

Multigen Creator

Getting Started

Version 2.6 for Irix
September 2003



MultiGen-Paradigm

VISUALIZE REALITY

MultiGen Creator Getting Started Version 2.6

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It is the policy of MultiGen-Paradigm, Inc. to improve products as new technology, software, hardware, and firmware become available. MultiGen-Paradigm, therefore, reserves the right to change specifications without prior notice. Some features, functions, and operations described herein may not be available worldwide.

Contact Information

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Mail	MultiGen-Paradigm, Inc. 5465 Legacy Drive Plano TX 75024 USA

The following table contains MultiGen-Paradigm, Inc. contact information for product support in San Jose.

Contact Method	For Product Support:
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Customer Support and Licensing	877-289-5670 (toll free)
Mail	MultiGen-Paradigm, Inc. 2044 Concourse Drive San Jose CA 95131 USA



Getting Started

This guide describes how to install the Creator software and License Server software, and how to create a valid license. It also describes how to set environment variables that complete the licensing process and customize Creator Version 2.6 for IRIX.

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System Requirements

This is the system configuration for the IRIX operating system. We highly recommend that you upgrade your operating system to IRIX 6.5.x, or whatever is the most current and supported version. Earlier versions might require patches from SGI.

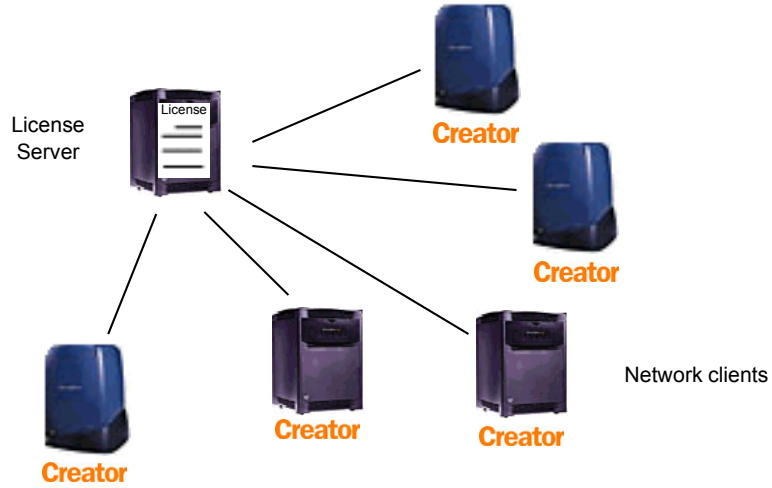
- OpenGL-based SGI IRIX workstations (IRIS GL-based workstations are unsupported)
- IRIX 6.5 or higher
- 250 MHz MIPS CPU clock speed or higher
- 128 MB memory or higher
- 4 GB or greater hard drive
- 1024 x 768 or higher screen resolution
- CD-ROM drive

Installing License Server and Creator Software

You install MultiGen Creator by using the IRIX Software Manager. MultiGen Creator is unlocked using the Élan License Manager software package by Rainbow Technologies. After you install Creator, you create a network license for both networked and single-user systems. You must have a license to save files in Creator; otherwise, you can only run Creator in read-only mode.

If you are using Creator on a networked system (a client-server architecture), you install the license server software on the server computer (License Server). License server software manages the Creator licenses on a networked system and enables you to create the license files.

We recommend that you install the Creator license server software on the License Server, and install copies of the Creator software on individual systems (the network clients):



As an alternative, you can install the license software and Creator software only on the License Server. The network clients can access the Creator application from the License Server:



If you have a single-user system without a License Server, you install the license *and* Creator software on the same system.

To install Creator software:

- Step 1.** Insert the Creator for IRIX CD into the CD-ROM drive.
- Step 2.** Choose **Software Manager** from the desktop **System** menu, or run `swmgr` (as root) from a shell window.
- Step 3.** In the **Software Manager**, type `CDROM/dist`, and click the **Lookup** button.
- Step 4.** Select **Customize Installation**.
- Step 5.** Select the software that you want to install. The software installs in the `/usr/local/MultiGen-Paradigm` directory.

Note: If you want to install the minimum amount of software necessary to set up a License Server (for installations where the Creator application will be installed on each client machine), select only the **Élan License Manager** option and deselect all other licensing options. You do not need to install the Élan License Manager on network clients.
- Step 6.** Click **Start**.
- Step 7.** When installation is complete, exit from the **Software Manager**.

Licensing Creator

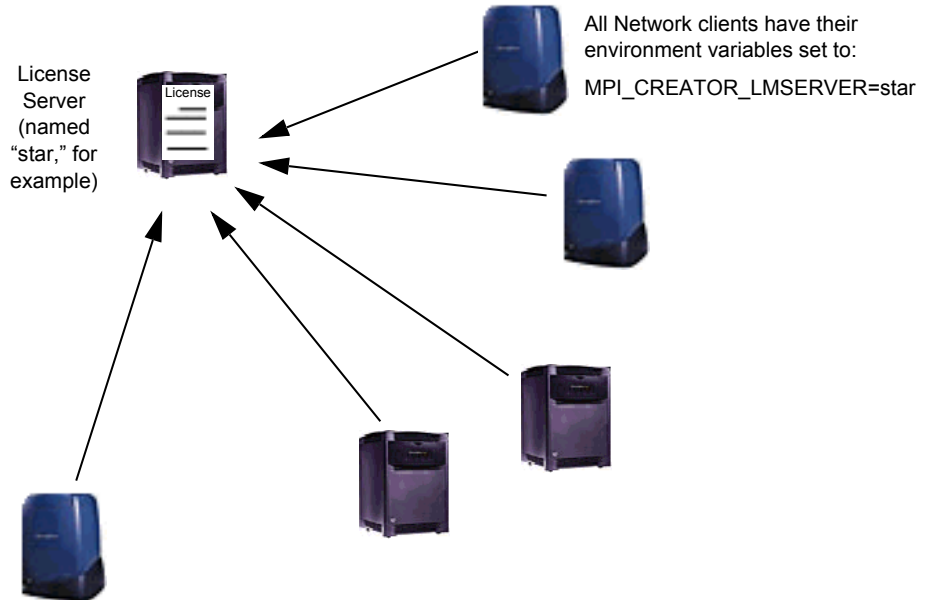
Only network licenses are available with Creator for IRIX; if you are licensing a single system, you create a network license for only one system. After you create license files, you must run a daemon on the License Server to read the license files and make them available to the network clients, even if the client and server are the same system.

A network license for one or multiple users has the following arrangement:

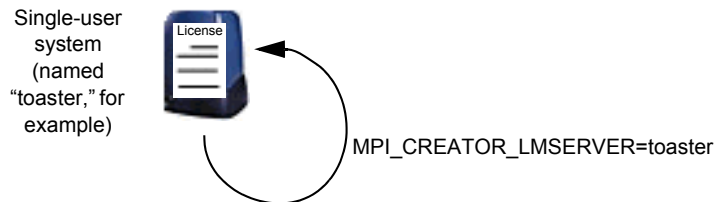
- The network license resides on a single machine: the License Server.
- Once the network license is created, the license manager daemon is started on the License Server.

- Each network client sets the environment variable `MPI_CREATOR_LMSERVER` to point to the License Server. When starting up, Creator searches for a valid license on the system specified by `MPI_CREATOR_LMSERVER` and acquires a license, if one is available. If all licenses are in use, the client receives a message that none is available, and Creator launches in read-only mode. *The network license must not be copied to client machines in a multiuser environment!*

The following figure illustrates this network license arrangement.



If you are installing Creator on a single computer, that machine is both the server and the client. To license single-user systems, you install a network license on your system, start the license daemon, and set the environment variable `MPI_CREATOR_LMSERVER` to point to your system's hostname.



MPI_CREATOR_LMSERVER is only one of the important environment variables you need to set to configure Creator for your system. To simplify this process, the script `creator.env` is installed in `/usr/local/MultiGen-Paradigm/bin`. You can paste its contents into your `.login` file (for each user) and modify the contents for your installation after you create a network license (see “Completing Licensing on Client and Single-User Systems” on page 12).

Establishing a Valid License

Creator installs two utilities for generating licenses, `elmadmin` and `xelmadmin`, in the `/usr/local/MultiGen-Paradigm/config/creator/server/lm/bin` directory. The `xelmadmin` utility has the same functionality as the command-line utility `elmadmin` but has an X/Motif user interface. The procedures in this guide use `xelmadmin`.

These are the basic steps for setting up the License Server:

1. Run `xelmadmin` to display a server code for the License Server, and then send the server code to MultiGen-Paradigm via e-mail (`unlock@multigen-paradigm.com`) to obtain a key that unlocks the license.
2. When you receive the unlock key from MultiGen-Paradigm, use `xelmadmin` to enter the key that creates the license.
3. Start the Élan License Manager daemon (`elmd`).

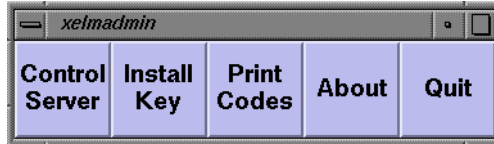
After you start the daemon, you configure the client systems to find the network license (described in “Completing Licensing on Client and Single-User Systems” on page 12).

Finding and Sending the Server Code

To find the License Server’s server code and send it to MultiGen-Paradigm:

- Step 1.** Login as root on the License Server machine.
- Step 2.** Create the directory `/usr/local/MultiGen-Paradigm/config/creator/server/keys`. (If you are installing Creator on a single machine, that machine automatically becomes the License Server.) This step prepares the system to accept the license key.

-
- Step 3.** Type `/usr/local/MultiGen-Paradigm/config/creator/server/lm/bin/xelmadmin` on the command line, and press Enter to run the `xelmadmin` utility. The License Administrator controls appear:



- Step 4.** Click **Print Codes**. The server code and other information appear in the *Print Server Codes* window.



The server code appears next to the License Server's system name

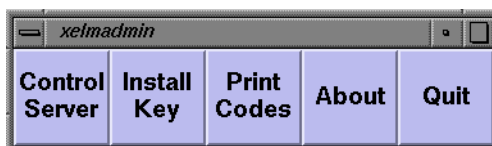
- Step 5.** E-mail the following information to `unlock@multigen-paradigm.com`:
- The server code
 - Your name and phone number
 - Your organization name
 - The name and complete address of the person who should receive software updates (including department, mail stop, and so forth)
 - Your Account number, which is located on the CD cover or the back of the Creator box.
- Step 6.** Choose **File/Quit** to exit from `xeladmin`.

Creating the License

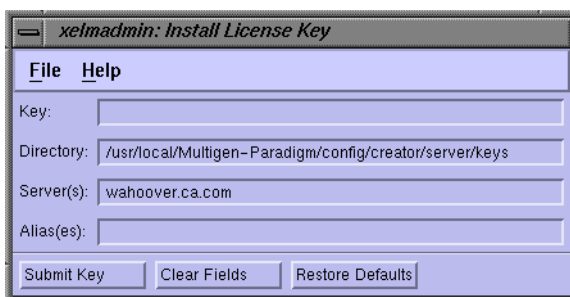
After you send MultiGen-Paradigm your server code via e-mail, you will receive a 45-day key. A permanent key will be sent to you via e-mail after payment is received.

When you receive a key from MultiGen-Paradigm, use the following procedure to create the license file:

- Step 1.** Login as root on the License Server machine.
- Step 2.** Type `/usr/local/MultiGen-Paradigm/config/creator/server/lm/bin/xelmadmin` on the command line, and press Enter to run the xelmadmin utility. The License Administrator controls appear:



- Step 3.** Click **Install Key**. The server code and other information appear:



- Step 4.** Enter the unlock key you received from MultiGen-Paradigm in the **Key** field. Spaces are optional.
- Step 5.** Type `/usr/local/MultiGen-Paradigm/config/creator/server/keys` in the **Directory** field, if it does not already appear.
- Step 6.** Click **Submit Key**. The *Key Information* dialog box appears.

Step 7. Click **Continue**. A message informs you that the key was successfully installed. The key file is now in the `/usr/local/MultiGen-Paradigm/config/creator/server/keys` directory you created. Click **Continue**.

Note: If you receive a message that the key could not be installed, make sure you have write permission for the `/usr/local/MultiGen-Paradigm/config/creator/server/keys` directory, check the key you entered in the *Install License Key* window to make sure you entered it correctly, and then try again. If problems persist, send an e-mail to `creator@multigen-paradigm.com`.

Step 8. Choose **File/Quit** to exit from `xeladmin`.

Starting the Élan License Manager Daemon (elmd)

To make the license you created available over the network or on a single-user system, you must start the license manager daemon. To start the daemon, use the command `elmd`, which has the following syntax and options:

syntax: `./elmd [-e path] [-s#] [-l file] [-m size]`

- `-e path` - Load all keys found into the specified key directory or set of directories. If none is specified, use the default key directory (`/usr/local/MultiGen-Paradigm/config/creator/server/keys`).
- `-s #` - Set the startup time to # seconds. This is the period that `elmd` waits and listens for client reconnect over new clients. The default is 180 seconds (3 minutes); we recommend 1 second.
- `-l file` - Create a log file named `file` and write all relevant information to that file. If the file already exists, append it to the end of the file. Note that the file must be a complete path name. The use of a log file is highly recommended, as it provides a way of tracking problems should they occur.
- `-m size` - Limit the log file to the size specified. With this option, the log file is self-maintained by `elmd`, such that `elmd` limits the size to which the log file can grow. When this size is reached, the log file named `file` is moved to `file.old` and the current log file is truncated.

To start the license manager daemon:

Step 1. Login as root on the License Server machine.

Step 2. Type `/usr/local/MultiGen-Paradigm/config/creator/server/lm/bin.`

Step 3. Type:

```
./elmd -e /usr/local/MultiGen-Paradigm/config/creator/server/  
keys -s1 -l /usr/local/MultiGen-Paradigm/config/creator/lm/  
elmd.log
```

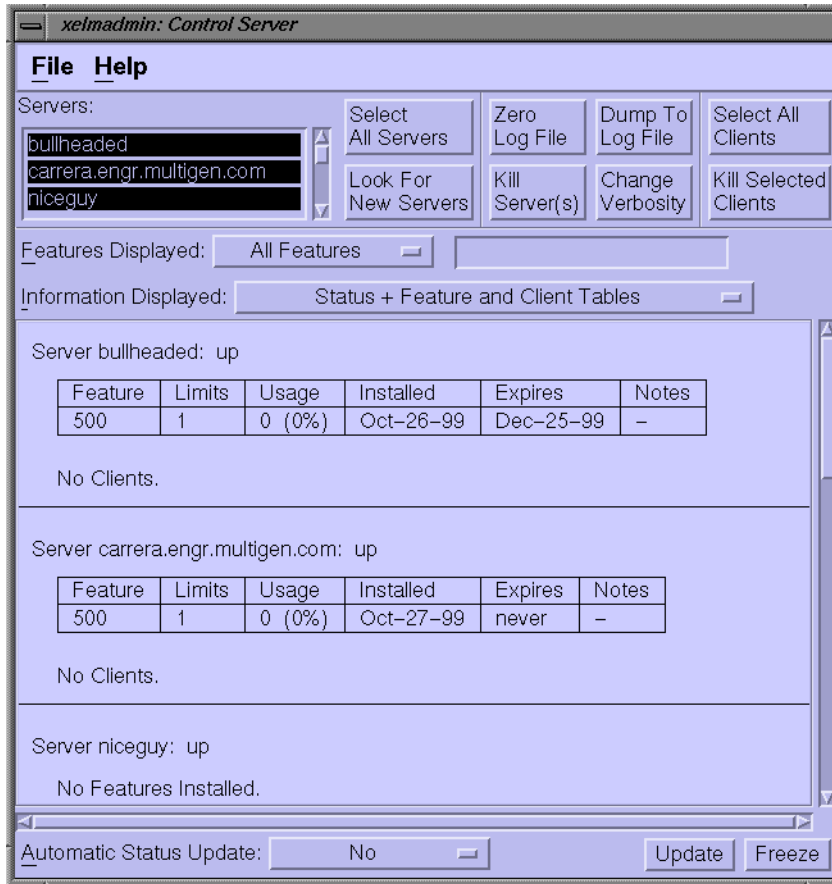
The log file in the `/usr/local/MultiGen-Paradigm/lm/` directory stores the License Server output. However, the log file can have an arbitrary file name with a complete path that you specify. If you do not have write access to the `/usr/local/MultiGen-Paradigm/lm/` directory, you can use one of the following commands:

- To start `elmd` with no log file, type `./elmd -e /usr/local/MultiGen-Paradigm/config/creator/server/keys -s1`.
- To start `elmd` and create a log file with a name and location of your choice, type `./elmd -e /usr/local/MultiGen-Paradigm/config/creator/server/keys -s1 -l <logfile>`.

To confirm that the license daemon has started:

Step 1. While you are in the `/usr/local/MultiGen-Paradigm/config/creator/server/lm/bin` directory, type `./xelmadmin` and press Enter. The License Administrator controls appear.

Step 2. Click **Control Server**. The *Control Server* window appears:



Step 3. Choose the License Server on which you started the daemon in the **Servers** list.

You can also use **Control Server** to stop the license daemon and perform other administrative tasks. You must be logged in as **superuser** to do more than view the status of the License Servers, however. For complete instructions on xelmadmin, read `install.htm` in the `/usr/local/MultiGen-Paradigm/config/creator/server/lm/docs/` directory.

Step 4. Choose **File/Quit** to exit xelmadmin.

Completing Licensing on Client and Single-User Systems

On all client systems and single-user machines, you must set the environment variable `MPI_CREATOR_LMSERVER` for individual user accounts to point to the License Server. Creator includes a sample script, `creator.env`, which contains the syntax for setting both essential and optional environment variables, including `MPI_CREATOR_LMSERVER`. To complete Creator licensing:

- Step 1.** Change directories to your login directory (`/usr/people/<your_login>`).
- Step 2.** Using a text editor, paste the contents of `/usr/local/MultiGen-Paradigm/bin/creator.env` into your `.login` file.
- Step 3.** In `.login`, make sure `MPI_CREATOR_LMSERVER=<your License Server hostname>`. Creator operates in read-only mode if this environment variable is not set correctly.
- Step 4.** Customize the other environment variables as needed. Comments in `creator.env` describe each environment variable. For additional information, see the Creator online help.
- Step 5.** Save your `.login` file and exit from the text editor.
- Step 6.** Execute `.login` on the command line to register the variables. For example, for C shell users, type `source .login`.
- Step 7.** Type `creator` on the command line, in any directory, to start Creator. You do not need to specify a path.

Using creator.env for Temporary Configuration

When you copy the contents of `creator.env` into your `.login` file, you ensure that Creator will find the files it needs to start up and find a valid license. However, when you stop working on one project and start working on another, you will probably want to change the environment variable settings that tell Creator where to look for textures, external references, elevation data, and feature data for the new project. You might also want to set the `MPI_CREATOR_RESOURCEPATH` variable to point to custom color and material palettes.

To easily switch between environment variable settings that are customized for different projects, you can store variations of `creator.env` (renamed `<project_name>.env`, for example) in the master directory of each project. When you are ready to work on a project, simply change to the master directory and execute `<project_name>.env` on the command line to configure the Creator environment for the project. For example, for C shell users, type `source <project_name>.env`.

Contacting MultiGen-Paradigm

For license keys, e-mail: unlock@multigen-paradigm.com

For Creator and licensing Technical Support, call: toll free (877) 289-5670 or (408) 965-8525; e-mail: creator@multigen-paradigm.com

Please inform us of your:

- Name
- Phone number
- E-mail address
- Server code. To locate the server code, see “Finding and Sending the Server Code” on page 6.
- EDP number and/or Account number, which can be found on your CD cover or on the back of the Creator box.

