

MSC SimDesigner Enterprise™

2006 r1 SP1 CATIA® V5R16 Edition

Installation Guide

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Publication Date: April 2006

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Installing SimDesigner Enterprise

- Installing on Windows
- Performing Maintenance on Windows
- Installing on UNIX
- Running on UNIX
- Uninstalling on UNIX

- Supported Platforms

SimDesigner Enterprise is supported on Windows 2000, Windows XP, IBM AIX, HP-UX, SUN and SGI IRIX. Please refer to the CATIA V5R16 documentation for more information.

- Pre-Installation Requirements

CATIA V5R16 must be installed with at least service pack 2 with HotFix 8 installed- please refer to the SimDesigner Enterprise Release Guide for more information.

- Licensing

SimDesigner Enterprise uses MSC.licensing. The MSC.licensing utilities are available on the installation CD.

MSC.licensing 10.8.0 or later is required for SimDesigner Enterprise.

Licensing information is usually entered during the install process. However, all parameters can be edited later in the configuration files.

Refer to [Product Licensing with FLEXlm on Windows](#) (Appendix. C) or [Product Licensing with FLEXlm on UNIX](#) (Appendix. D) for more information.

- System Resource Requirements

SimDesigner Enterprise resource requirements vary according to model size and actions performed. Since SimDesigner Enterprise products are symbiotic, please refer to the CATIA V5R16 documentation for system resource requirements.

- TCP/IP Requirements

You must have the Microsoft TCP/IP protocol installed. SimDesigner Enterprise applications also requires an ethernet card, even if the workstation is not connected to a network. FLEXIm uses the network adapter MAC address to create a host ID. For additional information see [TCP/IP Setup](#) (Appendix. E).

1.1 Installing on Windows

1. Close all Windows programs.
2. Place the SimDesigner Enterprise CD in the drive. If the installation does not start automatically, run setup.exe directly from the CD.
3. Select from the following options:
 - Install Software
 - Installation Guide
 - SimDesigner Website
4. Choose the “Install Software” selection to display a menu presenting the following:
 - SimDesigner Enterprise
 - MSC.Licensing 10.8 - see [Product Licensing with FLEXlm on Windows](#) (Appendix. C) for more information about licensing for SimDesigner for CATIA V5.
 - MSC.Analysis Manager
5. Choose SimDesigner Enterprise on the installation menu and you will be guided through the installation process.
6. Next, you will be asked to choose which CATIA installation SimDesigner Enterprise should be installed in. Choose a CATIA instance from the list or select **User Specified** to specify an explicit path.
7. When asked to specify User Name, Company Name and if the installation should be for all users or one user, check **Only for me** if the computer is shared by other users and you want to restrict usage to the currently logged on user.
8. Choose a location for installation.
9. Specify the SMTP mail server for the Expert Gateway Analysis Manager. Contact your system administrator for this information. If the SMTP mail server is not known at this time, leave the default value in the field. You may change it later.
10. Specify the SMTP mail server domain for the Expert Gateway Analysis Manager. Contact your system administrator for this information. If the SMTP mail server domain is not known at this time, leave the default value in the field. You may change it later.

11. Specify the SMTP mail server port number. Contact your system administrator for this information. If the SMTP mail server port number is not known at this time, leave the default value in the field. You may change it later.
12. Specify the **Protocol** to be used when communicating the **MSC SimManager Web Application**. Contact your system administrator for this information. If the **Protocol** is not known at this time, leave the default value in the field. You may change it later.
13. Specify the **hostname** on which the **MSC SimManager Web Application** is running. Contact your system administrator for this information. If the **hostname** is not known at this time, leave the default value in the field. You may change it later.
14. Specify the server **port number** on host 'UNKNOWN' on which the **MSC SimManager Web Application** is running. Contact your system administrator for this information. If the server **port number** is not known at this time, leave the default value in the field. You may change it later.

1.2 Performing Maintenance on Windows

If you run the setup program again, a dialog allowing you to Modify, Repair or Remove SimDesigner Enterprise program components will be displayed.

- **Modify**

Choosing Modify and clicking **Next** will display a dialog allowing you to select or de-select SimDesigner Enterprise components. When you click **Next**, the maintenance will be performed and the maintenance complete dialog will be displayed.

- **Repair**

Choosing Repair and clicking **Next** will re-install SimDesigner Enterprise components and display the maintenance complete dialog when complete.

- **Remove**

Choosing Remove and clicking **Next** will remove SimDesigner Enterprise components from your system.

The maintenance complete dialog will be displayed upon successful completion of these functions.

1.3 Silent installation on Windows

InstallShield Silent allows automated electronic software distribution without any end-user intervention to provide input via dialog boxes.

Note: Silent install will only work on machines with identical configurations.

The Response File

A normal, non-silent, installation receives the necessary input from you in the form of responses to dialog boxes. However, a silent installation does not prompt you for input but instead will read directives from the InstallShield Silent Response File (.iss file).

A response file contains information similar to that which you would enter as responses to dialog boxes when running a normal setup. InstallShield Silent reads the necessary input from the response file at run time.

You can create an InstallShield Silent Response File by running setup.exe and have InstallShield record and create the response file for you.

Recording a Response File for Silent Installations

Simply run the setup with the **Setup.exe -r** command line parameter. InstallShield will record all your installation choices in Setup.iss and place the file in the Windows folder.

Alternatively you can run setup with the **-f1** option to divert the response file to the location of your choice with the following command:

```
Setup.exe -r -f1"<fully qualified path>\YourResponseFile.iss"
```

Installation using Installshield Silent

```
Setup.exe -s
```

Or use the **-f1** switch so you can specify the name and location of the response file:

```
Setup.exe -s -f1"<fully qualified path>\YourResponseFile.iss"
```

Recording a Response File for Silent Uninstallations

Run the setup after the product has been installed by using the **Setup.exe -r** command line parameter. InstallShield will record all your uninstallation choices in Setup.iss and place the file in the Windows folder.

Alternatively you can run setup with the **-f1** option to divert the response file to the location of your choice with the following command:

```
Setup.exe -r -f1"<fully qualified path>\YourResponseFile.iss"
```

Uninstallation using Installshield Silent

To Uninstall the product with out any user interaction, run the following command from the command prompt using the silent uninstallation response file:

```
Setup.exe /M{SimDesigner Product GUID} /s /f1"<fully qualified path>\YourResponseFile.iss"
```

Note: The SimDesigner Product GUID can be obtained from within the response file recorded for the installation.

Simple Silent Uninstallation

If you do not want to follow the script logic and simply want to uninstall the product, you can use the following command line:

```
Setup.exe /M{SimDesigner Product GUID} /uninst
```

1.4 Installing on UNIX

1. Login as root.

Note: You must be root on the machine you are installing on - if you su to root, you must use the form 'su - root'.

2. Copy the file sd2006vr16.bin to a temporary location on your system.
3. Run sd2006vr16.bin to install SimDesigner Enterprise. You will be guided through the installation process - please note the following:

- Customer Information

When asked to specify User Name, Company Name and if the installation should be for all users or one user, check 'Only for me (username)' if the computer is shared by other users and you want to restrict usage to the currently logged on user.

- Select Setup Type - you will be asked to specify Full or Compact install:

Full will install the Gateway Analysis Manager (GAM) which enables you to submit and monitor analysis jobs locally or remotely.

Note: If you wish to use an existing Gateway Analysis Manager with SimDesigner Enterprise, refer to [Using an Existing GAM Installation](#) (page. 24).

Compact will not install the Gateway Analysis Manager (GAM) - you can install or uninstall (GAM) anytime later.

- License Setup

The license setup dialog will ask you to enter a FLEXlm license location - you may enter either one or more FLEXlm server hostnames separated by a semicolon (for example 1700@hostname) or a license file location (such as c:\msc\flexlm\license.dat) or both. If you specify both, specify the hostname(s) first.

If you don't have this information to hand, just leave it blank - the license information can be added later. For instructions on how to do this, please refer to [Product Licensing with FLEXlm on UNIX](#) (Appendix. D).

4. If necessary, install FLEXlm and associated license codes. Refer to [Product Licensing with FLEXlm on UNIX](#) (Appendix. D) for more information.

5. Logon without root privileges and configure GAM - see [Configuring GAM](#) (page. 26).

Note: There may already be a Gateway Analysis Manager previously installed by another MSC.Software product - if you wish to use an existing Gateway Analysis Manager with SimDesigner Enterprise, refer to [Using an Existing GAM Installation](#) (page. 24).

See [Gateway Analysis Manager \(GAM\) on UNIX](#) (Appendix. B) for more information about the Gateway Analysis Manager.

1.5 Running on UNIX

To run SimDesigner Enterprise either use the SimDesigner Enterprise Icon in the /application manager/catia folder of the desktop or enter the following command:

```
<install_dir>/runsd.csh
```

1.6 Uninstalling on UNIX

To uninstall SimDesigner Enterprise, enter the following command:

```
<install_dir>/Uninstallerdata/Uninstall
```

A

Gateway Analysis Manager (GAM) on Windows

- GAM Host Definitions
- Using an Existing GAM Installation
- Installing a New GAM
- Configuring GAM
- Starting GAM

The SimDesigner Expert Gateway uses the Gateway Analysis Manager (GAM) for job-submission.

This appendix contains basic installation and configuration topics for the Gateway Analysis Manager (GAM) on Windows. This product is used for submitting analysis jobs in a batch mode directly from the SimDesigner Enterprise environment to either a local or remote machine.

The standard installation of SimDesigner Enterprise automatically installs, configures, and starts the GAM services for submission of batch jobs on the local machine. If GAM is to be used for remote submittals, it must be reconfigured and its services must be restarted. This is also necessary if additional analysis hosts or programs are to be added regardless of a local or remote submittal.

A.1 GAM Host Definitions

- The **Master host** is the machine which continually runs the GAM service (called MSCQueMgrSD). This is also referred to as the *master* node. This service schedules all the jobs.
- The **Submit host** is the machine from which the analysis is submitted, sometimes referred to as the **client**. This is the machine SimDesigner is running on.
- The **Analysis host** is the machine which actually executes the analysis.

For a standard installation, all three of these machines are the same machine. Below is an itemized list of installation requirements:

- The Queue Manager (MSCQueMgrSD) should run as a user or as administrator.
- Each machine (*Submit* and *Analysis*) must be reachable to and from the *Master* node via a TCP/IP network.
- Each *Analysis* host must have a Remote Manager (MSCRmtMgrSD) service running that uses the same port number. It is recommended that each *Submit* machine also run a RmtMgr service with the same port number, however this is not a strict requirement.

Each user wishing to use GAM should have the same login name, user and group ids on all hosts / nodes in the configuration. This will prevent file access problems.

Troubleshooting

To troubleshoot problems you should always first look for clues in the contents of files produced by any job submitted by GAM plus any files created by the analysis itself:

- jobname.stdout, jobname.stderr, jobname.tml and jobname.mon
- <install_dir>/p3manager_files/default/log/MSCQueMgrSD.log
- Control Panel / Administrative Tools / Event Viewer / Application Log and look at events of source MSCQueMgrSD and MSCRmtMgrSD

A.2 Using an Existing GAM Installation

You may already have a Gateway Analysis Manager installed previously.

SimDesigner Enterprise can only use an existing GAM installation if it is v2003 or higher.

To enable SimDesigner Enterprise to use an existing version follow this procedure:

1. Start the SimDesigner Environment Editor - **Start / Programs / MSC.Software / SimDesigner Enterprise / Tools.**
2. Modify the GAM_HOME variable to point to the directory containing the existing GAM installations p3manager_files.
3. Make sure the GAM services are started - see [Starting GAM](#) (page. 21).

A.3 Installing a New GAM

The default SimDesigner Enterprise installation procedure will copy the GAM files into the <install_dir>\p3manager_files folder and install the Queue manager and remote manager services.

Decide which machine will be the master host and which machine(s) will be submit and analysis host(s) and copy the <install_dir>\p3manager_files folder to them.

Note: Although not all files in <install_dir>\p3manager_files will be needed, it is easier just to copy them all.

You will now need to edit the configuration files - see [Configuring GAM](#) (page. 19).

A.4 Configuring GAM

Note: Samples of these files exist in the <install_dir>\p3manager_files folder with explanations of the parameters.

1. Login to the **Master host** machine.
2. Edit <install_dir>\p3manager_files\org.cfg:

```
#-----
# Gateway Analysis Manager org.cfg file
#-----
#
# Org Master Host Port #
#
#-----
default Host-Machine 3900
#-----
```

- **Org:** Specifies a directory containing GAM related parameters - the directory name 'default' is created during the GAM installation.
- **Master Host:** The node name of the machine designated as the Master Host.
- **Port Number:** Specifies a port to be used by the Master Host..

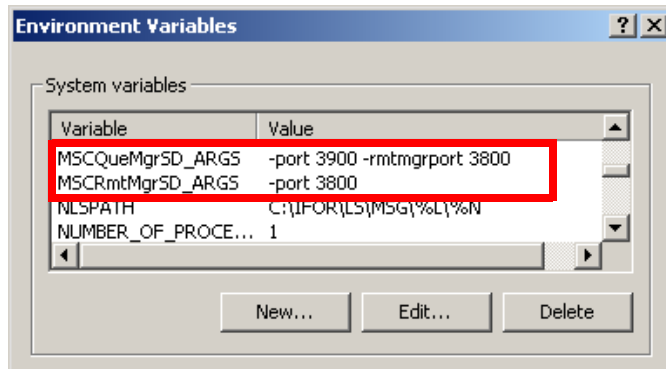
3. Edit <install_dir>\p3manager_files\default\conf\host.cfg:

- **Administrator:** This is the name of the user who will own the configuration files for example ADMIN: gam_admin. Do not specify Administrator.
- **Queue Type:** MSC is the default - others are NQS and LSF.
- **Applications:** This will typically be MSC.Nastran or MSC.Marc.
- **Physical Hosts:** The names of physical hosts these applications run on.
- **AM Hosts:** Application paths on the physical hosts identified by a unique name.

4. Edit <install_dir>\p3manager_files\default\conf\disk.cfg:

- **Disk Space:** Each *AM Host* must be associated with a scratch disk space location.

5. Ensure that the GAM services will start correctly on re-boot - select **Start / Settings / Control Panel / System**, click the **Advanced** tab, click **Environment Variables** and ensure that the following two variables exist:



- **MSCQueMgrSD_ARGS** - Specifies the port number that the Queue Manager (running on the Master Host machine) will use and the port number that all Remote Managers (running on the Analysis Host machines) will be using.
 - **MSCRmtMgrSD_ARGS** - Specifies the port number that the Remote Manager (if running on this machine) will use.
6. When you have finished configuring GAM, start the GAM services - see [Starting GAM](#) (page. 21)

A.5 Starting GAM

1. On the master host, start the Queue Manager service, which schedules analysis jobs. Under the *Start* menu select **Settings / Control Panel / Administrative Tools / Services** and start the “MSCQueMgrSD” service.

If the service is not there, you can install it by running the batch script:

```
<install_dir>\p3manager_files\bin\WINNT\install_server.bat
```

Edit this first to ensure that the installation path is correct. This batch file installs the Queue Manager service.

2. For the analysis machines, the Remote Manager service must be started in the same way for proper communication on each of these machines. (If some of these machines are UNIX machines, please refer to [Gateway Analysis Manager \(GAM\) on UNIX](#) (page. 22).)

The Remote Manager service can be installed by running the batch file:

```
<install_dir>\p3manager_files\bin\WINNT\install_client.bat
```

Edit this first to ensure that the installation path is correct in this batch file. These *Analysis* nodes must be able to *see* the `<install_dir>\p3manager_files` directory.

Note: Any time you make a change to **host.cfg** or **disk.cfg** you must stop and restart the Queue Manager service as shown in the first step.

You should now be able to submit analysis jobs directly from SimDesigner Enterprise by using the Setup Batch icon on the SimDesigner Gateway toolbar.

Note: To ensure that the GAM services will start correctly on re-boot, please refer to [Configuring GAM](#) (page. 19) to set the system environment variables.

Gateway Analysis Manager (GAM) on UNIX

- GAM Host Definitions
- Using an Existing GAM Installation
- Installing GAM
- Configuring GAM
- Starting GAM
- The AdmMgr Tool

The SimDesigner Expert Gateway uses the Gateway Analysis Manager (GAM) for job-submission.

This appendix contains installation and configuration topics for the Gateway Analysis Manager (GAM) on UNIX. This product allows you to submit batch analysis jobs directly from SimDesigner Enterprise CATIA Edition to local or remote machines.

The SimDesigner Enterprise CATIA Edition installation installs and configures the GAM daemons for batch jobs submission on the local machine. If GAM is to be used for remote submittals, or if additional analysis hosts or programs are to be added, it must be reconfigured and its daemons must be restarted.

B.1 GAM Host Definitions

- *Master* host is the machine which continually runs the GAM daemon (called `QueMgrSD`). This is also referred to as the *master* node. This daemon schedules the all jobs.
- *Submit* host is the machine from which the analysis is submitted, sometimes referred to as the *client*. This is the machine CATIA is running on.
- *Analysis* host is the machine which actually executes the analysis.

All of these hosts can be the same machine. Below is a list of installation requirements:

- The Queue Manager (`QueMgrSD`) should run as root on the *Master* node. This is not a strict requirement but recommended.
- Each *Submit* and *Analysis* machine must be connected to the *Master* node via a TCP/IP network.
- Each *Analysis* host must have a Remote Manager (`RmtMgrSD`) daemon running that uses the same port number. It is recommended that each *Submit* machine also run a `RmtMgr` daemon with the same port number, however this is not a requirement.

Each user wishing to use GAM must meet the following requirements:

- Users should have the same login name, user and group ids on all hosts / nodes in the configuration. This will prevent file access problems.
- Users must have `uname` in their default search path (`path` or `PATH` environment variable in the user's `.cshrc` or `.profile` file).

Troubleshooting: You should first look for clues in the contents of files produced by jobs submitted by GAM plus any files created by the analysis itself:

- `jobname.stdout`
- `jobname.stderr`
- `jobname.tml`
- `jobname.mon`
- `<install_dir>/p3manager_files/default/log/QueMgrSD.log`
- `/var/adm/syslog/syslog.log` (if daemons do not start)

B.2 Using an Existing GAM Installation

You may already have a Gateway Analysis Manager installed previously by another MSC.Software product. To enable SimDesigner Enterprise CATIA Edition to use this existing version follow this procedure:

1. Edit <install-dir>/V5iEnv/MSV5R13.B13.txt
2. Modify the GAM_HOME variable to point to the existing GAM installations p3manager_files.
3. Make sure the GAM services are started - see [Starting GAM](#) (page. 27).

B.3 Installing GAM

The default SimDesigner Enterprise CATIA Edition installation procedure will copy the GAM files into the <install_dir>/p3manager_files directory.

Decide which machine will be the master host and which machine(s) will be submit and analysis host(s) and copy the <install_dir>/p3manager_files directory to them.

Note: Although not all files in <install_dir>/p3manager_files will be needed, it is easier just to copy them all.

You will now need to edit the configuration files - see [Configuring GAM](#) (page. 26).

B.4 Configuring GAM

Note: Samples of these files exist in the <install_dir>/p3manager_files directory with explanations of the parameters.

Login to the *Master* host machine and edit these files:

1. <install_dir>/p3manager_files/org.cfg

In the **org.cfg** file you define two items:

- *Org*: A default is provided - you may add others if you wish.
- *Master Host*: The node name of the machine.
- *Port Number*: Use 3800 as the default.

2. <install_dir>/p3manager_files/default/conf/host.cfg

In the **host.cfg** file you must define four items:

- *Administrator*: This is the name of the user who will own the configuration files. Do not specify root. For example ADMIN: gam_admin.
- *Queue Type*: MSC is the default - others are NQS and LSF.
- *Applications*: This will typically be MSC.Nastran or MSC.Marc.
- *Physical Hosts*: The names of physical hosts these applications run on.
- *AM Hosts*: Application paths on the physical hosts identified by a unique name.

3. <install_dir>/p3manager_files/default/conf/disk.cfg

In the **disk.cfg** file you define one item:

- *Disk Space*: Each *AM Host* is associated to a scratch disk space location.

When you have finished editing the files, start the GAM services - see [Starting GAM](#) (page. 27).

B.5 Starting GAM

1. On the master host, start the Queue Manager daemon, which schedules analysis jobs. First make sure that one is not already running. (DO NOT use kill -9 to do this. Simply issue a kill command with no -9.).

To start the Queue Manager daemon type:

```
<install_dir>/p3manager_files/bin/<plat>/QueMgrSD -path <install_dir>
```

where <install_dir> is the installation location and <plat> is one of HP700, SGI5, RS6K, LX86 or SUNS depending on the platform.

2. For the analysis machines, the Remote Manager daemon must be started for proper communication on each of these machines. For the submit machines, it is recommended, though not necessary, that you start the Remote Manager daemon. (If some of these machines are Windows machines, please refer to [Gateway Analysis Manager \(GAM\) on Windows](#) (page. 15).)

To start the Remote Manager daemon type:

```
<install_dir>/p3manager_files/bin/<plat>/RmtMgrSD -path <install_dir>
```

The Analysis nodes must be able to see the <install_dir>/p3manager_files directory.

Note: Any time you make a change to **host.cfg** or **disk.cfg** you must stop and restart the Queue Manager service as shown in the first step.

You should now be able to submit analysis jobs directly from SimDesigner Enterprise CATIA Edition by using the Setup Batch icon on the SimDesigner Gateway toolbar.

You may want to automatically start the daemons at boot-up in order to ensure that GAM is always available.

B.6 The AdmMgr Tool

An administration tool is available that provides a interactive method of maintaining the GAM configuration files.

The AdmMgr tool can be found in:

<install_dir>/p3manager_files/bin/<plat>/AdmMgr

where <plat> is RS6K for AIX and SGI5 for SGI

Please contact support for more information.

B.7 To use the graphical Admin Tool

1. Set the environment variable AM_HOME to the location of p3manager_files.

Ex. setenv AM_HOME
/tmp/MSC.Software/SimDesigner/2006r1.R16/p3manager_files

2. bring up the Admin tool

Ex:
/tmp/MSC.Software/SimDesigner/2006r1.R16/p3manager_files/bin/<MACHINE>/AdmMgr

where MACHINE is the architecture of the machine that this is running on:

HP700 - Hewlet Packard HP-UX

HPIPF - Hewlet Packart HP-UX for Itanium

LX86 - Linux

LXIPF - Linux native IA64

RS6K - IBM AIX

SGI5 - Silicon Graphics IRIX

SUNS - Sun Solaris

3. Select "Modify Config Files" for Action, and go through each Object: Applications, Physical Hosts, A/M Hosts, Filesystems and fill them in. When finished, click Apply. Then Quit. i.e. the Config Location data box can be left blank, thus the licensing for that application will be picked up from the environment
4. The services can be started by bringing up AdmMgr logged in as local root, and then selecting Action: "Queue Manager" in the menu, then hit Apply to start it.

B.8 To Configure/Start the Services Manually

1. set AM_HOME just like in A:1
2. create a org.cfg file in
/tmp/MSC.Software/SimDesigner/2006r1.R16/p3manager_files/
 - it should contain one line: " default <hostname> 2900"
3. Create three files in
/tmp/MSC.Software/SimDesigner/2006r1.R16/p3manager_files/default/conf

- host.cfg

There are two ways to define the license to be used for a given solver

- The RCpath for a A/M Host can contain just the word "NONE", and the MSC_LICENSE_FILE environment variable must be set to a proper solver license
- The other way is to enter the full path to the license configuration file for the given solver.

For nastran, it would be: /tmp/MSC.Software/Nastran/conf/nast2005rc

- disk.cfg

- msc.cfg (optional)

4. Use the sample files (host.cfg.sample, disk.cfg.sample) as a guideline for creating these files. (I've attached some here too, easier example)
5. Start the RmtMgr preferably logged in as root .
/tmp/MSC.Software/SimDesigner/2006r1.R16/p3manager_files/bin/<MACHINE>/RmtMgr
6. Start the QueMgr logged in as a normal user, preferably not root.
/tmp/MSC.Software/SimDesigner/2006r1.R16/p3manager_files/bin/<MACHINE>/QueMgrIf the QueMgr doesn't start correctly, or to view any problems reported, read the QueMgr log file,

/tmp/MSC.Software/SimDesigner/2006r1.R16/p3manager_files/default/log/QueMgr.log

Product Licensing with FLEXlm on Windows

- Obtain licenses
- Display the MSC.licensing hostID
- Install SimDesigner Enterprise licenses
- Install a FLEXlm server
- LMTOOLS configuration utility
- Update the SimDesigner Enterprise Configuration File
- Update the MSC_LICENSE_FILE System Variable
- FLEXlm licensing models and examples

SimDesigner Enterprise uses MSC.licensing (FLEXlm) to validate usage of its various component features - this section outlines FLEXlm licensing-related procedures that may be necessary to complete the installation of SimDesigner Enterprise.

As part of the installation, the product licenses that you obtain from MSC.Software Corporation are placed in a file called the License File. This file is located either on a FLEXlm License Server or locally.

When SimDesigner Enterprise starts up, it looks in a configuration file to find out where to obtain its licensing information - the configuration file will point to one or more FLEXlm Server addresses and/or a physical license file location.

SimDesigner Enterprise will then make a request to FLEXlm to validate usage for the particular machine it is running on.

- | |
|---|
| <p>Note:</p> <ul style="list-style-type: none">• A FLEXlm Server is required in all cases.• FLEXlm version 10.8.0 or later is required. |
|---|

C.1 Obtain licenses

Contact your MSC.Software representative to obtain SimDesigner Enterprise licenses. The license will be provided in the form of a license.dat file. The MSC.licensing license file contains information used to validate usage of the software and may vary according to the licensing model used (see [FLEXlm licensing models and examples](#) (page. 40)).

C.2 Display the MSC.licensing hostID

You may need to supply a MSC.licensing hostID in order to obtain a license from MSC.Software (the hostID is included as part of certain license types).

To display the MSC.licensing hostID:

1. Choose **Install Software** from the main SimDesigner Enterprise installation menu.
2. Choose **MSC.Licensing 10.8.0**.
3. Select **Get HostID** and note the HostID then click any button to exit.

C.3 Install SimDesigner Enterprise licenses

Installing the SimDesigner Enterprise licenses is simply a case of adding them to a license.dat file and pointing to it in the SimDesigner Enterprise configuration file as described in [Update the SimDesigner Enterprise Configuration File](#) (page. 38).

Note: Although SimDesigner Enterprise looks in the configuration file for the location of a FLEXlm license file, if the MSC_LICENSE_FILE system environment variable is defined it will override the configuration file and possibly prevent the product starting up - if this is the case, you will need to update the variable to point to the correct license (see [Update the MSC_LICENSE_FILE System Variable](#) (page. 39)).

Edit the license.dat file

The license.dat file may be on the FLEXlm server or located on your machine, either way you must have a FLEXlm server installed (see [Install a FLEXlm server](#) (page. 36)).

Edit the license.dat file and add the SimDesigner Enterprise licenses. You can use LMTOOLS to find out the location of the license.dat file on a FLEXlm server (see [LMTOOLS configuration utility](#) (page. 37)).

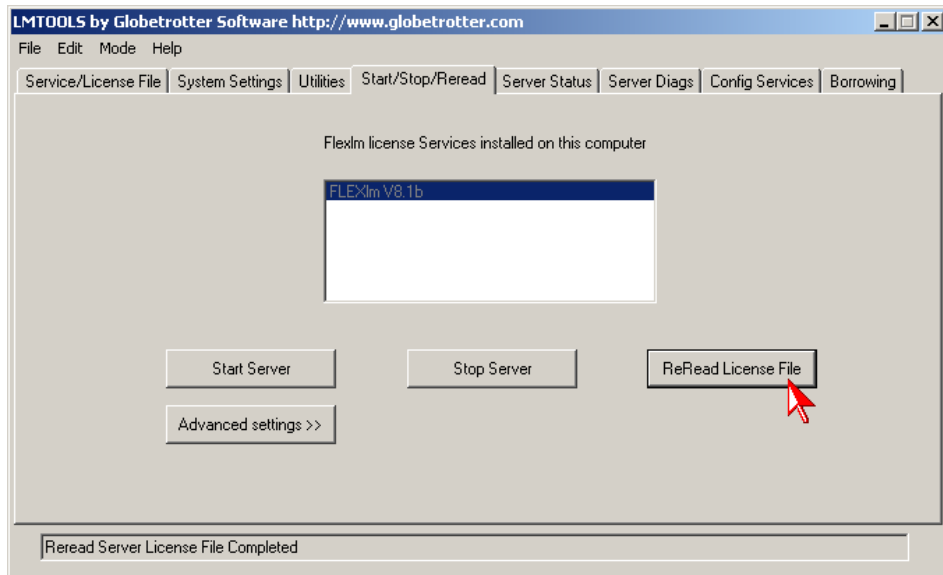
You may want to save a copy of the file before updating it.

If this is a new license.dat file, you will need to change the SERVER and DAEMON lines in the new license file otherwise use what is already in the file and just add the FEATURE lines. For example:

```
SERVER hostname hostid 1700
DAEMON MSC /your_path/msc
FEATURE V5i_Access MSC 2004.0531 29-apr-2004 etc...
```

Re-read license file

If you are updating a license.dat file on a FLEXlm server you need to refresh the file by using LMTOOLS to re-read the license.dat file and enable the new licenses.



If there is a problem with this, or if the licenses still do not appear to be available, restart the system.

Point SimDesigner Enterprise to the license file

Update the configuration file as described in [Update the SimDesigner Enterprise Configuration File](#) (page. 38). Note that although SimDesigner Enterprise looks in the configuration file for the location of a FLEXlm license file, if the MSC_LICENSE_FILE system environment variable is defined it will override the configuration file and possibly prevent the product starting up - if this is the case, you will need to update the variable to point to the correct license (see [Update the MSC_LICENSE_FILE System Variable](#) (page. 39)).

C.4 Install a FLEXlm server

1. Select **Install Software** from the main SimDesigner Enterprise installation menu.
2. Choose **MSC.Licensing 10.8.0**.
3. Select **Server Installation 10.8.0** to start the licensing server installation.
4. Click **OK when** your system's hostID appears.
5. Follow the installation dialogs.

Note: When asked to select a license file, use the license.dat file supplied with SimDesigner Enterprise - if you don't have it, you can add it later (see [Install SimDesigner Enterprise licenses](#) (page. 34)).

C.5 LMTOOLS configuration utility

LMTOOLS is a FLEXlm utility that allows you to configure various FLEXlm server settings. To start LMTOOLS execute `<install_dir>\lmtools.exe`

C.6 Update the SimDesigner Enterprise Configuration File

The SimDesigner Enterprise configuration file contains, amongst other things, the location of the license file - if you didn't enter the license information during the install, or need to modify it later, you can manually edit the file:

```
<install_dir>\v5ienv\msc.v5r13.b13.txt
```

Edit the line:

```
MSC_LICENSE_FILE=port@hostname;c:\msc\flexlm\license.dat
```

You may enter either one or more FLEXlm server hostnames separated by a semicolon (for example 1700@hostname) or a license file location (such as c:\msc\flexlm\license.dat) or both. If you specify both, specify the hostname(s) first.

Important: You must specify any server hostnames before the license.dat file(s).

C.7 Update the MSC_LICENSE_FILE System Variable

Although SimDesigner Enterprise looks in the configuration file for the location of a FLEXlm license file, if the MSC_LICENSE_FILE system environment variable is defined it will override the configuration file and possibly prevent the product starting up.

If this is the case, go to the Windows Control Panel, select **System/Advanced/Environment Variables...** and look for MSC_LICENSE_FILE.

The variable may contain other MSC.Software licensing information - edit it and add the location of the SimDesigner Enterprise license (either a server such as 1700@bari or a location such as c:\msc\flexlm\license.dat).

Remember to separate entries with a semi-colon and to specify hostname locations first.

C.8 FLEXlm licensing models and examples

SimDesigner Enterprise uses one of the following FLEXlm licensing models:

Named User licensing

The license provided by MSC Software for SimDesigner 2006 r1 authorizes a maximum number of users the ability to run SimDesigner. Your SimDesigner administrator manages the list of users that can run the software. Any Named user may log in and use SimDesigner on any machine on the network on which the license server is reachable. Each named user is permitted to run multiple sessions of SimDesigner only on the same machine with each session using an additional license. So, if you have three sessions of SimDesigner running on your computer, you will consume three licenses from the Named User License pool. When individual users consume multiple licenses, it is possible for the available license pool to be depleted, therefore denying access to other named users.

OPTIONS file

The OPTIONS file contains the list of Named users of SimDesigner. Your administrator maintains the OPTIONS file that lists the Named user login ids. This way, you control who is a Named user and may change who is a Named user at any time. You do this by editing the file and restarting the license server using the FlexLM lmtools utility. No contact with MSC Software is needed to change the list of Named users. To keep the maintenance of the Named user file to a minimum, SimDesigner 2006 r1 only adds Named user security to the primary CA_ACCESS feature.

Named user licensing requires that the path to the OPTIONS file be given on the DAEMON line. Please refer to FlexLM regarding various ways of creating an option file. Some examples are listed below:

```
# ----- Start of License File -----  
#  
SERVER blade 80fb2476 1700  
DAEMON MSC /your_path/msc OPTIONS=/your_named_user_options file  
FEATURE CA_Access MSC 2006.1205 05-dec-2006 1 7D9386A5EBECDAFE52B2 \  
    USER_BASED ISSUED=05-dec-2005 ck=63 \  
    SN=1235186-ca26a539e922fc6ca633
```

The CA_ACCESS feature provides access to the entire set of SimDesigner workbenches and all workbenches are included in the base package. Some examples of an OPTIONS file for SimDesigner are shown below.

Example 1:

```
Include CA_ACCESS USER user1  
Include CA_ACCESS USER user2
```

Example 2:

```
GROUP simdusers user1, user2, user3, ...  
INCLUDE CA_ACCESS GROUP simdusers
```

Nodelocked

Allows use of SimDesigner Enterprise only on a specifically named machine.

This is an example of a nodelocked license file:

```
SERVER hostname hostid 1700  
DAEMON MSC /your_path/msc  
FEATURE V5i_Access MSC 2004.0531 29-apr-2004 8 4CFEF76D59E040FC1343 \  
HOSTID=23456789 asset_info="10081+10084 AP209 Gateway (GWS)" \  
ISSUED=29-apr-2003 ck=54 SN=1324476-7b13e038600a2cfcb952  
FEATURE CA_Gen_NASTRAN MSC 2004.0531 29-apr-2004 1 \  
0CCEA79DA1987474CE48 HOSTID=23456789 \  
asset_info="10081+10054+1003 MSC.Nastran Generative (GPN)" \  
ISSUED=29-apr-2003 ck=48 SN=985526-7cfae6677b9688d67940
```

Concurrent

Allows multiple uses of SimDesigner Enterprise according to the number of licenses purchased.

This is an example of a concurrent license file:

```
SERVER hostname hostid 1700  
DAEMON MSC /your_path/msc  
FEATURE CA_Access MSC 2004.0531 29-apr-2004 16 CC3E474D769449F91144 \  
asset_info="10081+10084 AP209 Gateway (GWS)" \  
ISSUED=29-apr-2003 ck=96 SN=1324476-57778154941b2cfc1719  
FEATURE CA_Gen_NASTRAN MSC 2004.0531 29-apr-2004 2 \  
9C6EA7FD88D85842DEFB asset_info="10081+10054+1003 MSC.Nastran \  
Generative (GPN)" ISSUED=29-apr-2003 ck=167 \  
SN=985526-5a231d9776d588d6df96
```

All licensing models require a FLEXlm server. See [Install a FLEXlm server](#) (page. 36).

Product Licensing with FLEXlm on UNIX

- Obtain licenses
- Display the FLEXlm hostID
- Install SimDesigner Enterprise licenses
- Install a FLEXlm server
- Unload FLEXlm server and utilities
- Update the SimDesigner Enterprise Configuration File
- FLEXlm licensing models and examples

SimDesigner Enterprise uses FLEXlm to validate usage of it's various component features - this section outlines FLEXlm licensing-related procedures that may be necessary to complete the installation of SimDesigner Enterprise.

As part of the installation, the product licenses that you obtain from MSC.Software Corporation are placed in a file called the License File. This file is located either on a FLEXlm License Server or locally.

When SimDesigner Enterprise starts up, it looks in a configuration file to find out where to obtain it's licensing information - the configuration file will point to one or more FLEXlm Server addresses and/or a physical license file location.

SimDesigner Enterprise will then make a request to FLEXlm to validate usage for the particular machine it is running on.

- | |
|---|
| <p>Note:</p> <ul style="list-style-type: none">• A FLEXlm Server is required in all cases.• FLEXlm version 10.8.0 or later is required. |
|---|

D.1 Obtain licenses

Contact your MSC.Software representative to obtain SimDesigner Enterprise licenses. The license will be provided in the form of a license.dat file. The FLEXlm license file contains information used to validate usage of the software and may vary according to the licensing model used (see [FLEXlm licensing models and examples](#) (page. 50)).

D.2 Display the FLEXlm hostID

First, unload the FLEXlm files as outlined in [Unload FLEXlm server and utilities](#) (page. 48) then run the following:

```
<installation_dir>lmutil hostid
```

D.3 Install SimDesigner Enterprise licenses

Installing the SimDesigner Enterprise licenses is simply a case of adding them to a `license.dat` file and pointing to it in the SimDesigner Enterprise configuration file as described in [Update the SimDesigner Enterprise Configuration File](#) (page. 49).

Note: Although SimDesigner Enterprise looks in the configuration file for the location of a FLEXlm license file, if the `MSC_LICENSE_FILE` system environment variable is defined it will override the configuration file and possibly prevent the product starting up - if this is the case, you will need to update the variable to point to the correct license.

Edit the `license.dat` file

The `license.dat` file may be on the FLEXlm server or located on your machine, either way you must have a FLEXlm server installed (see [Install a FLEXlm server](#) (page. 47)).

Edit the `license.dat` file and add the SimDesigner Enterprise licenses. You can use `LMTOOLS` to find out the location of the `license.dat` file on a FLEXlm server (see [Unload FLEXlm server and utilities](#) (page. 48)).

You may want to save a copy of the file before updating it.

If this is a new `license.dat` file, you will need to change the `SERVER` and `DAEMON` lines in the new license file otherwise use what is already in the file and just add the `FEATURE` lines. For example:

```
SERVER hostname hostid 1700
DAEMON MSC /your_path/msc
FEATURE V5i_Access MSC 2004.0531 29-apr-2004 etc...
```

Replace license file

Rename the existing `license.dat` file to `license_old.dat`, and rename the new file to the current license file name (i.e. `license.dat`):

```
mv license.dat license_old.dat
mv license_new.dat license.dat
```

Force FLEXlm daemon to read new license file

Use the `lmreread` command to cause the `lmgrd` daemon to reset using the new license file.

```
<install_dir>/lmutil lmreread -c <path>/license.dat
```

You should now be able to run SimDesigner Enterprise products using the new licenses. If for some reason this fails, kill and restart the daemons as follows.

```
<install_dir>/lmgrd -x lmdown -c <path>/license.dat  
<install_dir>/lmgrd -c <path>/license.dat
```

Point SimDesigner Enterprise to the license file

Update the configuration file as described in [Update the SimDesigner Enterprise Configuration File](#) (page. 49). Note that although SimDesigner Enterprise looks in the configuration file for the location of a FLEXlm license file, if the MSC_LICENSE_FILE system environment variable is defined it will override the configuration file and possibly prevent the product starting up - if this is the case, you will need to update the variable to point to the correct license.

D.4 Install a FLEXlm server

First, unload the FLEXlm files as outlined in [Unload FLEXlm server and utilities](#) (page. 48) then run the following to start the server:

```
<install_dir>/lmgrd -c <path>/license.dat
```

Select the license.dat file supplied with SimDesigner Enterprise - see [Install SimDesigner Enterprise licenses](#) (page. 45).

You may need to ensure that the FLEXlm server is started automatically.

D.5 Unload FLEXlm server and utilities

In the flexlm directory on the installation disk, locate the file appropriate for your platform and unzip then untar it. You should see the following files:

- LMGRD - the FLEXlm server
- MSC - the FLEXlm vendor daemon
- LMUTIL - the FLEXlm administration utility

D.6 Update the SimDesigner Enterprise Configuration File

The SimDesigner Enterprise configuration file contains, amongst other things, the location of the license file - if you didn't enter the license information during the install, or need to modify it later, you can manually edit the file:

```
<install_dir>/v5ienv/msc.v5r13.b13.txt
```

Edit the line:

```
MSC_LICENSE_FILE=port@hostname;msc/flexlm/license.dat
```

You may enter either one or more FLEXlm server hostnames separated by a semicolon (for example 1700@hostname) or a license file location (such as c:\msc\flexlm\license.dat) or both. If you specify both, specify the hostname(s) first.

Important: You must specify any server host names before the license.dat file(s).

D.7 FLEXlm licensing models and examples

SimDesigner Enterprise uses one of the following FLEXlm licensing models:

Named User licensing

The license provided by MSC Software for SimDesigner 2006 r1 authorizes a maximum number of users the ability to run SimDesigner. Your SimDesigner administrator manages the list of users that can run the software. Any Named user may log in and use SimDesigner on any machine on the network on which the license server is reachable. Each named user is permitted to run multiple sessions of SimDesigner only on the same machine with each session using an additional license. So, if you have three sessions of SimDesigner running on your computer, you will use three licenses from the Named User License pool. When individual users consume multiple licenses, it is possible for the available license pool to be depleted, therefore denying access to other named users.

OPTIONS file

The OPTIONS file contains the list of Named users of SimDesigner. Your administrator maintains the OPTIONS file that lists the Named user login ids. This way, you control who is a Named user and may change who is a Named user at any time. You do this by editing the file and restarting the license server using the FlexLM lmtools utility. No contact with MSC Software is needed to change the list of Named users. To keep the maintenance of the Named user file to a minimum, SimDesigner 2006 r1 only adds Named user security to the primary CA_ACCESS feature.

Named user licensing requires that the path to the OPTIONS file be given on the DAEMON line. Please refer to flexlm regarding various ways of creating an option file. Some examples are listed below:

```
# ----- Start of License File -----  
#  
SERVER blade 80fb2476 1700  
DAEMON MSC /your_path/msc OPTIONS=/your_named_user_options_file  
FEATURE CA_Access MSC 2006.1205 05-dec-2006 1 7D9386A5EBECDAFE52B2 \  
    USER_BASED ISSUED=05-dec-2005 ck=63 \  
    SN=1235186-ca26a539e922fc6ca633
```

The CA_ACCESS feature provides access to the entire set of SimDesigner workbenches and all workbenches are included in the base package. Some examples of an OPTIONS file for SimDesigner are shown below.

Example 1:

```
Include CA_ACCESS USER user1  
Include CA_ACCESS USER user2
```

Example 2:

```
GROUP simdusers user1, user2, user3, ...  
INCLUDE CA_ACCESS GROUP simdusers
```

Nodelocked

Allows use of SimDesigner Enterprise only on a specifically named machine.

This is an example of a nodelocked license file:

```
SERVER hostname hostid 1700  
DAEMON MSC /your_path/msc  
FEATURE CA_Access MSC 2004.0531 29-apr-2004 8 4CFEF76D59E040FC1343 \  
HOSTID=23456789 asset_info="10081+10084 AP209 Gateway (GWS)" \  
ISSUED=29-apr-2003 ck=54 SN=1324476-7b13e038600a2cfcb952  
FEATURE CA_Gen_NASTRAN MSC 2004.0531 29-apr-2004 1 \  
0CCEA79DA1987474CE48 HOSTID=23456789 \  
asset_info="10081+10054+1003 MSC.Nastran Generative (GPN)" \  
ISSUED=29-apr-2003 ck=48 SN=985526-7cfae6677b9688d67940
```

Concurrent

Allows multiple uses of SimDesigner Enterprise according to the number of licenses purchased.

This is an example of a concurrent license file:

```
SERVER hostname hostid 1700  
DAEMON MSC /your_path/msc  
FEATURE CA_Access MSC 2004.0531 29-apr-2004 16 CC3E474D769449F91144 \  
asset_info="10081+10084 AP209 Gateway (GWS)" \  
ISSUED=29-apr-2003 ck=96 SN=1324476-57778154941b2cfc1719  
FEATURE CA_Gen_NASTRAN MSC 2004.0531 29-apr-2004 2 \  
9C6EA7FD88D85842DEFB asset_info="10081+10054+1003 MSC.Nastran \  
Generative (GPN)" ISSUED=29-apr-2003 ck=167 \  
SN=985526-5a231d9776d588d6df96
```

All licensing models require a FLEXlm server. See [Install a FLEXlm server](#) (page. 47).

APPENDIX

E

TCP/IP Setup

▶ TCP/IP Setup

E.1 TCP/IP Setup

For the SimDesigner Enterprise CATIA Edition installation to run properly you must have the Internet Protocol (TCP/IP) installed. To check that TCP/IP has been installed, please perform the following steps:

1. Open the Control Panel.
2. Select the Network and Dialup Connections.
3. If a selection for Local Area Connection is shown right click on that selection and choose properties. If a Local Area Connection has not been established skip to step number 5 to create this connection. In the Local Area Connection Properties dialogue box that appears you should be able to determine if Internet Protocol (TCP/IP) is installed.
4. If TCP/IP is not showing under “Components checked are used by this connection:”, click on Install choose Protocol and click on Add to choose TCP/IP and click OK to install the protocol.
5. To install Local Area Connection, open Control Panel - Network - Dial-Up Connections then click on the Make New Connection and follow the instructions given by the Network Connection Wizard. Remember to select a TCP/IP connection type for this new connection.

SimDesigner Enterprise CATIA Edition also requires an ethernet card, even if the workstation is not connected to a network, to create a hostID for licensing.

APPENDIX

F

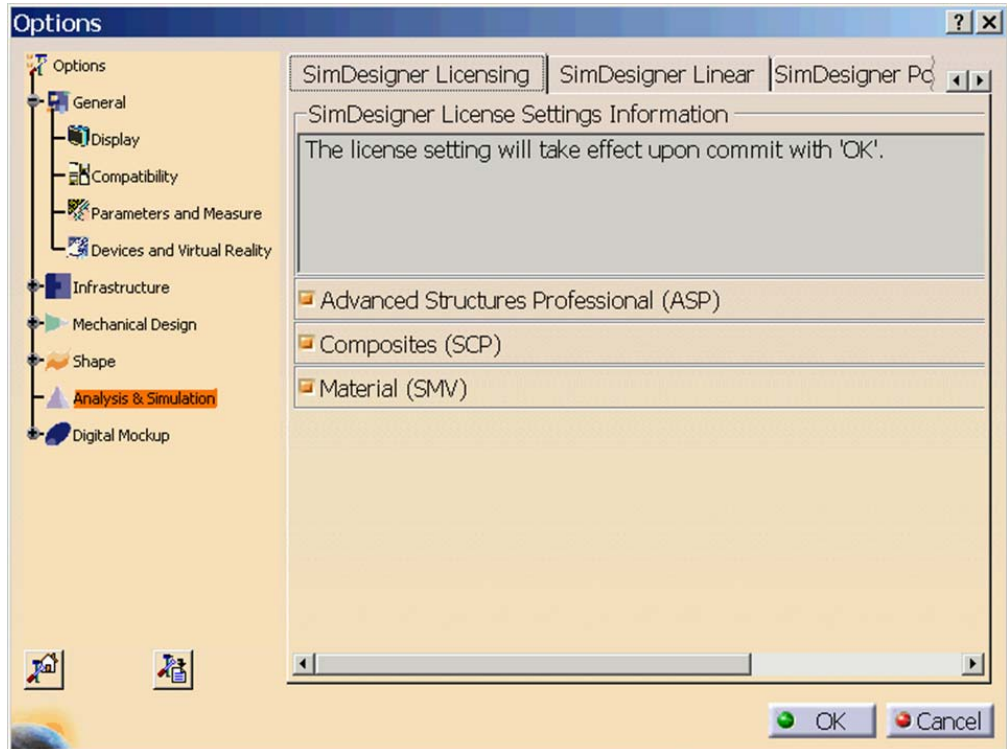
SimDesigner Options

- SimDesigner Licensing Options
- SimDesigner Linear Options
- SimDesigner Post Processing Options
- SimDesigner Units Options

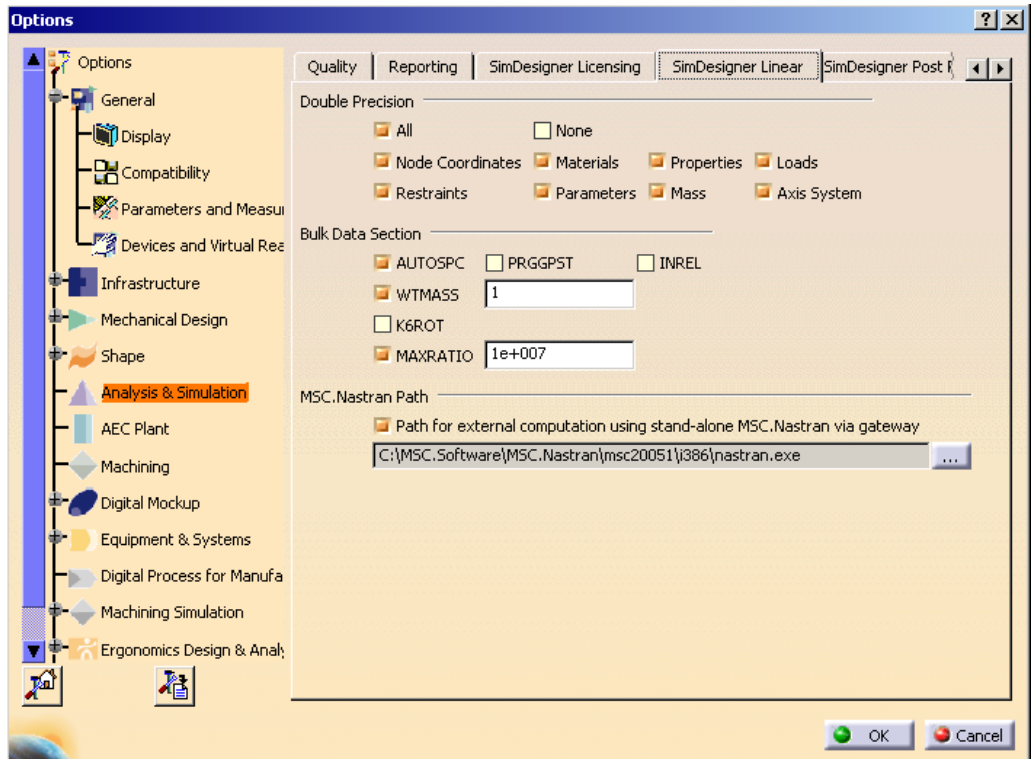
6.1 SimDesigner Options from Tools / Options

1. Certain SimDesigner Enterprise CATIA Edition options are available by selecting **Tools / Options / Analysis & Simulation** from the Menu bar:

SimDesigner Licensing Options

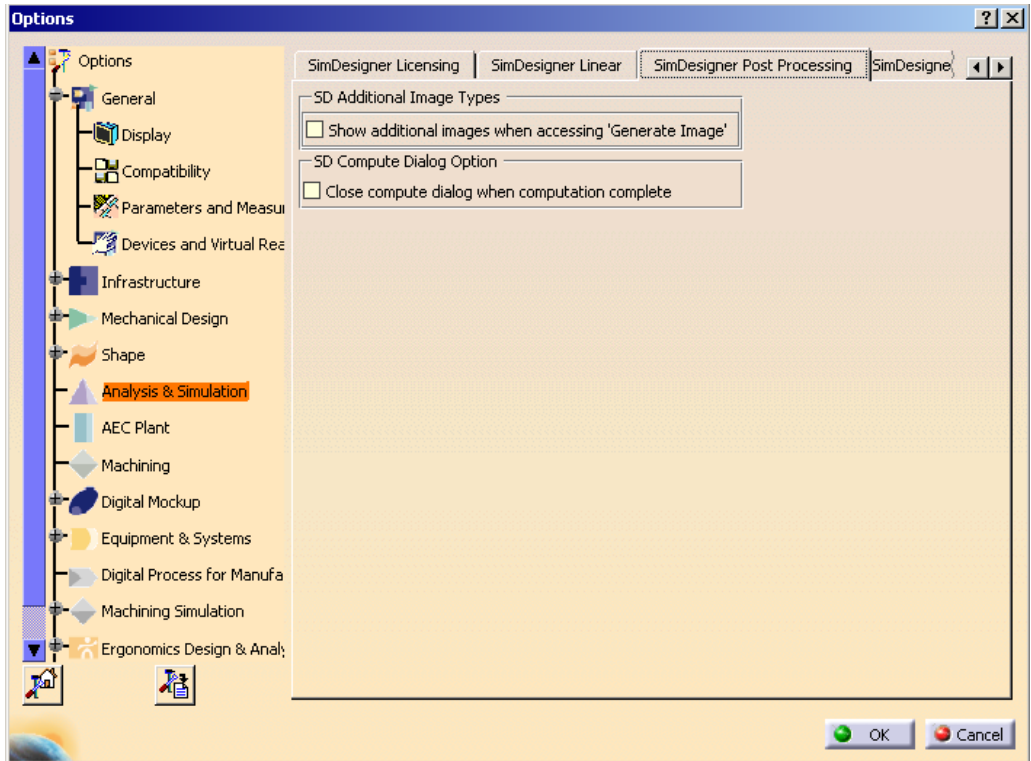


SimDesigner Linear Options



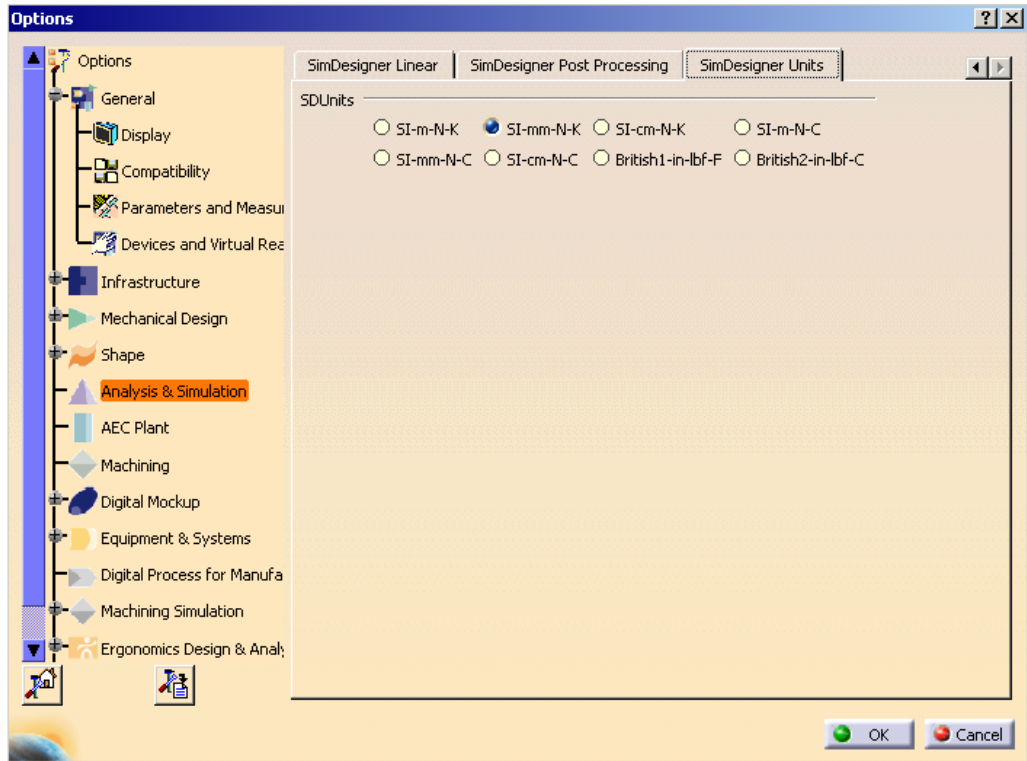
These options are the default settings that will be used when creating any SimDesigner Linear case (Static, Modal, Buckling and Dynamic) and when exporting from SimDesigner Gateway for MSC.Nastran.

SimDesigner Post Processing Options



The SimDesigner Advanced Image Types.

SimDesigner Units Options



Setting the units here ensures that consistent units are used for both import and export operations.