

# 1. Installation Instructions - Unix & Linux

There are two types of Gridgen installations: a First Time Installation and a Maintenance Release Installation.

- A First Time Installation involves extracting both Gridgen and its license managers from a CD and is performed by new users who are using Gridgen for the first time or by existing Gridgen users when a new, major Gridgen version is released.
- A Maintenance Release Installation involves replacing your current Gridgen executable program files with the latest Gridgen executable files. You obtain the latest Gridgen executable either by downloading them from Pointwise's ftp site or from a CD.

A typical Gridgen installation will result in the following layout of data (approximately 200 MBytes) in the *gridgen\_home\_path* directory:

- *doc/* - This directory contains the Gridgen User Manual, Glyph Reference Manual, Tutorial Workbook, and Gridgen Release Notes and Installation Instructions in PDF and HTML formats in the *PDF/* and *Help/* subdirectories respectively. PDF files may be viewed and printed using Adobe Acrobat Reader. HTML files may be viewed by pressing **Help** within Gridgen.
- *examples/* - This directory contains Gridgen (.gg), database, and Glyph script (.glf) files for tutorials and other examples of Gridgen usage.

*hw/* - There is not a directory actually named *hw*. It is included here in a generic sense to represent the specific hardware brand(s) of computer on which you will install Gridgen and its license managers. Instead of *hw* you may see directories called *sgi65*, *sun*, *hp*, and *linux*. Hardware brand specific files for the license managers, library files, and executables will be contained here within subdirectories.

- *licenses/* - This directory is where we strongly recommend that you install your license file.
- *utils/* - This directory contains Glyph scripts that perform various utility functions.
- *gridgen* - This file is Gridgen's Launch Script.
- *LICENSE\_CONTROL.SH* - This file is Gridgen License Control Script.

## 1.1 Planning Your Installation

Before beginning an installation you should invest some time in planning. Choices to make include the following.

- Choose the workstation on which you will perform the installation. It is best to perform a First Time Installation on the workstation that will also run Gridgen's license server so that the Install Script can run the license management programs. Keep in mind that the license server workstation should be networked to any workstation at your site on which you want to run Gridgen.
- Choose the user who will install Gridgen. We recommend that you do not install Gridgen as root.
- Choose where Gridgen's home directory (called *gridgen\_home\_path*) will be. This is the directory into which all files should be installed. Please record the location of *gridgen\_home\_path* so that it will be easy to find these files when you need to do a Maintenance Installation or install a new license file. It is also very helpful if this directory can be mounted by every workstation that will run Gridgen.
- Choose where Gridgen's FLEXlm and Native CAD Reader (NCR) license managers will be installed. We recommend that you install both in *gridgen\_home\_path/hw/flexlm* where *hw* is replaced by the hardware type of your installation (for example, *linux* for PC workstations running Linux).

- Choose the directory where Gridgen's license file (or files if you have licensed an NCR) provided by Pointwise will be placed. It is recommended that you place all license files in *gridgen\_home\_path/licenses*.

After your planning is complete the First Time Installation process is quite straightforward and may be run using Gridgen's Install Script on the CD. The Install Script performs many tasks:

1. Extracts Gridgen's files from the CD
2. Extracts the license managers files from the CD
3. Generates your host ID and host name
4. Imports your Gridgen license file
5. Starts, stops, or queries the FLEXlm license server (uses the daemon *lmgrd*)

If you have licensed an NCR, the install script can also perform these additional tasks:

6. Generates your NCR host ID
7. Imports your NCR license file
8. Starts, stops, or queries the NCR license server

You are responsible for reporting the host ID and host name to us between tasks 3 and 4. For users with a licensed NCR, the NCR host ID (task 6) must be reported in addition to the Gridgen host ID and hostname to receive an appropriate license file.

Of course, you cannot run the Install Script until the CD's file system has been mounted on your workstation.

## 1.2 First Time Installation

To start the Install Script you must first open a shell window, change to the *gridgen* subdirectory at the CD's *mount\_directory*, and start the Install Script using the following commands.

```
cd mount_directory/gridgen
sh ./INSTALL.SH
```

If installing on an SGI Prism workstation, the following commands will need to be used to execute the installation script:

```
cd mount_directory/gridgen |
/irix/usr/bin/sh ./INSTALL.SH |
```

When first started the Install Script's main menu will be displayed as shown below.

```
=====
Choose one of the following menu items:

    1. Complete new installation. (Runs items 2-4 below).
    2. Unload Gridgen from CD.
    3. Unload the license manager from CD.
    4. Run the license utility.

    0. none of the above (exit)

Please enter a number from 0 to 4:
```

Since this is a First Time Installation you will choose the first option above by typing a 1 and pressing the

Enter key.

```

=====
== Install Gridgen
=====

----- NOTICE -----
THE TERMS OF THE AGREEMENT UNDER WHICH YOU ARE ACQUIRING THE RIGHT TO USE
THE SOFTWARE INCLUDE THE ``RIGHT TO USE LICENSE`` ATTACHED HERETO OR
ACCOMPANYING THE SOFTWARE. YOUR PURCHASE, LICENSE, RECEIPT OR USE OF THE
SOFTWARE CONSTITUTES YOUR ACCEPTANCE OF ALL THE ``RIGHT TO USE LICENSE.``

Enter the name of the directory where you will be installing Gridgen: (/usr/local/gridgen)

```

This first prompt is for the directory into which Gridgen will be installed. This directory is Gridgen's home directory, called *gridgen\_home\_path* for short. The default installation directory is `/usr/local/gridgen` but you are free to choose any existing directory for which you have write privilege. **Note:** If your server is an SGI Prism workstation, the installation directory should be created under `/home`. The installation directory must exist before you enter its name here or else the Install Script will exit.

```

Choose one of the following versions of Gridgen to
be installed:

```

1. Silicon Graphics IRIX 6.5+ (SGI)
2. Hewlett-Packard (HP)
3. Sun - Solaris 8
4. Linux (Intel / AMD)
5. Linux 64-bit
6. Apple OS X
7. none of the above

```

Please enter the numbers of the selected platforms
separated by
spaces (or enter 7 to skip installation):

```

The prompt shown above lets you select the Gridgen hardware version(s) to be installed. Keep in mind that your use of Gridgen is not restricted to any specific hardware version so you are free to install as many hardware versions of Gridgen as you can use. However, if you are installing on an SGI Prism workstation, you will need to install only the *Silicon Graphics IRIX 6.5+* version of Gridgen.

Entering 6 will return you to the Install Script's main menu.

Once you type the number corresponding to the desired hardware version(s) you will see the messages shown below as files are extracted from the CD and installed into the *gridgen\_home\_path* directory.

```

Copying Gridgen from CD-ROM for hw...
list of files
Copying documentation from CD-ROM...
Setting permissions...
Gridgen copy completed.

```

This next step of the procedure involves installation of the Gridgen License Manager (LM) which includes the FLEXlm and Native CAD Reader (NCR) license managers.

```

=====
== Install the license manager
=====

Enter the name of the directory where you will be installing the
Gridgen License Manager (LM): (/usr/local/gridgen)

```

The Install Script will install the LM in the same directory in which you installed Gridgen by default but you may choose any existing directory for which you have write privileges. We recommend that you install the

LM in the default location.

```
Choose one of the following versions of the LM to
be installed:
```

1. Silicon Graphics IRIX 6.5+ (SGI)
2. Hewlett-Packard (HP)
3. Sun - Solaris 8
4. Linux (Intel / AMD)
5. Linux 64-bit
6. Apple OS X
  
7. none of the above

```
Please enter a number from 1 to 7:
```

The prompt shown above is asking you for the hardware version of the LM to install. You only have to install the LM once on your network regardless of how many systems you have. However, keep in mind that the Install Script also runs the LM's utility to acquire the server *host ID* and the *NCR host ID*. That's why you should be running the Install Script for a First Time Installation on the workstation that will be Gridgen's license server.

```
Copying LM from CD-ROM...
list of files
LM copy completed.
```

The next step of the installation procedure is to generate licensing information and start the license server(s).

```
=====
==
== Gridgen License Control
==
=====

Current settings:
  Hostname                : urchin
  Gridgen license host ID : 000476eadca1
* Gridgen installed license file : (missing)
  Native CAD Reader license host ID : 000476EADCA1
* Native CAD Reader license port : 1542
* Native CAD Reader installed license file: (missing)

Options:
  General:
    a) Change settings (only settings marked with * may be changed).
    b) Get license keys.
  Gridgen License Manager:
    c) Start    e) Check status
    d) Stop     f) Import License
  Native CAD Reader License Manager:
    g) Start    i) Check status
    h) Stop     j) Import License

  x) Exit.

Please enter a letter from 'a' to 'j' or 'x' to exit:
```

We recommend throughout the installation process that the default locations and port number be used when setting up your Gridgen and NCR license servers. However, if you need to change these settings, you can do so by selecting option 'a' from the Options: General menu. If the default port number of 1542 is changed using the Install Script, you will have to edit your license file to reflect this change before starting the license server. In your license file, the following string will need to be modified, where 1542 is the port number and hostname is the hostname reported in the Current settings area:

```
user_info=CADserver=hostname:1542
```

To obtain the information needed for a license file, we recommend using either the **Current settings** display or option `'b'`, to get the **Hostname** and **Gridgen license host ID**. This information and the **Native CAD Reader license host ID** (if you have licensed an NCR) should be emailed to [licenses@pointwise.com](mailto:licenses@pointwise.com) or your local Gridgen distributor to receive your license. In reply, you will receive an email with the license file `pointwise_flexnet.lic` attached. If you have licensed an NCR, you will also receive the license file `pointwise_ncr.dat`. Any license files you receive should be imported via options `'f'` and `'j'` for Gridgen and NCR license files respectively. Please note that importing license files under one or both of these options will place the license files in the default recommended location of `gridgen_home_path/licenses` under the names of `pointwise_flexnet.lic` and `pointwise_ncr.dat`.

Once the Gridgen license file (`pointwise_flexnet.lic`) has been installed, the license server will need to be started. Start by selecting option `'c'`, which will prompt you to specify the full path and file-name of a log file. The log file serves as a helpful diagnostic tool for trouble-shooting server start-up issues. We recommend that the log file is placed in `gridgen_home_path/licenses` as `pointwise_flexnet.log`. If you wish, you may leave the location blank and hit enter to start the server with no log file. Once you hit enter, the Install Script will start the Gridgen license server:

```
Enter the path and name of the log file (leave blank for no log file):
/usr/bin/local/GridgenV15/licenses/pointwise_flexnet.log
Starting Gridgen license server using the command:

"/usr/bin/local/GridgenV15/linux/flexlm/lmgrd" -c "/usr/bin/local/
GridgenV15/licenses/pointwise_flexnet.lic" -l /usr/bin/local/
GridgenV15/licenses/pointwise_flexnet.log"
```

To verify that the Gridgen license server is running, you can query the license server by selecting option `'e'` from the Gridgen license control main menu.

```
lmutil - Copyright (c) 1989-2006 Macrovision Europe Ltd. and/or Macrovision
Corporation. All Rights Reserved.

Flexible License Manager status on Mon 12/10/2007 16:31

License server status: 27000@xenia
  License file(s) on xenia: /usr/bin/local/GridgenV15/licenses/pointwise_flexnet.lic:

  xenia: license server UP (MASTER) v11.4

Vendor daemon status (on xenia):

  PWID: UP v11.4

Gridgen license server is RUNNING.
```

Now that you have checked the Gridgen license server's status, you may either go on to start the NCR license server (if you have licensed an NCR process) or you may quit the Install Script and start using Gridgen. To exit the Install Script, you will need to enter option `'x'` from the Gridgen license control menu, then `'0'` from the Install Script main menu. To start the NCR license server, select option `'g'` which will bring you to the following display:

```
Enter the path and name of the log file (leave blank for no log file):
/usr/bin/local/GridgenV15/licenses/pointwise_ncr.log
Starting the Native CAD Reader license server using the command:

"/usr/bin/local/GridgenV15/linux/flexlm/CADstartsrv" "/usr/bin/local/
GridgenV15/licenses/pointwise_ncr.dat" 1542 -logfile "/usr/bin/local/GridgenV15/
licenses/pointwise_ncr.log"
```

You will be prompted to specify the full path and filename of your NCR license server log file after which the license server will be started. We recommend saving the log file as `pointwise_ocr.log` in the `gridgen_home_path/licenses` directory.

You may mount the CD and run the Install Script at any time to run any one task such as extracting a second hardware brand of Gridgen from the CD or generating host information for a new license file with the license utility.

### 1.3 License Control

During the installation process, a license control script is extracted to your `gridgen_home_path` directory as `LICENSE_CONTROL.SH`. We recommend that this script be used after a first time installation ([Section 1.2](#)) any time you need to obtain host information, import a new license file, control the status of the license server, or change license server settings. Execute the following commands to run the script.

```
cd gridgen_home_path/  
sh ./LICENSE_CONTROL.SH
```

If installed on an SGI Prism workstation, the following alternative commands should be used to run the script:

```
cd gridgen_home_path/  
/irix/usr/bin/sh ./LICENSE_CONTROL.SH
```

The license control script options and their uses are outlined in [Section 1.2](#) and [Section 3](#).

### 1.4 Concurrent V14 and V15 Processes

If you are interested in continuing to use V14 after upgrading to V15, please be aware that V14 can be run with a V15 license. However, V15 will not run under a V14 license.

### 1.5 Downloading A Maintenance Release

Periodically new, minor Gridgen versions are released. These minor releases are called maintenance releases. Usually a maintenance release consists solely of defect corrections to the software. You can determine your current Gridgen version by looking in the Version window in the upper left corner of the Gridgen screen. Maintenance releases are announced at the Pointwise web site and via the Gridgen e-mail list.

You can obtain a maintenance release by downloading a new Gridgen executable file from the Maintenance Release Download site in the Pointwise Support area of our website (<http://www.pointwise.com/support/download.shtml>).

**Note:** Users upgrading from Gridgen V15.10 to V15.11 will need a new Gridgen license file. New license files can be requested online at <http://www.pointwise.com/licenses/>.

### 1.6 Maintenance Release Installation

Once you have downloaded a Gridgen maintenance release executable you may install it by following these steps. Note that in the following steps the string `hw` should be replaced with the appropriate string for your hardware type (e.g. `sgi65` for SGI workstations running IRIX 6.5). Furthermore, the examples below refer to the directory Gridgen was originally installed in as `gridgen_home_path`.

1. Copy to tape, disk, or to a compressed tar file all files contained within `gridgen_home_path`. This needs to be done in case a problem is encountered while installing the maintenance release.

2. Uncompress and untar the archive `gridgen_hw.tar.gz` in the `gridgen_home_path` directory:

```
cd gridgen_home_path
gunzip gridgen_hw.tar.gz
tar -xvf gridgen_hw.tar
```

3. Change to the `gridgen_home_path/hw/bin` directory:

```
cd gridgen_home_path/hw/bin
```

4. The new executable `gridgen` should now be present in this directory. For each maintenance release, this executable will be updated. Occasionally, other files that need to be updated for a maintenance release may also be extracted in addition to the `gridgen` executable.
5. (*Only for upgrades from Gridgen V15.10 to V15.11 or newer versions*) Due to an updated license manager in V15.11 and newer versions, the old license server (for Gridgen V15.10) will need to be stopped ([Section 3.10](#)). A new license file will also need to be requested from Pointwise online at <http://www.pointwise.com/licenses/>. Using the Gridgen V15.11 or newer `LICENSE_CONTROL.SH` script, import the new license file and start the license server according to the instructions outlined in [Section 1.2](#).

Now you may run Gridgen as before.

## 1.7 On-Line Help Updates

Periodically Gridgen's on-line help and other miscellaneous files are updated. Help updates are announced at the Pointwise web site and via the Gridgen e-mail list.

On the ftp site you will find a file called `help_update_n.tar.gz`, where `n` is replaced by the maintenance release number. This is a gzipped (compressed) tar archive containing updated HTML files for the on-line help and various other updated files. You may download this file using the same techniques used to download a Gridgen maintenance release.

Once the help update has been downloaded you may install it using the following procedure.

1. `cp help_update_n.tar.gz gridgen_home_path`
2. `gunzip help_update_n.tar.gz`
3. `tar -xvf help_update_n.tar`

## 1.8 Running Gridgen

All users should be sure that when they execute Gridgen they are actually running the Launch Script `gridgen` in the `gridgen_home_path` directory. If you were to examine the script's contents you will notice that it accomplishes a variety of tasks including

- setting environment variables for the on-line help and the tutorials,
- choosing the appropriate Gridgen hardware version, and
- modifying some keyboard mappings.

**Note:** For installations on SGI Prism workstations, users will need to run the `gridgen` script by using the following command to ensure that the appropriate shell is invoked:

```
/irix/usr/bin/sh ./gridgen|
```

