

Chapter 2

UNIX Installation

Installation of Artwork Conversion Software's translators and postprocessors on UNIX platforms has been adjusted to make it as similar as possible across the various machines we support.

Each tape or CD is shipped with an installation script. If you are a knowledgeable UNIX user you can inspect the script to see what actions it takes.

The programs are shipped so that they can be configured either as node-locked or network licensed. If your company has purchased a node-locked license, you will get key codes that lock the application to a particular machine's hostid/hostname. If you have purchased a network license version, you will get keycodes that lock the license manager to a hostid and authorize as many application licenses as you have purchased.

Node Locked vs Floating Network Licensing

The first question you must answer in the INSTALL routine is whether you are installing the application as node-locked or as networked. If you were not involved in the purchase you may not know the answer. There are other ways to know:

Floating Network Keycodes

The FAX, email or certificate with your keycodes will say **lserv**. Otherwise you have node locked. Network license keycodes look like:

```
RDx4IGD9XEKL799TDRMKC5SUP8RIGG#
```

Node Locked Keycodes

Node-locked keycodes have 6 rows of 6 characters:

```
QTMPZr  
BAgHIF  
TTOBMZ  
GPLqRS  
WiVxME  
DFoBTC
```

Installation Procedure

Tape

Use the tar command.. Tar the contents of the tape to your computer's hard disk. In this example we will assume the directory is called /usr/cad_util. The directory can be any that you choose.

Example

```
$ cd /usr/cad_util  
$ tar xvf /dev/rst1
```

The actual device name will vary depending on your particular operating system and how your tape has been installed.

CD Installation

Mount the CDROM. If you do not have an automount system here are some hints. The most common mount point is called /cdrom. Typically, root permission is required to execute the mount command.

SunOS

```
# mount -r -t hfsfs /dev/sr0 /cdrom
```

Solaris

```
# /usr/sbin/mount -r -F hfsfs /dev/sr0 /cdrom
```

HPUX

```
# mount -t cdfs /dev/dsk/c201d2s0 /cdrom
```

Note that these are just examples - your mount point and device name may vary.

Change Directory to /cdrom

Make the /cdrom (or your mount point) the current working directory.

```
$ cd /cdrom
```

Run the Install Script

```
$ install.unx [enter]
```

This script will detect your operating system: SunOS, Solaris or HPUX and prompt you for the name of the desired installation directory. If such a directory does not exist it will attempt to create it. Of course, when running this script you must have the correct permissions to write to or create the desired directory. If you run the script as root you will need to change file permissions or ownership so that others can use the application.

The script will then extract the program distribution from the tar file stored on the CD.

Finally the script will prompt you for the key strings, activate the programs and move the examples to a sub directory.

HPUX Users

The HPUX operating system may not support the ISO-9660/Rockridge file naming conventions used on the CD. Instead of automatically translating the filenames to lower case as other operating systems do, it leaves them in upper case with the revision number. This is only a minor aggravation since we've modified our install script to account for this possibility.

INSTALL.UNX;1 is not remapped to install.unx.

If this is the case on your machine then simply type:

```
$ INSTALL.UNX;1 [enter] instead of
```

```
$ install.unx [enter]
```

You can obtain a patch for HPUX that adds ISO-9660/Rockridge support. To do so browse HP's WEB page at <http://support.mayfield.hp.com> and search for the keyword "rockridge".

Floating Network License

Artwork's UNIX software can be either node locked or configured to run as a floating license. Floating licenses are administered by a license daemon called `lserv`. `lserv` can be setup to run on any machine attached to the network - it need not be a file server but should be always accessible. Since the `lserv` program relies on TCP/IP and sockets the `lserv` can even run on a different operating system - however you should contact Artwork if you need such a configuration.

The `INSTALL` script will ask you if you are installing for network licensing. If YES, then it will first configure the application software to obtain a license from the daemon instead of checking the `hostid/hostname`. A second script will then prompt you for network keycodes and launch the `lserv` daemon.

Setting the LSHOST Environment Variable

To reduce network traffic we have configured our applications to contact only the machine running `lserv`. The applications determine this machine by reading the contents of an environment variable called `LSHOST`. Each user **must** have an environment variable set that points to the location of the license manager. Setting these values depends on the shell:

C shell: `setenv LSHOST hostname`

Bourne shell: `set LSHOST=hostname`

Korn shell: `set LSHOST=hostname`

for example if the hostname of the server running `lserv` is `asm001` then each user should have `LSHOST=asm001`. If this variable is not set the application software cannot get a license from `lserv`.

If the `LSHOST` variable is not set you will see an error message:

Unable to Contact License Manager

Launching Lserv, the Floating License Manager

The first time you launch `lserv` it will probably be started by the `INSTALL` script. You will want the `lserv` daemon to be launched automatically upon boot up. The following syntax may be used in your boot up script. (Assumes `lserv` loaded in `/usr/cad_util`.)

Lserv Command Line Syntax

```
lserv -s license_file_name
```

where `license_file_name` is the name of the key file, (default) `Licenserc`.

Examples

```
/usr/cad_util/lserv -s /usr/cad_util/Licenserc  
/usr/cad_util/lserv -s /usr/VL_KEY/Licenserc
```

Starting LSERV from Boot Up

The INSTALL script normally starts lserv the first time. However if the license server is rebooted the lserv daemon will not restart unless you have added the required statements to the server's boot up file to restart lserv.

Example for HPUX 9.0/10

Add the following script in localrc() function in the /etc/rc file:

```
localrc ()
{
    #Start up the lserv license server daemon for Artwork Conversion pro-
    grams
    VLdir=DIRECTORY
    if [ -f ${VLdir}/lserv -a -f ${VLdir}/Licenserc ]; then
        VRun='/bin/ps -ef | grep Licenserc | grep -v grep'
        if [ "$VRun" = "" ]
        then
            echo "Starting License Server: lserv"
            nohup ${VLdir}/lserv -s ${VLdir}/Licenserc >> /tmp/lserv.out
            /bin/cat /tmp/lserv.out
        else
            echo "License Server already running"
        fi
    fi
}
```

Example for Solaris 2.4 Operating System

Create a S86lserv script file in /etc/rc3.d with the following text:

```
#!/bin/sh
#
#/etc/rc3.d/S86lserv - Start up the license server daemon
#
VLdir=DIRECTORY
if { -f /vmunix }
then
    opt="-ax"
    LICPS="ps"
else
    opt="-ef"
    LICPS="/usr/bin/ps"
fi
if [ -f ${VLdir}/lserv -a -f ${VLdir}/Licenserc ]; then
    VRun='${LICPS} ${opt} | grep Licenserc | grep -v grep'
    if [ "$VRun" = "" ]
    then
        echo "Starting License Server:lserv for Artwork Conversion"
        ${VLdir}/lserv -s ${VLdir}/Licenserc
    else
        echo "License Server already running"
    fi
fi
exit 0
```

Port Address

The lserv server uses the network port number 5093. The system administrator should add the following line to /etc/services file

```
LicenseServ      5093/udp
```

Example for SunOS 4.1.x Operating System

Add the following text to the /etc/rc.local file

```
#Start up the License Server daemon:lserv
#
Vldir=DIRECTORY
if [ -f ${Vldir}/lserv -a -f ${Vldir}/Licenserc ]; then
    VLrun='/bin/ps -ef | grep Licenserc | grep -v grep'
    if [ "VLrun" = "" ]
    then
        echo "Starting License Server: lserv"
        nohup ${Vldir}/lserv -s ${Vldir}/Licenserc >> /tmp/lserv.out
        /bin/cat /tmp/lserv.out
    else
        echo "License Server already running"
    fi
fi
```

Port Address

The lserv server uses the network port number 5093. The system administrator should add the following line to /etc/services file

```
LicenseServ      5093/udp
```

Changing or Updating Key Codes

Our applications are shipped unkeyed on tape. Running the INSTALL routine launches each unkeyed module and passes the keycodes you have typed in to the module. The module then rewrites itself and saves the unkeyed version to disk with the suffix .uky.

Node Locked Programs

When you get new keycodes:

Do not edit the nodekey file and expect the programs to work.

Do not run INSTALL again.

This will not work!

Run the script called REKEY.program

Explanation

Artwork's executables are shipped on tape or other media as "unkeyed" The first time that they are executed (normally when you run INSTALL for the first time) instead of executing they expect to get as input the key strings that will activate them. They accept those keystings and self modify to incorporate those strings so that they know which CPU they are authorized to run on and also know the expiration date to check for.

The next time one of the activated programs is started up it executes normally and will no longer accept new key strings. This is why running the INSTALL script or editing the nodekey file is futile.

However each keyed module makes an unkeyed copy of itself - the unkeyed copies are saved using the extension .uky.

For example, the program exec gdsvu will make a copy of itself called gdsvu.uky during the

first `INSTALL` and will self modify. If you wish to change keycodes after running `INSTALL` you would have to copy all of the `.uky` copies back to the original name.

```
$ mv gdsvu.uky gdsvu
```

The “`REKEY_programname`” script, which you should find in the directory where you installed the programs essentially does this for you.

If for some reason the `REKEY` script doesn’t exist or doesn’t work you will normally have to re-install the program directory files.

You may tar from tape and run the `INSTALL` script or you can now run a script called `REKEY,program_name`. For example, if you purchase our `GDSPLLOT` program you will find in your directory `REKEY.GDSPLT`. This script will enable you to change keycodes assuming that you did not delete any of the `.uky` files originally created.

Updating Floating License Keys

Updating you key strings for floating licenses is done differently than for node locked licenses. The floating license manager reads a keystring file, normally called `Licenserc` when it starts up.

- Edit the file `Licenserc`
- Kill the `lserv` daemon.

You can identify the daemon’s pid by using:

```
ps -auxw | grep lserv or ps -ef | grep lserv
```

- Restart the `lserv` program

Checking Status of the License Manager

A simple utility program called `LSMON` is available for checking the status of the license manager.

```
$ lsmon [enter]
```

`Lsmon` will return a list of licensed features. Each feature represents an application program or a module of an application program. Unfortunately the feature name used by `lserv` may not always be the same as the program name. For example the feature name for `GDSPLLOT` is `ACS3520`. See sample output of `lsmon` below:

```
lsmonitor for LicenseServ 3.3 Copyright (c) Viman Software Inc.
Feature Name: ACS3520(v0) (floating license) expires: Thu Dec 30 23:59:59 1999
Concurrent licenses: 1
Available unreserved: 1          In Use: 0
Available reserved   : 0          In Use: 0
Number of subnets   : 0
Site License info    : *.*.*.*
Hold time: 0 minute(s)
```

Node Locked Applications: ACS.LOCK Security File

Artwork's node locked applications make use of a file called ACS.LOCK, located in the /tmp directory of the executing machine. Do not tamper with this file. Any inconsistency with the contents of this file and the information stored internally by the application will cause a "security violation error" and cause the application to shut down.

If any of our applications generate a "security violation error," then all ACS applications, regardless of product number, will shut down immediately.

Do not type or copy key codes you receive into the ACS.LOCK file. ACS.LOCK is created and removed by applications and is used strictly to track simultaneous use.

Common Problems and Solutions

Problem

You get the following error message when trying to start up your application.

PERMISSION DENIED: 1 program authorized, 1 running.

Reason

You know that no one else is currently running this program. The application probably crashed or was unexpectedly terminated (for example by closing its window without correctly shutting it down) and didn't clean up the security file /tmp/ACS.LOCK.

Solution

delete the security file in /tmp called ACS.LOCK.

```
rm /tmp/ACS.LOCK
```

Problem

You are using a floating license application and get the error message upon starting the application:

PERMISSION DENIED: 1 program authorized, 1 running.

Reason

You know that no one else is currently running this program. Application probably crashed and didn't release the key. The license manager will time out the application in about 5 minutes.

Solution

first use the utility lsmon to verify that the license manager is up and running; a short status of each licensed application will displayed. Make sure that your application is listed. Wait 5 minutes. If you are really impatient and you are root you can also kill and restart lserv, the license manager but don't do this unless you notify other potential users that the license manager is going down.

Problem

When you click on a button **Start Translation**, the translation engine doesn't start. You see a message such as:

Last Conversion was terminated before completion

Reason

The engine couldn't open an xterm most likely because /openwin/bin is not in the PATH.

Solution

Add /openwin/bin to the PATH. Or on the command line add the option -xterm off to tell the engine not to attempt to open an xterm.

Problem

You see the following message when trying to start up a program:

Proportional X-Window font not supported: Permission Denied

Reasons

Unfortunately, this message may have several causes.

[1] The font specified at the command line or in .Xdefaults is a proportional font. Artwork's programs only work with fixed spaced fonts. On SUN fonts such as 9X15 are fixed. On HP systems fonts such as Courr18 are fixed.

[2] DISPLAY variable not set or not set correctly.

[3] Typically on a remote login on the local terminal you have not specified xhost +

If you cannot find the fonts, run the program xlsfonts - this program also requires, of course, that DISPLAY variable be set correctly. Returns a list of fonts that it knows about. This should be run on the terminal. Unfortunately, some font names may be aliased.

Problem

Programs are unable to open or write a file to disk. Error messages vary.

Reason

Wrong permissions to the data directory. Often if a sysadm has installed your software, the permissions in the example directory belong to him. The user must have read, write execute permissions to the data directory. Do an `ls -l ..` from the data directory to determine the permissions of the directory you are currently in. You must have `rw-rw-rw` permissions to this directory.

Solution

Fix the directory and file permissions.