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Installing on Microsoft Windows NT

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4.1 Overview

MSC/PATRAN on Windows NT uses the common installation procedure. MSC/PATRAN, MSC/NASTRAN and all related products use the same installation utility and follow the same basic procedure. Many previously separate tasks have been combined into a single script, to simplify the installation.

Known Limitations

MSC has made every attempt to offer quality software on Microsoft's Windows NT operating system. The following are known limitations:

- MSC/PATRAN on Windows NT only supports PostScript printers.
- Due to a window size limitation of Exceed, the Select menu is set to horizontal.
- Because Exceed does not allow this sequencing on NT, the Select menu may not stay on top. To bring the Select menu to the front, reselect the Select databox. See also the `select_menu_always_on_top` setting in **settings.pcl** (p. 76)
- When you import a Pro Engineer file into MSC/PATRAN on Windows NT, a Pro/Engineer process window is created. This process window does not automatically close when the import is successfully completed. You must manually close the process window for each Pro Engineer part file.
- Support of the SpaceTec spaceball is not available in this version of MSC/PATRAN on Windows NT.
- To import !Unigraphics Part files, you must use the NTFS file system type (not FAT).

Modules and Products Available on Windows NT

The following analysis products, Analysis Preferences, and CAD Access modules are NOT currently available on the Windows NT platform. Products marked with an asterisk (*) are likely to be released in the near future. Check with your sales representative for the latest product information.

- MSC/PATRAN CADDs Access
- MSC/MATERIAL
- MSC/THERMAL*
- MSC/PATRAN ANALYSIS MANAGER
- MSC/DROPTTEST*
- MSC/PATRAN SAMCEF Preference
- MSC/PATRAN MSC/DYTRAN Preference*

4.2 TCP/IP Setup

You must have the TCP/IP networking facility installed on Windows NT. To check the TCP/IP network installation:

1. Open up the Control Panel.
2. Select the Network icon and the Protocols tab.
3. Check to see that the TCP/IP protocol is installed.

MSC/PATRAN also requires an ethernet card, even if the workstation is not connected to a network. MSC/PATRAN uses the ethernet card to create a system ID for FLEXIm licensing.

For additional information see [FLEXIm and Licensing Problems](#) (p. 102).

Install the Printing Service

Before you can use File/Print option in MSC/PATRAN, you must install the Microsoft TCP/IP Printing service from the Network option in Control Panel. Use the Services Tab to add this service, or check to see if it has been added.

4.3 Hummingbird Exceed Setup

MSC/PATRAN on Windows NT requires the Hummingbird Exceed and Exceed 3D version 6.0.2 or later. For additional information see [Microsoft Windows NT Requirements](#) (p. 23).

Important: MSC/PATRAN on Windows NT requires but does not include Hummingbird Exceed.

Contact Hummingbird to purchase Exceed and Exceed 3D:

Hummingbird Communications LTD.
1 Sparks Avenue, North York
Ontario, M2H 2W1 Canada
Telephone: 1(416) 496-2200
Fax: 1(416) 496-2207
email: sales@hummingbird.com
WWW: <http://www.hummingbird.com>

In Europe:
37 rue de Vermont
1202 Geneva, Switzerland
Telephone: +41 (22) 733 18 58
Fax: +41 (22) 733 64 03

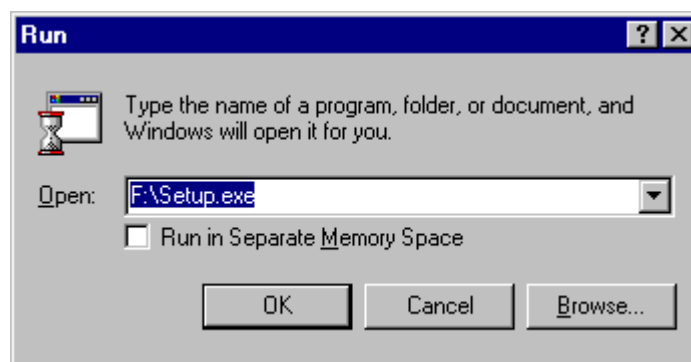
The MacNeal-Schwendler Corporation recommends the following settings for Exceed. All of these settings are accessible by running the Exceed | Xconfig program.

- Under **Input** - select “**Middle Button Emulation**” emulation if you have a two-button mouse. Unselect it if you have a three-button mouse.
- Under **Window Mode** - set “Window Mode” to “**Multiple**.” You may also wish to adjust the focus policy from “Click” to “Pointer”

4.4 Installing MSC/PATRAN with the Setup Wizard

Make sure that you exit all programs before you begin the installation procedure.

1. Insert the MSC/PATRAN on Windows NT CD-ROM in the CD-ROM drive and select Run from the Start menu (NT 4.0). You should see the dialog box shown below on your screen.



2. Type x:\setup.exe, where x is your CD-ROM drive. This begins the MSC/PATRAN on Windows NT installation Setup Wizard. Setup attempts to verify the resources necessary to run MSC/PATRAN on Windows NT.

The Setup Wizard presents you with four choices:

- Install MSC/PATRAN (Installs the software system)
- Install MSC/NASTRAN (Installs the MSC/NASTRAN analysis solver — licensed separately)
- Install FLEXlm (Installs a FLEXlm license server or nodelock license file)
- Install ATM & Viewer (Installs Adobe Type Manager and Frameviewer on-line help utility)
- Install InterBase (Installs database system for upgrading v7.5 or earlier databases)
- MSCinfo (Provides System Information)



MSC/PATRAN on Windows NT requires a FLEXlm server locally, or on the network, to supply licenses. You may wish to establish a FLEXlm server before installing MSC/PATRAN.

If the FLEXlm server is established before MSC/PATRAN is installed, the creation of environment variables etc., can be automated. The FLEXlm setup can be done after MSC/PATRAN is installed. FLEXlm licenses are fully compatible between UNIX and NT.

If you do not have a FLEXlm license, you must first run the FLEXlm install. See **FLEXlm Installation (Optional)** (p. 59) for additional information.

4.4.1 Selecting Components

1. On the Setup Wizard menu, select the PATRAN button.

The Setup Wizard takes you through the installation of MSC/PATRAN on Windows NT and its components.

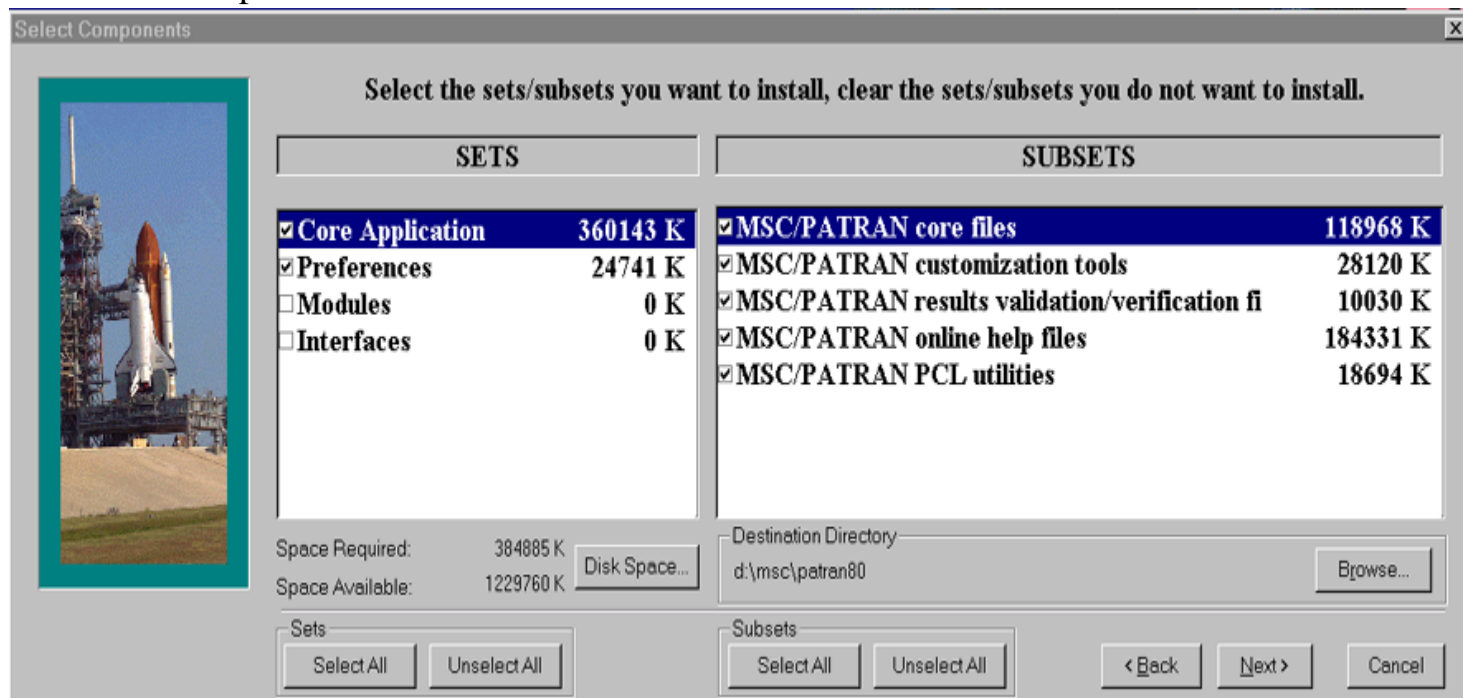
2. Choose Custom install to select which modules, options and preferences to install.

-or-

Choose Full install to select all modules, options and preferences.

-or-

Choose Typical install to select the most frequently used modules, options and preferences



The following selections apply to the installation of each component.

4.4.2 FrameViewer Installation (Optional)

This portion of the installation installs FrameViewer 5. Use FrameViewer 5 to view the on-line help files.

3. Select registered owner installation (not networked installation). Networked installation allows FrameViewer to be accessed from a server and MSC has not verified this option.
4. At the prompt, supply a name, company name and an installation path.
5. Install all FrameViewer components.

For information on ATM installation see **Adobe Type Manager Setup** (p. 65).

4.4.3 MSC/PATRAN Core Product Installation

Once you have installed all the third-party programs, the MSC/PATRAN installation begins. The Setup Wizard should complete the installation without any further user input.

4.4.4 FLEXlm Installation (Optional)

MSC/PATRAN on Windows NT uses FLEXlm based licensing. If you already have FLEXlm setup as a license server for MSC/PATRAN, you do not need to complete this installation. You will need to have a FLEXlm server on your

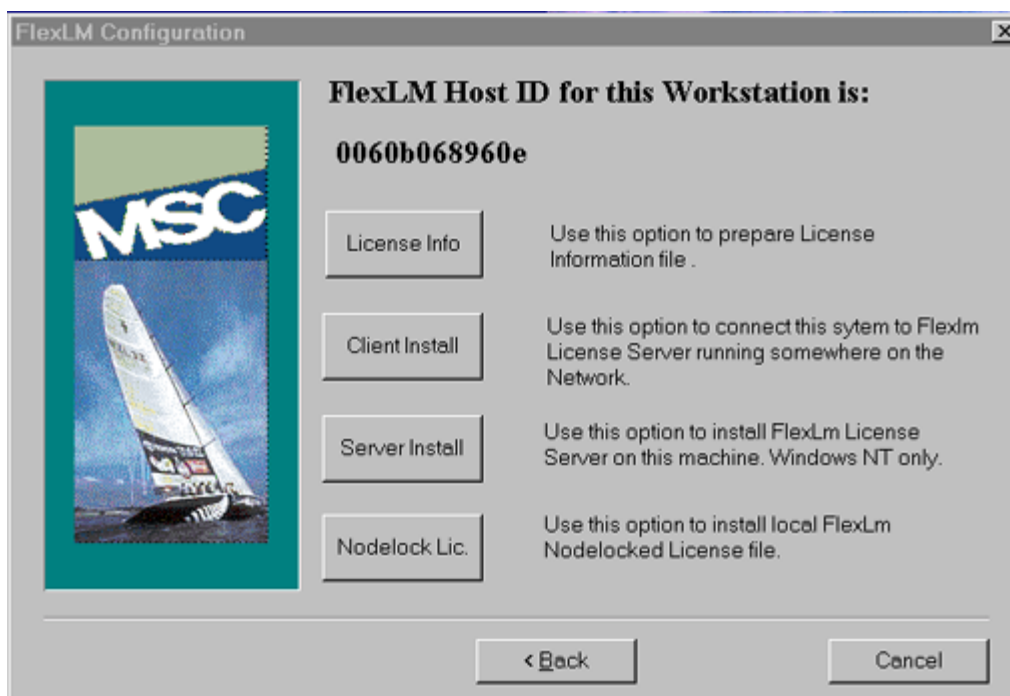
Important: The lmhostid, which is used to generate license codes, must be 12 digits on the Windows NT platform. The correct number should be generated by the "License Info" selection below, but do not use the "mscid" generated during a NASTRAN installation. You must also have an ethernet card and a valid installation of TCP/IP.

Windows NT workstation or on a UNIX workstation on the same TCP/IP network.

To install FLEXlm:

1. Select FLEXlm from the main menu in the Setup Wizard. You should see the following screen:
 - License Info - Creates an authorization form (mscauth.txt) to send to MSC.
 - Client Install - Uses licenses from an existing FLEXlm server (UNIX or NT).

- **Server Install** - Installs the FLEXlm server (Note: You must first acquire authorization codes from MSC).



2. If you wish to start a FLEXlm license server on this workstation select “Server Install”. The Setup Wizard will prompt you for an existing license.dat file (supplied by MSC), and will start the appropriate NT services. For additional information see **Installing FLEXlm** (App. A)

4.4.5 InterBase Installation (Optional)

The InterBase database system is required only if you intend to upgrade databases from MSC/PATRAN v7.5 or earlier. See **Installing InterBase on Windows NT** (App. B) for more information.

4.5 Upgrading an Existing Installation

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

1. Choose the same installation directory (e.g. `c:\msc`) and follow the steps in **Installing MSC/PATRAN with the Setup Wizard** (p. 56). This will create a parallel Patran directory:

```
dir c:\msc
06/25/98 12:16p <DIR> bin
06/25/98 12:16p <DIR> flexlm
06/25/98 12:16p <DIR> patran75
06/25/98 12:16p <DIR> patran80
```

If you do not have enough disk space for parallel installs, uninstall the existing MSC/PATRAN on Windows NT first. Make sure to copy the customization files listed below, however. See **Uninstalling** (p. 68).

2. Update the following customization files in the new installation directory to match the existing installation:
 - p3_printers.def
 - p3_trans.ini
 - p3epilog.pcl
 - p3toolbar.def
 - p3quickpick.def
 - settings.pcl
3. 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 issues during the installation:

- MSC/PATRAN on Windows NT v8.x requires Hummingbird Exceed 6.0.2 and Exceed 3D 6.0.2. The version of Exceed used with MSC/PATRAN on Windows NT v7.5 or earlier (v5.1.3) will not work.
- There is no need to re-install FLEXlm or update your licenses.
- There is no need to re-install InterBase.
- There is no need to re-install FrameViewer

4.6 Optional Steps

The following sections describe the customization product set.

4.6.1 Customizing Analysis Preferences in p3trans.ini

You can customize the MSC/NASTRAN, ABAQUS, ANSYS or MARC Preferences to automatically submit jobs from the analysis form. Edit the file `p3_trans.ini` in the MSC/PATRAN installation directory (default is `C:\MSC\Patran8x`) to point to the correct location and machine name where the solver resides.

There is an entry in `p3_trans.ini` for each analysis preference and analysis module. For example:

```
[MscNastran]
Host=LOCAL
Hosttype=Windows
Scratchdir=
Acommand70=c:\msc\nastran70\bin\nastran.exe
```

4.6.2 Printing on Windows NT

You can print to a connected printer or a network printer using the File/Print menu. MSC/PATRAN uses the TCP/IP `lpr` command to print Postscript files. You must have a TCP/IP capable print server and a Postscript capable printer.

Install the TCP/IP Printing Service

Before you can use File/Print option in MSC/PATRAN, you must install the Microsoft TCP/IP Printing service on both the client and print server. Use the “Control Panel | Network | Services” tab to add this service, or check to see if it has been added.

Identify or Start an lpd Server

TCP/IP printing requires a server running the Line Printer Daemon (lpd). This can either be a UNIX workstation running `lpd`, or a Windows NT workstation running the “TCP/IP Print Server” (`lpdsvc`) service. If you have an existing print server specify it in the `p3_printers.def` file (see below). If not you must start a server.

To start the `lpdsvc` service on a Windows NT workstation choose “Control Panel | Services”, and start “TCP/IP Print Server.” To start the service manually enter the following at a command prompt:

```
net start lpdsvc
```

Verify the Path to lpr

A version of the `lpr` executable is shipped with Hummingbird Exceed. MSC/PATRAN requires the Microsoft Windows NT `lpr.exe` command, which is typically located in `c:\winnt\system32`. Your path (as defined in Control Panel | System | Environment) must list the `system32` directory before any Exceed directory.

Specify a Printer in the `p3_printers.def` File

At this time, you may reference only one printer in the definition file. Edit the `p3_printers.def` file in the MSC/PATRAN installation directory as follows:

```
Destination = -S servername -P printername [-o l]
```

Where *servername* is the TCP/IP network name of the printer server, and *printername* is the TCP/IP spool name of the printer. For example:

```
Destination = -S unixhost -P laser9
```

The “-o l” parameter is needed when printing to an NT (`lpdsvc`) print server, but not needed when printing to a UNIX (`lpd`) print server. Note that *servername* may be a host name or a TCP/IP address (i.e. 161.24.71.71), but *printername* must be the name of a printer recognized on the server.

Print

Select the File/Print option and click on the Apply button. MSC/PATRAN submits the PostScript file to the specified printer. There is no dialog box or warning that printing is completed.

-or-

Print to a file and submit the file to a printer from the DOS command prompt. Choose the Print to File option in the print form of MSC/PATRAN. At a DOS prompt in Windows NT, give the following command:

```
lpr -S <print server name> -P <printer name> -o l <filename>
```

Example:

```
lpr -S nthost -P hp_1086 -o l mymodel.ps.01
```

-or-

```
lpr -S unixhost -P hp_1086 mymodel.ps.01
```

For additional information on printing see **Printing on Windows NT** (p. 121) in the *MSC/PATRAN User's Guide, Part 2: Basic Functions*.

Printing from Insight

The settings used in the `p3_printers.def` file are not available within Insight. The File | Print menu under Insight does, however, create a Postscript file (called `insight.ps.*`) which can be submitted by hand from a Command Prompt as described above.

4.6.3 Displaying FrameViewer

To customize the way that FrameViewer displays on your monitor:

1. Open the `fmviewer.ini` file.
2. Under Misc. preferences, edit the line:

```
MonitorSize=17in
```

You can define the size of your monitor in centimeters or inches.

This setting is normally done during the FrameViewer installation process, but you can change the setting after the installation.

4.6.4 Installing PCL Utilities on Windows NT

The PCL Utilities (formerly known as Shareware) is available on the CD-ROM

1. Install the "PCL Utilities" using the Setup Wizard.
2. Use Explorer to copy `p3epilog.pcl` from
`C:\msc\patran80\shareware\msc\unsupported\utilities` to
`C:\msc\patran80` by clicking the right mouse button on `p3epilog.pcl` and dragging this file to `C:\msc\patran80`.

When MSC/PATRAN is started, the utilities menu should be available.

4.6.5 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. For this reason, MSC/PATRAN Pro/ENGINEER Access requires the following to properly execute:

1. The MSCP_PROE_CMD environment variable must define the location of the Pro/ENGINEER executable. For example,

```
% set MSCP_PROE_CMD=c:\proe18\proe
```

Typically this environment variable is set the under “Control Panel | System | Environment”. See **Environment Variables** (p. 70) for additional information.

2. Pro/ENGINEER must have a valid installation and valid licenses on the local workstation.
3. Both the Pro/ENGINEER `bin` directory and the MSC/PATRAN `bin` directory must be included in the user's path.
4. PROSETUP must be defined in the Windows NT registry. Run regedt32 and make sure the following key exists and is defined (with the path to the Pro/ENGINEER installation directory):

```
HKEY_LOCAL_MACHINE\SOFTWARE\PTC\PROSETUP
```

This key will often be missing if Pro/ENGINEER was installed without using its normal installation utility (i.e. it was cloned from another machine).

4.6.6 Adobe Type Manager Setup

Once Adobe Type Manager is installed, three steps need to be done to correctly display the on-line help files.

1. Start Adobe Type Manager.
2. Select `c:\PSFONTS\PFM` directory.
3. Select the ZapfDingbats font and click on the Add button. The ZapfDingbats font should now appear in the Destination list.

4.6.7 MSC/PATRAN on Windows NT Startup Directory

MSC/PATRAN runs from, and stores the database, session and journal files in a directory that is selected according to the table below.

If You...	MSC/PATRAN...
Start from a DOS command prompt by entering : <code>patran</code>	Selects the current working directory.
Double click the MSC/PATRAN icon	<p>Looks for the users home directory (%HOMEDRIVE%%HOMEPATH). This should be set by the “User Manager” program.</p> <p>If it does not find the users home directory, it starts up in the directory defined by the HOME environment variable. If no variables are set, MSC/PATRAN starts in the root directory (C:\). For more information see Environment Variables (p. 70).</p>

Normally, the NT administrator should set up each account with a home directory. Note that unlike the UNIX version, you can run MSC/PATRAN on Windows NT using a path name that contains spaces.

4.6.8 Application Resources

MSC/PATRAN uses application resource files to define the minimum set of X resources needed for specific MSC/PATRAN applications. These resources include an optimal color scheme, default window locations and appropriate font sizes.

The MSC/PATRAN on Windows NT CD-ROM contains these resource files which are automatically placed under the directory, `<installation_dir>/patran8x/app-defaults`. Copy these files to `<exceed_installation_dir>/users` to make them available in MSC/PATRAN on Windows NT. This is normally done by the installation procedure. You will need to do this manually if you use an existing Exceed installation. In this case, you should also copy the `XKeysymDB` file from the MSC/PATRAN installation directory to the `<exceed_installation_dir>/users` directory with the new name `XKeysmdb`. **Note the spelling change.**

See **Application Resources** (p. 74) in the User Environment chapter for additional information.

4.6.9 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,

```
% set MSCP_PROE_CMD=d:\proe\bin\proe18
```

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 (see **Environment Variables** (p. 70) for additional information).

```
% set MSCP_PROE_CMD=d:\proe\bin\pro
```

2. Execute the p3_proengineer.cmd 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.

```
% d:\msc\patran8x\bin\p3_proengineer.cmd +prt<partfile> pro_wait
```

For example:

```
d:\msc\patran8x\bin\p3_proengineer.cmd +prttest.prt pro_wait
```

4.7 Uninstalling

The following table defines the steps for uninstalling the various components of the MSC/PATRAN software system.

To Uninstall...	The Uninstall Procedure...	Note that...
MSC/PATRAN	Uninstall icon in MSC program group	<div>Equivilent to</div> <div><msc>setup.exe -funinst.ins</div>
MSC/NASTRAN	Uninstall icon in MSC program group	<div>Equivilent to</div> <div><msc>setup.exe -fdelsl1.isu</div>
InterBase	intel.cmd is located in the IBSERVER directory	This removes the service and registry settings. You can then manually delete the files from the hard disk.
FrameViewer	None	The registry is not modified. Simply delete FrameViewer from the hard disk.
FLEXlm	None	<div>You need to stop the FLEXlm service before removing the FLEXlm directory. To stop and remove the service type:</div> <div>x:\<flexlm_dir>\install.exe -r</div> <div>Simply delete FLEXlm from the hard drive.</div>