ADINA System 8.5

Installation Notes

for

HP HP-UX

IBM AIX

Linux

SGI IRIX

Sun Solaris

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System Requirements

The following table describes the system requirements for ADINA System 8.5.

Category	Minimum Requirement
Operating System	HP HP-UX 11 (PA-RISC 2) HP HP-UX 11i v1.6 (Itanium) IBM AIX 5.1 SGI R8000/R10000 IRIX 6.5 SUN Solaris 8 Linux kernel 2.4 (x86, x86_64, Opteron) Linux kernel 2.6.9 (Itanium)
Hardware	About 250 MB free disk space CD-ROM drive
Software	FORTRAN compiler (optional) to customize the user-supplied routines.
Memory	128 MB (more recommended)

1. Installation and Setup

1.1 Mounting the CD-ROM Drive

Insert the ADINA System 8.5 CD in the CD-ROM drive and mount the drive if it is not automatically mounted. The `mount` commands described in the table below are provided as a reference. Please consult your system administrator if you have problem mounting the CD-ROM drive.

Operating System	`mount` Command[a]
HP HP-UX	`/etc/mount -F cdfs \` `-o ro,cdcase /dev/dsk/c?t#d0`[b] `/cdrom`
IBM AIX	`mount -rv cdrfs /dev/cd0 /cdrom`
SGI IRIX	`mount -rt iso9660 /dev/scsi/sc0d#l0`[c] `/cdrom`
SUN Solaris	`The CD-ROM is already mounted at` `/cdrom/cdrom0`
Linux	`mount /mnt/cdrom (or /media/cdrom)`

a. In the table above, the # must be replaced with the SCSI ID of the CD drive.

b. The question mark (?) should be replaced with the Interface Card Instance Number and the pound sign (#) should be replaced with the devices' SCSI ID number.

c. The SGI device name uses the lowercase alpha character "L", not the numeric "1".

1.2 Selecting the ADINA Home Directory

Select the directory to install the ADINA System. This directory will be referred to as the "ADINA home directory" or <ADINAHOME>. Create the directory if it does not exist. Change the working directory to the ADINA home directory.

For example, if the ADINA home directory is `/usr/adina85`, the commands will be:

```
umask 022
mkdir /usr/adina85
cd /usr/adina85
```

1.3 Starting the setup Script

Enter the command to start the setup script.

```
<CD-ROM mount directory>/setup
```

During the setup, you will be asked for the type of ADINA license you have. The procedures for setting up the node-locked license and floating license are described in Sections 1.4 and 1.5 respectively.

1.3.1   **-t** option

In normal cases, the setup script will automatically detect the type and operating system of the machine you are installing the ADINA System. In some cases, where you may want to specify the installation of a particular version, or when the setup script fails to detect the system correctly, you can use the **-t** option to indicate the version to install. To see the list of target versions that can be specified, use the **-h** option.

1.3.2   Online Manuals

The ADINA manuals are available as online documents. You need to select the option to install the online documents in order to access them. To view the online documents, you also need to have Acrobat Reader 4.0 or a later version. If you do not have Acrobat Reader on your system, you will need to download and install Acrobat Reader from the Adobe web site.

Note that TRANSOR for I-DEAS Users Guide is provided in HTML files.

1.3.3   TRANSOR Interface Program

If you have selected to install TRANSOR for I-DEAS, please refer to the following Section 1.6 for additional setup information.

1.3.4   User Environment

Once you have successfully installed the ADINA System, including the passwords, please refer to Section 1.7 on the proper user's command search path and the scripts to run the ADINA System.

1.4   Node-Locked License Setup

During setup (Section 1.3), you will be prompted whether you want to install the password. The automatic node-locked license installation can read either an old license file (**license.dat**) or the password file (renamed as **adina.txt**) that you receive from ADINA R & D.

To obtain the password file, please run the **adhostid** command to obtain the system ID of your machine and send the system ID to ADINA R & D (password@adina.com). The password file will be sent to you via email (recommended) or fax.

The easiest way to install the password is to rename the password file (received via email) as **adina.txt** and placing it in the ADINA home directory for automatic installation. If you did not install the password during setup, you can use the **adpass** script to install the password at any time.

```
cd <ADINAHOME>
./adpass
```

If the password file is for several machines, or if you received the ADINA password file via fax, you will need to use the Install program to install the password manually. If the password file is for several machines, you need to run Install on the computer listed as the first host in the password file.

1.5   Floating License Server Setup

For the machine to be used as the ADINA license server,

1. Please run the **echoid** command (in <ADINAHOME>/slm) to obtain Lock Code 1 for the server and send it to ADINA R & D (password@adina.com).

2. For **University users**, please also provide the IP subnets where ADINA will be used, e.g. 152.12.*.*. You may specify up to 6 subnets.

3. Once you receive the floating password file **lservrc** (lowercase with no extension), put the file in the <ADINAHOME>/slm directory and start the floating license manager using the command **lserv**.

```
cd <ADINAHOME>/slm
./echoid
  [send Lock Code 1 to ADINA R & D]
  [put the password file lservrc in directory]
./lserv
```

Please refer to the README file in <ADINAHOME>/slm for additional information.

1.6   Setup for TRANSOR for I-DEAS

Note: • TRANSOR should be installed on the machine that runs I-DEAS.

• If you are using I-DEAS 11 or 12, please use the appropriate substitution for nxi5 in the instructions below.

Logon as the I-DEAS administration account (e.g., ideasadm), and then change the working directory to the TRANSOR directory under the ADINA home directory and run the TRANSOR setup script. For example,

```
su   ideasadm
cd   <ADINAHOME>/transi8.5/nxi5
./setup
```

During setup, you will be prompted whether you want to replace the ideas.icn and ideas.vgc files for I-DEAS. These are the customized icon files which add the TRANSOR icons to the standard I-DEAS icon panel.

It is **recommended** that you do not replace the existing icon files for I-DEAS as the icon files are used for all tasks instead of just Simulation. To start TRANSOR for I-DEAS, the recommended mode is to use the Application Launcher. Please refer to the TRANSOR for I-DEAS Users Guide (HTML files).

Note that if you select to replace the icon files, the original `ideas.icn` and `ideas.vgc` files will first be backed up as `ideas_org.icn` and `ideas_org.vgc` if these files do not exist.

1.7   Accessing the ADINA System

The shell scripts to access the ADINA System are all located in the **tools** subdirectory. Therefore, you should add the directory **<ADINAHOME>/tools** to the user's command search path for the user to properly access the ADINA system.

The script to start ADINA-AUI is `aui8.5`. You can access the components of the ADINA System from ADINA-AUI. The individual components of the ADINA System can also be accessed using the following scripts:

Component / Feature	Script
ADINA-AUI	`aui8.5`
ADINA, ADINA-T, ADINA-F, ADINA-FSI (Fluid-structure interaction) and ADINA-TMC (Thermo-mechanical coupling)	`adina8.5`
User Interface for Solution Programs	`ai8.5`
Verification problem checking	`apdiff`

Each of these scripts supports the `-help` option, which provides a description of the available options for the script.

1.8   Verification Problems

The `samples` subdirectory contains the set of verification problems (in batch commands) to help you verify your installation as well as to build your own models. It contains the following subdirectories and the `ref.pl2` file.

Directory/File	Contents
a	ADINA problems (linear analysis)
b	ADINA problems (nonlinear analysis)
f	ADINA-F and ADINA-FSI problems
t	ADINA-T and ADINA-TMC problems
primer	ADINA-AUI primer problems
iges	ADINA-AUI – IGES interface examples
ti	TRANSOR for I-DEAS examples
ref.pl2	Reference result file

2. User-Supplied Routines

The user-supplied routines for ADINA, ADINA-T, ADINA-F are used to incorporate user-supplied materials and loadings (ADINA only) into the ADINA System. These user-supplied routines are compiled and linked into a shared library which is then loaded automatically in the corresponding ADINA/-T/-F/-FSI/-TMC executable when the program starts.

2.1 Building the Shared Library

Building the ADINA/-T/-F /-FSI/-TMC shared library is the same as building any other FORTRAN programs. The compiler and linker options are all set up properly in the `Makefiles` located in the `adina8.5, adinat8.5, adinaf8.5, adfsi8.5 and adtmc8.5` subdirectories, and you can simply type `make` to rebuild the corresponding shared library. Please refer to the ADINA/-T/-F Theory and Modeling Guide for instructions to modify the user-supplied routines.

2.2   Location of the Shared Library (option `-lib`)
Note: The ADINA/-T/-F/-FSI/-TMC program will not start if the corresponding shared library is not found.

The default location of the ADINA/-T/-F/-FSI/-TMC shared library is in the same directory as the respective ADINA/-T/-F /-FSI/-TMC executable (i.e., in the `adina8.5, adinat8.5, adinaf8.5, adfsi8.5, adtmc8.5` subdirectories respectively).

The script `adina8.5,` supports the `-lib` option which can be used to specify the directory that contains the corresponding ADINA/-T/-F/-FSI/-TMC shared library. This `-lib` option is very useful if you have a different number of user-supplied materials/loadings, as you can keep the corresponding shared libraries in different directories and use the `-lib` option to select the one you want to use.

3. File Naming Conventions

The ADINA System uses certain filename extension conventions, which are illustrated in the table below (the problem name is *femodel*).

Filename	Description
femodel.in	ADINA-IN input file
femodel.ilg	ADINA-IN log file
femodel.dat	ADINA, ADINA-T or ADINA-F input file
femodel.plo	ADINA-PLOT input file
femodel.out	Solution program output file
femodel.log	Additional output files for ADINA-FSI and ADINA-TMC analyses
femodel.mtx	ADINA stiffness and mass matrix file.
femodel.oux	ADINA extended output file
femodel.res	ADINA, ADINA-T or ADINA-F restart file
femodel.por	ADINA, ADINA-T or ADINA-F porthole file
femodel.idb	ADINA-IN database file
femodel.pdb	ADINA-PLOT database file
femodel.pl2	ADINA-PLOT check list file
femodel.mod	ADINA mode shape file
femodel.tem	ADINA temperature file
femodel.tgr	ADINA temperature gradient file