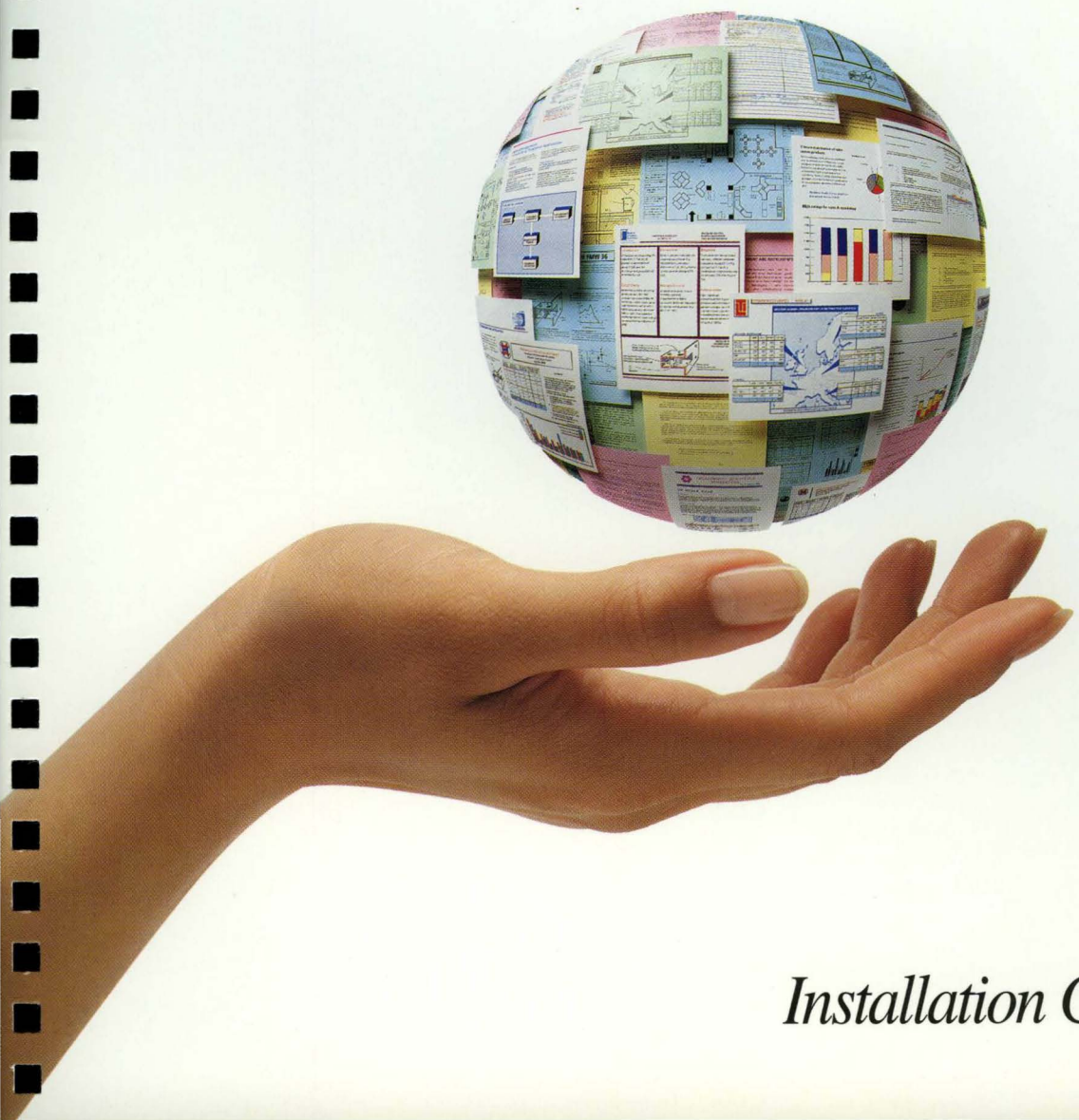
GlobalView
for X Windows

XSoft
A DIVISION OF XEROX



Installation Guide

XEROX

Installation Guide

GLOBALVIEW for X Windows

version 2.1

Xerox GLOBALVIEW for X Windows Applications
July, 1995

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Product Education and Documentation
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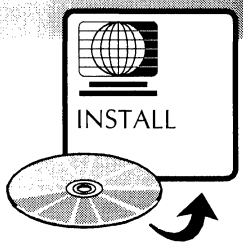

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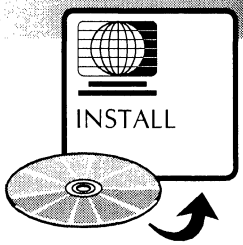


Before you begin

Xerox software is designed for multinational use, so your workstation's default settings might differ slightly from those shown in this publication. The software works the same way, however, despite such differences.

Software requirements

Software required—Run the following software applications to perform the tasks in this user guide:

- Solaris 2.3 or 2.4

or

- SunOS 4.1.3 or 4.1.4

and

- Openwin 3.0 and 3.3 or X11R5 with OPEN LOOK or Motif

✦ **Note:** If you are running on a multi-processor Solaris system, be sure to install Solaris 2.4 as well as the recommended patches from Sun Microsystems for Solaris and/or Open Windows. If you are running on a multi-processor SunOS system, be sure to install SunOS 4.1.4 plus any Sun patches. You get these patches directly from Sun.✦

To run GVX on Solaris 2.3 or 2.4

Memory and disk space required—To run Solaris 2.3 or 2.4, OpenWindows, and GLOBALVIEW requires the following minimum amounts of memory and disk space:

Type	Amount
RAM	32 MB
DISK	400 MB

Swap space required—To run Solaris 2.3 or 2.4, OpenWindows, and GLOBALVIEW requires the following amounts of swap space:

Parameter	Solaris & Openwin	/tmp	GLOBALVIEW	Total required swap space
Recommended	32 MB	18 MB	85 MB	135 MB
Maximum	40 MB	24 MB	128 MB	192 MB

To run GVX on SunOS 4.1.3 or 4.1.4

Memory disk space required—To run SunOS, OpenWindows, and GLOBALVIEW requires the following minimum amount of memory and disk space:

Type	Amount
RAM	16 MB for monochrome displays 20 MB for color displays
DISK	400 MB

Swap space required—To run SunOS, OpenWindows, and GLOBALVIEW requires the following amounts of swap space:

Parameter	SunOS & Openwin	GLOBALVIEW	Total required swap space
Recommended	20 MB	80 MB	100 MB
Maximum	32 MB	128 MB	160 MB

How to use this guide

About this installation guide—This installation guide shows you how to install GLOBALVIEW on a Sun workstation. For best results, read the following materials before proceeding to install GLOBALVIEW for X Windows:

1. The "Installation" section in chapter 1, "General information," of the *GLOBALVIEW for X Windows Release Notes* for a description of late changes to installation or restrictions on use of the GLOBALVIEW applications.
2. This "Before you begin" section.
3. Chapter 1, "Preparing for the install."

Then you are ready to go to Chapter 2, "Installing GLOBALVIEW."

References to the mouse

GLOBALVIEW assigns different default values to mouse buttons depending on whether you have a two- or three-button mouse.

The following table shows GLOBALVIEW default mouse button settings for a two-button mouse.

Mouse button	GLOBALVIEW default
Left	Select
Right	Adjust
Chord (both buttons)	Menu

The following table shows GLOBALVIEW default mouse button settings for a three-button mouse.

Mouse button	GLOBALVIEW default
Left	Select
Middle	Adjust
Right	Menu

UNIX access rights

System Administrators should ensure that "normal" access permissions apply before users install GLOBALVIEW. For example, if access permissions for the /tmp directory are restricted, then GLOBALVIEW will be unable to start since it requires access to this directory. In the case of the /tmp directory, the correct UNIX permission should be 777.

Appendixes

Appendix A contains information about how you upgrade GLOBALVIEW if you are upgrading from an older GLOBALVIEW version and/or an older version of Sun operating system.

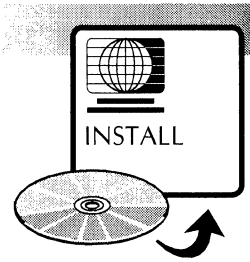
Appendix B contains information about installing or updating the License File. Specifically, it describes the different paths used for possible source locations of the license.dat file. System Administrators should refer to this appendix before installing GLOBALVIEW.

Appendix C contains information about the installation process, GVX directories, and Online Help for System Administrators.

Appendix D contains hints and tips.

All applications documented in this user guide might not be available on your workstation. Contact your local sales organization for more information.

✦ **Note:** Screens in this user guide show GLOBALVIEW running in the OPEN LOOK X window manager. If you are running Motif, your screens will look slightly different.✦



1. Preparing for the install

This section lays out the basic requirements for installing GLOBALVIEW for X Windows and the major steps associated with it. Refer to the rest of this manual for details.

✦ **Note:** The bold brackets contain pointers to the specific page(s) of this manual to find more information.✦

Installation overview

For any questions you have along the way, contact your UNIX System Administrator.

1. **Make sure you are using one of the following supported workstations with at least a 400 MB disk capacity:**

   - ☐ SPARC1, SPARC1+
   - ☐ SPARC2 (Xerox 6540)
   - ☐ SPARC IPC (Xerox 6520)
   - ☐ SPARC IPX (Xerox 6522)
   - ☐ SPARC 10, Model 20, 30, and 40
   - ☐ SPARC LX
   - ☐ SPARCclassic™
   - ☐ SPARC 5
   - ☐ SPARC 20

✦ **Note:** Running GVX on a multi-processor configuration is supported if using Solaris 2.4 or SunOS 4.1.4.✦

2. **GVX requires that one of these Sun operating systems be installed.**

   - ☐ Solaris 2.3 or 2.4
   - ☐ SunOS 4.1.3 or 4.1.4

   ✦ **Note:** We recommend installing any Sun Microsystems patches to ensure you have the latest operating system software. You get patches directly from Sun.✦

3. Install one of the following:

- For Solaris, install at least the complete "End User" subset of Solaris 2.3 or 2.4.
- For SunOS, install these applications; Networking, Sys, System_V, TLI, and Text

4. Install GVX before you install Shared Document Services.

Shared Document Services are required for access to Xerox network services. Refer to the *Shared Document Services Installation Guide* for details.

5. Check your disk space.

a. You must have at least 1 MB of free disk space in your /(root) and /tmp partitions to run XSoft Installation and SysAdmin Tool (XIST).
b. You must have a partition, other than /tmp, that has 100 MB of free disk space for basic GVX.
c. Ensure you have adequate disk space for the size and number of workspaces planned for that machine.
   - 4 MB minimum workspace size
   - 10 MB recommended workspace size
d. /tmp must have read, write, and execute permissions.

6. Check your swap space.

135 MB of swap space is recommended to run GVX on Solaris 2.3 or 2.4. 100 MB of swap space for SunOS 4.1.3 or 4.1.4. Depending on the complexity of your GVX applications and the number of fonts installed, you may have to allocate more swap space for proper GVX operation. **[Before you begin]**

✦ **Note:** Additional UNIX applications may require even more swap space.✦

7. Access your CDROM drive and start the XIST installation tool.

Run the startxist script that will automatically invoke the XSoft Installation and SysAdmin Tool (XIST) program. Doing this will set all the required environment variables for running XIST. The software automatically provides the correct variables whether you are running Solaris or SunOS. **[2-12]**

8. Use XIST to install GVX applications and GVX Online Help.

GVX application families are independent and you do not have to install them in any specific order. **[2-21 to 2-32]**

9. Reboot.

After the initial installation of GVX, you must **reboot** the machine to load and activate GVX drivers.

10. Start GVX.

After rebooting, we recommend starting GVX by typing **/opt/XSoft/bin/startgvx** in an OPEN LOOK or Motif window. This command automatically sets the correct environment variables for GVX.

If you started OPEN LOOK without the "noauth" switch, you will have to run the "/usr/openwin/bin/xhost +<your machinename>" command before running GVX. **[2-17]**

Licensing your GVX software

The License Server can be installed after GVX is installed. **[Appendix B]**

1. Install the License Server.

The License Server utilizes the Highland Flexlm license service. It can run on one, three, or five servers. **[B-5]** If the Highland Flexlm license service is not already installed, the License Server must be installed using XIST. **[B-7]**

2. Complete the License Request Form to enable GVX.

GVX will run without a license for a six-day grace period to allow you time to send in the License Request form (shipped with your software) and obtain the proper license file for your site.

3. Run the License service.

After installing the license file, you must tell the License service to read and use this file by running "lmgrd" (located on the license server) using the proper syntax. **[B-9]**

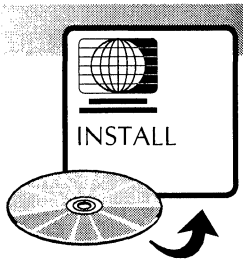
✦ Notes:

If you are using GVX in a standalone configuration you will need to install the license file and run the License service on each machine.

If you are in a NIS/server configuration you only need to obtain one license file for the server. You would then install this license file and run the License service on the server. The client workstations would not need to run the License service, but they need to install the license file on each client workstation or a universally available nfs-accessible directory. You use XIST to do this.

If you are using another UNIX application that is licensed by the FlexLM License Server, you must be sure your LM_LICENSE_FILE environment variable references both license.dat files. For example, type this command all on one line:

setenv LM_LICENSE_FILE /home/lmgrd_dir/license.dat:/opt/XSoft/License/license.dat✦



2. Installing GLOBALVIEW

In this chapter you will access and run the XSoft Installation and System administration Tool (XIST) to install GLOBALVIEW for X Windows.

✦ **CAUTION:** If you are upgrading from GLOBALVIEW 1.0 or 1.0.5, you must first follow the procedure described in Appendix A.✦

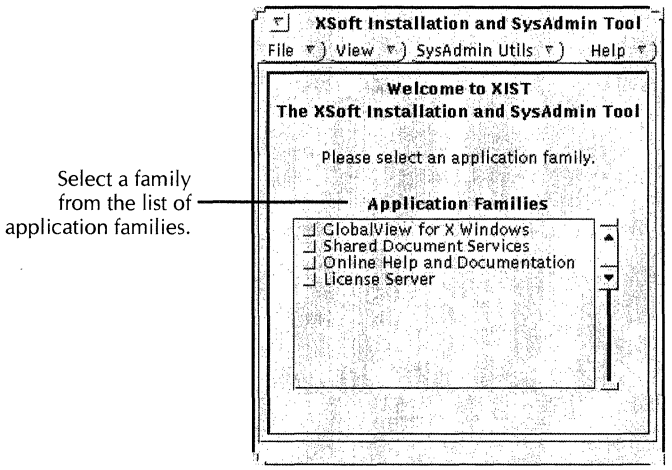
Overview

From a top level, the installation steps are as follows:

- Load the GVX software CD.
- Run OPEN LOOK or Motif.
- Access and run XIST.
- Select GLOBALVIEW for X Windows from the application family window, or load a template.
- Enter appropriate information in the Configuration window.
- Decide which install mode to use, Express or Custom. If you have previously loaded a template, select Template install and go on to the next bullet item.
  - If Custom, select the applications you wish to install.
  - Respond to XIST prompts.
  - Select Install after applications have been checked.
- Select Done after XIST displays the message that the process is complete.
- Reboot UNIX and login.
- Run OPEN LOOK or Motif.
- Start GVX in a UNIX command tool window.

XIST menu

The XSoft Installation and SysAdmin Tool (XIST) menu lists the applications that are available for installation. The contents of the list can vary, depending on the contents of the cdrom, UNIX directory, or what features are supported on various operating systems.



File option menu

Select File with the Menu mouse button to see the pop-up menu list:

Load Template

Select this option to install a previously saved software configuration template (uses .XT file suffix).

Save Template

You can select this option during the Custom installation to save the software configuration template for use in subsequent workstation installations. Save each template file with an .XT suffix, so XIST recognizes the template file.

Exit XIST Select this to leave the XIST installation program.

View option menu

Select View with the Menu mouse button to see the pop-up menu list:

XSoft Support Displays XSoft general information and telephone numbers.

Install messages Displays the log of your last GLOBALVIEW software installation activity.

System profile Displays useful software and hardware configuration information about your Sun workstation (valuable for reporting and diagnosing problems when calling support).

XSoft Product Displays a list of new applications available with this release of GLOBALVIEW for X Windows.

SysAdmin option menu

Select SysAdmin Utils with the Menu mouse button to see the pop-up menu list. These options are appropriate for various system administration actions and are explained in the next chapter. The typical user may not need to use all of them. Contact your system administrator, or refer to chapter 3, "XIST System Administration Utility," if you have questions about any of these items.

- GEN: Add Swap
- GVX: Add Desktop Partition
- GVX: Clean up Old GVX
- GVX: Copy Install Directory to UNIX
- GVX: Create Shared GVX
- GVX: Customize Kernel (only if running SunOS 4.1.3 or 4.1.4
- SDS: De-install Document Services
- GVX: Install GVX to UNIX Mail
- GVX: Remove Desktops
- GVX: Set up System Font Size
- GVX: Set up Time Zone
- GVX: Update Default Domain and Organization
- GVX: Update License File

Help option menu

Select Help with the Menu mouse button to see the pop-up menu list that describes the windows available in the XIST program. You will see the actual XIST windows during the installation process.

In each XIST window, you can display the help message for the menu items by selecting the item and pressing HELP. If your cursor is in the XIST window, pressing HELP displays the help message for that window.

Intro — Displays a summary message about the XIST program and the general installation process.

Family Window — Describes the application family window.

Configuration Window — Displays various information and questions specific to installing an application family.

Package Window — Allows you to specify which optional software packages you want installed for an application family.

Module Window — Allows you to select optional software modules of an application package.

Work Window — Displays what files are being installed, their size, and the progress indicator of the installation.

SysAdmin Window — Displays a variety of XIST utilities related to installing, de-installing, upgrading, and customizing your workstation.

Dialog Window — Displays messages to users from the XIST program about the installation.

More options

The More options button displays additional information on the GLOBALVIEW setup configuration sheet. You may not need to use this depending on your system configuration. Some of the information to consider here follows.

GLOBALVIEW Directory Information — Fill in this area of the GLOBALVIEW configuration form with the full path names of the directories to be used for the GLOBALVIEW installation. XIST has already filled in this area with default directories in the partition with the largest amount of available disk space. XIST does not support an install of GVX to /tmp partitions.

XSoft Directory — The XSoft Directory contains directories supporting application families that are installed. Do not create a root directory or a partition named /XSoft. This name is reserved for XIST.

Top Level GVX Directory (local) — The Top Level GVX Directory contains GLOBALVIEW files and subdirectories. This directory must be on a local file system (not remote) and may be modified only on new installs. Enter new path name to modify and press RETURN. The new path name must end with ...XSoft/GVX.

GVX Appls (local) — The GVX Appls directory contains GLOBALVIEW application files and subdirectories. This directory is contained within the Top Level GVX Directory.

GVX Desktops (local)

The GVX Desktops directory contains GLOBALVIEW workspaces. This directory location is set to the existing desktops directory, if there is one. If a desktops directory doesn't exist, the path uses the GVX Top Level Directory choice and may be modified.

GVX Bin (remote or local)

The GVX Bin directory contains GLOBALVIEW executable files. This directory can be either local or remote. If you want to share GLOBALVIEW that someone else has already installed as a shared GVX bin directory on their machine, you must specify that remote file system location. This shared directory must be exported and must exist. A shared GVX bin directory can be created using the Create Shared GVX option within the SysAdmin Utility.

XNS Directory (local)

The XNS Directory contains the XNS time stub and other communications related files. This entry may be modified.

GLOBALVIEW Kernel Customization Information

GLOBALVIEW requires a modified kernel if you are running SunOS 4.1.3 or 4.1.4. You can use the default kernel, a custom kernel, a pre-built kernel, or the existing kernel.

Default

XIST will use the GENERIC kernel configuration file and modify it for GLOBALVIEW. The new kernel configuration file will be GENERIC-GVX. The kernel configuration path indicates the path of the directory where the kernel is to be built from.

Custom

XIST will use the kernel configuration file that you specify and modify it for use with GLOBALVIEW. Select Custom, then move the pointer to the Kernel Config Path text area. Enter the full pathname of your custom configuration file.

Pre-Built

XIST will use an existing vmunix file other than the one currently used by the workstation. Select Pre-Built, then move the pointer to the Pre-Built kernel path. Enter the full pathname of the vmunix file. This kernel must already be configured for GLOBALVIEW. You must use the name vmunix for the kernel file name.

Use Existing

XIST will use the existing vmunix file in the / directory. This kernel must already be configured for GLOBALVIEW. Use this only if you have installed GLOBALVIEW before, such as in the upgrade case.

Using the XIST program from a local cdrom

This section contains the procedure for installing GLOBALVIEW for X Windows using the XSoft Installation and System administration Tool (XIST) program. XIST is accessed from a local cdrom.

Accessing and running XIST

To access and run XIST:

1. Make sure the local cdrom drive is properly connected and accessible. Turn on the Sun workstation. After a few minutes, the UNIX login prompt appears. Login as yourself. Type your login id and press RETURN.
2. Type your password and press RETURN.
3. Run Openwin 3.3 or X11R5 with OPEN LOOK, or with Motif. For example, to access OPEN LOOK, type:

   /usr/openwin/bin/openwin

   ✦ **Note:** You may need to run xhost after running the window manager. Type the following command in a cmdtool window:

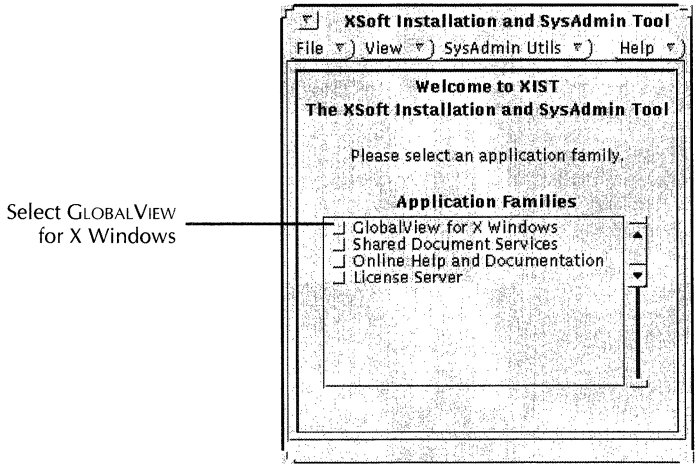
   /usr/openwin/bin/xhost +<yourmachine name>✦
4. Open a command tool window (cmdtool or xterm) and login as root. Type **su root** and press RETURN.

5. Type the root password and press RETURN.
6. Place the cd containing the GLOBALVIEW software in the cd tray, and place it in the cdrom drive.
7. Change the current directory to the cdrom:

   cd /cdrom/globalview
8. Type the following command at the cmdtool or xterm prompt:

   ./startxist

   In a few minutes, the XIST window appears.



Installing GLOBALVIEW

9. Select the box to the left of GLOBALVIEW for X Windows. If XIST detects an older version of GVX exists, a pop-up window appears asking you to clean up the older version. If a previous version of GLOBALVIEW is not detected, go to step 12.

   ✦ **Note:** You may load a template to install GVX, if one or more are available for your site.✦

10. Select OK in the XIST Prompt window to remove the previous version of GVX.

    ✦ **Note:** This clean up option will preserve any existing desktops and printer fonts but deletes the application loader and GVX Online Help.✦

11. Select Done when you see the message that clean up is complete. Return to step 9.

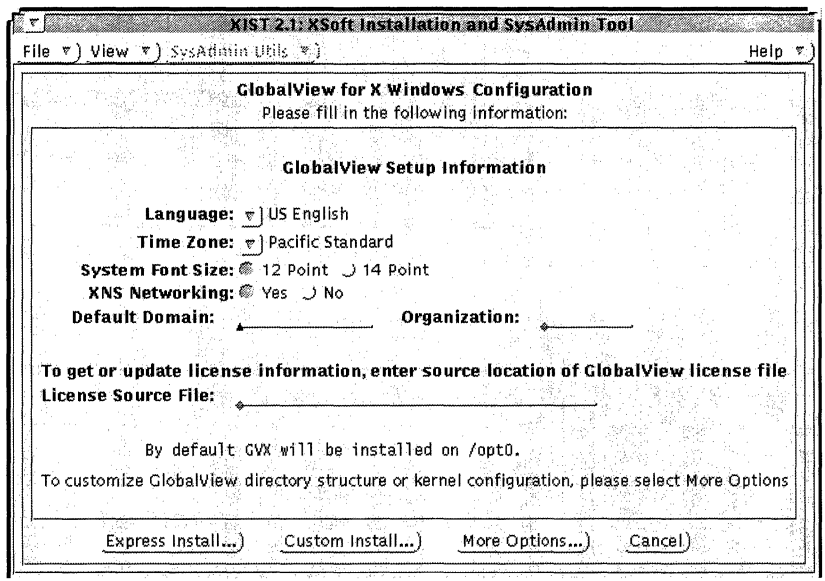
Configuration window

12. Fill out the GLOBALVIEW configuration form with general setup information. To set up a special configuration, select the More Options button.

    ✦ **Note:** If you did a template install, all entries are filled in, proceed to step 20.✦

✦ **Note:** XIST tries to guess the correct time zone, you may change it, if necessary.✦

✦ **CAUTION:** Do NOT enter your UNIX domain and organization names. Check your spelling.✦



Language

13. Select one of the language options:

    The default language appears in the field, if you select the second language, the files specific to that language will replace those of the default language.

Time Zone

Select Time Zone to display a pop-up menu with a comprehensive list of time zones around the world. Move the mouse down until the desired time zone is highlighted.

System Font Size

14. Choose a font size to be used on the GLOBALVIEW display, select 12 Point or 14 Point. 14 Point is recommended for high resolution monitors for easier viewing.

XNS Networking

15. Select one of the following network options:

    Yes, if your workstation is to be part of an XNS network (Document Services).

    No, if the workstation is not to be connected to an XNS network (standalone).

Default Domain

16. Enter the default XNS domain name in the text area.

Organization

17. Enter the XNS organization name in the text area.

GLOBALVIEW License Server file

18. Enter the source path name of the GLOBALVIEW License Server data file (license.dat). See Appendix B for more information about the License Server.

    XIST provides you two alternatives to specify the source path name to the GLOBALVIEW License Server data file (license.dat).

    To specify the source license file path name:

    ▸ Do one of the following:

    - For a first time installation, you can use XIST to copy the license.dat file to the destination location. Enter the source file location in the Configuration window as requested. This file may be on a floppy disk or a network location. If you are not sure of the correct path name, ask your system administrator.
    - You can use the SysAdmin utility and the GVX: Update License File option to specify the source location of the license.dat file. Enter the source file location as requested in the window and proceed as directed by XIST.

    ✦ **Note:** You can install GLOBALVIEW with the license file path entry blank for a six day grace period while you get the file from XSoft.✦

Installation choices

You have several installation options for installing GLOBALVIEW for X Windows, indicated by the options noted at the bottom of the configuration window.

19. Select one of the following installation choices:

Template

If you are using a template to install or reinstall your software, select the Template install...option at the bottom of the configuration window, then go to step 23. With the Template install method, you can install anything that was saved in the Template.

Express..., if you want to load a predetermined application set of GLOBALVIEW WorksPlus. It includes applications, fonts, keyboards, and so on. See the section "Express applications list," appendix C, for the details on what is installed during Express.

Custom..., if you want to select from the full application series in GLOBALVIEW WorksPlus or the other GLOBALVIEW optional packages, go to step 21.

Express or Template selected

20. If you select Express install or Template install to load predetermined application sets of the GLOBALVIEW WorksPlus package, the XIST work window appears. This will take a while, then continue with step 23.

    An XIST information window appears with the message, "All installed applications will run automatically when GLOBALVIEW is started (Autorun=True)."

Custom selected

21. If you select Custom install go to the "Selecting GLOBALVIEW packages and modules" section in this chapter and follow the install process from there. For WorksPlus, choose Workspace and Editors options. For AccessPlus, choose Workspace and DSA options.

22. Select Install... at the bottom of the XIST window. The XIST work window appears that graphically shows how the installation is proceeding.

23. Select Done after you read the XIST information window, then Done to return to the family window to install another application family, or select Exit XIST in the XIST install progress window.

24. When you are finished using XIST to install GVX, cd out of the /cdrom directory and type the following in a UNIX shell:

    eject cdrom

25. Reboot UNIX and login as user.

26. Start your window manager.

    ✦ **Note:** You may need to run xhost after running the window manager. Type the following command in a command tool window:

    /usr/openwin/bin/xhost +<machine name>✦

Starting GLOBALVIEW

27. Type one of the following commands at the UNIX prompt to start GLOBALVIEW:

    - to automatically set the environment variables and start GLOBALVIEW, type **/opt/XSoft/bin/startgvx**
    - **/opt/XSoft/bin/gvx**
    - if you have added /opt/XSoft/bin to your search path, type **gvx** or **startgvx**

    The first time you run GLOBALVIEW, it can take up to 45 minutes before the GLOBALVIEW Logon option sheet appears. This depends on the number of applications selected during the installation.

Using the XIST program from a remote cdrom

This procedure assumes the remote cdrom has been mounted and the installation directory has been exported. If this is not the case, see your System Administrator.

Accessing and running XIST

To access and run XIST:

1. Login as user. Type your login id and press RETURN.
2. Do steps 2 through 5 described in the previous section, "Running the XIST program from a local cdrom."
3. Change to the GLOBALVIEW installation directory on the remote cdrom. Enter the following command at the cmdtool or xterm prompt:

   cd /net/<machine name>/cdrom/

   Here, <machine name> is the workstation from which the cdrom drive is attached.
4. Type **./startxist** to start XIST.
5. Continue with steps 9 through 23 of the previous section, "Running the XIST program from a local cdrom," then go to step 6.
6. Reboot UNIX and login as user.
7. Start your window manager.

   ✦ **Note:** You may need to run xhost after running the window manager. Type the following command in a command tool window:

   /usr/openwin/bin/xhost +<machine name>✦

Starting GLOBALVIEW

8. Type one of the following commands at the UNIX prompt to start GLOBALVIEW:
   - to automatically set the environment variables and start GLOBALVIEW, type **/opt/XSoft/bin/startgvx**
   - **/opt/XSoft/bin/gvx**
   - if you have added /opt/XSoft/bin to your search path, type **gvx** or **startgvx**

Using the XIST program from a UNIX directory

This procedure assumes the installation directory has been copied to a UNIX location using the Copy Install Directory to UNIX option of XIST's SysAdmin Utility. If this is not the case, see your System Administrator before starting a network installation.

Accessing and running XIST

To access and run XIST:

1. Login as user. Type your login id and press RETURN.
2. Do steps 2 through 5 described in the section, "Running the XIST program from a local cdrom."
3. Change to the network path where the GLOBALVIEW installation directory is located. Enter the following command at the cmdtool or xterm prompt:

   cd /<pathnameToGVXInstallDirectory>

For example, if the installation directory is on /disk1/installer.SunOS, then users should cd to /disk1.

4. Type **./startxist** to start XIST.
5. Continue with steps 9 through 23 of the section, "Running the XIST program from a local cdrom," then go to step 6.
6. Reboot UNIX and login as user.
7. Start your window manager.

   ✦ **Note:** You may need to run xhost after running the window manager. Type the following command in a command tool window:

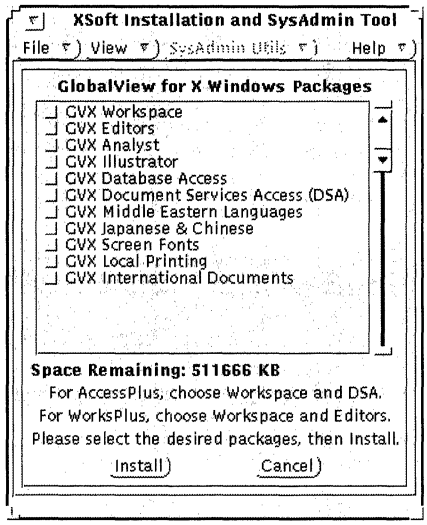
   /usr/openwin/bin/xhost +<machine name>✦

Starting GLOBALVIEW

8. Type one of the following commands at the UNIX prompt to start GLOBALVIEW:
   - to automatically set the environment variables and start GLOBALVIEW, type **/opt/XSoft/bin/startgvx**
   - **/opt/XSoft/bin/gvx**
   - if you have added /opt/XSoft/bin to your search path, type **gvx** or **startgvx**

Selecting GLOBALVIEW packages and modules

GLOBALVIEW for X Windows packages feature many applications and utilities that you can install using the Custom install button. For example, you may install additional fonts from the GVX Screen Fonts package, or ViewCards from the GVX Analyst package.

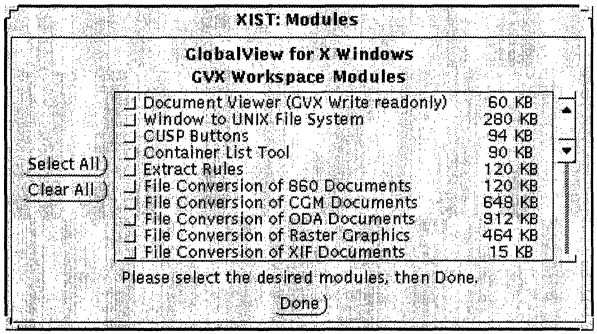


After you select a package, a window appears with a list of modules available within that package and the amount of disk space each module consumes. The amount of remaining disk space on the file system is updated as each module is selected.

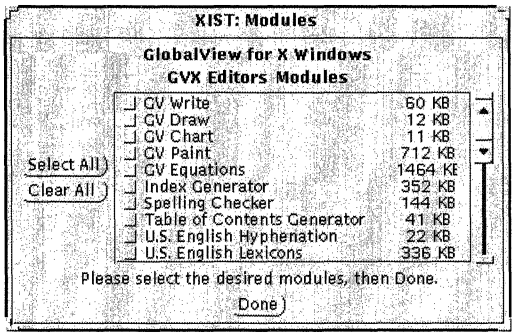
You can use XIST to add applications or packages during or after a GVX installation.

✦ **Note:** You must reboot GLOBALVIEW for X Windows each time you install new GVX applications or Packages.✦

The GLOBALVIEW WorksPlus package consists of Workspace and Editors packages. Be sure to scroll the screen down or resize the window so you can view the complete list of Workspace applications.



The Editors package includes the following:



These applications will be installed as follows:

- Windows to UNIX File System installed whether or not user-selected.
- Registration Tool and Disk Space Warning will not be listed but always installed.
- GVX Network Access and Reference Icons will be installed whether or not user-selected, if XNS networking is selected in the configuration sheet.

- Any dependent applications, not listed in the XIST screens, are installed automatically and appear in the loader after you log on.

After selecting Done, the GLOBALVIEW Packages window appears in a few moments. You can select another package to install.

If you select applications whose space requirements exceed the capacity for the GLOBALVIEW file system, a warning message appears.

Select All

To select all packages or modules within a package:

▸ Select the Select All button.

Clear All

To clear all choices within a package:

▸ Select Clear All.

You can then start over and select new choices.

Selecting additional packages and modules

Using XIST, you can select other packages to install. Be sure to scroll the package window down so you can view the complete list for each application set.

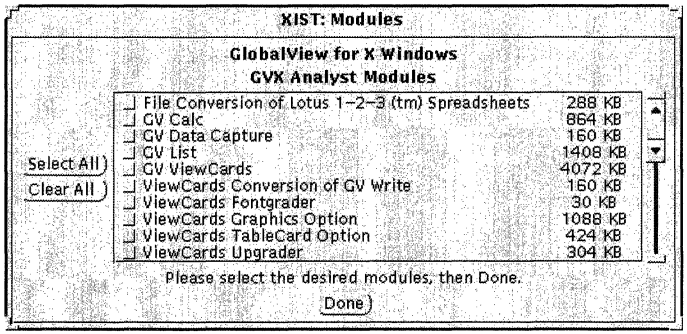
Choosing GVX Workspace Local Printing Options allows you to select various printing applications.

✦ **CAUTION:** Do not select more than one local printing option. Also, local printing cannot be co-resident with a different Shared Document Services printer option.✦

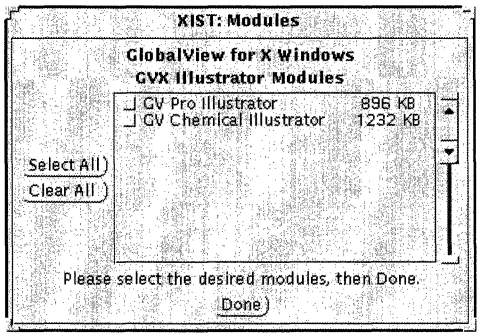
Choosing GVX International Document Options allows you to select various language hyphenation dictionaries and lexicons for using other languages.

Choosing GVX Workspace Screen Fonts allows you to select from a variety of screen fonts. Select either the family font or the family font widths when given a choice.

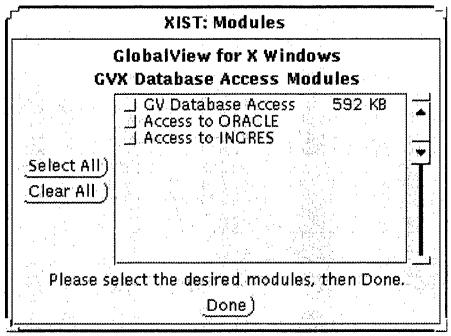
Choosing GV Analyst allows you to select any of the following applications in the next screen:



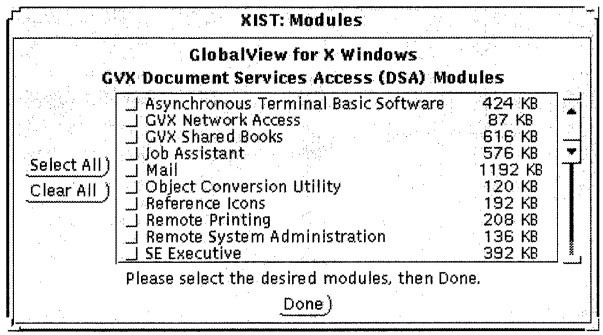
Choosing the GV Illustrator option allows you to select modules from the following screen:



The optional GV Database Access package offers connectivity to leading industry Relational Database Management Systems (RDBMS). You can use the GLOBALVIEW document as the interface for data query and retrieval operations with Oracle and Ingres database systems. Be sure to select the RDBMS system offered at your site.



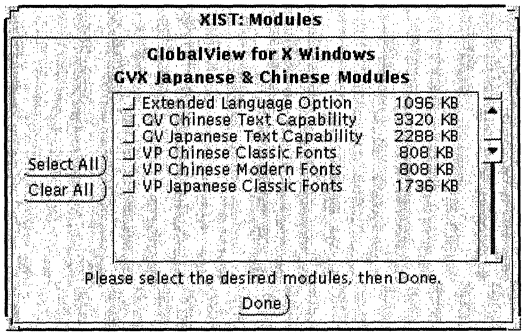
Choosing GV Document Services Access allows you to select modules from the following screen:



Choosing GV Middle Eastern Languages allows you to select modules from the following list:

- GV Arabic Text Package
- GV Hebrew Text Package
- VP Arabic Classic Fonts
- VP Arabic Modern Fonts
- VP Hebrew Classic Fonts
- VP Hebrew Modern Fonts

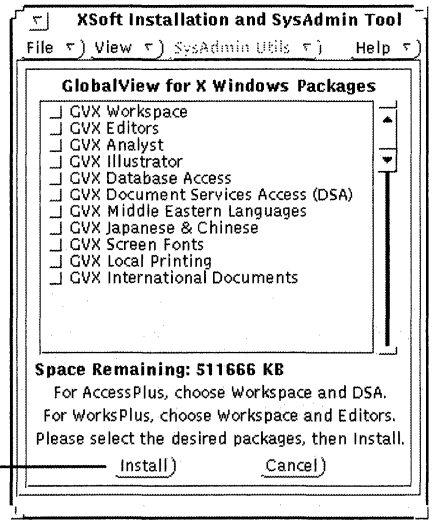
Choosing the GV Japanese and Chinese option (available to workstations running Solaris 2.3 or 2.4) allows you to select modules from the next screen:



Continuing the custom installation process

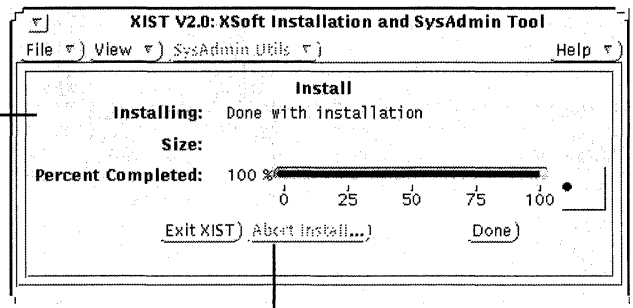
1. After you have selected all the GLOBALVIEW packages and modules you want to install, select Install at the bottom of the window.

   ✦ **Note:** If you want to use this install set for additional workstations, select the Save Template option in the File menu, name the file with a .XT suffix, and store the template file for later use.✦



Select Install after you select packages and modules

2. The XIST Installation Monitor window appears that graphically shows how the installation is proceeding.



Messages about the installation in progress display here.

A graph displays the percentage of installation that has completed.

Select Abort Install to abort the installation process (before it completes as this screen indicates).

An XIST information window appears near the end of installation.

Finishing the installation process

3. Select Done after you read the XIST information windows.

Exit XIST

4. Select Exit XIST.

Reboot

5. Exit the X Windows environment, login as root, and reboot UNIX.

Running GLOBALVIEW

6. Start your window manager.
7. Enter one of the following commands at the UNIX prompt:
   - **/opt/XSoft/bin/startgvx**
   - **/opt/XSoft/bin/gvx**

The first time you run GLOBALVIEW, it can take up to 45 minutes before the GLOBALVIEW Logon option sheet appears. This depends on the number of applications selected during the installation.

To run GLOBALVIEW on a workstation NOT connected to an XNS network:

▸ Enter one of the following commands at the UNIX prompt:

- **/opt/XSoft/bin/startgvx V**
- **/opt/XSoft/bin/gvx V**

✦ **Note:** The "V" switch is only required the first time you run GLOBALVIEW so that you can create your workspace without the XNS network. See the *GLOBALVIEW for X Windows Workspace User Guide* for more information about Workstation Administration.✦

Swap space considerations

The XIST windows display other important messages.

For example, if you need more swap space, this will be indicated. You can use the SysAdmin Utility described in chapter 3 to add swap space. If you are not sure how much swap space you have, or you need help adding swap space, see your System Administrator. The following table shows the basic swap space requirements.

Parameter	Solaris & Openwin	/tmp	GLOBALVIEW	Total required swap space
Recommended	32 MB	18 MB	85 MB	135 MB
Maximum	40 MB	24 MB	128 MB	192 MB

Parameter	SunOS & Openwin	GLOBALVIEW	Total required swap space
Recommended	20 MB	80 MB	100 MB
Maximum	32 MB	128 MB	160 MB

✦ **Note:** Running additional UNIX applications or more fonts may require you to allocate additional swap space.✦

Running GLOBALVIEW printing applications, printer fonts, ViewCards, and converting large documents or documents with large graphics to GLOBALVIEW require the maximum swap space requirements.

Converting small to medium sized documents to GLOBALVIEW requires the recommended swap space requirements.

Abort Install

To abort the installation process:

1. Select Abort Install.
2. Select Acknowledge to return to the family window.

Using the message scroll bar

Some messages that display during the installation process are too long for the amount of space available in the window.

To read the entire message:

- Use the Select (left) button to scroll the message left or right.

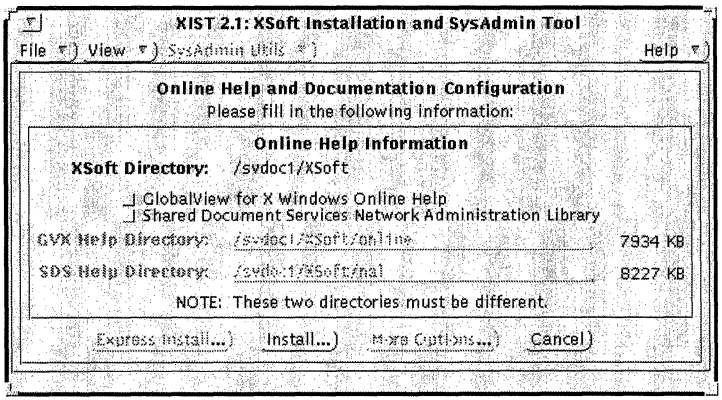
When the installation process completes, an information screen appears that describes any problems detected during

installation and states that the process is complete. Select Done to return to the XIST Installation Monitor window.

If a serious error is detected during installation, XIST will post the error message. Select Acknowledge for XIST to abort and return to the family window.

Installing GVX Online Help

✦ **Note:** System Administrators should review the "GVX Online Help installation considerations" section in Appendix C before installing Online Help and Documentation.✦



To install Online Help and Documentation:

1. Select Online Help and Documentation from the Application Families menu.
2. Select GLOBALVIEW for X Windows Online Help in the configuration window.
3. Accept the default directory or enter the GVX Help Directory location.
4. Select Install...

   The installation of GVX Online Help begins.

5. Select Done when the XIST information window displays a message that the installation is complete. Then select Done in the Install progress window.

✦ **Note:** If you have an older version of Online Help (from GVX 1.0 or 1.0.5), installing the new one will remove the older version. Alternatively, you can use Clean up old GVX in the SysAdmin utility to clean up both GVX and GVX Online Help.✦

Running GVX Online Help

GVX Online Help runs as a separate application, so it can be open, next to your GLOBALVIEW workspace while you work. You start and stop the Help application independent of GLOBALVIEW.

To run GVX Online Help in the UNIX command window:

1. Type **cd /online** and press RETURN, (the Enter key).
2. Type **./online** and press RETURN, (the Enter key).

   The GVX Online Help window appears with a Table of Contents that lists topics, including how to use Help.
3. Click the Select mouse button on boxed text to select a Help topic.

   If you are new to GLOBALVIEW, select "Quick Start."

This version of GLOBALVIEW for X Windows allows you to run Online Help within the GV workspace.

To run GVX Online Help in the GV workspace window:

1. Do one of the following:
   - Select the GVX Online Help button in your GLOBALVIEW workspace, then press F1.
   - Point and hold the Menu mouse button on the Help button and select the Execute option from the popup menu.

   The GVX Online Help window appears with a Table of Contents that lists topics, including how to use Help.

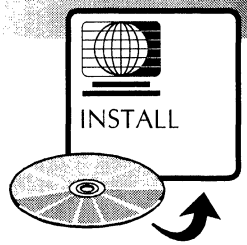
2. Click the Select mouse button on boxed text to select a Help topic.

The Help button is located in the Workstation folder in the Information for New and Upgrading Users and on the workspace for new users.

GVX Online Help behaves like other X applications. You can resize and iconify the window and scroll through the text using the sidebar arrows.

To exit GVX Online Help:

- Select Exit in the File Menu of the Help window.



3. XIST System Administration Utility

This chapter explains how to run the System Administration utilities. You run these utilities from the XSoft Installation and SysAdmin Tool (XIST). To run XIST, refer to chapter 2, "Installing GLOBALVIEW."

Select SysAdmin Utils button

The SysAdmin Utils button in the middle top area of the XIST screen contains a list of options.

To perform system administration activities:

1. Using the Menu mouse button, press and hold the SysAdmin option button.
2. Select an option within the pop-up menu.

Selecting a System Administration utility

You run a System Administration (SysAdmin) utility by selecting an option from the SysAdmin Utility pop-up menu. The options are described in the following sections.

Add Swap

✦ **Note:** To determine how much swap space you have, enter the following command in a cmdtool window:

For Solaris 2.3 or 2.4

/etc/swap -s

For SunOS 4.1.3 or 4.1.4

pstat -s

In either case, add the numbers for swap used and available swap to get the total swap space number.✦

To add additional swap space on the workstation:

1. Select the GEN: Add Swap option in the pop-up menu.
2. Select the partition where you want to add additional swap space.
3. Specify the amount of additional swap space you want to add in the Additional Swap Size (in KB) area. The default is 10000 KB. You can type a new amount, or use the up/down arrows to increase or decrease the size.
4. Select Add Swap.

Add Desktop Partition

If your existing desktop partition is running out of space, use this procedure to add desktop partitions for additional users' workspaces. Each user's workspace is contained within a single partition.

To add a desktop partition on the workstation:

1. Select the GVX: Add Desktop option in the pop-up menu.
2. Select the partition where you want to add the desktop partition.
3. Select Add Desktop Partition.

Clean up Old GVX

Always use this procedure before upgrading from GLOBALVIEW release 1.0 or 1.0.5. For upgrade information, see Appendix A.

Select the Clean up Script option to remove old versions of GLOBALVIEW. You have options to preserve existing desktops, printer fonts, and the application loader. Any previous version of Online Help is deleted during this process.

✦ **CAUTION:** Make sure you have selected Preserve Existing Desktops, if you want to keep the desktops. Once the desktops are removed, they cannot be recovered.✦

When upgrading from GVX 1.0 or 1.0.5 to GVX 2.1, do not select the Preserve Existing Application Loader option as the applications are not upward compatible.

✦ **Note:** If Shared Document Services are installed on this workstation, make sure you manually delete all applications from the loader before you use the Clean up Old GVX procedure. If you do not, the application loader will still be preserved even if you specify that it not be preserved.✦

Copy Install Directory to UNIX

This option allows you to copy the Install Directory (220 MB) into a network directory. The directory allows users to install over the network using the full pathname location.

To copy a directory from the installation directory to UNIX:

1. Select the GVX: Copy Install Directory to UNIX option in the pop-up menu.

   The correct source directory path appears in the window. For Solaris 2.3 or 2.4 platforms, an example path is /cdrom/cdrom1/installdir.Solaris. For SunOS 4.1.3 or 4.1.4 platforms, the path is /cdrom/installdir.SunOS.

2. Enter the path to the destination directory after To.

   ✦ **Note:** The destination directory must be of the form:

   /<user selected path>/**installdir.SunOS**

   or

   /<user selected path>/**installdir.Solaris**✦

3. Select Copy Install Directory and then Done.

Create shared GVX

This option allows you to set up a GVX bin directory for workstation users to execute GVX remotely.

1. Select the GVX: Create shared GVX option in the pop-up menu.
2. Enter a location for the bin directory you want to create as a shared GVX directory.

For example,

/opt/GVXshared/bin

users would use this path as the remote bin location when installing shared GVX.

3. Select Create Shared GVX directory and then Done.

Customize Kernel for SunOS platforms

To customize the kernel:

1. Select the GVX: Customize Kernel option in the pop-up menu.
2. Select the required number of cdevsw slots.
3. Select the required number of VDDRV slots.

✦ **CAUTION:** GLOBALVIEW version 2.1 requires 8 cdevsw slots, 3 VDDRV slots for XNS module loading and displayed patches.✦

✦ **Note:** For SunOS 4.1.3 onwards, and for Solaris, you need to acquire and install any Sun patches from Sun Microsystems.✦

De-install Document Services

This option allows you to remove Document Services software from the system. Please refer to the *Shared Document Services Installation Guide Version 14.0* for more details.

Install GVX To UNIX Mail

✦ **Note:** You do not need to install GVX To UNIX Mail if you already have a UNIX mailtool that automatically encodes and decodes binary attachments, such as the OpenWindows 3.3 mailtool, or you are already using the XNS GVX Mail application.✦

To install GVX To UNIX Mail, you need to indicate the source of the mail programs in the From area. There are two choices available:

- CD directory path

- UNIX directory path

Use the procedure "To install the mail programs from a cdrom" when the source of the mail programs is a CD directory.

Use the procedure "To install the mail programs from a UNIX directory" when the source of the mail programs is a UNIX directory.

To install the mail programs from a cdrom:

1. Select the GVX: Install GVX to UNIX Mail option in the pop-up menu.
2. The default location depending on the platform is displayed:

   An example for Solaris 2.3 or 2.4 is:

   /cdrom/cdrom1/installdir.Solaris/MailGV2Unix

   For SunOS 4.1.3 or 4.1.4 it is,

   /cdrom/installdir.SunOS/MailGV2Unix
3. In the To area, enter the UNIX destination directory, the location to store GVX UNIX mail tools and programs. For example,

   /opt/XSoft/GVX/bin
4. Select Install GVX to UNIX Mail Programs.

Now you must create your GVX to UNIX mailboxes. Go to the procedure "To create your mailbox."

To install the mail programs from a UNIX directory:

1. Select the GVX: Install GVX to UNIX Mail option in the pop-up menu.
2. In the From area, the default UNIX path to /installdir, is displayed.
3. In the To area, enter the UNIX destination directory, the location to store GVX UNIX mail tools and programs.
4. Select Install GVX to UNIX Mail Programs.

Now you must create your GVX to UNIX mailboxes.

To create your mailbox:

1. Select a cmdtool or xterm window and log in as the UNIX user who will be using these mailboxes.

   ✦ **Note:** This account must be the same as the one the user logs into UNIX as, before starting GLOBALVIEW.✦

2. Change to the UNIX destination directory where you installed the mail programs. At the cmdtool prompt, enter:

   cd <pathtomailprograms>

3. Run the mailbox creation script. At the cmdtool prompt, enter:

   ./createGVXUnixMailboxes

After you have created your workspace within GLOBALVIEW, there are several other steps required to set up your mail environment. These are described in the *GLOBALVIEW for X Windows Workspace User Guide*.

Remove Desktops

To remove desktops:

1. Select the GVX: Remove Desktops option in the pop-up menu.
2. Select the desktops you want to remove.
3. Select Remove Desktops.

✦ **CAUTION:** Make sure you have selected only the desktops that you want to delete. Once the desktops are removed, they cannot be recovered.✦

Set up System Font Size

To setup system font size:

1. Select the GVX: Set up System Font Size option in the pop-up menu.
2. Select whether you want 12 or 14 point system font size.
3. Select Set up System Font Size.

Set up Time Zone

To change the time zone:

1. Select the GVX: Set up Time Zone option in the pop-up menu.
2. Select the time zone from the list of time zone areas.
3. Select Set up Time Zone.

Update Default Domain and Organization

To update the default domain and organization:

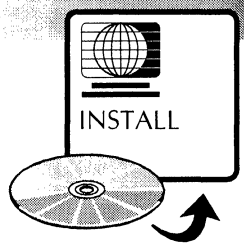
1. Select the GVX: Update default domain and organization option in the pop-up menu.
2. Enter the default domain and organization names.
3. Select Update default domain and organization.

Update License File

To update the license server file:

1. Select the GVX: Update License File option in the pop-up menu.
2. Enter the License Source File name.
3. Select Update License File.

See Appendix B, "Installing the License Server," for more information.



A. Upgrading GLOBALVIEW from a previous version

GLOBALVIEW for X Windows version 2.1 runs on Solaris 2.3, 2.4 or SunOS 4.1.3, 4.1.4 operating system software versions. There are several user scenarios for upgrading from earlier versions of GLOBALVIEW and Sun software.

Upgrade assumptions

This section provides general information that applies whether you are upgrading from XGV 3.2, GVX 1.0.x, or GVX 2.0, unless otherwise noted. Read the following sections carefully, but you may not need to do everything that is described depending on your starting and ending configuration points.

- This appendix describes the upgrade process for Sun workstations currently running SunOS 4.1.x or Solaris 2.3 or 2.4 with either GLOBALVIEW for X Windows versions 1.0.x/2.0 or Xerox GLOBALVIEW 3.2.x.

- If you are upgrading GVX (GVX 1.0.5 to GVX 2.1 or GVX 2.0 to GVX 2.1), you can run XIST and Clean up your old GVX. Be sure to preserve your desktops and printer fonts. Do not preserve your Application loader.

- If this workstation is also running Shared Document Services 12.x, you should delete all applications from the loader before you upgrade to GVX 2.1.

✦ **Note:** The GVX 2.1 XNS drivers now consume all 8 of the reserved driver slots, so if users have another device on the eighth slot, it will no longer work.✦

Upgrade process overview

Upgrading to GLOBALVIEW for X Windows version 2.1 involves five general steps. The following table lists these steps and describes what resource to use for each.

Step No.	Description	Refer to:
1.	Preserve user desktops	This appendix
2.	Upgrade UNIX to Solaris 2.3 or 2.4 (Optional)	Sun documentation and tools
3.	Clean up anything left of the old GV	This appendix
4.	Install GVX 2.1	Chapter 2, "Installing GLOBALVIEW"
5.	Restore user data	This appendix

What GV data to save?

Save these items before you upgrade your workstations.

License.dat file

If upgrading from GVX 1.0.x or GVX 2.0, a copy of your site's GVX license.dat file needs to remain available. You should save your old one if a network copy is not accessible via NFS.

- The GVX 1.0.x license file is stored as

  /xws/license/license.dat.

- The GVX 2.0 or 2.1 license is stored as

  /opt/XSoft/License/license.dat

✦ **Note:** If you purchased Database Access, Illustrators, or Japanese/Chinese Languages for the first time, you will need a new license.dat file.✦

User Desktops

It is critical to save your desktops containing all your user data.

Printer fonts

There are no changes to Printer Fonts. If you preserve your Printer Fonts, it saves you the reinstallation time.

✦ **Note:** Do not select the option to Preserve the Loader during the GVX Clean up Old GVX process.✦

✦ **CAUTION:** Before you upgrade UNIX to Solaris 2.3 or 2.4, make a note of where /xws points, and recreate that link by hand after upgrading UNIX and before upgrading to GLOBALVIEW for X Windows version 2.1. The XSoft Installation and System Administration Tool (XIST) uses the symbolic link /xws to locate an old version of GLOBALVIEW to be cleaned up.✦

Preserving user data

You should always backup important files before you attempt a major change like initializing a new operating system, even if you do not expect those files to be overwritten. User data you need to save consist of desktops and printer fonts. Your desktop directory contains your User Profile, so this is saved along with your desktop. If you do not choose to preserve printer fonts, you can reinstall them along with the rest of GVX 2.1.

You must preserve all user data if you upgrade UNIX to Solaris 2.3 or 2.4, because installing Solaris requires repartitioning the disks (in most cases). Installing Solaris 2.3 or 2.4 overwrites old GLOBALVIEW files located in the root, /etc, and /usr file systems.

Backup alternatives

To backup user data:

▸ Read the following options, and choose the one that is appropriate for your workstation configuration:

✦ **Note:** Don't use GV Cartridge Tape as a back up option. This application is not part of the GVX 2.1 release and you won't be able to restore your desktop from a GV tape. Refer to the "Using floppy disks and cartridge tapes" chapter in the *GLOBALVIEW for X Windows Workspace User Guide* for details on how to read old GV tapes in UNIX.✦

- If your workstation is on a Shared Document Services (XNS) network **and** the size of your desktop is less than 30 MB (61,200 GV disk pages), you can move your desktop to a file service when you log off GLOBALVIEW. Then you can upgrade to GVX 2.1, and retrieve your desktop when you first log on to GLOBALVIEW.
- If your workstation is on an XNS network, and you don't need to save everything on your desktop, you can save important files on a remote file drawer. Copy them to a remote file drawer before you upgrade. Then you can discard your desktop, upgrade to GVX 2.1, build a new desktop, and retrieve your important files.
- You can use GV Floppy Tool or Window to Unix File System to copy important desktop files to floppy disks. Then you can discard your desktop, upgrade to GVX 2.1, build a new desktop, and retrieve your important files.
- You can use gtar and compress commands to package the desktops and printer fonts in a UNIX tar file. The tar file can be stored on a local UNIX file system that you plan to preserve if you are upgrading UNIX, on another machine via NFS or ftp, or on tape using tar.

The rest of this section assumes you choose the gtar backup option, but you could use any of the other backup alternatives instead.

You need access to SunOS 4.1 and Solaris 2 versions of gtar. For your convenience, we have included the gtar utilities on the GLOBALVIEW CD in the Auxiliary directory. The directory contains a gtar.README file and both versions of the Gnu gtar utilities.

To backup and restore user data using a UNIX tar file:

1. Get a copy of the SunOS 4.1 version, Gnu gtar utility, located on the GLOBALVIEW CDROM in Auxiliary UNIX directory /gnu. Make sure that gtar is on your search path.

   ✦ **Note:** You must use Gnu gtar utility instead of the normal UNIX tar command because tar will not handle the very long UNIX file pathnames used in the GLOBALVIEW directory structure.✦

2. Type the following commands to backup your desktops and printer files:

   su root

   cd /xws

   gtar cfh - ./desktops ./system/printing | compress > gvx_backup_`uname -n`.gtar.Z

   ✦ **Note:** If any directories inside /xws/desktops are a link, the h switch to gtar will cause the file link points to be included in the tar file. When you restore from the tar file, the link is lost and all of the desktops end up in the same directory. You need to plan for the necessary space, or omit the h switch and tar/untar each linked directory separately.✦

   ✦ **CAUTION:** When you use gtar, you get a message that the file name is too long and is mangled to some name. This is normal and your gtar is successful. Ignore messages similar to the following:

   /gtar:
   ./desktops/A/Barbara:_Yeency::Alpha:ePA::Xcorp/080
   02008066C2F9ACD34.D/08002008066C2F9ACD35.
   D/08002008066C2F9ACD38.D/08002008066C2F9A
   CD3A.D/: is too long: mangling to @@MaNgLeD.1✦

3. Move the tar file to a safe place or tar it to tape.

4. Upgrade your workstation to Solaris 2.3 or 2.4 using the Sun documentation and tools.
5. Install GVX 2.1 using the instructions in Chapter 2, "Installing GLOBALVIEW." Do not start GLOBALVIEW yet.
6. Type the following commands to restore your files:

   su root

   cd /opt/XSoft/GVX
7. Retrieve your backup tar file from the UNIX location you saved it in step 3.
8. Type the following to get the desktops and printer files into your new directory structure:

   zcat gvx_backup_`uname -n`.gtar.Z | gtar xf -

   ✦ **Note:** If there is not enough space in /opt/XSoft/GVX for both the tar file and the original desktops, put the tar file on another file system and use that file system's full pathname in the restore command.✦
9. Start GLOBALVIEW.

   ✦ **Note:** As you retrieve your desktop, the system will inform you that a problem was found in your file system. This is because GVX needs to recalculate the size of your desktops, so this warning may be ignored.✦

Upgrading GV but not UNIX

If you want to remain on the same Sun Operating system version (SunOS 4.1.3 or 4.1.4 or Solaris 2.3 or 2.4), these are the steps to upgrade to the latest version of GLOBALVIEW.

1. Delete any Shared Document Services folders from the GVX applications loader. Do not de-install services.
2. Use XIST's SysAdmin Utils option, Clean up old GVX. Preserve desktops, but not the Loader. Preserving Printer Fonts is optional.
3 Use XIST to install GVX 2.1.
4. Reboot UNIX to load new drivers.
5. Start gvx.

Upgrading GV and UNIX

If you also want to upgrade the Sun Operating system version (SunOS 4.1.3 or 4.1.4 or Solaris 2.3 or 2.4), these are the steps to upgrade to the latest version of GLOBALVIEW.

1. Backup desktops and license.dat file.
2. Note paths to /xws, /xws/desktops, /xws/desktops/*, and /XWS/system/printing links.
3. Upgrade UNIX.
4. Recreate links
5. Use XIST to Clean Up Old GLOBALVIEW. Preserve desktops, but not the Loader. Preserving Printer Fonts is optional.
6. Use XIST to install GVX 2.1.
7. Reboot UNIX to load new drivers.
8. Restore desktops and license.dat
9. Start gvx.

Upgrading GV located on same disk as SunOS

If your GLOBALVIEW software shares a disk with part of SunOS, when you upgrade to Solaris 2.3 or 2.4 the file system containing GLOBALVIEW is overwritten. In this case, you must backup whatever data you wish to save, and restore the data after the upgrade.

Upgrading GV located on separate disk from SunOS

If your previous version of GLOBALVIEW is installed on a separate disk that contains only user data and NO SunOS files, you can save your desktops and printer fonts by telling the Solaris 2.3 or 2.4 installer to preserve the file systems where they are located. The disk partitioning panel of the Solaris 2.3 or 2.4 utility allows you to specify which disk partitions should be preserved during an install.

To preserve your desktops and printer fonts:

1. Type the following to list the directory locations of desktops and printer fonts:

   df /xws

   df /xws/desktops

   df /xws/desktops/*

   df /xws/system/printing

2. Note the file system locations in the Mounted on column.
3. Check the location of each of these directories in case GLOBALVIEW is installed across multiple file systems, with symbolic links connecting them into the /xws directory. Note the details of any links used before going on.
4. Depending on your configuration, upgrade your workstation to SunOS 4.1.3 or SunOS 4.1.4 or upgrade your workstation to Solaris 2.3 or 2.42.3 using the Sun documentation and tools.
5. If you need to save your license.dat file, do it now, before you run XIST.

   cp -p /xws/license/license.dat <ASafePlace>

6. Recreate by hand whatever links and directories are necessary for your desktops to be accessed as:

   /xws/desktops/A, /xws/desktops/B, and so on

7. Recreate by hand whatever links and directories are necessary for your printing volume to be accessed as:

   /xws/system/printing

8. Recreate the /xws link as

   ln -s /<filesystemContainingGV> /xws

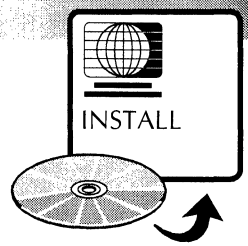
9. Run XIST, use the Cleanup Old GVX system administration option to remove all old GV files except the ones you really want to save. Make sure the Preserve desktops and Preserve Printer Fonts items are selected.

   ✦ **Note:** This cleanup option deletes the application loader and GVX Online Help.✦

10. Install GVX 2.1 using the instructions in Chapter 2, "Installing GLOBALVIEW."

Files that cannot be preserved

You will have to reinstall any third party screen fonts. For example, Adobe contour fonts need to be reinstalled from the vendor's original media after upgrading to GVX 2.1.



B. Installing the License Server

The License Service allows you to enable XSoft software using an industry standard method. It uses licensing software that automates the bookkeeping task of license distribution. The License Service uses TCP/IP protocols to communicate with the client workstations and provides the necessary authorization tokens. Each initial installation of GLOBALVIEW applications comes with a six-day, free license grace period.

The License Service's license file specifies the number of users allowed to use each feature at a customer site (i.e., number of licenses purchased). This license file is installed at the same node as the License Service and on every local GLOBALVIEW workstation. Licensing a feature is transparent to the user (the user does nothing to obtain licenses). Running a licensed feature generates a request for a license. When you first run a licensed feature, the application sends a request for a license to the License Service. If there are licenses available for that feature, the License Service grants the request and allows it to run.

The benefits are:

- You do not have to license each workstation separately.
- It is completely transparent to the end user.

Backward compatibility

If your site has a mix of GVX 1.x and GVX 2.x, you must be running the latest license manager (lmgrd). The following matrix describes this compatibility of versions of GVX with versions of the license manager (LM).

Version	GVX 1.0	GVX 1.0.5	GVX 2.x
LM 2.21 (delivered with GVX 1.0)	ok	ok	no
LM 2.4 (delivered with GVX 1.0.5 and 2.0)	ok	ok	ok

Configuration decisions

This section describes configuration decisions for:

- Selecting the server
- System resources
- Redundancy

Selecting the server

Using a License Service requires an on-site, knowledgeable License Server Administrator (LSA). To select a License Server the LSA must choose from workstations that are always available to the net. Don't select a workstation that is on a section of the net that could be isolated (bridge going down) or will frequently be rebooted.

If you are currently using Highland License Service (Flexlm), you do not need to choose an additional server. You could add the XSoft licensing daemon to this server (see "Server installation"). For standalone configurations (or networks not connected with TCP/IP), you must install a License Server on each workstation to run independently (see "Standalone installation").

System resources

The following information describes system resource requirements for the License Server. However, on a small net (20 workstation clients), system demands of the License Server will probably not be a major factor in choosing the server.

- Remote mounted disks are not recommended. All the License Server files should be on a locally mounted drive or the risk of failure and the loss of licenses is doubled (loss of either License Server or the remote file server could halt licensing).
- The log file is the only output file. Each transaction (checkin or checkout) is represented by a line in the file. Over time this file can become large and should be deleted routinely.
- After about 60 workstations are connected to the License Server, the available process file descriptors on most

systems will have been used. The xsoft_lmd automatically starts another copy of itself if it runs out of file descriptors. Depending on the size of your net, this could affect the number of processes involved.

- Each workstation client served by the License Server uses a socket. If you have hundreds of workstations on the net accessing licenses, you might need to confirm that your server kernel configuration allows for enough sockets.
- The License Server provides very little traffic on the net. Each transaction (checkin or checkout) is typically less than 1K of data.
- In general the License Server uses very little CPU time. However, on a large net you may want to make sure there are CPU cycles available.

Redundancy

The License Server supports the use of redundant servers. The License Server Administrator has the option to run the License Service on one, three, or five server node configurations. If the LSA chooses to run three servers, the servers will automatically connect to each other at initialization, establish a quorum, and decide which acts as the master server.

If the master server goes down, a secondary server picks up all current license status and connects to the application(s). This is done automatically, is transparent to the user, and does not affect licenses already in use. If a secondary server goes down, nothing will happen since the master and the other secondary server are still talking and there is still a quorum (a quorum is two servers in the three server configuration and three servers in the five server configuration). If the other secondary server goes down, the master will stop distributing licenses, as there is no longer a quorum.

If you do not wish to run redundant servers, and the server goes down, the license server client routines will begin the reconnection intervals. Licenses currently in use will not be affected, but no new licenses can be acquired until the server comes back and connection is reestablished.

If you choose to install multiple license servers, then you must use XIST to install the servers on either three or five machines, depending on your configuration.

Standalone installation

The License Service is normally installed on a server node on the TCP/IP network. For standalone workstations or networks not using TCP/IP, the License Service is installed at the local workstation running GLOBALVIEW. After installing GLOBALVIEW on your workstation, install the License Service by the procedure described in the "Server installation" section. The License File contains only one hostname and hostid. They are the name and id of the workstation.

Existing Highland Flexlm server

If your site is already using Highland's License Service Manager (Flexlm) from another software vendor, the installation of a new and separate License Server for your XSoft applications is not necessary. You can use one License Server to license software from multiple vendors. You will, however, need to run separate instances of the lmgrd since appending other vendor's files with the XSoft license.dat is not recommended. Remember that the port number on the server line in each license.dat file must be unique. Also, make sure you are running lmgrd version 2.1 or higher. The environment variable (LM_LICENSE_FILE) can be changed to point to multiple license.dat files or the same thing can be accomplished by directing the lmgrd instances to different license.dat files through the commands you use to launch them (for example, all on one line: % lmgrd -c /opt/XSoft/License/license.dat >> license.log &). Also see the "Multiple vendor daemons" section in this appendix.

Software installation

If you don't have the License File (license.dat) needed to complete the following installation, see the "Obtaining the License File" section in this appendix. You need the License File with your encrypted licensing to finish the License Server installation. Complete the License Enabling Request Form provided with the software and send it to Licensing Support. Instructions on how to complete this form are provided at the

end of this appendix. You can also obtain a copy of this form from your Sales Representative.

Installation of the License Service is a two-part process: local workstation installation and server node installation. Either the License Server Administrator or the end user can install the license file at their workstation. The License Server Administrator should install the server node. For standalone systems and all non-NIS nets, all license service software is installed on the local GLOBALVIEW workstation (see "Server installation").

Client installation

During GLOBALVIEW installation, the user might have installed the license.dat file on his or her workstation. The user installed the file from the directory specified after License Server Data File in the GLOBALVIEW configuration form. (See chapter 2, "Installing GLOBALVIEW," for installation instructions.) If the license.dat file was not available during installation, see the "Installing or updating the License File" section in this appendix.

The license.dat file provides the actual information used to locate the server(s) running the license service software.

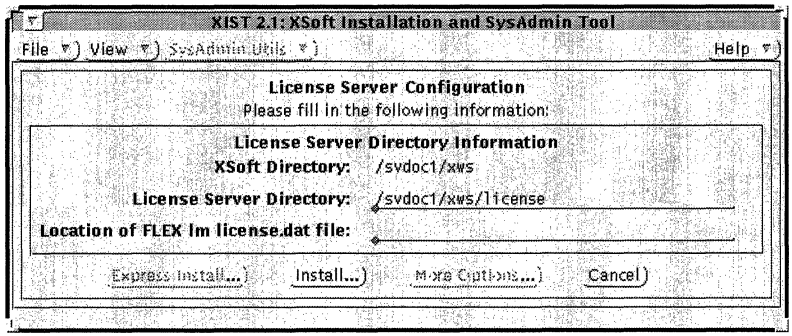
Server installation

You install the License Server, like GLOBALVIEW, using XIST. To run XIST, see chapter 2.

To install the server:

1. Select License Server option from the Applications Families menu.

   The License Server Configuration window appears.



2. Enter the full path for the license file.

   For Solaris 2.3 or 2.4:

   To access the license.dat from a local floppy drive, the volume manager must be running, type the following in a cmdtool or shelltool window:

   /usr/bin/volcheck

   and type the following in the XIST window:

   /floppy/floppy0/license.dat

   To access from a remote floppy drive on an NIS net, the volume manager must be running, type the following in the XIST window:

   /net/<machine name>/floppy/floppy0/license.dat

   For more information on paths for accessing the license.dat, see the "Installing or updating the License File" section in this appendix.

   If you do not have the license.dat available, this path can be left blank and a template file will be installed. You must install the license.dat file before the License Server can distribute licensing tokens. For information on obtaining or installing the license.dat file, see section "Installing or updating the License File" in this appendix.

   The License Server Configuration window also displays the path where the license server files are installed (a link is created so the files can be accessed at /opt/XSoft/License for compatibility with possible mixed networks of GVX 1.0.x and GVX 2.0/2.1).

3. Select Install... The Install window appears and displays the progress of the installation.

   A pop-up window appears during the license server install with information:

   For Solaris 2.3 or 2.4 platforms, on adding a file that automatically starts up the license server.

   For SunOS, check that you have the statements in your /etc/rc.local file if you want to automatically start the license server during booting.

4. After the installation is complete, select Exit XIST.

During installation the path /opt/XSoft/License is created and the following files are installed:

- lmgrd—license manager daemon
- xsoft_lmd—XSoft license daemon
- license.dat—licensing file
- lmdown—license manager tool (see the "Maintenance" section of this appendix)
- lmhostid—license manager tool (see the "Maintenance" section of this appendix)
- lmreread—license manager tool (see the "Maintenance" section of this appendix)
- lmstat—license manager tool (see the "Maintenance" section of this appendix)

After the install you can start the License Server with the commands shown below.

```
% cd /opt/XSoft/License
% ./ lmgrd -c /opt/XSoft/License/license.dat
>>license.log &
```

Summary

During the installation at the local GLOBALVIEW client, a License File was installed containing information necessary for the client libraries to locate each server node (1, 3, or 5) running the License Service. The local GLOBALVIEW workstation also has a timestamp.tmp file installed that allows

the workstation to run GLOBALVIEW without licensing for the grace period.

During installation, each server node has the License Service Manager (lmgrd), the XSoft vendor daemon (xsoft_lmd), and the license file (license.dat) installed (if the license.dat is not available then a template license.dat is installed).

For standalone systems, the License Service Manager, the XSoft vendor daemon, and the license file are installed at the local GLOBALVIEW workstation.

Installing or updating the License File

This section describes how you install or update the License File.

License File

The License File is the ASCII file that is used by the License Server to verify license usage and by the workstation to locate the License Server. The License File contains all the information about the licenses at a particular site, as well as the hostname and hostid of the server node(s) where the license daemons are running, and the name and location of the XSoft vendor daemon, xsoft_lmd. It contains the number of licenses purchased and encrypted codes which validate the license information for each feature. If the license file is not available at the installation of the License Server, a "template" is installed. The template is then replaced by the enabled License File supplied to you by Licensing Support (containing the encrypted license information), or the customer site License Server Administrator can enable the template License File by editing the file to include the encryption codes provided by Licensing Support.

Obtaining the License File

To obtain the License File for your site, you need to complete the License Request Form provided with the software, and send it to Licensing Support. The form requires information about the server(s) on which you will install the License Server

software. The intended License Server's name and id are required on this form because they are needed to create the License File that enables your software. If you are using a Sun workstation as the server, you can obtain this information by using the UNIX commands hostname and hostid, or uname -n and sysdef. The License Request Form can be obtained from your Sales Representative as well as information on how you contact License Support.

Use the following procedures to install the license file (if it was not available for the software install) or to update the license file (if changes have been made). The License Server cannot provide tokens until it has an enabled license.dat file. You can use these procedures for both the License Server and its client workstations.

Installing or updating the License File from a floppy drive

If you have a floppy drive available on your net, you can request that the license.dat be sent to you on floppy and use the SysAdmin Utility in XIST to copy the license.dat file from the floppy to your license server or workstation.

Local floppy drive

To install from a local floppy drive:

1. The volume manager must be running. Insert the license file floppy and enter the following:

   For Solaris:

   /usr/bin/volcheck

   For SunOS:

   mount /dev/fd0c /pcfs

   ✦ **Note:** If this does not succeed, see your UNIX System Administrator for the correct information.✦

2. Start XIST using the steps described in chapter 2.
3. Select the SysAdmin button in the XIST window.
4. Select Update License File option and enter the following path to your floppy drive in the XIST window:

   For Solaris:

   /floppy/floppy0/license.dat

For SunOS:

/pcfs/license.dat

5. Select Update License File.

   The SysAdmin utility copies the license file to the correct location.

After installing or updating the license.dat file at the License Server, you need to either run the License Service or, if it is already running, tell it to reread the license file.

To tell the License Service to reread the license.dat, see the instructions for lmreread in the "Maintenance" section. To run the License Service, enter the following lines:

```
% cd /opt/XSoft/License
% ./ lmgrd -c /opt/XSoft/License/license.dat
>>license.log &
```

Remote floppy drive

To install from a remote floppy drive:

1. The directory must have been exported. Insert the floppy and enter the following:

   For Solaris:

   /usr/bin/volcheck

   For SunOS:

   mount /dev/fd0c /pcfs

   ✦ **Note:** If this does not succeed, see your UNIX System Administrator for the correct information.✦

2. Start XIST using the steps described in chapter 2.
3. Select the SysAdmin button in the XIST window.
4. Select Update License File and enter the path to the remote drive in the SysAdmin Utilities window. If your net uses NIS, then the path you enter for the XIST SysAdmin utility has the following form:

   For Solaris:

   /net/<machine name>/floppy/floppy0/license.dat

   For SunOS:

   /net/<machine name>/pcfs/license.dat

5. Select Update License File. The SysAdmin utility copies the license file to the correct location.

   ✦ **Note:** If you are not using NIS, you need to ask your LSA how to connect to the remote drive (edits to /etc/hosts and /.rhosts files may be required).✦

After installing or updating the license.dat file at the License Server, you need to either run the License Service or, if it is already running, tell it to reread the license file.

To tell the License Service to reread the license.dat, see the instructions for lmreread in the "Maintenance" section. To run the License Service, enter the following lines:

```
% cd /opt/XSoft/License
% ./ lmgrd -c /opt/XSoft/License/license.dat >>
license.log &
```

Editing the License File

If you do not have a floppy drive available to the server that you will be using, then you may have to edit the template license.dat file. If the enabled license.dat is not available at the time the License Service is installed, XIST installs a template license.dat file. This file is similar to an enabled license.dat but lacks the hostname and id and the encryption codes that enable the License Server to actually distribute license tokens.

The encryption codes can be obtained by following the same process as you use to get the license.dat file on floppy (see "Obtaining the License File"). You can request that the license file information be provided by hardcopy (fax or mail).

To add the encryption codes you can edit the template by using any edit tool you choose. OpenWindows provides an easy-to-use Text Editor. You can access it from OpenWindows by clicking the mouse (usually the right button) on an empty area of the desktop, selecting Programs, and then selecting Text Editor from the submenu. Once the Text Editor opens, select File. Then enter the Directory (/opt/XSoft/License), the File (license.dat), and then select Load File. Add the information to match the copy of license.dat you have been provided. To save your edited file, select File.

After installing or updating the license.dat file at the License Server, you need to either run the License Service or, if it is already running, tell it to reread the license file.

To tell the License Service to reread the license.dat, see the instructions for lmreread in the "Maintenance" section. To run the License Service, enter the following lines:

```
% cd /opt/XSoft/License
% ./ lmgrd -c /opt/XSoft/License/license.dat >>
license.log &
```

Non-floppy install or update through NIS

If you stored your license.dat file to a location on your NIS net, you can direct the SysAdmin utility to follow this network path to copy the license.dat file. This can be useful if changes are made to the license. Use the SysAdmin utility to make local copies for each workstation and license server from the one that you edited.

After installing or updating the license.dat file at the License Server, you need to either run the License Service or, if it is already running, tell it to reread the license file.

To tell the License Service to reread the license.dat, see the instructions for lmreread in the "Maintenance" section. To run the License Service, enter the following lines:

```
% cd /opt/XSoft/License
% ./ lmgrd -c /opt/XSoft/License/license.dat >>
license.log &
```

Non-floppy install or update through XNS

If the license.dat is stored in an XNS file drawer, you can move the file to a location on the NIS net by using the Window to UNIX File System (WUFS) icon on any GVX workstation. After the file is on the NIS net, use the process described in the section, "Non-floppy install or update through NIS," to install it. When you move the file, set the WUFS properties for UNIX format.

If your network does not use NIS, then you are using the standalone configuration. You store and move the license.dat through XNS net to the correct device and then use the WUFS, (select UNIX format), to put the file in the /opt/XSoft/License directory.

Maintenance

This section describes maintenance considerations.

Monitor and control tools for the server

The LSA uses the following tools to monitor and control the License Service:

- lmdown lets you gracefully bring down all license daemons (if you are a member of either the lmadmin group or group 0). The -c option in the command is required to specify a path.

  /opt/XSoft/License/lmdown -c
  /opt/XSoft/License/license.dat

  ✦ **Note:** Group 0 is the "wheel" group; root is a member. For more information see your UNIX documentation.✦

- Use /opt/XSoft/License/lmhostid to determine any server's hexadecimal hostid.

- lmreread allows the license manager to reread license.dat. This is only necessary if the license manager is having problems or if the license file has changed. The -c option in the command allows you to specify a License File, otherwise lmgrd will reread the file name it originally read.

  /opt/XSoft/License/lmreread -c
  /opt/XSoft/License/license.dat

- lmstat reports the status of all license manager and feature usage. It shows active daemons and which station uses what features.

  /opt/XSoft/License/lmstat -c
  /opt/XSoft/License/license.dat -A

Options for lmstat include:

-a	display everything
-A	list all active licenses
-c <license_file>	use license_file
-f [feature]	list all users of specified feature(s)
-l [regular exp]	list all users of the features matching the given regular expression
-s [server]	display status of the specified server node(s)
-S [daemon]	list all users of the specified daemon's features
-t <timeout>	override 10 second daemon timeout

Troubleshooting

Running a feature generates a request for a license, which causes one of the following:

- The request for a license is granted, and the feature is allowed to run.
- The request for a license is denied.

  ✦ **Note:** During the grace period, the XSoft application will run even if the request is denied.✦

  The request is denied if:

  — There are no licenses available for the specified feature

  — Connection is lost to the License Server

  — License file data mismatch

  — Corrupt license file

  — Corrupt license daemon

The following message appears:

<multinational feature name> cannot run: {License Error I Unix Error} #<error code>

License error codes are described later in this appendix.

Log file

The log file (license.log) is the output file that tracks each transaction. Each checkin or checkout is represented by a line in the file. This file, which is found in /opt/XSoft/License, is another tool that you can use to track problems and monitor normal functioning of the License Server.

Each line in the log file gives the time of the transaction (mm/dd hh:mm), daemon name, and a message. If the daemon name is followed by an underscore (_) and a number, this indicates a forked daemon. The message indicates if a token is being checked out or in, or being denied. You use this to monitor activity and indicate when you need to increase the number licenses.

The license.log file continues to append new lines. Over time this file gets larger and should be routinely deleted to conserve space.

Missing tokens

When the user terminates GLOBALVIEW, (logoff with "Quit"), the License Service pulls back all licenses that were in use by that workstation. If the user logs off GLOBALVIEW with the Idle or Suspend options, all licenses remain with the workstation and are available to that station when GLOBALVIEW resumes.

When accounting for missing tokens, be sure to consider suspended workstations. You can use the lmstat utility to help you track tokens.

✦ **Note:** The License Service client routines provide a timer handler to support License Service pinging at a specified interval (a heartbeat). If GLOBALVIEW is interrupted, the License Service will detect that the heartbeat has stopped and will take back all licenses after the specified interval expires.✦

Multiple vendor daemons

If you are using one License Server to license applications from several vendors, you may have problems if you mix software levels of the vendor daemons. Also, earlier versions of Flexlm had limitations not found in the latest version. If you are not using version 2.1 or later, you need to update your files.

Our install does not append multiple license files together. XSoft does not recommend this practice.

✦ **Note:** If you are using another UNIX application that is licensed by the FlexLM License Server, you must be sure your LM_LICENSE_FILE environment variable references both License.dat files. For example, this command all on one line:

setenv LM_LICENSE_FILE /home/lmgrd_dir/license.dat:/opt/XSoft/License/license.dat✦

Editing license.dat

If your company wants to purchase more license tokens or add a feature, Licensing Support will provide you with a new license file. The LSA will be able to install the new license file without having to bring the License Service down. See the section, "Installing or updating the License File," for more information.

Glossary

End user—The person using the XSoft application software.

Feature—In this document, a feature is an entity corresponding directly to a GLOBALVIEW application or another XSoft software application.

Internal Feature Name—The feature name that appears in the license file. The License Service uses this name to maintain and distribute licenses, and therefore it must be unique. The internal feature name is the same even in the localized product versions.

License—Permission to use a feature.

License File—See license.dat.

License Server Administrator (LSA)—The system administrator at the customer's site responsible for customizing and monitoring the License Service.

License Service—The License Service is responsible for handling requests for licenses. It keeps track of the number of licenses checked out, who has them, and the number of available licenses.

Licensed Feature—A feature, or an application package, that requires a license before it can be used.

license.dat—An ASCII file that lmgrd uses when it receives requests for licenses to monitor license allocation. It contains all the information about the licenses at a particular site, as well as the hostname and hostid of the server node where the license daemons are running, and the name and location of the XSoft vendor daemon, xsoft_lmd. It lists the number of licenses purchased and encrypted codes which validate the license information for each feature.

lmdown—Highland utility used to bring down the license server daemons. Must be member of lmadmin group or group 0 to use this.

lmgrd—Highland License Manager daemon. This process runs on the server node and monitors license allocation.

lmhostid—Highland utility used to get a workstation's hostid.

lmreread— Highland utility used to tell license daemon to re-read the license file when changes have been made.

lmstat—Highland utility used to check the status of the license manager and application licenses.

Server node—A computer system that is running the license manager software, usually a remote server.

Time stamp File—See timestamp.tmp

timestamp.tmp—Time stamp file used to support a six-day grace period for GLOBALVIEW applications after initial install.

xsoft_lmd—XSoft vendor daemon. This process runs on the server node and handles licensing of all XSoft applications.

Error codes

License Error (-1): NOCONFFILE - cannot find license file.-- license data files were not properly installed on client workstation or LM_LICENSE_FILE environment variable not set correctly.

License Error (-2): BADFILE - invalid license file syntax. License file may have been modified - this XSoft file should not be modified in any way.

License Error (-3): NOSERVER - cannot connect to license server.

License Error (-4): MAXUSERS - licensed number of users already reached.

License Error (-5): NOFEATURE - no such feature exists. -- application license name is not in the license file.

License Error (-6): NOSERVICE - no TCP 'license' service exists.

License Error (-7): NOSOCKET - no socket connection to license manager server.

License Error (-8): BADCODE - encryption code in license file is inconsistent. License file may have been modified - this XSoft file should not be modified in any way.

License Error (-9): NOTTHISHOST - invalid host.

License Error (-10): LONGGONE - feature has expired.

License Error (-11): BADDATE - invalid date format in license file.

License Error (-12): BADCOMM - invalid returned data from license server.

License Error (-13): NO_SERVER_IN_FILE - no SERVER lines in license file.

License Error (-14): BADHOST - cannot find SERVER hostname in network database.

License Error (-15): CANTCONNECT - cannot connect to license server. -- license daemon on remote server is not running.

License Error (-16): CANTREAD - cannot read data from license server.

License Error (-17): CANTWRITE - cannot write data to license server.

License Error (-18): NOSERVSUPP - license server does not support this feature.

License Error (-19): SELECTERR - error in select system call.

License Error (-20): SERVBUSY - license server busy (no majority).

License Error (-21): OLDVER - license file does not support this version.

License Error (-22): CHECKINBAD - feature checkin failure detected at license server.

License Error (-23): BUSYNEWSERV - license server temporarily busy (new server connecting). Try again.

License Error (-24): USERSQUEUED - users are queued for this feature. Try again.

License Error (-25): SERVLONGGONE - license server does not support this version of this feature.

License Error (-26): TOOMANY - request for more licenses than this feature supports.

License Error (-27): CANTREADKMEM - cannot read /dev/kmem.

License Error (-28): CANTREADVMUNIX - cannot read /vmunix.

License Error (-29): CANTFINDETHER - cannot find ethernet device.

License Error (-30): NOREADLIC - cannot read license file.

License Error (-31): TOOEARLY - feature not yet available.

License Error (-32): NOSUCHATTR - no such attribute.

License Error (-33): BADHANDSHAKE - bad encryption handshake with daemon.

License Error (-34): CLOCKBAD - clock difference too large between client and server.

License Error (-35): FEATQUEUE - in the queue for this feature.

License Error (-36): FEATCORRUPT - feature database corrupted in daemon.

License Error (-37): BADFEATPARAM - duplicate selection mismatch for this feature.

License Error (-38): FEATEXCLUDE - user/host on EXCLUDE list for feature.

License Error (-39): FEATNOTINCLUDE - user/host not on INCLUDE list for feature.

License Error (-40): CANTMALLOC - cannot allocate dynamic memory.

License Error (-41): NEVERCHECKOUT - feature was never checked out.

License Error (-42): BADPARAM - invalid parameter.

License Error (-43): NOKEYDATA - no Flexlm key data supplied in lm_init() call.

License Error (-44): BADKEYDATA - invalid key data supplied.

License Error (-45): FUNCNOTAVAIL - Flexlm function not available in this version

License Error (-46): DEMOKIT - Flexlm software is demonstration version.

License Error (-47): NOCLOCKCHECK - clock setting check not available in daemon.

Format of the License File

The License File is an ASCII file containing all the information about features and how they are licensed. The XSoft License File contains three sections: Server, Daemon, and Feature. Each section includes one or more lines of information about that section. The format is as follows (words in all caps are keywords that must appear in the file):

Server Line Format (1, 3, or 5 lines):

SERVER nodename id optional-port-number

nodename is the string returned by the Unix hostname or uname -n commands

id is the string returned by the lmhostid or sysdef commands

optional-port-number is the TCP port number to use

Daemon Line Format (1 line):

DAEMON daemon-name path

daemon-name is the name of the XSoft daemon used to serve some feature(s) in the file

path is the pathname to the executable code for this daemon

Feature Line Format (1 line for each feature):

FEATURE name daemon version exp-date #users code "vendor-string" hostid

name is the name of the feature

daemon is the daemon-name from a DAEMON line - this specified daemon serves this feature

version is the version of this feature that is supported (to 3 decimal places)

exp-date is the expiration date in the format: dd-mmm-yy - if the year is set to 0, the feature will never expire

#users is the number of licensed users for this feature

code is the encryption code for this feature

"vendor-string" is the vendor defined string enclosed in double quotes - can contain any 64 characters except a quote (and can be empty as shown in the example)

hostid is the string returned by "lmhostid" or UNIX commands such as hostid or uname -n

Example License File

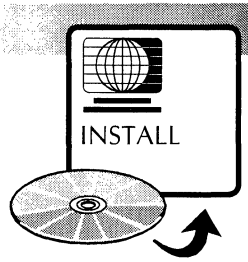
The following License File example provides 150 licenses for each feature, and has a set of three License Server nodes:

```
SERVER raven 52000729 1700
SERVER macbeth 51005b03 1700
SERVER penterra 55408b3e 1700
DAEMON xsoft_lmd /opt/XSoft/License/xsoft_lmd
FEATURE GVX_Write xsoft_lmd 1.000 1-jan-99 150 6B36F0A1037131FB5E53 "" ANY
FEATURE GVX_Draw xsoft_lmd 1.000 1-jan-99 150 6BB66001BE52AD86F7A7 "" ANY
FEATURE GVX_Paint xsoft_lmd 1.000 1-jan-99 150 7B9620B1FA43BCCD5E48 "" ANY
FEATURE GVX_Chart xsoft_lmd 1.000 1-jan-99 150 6BE610C128814DD17B60 "" ANY
FEATURE GVX_List xsoft_lmd 1.000 1-jan-99 150 1B76E051AD7023770217 "" ANY
FEATURE GVX_Calc xsoft_lmd 1.000 1-jan-99 150 FB06C08132741C5FF0A5 "" ANY
FEATURE GVX_Equations xsoft_lmd 1.000 1-jan-99 150 DBF6B021345ACE88F9E6 "" ANY
FEATURE GVX_Data_Capture xsoft_lmd 1.000 1-jan-99 150 DB66D0318F43121E6760 "" ANY
FEATURE GVX_Pro_Illustrator xsoft_lmd 1.000 1-jan-99 150 8B166041F035627A8161 "" ANY
FEATURE GVX_Chemical_Illustrator xsoft_lmd 1.000 1-jan-99 150 CB7640F1DBA6302A5B06 "" ANY
FEATURE GVX_ViewCards xsoft_lmd 1.000 1-jan-99 150 2B46A0316CB499A0466A "" ANY
FEATURE GVX_Japanese_Text_Capability xsoft_lmd 1.000 1-jan-99 150 AB9660513DF8B18F367B "" ANY
FEATURE GVX_Chinese_Text_Capability xsoft_lmd 1.000 1-jan-99 150 6B368071E52B646178C5 "" ANY
FEATURE GVX_Arabic_Text_Package xsoft_lmd 1.000 1-jan-99 150 CB46F0F15AEDB7DB6BCB "" ANY
FEATURE GVX_Hebrew_Text_Package xsoft_lmd 1.000 1-jan-99 150 9B56206140CF9267E66D "" ANY
FEATURE GVX_Network_Access xsoft_lmd 1.000 1-jan-99 150 CB06807177A65971AB89 "" ANY
FEATURE GVX_Shared_Books xsoft_lmd 1.000 1-jan-99 150 2BC6C081CC1BE4B75068 "" ANY
FEATURE Document_Search_and_Retrieval xsoft_lmd 1.000 1-jan-99 150 ABF620E1529A2DBD26CD "" ANY
FEATURE DSR_Administration_Applications xsoft_lmd 1.000 1-jan-99 150 ABF670010DC32FD8DAC2 "" ANY
FEATURE GVDS_File_Service xsoft_lmd 1.000 1-jan-99 150 6BD620312E654EB25D7E "" ANY
FEATURE GVDS_Mail_Service xsoft_lmd 1.000 1-jan-99 150 7B6610813653668B4F75 "" ANY
FEATURE GVDS_Print_Service xsoft_lmd 1.000 1-jan-99 150 4B3640417E5D4BDE3E39 "" ANY
```

License Request Form tips

The License Server Administrator uses a License Request Form to request the license file to enable XSoft applications. There is a two-part form for this purpose included with your software.

Be sure to enter the server information clearly on the License Enabling Form. You may also obtain a copy from your Sales Representative. Be sure you copy the completed form before sending it to Software Support for the license file.



C. Information for System Administrators

This appendix provides System Administrators additional information about the XSoft Installation and System Administration Tool (XIST).

This appendix is divided into three main sections:

- The installation process.
- Directories—Describes each directory, file, and program in the installation package.
- GVX Online Help installation considerations—Explains the modifications that XIST makes to the XKeysymDB file.

The installation process

When you use XIST to install or upgrade the software, the applications are copied in the NSInterop format (used by WUFS) from the cd to a UNIX directory. When GLOBALVIEW starts up, they are moved from the UNIX directory into the Loader. During startup, GLOBALVIEW automatically checks this UNIX directory and copies any applications it finds there into the Loader before beginning the application autorun process.

When you perform an installation, you use the following XIST windows (see chapter 2 for detailed descriptions of these windows):

Main XIST window You select the product family to start the installation. XIST prompts you through the process. For GVX, there are two installation methods, Express or Custom. You can use Custom install on a first installation, select Save Template during the installation, and then use Load Template to install that configuration on other workstations.

If you choose the SysAdmin button, XIST displays a pop-up option list and you can choose the desired administration functions.

Configuration During installation, a product family can require optional configuration information such as destination UNIX directories, networking information, licensing information, or other configuration options.

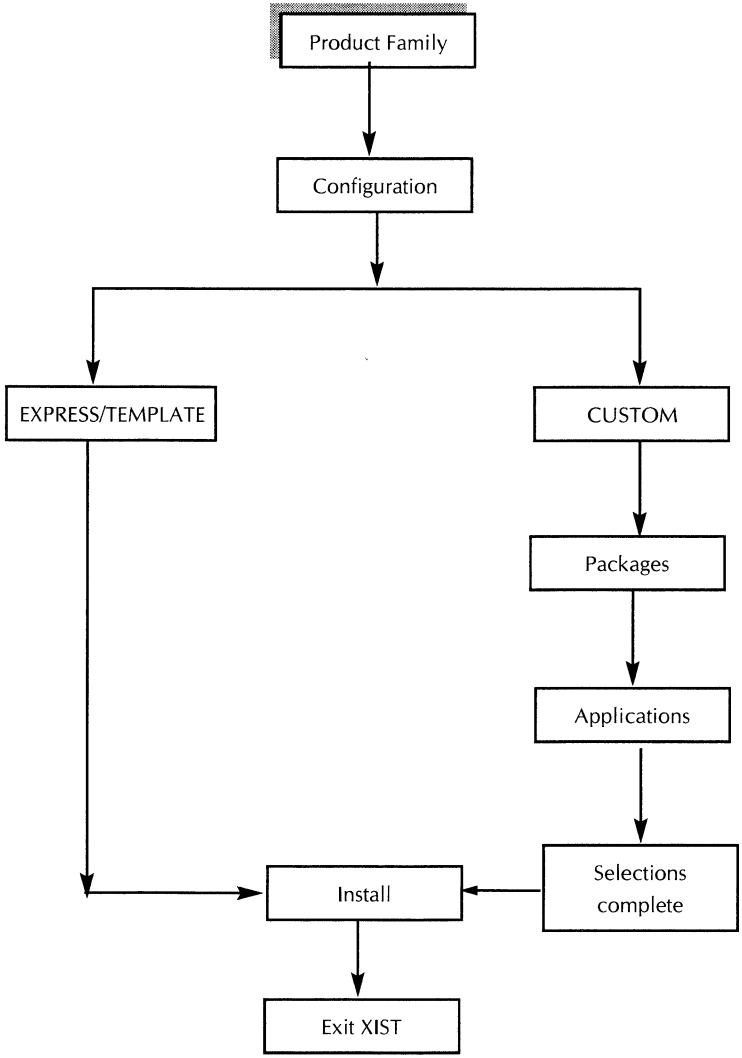
Packages With the Custom install, you select which packages to install and if the package contains more than one application, which applications to install.

Applications XIST provides a detailed list of each application in the package. You can select applications individually, select all applications, or clear all selections. Dependencies are automatically included to be installed, even if you do not select them.

Feedback Once you have selected configuration, packages, and applications and have selected installation, a feedback window is displayed to show the progress of the installation.

Information By selecting the Installed messages option from the View window, you can display the information window at any time to see feedback during installation. This window is displayed automatically when the installation process is complete.

The following figure shows how you progress through XIST to complete an installation. You can choose the Express, Template, or the Custom installation method.



Template applications list

This list depends on what selected applications are saved when you initially used Save Template during your first Custom install of GLOBALVIEW for X Windows, version 2.1. You can store the saved template to a UNIX location and use it for subsequent installations of the same application set.

Express applications list

Using the Express installation option installs these applications.

Base package

Window to UNIX File System
Disk Space Warning
Registration Tool
GV Network Access (if XNS is selected)

Additional Applications

Document Viewer (read-only GV Write, will not run if GV Write is running)
GV Write
CUSP Buttons
File Conversion of XIF Documents
File Conversion of Raster Graphics
Illustrator Basics
Keyboard Accelerators
Link To Mastersoft Word For Word
Open Doc Print
Sun Raster Converter
UNIX Printing
GV Draw
GV Chart
GV Paint
Spelling Checker
Table of Contents Generator
U.S. English Hyphenation
U.S. English Lexicons
Mail (if XNS is selected)
Remote Printing (if XNS is selected)
Reference Icons (if XNS is selected)
GV Shared Books (if XNS is selected)

Fonts

VP Xerox Modern Fonts
VP Xerox Classic Fonts
VP Terminal Fonts
VP Helvetica 300 Fonts Widths
VP Times 300 Fonts Widths
VP Optima 300 Fonts Widths
VP Courier Fonts Widths

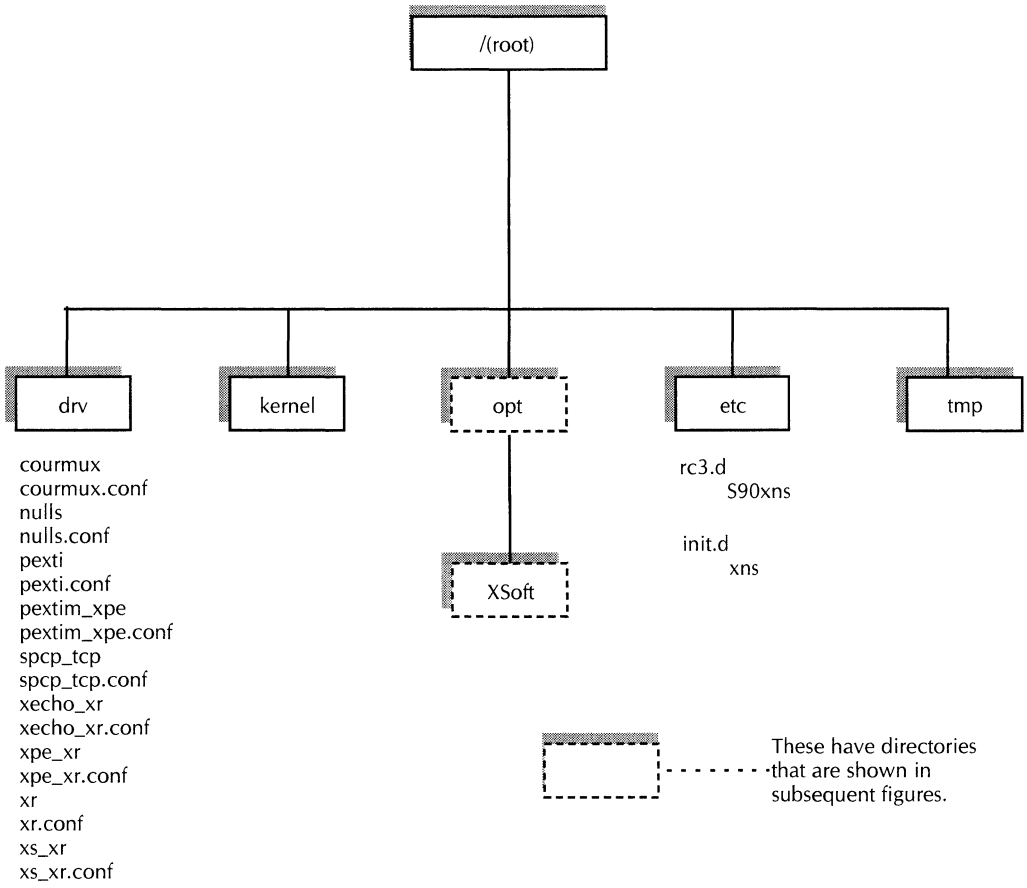
✦ **Note:** If you want to customize the Express installation list for your site, please refer to Appendix D, Hints and tips section.✦

Directories

Installation software consists of numerous directories, programs, and files in a hierarchical structure. This section shows the software structure and describes each directory, program, and file in the structure.

/(root) directory

The UNIX /(root) directory contains GLOBALVIEW files and directories as shown in the following figure. The directory must be on a local file system (not remote).



The /(root) directory contains the following five directories:

- kernel—A UNIX directory for Solaris 2.3 and 2.4 configurations.
- drv—A directory containing the device drivers and programs that implement the XNS communication driver.
- dev—for SunOS platforms only

  xnsdrv.o—A device driver that implements the XNS communication driver. The following five programs manipulate the xnsdrv.o device driver.

xnsdrv.DEINSTALL—A program that deinstalls the xnsdrv.o driver.

xnsdrv.INSTALL—A program that installs the xnsdrv.o driver.

xnsdrv.LOAD—A program that loads the xnsdrv.o driver.

xnsdrv.MKDEV—A program that creates the xns device.

xnsdrv.RMDEV—A program that removes the xns device.

- opt—This can be a UNIX partition or a UNIX directory. The contents of this directory are described in the opt directory section of this appendix.
- etc—A UNIX directory that contains the rc3.d and init.d directories. S90xns is a file in rc3.d and xns is a file in init.d..
- tmp—A UNIX directory, usually for temporary storage. This directory should have at least 18 MB of available disk space. During installation, XIST uses this directory to store temporary data files.

opt directory

The opt directory contains the XSoft directory which contains ten directories as shown in the following figure.

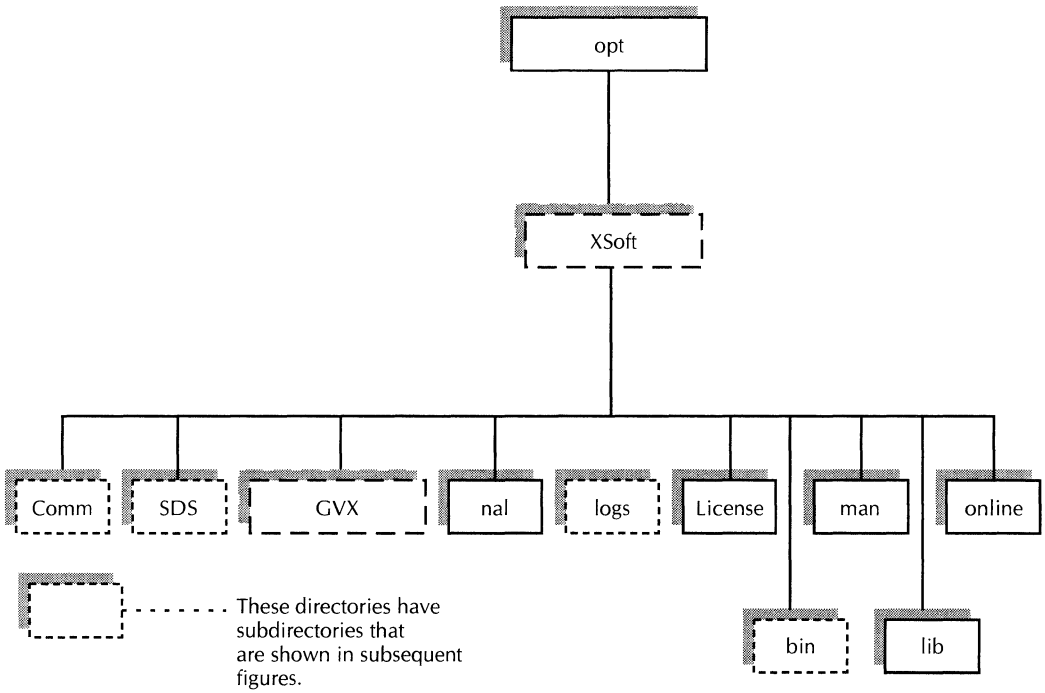
The online, License, man, lib, and nal directories are described below. The remaining directories are described in subsequent sections.

online—A directory created to store the GLOBALVIEW online help database.

License—A directory created to store the license.dat file and license server files, if installed.

man—A directory (currently empty) that contains manual pages.

lib—A directory (currently empty) that may contain library files that applications may need to link with when they are started.



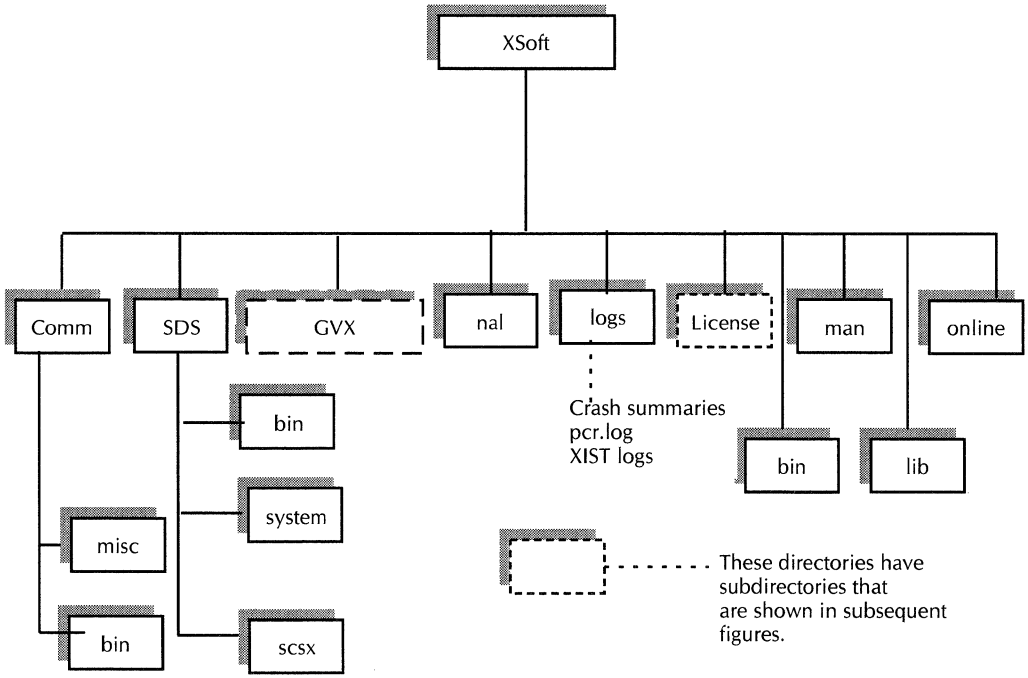
nal—A directory created to store the Network Administration Library (NAL) database.

XSoft directory

The following figure shows the XSoft directory and details of the logs, SDS, and Comm directories.

The logs directory contains the following files:

- xistconfig.log—A log file that records gvx configuration errors.
- install.log—A file used during installation to record which items are installed and when they are installed.
- XWSCrashSummary—This file is created after a system crash. It records the condition of the stack and other



pertinent information that will aid in recovery after the crash.

- XWSCrashSummaryPrevious—If there is a system crash and an XWSCrashSummary file already exists, the existing file is renamed XWSCrashSummaryPrevious. A new XWSCrashSummary file is then created.
- pcr.log—A file that contains detailed information about the internal workings of the currently running instance of GLOBALVIEW.

✦ **Note:** Shared Document Services 12.x **cannot** be installed on a system running GLOBALVIEW for X Windows version 2.0.✦

The Comm/bin directory contains information on Shared Document Services. It contains these files for Solaris 2.3/2.4:

- install.ap
- p2552.v1
- p3.v3
- p32.v1
- tihelper
- xnssetup.csh
- xnsstart
- xnstime
- xnsup
- xnsup.awk

It contains these files for Solaris 1.1.x (SunOS 4.1.3/4.1.4):

- p2500.v1
- p3.v3
- pex2500.v1
- tihelper
- xnsdrv.INSTALL
- xnsdrv.o
- xnssetup.csh
- xnsstart
- xnstime
- xnsup
- xnsup.awk

The SDS/bin directory contains the shared document services application code for the following.

- gvx.autorun—A script that supports services that the user wants to run automatically. It continually runs gvx.
- init_genesis—A program that is installed with Shared Document Services (SDS) and creates a services genesis file.
- setty_program—A program for administering Document Services through a command line interface.

The SDS/system directory contains the shared document services application code for the following.

- XNSusers—A file containing the list of authorized File Service users. This list is used to confirm that a user has access to the files.

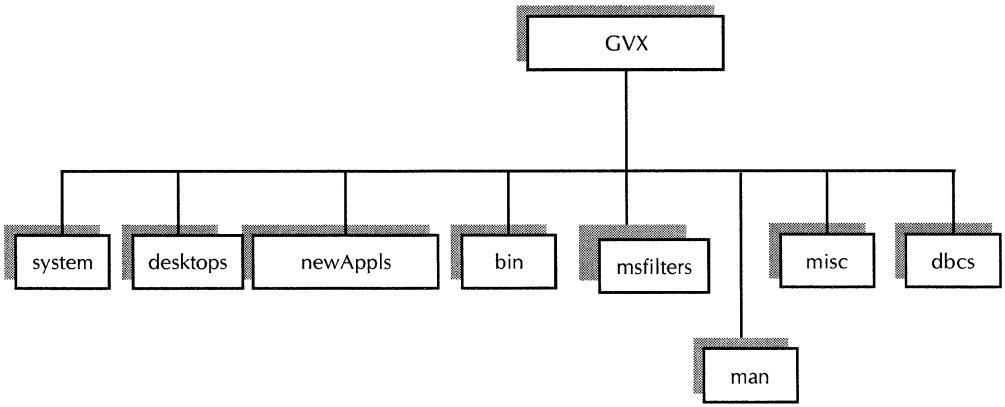
- xnsfs—A directory containing the File Service configuration.
- config—A file describing the File Service configuration.

The scsx directory contains the scsx application code.

- bs5800—A top level directory that must be used. It contains the files needed for File Service and scsx.

GVX directory

As shown in the following figure, the GVX directory contains eight directories.



system—A GLOBALVIEW directory that contains printing, ns, bwsdata, and bin directories (these are explained in the next section).

desktops—A GLOBALVIEW directory that contains workspaces.

newAppls—A GLOBALVIEW directory that contains applications that will be installed with the next boot of GVX. These applications are copied from this directory into the Loader when GLOBALVIEW is started.

bin—A GLOBALVIEW directory that contains programs that are needed to run GLOBALVIEW.

msfilters—A directory containing Mastersoft Word for Word filters. These filters are third-party conversion software. For

example, a filter might convert a document format from WordStar to GLOBALVIEW format.

man—A directory that may contain a manual page.

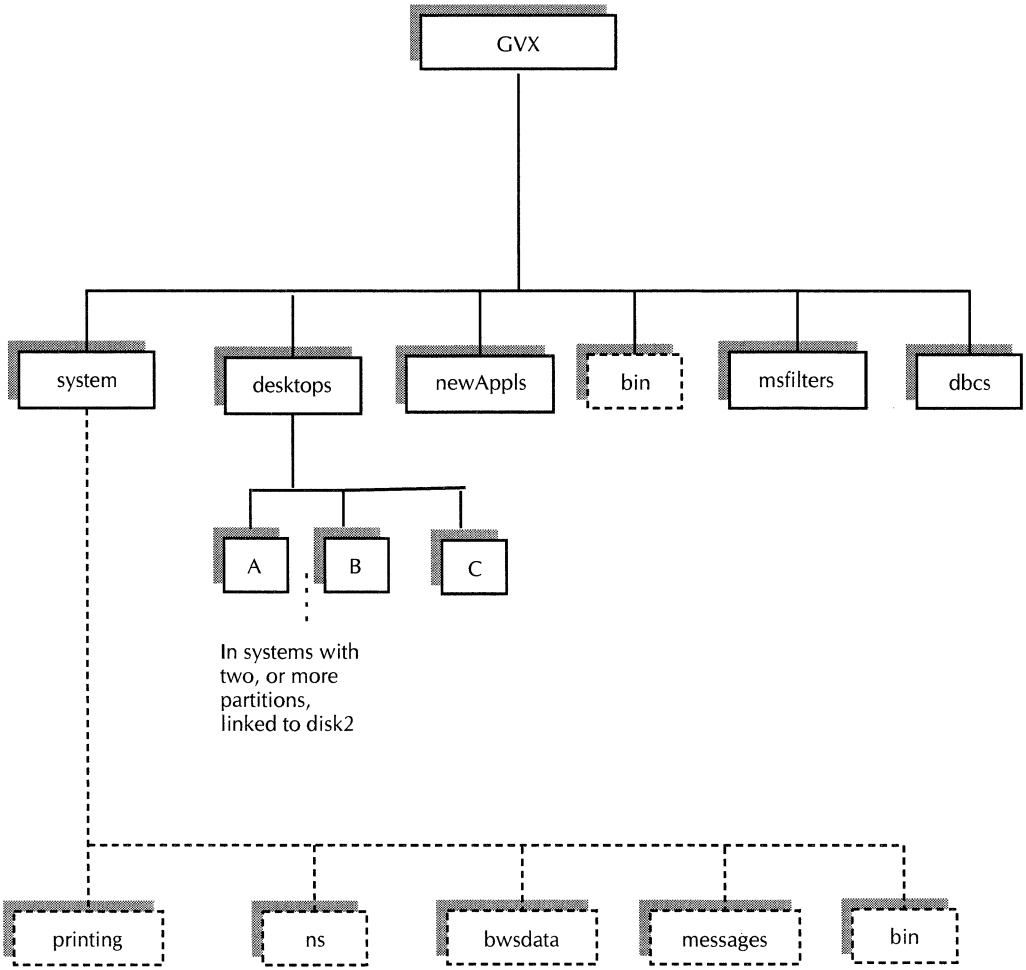
The misc directory contains the following files:

- localTimeZone—The time zone that has been selected from the data file.
- localTimeParameters—A data file containing time zones offset from GMT.
- timezoneinput.csh—A program that is referenced by the system. If a local Time Zone file does not exist, the program will prompt the user to select an appropriate Time Zone.

dbcs—An optional directory where UNIX executable and data files are stored for use by GV Database Access software.

system directory

The system directory contains the directories shown in the following figure:



The /system/printing directory is created by the Print Service and contains the printingvol directory. This is a directory of

printing functions such as fonts, break pages, and other data needed by the printer.

The /system/ns directory is part of the GLOBALVIEW system volume and contains the Loader. New applications are copied from the newAppls directory into this Loader.

The ns directory contains the following files:

- IDMap—A UNIX directory for GLOBALVIEW files. It is a map that lists each GLOBALVIEW file.
- IDLog—A log of GLOBALVIEW file transactions. This log is used for crash recovery operations.
- lock—This causes your /opt/XSoft directory to be locked so that no one can gain access to it via GVX while you are using the workstation.
- tmp—A temporary storage area used by ns.

The /system/bwsdata directory contains the following files:

- *.TIPC,*.Icons—System keyboard and icon files.
- *.brush—Files containing the brushes used in Pro Illustrator graphics applications.
- WorkstationProfile—A data file containing internal software settings for GLOBALVIEW. The settings apply to all GV users of that machine. It supports such features as icon types, multinational settings, etc. For example, you can set the GLOBALVIEW default language.
- DefaultUserPalettes/Profile—The default settings for icon colors. These default colors appear the first time the system is started.
- ProductFactoring.cache—A data file used by the old product factoring scheme for backward compatibility.
- DefaultStartupSW.data—A BWS data file containing the default settings used for startup software.
- Software.options—A data file used by the old product factoring scheme. It lists available software options.
- System.novafont—A file that contains the system font used for text in the workstation icons.

System/bin is a UNIX directory of executable files and contains the following files:

- XWSCleanup—A GLOBALVIEW script that cleans up the system after a crash.
- GVXPackage—The actual GLOBALVIEW executable.
- XWSScript—Internal script for starting GLOBALVIEW.
- gvfilelist—A data file.
- systemversion—A file that contains the GLOBALVIEW version number and other software related information.

bin directory

Bin is a UNIX directory of executable files and contains the following files:

- gethost and gethostbyname—The GLOBALVIEW initiator and the X server use these programs to connect to the X server.
- gvx—A program or script that starts GLOBALVIEW. If it is a script, the real initiator is gvx.initiator.
- createGVXUnixMailBoxes—One of three programs that is installed when the user installs GVX to UNIX mail. Other programs that must be installed when installing GVX to UNIX mail are: gvxdecode and gvxsend.
- gvxdecode—One of three programs that are installed when the user installs GVX To UNIX Mail. Other programs that must be installed when installing GVX To UNIX Mail are: createGVXUnixMailBoxes and gvxsend.
- gvxsend—One of three programs that is installed when the user installs GVX To UNIX Mail. Other programs that must be installed when installing GVX To UNIX Mail are: createGVXUnixMailBoxes and gvxdecode.
- backstop_window—If there is a system crash and appropriate messages cannot be displayed, this program will open an X window so you can see the crash log.
- gvx.initiator—The GLOBALVIEW initiator program.

Links

This section shows the various links used by the system for the following:

- Online Help
- Link to Mastersoft Word for Word
- License

If GLOBALVIEW is installed on /<partition>/XSoft, an /opt/XSoft link will be created pointing to the directory installed with GVX.

Each of these links start with the /opt/XSoft and /part/XSoft links. /opt/XSoft is a link in the root directory pointing to /part/XSoft. /part/opt/XSoft is a place holder for disk partitions requested by the user. It serves as the root for the GLOBALVIEW directory structure.

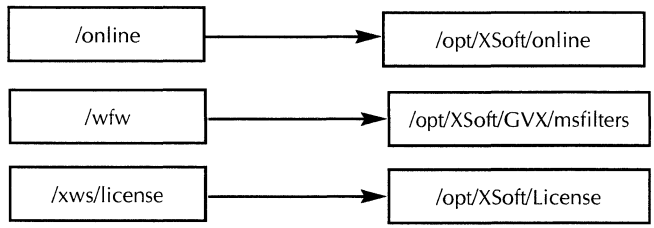
All of the other directories and files shown in the following figures have been explained in previous sections.

The following figure shows the links for online, /msfilters, and License. These directories are described in previous sections.

/online is a link to /opt/XSoft/online

/wfw is a link to /opt/XSoft/GVX/msfilters

If /xws/license exists, then /opt/XSoft/License is a link to/xws/license



GVX Online Help installation considerations

The following sections provide information that the System Administrator should be aware of before installing GVX Online Help.

✦ **Note:** Installing GVX 2.1 Online Help will delete any previously installed version of GVX Online Help.✦

Install dependencies

When you install GVX Online Help, XIST modifies the XKeysmDB file in /usr/lib/X11 to include key binding information that Help requires. XIST also creates a symbolic link in /usr/lib/X11/app-defaults/KRSM to /online/data/KRSM.

If XIST cannot locate /usr/lib directory , or if the directory /usr/lib/X11 or XKeysmDB file are read-only, you will receive a message indicating that the file cannot be written to and "osf changes" cannot be made. You will also receive numerous "osf error" warnings when GVX Online Help is started. Help appears to function properly but will not allow you to enter data from the keyboard.

✦ **Note:** If you are an Open Windows 2.0 user, you might still receive widget warnings. However, this does not affect running GVX Online Help.✦

Solving installation problems

If you install on a workstation that has a local copy of X Windows, the XKeysmDB file is probably writeable, and the changes will be made during the installation.

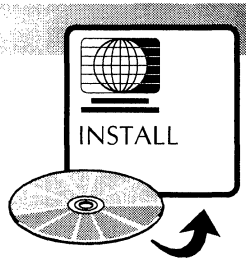
If your workstation is "linked" to a single installation of X Windows so other workstations use the same XKeysmDB file, then the XKeysmDB file is probably read-only.

If the XKeysmDB file is not writeable, an error message displays during installation. You can do one of the following:

- Make the XKeysmDB file and at least its parent directory writeable, and then install GVX Online Help again.

- Locate the sun_bind.sym file in the /online/bin directory. Append the contents of this file to the XKeysymDB file. Create a symbolic link in the /usr/lib/X11/app-defaults/KRSM directory to /online/data/KRSM.
- Install GVX Online Help on a workstation with a compatible XKeysmDB file, then copy it to the system UNIX XKeysmDB file. Create a symbolic link in the /usr/lib/X11/app-defaults/KRSM to /online/data/KRSM.

✦ **Note:** The UNIX XKeysmDB file only has to be written once. If you reinstall GVX Online Help, you can choose to ignore the error message, if you know the UNIX XKeysmDB file has already been modified. However, it should be rewritten or sun_bind.sym appended if "osf" error messages appear when you start GVX Online Help.✦



D. Hints and tips

GLOBALVIEW for X Windows CDROM directory structure

GLOBALVIEW for X Windows consists of a number of directories and files on the CDROM.

- Auxiliary
- Developer Tool Kits
- Document Downgrader Tools
- Interpress Printer Fonts
- Online Samples and Tutorial Exercises
- PostScript Printer Fonts
- README.txt
- demo
- installdir.Solaris - The installation directory for Solaris 2.3/2.4.
- installdir.SunOS - The installation directory for SunOS 4.1.3/4.1.4.
- startxist - A script that sets the required environment variables and starts up XIST. It automatically determines which operating system you are using and loads the appropriate files.

Installation overview

To use this startxist script, do the following:

- Open a command tool window
- Login as **root** or **lroot**
- cd /cdrom (use appropriate path for SunOS or Solaris)
- Type **startxist**

Hints and tips

The hints and tips section includes these general categories:.

- /tmp considerations
- Swap space considerations
- L5 Function Key
- Customizing Express Install
- GVX settings
- GVX startup
- OPEN LOOK
- Motif
- XIST start up
- xwssysu and xwssysg accounts

/tmp considerations

On SunOS 4.1.x, if you continue to run out of space on your /tmp directory, you can move it to a different location. To do this, simply go to a directory where you have more space. Make a directory called tmp. Go back to your root directory and create a link to your new tmp directory. If you do this or you have moved your /tmp directory and you have trouble running X or GVX, check the access rights to make sure you have it set correctly. If it is not set correctly, change it to allow all access rights using chmod 777.

Swap space considerations

On Solaris 2.3/2.4, if you continue to run out of space on your /tmp directory, you will need to make your swap space larger. The reason for this is that /tmp is kept in swap space on Solaris 2.3/2.4. To add swap space, refer to chapter 3, "XIST System Administration Utility."

L5 Function Key

Pressing the Front (L5) key brings the window at the pointer location to the top so that you can view the entire window. When the window is already on top, pressing the Front (L5) key moves it to the bottom of the displayed windows. For

more details on the function keys in X windows see the *SunSoft OpenWindows User Guide.*

Customizing Express install

- To change the Express install file and modify it to your application choices, use the SysAdmin Utils menu and do the following:

1. Select GVX: Copy Install Directory to UNIX option.
2. Copy the installdir to a hard disk

   For example,

   /disk1/installdir.Solaris

   or

   /disk1/installdir.SunOS

   ✦ **Note:** The destination directory must end in either of the above example names.✦
3. Select Done after completing the copy steps.
4. Select the GlobalView for X Windows option from the Applications Families.
5. Fill in all entries in the configuration sheet.
6. Select the applications from the packages you want to install at your site.
7. Save the template as ExpressInstall.XT. For example,

   /disk1/installdir.SunOS/XIST/ExpressInstall.XT

   ✦ **Note:** This process overwrites the default ExpressInstall.XT file.

Now you can use the Express install option to install GVX with your customized template file.

GVX settings

- In Solaris 2.3/2.4, Sun has added some window management accelerators invoked using key combinations with the Diamond/KEYBOARD key. For example, to close a window, press the KEYBOARD and Q combination. To

iconify a window, press the KEYBOARD and W combination.

GLOBALVIEW uses the KEYBOARD key to enter characters from alternate keyboards. Using Solaris 2.3/2.4 overrides GLOBALVIEW's use of the KEYBOARD key.

To get the GVX character, do one of the following:

a. Change your .Xdefaults file to remove the window management accelerators or define a new, physical KEYBOARD key.

b. Use an alternate keyboard for a few keystrokes and do the following:

   - Press and hold down KEYBOARD for these next actions
   - Press the function key in the Alternate Keyboard Selection window for the name of the keyboard you want
   - Press SHOW, then select the character with the mouse from the alternate keyboard.

c. Set your alternate keyboard to your preferred key layout by doing the following:

   - Press and hold down KEYBOARD
   - Press the function key in the Alternate Keyboard Selection window for the name of the keyboard you want
   - Press SET.
   - Release KEYBOARD, then type on the physical keyboard that now has the alternate keyboard layout in effect.

- Existing users of GLOBALVIEW 1.0 and 1.0.5 or users who didn't set LM_LICENSE_FILE at all, do not need to be concerned with setting the license.dat file to /opt/XSoft/License. However, if you set LM_LICENSE_FILE differently in your environment, please update it accordingly.

GVX start up

- If you use an alias for gvx startup, please update it to the correct directory path:

  /opt/XSoft/bin/gvx

- To automatically set environment variables and start GLOBALVIEW type the following;

  /opt/XSoft/bin/startgvx

- To use your own set of environment variables, do *xhost +hostname*, and then type the following to start GLOBALVIEW;

  /opt/XSoft/bin/gvx

- If you select and run Link to Mastersoft Word for Word, add **/wfw** to your search path.

- When you run GVX on OpenWindows you must either do an *xhost + hostname*, where hostname is the name of the machine you are on before running GVX, or start OpenWindows with noauth. For example:

  openwin -noauth

  The *xhost + hostname* can be added to an alias for gvx in your .cshrc.

  For example:

  alias gvx "xhost + `uname -n`;/opt/XSoft/bin/gvx \!*"

  The \!* allows for switch settings to be passed to the command.

  ✦ **Note:** The startgvx script in GVX 2.0 does the xhost command for you.✦

- You can have OPEN LOOK start GVX for you when you start up OpenWindows. Do a save workspace using the OPEN LOOK utility menu and add the following to your .openwin-init:

  toolwait xhost +`uname -n`;gvx

  This also should be the last item in the list or at least after the console window is brought up since it needs to write GLOBALVIEW startup messages to the console. Also, gvx

must be on your path or you have to specify the exact location. For example:

toolwait xhost + `uname -n`;/opt/XSoft/bin/gvx

The .openwin-init file can be found in the home directory of the person starting X windows after you have done a save workspace.

✦ **Note:** This file is overwritten each time you do the save workspace command. Therefore, you will need to modify it each time.✦

- You can also start GVX from your OpenWindows menu. To do this, you will need to add the following line to your .openwin-menu file:

  "GVX..." exec /opt/XSoft/bin/gvx

  For more details about customizing your menu, see the *OpenWindows User Guide* from SunSoft.

- The following table describes GLOBALVIEW startup switches that can be used when you start GLOBALVIEW.

Switch	Description
c	Does not run auto-run Common applications.
d	Directs Debugging log output to the cmdtool window instead of into the pcr.log file. Crash Summaries are not created when using this switch and it should only be used when requested by support.
I	Empties the Basic Icons folder during startup (the items in the folder are created by the applications as necessary). This increases the time to start GLOBALVIEW. You should only need to use it once. It is useful for deleting old basic icons.
s	Does not run auto-run Services applications.
w	Does not run auto-run Workstation applications.
z	Turns off confirmation when using these optional startup switches.
A	Writes all thread stacks in XWSCrashSummary. This creates a very long crash summary and should only be used when requested by support.
N	Does not run any auto-run applications.
V	Brings up Workstation Administration option sheet before logon.

✦ **Note:** The switches are case sensitive and all switches default to off. Entering **/opt/XSoft/bin/gvx -help** at the UNIX prompt in a cmdtool or xterm window lists the switches.✦

For example, one might use these switches for startup commands:

/opt/XSoft/bin/startgvx N

or

/opt/XSoft/bin/gvx V

OPEN LOOK

- OpenWindows installs as part of Solaris 2.3/2.4. To run it, type the following command after logging on to UNIX:

  /usr/openwin/bin/openwin

- When you are in X windows and you start getting messages written directly to your display, it probably means that you have deactivated the console window or X windows does not think you have the console window up. In OPEN LOOK use the Workspace menu (click the menu button) to start a new console window. That choice can be found in the Utilities submenu.

Motif

- If you run with the Motif window manager, you can get better GVX selection functionality if you tell Motif not to grab the input focus; that is, not to have the input focus follow the cursor. To change this, simply add the following line to your .Xdefaults file:

  Mwm.startupKeyFocus: : False

- When running Motif, the bitmap inside the logon icon (when the logon sheet is iconified) might appear off center or clipped. This does not cause a problem but can be annoying. To fix this, Motif has a resource file that sets the size of the Motif icons. Do the following before starting the Motif window manager (mwm). First, in the user's .Xdefaults file (in the user's home directory), set the following property:

  Mwm*iconImageMaximum: 72x72

  Then type:

  xrdb .Xdefaults

  You can put the "xrdb .Xdefaults" command in your .xinitrc file so that it gets executed each time you start X.

XIST start up

- While starting up XIST, if you see messages such as the following:

  ld.so: warning: /usr/lib/libc.so.1.6 has older version than expected 8

  These messages indicate you should check the following:

  1. See that your ID_LIBRARY_PATH and OPENWINHOME environment variables are set to the correct directory.

     Usually, you should have OPENWINHOME set to /usr/openwin. This causes startxist to correctly set LD_LIBRARY_PATH to contain $OPENWINHOME/lib.

  2. See that your SunOS or Solaris libraries in /usr/openwin/lib and /usr/lib are up to date with the current versions (e.g. version 1.8 for libc.so on SunOS).

xwssysu and xwssysg accounts

- If you encounter a problem related to these accounts or if you decide to change a networked workstation to a standalone workstation, please check that the passwd and group files have these account IDs set to 26784.

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