



GOCAD Suite 2.5 Installation Guide

GOCAD Suite



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Before You Begin

About This Guide

This guide explains how to install GOCAD Suite and GOCAD Developer Kit in both UNIX® and Microsoft® Windows® environments. Instructions in this guide assume familiarity with the operating system on which you are installing the program. GOCAD Suite includes the following products:

Discipline	Product
Geosciences	Base Module
Seismic Interpretation	Volume Interpretation
	Seismic Attribute Analysis
	Parallel Computing – Seismic Attribute Analysis
	Rock Volume Uncertainty Assessment (Alea®) ¹
Velocity Modeling	Velocity Modeler and Time-to-Depth Conversion
	Parallel Computing – Velocity Modeler and Time-to-Depth Conversion
Geologic Interpretation	Stratigraphic Modeling and Fault Analysis
	Well Correlation and Stratigraphic Analysis
	Advanced Structural Analysis (Kine3D-1) ²
	2D Restoration (Kine3D-2) ²
	3D Restoration (Kine3D-3) ²
Reservoir Modeling	3D Reservoir Grid Builder
	Reservoir Data Analysis
	Reservoir Properties
	Object Modeling
	Reservoir Risk Assessment (Jacta®) ¹
	HP Reservoir Risk Assessment (Jacta Cluster) ¹

(Continued 1 of 2)

Discipline	Product
Reservoir Production	Upscaler and LGR
	Fracture Modeling (FracMV) ³
	Reservoir Simulation Interface (ECLIPSE®, 3DSL®)
	Production Data Analysis
	Production Risk Assessment – Jacta 3DSL Connection
	Production Risk Assessment – Jacta FrontSim Connection
Drilling Planner	Basic Well Planning
	Sidetrack and Collision Risk
System and Complements	Finite Element Mesh Constructor
	Remote Collaboration
	3D Magellan™ Mouse
	OpenSpirit® Access
(Continued 2 of 2)	

1. Developed in cooperation with Total.
2. Developed in cooperation with Institut Français du Pétrole (IFP).
3. Developed in cooperation with Midland Valley.

You install the entire suite, and a license server controls access according to the products you purchased. Instructions to install and configure the license server are included.

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Supported Operating Systems and Requirements

In this chapter

- "Common System Requirements," page 1-2
- "Additional Software Requirements," page 1-6
- "Specific Requirements for Supported Operating Systems," page 1-2
- "About Windows for x86 (32-Bit) and x64 (64-Bit) Systems," page 1-7

Overview

This chapter lists the hardware and software needed to run GOCAD Suite and GOCAD Developer Kit. It details requirements across all operating environments, specific requirements for each operating system, and additional software requirements.



1.1 Common System Requirements

This section lists minimum requirements and recommendations for all operating environments.

Memory	2 GB or more recommended
Hard disk space for GOCAD Suite	500 MB
Additional hard disk space for Developer Kit	200 MB
	Note The 200 MB requirement for Developer Kit installation is in addition to the hard disk space requirement for GOCAD Suite listed above.
Pointing device	Three-button pointing device such as a mouse or trackball

1.2 Specific Requirements for Supported Operating Systems

This section lists supported operating systems for each environment, and it lists environment-specific hardware requirements. For the most up-to-date list of system requirements, see the System Requirements page at <http://gocad-download.pdgm.com/sysreqs.php>.

Notes

- The memory requirements listed are for normal usage of GOCAD Suite. Large data sets require additional memory.
- The sizes indicated are for GOCAD Suite only. Disk space should be increased if extensions from other vendors are installed or if data is installed on local hard drives. To optimize performance, we recommend that you work on data locally.



Microsoft Windows for x86 Systems (32 Bits)

Operating system Windows Vista (Business, Enterprise, or Ultimate Edition) and Windows XP Professional (Service Pack 2)

Note You can run the x86 version of GOCAD Suite on Windows x64 systems.

Hardware **Processor:** Intel® Core™, Core 2 Duo, Core 2 Quad, or Xeon® class processor; or AMD Athlon™, Opteron™, or Phenom™ class processor recommended
Graphics adapter: 3D graphics adapter with a minimum resolution of 1280x1204 pixels supporting OpenGL®. NVIDIA® Quadro® series recommended

Software **Development environment:** (for Developer Kit only) Microsoft Visual Studio® 2005 Professional Edition Service Pack 1 and ActiveState ActivePerl 5.8 or 5.10. You can find ActivePerl at <http://www.activestate.com/>.
Note If you use ActivePerl 5.10, ensure that you install version 5.10.0.1002. Earlier versions of ActivePerl 5.10 do not work correctly with the development environment on Windows 64.

Microsoft Windows for x64 Systems (64 Bits)

Operating system Windows Vista x64 (Business, Enterprise, or Ultimate Edition) and Windows XP Professional x64 Edition (for more information, see "About Windows for x86 (32-Bit) and x64 (64-Bit) Systems" on page 1-7)

Hardware **Processor:** Intel Core, Core 2 Duo, Core 2 Quad, or Xeon class processor; or AMD Athlon, Opteron, or Phenom class processor recommended
Graphics adapter: 3D graphics adapter with a minimum resolution of 1280x1204 pixels supporting OpenGL. NVIDIA Quadro series recommended

Software **Development environment:** (for Developer Kit only) Microsoft Visual Studio 2005 Professional Edition Service Pack 1 and ActiveState ActivePerl 5.8 or 5.10. You can find ActivePerl at <http://www.activestate.com/>.
Note If you use ActivePerl 5.10, ensure that you install version 5.10.0.1002. Earlier versions of ActivePerl 5.10 do not work correctly with the development environment on Windows 64.



Linux for x86 Systems (32 Bits)

Operating system Red Hat® Enterprise Linux 3.0 or 4.0

Hardware **Processor:** Intel Core, Core 2 Duo, Core 2 Quad, or Xeon class processor; or AMD Athlon, Opteron, or Phenom class processor recommended

Graphics adapter: 3D graphics adapter with a minimum resolution of 1280x1204 pixels supporting OpenGL. NVIDIA Quadro series recommended

Software **Development environment:** (for Developer Kit only)

- GCC 3.2.3 for Red Hat Enterprise Linux 3.0
- GCC 3.4.3 for Red Hat Enterprise Linux 4.0

Linux for x64 Systems (64 Bits)

Operating system Red Hat Enterprise Linux 3.0 or 4.0

Hardware **Processor:** Intel Core, Core 2 Duo, Core 2 Quad, or Xeon class processor; or AMD Athlon, Opteron, or Phenom class processor recommended

Graphics adapter: 3D graphics adapter with a minimum resolution of 1280x1204 pixels supporting OpenGL. NVIDIA Quadro series recommended

Software **Development environment:** (for Developer Kit only)

- GCC 3.2.3 for Red Hat Enterprise Linux 3.0
- GCC 3.4.3 for Red Hat Enterprise Linux 4.0



Sun Solaris for SPARC Systems (64 Bits)

Typical system Sun Ultra 25 or Ultra 45

Operating system Solaris 8 or above

Hardware **Processor:** UltraSPARC III 900 MHz or above recommended
Graphics adapter: 3D graphics adapter such as Sun XVR-500, XVR-600, XVR-1000, XVR-1200, XVR 2500 or XVR-4000

Software **Development environment:** (for Developer Kit only) Solaris Studio 9 (C++ 5.6)

OpenGL: OpenGL 1.2.3

Patches: The following patches or later versions of them must be installed:

For Solaris 8, 108434-22, 108435-22 or later and 111721-04 or later

For Solaris 9, 111722-04 or later

For all version of Solaris, the latest revisions of 112628 and 112629

For the development environment, 117549-08 or better, 117551-05 or better and 115983-08 or later

Note These patches can be downloaded free of charge from <http://sunsolve.sun.com/>. It is highly recommended that you apply the latest patches for your OpenGL version. A graphics card must be installed. You can obtain full lists of patches by operating system at <http://sunsolve.sun.com/>.



1.3 Additional Software Requirements

Internet Explorer® (Windows only)

Accessing Help on Windows requires Internet Explorer 6.0 or later, or Firefox (see next section). JavaScript™ must be enabled to display the Help.

Firefox (UNIX only)

Accessing Help on UNIX requires a browser that supports Java and JavaScript. If the browser installed on your operating system is older or lacks JavaScript, consider using Mozilla Firefox:

<http://www.mozilla.com/>

Qt Enterprise License (Developer Kit only)

Developers may need to purchase a Qt® Enterprise License. For more information, see "About Qt" on page 4-3.



1.4 About Windows for x86 (32-Bit) and x64 (64-Bit) Systems

GOCAD Suite is available in a package that supports Windows for x64 (64-bit) systems. This package is designed for Windows Vista x64 and Windows XP Professional x64 Edition, which are versions of Windows that run on processors of the x64 family made by AMD or Intel.

You can use any 32-bit (x86) projects in the 64-bit (x64) version of GOCAD Suite, but because x64 projects require more computational power and memory, not every 64-bit project will load on the 32-bit version of GOCAD Suite.

You can install the 32-bit and 64-bit versions of GOCAD Suite on the same x64 system. The versions are separated and do not interfere with each other.





Installing GOCAD Suite

In this chapter

- "General Installation Process," page 2-2
- "Installing GOCAD Suite," page 2-4
- "Downloading GOCAD Suite," page 2-2
- "Starting GOCAD Suite," page 2-8

Overview

This chapter explains how to install and start GOCAD Suite in UNIX and Windows environments.

2.1 General Installation Process

Table 2–1 summarizes the installation process and lists the section or chapter that provides additional information.

Table 2–1 GOCAD Suite installation process

Step	See
1 Download the GOCAD Suite software.	"Downloading GOCAD Suite" on page 2-2.
2 Install GOCAD Suite on the client computer.	"Installing GOCAD Suite" on page 2-4.
3 Install License Server 11.3 on the server for which the license file was issued.	Chapter 3, "Installing and Configuring License Server 11.3."
4 Start GOCAD Suite.	"Starting GOCAD Suite" on page 2-8.

2.2 Downloading GOCAD Suite

You can download GOCAD Suite and related products from <http://gocad-download.pdgm.com/>. All products in the suite are packaged together.

The License Server program must be downloaded separately and installed on the computer that will serve licenses. For more information and instructions, see [Chapter 3, "Installing and Configuring License Server 11.3."](#)

If you purchased GOCAD Developer Kit, it must be downloaded and installed separately also. For instructions, see [Chapter 4, "Installing Developer Kit."](#)

Paradigm products are available on CDs (by request). License Server is included on the CDs. If you have the CDs, you do not need to download the products. For more information, see ["To request GOCAD Suite on CD" on page 2-3.](#)

About the GOCAD Suite packages

Table 2–2 lists the available GOCAD Suite packages, which are sorted by operating system. Multiple packages are available for the same vendors to provide both 32-bit and 64-bit versions of the software.

Table 2–2 GOCAD Suite packages

Operating system description	GOCAD Suite package to install
Windows Vista or Windows XP for Intel x86 (32 bits)	GOCAD-Suite-x.x.x-Windows-i86.msi
Windows Vista or Windows XP for x64 systems (64 bits)	GOCAD-Suite-x.x.x-Windows-x64.msi
Red Hat Enterprise Linux 3.0 (32 bits) - i86	GOCAD-Suite-x.x.x-Linux-i86.tar.gz
Red Hat Enterprise Linux 3.0 (64 bits) - x64	GOCAD-Suite-x.x.x-Linux-amd64.tar.gz
Red Hat Enterprise Linux 4.0 (32 bits) - i86	GOCAD-Suite-x.x.x-Linux-i86-re4.tar.gz
Red Hat Enterprise Linux 4.0 (64 bits) - x64	GOCAD-Suite-x.x.x-Linux-amd64-re4.tar.gz
Sun Solaris 8 or later (64 bits) - SPARC	GOCAD-Suite-x.x.x-Solaris-64.tar.gz

Note You can run x86 Linux on an x64 system.



To download GOCAD Suite

Downloading GOCAD Suite and related products from the download page requires a logon name and password. This logon name and password are sent by e-mail along with the license file when you purchase a product. If you did not receive a logon name and password, contact support at <http://gocad-support.pdgm.com/>.

- 1 Go to the download page at <http://gocad-download.pdgm.com/>.
- 2 Select the product you want to download.
- 3 Click the **Download** link that applies to your operating system.

Note UNIX files are tar archives compressed with gzip. Windows files are either a Windows Installer (.msi) file or an executable (.exe) file.

- 4 When the dialog box opens, type the logon name sent to you by e-mail in the **User name** box, type the supplied password in the **Password** box, and then click **OK**.

Note The user name and password entries are case-sensitive. If you did not receive a user name and password or if they do not work, contact support at <http://gocad-support.pdgm.com/>.

- 5 When prompted to save or open the file, save the file to your hard disk drive.

To request GOCAD Suite on CD

CDs containing the GOCAD Suite packages are available by request.

- 1 Go to the download page at <http://gocad-download.pdgm.com/>.
- 2 Click the **Request CD** link.
- 3 Enter your contact information.
- 4 Select the check box (and enter your password) for each CD you want. Your choices are:
 - GOCAD Suite: All Environments (Linux, Windows, and Solaris)
 - GOCAD Developer Kit: All Environments (Linux, Windows, and Solaris)
- 5 Click **Request CD**.

Packages on the CDs are sorted by operating system with the naming convention described in "[About the GOCAD Suite packages](#)" on page 2-2.

2.3 Installing GOCAD Suite

Separate instructions are included for UNIX and Windows environments. Complete the procedure that corresponds to your environment.

If you have not downloaded GOCAD Suite (and you do not have GOCAD Suite on CD), complete the procedure in "Downloading GOCAD Suite" on page 2-2 before you continue.

2.3.1 Installing GOCAD Suite on UNIX

All GOCAD Suite packages for UNIX are installed by extracting a compressed archive into the main installation directory. All Paradigm products must reside under a common directory. The default directory name is PDGM.

If you plan to use GOCAD Suite on multiple UNIX operating systems, you must download and install the package for each operating system. Multiple installations can reside in the same directory; the installation process handles correct file placement automatically.

Caution Do not move the PDGM directory contents. The subdirectories were specifically created by the installation process and must not change. You can rename the PDGM directory, but do not move or rename the subdirectories. Splitting the directories causes failures when GOCAD Suite starts.

This section includes instructions for installing GOCAD Suite on UNIX and an additional procedure for configuring OpenSpirit Access, an optional module. You can skip the information and instructions regarding OpenSpirit Access if you do not have a license for it.

To install GOCAD Suite on UNIX

- 1 Do one of the following:
 - If you downloaded GOCAD Suite and the file is not in the directory where you want to install the program, copy the file to the installation directory.
 - If you are installing GOCAD Suite from CD, copy the package from the appropriate CD to the installation directory.

- 2 To move to the installation directory, type the following command where *installation_directory* is a placeholder for the actual directory name:

```
cd installation_directory
```

- 3 Type the following command to extract the files, where *x.x.x* is the version number and *operating_system* matches the operating system listed in the package name:

```
gunzip < GOCAD-Suite-x.x.x-operating_system.tar.gz | tar xvf -
```

Installing the package creates the PDGM directory. The main executable is in PDGM/*Gocad-x.x.x/bin/Gocad*.

Important

- You cannot start GOCAD Suite until License Server 11.3 and the license file are correctly installed on the server computer for which the license file was issued. For more information and instructions, see [Chapter 3, "Installing and Configuring License Server 11.3."](#)
- If you have a Reservoir Simulation Interface license and you want to launch flow simulations from GOCAD Suite, you must create a run configuration file. For instructions, see *Reservoir Simulation Interface Configuration Guide*.



- If you have a High-Performance Reservoir Risk Assessment (Jacta Cluster) license and you want to run Jacta simulations on a cluster network, you must install and configure a batch management system. For instructions, see *High-Performance Reservoir Risk Assessment (Jacta Cluster) Configuration Guide*.

Note Archive extraction will fail if the archive is corrupt or incomplete. On Solaris workstations, an archive copied from another computer system may be incomplete because of differences in archive formats. In that case, you will need to apply patch 110951-01 on the **tar** extraction utility. You can verify the size of the archives by checking them on the Paradigm download Web page at <http://gocad-download.pdgm.com/>.

To configure OpenSpirit Access on UNIX

If you have an OpenSpirit Access license, you must specify where OpenSpirit (the third-party program licensed by OpenSpirit Corporation) is installed on your computer; otherwise, OpenSpirit Access cannot connect to it. Although there is more than one method for specifying the location of OpenSpirit, we recommend that you save the `OSP_HOME` environment variable in your user profile as explained in the following procedure. If you installed an earlier version of GOCAD Suite and already completed this procedure, you do not need to do it again.

On Windows, the OpenSpirit Windows installer sets the `OSP_HOME` environment variable on the computer automatically, so no additional configuration is necessary. The following procedure applies to UNIX and Linux operating systems only.

Note Another method for specifying where OpenSpirit is installed on your computer is to edit the `GocadOsp/lib/app-default/osp_home` file manually (the file is located in the installation directory for GOCAD Suite). This method is explained in earlier installation instructions for the OpenSpirit plug-in running under GOCAD 2.0.x. We recommend that you save the environment variable in your user profile instead. Otherwise, every time you install a new version of GOCAD Suite, you must edit the `osp_home` file. By using the following method, you perform the configuration only once as long as you do not update OpenSpirit in a way that changes its location.

- Assuming OpenSpirit (the client program licensed by OpenSpirit Corporation) is installed in the `/appl/openspirit` directory, edit your UNIX or Linux user profile to set the environment variable `OSP_HOME` according to your shell type as follows:

- If you are using the C shell, type:
setenv OSP_HOME /appl/openspirit
- If you are using the Korn or Bourne shell, type:
export OSP_HOME=/appl/openspirit

If OpenSpirit is installed in a different location, substitute the correct path.

Note If you want to use a different OpenSpirit installation temporarily, you can set the `OSP_HOME` variable in the shell you are starting GOCAD Suite from. Assuming OpenSpirit is installed in `appl/openspirit/openspirit-x.x.x`, for example:

- If you are using the C shell:
setenv OSP_HOME /appl/openspirit/openspirit-x.x.x
- If you are using the Korn or Bourne shell:
export OSP_HOME=/appl/openspirit/openspirit-x.x.x

2.3.2 Installing GOCAD Suite on Windows

Complete the following procedure to install GOCAD Suite on Windows.

To install GOCAD Suite on Windows

- 1 If you downloaded GOCAD Suite, double-click the downloaded file.
– or –

If you are installing GOCAD Suite from CD, do the following:

- a Place the CD for the Windows version of GOCAD Suite in your CD drive, open **My Computer**, and double-click the CD name to display the CD contents.
- b Open the **Suite** folder, and then double-click one of the following files, where *x.x.x* is the version number:
 - For Windows Vista or Windows XP for x86 systems (32 bits), double-click **GOCAD-Suite-x.x.x-Windows-i86.msi**.
 - For Windows Vista or Windows XP for x64 systems (64 bits), double-click **GOCAD-Suite-x.x.x-Windows-x64.msi**.

Whether you are using a CD or a downloaded file, the installation wizard opens after a few moments.

- 2 Follow the instructions in the installation wizard as they appear.

Important

- We recommend that you have Administrator rights enabled when you install GOCAD Suite. You can either log on as an account with Administrator rights, or you can right-click the GOCAD Suite installation file (.msi), point to **Run As** on the shortcut menu, click the **the following user** option, type or select the user name, type the corresponding password, and then click **OK**.
- When GOCAD Suite is installed on a server, it will not run on a local computer unless the runtime library Microsoft Visual C++ 2005 SP1 Redistributable Package that corresponds to the processor architecture of the GOCAD Suite installation (x86 or x64) is installed on that computer. If a message "The application configuration is incorrect. Reinstalling the application may fix the problem" appears, follow the instructions in "[Configuring GOCAD Suite to Run from a Shared Location \(Windows Only\)](#)" on page 2-7.
- You cannot start GOCAD Suite until License Server 11.3 and the license file are correctly installed on the server computer for which the license file was issued. For more information and instructions, see [Chapter 3, "Installing and Configuring License Server 11.3."](#)
- If you have a Reservoir Simulation Interface license and you want to launch flow simulations from GOCAD Suite, you must create a run configuration file. For instructions, see *Reservoir Simulation Interface Configuration Guide*.
- If you have a High-Performance Reservoir Risk Assessment (Jacta Cluster) license and you want to run Jacta simulations on a cluster network, you must install and configure a batch management system. For instructions, see *High-Performance Reservoir Risk Assessment (Jacta Cluster) Configuration Guide*.



2.3.3 Configuring GOCAD Suite to Run from a Shared Location (Windows Only)

If you are installing GOCAD Suite on a server in a Windows environment, you must ensure that Microsoft Visual C++ 2005 Redistributable Package is installed on each local computer from which the program will be run.

If you do not have Microsoft Visual C++ 2005 Redistributable Package installed, perform the following steps.

Notes

- To perform this procedure, you must have Administrator rights.
- You do not need to perform this procedure if you are installing GOCAD Suite on the computer on which it will run. For local installations, the installation program automatically installs the runtime library for your environment.

To configure GOCAD Suite to run from a shared location (Windows only)

1. Navigate to C:\Program Files\PDGM\Gocad-x.x.X\Redist, where *x.x.x* is the version number.
2. Do one of the following:
 - For Windows for x86 systems (32 bits), locate and double-click the file **vcredist_x86.exe** to run it.
 - For Windows for x64 systems (64 bits), locate and double-click the file **vcredist_x64.exe** to run it.
3. If you receive a message directing you to restart your computer, shut down your computer and restart it to complete the installation.

2.4 Starting GOCAD Suite

Complete the procedure that corresponds to your environment.

2.4.1 Starting GOCAD Suite on UNIX

You cannot start GOCAD Suite until License Server 11.3 and the license file are correctly installed on the server computer for which the license file was issued. For more information and instructions, see [Chapter 3, "Installing and Configuring License Server 11.3."](#)

After GOCAD Suite is installed, License Server is set up, and the license is configured, you can start GOCAD Suite and connect to License Server.

To start GOCAD Suite on UNIX

- 1 If you installed GOCAD Suite in the /opt directory, type the following command at a command prompt, where *x.x.x* is the version number:

```
/opt/PDGM/Gocad-x.x.x/bin/Gocad
```

– or –

If you have a GOCAD Viewer license only, type the following command at a command prompt:

```
/opt/PDGM/Gocad-x.x.x/bin/Gocad-Viewer
```

Note If you installed GOCAD Suite in a different location, substitute the correct path.

[Table 2–3 on page 2-9](#) lists frequently used options you can add to the command.

The **Open Existing or New Project** dialog box opens.

Note If GOCAD Suite cannot connect to License Server, an error message will appear on the console. To configure License Server, set the GOCADLMD_LICENSE_FILE environment variable to *port@host*, where *port* is the TCP/IP number (typically 27000) and *host* is the name (or IP address) of the computer on which License Server is installed. (If you did not change the default port value for License Server, you can omit it.) If you do not know these values, contact your license administrator. Examples are @192.68.1.1 or 23456@license-server.

Tip For more information about starting the program, creating a project, and opening existing projects, see the *User Guide, Part I: Getting Started*.

- 2 Click **New Project**, find and open a folder, type a name in the **File name** box, and then click **Save** to open the **Project Modules Selector**.
- 3 Do one of the following:
 - To select all available products, click **Select All**, and then click **OK**.
 - To select products individually, click each tab and select the check box next to each product you want to load, and then click **OK**.

A splash screen appears as the program loads the selected products. GOCAD Suite opens and prompts you to choose project units.

- 4 In the **Initialize Project Units** dialog box, select from the options and then click **OK**. For more information about the project units, see the *User Guide, Part I: Getting Started*.

Table 2–3 Startup options

Main options	Description
-help	Lists all the options you can use when starting GOCAD Suite.
-64	Starts the program in 64-bit mode. This option is needed only if you installed both the 32-bit version and a 64-bit version. The program starts by default in 32-bit mode if both are installed. To use the 64-bit version, you must add the -64 option. ¹
-all-plugins	Loads all the products you have purchased. If you use this option, Project Modules Selector does not appear during startup.

1. You can run Intel 32-bit Linux on a 64-bit Opteron or Xeon system.

2.4.2 Starting GOCAD Suite on Windows

You cannot start GOCAD Suite until License Server 11.3 and the license file are correctly installed on the server computer for which the license file was issued. For more information and instructions, see [Chapter 3, "Installing and Configuring License Server 11.3."](#)

After GOCAD Suite is installed, License Server is set up, and the license is configured, you can start GOCAD Suite and connect to License Server.

To start GOCAD Suite on Windows x86 Systems (32 bits)

- 1 On the Windows taskbar, click the **Start** button, point to **All Programs**, point to **GOCAD Suite x.x.x**, and then click **GOCAD Suite x.x.x**, where *x.x.x* is the version number.
- 2 If you are starting GOCAD Suite for the first time and the **FLEXnet License Finder** dialog box opens, do the following:
 - a Select **Specify the License Server**, and then click **Next**.
 - b Type a *port@host* value where *port* is the TCP/IP number (typically 27000) and *host* is the name (or IP address) of the computer on which License Server is installed. If you do not know these values, contact your license administrator.
 - c Click **OK**.

After you connect to License Server, the **Open Existing or New Project** dialog box opens.

- 3 Click **New Project**, find and open a folder, type a name in the **File name** box, and then click **Save** to open the **Project Modules Selector**.
- 4 Do one of the following:
 - To select all available products, click **Select All**, and then click **OK**.
 - To select products individually, click each tab and select the check box next to each product you want to load, and then click **OK**.

A splash screen appears as the program loads the selected products. GOCAD Suite opens and prompts you to choose project units.

- 5 In the **Initialize Project Units** dialog box, select from the options and then click **OK**. For more information about the project units, see the *User Guide, Part I: Getting Started*.

Tip For more information about starting the program, creating a project, and opening existing projects, see the *User Guide, Part I: Getting Started*.

To start GOCAD Suite on Windows x64 Systems (64 bits)

There is a known problem in the FLEXnet License Finder on all Windows x64 versions. The tool does not accept any license server information and always reports, "The License Server returned a networking error. See your System Administrator for assistance." The issue has been reported to Macrovision, but a corrected version of FLEXnet is not yet available. Complete the following procedure to work around the issue.

- 1 On the Windows taskbar, click the **Start** button, point to **All Programs**, point to **GOCAD Suite x.x.x**, and then click **GOCAD Suite x.x.x**, where *x.x.x* is the version number.
- 2 If you are starting GOCAD Suite for the first time and the **FLEXnet License Finder** dialog box opens, close the dialog box. You will set the GOCADLMD_LICENSE_FILE environment variable to bypass the dialog and preconfigure the license information.
- 3 Set the environment variable on the client computer that is running GOCAD Suite:
 - a Click the **Start** button, click **Settings** (only if using the Classic Start menu), and then click **Control Panel**.
 - b In Control Panel, double-click **System** to open the **System Properties** window (if you are using Windows XP) or the **Advanced System Settings** window (if you are using Windows Vista).
 - c In either window, click the **Advanced** tab, and then click **Environment Variables** to open the **Environment Variables** panel.
 - d Under the **User variables** category, click **New** to open the **New User Variable** dialog box.
 - e In the **Variable name** box, type **GOCADLMD_LICENSE_FILE**; in the **Variable value** box, type the information to access License Server; and then click **OK**.

For the value in the **Variable value** box, use the format *port@host*, where *port* is the TCP/IP number (typically 27000) and *host* is the name (or IP address) of the computer on which License Server is installed. (If you did not change the default port value for License Server, you can omit it.) If you do not know these values, contact your license administrator.

- f In the **Environment Variables** panel, check that GOCADLMD_LICENSE_FILE is defined as, for example, @192.68.1.1 or 23456@license-server, and then click **OK**.
- g In the **System Properties** panel, click **OK**.

GOCAD Suite will start immediately, without the FLEXnet License Finder, and the **Open Existing or New Project** dialog box opens.

- 4 Click **New Project**, find and open a folder, type a name in the **File name** box, and then click **Save** to open the **Project Modules Selector**.
- 5 Do one of the following:
 - To select all available products, click **Select All**, and then click **OK**.
 - To select products individually, click each tab and select the check box next to each product you want to load, and then click **OK**.

A splash screen appears as the program loads the selected products. GOCAD Suite opens and prompts you to choose project units.

- 6 In the **Initialize Project Units** dialog box, select from the options and then click **OK**. For more information about the project units, see the *User Guide, Part I: Getting Started*.

Tip For more information about starting the program, creating a project, and opening existing projects, see the *User Guide, Part I: Getting Started*.



Installing and Configuring License Server 11.3

In this chapter

- "About License Server," page 3-2
- "About Configuring Licenses for GOCAD Suite," page 3-3
- "Installing or Upgrading License Server 11.3 on UNIX," page 3-6
- "Installing or Upgrading License Server 11.3 on Windows," page 3-9
- "Setting Up the License Option File—Basic GOCAD Developer Kit (Developer-Based) Product Only," page 3-13
- "Updating the License File," page 3-14
- "Frequently Asked Questions About License Server," page 3-15

Overview

This chapter describes how to install and configure the license server program. This chapter includes procedures for both UNIX and Windows environments.



3.1 About License Server

A license server is a program that makes software licenses available to another program. GOCAD Suite 2.5 uses a license server based on FLEXNET from Macrovision Ltd. to control program usage according to the licenses purchased. Because the license server is built with FLEXNET 11.3, we refer to our product as License Server 11.3.

Important GOCAD Suite 2.5.x will only work with License Server 11.3 or later. If you are already using a license server released by Paradigm or another vendor, you must upgrade to this version.

License Server is distributed as a separate package and must be downloaded separately.

License Server is backward-compatible with earlier licenses: The latest version of the License Server can provide licenses for earlier versions of Paradigm products.

3.2 About Configuring Licenses for GOCAD Suite

All Paradigm programs are licensed. You must have a license for the product you have installed before you can use it.

This section provides information for system administrators and users about licenses. See "License Types" on page 3-3 for a description of the types of licenses, and see "License File Components" on page 3-4 for information about license file components.

Note For more information on License Server administration tools, see the *FLEXNET Licensing End User Guide*. The user guide is available on the Macrovision Web site at:

http://www.macrovision.com/pdfs/flexnet_licensing_end_user_guide.pdf

3.2.1 License Concepts

A *license server* is a software service on a computer that dispatches licenses to *client* programs.

GOCAD Suite is a client program that connects to the license server to gain authorization to access certain software features. GOCAD Suite 2.5 uses a program called License Server 11.3.

License Server 11.3 and GOCAD Suite can be installed on the *same* computer. License Server must be installed on the computer for which the license file was issued. This computer is listed on the SERVER line in the license file. For more information and an example, see "SERVER lines" on page 3-4.

3.2.2 License Types

Licenses for Paradigm products are server-based, which means a license server must be installed before you can run the program. The licenses can be permanent or temporary. They have a limited number of *tokens*, which are the number of available concurrent usages. Client computers connect to License Server to gain the right to run the licensed software.

There are two types of licenses:

- **Shared.** If you receive a shared license, License Server is installed on a computer connected to a network. GOCAD Suite can run on the same computer, or it can run on another computer and use the network to connect to License Server. License Server must run on the computer for which the license was issued. This computer is listed on the SERVER line in the license file. For an example, see "SERVER lines" on page 3-4.

Important For Windows for x64 systems (64-bit systems), you can run the License Server only locally. A Windows 64-bit computer cannot serve as a license server for a network.

- **Host-locked.** If you receive a host-locked license, GOCAD Suite and License Server can run on only one computer. The computer for which the license is issued is listed on the SERVER line and in the INCREMENT paragraph in the license file. For more information and examples, see "License File Components" on page 3-4. Host-locked licenses typically are issued for running GOCAD Suite on a notebook that is not connected to a network.

3.2.3 License File Components

License files are text files and are composed of paragraphs and lines of text. Understanding the license files is helpful when troubleshooting problems or talking to Paradigm Support.

SERVER and VENDOR Lines

SERVER lines

License Server must be installed on the computer listed on the SERVER line. For a standard license server, one line is used; for triple redundancy servers, three lines are used. With triple redundancy, if one server fails, the two remaining servers take over and perform as the license server. Each of the three servers stores the same information and must be able to communicate through the network at any time. SERVER lines are formatted as follows:

```
SERVER license-server 123456789012 27000
```

where:

license-server is the server name. (The license administrator can change this name.)

123456789012 is the server computer FLEXNET Host ID. (Do not change this number. Any change in it invalidates the license.)

27000 is the TCP/IP port number. (The license administrator can change this number.)

License Server listens to at least one TCP/IP port so that clients can connect to the license server on that port. By default, the TCP/IP port used by License Server is 27000.

If a third-party product license server is using the 27000 default port, you may have to change the port from 27000 to an unused one.

If you change the port, the new port number must be communicated to end users because it is needed when starting GOCAD Suite for the first time. See ["Starting GOCAD Suite" on page 2-8](#).

VENDOR lines

One VENDOR line can be used for all server-based license files for Paradigm products. VENDOR lines are formatted as follows:

```
VENDOR gocadlmd
```

where:

gocadlmd is the name of the licenses service program for Paradigm products.

INCREMENT Paragraphs

INCREMENT paragraphs define the characteristics of the license: its duration, the number of tokens, and so on. The license file includes an increment for each product or feature you purchased.

Important Any change to the INCREMENT paragraph invalidates the license.

INCREMENT paragraphs are formatted as follows:

```
INCREMENT gocad_base gocadlmd 200512.31 31-dec-2008 50 \  
5BCF5BEB731B HOSTID=1234567890ab SUPERSEDE \  
ISSUED=16-Aug-2007 ck=118 SN=... \  
START=10-May-2007 SIGN=... \  
SIGN2=...
```

where:

- `gocad_base` is the feature name corresponding to this increment.
- `200512.31` is the maintenance expiration date. This license allows users to run Paradigm products released before that date.
- `31-dec-2008` is the license expiration date. The date is "permanent" for permanent licenses.
- `50` is the number of tokens (available concurrent usages) in the license
- `HOSTID=1234567890ab` Indicates that the INCREMENT package is locked on the server computer that has FLEXNET Host ID 1234567890ab. This line is present on all host-locked licenses.



3.3 Installing or Upgrading License Server 11.3 on UNIX

The following sections detail the procedures to either upgrade from an earlier version of License Server or perform a fresh installation in a UNIX environment.

It is necessary to install License Server 11.3 on only the server computer for which the license file was issued. In larger organizations, License Server is installed on a server computer while GOCAD Suite is installed on many client computers. If your computer is one of the client computers, you do not need to install License Server on it.

If you are a previous License Server user upgrading to the latest release, see "[Removing an Earlier Version of License Server](#)" on page 3-6. If you are performing a new installation, complete the procedures in "[Installing a New License Server](#)" on page 3-7.

3.3.1 Removing an Earlier Version of License Server

This section presents instructions for removing the version of License Server that controlled access to an earlier version of Paradigm products.

A license server may not be on your computer if you were using a license file installed on a remote server or if you were using a type of license (called a node-locked, serverless license) that did not require a license server.

To remove an earlier version of License Server

- 1 Type the following command in the directory where the License Server is installed to shut it down:

lmdown

- 2 Make sure that the script that starts the License Server at boot time is disabled.
- 3 Make sure to keep a copy of your license file and name it gocadlmd.lic.
- 4 If you have an option file for the Basic GOCAD Developer Kit (Developer-Based) license, write down the list of logon names authorized to access the license.
- 5 Remove all the files in the PDGM/licenses directory that were distributed with the previous version of the License Server. These files include lmgrd.exe, gocadlmd.exe, lmutil.exe.

After you remove the earlier version of the License Server, you are ready to install License Server 11.3.

3.3.2 Installing a New License Server

Complete the following procedures to install a new License Server in a UNIX environment.

To create a dedicated account for License Server

For security reasons, we recommend that you do not start License Server as root. We suggest that you create a dedicated account (for example, `paradigm`) with restricted rights on the server computer. Use this account each time you want to stop or restart License Server or install new licenses.

To download License Server files

- If you do not have GOCAD Suite on CD, download one of the License Server packages on the Paradigm download site at <http://gocad-download.pdgm.com/>. Download the package that corresponds to your operating system.

Note License Server packages for all supported operating systems are distributed on all GOCAD Suite CDs.

To install License Server

- 1 Do one of the following:
 - If you downloaded License Server and the file is not in the directory where you want to install the program, copy the file to the installation directory.
 - If you are installing License Server from CD, copy the package from a GOCAD Suite CD to the installation directory. (License Server packages for all supported operating systems are distributed on all GOCAD Suite CDs.)
- 2 Type the following command to move to the installation directory, where *installation_directory* is a placeholder for the actual directory name:
cd *installation_directory*
- 3 Type the following command to extract the License Server files, where *operating_system* matches the operating system listed in the package name:
gunzip < LicenseServer-11.3.operating_system.tar.gz | tar xvf -
This creates a directory named `PDGM/licenses`, which contains all License Server programs and utilities.

To install the license file

- Copy the license file you received from Paradigm to the directory `PDGM/licenses`. Rename the license file `gocadlmd.lic`.

Important The `SERVER` line on the license file must reflect the name of the computer for which the license file was issued. If this is not the case, the `SERVER` line must be edited. For more information, see "[SERVER lines](#)" on page 3-4.

To set up the license option file— Basic GOCAD Developer Kit (Developer-Based) only

If you have a Basic GOCAD Developer Kit (Developer-Based) license, you must also set up a license option file. For instructions, see "[Setting Up the License Option File— Basic GOCAD Developer Kit \(Developer-Based\) Product Only](#)" on page 3-13.

To start License Server

- Do one of the following to start License Server:
 - If you are using the C shell, type a command similar to the following:
cd PDGM/licenses
./lmgd -c gocadlmd.lic >& gocadlmd.log
 - If you are using either the Korn or Bourne shell, type a command similar to the following:
cd PDGM/licenses
./lmgd -c gocadlmd.lic > gocadlmd.log 2>&1

License Server starts in the background and logs the server output to the file PDGM/licenses/gocadlmd.log.

We recommend that you configure your computer to run the License Server automatically at system startup.

You can check the content of gocadlmd.log for any error messages. If there are error messages and you need assistance, contact Paradigm Support at <http://gocad-support.pdgm.com/>. Make sure to include a copy of the gocadlmd.log file in your support request.

Note lmgd is the License Server daemon.

Where to go from here

After you have installed License Server, you can start GOCAD Suite. For instructions, see "Starting GOCAD Suite on UNIX" on page 2-8.

3.3.3 Stopping License Server

The following instructions explain how to stop License Server in a UNIX environment.

To stop the License Server

- Type the following commands to stop the License Server:
cd PDGM/licenses
lmdown



3.4 Installing or Upgrading License Server 11.3 on Windows

The following sections detail the procedures needed to either upgrade from an older version of the License Server or perform a fresh installation in a Microsoft Windows environment.

It is necessary to install License Server 11.3 only on the server computer for which the license file was issued. In larger organizations, License Server is installed on a server computer while GOCAD Suite is installed on many client computers. If your computer is one of the client computers, you do not need to install License Server on it.

Important For Windows for x64 systems (64-bit systems), you can run the License Server only locally. A Windows 64-bit computer cannot serve as a license server for a network.

If you are a previous License Manager user upgrading to the latest release, see "Removing an Earlier Version of the License Server" on page 3-9. If you are performing a new installation, follow the procedures in "Installing a New License Server" on page 3-10.

3.4.1 Removing an Earlier Version of the License Server

This section presents instructions for removing the version of License Server that controlled access to an earlier version of Paradigm products.

A license server may not be on your computer if you were using a license file installed on a remote server or if you were using a type of license (called a node-locked, serverless license) that did not require a license server.

To deactivate the License Server

- 1 Make sure to keep a copy of your license file and name it gocadlmd.lic. You should be able to find your license file in C:\Program Files\PDGM\licenses.
- 2 If you have an option file for the Basic GOCAD Developer Kit (Developer-Based) license, write down the list of logon names authorized to access the license.
- 3 To start the License Server configuration tool, point to **All Programs**, point to **GOCAD 2.0.x**, point to **Utilities**, and then click **License Server Configuration Utility**.
– or –
Locate and run lmttools.exe.
- 4 On the **Service/License File** tab, select **Configuration Using Services**.
- 5 On the **Configure Services** tab, clear the **Start Server at Power Up** and **Use Services** check boxes.
- 6 Restart your computer.

To remove the License Server

- 1 On the Windows taskbar, click **Start**, click **Control Panel**, and then double-click **Add or Remove Programs**.
- 2 Select **FLEXNET License Server x.x** (the earlier version of FLEXNET), and then click **Remove**.
- 3 When prompted to confirm that you want to remove the FLEXNET License Server, click **Yes**.

After you remove the earlier version of the License Server, you are ready to install License Server 11.3.

3.4.2 Installing Dongle Device Drivers

Dongle licenses require that special drivers be installed on the computer to which the dongle is attached. Dongle licenses work only with Microsoft Windows operating systems. The type of dongle is determined by the FLEX ID, which is labeled on the dongle itself.

The dongle drivers can be downloaded from the Paradigm download site, and they are included on the GOCAD Suite CD for the Windows environment. The drivers are set up by an automatic installation program.

To download the dongle device drivers (dongle license only)

- If you do not have GOCAD Suite on CD, download the Dongle Driver package on the download site at <http://gocad-download.pdgm.com/>.

To install Dongle Drivers (dongle license only)

- 1 If you downloaded the Dongle Drivers, double-click the downloaded file.
 - or –
 - If you are installing the Dongle Drivers from CD, do the following:
 - a Place the GOCAD Suite CD for Windows in your CD drive, open **My Computer**, and then double-click the CD name to display its contents.
 - b Open the **DongleDrivers** folder, and then double-click **DongleDrivers-2.0-Windows.exe**.
- 2 Follow the instructions in the installation wizard.

3.4.3 Installing a New License Server

Complete the following procedures to install the new License Server in the Windows environment.

Note You must have Administrator rights to install License Server.

Important For Windows for x64 systems (64-bit systems), you can run the License Server only locally. A Windows 64-bit computer cannot serve as a license server for a network. (But you can run GOCAD Suite on a Windows 64-bit computer and connect to a remote License Server.)

To download License Server files

- If you do not have GOCAD Suite on CD, download the License Server package for Windows on the Paradigm download site at <http://gocad-download.pdgm.com/>.

Note License Server packages for all supported operating systems are distributed on all GOCAD Suite CDs.

To install License Server

- 1 If you downloaded License Server, double-click the downloaded file.
– or –
If you are installing License Server from CD, do the following:
 - a Place a GOCAD Suite CD in your CD drive, open **My Computer**, and double-click the CD name to display its contents. (License Server packages for all supported operating systems are distributed on all GOCAD Suite CDs.)
 - b Open the **LicenseServer** folder, and then double-click **LicenseServer-11.3-Windows.msi**.
- 2 When the **InstallShield Wizard** opens, click **Next**.
- 3 Read the license agreement; if you accept, click **I accept the terms in the license agreement**, and then click **Next**.
- 4 Type your user name and organization in the appropriate boxes, and then click **Next**.
- 5 Select the folder where you want to install the License Server, and then click **Next**.
- 6 Select **Complete**, and then click **Next**.
- 7 Click **Install** to start the installation process.
- 8 Click **Finish** when the process is complete.

To install the license file

- Do one of the following:
 - If you are running an x86 edition of Microsoft Windows, copy the license file you received from Paradigm as gocadlmd.lic into the folder:
C:\Program Files\PDGM\licenses.
 - If you are running an x64 edition of Microsoft Windows, copy the license file you received from Paradigm as gocadlmd.lic into the folder:
C:\Program Files (x86)\PDGM\licenses.

Important The SERVER line on the license file must reflect the name of the computer for which the license file was issued. If this is not the case, the SERVER line must be edited. For more information, see "[SERVER lines](#)" on [page 3-4](#).

To set up the license option file—Basic GOCAD Developer Kit (Developer-Based) only

If you have a Basic GOCAD Developer Kit (Developer-Based) license, you must also set up a license option file. For instructions, see "[Setting Up the License Option File— Basic GOCAD Developer Kit \(Developer-Based\) Product Only](#)" on [page 3-13](#).



To finish License Server configuration

- 1 Click **Start**, point to **All Programs**, point to **License Server**, and then click **License Server Configuration Utility**. A dialog box with several tabs appears.
- 2 On the **Service/License File** tab, click **Configure Using Services**, and then click **License Server** in the list.
- 3 On the **Config Services** tab, select the **Use Services** and **Start Server at Power Up** check boxes.
- 4 Click the **Save Service** button.
- 5 Restart your computer.

You can check the content of gocadlmd.log located in C:\Program Files\PDGM\licenses for any error messages. If there are error messages and you need assistance, contact Paradigm support at <http://gocad-support.pdgm.com/>. Make sure to include a copy of the gocadlmd.log file in your support request.

Where to go from here

After you have installed License Server, you can start GOCAD Suite. For instructions, see "Starting GOCAD Suite on Windows" on page 2-9.

3.5 Setting Up the License Option File— Basic GOCAD Developer Kit (Developer- Based) Product Only

The Basic GOCAD Developer Kit (Developer-Based) license requires that you specify the logon names of the license users in an option file. The option file must be named `gocadlmd.opt`, and it must be in the same directory as `gocadlmd.lic`. This file can be modified at any time without affecting the validity of the license; however, License Server must be restarted if you modify the file.

To set up the license option file— Basic GOCAD Developer Kit (Developer-Based) only

- 1 Uncomment the GROUP line in the `gocadlmd.opt` file distributed with the License Server package, and modify the list of logon names authorized to access the Developer Kit.

```
# GOCAD License Server Option File
#
# Uncomment the following GROUP line if you have purchased
# a "Basic GOCAD Developer Kit (Developer-Based) "
# license.
# The following line should contain the list of
# logins authorized to access the license.
#
# GROUP Developers login1 login2 login3 — GROUP line
#
.
.
.
```

Note The number of users you specify cannot exceed the number of licenses granted in the license file. This number can be checked by looking in the INCREMENT paragraph (see "INCREMENT Paragraphs" on page 3-5) of the license file for the Basic GOCAD Developer Kit (Developer-Based) product. If the number of users you specify is less than the number of licenses granted in the license file, the remaining licenses *will not* be available.

- 2 Restart License Server.

Note You must restart License Server every time you modify the option file. Reloading the server with the **Imreread** command is not sufficient.



3.6 Updating the License File

This section explains how to update the license file. Updating the license file is necessary if, for example, you purchase a new Paradigm product or renew your maintenance contract. In these cases, Paradigm sends you a new license file that fully replaces all previously issued license files. You do not combine license files.

Complete the procedure for your environment. Instructions assume License Server 11.3 is already running.

To replace the license file on UNIX

- 1 In the PDGM/licenses directory, replace the current license file named `gocadlmd.lic` with the new license file.
- 2 Rename the new license file **`gocadlmd.lic`**.
- 3 Restart License Server 11.3. For instructions, see ["To start License Server" on page 3-8](#).

To replace the license file on Windows

- 1 In the PDGM/licenses folder, replace the current license file named `gocadlmd.lic` with the new license file.
- 2 Rename the new license file **`gocadlmd.lic`**.
- 3 Restart your computer.

3.7 Frequently Asked Questions About License Server

This section answers the following frequently asked questions about License Server:

- "How Do I Find the Host ID for My Computer?," page 3-15
- "How Do I Switch from One License Server to Another?," page 3-16
- "What Is the GOCADLMD_LICENSE_FILE Environment Variable?," page 3-17

3.7.1 How Do I Find the Host ID for My Computer?

The Host ID is an 8-character (Sun Solaris) or 12-character (Microsoft Windows, Linux) hexadecimal number. It is neither the workstation's IP address, nor the serial number.

To get the Host ID on Windows

Although there are other methods, use the following one to ensure you get the required Host ID.

- 1 On the Windows taskbar, click **Start**, and then click **Run**.
- 2 Type **cmd** and then click **OK** to open a command prompt.
- 3 Type **ipconfig /all**, and then press ENTER to get the following output:

```
Windows IP Configuration

    Host Name . . . . . : mycomputer
    Primary Dns Suffix . . . . . : mycompany.com
    Node Type . . . . . : Unknown
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No
    DNS Suffix Search List. . . . . : mycompany.com

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : mycompany.com
    Description . . . . . : Broadcom 440x 10/100
Integrated Controller
    Physical Address. . . . . : 00-0D-56-AF-18-0F
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IP Address. . . . . : 10.1.13.32
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 10.1.1.1
    DHCP Server . . . . . : 10.1.10.57
    DNS Servers . . . . . : 10.1.10.57
                             10.1.10.24
    Lease Obtained. . . . . : Friday, September 24, 2007
    Lease Expires . . . . . : Monday, September 27, 2007
```

- 4 Send the complete resulting output to the person who requested the Host ID.

Note Be sure to send the full contents of ipconfig/all, especially if your computer is a notebook. To generate a license, Paradigm requires the physical address: the Host ID of the fixed Ethernet card, not the wireless one.

To get the Host ID on UNIX

Retrieve the Host ID by using the `lmhostid` utility, which you can download from the Paradigm download site. Running `lmhostid` within UNIX gives you an 8-character Host ID (Sun Solaris) or 12-character Host ID (Linux).

Although there are several UNIX "hostid" commands, they return a number that does not correspond to the required Host ID. Only the following method is accurate.

- 1 Download `lmhostid` for your operating system from the Paradigm download site at <http://gocad-download.pdgm.com/>.

- 2 Type the following command at a command prompt to set execution rights on the `lmhostid` utility:

```
chmod u+x lmhostid-11.3-operating_system
```

- 3 Type the following command at a command prompt to rename the `lmhostid` utility:

```
mv lmhostid-11.3-operating_system lmhostid
```

- 4 Type the following command at a command prompt to run the `lmhostid` utility:

```
lmhostid
```

Running `lmhostid` gives you results similar to the following:

```
% lmhostid
lmhostid -Copyright (C) 1989-2002 Globetrotter Software, Inc.
The FLEXNET host ID of this machine is "12345678"
```

- 5 Send the resulting output to the person who requested the Host ID.

3.7.2 How Do I Switch from One License Server to Another?

The information on the license server you are using is stored in the registry on Windows and in `$HOME/.flexlmrc` on UNIX. On Windows, to switch from one License Server to another, you need to delete this information from the registry. On UNIX you need to remove the file `$HOME/.flexlmrc`. You might want to do this, for example, to switch from the License Server on your computer to one on a network.

To switch from one License Server to another on Windows

- 1 Click the **Start** button, click **Run**, type **regedit**, and then click **OK**.
- 2 In the **Registry Editor**, click the **Edit** menu, and then click **Find**.
- 3 In the **Find** dialog box, type **GOCADLMD_LICENSE_FILE**, and then click **Find Next**.
- 4 When the list of files appears, delete **GOCADLMD_LICENSE_FILE**.

When you start GOCAD Suite, the **FLEXNET License Finder** dialog box opens and you are prompted to specify the license server. For instructions on specifying the license server, see "Starting GOCAD Suite on Windows" on page 2-9.

To switch from one License Server to another on UNIX

- Type the following command at a command prompt, and then press ENTER:

```
rm $HOME/.flexlmrc
```

You can now start GOCAD Suite. For instructions, see "Starting GOCAD Suite on UNIX" on page 2-8.



3.7.3 What Is the GOCADLMD_LICENSE_FILE Environment Variable?

GOCADLMD_LICENSE_FILE is an environment variable that can specify explicitly where GOCAD Suite searches for license information. Its value is *port@host*, where *port* is the TCP/IP number and *host* is a server name such as *server.mycompany.com* or an IP address such as 123.45.678.90.

If you are installing License Server locally on a Windows 64-bit computer or you are running GOCAD Suite on a Windows 64-bit computer and connecting to a remote License Server, you must set this environment variable. For instructions, see ["To start GOCAD Suite on Windows x64 Systems \(64 bits\)"](#) on page 2-10.

This environment variable can also be used for troubleshooting your License Server. To switch from one license server to another, see ["How Do I Switch from One License Server to Another?"](#) on page 3-16. Otherwise, setting this environment variable is not required to use GOCAD Suite and we recommended that you do not use it.





Installing Developer Kit

In this chapter

- "About Developer Products," page 4-2
- "General Installation Process," page 4-2
- "About Qt," page 4-3
- "Installing GOCAD Developer Kit," page 4-3
- "Setting Up the GOCAD_LICENSE Environment Variable," page 4-6

Overview

Developer Kit is a product that developers can use to build modules based on Paradigm technology. This chapter explains how to install and configure GOCAD Developer Kit in Windows and UNIX environments.

4.1 About Developer Products

Paradigm offers two developer products:

- **Basic GOCAD Developer Kit (Shared).** Incorporates a subset of Base Module functionalities for use in development. Your GOCAD Basic Developer Kit license should only be used for independent program or GOCAD plug-in development and test purposes. The GOCAD Basic Developer Kit (Shared) can be shared among developers at a site.
- **Basic GOCAD Developer Kit (Developer-Based).** This product is the same as Basic GOCAD Developer Kit (Shared), except that instead of being shared among developers in an organization, the license is locked to a specific developer.

All of these products are packaged together in the GOCAD Developer Kit, and therefore you will not need to download multiple packages.

4.2 General Installation Process

If you have not done so already, install GOCAD Suite. For instructions, see "[Installing GOCAD Suite](#)" on page 2-4.

Table 4–1 summarizes the Developer Kit installation process, and it lists the section or chapter that provides additional information and instructions.

Table 4–1 General steps to install Developer Kit

Step	See
1 Purchase a Qt Enterprise License if required by your environment.	"About Qt" on page 4-3
2 Download the GOCAD Developer Kit software.	"Downloading GOCAD Suite" on page 2-2
3 Install GOCAD Developer Kit on the client computer where you have installed GOCAD Suite.	"Installing GOCAD Developer Kit" on page 4-3
4 For each developer who will use Basic GOCAD Developer Kit or Basic GOCAD Developer Kit (Developer-Based) products, set up the GOCAD_LICENSE environment variable.	"Setting Up the GOCAD_LICENSE Environment Variable" on page 4-6
5 If you are using Basic GOCAD Developer Kit (Developer-Based), set up the license server option file to contain the developers' user names.	"Setting Up the License Option File— Basic GOCAD Developer Kit (Developer-Based) Product Only" on page 3-13



4.3 About Qt

Do I need to purchase a Qt Enterprise license?

On UNIX, Developer Kit contains Qt libraries and header files that will allow you to create modules and plug-ins. Most developments on UNIX do not require the purchase of a Qt Enterprise license from Trolltech. However, if your development uses the Qt utilities moc and uic, you will need to purchase a Qt Enterprise license from Trolltech.

On Windows, a Qt Enterprise License is required to develop with Developer Kit.

To obtain and install Qt

If you determined that you need to purchase a Qt Enterprise License, complete the following procedure:

- 1 Purchase a Qt Enterprise License from Trolltech. This can be done from their Web site at <http://www.trolltech.com/products/purchase/>.
- 2 Forward the e-mail confirming that you have purchased Qt Enterprise License from Trolltech to Paradigm support. Upon reception, Paradigm will send you the logon name and password you will need to download GOCAD Qt 3.3.8 Libraries.
- 3 Download the GOCAD Qt 3.3.8 Libraries. For instructions to download packages, see "[Downloading GOCAD Suite](#)" on [page 2-2](#).
- 4 Extract the downloaded file into the PDGM directory.

4.4 Installing GOCAD Developer Kit

Separate instructions are included for UNIX and Windows environments. Complete the procedure that corresponds to your environment.

If you have not downloaded GOCAD Developer Kit (and you do not have GOCAD Developer Kit on CD), complete the procedure in "[Downloading GOCAD Suite](#)" on [page 2-2](#) before you continue.

4.4.1 Installing Developer Kit on UNIX

All GOCAD Developer Kit packages for UNIX are installed in the main installation directory by extracting a compressed archive. All Paradigm products must reside under a common directory. The default directory name is PDGM.

If you plan to use GOCAD Developer Kit on multiple UNIX operating systems, you must download and install the package for each operating system. Multiple installations can reside in the same directory; the installation process handles correct file placement automatically.

Important You must install Developer Kit where you installed GOCAD Suite.

- 1 Do one of the following:
 - If you downloaded Developer Kit and the file is not in the directory where you want to install the program, copy the file to the installation directory.
 - If you are installing Developer Kit from CD, copy the package from the appropriate CD to the installation directory.
- 2 Type the following command to move to the installation directory, where *installation_directory* is a placeholder for the actual directory name:
cd *installation_directory*
- 3 Type the following command to extract the files, where *x.x.x* is the version number and *operating_system* matches the operating system listed in the package name:
gunzip < GOCAD-*x.x.x*-Devkit-*operating_system*.tar.gz | tar xvf -

4.4.2 Installing Developer Kit on Windows

Complete the following steps to install GOCAD Developer Kit on Windows.

To install GOCAD Developer Kit on Windows

- 1 If you downloaded GOCAD Developer Kit, double-click the downloaded file.
– or –
If you are installing GOCAD Developer Kit from CD, do the following:
 - a Place the Developer Kit CD in your CD drive, open **My Computer**, and double-click the CD name to display the CD contents.
 - b Open the **DevelopmentKit** folder, and then double-click one of the following files, where *x.x.x* is the version number:
 - For Windows Vista or Windows XP for Intel x86 (32 bits), double-click **GOCAD-*x.x.x*-Devkit-Windows-i86-vs2005.msi**
 - For Windows Vista or Windows XP for x64 systems (64 bits), double-click **GOCAD-*x.x.x*-Devkit-Windows-x64-vs2005.msi**

Whether you are using a CD or a downloaded file, the installation wizard opens after a few moments.

- 2 Follow the instructions in the installation wizard as they appear.

Notes

- When GOCAD Developer Kit is installed on a server, it will not run on a local computer unless the runtime library MSVCR80.dll is installed. If you attempt to start GOCAD Developer Kit locally and this library is not installed, a message notifies you that the program failed to start because MSVCR80.dll was not found. If you receive this message, follow the instructions in "[Configuring Developer Kit to Run from a Shared Location \(Windows Only\)](#)" on page 4-5.
- Although you can install the x64 version of the Developer Kit, you will only be able to produce development products for the x86 environment.

4.4.3 Configuring Developer Kit to Run from a Shared Location (Windows Only)

For Windows environments, if GOCAD Developer Kit is installed on a server, the necessary runtime library must be installed for the program to run on a local computer. If you try to start GOCAD Developer Kit on a local computer and this runtime library is not installed, a message informs you that the program failed to start because MSVCR80.dll was not found.

If you receive this message, perform the following steps.

Notes

- To perform this procedure you must have administrator privileges.
- This procedure should be performed only for shared installations. For local installations, the installer automatically runs the runtime library appropriate for your environment.

To configure Developer Kit to run from a shared location (Windows only)

- 1 Navigate to C:\Program Files\PDGM\GOCAD-x.x.x\Redist, where x.x.x is the version number.
- 2 Perform one of the following steps:
 - For Windows for x86 systems (32 bits), locate and double-click the file **vcredist_x86.exe** to run it.
 - For Windows for x64 systems (64 bits), locate and double-click the file **vcredist_x64.exe** to run it.
- 3 If you receive a message directing you to restart your computer, shut down your computer and restart it to complete the installation.

4.5 Setting Up the GOCAD_LICENSE Environment Variable

If you have a Basic GOCAD Developer Kit or Basic GOCAD Developer Kit (Developer-Based) license, you will need to set the GOCAD_LICENSE environment variable to dsl for each developer who will use the product.

To set GOCAD_LICENSE environment variable on UNIX

- Do one of the following:
 - If you are using C Shell, type the following command at a command prompt:
setenv GOCAD_LICENSE dsl
 - If you are using Korn Shell, type the following command at a command prompt:
export GOCAD_LICENSE=dsl

To set GOCAD_LICENSE environment variable on Windows

- 1 Right-click **My Computer**, and then select **Properties** to open the **System Properties** dialog box.
- 2 Click the **Advanced** tab, and then click the **Environment Variables** button.
- 3 In the User Variables section at the top, click the **New** button to open the **New User Variable** dialog box.
- 4 In the **Variable name** box, type **GOCAD_LICENSE**.
- 5 In the **Variable value** box, type **dsl**.
- 6 Click **OK**.



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