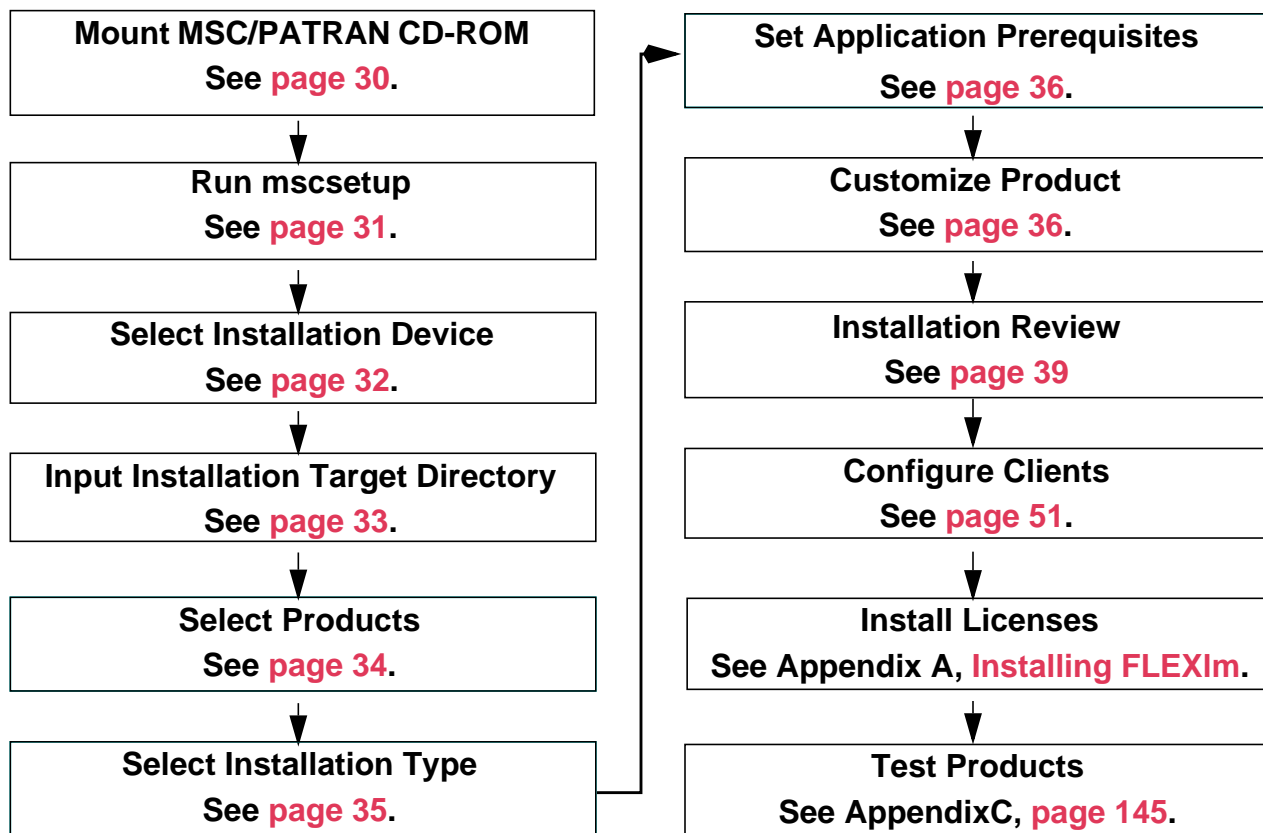




Installing MSC/PATRAN on UNIX

- Overview
- Installing MSC/PATRAN with mscsetup
 - Upgrading an Existing Installation
 - Optional Steps
 - Module Setup and Installation
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3.1 Overview



3.2 Installing MSC/PATRAN with mscsetup

The `mscsetup` utility performs almost all of the steps necessary to get MSC/PATRAN running. It creates a log file, `mscsetup.log`, as a record of all messages, prompts, and user input. The `mscsetup` utility also creates a playback file, `mscsetup.pbk`, for reproducing identical installations.

Table 3-1 lists useful command line options available with the `mscsetup` utility.

Table 3-1 `mscsetup` Command Line Arguments

Command Line Arguments	Purpose
<code>mscsetup <playback.pbk></code>	Runs playback file in install-only mode. Useful to repeat identical installations.
<code>mscsetup amendment</code>	Generates a contract amendment form.
<code>mscsetup flexlm <license_file></code>	Install a new FLEXlm license file into the <code>flexlm/licenses</code> directory. Also checks the file for correct checksum, SERVER line, and invalid characters.
<code>mscsetup flexlmcheck <license_file></code>	Performs a check of FLEXlm licensing. If no license file is given, the current MSC_LICENSE_FILE setting. See Installing FLEXlm (Ch. A) for additional information.
<code>mscsetup help</code>	Obtain usage utility information
<code>mscsetup id</code>	Display the MSCID. System id used to generate licenses. See Installing FLEXlm (Ch. A) for additional information.
<code>mscsetup mscinfo</code>	Executes the <code>mscinfo</code> utility. See The mscinfo Utility (p. 8) for additional information.
<code>mscsetup -b <installation_dir></code>	Sets the default installation directory
<code>mscsetup -l <log_file></code>	Write the installation log to <code><log_file></code> . Default is <code>mscsetup.log</code>
<code>mscsetup -m <media>:<path></code>	Specifies default installation media and path e.g. "cd:/CDROM"
<code>mscsetup -n</code>	Turns off screen handling for text-only scrolling mode.
<code>mscsetup -p <playback_file></code>	Write the playback file to <code><playback_file></code> . Default is <code>mscsetup.pbk</code> .
<code>mscsetup -r <user@node></code>	Sets the user and node for remote installation
<code>mscsetup -t <tmp_dir></code>	Sets the directory <code>mscsetup</code> will use for scratch. Default is <code>/tmp</code> .
<code>mscsetup -x</code>	Expert mode. Shows menus and prompts with no explanatory text. Recommended only for users very familiar with <code>mscsetup</code> .

3.2.1 Mount CD-ROM

Mounting the CD-ROM may vary according to the setup of your operating system. The steps in this section represent “default” mounting procedures; however, simpler tools are often available as part of user environment packages such as the Common Desktop Environment (CDE) or SGI’s 4DWM. Consult your operating system documentation for the best method of mounting CD-ROM devices.

1. Create a directory for the CD-ROM, if it does not already exist:

```
# # mkdir /CDROM
```

2. Mount the CD-ROM drive by issuing one of the following commands:

Digital UNIX: # mount -t cdfs /dev/rzUA /CDROM

where U = CD-ROM unit, A = a or c.

HP 10.x: # mount -F cdfs /dev/dsk/c0tUd0 /CDROM

where U = the SCSI controller # for the CD-ROM drive

IBM: # mount -rv cdrfs /dev/cd0 /CDROM

SGI: # mount -rt iso9660 /dev/scsi/scCdUl0 /CDROM

where C = the SCSI controller # and U = CD-ROM unit #. These values can be found by entering the command, **/bin/hinv**.

NOTE: The “l” in scCdUl0 is the letter “L” in lowercase, not a “one”.

Sun Solaris: You do not need to enter a mount command, since the MSC/PATRAN CD-ROM will automatically be mounted by the Solaris vold daemon. The actual mount point is specified in the file, **/etc/vold.conf**, which by default, is **/cdrom/cdrom0**. If this directory does not appear after inserting the CD-ROM, make sure the vold daemon is running.

3. Remove the MSC/PATRAN CD-ROM, by entering:

```
# cd <other_dir>
# umount /CDROM
```

Where **<other_dir>** is any directory, other than **/CDROM**.

4. Press the eject button on the CD-ROM drive. On some systems you may need to enter:

```
# eject cdrom
```

3.2.2 Starting the mscsetup Installation Utility

You do not need to be root to run `mscsetup`.¹ Remember that the `mscsetup` utility keeps a log of important information so it is not necessary to make detailed notes. To execute `mscsetup` from the CD-ROM, enter:

```
# <cdrom_dir>/mscsetup
Please wait...
```

MSC Installation and Setup - Introduction

System type: <system>
User:

NOTE: You might need superuser (root) privileges to use the default installation directory /msc.

The following products are available on this delivery:

* MSC/PATRAN V8.x for <system>

Please note that new FLEXlm authorization codes are required to complete the installation of products contained on this media. NetLS-based licenses used for previous product versions are no longer valid!

The MSC ID for this system is: <FFFFFFF>

* FLEXlm V5.12

This will install the FLEXlm License Server and End-User tools. You should have a file or an e-mail message containing licensing data before installing this product.

* Only ROOT can automatically start FLEXlm during system boot.

Do you want to continue (default = Y)? Y

1. You may need to be root in order to do the following:

Prepare Machine for Reboot. MSC/PATRAN's licensing system has daemons that run for the entire time the machine is up. These daemons need to be started before MSC/PATRAN can be run. The user could start these manually, although it is easier for most customers if the daemon restarts at reboot. This should be in /etc/inittab. See **Set the Imgrd Daemon to Execute on Reboot** (App. A).

In the same manner, daemons which need to be run for the Analysis Manager, have to be restarted upon reboot. The default installation directory for MSC/PATRAN is /msc which often needs root permission to write. This default can of course be changed by a regular user at installation time. See **Inputting the Installation Directory** (p. 33).

Some machines require root access to mount a CD-ROM. See **Mount CD-ROM** (p. 30).

3.2.3 Selecting an Installation Device

When using the `mscsetup` utility, you must identify the type of media from which you are installing, and the path to that media.

MSC Installation and Setup - Installation Device Location

1. Install from a local CD.

Select this item if the installation CD is attached to this computer, or NFS mounted on this computer.

2. Install from a remote CD.

Select this item if the installation CD is attached to another computer.

X. Completely exit this installation now

Select this item to end this procedure now.

Enter 1, 2, or X (default = 1)? 1

MSC Installation and Setup - Local Installation Device or File

Enter the pathname of the local CD-ROM mount point.

Pathname (default = /CDROM)?

Install from /CDROM

Is this correct (default = Y)?

Please wait.....

The “local CD” option assumes that the CD-ROM is available. The CD-ROM must be either locally mounted or NFS mounted on the same machine as the installation directory.

The “remote CD” option allows accessing a CD-ROM on a remote machine using commands such as `rsh` and `rcp`.

3.2.4 Inputting the Installation Directory

The installation directory is the location where you will install all products. For example, if you choose `/msc` as the installation directory, a typical installation would look like this at completion:

```
# ls -l /msc
drwxr-xr-x  2 root   sys   1024 Apr 21 16:33 bin
drwxr-xr-x  5 root   sys    96 Apr 21 16:33 flexlm
drwxr-xr-x 17 root   sys  2048 Apr 21 16:03 patran80
drwxr-xr-x  6 root   sys   1024 Apr 21 16:33 viewer50
```

The utility also checks the amount of disk space available at that path. Note that `mscsetup` requires additional space for decompression.

Enter the pathname of the directory you want to install into, X to completely exit this installation, or ? for a list of available filesystems.

Pathname (default = /msc)?

The directory “/msc” exists.

Checking available disk space

The size of the filesystem containing this directory is 1400 MB, with 519MB currently available.

Do you wish to used this directory (default = Y)?

3.2.5 Selecting Products to Install

After you have entered the appropriate file paths you will be presented with a menu of all available product sets on the CD-ROM:

Product	Comments

1. MSC/PATRAN Core Application	Not selected yet.
2. MSC/NASTRAN Preference	Not selected yet.
3. ABAQUS Preference	Not selected yet.
...	
20. FLEXlm V5.12	Not selected yet.
X. Completely exit this installation now.	

Enter the number of the product to select or deselect, or
X to completely exit this installation.

Enter 1-20, or X (no default)? 1

Select each product set that you wish to install. You must select products one at a time since each product set selection is followed by appropriate setup questions.

Selecting a product and then choosing a “Custom” installation in **Selecting a Product Installation Type** (p. 35) allows you to see the full contents of each product set.

Important: For most licensed products, there is a “Product” listing in mscsetup that corresponds to each product, module, or translator. Several products, which may require additional licenses, are built into **The MSC/PATRAN Core Application**. The Core Application includes:

- MSC/PATRAN and PDB Database System
- InterBase Database System (required only for file conversion in v8.x)
- On-line Help files (Adobe Frameviewer and license included)
- MSC/PATRAN Euclid Access (licensed separately)
- MSC/PATRAN Catia Access (licensed separately)
- MSC/PATRAN IGES Access (licensed separately)
- PCL Utilities (commonly referred to as Shareware)
- MSC/PATRAN ANALYSIS MANAGER (licensed separately)

3.2.6 Selecting a Product Installation Type

Each product set contains several standard installation configurations. Each configuration option includes a description and identifies disk space requirements. For example, the MSC/PATRAN “Full” option includes this description:

2. Full Installation.

Install standard files plus the MSC/PATRAN analysis manager, database access programmer’s toolkit, and PCL utilities for <platform> systems. 525 megabytes required.

The installation type for MSC/PATRAN product sets are:

- **Standard** includes all files necessary to run the product without special options.
- **Full** includes the complete product set with all options
- **Client** configures a workstation to run using an MSC/PATRAN installation NFS mounted from a central server.
- **Custom** allows you to select individual components of the product set. Below are the two menus for Custom installation. The first list includes options installed with standard and the second list includes those options installed with FULL, but not with standard.

No. Architectural Component Comments	Mode	Mbyte

1. MSC/PATRAN core files	Yes	174
2. InterBase Database Subsystem (v4.0D)		
3. FrameViewer (5.11)	Yes	62
4. MSC/PATRAN on-line help files	Yes	179
5. MSC/PATRAN results validation/verification files	Yes	11
Space required for Architectural Components		426

No. Optional Component	Mode	Mbyte

1. MSC/PATRAN customization tools	No	25
2. MSC/PATRAN PCL utilities	No	25
3. MSC/PATRAN Analysis Manager	No	43
Space required for Optional Components		0

Enter a list of component numbers to select/deselect (you may use spaces or commas, a dash indicates a range, e.g., ‘1,3-5’),
N to continue product configuration with the next menu, or
X to exit this installation.

Enter 1-3, N, or X (no default)?

- **Deselect** toggles this product’s installation mode from “yes” (install) to “No” (do not install).

3.2.7 Setting Application Prerequisites

Some products include components that require special set-up. For each of these special components, we provide additional setup information and prompt you for required input.

Note that the exact format of the messages and prompts vary according to product selection and local environment.

MSC Installation and Setup - MSC/PATRAN Core Application Options Prerequisites

Please wait...

Do you wish to proceed? (default = Y)?

Options prerequisite testing completed.

3.2.8 Product Customization

Most product sets include several optional settings. These include settings for scratch directories, graphics hardware options, and paths to third party applications. The `mscsetup` utility prompts you for these settings to create the `site_setup`, and `settings.pcl` setup files.

If you are not sure of the settings at the prompt, answer “N” to set defaults. You can modify the values in the files at a later time. See **User Environment** (Ch. 5) for additional information.

This example sets up the generic scratch directory used for analysis programs such as MSC/NASTRAN.

MSC Installation and Setup - User Customization (MSCP_NASTRAN_SCRATCHDIR)

The `MSCP_NASTRAN_SCRATCHDIR` environment variable is used to specify the scratch directory on host `MSCP_NASTRAN_HOST` for running MSC/NASTRAN.

The value that you establish here will be added to the `site_setup` file as a default for your installation. Users can override the default value via a local environment variable setting if they wish to do so.

Enter the scratch directory for running MSC/NASTRAN jobs (default = .)?

3.2.9 License File Setup and Starting a FLEXlm server

MSC/PATRAN uses the FLEXlm licensing system. If you elect to install “FLEXlm” in **Selecting Products to Install** (p. 34), the installation procedure prompts you for the information necessary to start this machine as a license server.

If you do not select “FLEXlm,” the installation procedure instead prompts you to provide the location of a nodelock file or license file, or to identify another machine as the server. For more information on FLEXlm, see **Installing FLEXlm** (App. A).

This step sets the MSC_LICENSE_FILE environment variable.

MSC/PATRAN requires authorization before use...

Please select a licensing option from the following list:

1. Use an existing file with licensing or nodelock authorization info.
 2. Identify a network authorization server.
- D. Do not set authorization information now.
Select this if licensing information is already configured
or will be configured later.
- X. Completely exit this installation now.

Enter 1, 2, D, or X (default = D)?

Selection “1” requires a license file (i.e. license.dat) containing nodelock licenses or a reference to another server. The MSC_LICENSE_FILE environment variable will be set to reference this file.

Selection “2” sets the MSC_LICENSE_FILE to reference a remote machine and port number. See **Environment Variables** (p. 70) for additional information.

Selection “D” allows the user to configure the license information later. Make this selection if you have not set up your license and plan to do so later.

Starting a FLEXlm Server at a Later Time

If your `license.dat` file is not available at this point choose “D” from the above menu. When you have obtained your `license.dat` file, execute the `mscsetup` utility again and select only the “FLEXlm License Server v5.12” product.

You may also wish to check the `license.dat` file for corruptions that sometimes occur in email etc. with the `mscsetup` command:

```
% mscsetup flexlm <license_file>
```

See **Installing MSC/PATRAN with mscsetup** (p. 29) for additional information.

3.2.10 Contract Amendment Form

Once you have selected the last product you wish to install and answered the appropriate setup questions (see **Selecting Products to Install** (p. 34)), enter C at the following prompt:

```
Enter 1-20, C, or X (no default)? C
```

The Product Authorization Requirements screen then appears. This screen displays all the product sets you have installed, along with installed authorization information. The screen also prompts you to generate an “MSC Contract Amendment” form file with the system information that MSC needs to generate FLEXlm license codes. You can mail or fax this form to modify your network license.

MSC Installation and Setup - Product Authorization Requirements

Product	Authorization Methods	Authorization Installed

MSC/NASTRAN Preference	None	n/a

You can generate a contract amendment that can be completed and mailed or faxed to MSC to request a network license.

Do you want to generate a contract amendment (default = N)? Y

The MSC Contract Amendment has been written to

```
/topeka/users2/mscauth.txt
```

PRESS ENTER or RETURN to continue...

For additional information on FLEXlm see **Installing FLEXlm** (App. A)

3.2.11 Installation Review

Prior to actually performing the installation, the mscsetup utility reviews your current selections. You may change the installation source, target directory, or product selection.

MSC Installation and Setup - Installation Review

1. Installation Source /CDROM
2. Installation Directory /msc
519 MB available

3. Products	Type	Size	Test

MSC/PATRAN Core Application	Custom	354 MB	n/a
MSC/NASTRAN Preference	Standard	29 MB	n/a
ABAQUS Preference	Standard	15 MB	n/a
FLEXlm V5.12	Standard	3 MB	n/a
ANSYS Preference	Standard	19 MB	n/a
Pro/ENGINEER Interface	Standard	2 MB	n/a

Enter Y to begin the installation now, or N to change the installation options.

Is this OK (no default)?.

3.2.12 Installation Messages

As the `mscsetup` utility performs the installation, it issues messages informing you of its progress. Note that this information is recorded to the `mscsetup.log` file.

In this example we are installing the MSC/PATRAN core product set including the FrameViewer On-Line Help component, the MSC/NASTRAN Preference, and the FLEXlm license management software.

MSC Installation and Setup - Installation

No additional user input will be required.

Writing new playback file, '/topeka/users2/mscsetup.pbk'

Changing to working directory to '/topeka/users2'

Loading installation files. Mon Apr 21 14:24:12 PDT 1998

Using CD-ROM /CDROM

Begin loading files from flexlm/htmlman.tar

Verifying CD load operation...

Begin loading files from common/gunzip.tar

Verifying CD load operation...

Begin loading files from hpux/mscnastran.tar

Verifying CD load operation...

Begin loading files from hpux/p3_base.tar

Verifying CD load operation...

Begin loading files from common/mscshareware.tar

Verifying CD load operation...

Begin loading files from flexlm/hpux.tar

Verifying CD load operation...

Begin loading files from flexlm/base.tar

Verifying CD load operation...

Begin loading files from hpux/customization.tar

Verifying CD load operation...

Begin loading files from hpux/viewer50.tar

Verifying CD load operation...

Decompressing installation files. Mon Apr 21 15:10:11 PDT 1998

Decompression complete.

Configuring Products. Mon Apr 21 15:38:31 PDT 1998

Configuring MSC/PATRAN Core Application

Creating directories, setting modes...

Creating default version links...

Creating system directory links...

Setting user customizations...

Miscellaneous configuration commands...

Configuring MSC/NASTRAN Preference

Setting user customizations...

Creating directories, setting modes...

Configuring authorization...

Editing files...

Updating installation base directory...

Creating default version links...

The above notes were also written to the log file.

Installation complete. Mon Apr 21 15:38:55 PDT 1998

A log of this installation was written to:

/msc/mscsetup.log

The general installation of MSC/PATRAN is now complete. The following section describes optional steps. Customization and setup for individual users is described in **User Environment** (Ch. 5). Procedures for testing the installation are described in **Testing the Installation** (App. C).

3.3 Upgrading an Existing Installation

Upgrading an existing MSC/PATRAN installation does not require any special procedure. Perform the following steps:

1. Step 2 creates a parallel installation. If you do not have sufficient disk space for parallel installations, you can delete the existing `patranxx` directory (i.e. `patran62`, `patran75`).

Note, however, that deleting the existing installation may remove the InterBase subdirectory. Change directory to `/usr/interbase` and execute “`pwd`”. If the directory is a subdirectory of the existing MSC/PATRAN, you will need to delete the `/usr/interbase` link, and reinstall InterBase.

Finally, make copies of the files listed in Step 3 before deleting the existing installation.

2. Choose the same installation directory (e.g. `/msc`) and follow the steps in **Installing MSC/PATRAN with `mscsetup`** (p. 29). This will create a parallel Patran directory:

```
# ls /msc
bin
flexlm
patran75
patran80
viewer50
```

The `mscsetup` utility will place executables for each version in the `<installation_dir>/bin` directory. For example:

```
/msc/bin/p75
/msc/bin/p8
```

See **Executable Path or Script for Parallel Installations** (p. 44) for additional information.

If you do not have enough disk space for parallel installs, uninstall the existing MSC/PATRAN first. Make sure to copy the customization files listed below, however.

3. Update the following customization files in the new installation directory to match the existing installation:
 - `app-defaults/*` (i.e. `Maker`, `Patran`, etc.)
 - `*.def` files (i.e. `p3_printers.def`, `p3toolbar.def`, etc.)
 - `p3epilog.pcl` (must modify paths for custom software)
 - `settings.pcl`
 - `site_setup`

Note that not all of these files will exist in every installation. Check the existing `patranxx` directory and copy those files that do.

4. Once you have completed testing the new installation or are comfortable using the new version, you can uninstall the previous installation.

Finally, you should be aware of the following additional issues during the installation:

- There is no need to re-install FLEXlm or update your licenses.
- There is no need to re-install FrameViewer

3.4 Optional Steps

This section identifies some of the options available for your MSC/PATRAN installation.

3.4.1 Executable Path or Script for Parallel Installations

When installing MSC/PATRAN v8 on a system that already includes an installation of v7.0 or later, the mscsetup utility will automatically create executable links for each version in <installation_dir>/bin (see **Upgrading an Existing Installation** (p. 42) for more information).

To make MSC/PATRAN available to all users on the system you must either include the executable directory in their paths, or create symbolic links or a script in a common path location such as /bin.

To include the executables in the user's path, add the following to each MSC/PATRAN users .cshrc or .profile files:

```
set path = ( $path <installation_dir>/bin)
```

It is also possible to create a script to reference each installation individually. This script could be placed in a central location such as /bin. This is especially useful if you are retaining an installation of MSC/PATRAN v6.2 or earlier which does not install using the /msc type installation directory.

```
#!/bin/sh
#####
# script to drive multiple versions of MSC/PATRAN
# version 8.0
#####
#set -x

Cmd=`basename $0`

#Check which version to run
func_get_ver () {
    echo ""
    echo " MSC/PATRAN Version Menu"
    echo " Which version would you like to run?"
    echo
    echo "1) MSC/PATRAN version 7.5"
    echo "2) MSC/PATRAN version 8.0"
    echo
    /bin/echo "Enter number [default = 2] : \c"
    read version
    echo

    if [ -z "$version" ] ; then version=2 ; fi
```

```
        case "$version" in
            1) ver=75
                echo "You could have typed:"
                echo "% $Cmd 75 $*" ;;
            2) ver=80
                echo "You could have typed:"
                echo "% $Cmd 80 $*" ;;
        esac
    func_check_arg $ver $*
}

#Check the arguments of the p3 command for version
#Set the paths for the different versions
func_check_arg () {
    case "$1" in

        75) P3Dir=/usr/patran75
            shift
            args=$* ;;

        80) P3Dir=/usr/patran80
            shift
            args=$* ;;

        *) func_get_ver $* ;;
    esac
}

# main
func_check_arg $*

# Check Users

echo
echo "executing:"
echo "% $P3Dir/bin/$Cmd $args"
echo
exec $P3Dir/bin/$Cmd $args
```

3.4.2 Installing PCL Utilities and MSC Institute Files on UNIX

The PCL Utilities (formerly known as Shareware) is available on all CD-ROM's. Load it like any other product set. See **Selecting Products to Install** (p. 34). The PCL Utilities are a subset of the MSC/PATRAN Core Application. The utilities will be loaded with a Full installation and are an option with the Custom installation.

After installing the software, copy the supplied `p3epilog.pcl` file to the users home directories or the `<inst>/patran8x` directory as follows (see `p3epilog.pcl` (p. 77) for additional information):

```
# cp <inst>/patran8x/shareware/msc/unsupported/utilities/p3epilog.pcl .
```

MSC Institute Courseware can also be loaded from the product selection menu but is available on all CD-ROM's. It does not require installation of the `p3epilog.pcl` file.

3.4.3 Installing Spacetec Spaceball for Use with MSC/PATRAN

MSC/PATRAN supports the Spacetec Spaceball 2003 or 3003. Follow the SpaceWare installation instructions for these products. No additional steps are required for use with MSC/PATRAN. You can obtain these instructions, as well as the latest drivers, at the Spacetec web site, www.spacetec.com.

The Spaceball function buttons are assigned as follows:

KEY	FUNCTION	DEFAULT
1	Toggles Soft Button Menu On/Off	ON
2	Turn rotations on/off. Translations will turn on automatically	ON
3	Restricts motion to dominant X,Y,Z axis for greater control.	OFF
4	Restricts motion to the model axis closest to spaceball motion.	OFF
5	Decrease sensitivity. Each press halves sensitivity (1/32 min).	1
6	Increase sensitivity. Each press doubles sensitivity (32 max).	1
7	Restore defaults. Resets all buttons to their defaults.	N/A
8	Reset view on 2003. Rezero to stop image drift on 3003.	N/A
Left	3003 only. Opens/closes the Soft Button Menu.	OFF
Right	3003 only. Refit View as per MSC/PATRAN menu pick.	N/A
Pick	2003 only. Refit View as per MSC/PATRAN menu pick.	N/A
Rezero	2003 only. Rezero to stop image drift	N/A

3.5 Module Setup and Installation

3.5.1 MSC/PATRAN ANALYSIS MANAGER Setup

Below is a brief overview of the process for installing and configuring the MSC/PATRAN ANALYSIS MANAGER module. For additional details consult the MSC/PATRAN ANALYSIS MANAGER User Manual.

Most of the steps necessary to install and configure MSC/PATRAN ANALYSIS MANAGER (once it has been loaded from the CD-ROM using `mscsetup`) are performed using the `P3Mgr_Admin` utility.

1. Choose the machine that will act as the “Master Node.” This system will run the `quemgr` daemon and manage all analysis. Note that the `<inst>/patran8x/p3manager_files` directory must be visible on the Master Node.

Login as root, and execute the `P3Mgr_Admin` utility.

```
# <inst>/patran8x/p3manager_files/bin/<arch>/P3Mgr_Admin <inst>/patran8x
```

Where `<arch>` is the system type (SGI5, SUNS, HP700, etc.). After the forms come up, select an admin user (a non-root user under whom tests will be performed).

2. Choose “*Modify Config Files | Applications*” to add an application definition. This will typically be MSC/NASTRAN or ABAQUS.
3. Choose “*Modify Config Files | Physical Hosts*” to define and name the machines that will run analyses. Next choose “*Modify Config Files | A/M Hosts*” to define the application paths on the physical hosts. Note that each physical host may have multiple “A/M Host” definitions (i.e. one for MSC/NASTRAN v69, one for MSC/NASTRAN v70, and one for ABAQUS).
4. Choose “*Modify Config Files | Filesystems*” to define a filesystem directory for each A/M Host. When an analysis is run on the A/M Host scratch and analysis files will be written to this directory before being copied back to the client at the end of the analysis.
5. Save the configuration by pressing the “*Apply*” button.
6. Select “*Queue Manager*” to start the `quemgr` daemon.
7. Test the configuration by selecting “*Test Configuration*” for each of the objects.

3.5.2 MSC/PATRAN Direct CATIA Access Setup

Version 8 provides a new option for directly accessing CATIA models from within the MSC/PATRAN user interface. This differs from the CATXPRES/CATIA Preference utility (see below). Contact your sales representative to replace your existing MSC/PATRAN CATIA Access license with a new MSC/PATRAN Direct CATIA Access license.

MSC/PATRAN Direct CATIA Access directly imports CATIA models by accessing some CATIA software. For this reason, both CATIA and MSC/PATRAN must be available on the same network, and MSC/PATRAN must use environment variables to access CATIA (see “important” note below).

Important: MSC/PATRAN Direct CATIA Access requires certain environment variables to function properly. For an explanation of these variables and how to set them in the `site_setup` file see [Environment Variables](#) (p. 70).

Running MSC/PATRAN Direct CATIA Access Remotely

If you do not have access to CATIA on the same network or workstation as MSC/PATRAN, a utility is provided that can be run on a CATIA workstation to generate an intermediate Express Neutral file.

1. Copy the Express conversion utility from the MSC/PATRAN installation to the CATIA workstation:

```
% cp <installation_dir>/patran8x/bin/exe/p3_catia_expres .
```

2. Modify the `p3_catia_expres` script to include the “CAT*” environment variables normally defined in the `site_setup` file. See [Environment Variables](#) (p. 70):

```
setenv CAT_UNLOAD <dir>
etc.
```

3. Run `p3_catia_expres` on the CATIA workstation to generate an Express neutral file:

```
% p3_catia_expres model_name -fsp/model_directory_path -t
```

The “-t” option specifies a ASCII Express Neutral file (*.exp). Without this option a binary file (*.bxp) will be generated. Both types of files can be imported into MSC/PATRAN using “File | Import | Express Neutral File”.

3.5.3 MSC/PATRAN CATIA Access Setup

The MSC/PATRAN CATIA Access imports files generated by CATXPRES into MSC/PATRAN.

CATXPRES is developed by The MacNeal-Schwendler Corporation, and is a supported Graphics Interactive Preference (GII) function in Dassault Systemes' CATIA product.

The MSC/PATRAN CATIA Access and CATXPRES products are independent from each other, and they are licensed separately. CATXPRES uses the NetLS licensing system while MSC/PATRAN CATIA Access uses the FLEXlm licensing system. MSC/PATRAN CATIA may be licensed and installed on any workstation, and it does not need CATXPRES to be licensed on the same machine, or in the same network.

The instructions for installing CATXPRES are documented in the CATXPRES Installation Manual delivered with that product.

3.5.4 MSC/PATRAN Pro/ENGINEER Access Setup

The MSC/PATRAN Pro/ENGINEER Access module imports Pro/ENGINEER part files by actually running Pro/ENGINEER in the background, and executing a Pro/Develop program. For this reason, any MSC/PATRAN workstation that will access Pro/ENGINEER part files must be able to execute Pro/ENGINEER (i.e. the software must be executable and have valid licenses).

MSC/PATRAN Pro/ENGINEER Access determines the location of Pro/ENGINEER with the MSCP_PROE_CMD environment variable. For example,

```
% setenv MSCP_PROE_CMD /usr/bin/proe18
```

Typically this environment variable is set the site_setup file. See **Environment Variables** (p. 70) for additional information.

Running MSC/PATRAN Pro/ENGINEER Access Remotely

You may convert a ProENGINEER part file into a Express Neutral file outside of MSC/PATRAN by running the p3_proengineer executable directly. This must be done on a system with ProENGINEER installed and requires a FLEXlm license for MSC/PATRAN Pro/ENGINEER Access.

1. Set the MSCP_PROE_CMD environment variable. You may already have this set in the patran8x/site_setup file (see **Environment Variables** (p. 70) for additional information).

```
% setenv MSCP_PROE_CMD /usr/bin/pro
```

2. Execute the `p3_proengineer` script from the MSC/PATRAN installation.

It is possible to create an installation that contains only the MSC/PATRAN Pro/ENGINEER Access (by selecting only MSC/PATRAN Pro/ENGINEER Access in `mscsetup`). You may not, however, simply copy the following script since it requires files included in the installation.

```
% <inst>/patran8x/bin/p3_proengineer +prt<partfile> pro_wait
```

For example:

```
/msc/patran8x/bin/p3_proengineer +prttest.prt pro_wait
```


3.6 Configuring Clients

The client installation sets up MSC/PATRAN as a link to an installation mounted from a file server. This allows a central installation of MSC/PATRAN to be run on several workstations. This saves disk space, but there is a performance penalty on start-up and when opening a new database.

3.6.1 The mscsetup Utility Client Option

When selecting a Product Installation Type using the mscsetup utility, one of the options is for “Client” installation. See [Selecting a Product Installation Type](#) (p. 35).

3.6.1a Select Client Installation

Select an installation type for the MSC/PATRAN core application:

1. Standard Installation.

Install the MSC/PATRAN GUI and associated files including the PDB database subsystem and complete on-line help facility and results validation/verification files for <platform> systems. 426 megabytes required

2. Full Installation.

Install standard files plus the MSC/PATRAN analysis manager, database access programmer's toolkit, and PCL utilities for <platform> systems. 525 megabytes required.

3. Client Installation.

Install a local copy of InterBase on the target host.
Client system will access all other files via NFS from an existing installation on a Hewlett Packard 9000 host. 7 megabytes required.

4. Custom Installation.

Select specific architectural and optional components to install.

D. Deselect.

Remove MSC/PATRAN Core Application from the list of products to install.

R. Return to the Select Product Menu.

Do not alter the current configuration if MSC/PATRAN Core Application.

X. Completely exit this installation now.

Enter 1-4, D, or X (default = 1)? 3

MSC Installation and Setup - MSC/PATRAN Core Application Options

Please wait...

3.6.1b Selecting the Installation Base Directory

You will be prompted for an installation base directory. This is the NFS mount point of a MSC/PATRAN installation.

Consult your operating system documentation on how to establish NFS mounted directories from file servers to clients.

For example, assume MSC/PATRAN is installed on a machine called “alpha” in /msc. The client machine, “beta”, mounts that directory (alpha:/msc) as /alpha_mount/msc. The installation base directory would be given as /alpha_mount/msc, and the `mscsetup` utility would create links from the provided installation target directory to /alpha_mount/msc. So if the installation target directory is /msc on “beta”:

```
# ls -l /msc
lrwxr-xr-x 1 root sys 22 Nov 11 13:08 patran80-> /alpha_mount/msc/patran80
```

The `mscsetup` utility request follows:

MSC Installation and Setup - PATRAN V8.0 Installation Base Directory

You have selected a client installation of MSC/PATRAN. A client relies on the ability to access an existing standard or full installation base directory via NFS from a remote system.

Please supply the pathname to an existing installation base directory from which this host will access files which are not installed locally.

The name that you enter here will not be extensively checked at this time, but a cursory check will be made to ensure that at least a “patran” command does exist within the directory that you specify.

Do you wish to continue (default = Y)?

Enter the PATRAN installation base directory (no default)?