

MD R2 Adams

Installation and Operations Guide

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MDAM*R2*Z*Z*Z*DC-OPS

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Preface

- [Welcome to MD R2 Adams](#)
- [About MSC.Software](#)
- [Technical Support](#)
- [Internet Resources](#)

Welcome to MD R2 Adams

Thank you for purchasing MD R2 Adams products. The MD R2 Adams® is multidiscipline motion simulation software for analyzing the complex behavior of mechanical assemblies. With it, you can test virtual prototypes and optimize designs for performance, safety, and comfort, without having to build and test numerous physical prototypes.

The major multidiscipline aspects of MD Adams include the ability to transfer loads and motion information from MD Adams to MD Nastran for stress, durability, vibration and harshness analysis.

About MSC.Software

Overview

MSC.Software Corporation is the leading global provider of virtual product development (VPD) tools, including simulation software and professional services. MSC.Software helps companies make money, save time, and reduce costs associated with designing, testing, producing, and supporting manufactured products.

MSC.Software works with thousands of companies worldwide, in hundreds of industries, to develop better products faster by using information technology, software, and services to enhance and automate the product design and manufacturing process. Simulating your product performance reduces development costs, time to market, and warranty costs.

About Virtual Product Development and MD Adams

You've heard it before: manufacturing companies today face intense global competition, demanding customers, fragmented markets, increasing product complexity, compressed product cycles, price and profit pressures, strict regulatory and liability environments, systems integration and supply chain issues, skyrocketing costs of testing and physical prototyping, and on and on...

What you don't often hear, though, is a strategy for enabling your company to improve your new product development process to meet these challenges.

Whether you are delivering airplanes, automobiles, ships, biomedical devices, golf clubs or children's toys to your customers, MSC.Software's goal is to help you improve your new product development process, allowing you to be significantly better at your concept development, design, testing, and production activities through the application of VPD.

VPD is an environment that uses an integrated combination of both simulation software technology and traditional techniques to design, test, manufacture, and support products. The result is that cost-effective designs that meet all performance, safety, durability, and reliability requirements can be brought to market in less time and for less cost.

MD Adams, as part of VPD, is focused on enhancing your ability to make better product development decisions, explore innovative design alternatives, and consistently get the product right. It is the world's most widely used mechanical system simulation software. It enables you to produce virtual prototypes, realistically simulating the full-motion behavior of complex mechanical systems on your computers and quickly analyzing multiple design variations until an optimal design is achieved. This reduces the number of costly physical prototypes, improves design quality, and dramatically reduces product development time.

Technical Support

For help with installing or using an MSC.Software product, contact your local technical support services. Our technical support provides the following services:

- Resolution of installation problems
- Advice on specific analysis capabilities
- Advice on modeling techniques
- Resolution of specific analysis problems (e.g., fatal messages)
- Verification of code error.

If you have concerns about an analysis, we suggest that you contact us at an early stage.

You can reach technical support services on the web, by telephone, or e-mail.

Web

Go to the MSC.Software website at **www.mscsoftware.com**, and click on **Support**. Here, you can find a wide variety of support resources including application examples, technical application notes, available training courses, and documentation updates at the MSC.Software Training, Technical Support, and Documentation web page.

In addition, we provide several excellent sources of online information:

- **Knowledge Base** - Find solutions to problems in this repository of troubleshooting tips, examples, and frequently asked questions. To access the knowledge base, go to:
<http://support.mscsoftware.com/kb/>
- **VPD Community** - The VPD community is where to go when you are looking for peer support, as well as technical expertise. Many of our consultants, developers, and technical support staff monitor the forums. To sign up for the forums, go to:

<http://forums.mscsoftware.com>

Then:

- To view the Adams discussions, select Adams.
- To view product alerts and company news and events, select MSC News.

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Telephone: (7) (095) 236 6177

Fax: (7) (095) 236 9762

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Surrey, United Kingdom

Telephone: (44) (1276) 60 19 00

Fax: (44) (1276) 69 11 11

Tokyo, Japan

Telephone: (03)-6911-1200

Fax: (03)-6911-1201

Paris, France

Telephone: (03)-6911-1200

(03)-6911-1201

Gouda, The Netherlands

Telephone: (31) (18) 2543700

Fax: (31) (18) 2543707

Madrid, Spain

Telephone: (34) (91) 5560919

Fax: (34) (91) 5567280

Email

Send a detailed description of the problem to the email address below. You should receive an acknowledgement that your message was received, followed by an email from one of our Technical Support Engineers.

Training

The MSC Institute of Technology is the world's largest global supplier of CAD/CAM/CAE/PDM training products and services for the product design, analysis and manufacturing market. We offer over 100 courses through a global network of education centers. The Institute is uniquely positioned to optimize your investment in design and simulation software tools.

Our industry experienced expert staff is available to customize our course offerings to meet your unique training requirements. For the most effective training, The Institute also offers many of our courses at our customer's facilities.

The MSC Institute of Technology is located at:

2 MacArthur Place
Santa Ana, CA 92707
Phone: (800) 732-7211
Fax: (714) 784-4028

The Institute maintains state-of-the-art classroom facilities and individual computer graphics laboratories at training centers throughout the world. All of our courses emphasize hands-on computer laboratory work to facility skills development.

We specialize in customized training based on our evaluation of your design and simulation processes, which yields courses that are geared to your business.

In addition to traditional instructor-led classes, we also offer video and DVD courses, interactive multimedia training, web-based training, and a specialized instructor's program.

Course Information and Registration

For detailed course descriptions, schedule information, and registration call the Training Specialist at (800) 732-7211 or visit www.mscsoftware.com.

Internet Resources

MSC.Software (www.mscsoftware.com)

MSC.Software corporate site with information on the latest events, products and services for the CAD/CAE/CAM marketplace.

Simulation Center (simulate.engineering-e.com)

Simulate Online. The Simulation Center provides all your simulation, FEA, and other engineering tools over the Internet.

Engineering-e.com (www.engineering-e.com)

Engineering-e.com is the first virtual marketplace where clients can find engineering expertise, and engineers can find the goods and services they need to do their job

1 Getting Started

Overview

This chapter describes what you need to know and have available to install the MD R2 Adams[®] suite of software. It contains the sections:

- [Welcome to MD Adams Products, 3](#)
- [What You Need, 4](#)
- [About the MD Adams CDs, 5](#)
- [Types of Installations, 6](#)
- [Product Categories, 7](#)
- [Getting Help, 8](#)

Welcome to MD Adams Products

MD Adams products provide you with tools to model, simulate, and optimize your mechanical systems. This guide explains how to install and license the MD Adams products, and gives you troubleshooting tips if you have any problems during an installation.

What You Need

Before you start installing MD Adams products, there are a few things that you should be sure to do or have available:

- Check to ensure that your system contains the required hardware and software. See [Hardware and Software Specifications, 13](#). The hardware and software specifications help you determine the requirements for your platform so that you can install, license, and run the MD Adams products. They also list the memory and disk space requirements. Please review these specifications before you select the system on which you want to install the MD Adams software.
- Have your password certificate (license file) available so that you can get passwords and other information from it. For more on your password certificate, see [About Your Password Certificate](#) in the next section.
- Obtain any general-user software patches at the MD Adams Web site at <http://support.mscsoftware.com>. Once you are at our Web site, select Product Updates.

About Your Password Certificate

To run the MD Adams products, you need passwords and licensing information that authorize their use. The passwords are listed on your password certificate. The password certificate is sent to you by e-mail.

When you receive the password certificate, copy it to a file as explained in the e-mail message. You can then use the file as input to the installation program.

The password certificate contains information necessary for installation. The installation information appears on the first page of the certificate as follows:

- License contract information, including your request number, company name, license agreement number, and platform.
- MD Adams license server IDs and a password (FEATURE) for each product.

If you have an existing MSC license, you may not receive a new password. However, you will still need to know the name of the license server and the port number used.

About the MD Adams CDs

All of the files required to run the MD Adams products are on the CDs that come with MD Adams. The **Products CDs** contain the complete set of MD Adams products. Each CD contains a different set of platforms. The CD you use depends on the type of platform on which you are installing MD Adams products.

Types of Installations

The way in which you install and license the MD Adams products depends on your installation configuration.

Any given installation configuration is composed of the following three components:

- **File server** - Machine that contains the MD Adams files. It may be shared with other computers on a network.
- **License Server** - Machine that runs the MD Adams license server. The licensing of MD Adams products depends on the type of license you purchased.
- **Client** - Machine that runs the MD Adams products.

You can manage these three components on one machine, three different machines, or any combination of machines. You can also install MD Adams products on a heterogeneous network where you install MD Adams products for different platforms all on one network. For information on the various UNIX configurations, see [UNIX Installation Roadmaps, 87](#).

Product Categories

The product(s) or feature package you are licensed to use for MD Adams appear on the first page of your password certificate under the section Feature/Password. When you install the products, select the packages that you are licensed for.

Getting Help

If you have questions or problems installing or testing your MD Adams products, refer to [Troubleshooting, 81](#). If the problems persist, go to the Customer Services Web pages at <http://support.mscsoftware.com/>. If the problems still persist, call MSC.Software Technical Support at the numbers listed below. Before contacting Technical Support, please have the following information available:

- Hardware type (be as specific as possible)
- Version of the operating system, including build number and service packs, if applicable
- Version of compilers
- Hardcopy of all error messages (you can send it by fax or through e-mail)

If possible, generate a troubleshooting report as explained in [Generating Problem Reports, 83](#).

United States

(800) 732-7284

International

Contact your local distributor.

2 Hardware and Software Configurations

Overview

This chapter provides the hardware and software configurations for MD Adams.

Note: For the latest version of the hardware and software specifications, see the MD Adams Support site at <http://support.mscsoftware.com>

This chapter includes the following sections:

- [Product and Platform Support, 11](#)
- [Hardware and Software Specifications, 13](#)
- [System Requirements, 14](#)
- [Graphics Requirements, 16](#)
- [Licensing Requirements, 17](#)
- [Dropped Platforms and Transition Plans, 18](#)

-
- Note:**
1. Intel IA-32 and x64 processors: Pentium 4, Pentium D, Core 2 Duo, Xeon and AMD compatibles.
 2. QA performed on 6.5.27, but MD R2 Adams is expected to work on levels above this.
 3. Adams/Controls is supported on these platforms. However, partner product support varies. Please also see the Support Versions of Integration Products table in the Release Guide and Knowledge Base Article 12445.
-

Hardware and Software Specifications

Table 1 outlines the hardware and software specifications for MD Adams.

Table 1 Hardware and Software Specifications

Hardware Vendor	Models and Processors	Operating System	Fortran	C/C++
HP PA-RISC HP-UX	PA-8k based B-class, C-class, J-class, and rp-class servers	HP-UX 11i	f90 3.0	c89 11.11.14 aCC 03.65
IBM POWER AIX	POWER3, POWER4, POWER5, POWER5+	AIX 5.3 maintenance level 5	XLF 9.1	Visual Age C/C++ 8.0
Intel & AMD x86 Linux	Intel Pentium 4, Pentium D, Core 2 Duo, Xeon, and compatibles	Red Hat Enterprise Linux 4 2.6.9-34	g77 3.4.5-2-24 Intel Fortran 9.1	g++ 3.4.5-2
Intel & AMD x86-64 Linux (32-bit)	Intel Pentium 4, Pentium D, Core 2 Duo, Xeon, and compatibles	Red Hat Enterprise Linux 4 2.6.9-22	g77 3.4.4-2 Intel Fortran 9.1	g++ 3.4.4-2
Intel & AMD x86 Windows	Intel Pentium 4, Pentium D, Core 2 Duo, Xeon, and compatibles	Windows 2000 and Windows XP Professional	Intel Fortran 9.1	Visual Studio C++ .NET 2003, Visual Studio C++ .NET 2005
Intel & AMD x86-64 Windows (WOW64)	Intel Pentium 4, Pentium D, Core 2 Duo, Xeon, and compatibles	Windows 2003 Server x64 and Windows XP Professional x64	Intel Fortran 9.1 for x86 (32-bit)	Visual Studio C++ .NET 2003, Visual Studio C++ .NET 2005 for x86 (32-bit)
SGI MIPS IRIX	R14K, R15K, R16K	IRIX 6.5.27	f77 7.4.2	C/C++ 7.4.2
Sun UltraSPARC Solaris	UltraSPARC III-based systems	Solaris 8, 9, 10	Sun Studio 8, 9, 10	Sun Studio 8, 9, 10

System Requirements

Table 2 shows the system requirements for MD Adams

Table 2 System Requirements

Platform	Operating System	System Patches	Disk Space	Memory and Swap Space
HP PA-RISC HP-UX	HP-UX 11i	GOLDBASE11i Gold base Patches for HP-UX 11i v1, Dec 2003 BUNDLE11i B.11.11.0306.1 Required Patch Bundle for HP-UX 11i June 2003 PHCO_31923 libc cumulative header file patch PHKL_30100 Psets, vPar, Xserver, T600 HPMC KRNG, early LPMC PHCO_95167 Fortran90 patch PHSS_28303 LIBCL patch PHSS_28880 HP ac++ -AA runtime libraries (aCC A.03.50) PHSS_29371 X/Motif Runtime Periodic Patch PHSS_30049 ld(1) and linker to cumulative patch PHSS_30170 Xserver cumulative patch PHSS_30174 3D Common Run PHSS_30496 OpenGL 1.1 Run PHSS_30504 Xserver cumulative patch PHSS_31281 Xserver cumulative patch	1.3 Gb	512 Mb Minimum 1 Gb Recommended Tunable Kernel Parameters: maxtsiz = 256 Mb maxstsz = 256 Mb maxusers = 128 or higher Swap = 2 x RAM
IBM POWER AIX	AIX 5.3	Maintenance Level 5	1.1 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
Intel & AMD x86 Linux	Red Hat Enterprise Linux 4	Enterprise Linux Kernel revision 2.6.9-11	1.3 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
Intel & AMD x86-64 Linux (32-bit)	Red Hat Enterprise Linux 4	Enterprise Linux Kernel revision 2.6.9.22	1.3 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM

Table 2 System Requirements

Platform	Operating System	System Patches	Disk Space	Memory and Swap Space
Intel & AMD x86 Windows	Windows 2000	Windows 2000 SP4	1.3 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
Intel & AMD x86 Windows	Windows XP Professional	Windows XP Professional SP1, Windows XP Professional SP2	1.3 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
Intel & AMD x86-64 Windows (WOW64)	Windows 2003 Server x64, Windows XP Professional x64	Windows XP Professional x64 Sp1	1.3 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
SGI MIPS IRIX	IRIX 6.5.27	Support Levels above 6.5.27m are expected to work under the SGI published, "The Mandate of Application Compatibility in SGI IRIX 6.5"	1.3 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
Sun Ultra SPARC Solaris	Solaris 8	Recommended patch bundle later than 1/14/2003 Generic_108528_18 Latest revisions of patches 106950 and 10813	1.2 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
Sun Ultra SPARC Solaris	Solaris 9	Recommended patch bundle later than 8/14/2003 Generic_112233-08 Latest revisions of patches 111711	1.2 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM
Sun Ultra SPARC Solaris	Solaris 10	Latest revisions of patches: 113886, 113887, 118676, 116298, 116302, 117832, 117834, 117836 117830, 117840, 117844, 118678 117838	1.2 Gb	512 Mb Minimum 1 Gb Recommended Swap = 2 x RAM

Graphics Requirements

The following are the graphics requirements for MD Adams.

Table 3 Graphics Requirements

Platform	Operating System	System Runtime Libraries	Validated Graphics Hardware
HP PA-RISC HP-UX	HP-UX 11i	X11-R6, CDE/Motif, OpenGL 1.1	Fire GL-UX
IBM POWER AIX	AIX 5.3	X11.base.rte 5.3.0.30 OpenGL.OpenGL_X.rte.base 5.3	GXT3000, GXT4500P
Intel & AMD x86 Linux	Red Hat Enterprise Linux 4	X11, OpenGL 1.2	The Adams products have been developed in full compliance with the OpenGL 1.2specification. The products should run properly with graphics cards that adhere to the 1.2 or later OpenGL specification.
Intel & AMD x86-64 Linux (32-bit)	Red Hat Enterprise Linux 4	X11, OpenGL 1.2	The Adams products have been developed in full compliance with the OpenGL 1.2specification. The products should run properly with graphics cards that adhere to the 1.2 or later OpenGL specification.
Intel & AMD x86 Windows	Windows 2000, Windows XP Professional	OpenGL 1.2	The Adams products have been developed in full compliance with the OpenGL 1.2specification. The products should run properly with graphics cards that adhere to the 1.2 or later OpenGL specification.
Intel & AMD x86-64 Windows (32-bit)	Windows 2003 Server x64, Windows XP Professional x64	OpenGL 1.2	The Adams products have been developed in full compliance with the OpenGL 1.2specification. The products should run properly with graphics cards that adhere to the 1.2 or later OpenGL specification.
SGI MIPS IRIX	IRIX 6.5.27	X11/Motif, OpenGL	VPro Graphics systems
Sun UltraSPARC Solaris	Solaris 8 Solaris 9 Solaris 10	X11 (CDE), OpenGL 1.2 X11 (CDE), OpenGL 1.3 X11 (CDE), OpenGL 1.3	Expert 3D, XVR 1000

Licensing Requirements

Following are the licensing requirements for MD Adams.

Table 4 Licensing Requirements

Platform	Hostname Retrieval	Host ID Retrieval
HP PA-RISC HP-UX	From a shell window, enter the command: hostname	From a shell window, enter the command: uname -I then convert the number to hex.
IBMPowerPC AIX	From a shell window, enter the command: hostname	From a shell window, enter the command: uname -l
Intel & AMD x86 Linux	From a shell window, enter the command: hostname	From a shell window, enter the command: /sbin/ifconfig eth0 Return the information in the line labeled "HWaddr" and remove the colons ":".
Intel & AMD x86-64 Linux (32-bit)	From a shell window, enter the command: hostname	From a shell window, enter the command: /sbin/ifconfig eth0 Return the information in the line labeled "HWaddr" and remove the colons ":".
Intel & AMD x86 Windows	From a "Command Prompt" window, enter the command: hostname	From a "Command Prompt" window, enter the command: ipconfig /all Return the information in the line labeled "Physical Address".
Intel & AMD x86-64 Windows (WOW64)	From a "Command Prompt" window, enter the command: hostname	From a "Command Prompt" window, enter the command: ipconfig /all Return the information in the line labeled "Physical Address".
SGI MIPS IRIX	From a shell window, enter the command: hostname	From a shell window, enter the command: sysinfo -s then convert the number to hex.
Sun UltraSPARC Solaris	From a shell window, enter the command: hostname	From a shell window, enter the command: hostid

Dropped Platforms and Transition Plans

Each release we review the platforms and operating systems changes by our partners and in the industry, and address these changes in our release. We make this information available to you for hardware planning. We welcome your input on platform support. Please communicate platform support needs to your MSC Sales representative.

Table 5 Platforms that will no longer be supported

Platform:	Last Supported Release	Recommended Platform:
SGI MIPS IRIX	Adams 2007 r1	Other supported UNIX or Windows Platform
Sun Solaris 8	Adams 2007 r1	Solaris 9, 10 or other Supported UNIX or Windows Platform.

3 Installing MD Adams on UNIX

Overview

This chapter provides instructions for installing the MD Adams software. It contains the sections:

- [Preparing to Install the Adams Product, 21](#)
- [Creating the Installation Directory, 22](#)
- [Copying and Starting the MD Adams Installation Program, 23](#)
- [Installing MD Adams, 25](#)
- [Installing the Adams/Controls Thin Client, 27](#)
- [Installing the MD Adams Extension for Easy5, 28](#)
- [Duplicating and Installing MD Adams on Your Hard Disk, 30](#)
- [Installing on a Heterogeneous Network, 32](#)

After installing the MD Adams products, you need to set up the licenses to run them. See [Licensing on UNIX, 33](#) for more information.

Note: For general steps (roadmaps) for the various UNIX configurations, see [UNIX Installation Roadmaps, 87](#)

Preparing to Install the Adams Product

The primary way to receive the Adams product is by downloading the software from the MSC.Software Solution Download Center. In the case of the UNIX products, this will be a TAR file that contains the appropriate files (compressed and zipped) needed for each platform.

Select the platform file from the SDC. Download and untar the file to a disk location that is accessible by the system that will be used for the installation. At this point a CD could also be created with the files.

Follow the directions in this document for installing Adams from these files.

- If using files on disk: Select option 3 from the main menu
- If using files from a CD: Select option 1 from the main menu

Creating the Installation Directory

This section explains how to create an installation directory in which to install the MD Adams products. This is the location on your file server where you want the MD Adams products to reside. Note that this directory must be accessible to all departmental file servers on which you are going to install MD Adams products. In addition, note that you can use a remote machine to mount the CD-ROM drive.

Note: You can enter the commands shown in this section in either uppercase or lowercase depending on your system. For example, when you mount the CD, the mount point can either be `/cdrom` or `/CDROM`.

To create the installation directory:

1. Log on to the UNIX system where you want to install the MD Adams products (the file server).
2. Load the appropriate Products CD in the CD-ROM drive. Each Products CD contains a different set of UNIX platforms. Be sure to load the correct CD for the platform on which you are installing MD Adams.
3. Enter the mount command for your platform.

Note: For a listing of mount commands for UNIX systems, see [Platform-Specific Commands, 80](#)

If you are using a remote machine on your network to mount the CD-ROM drive, you must have permission to access that machine from the installer's account, with a remote-shell, requiring no password. For example, if the remote machine's hostname is `server1`, you need to be able to enter the command `rsh server1` (or `remsh server1`, for HP systems) and be able to log on to `server1` without entering a password.

4. Create a directory in which to place the MD Adams products by entering the following command, where `install_dir` is the directory that you want to create:

```
mkdir install_dir
```

We recommend that you create a directory called `/usr/adamsmdx` for the MD Adams products. In the directory name, `x` represents the current version of MD Adams. If you have a prior version of MD Adams on your system, you should install the new version in a different location. If, however, you are adding the same version of software to an existing installation, place the new software in the same location.

Copying and Starting the MD Adams Installation Program

This section contains instructions for copying and starting the MD Adams installation program. You must perform all of the steps in the section before installing or licensing MD Adams products.

To copy and start the installation program:

1. Change to the installation directory you created by entering the following command:

```
cd /install_dir
```

2. Locate the installation program (`INSTALL.ADAMS` or `install.adams`) using the `ls` command for the disk location or the CD mount point. For example, depending on your system, enter either of the following:

```
ls /cdrom
```

```
ls /disk_location
```

3. Copy the installation program on to your system using the command appropriate for your system. For example, enter either of the following:

```
cp /disk_location/INSTALL.ADAMS ./
```

```
cp /cdrom/INSTALL.ADAMS ./
```

4. Enter the following command to start the installation script:

```
./INSTALL.ADAMS
```

The Installation Menu appears as shown next.

```
+-----+
|                                     |
|           MSC.Software Corporation |
|           MD R2 Adams              |
|           Product Installation Menu |
|                                     |
| Install MD Adams                  |
|   1) Install MD Adams from the CD-ROM |
|   2) Duplicate the CD-ROM to your hard disk |
|   3) Install MD Adams from your hard disk (step #2) |
|                                     |
| License MD Adams                  |
|   4) Install MSC passwords on this license server |
|   5) Start the MSC license server on this system |
|   6) Stop the MSC license server(s) |
|   7) Client the software to another server |
|                                     |
| Troubleshooting                    |
|   8) Generate a problem report |
|   9) Check hostid on this system |
|                                     |
| 10) Exit                           |
+-----+
Please enter your selection (CR=1):
```

Installing MD Adams

Follow the procedure below to automatically copy and uncompress the files from the disk location or the Products CD to your installation directory.

Note: You can enter the commands shown in this section in either uppercase or lowercase letters depending on your system. For example, when you mount the CD-ROM, the mount point could be either `/cdrom` or `/CDROM`.

To install MD Adams products:

1. Start the installation program as described on [page 23](#), if necessary.
2. At the prompt, enter 1 to select the option, `Install Adams from CD-ROM`.
3. Enter the name of the installation directory you created.
If you are logged in as root, the installation program automatically creates a soft link named `adamsmdr2` in `/usr/bin` for running the MD Adams products.
4. At the hostname prompt, enter the name of the machine, if using a CD, to which the CD-ROM drive is attached.
5. Enter the CD-ROM mount point (for example, `/cdrom`). For a listing of mount commands for UNIX systems, see [Platform-Specific Commands, 80](#).
6. From the list of platforms on the disk location or on the Products CD that appears, enter the type of platform on which you are installing MD Adams. An example of the list of platforms is shown next.

```
*****  
Platforms available are:  
  
rhlinux - Linux ix86 systems running Red Hat Enterprise Level 4  
irix32  - SGI systems running IRIX  
*****
```

Note: If the platform on which you are installing MD Adams products does not appear in the list, you may have loaded the wrong Products CD. If necessary, check the Products CD label, and load the appropriate CD.

7. Select the MD Adams packages that you want to install by entering a `y` after each option for which you are licensed.

The products you purchased appear on the first page of your password certificate.

Note that under the section Feature/Password, MSC.Software lists the products that you have been licensed to use. MSC.Software uses the feature names of the products as you enter them into the installation program, not the actual names of the products.

Note: If you select to install the Adams/Control Client, you cannot install any other MD Adams product. For more information, see [Installing the Adams/Controls Thin Client, 27](#).

8. Verify that you have enough disk space to install the products you selected. A list of the space required for each of the products you selected to install is shown at the left and the space you have available in the installation directory is shown at the top.
9. Enter **y** after you have verified the availability of disk space. The installation program automatically extracts and uncompresses the files required to use the MD Adams products. If you do not have enough space, enter **n** and the list of products appears again. Either open another shell window and free up space at the location you want to install or abort the installation program and start over selecting another location to install MD Adams products. Note that the hardware and software specifications list the disk space requirements for MD Adams products, and you should review it before starting.
10. Enter the path to the local license file or the port number that is used by the license server.
11. Enter the name of the MD Adams license server as it appears on your password certificate.
12. Enter the path to your machine's Internet browser.

You must have a browser installed to view the online help.

13. If you are installing Adams/View, select **X11** to install the X11 driver or select **NATIVE** to install the NATIVE driver.
The X11 driver supports local and remote displays with some performance penalty. The NATIVE driver supports local displays with increased performance if graphics acceleration hardware is present.
14. From the Product Installation Menu, select **Option 10(Exit)**.
15. If you installed Adams/Controls, you need to install the MD Adams Extension for Easy5. Previously, this was done automatically by the Adams/Controls install program. For more information, refer to [Installing the MD Adams Extension for Easy5, 28](#).

Installing the Adams/Controls Thin Client

The Adams/Controls Thin Client is a subset of Adams/Controls. This client can be helpful to Easy5 or MATLAB users who want to use TCP/IP communication when performing co-simulations with Adams/Controls, but don't want to do a full installation of Adams/Controls.

To install the Adams/Controls Thin Client:

1. Follow steps 1. through 6. on [page 25](#).
2. When prompted to select the products that you want to install, enter **y** for the Adams/Controls Thin Client.
3. Continue with Step 8. on [page 26](#) and complete the remaining steps in the installation procedure.

Note: You must install the MD Adams Extension for Easy5 to use the Adams/Controls Thin Client. For more information, see [Installing the MD Adams Extension for Easy5, 28](#).

Installing the MD Adams Extension for Easy5

Note: This procedure is only necessary if you installed Adams/Controls.

To run MD Adams and Easy5 together, you must install the MD Adams extension into Easy5. To import models into MD Adams that were exported from Easy5 (containing components from licensed Easy5 libraries), you must also configure your computer so that MD Adams knows how to find your Easy5 license. The following procedures explain how to do this.

To install the MD Adams extension for Easy5:

1. Make sure that both Easy5 and MD Adams have been installed.
2. Make sure you have permission (that is, root ('superuser') privilege) to add and modify files in the Easy5 installation directory.
3. Identify the command line command used to start the MD Adams version you will use with Easy5, for example, `adamsmdr2`.

Note: If you are unable to identify a command line command to run MD Adams but you can identify the top-level directory of the MD Adams installation, you can use `-d "directory path"` in place of the command line command in the following steps.

4. Perform the following:
 - a. Open an xterm window and set your working directory to a directory outside the Easy5 installation directory tree.
 - b. Start Easy5. The standard command is `easy5x`.
 - c. In the Easy5 main window, from the **File** menu, select **Open Command Shell**.
 - d. At the prompt in the command shell, enter:


```
$EZHOME/install_adams_controls.ksh adams_command
```

 where *adams_command* is the command line command from Step 3 above.
5. Type `exit` to close the command window.
6. If you started Easy5, from the **File** menu, select **Quit**.

The MD Adams extension installation is complete. Be sure to configure your computer as described next.

To configure your computer to run licensed exported Easy5 models within MD Adams:

1. Start Easy5.
2. From the **File** menu, select **Open Command Shell**.
3. At the prompt in the command shell, type `easy5x -license`.

Easy5 displays the licensing information, beginning with the type of license and the server name (if a server license) or the path to the license file.

4. Write down the contents of the line that starts with **Active license file(s)**, and the value that appears in the line following it (for example, **1700@rainier**).
5. Perform one of the following:
 - If the line is **Active license file(s) [EASY5_LMD_LICENSE_FILE]**, set the environment variable **EASY5_LMD_LICENSE_FILE** to the output value displayed in Step 4 above (for example, **1700@rainier**).
 - If the line is **Active license file(s) [MSC_LICENSE_FILE]**, find the value of the environment variable **MSC_LICENSE_FILE** to see what license file MD Adams is using.
 - If Easy5 and MD Adams are using different licenses (or license servers), set **LM_LICENSE_FILE** to the value for the Easy5 license (for example **2500@bosco**).
 - If Easy5 and MD Adams are using the same license, your computer is configured properly.

Duplicating and Installing MD Adams on Your Hard Disk

This section explains how to install the MD Adams products when you have multiple file servers and single-to-multiple clients. You first copy the files from the CD to your hard disk. You then use this disk, or depot, location to install MD Adams on the other file servers. Copying the MD Adams products from your hard disk is more convenient for additional network installations than installing all of them from the CD.

Note: This procedure requires up to 660 MB of scratch disk space.

To install MD Adams from your hard disk:

1. Change to the installation directory. Note that this directory must be accessible to all departmental file servers on which you are to install MD Adams products.
2. Start the installation program.
3. At the prompt, enter **2** to select the option, **Duplicate the CD-ROM to your hard disk**.
4. Enter the name of the installation directory.
The default location is your current directory (that is, the installation directory). Select the default by pressing Enter on your keyboard.
5. At the hostname prompt, enter the name of the machine to which the CD-ROM drive is attached.
6. Enter the CD-ROM mount point (for example, */cdrom*). For a listing of mount commands for UNIX systems, see [Platform-Specific Commands, 80](#).
7. From the list of platforms on the Products CD that appears, enter the type of platform on which you are installing MD Adams. An example of the list of platforms is shown below. You can either copy the files for just one platform or for all the platforms you need at one time.

```
*****
Platforms available are:

rhlinux - Linux ix86 systems running Red Hat Enterprise Level 4
irix32  - SGI systems running IRIX
*****
```

8. At the prompt, enter **10** to select the option **Exit**.
9. Log on to one of your departmental file servers.
10. In the system window, enter the `mkdir` command to create an installation directory and change to that new directory using the `cd` command.

11. We recommend that you create a directory called `/usr/adamsmdx` for the MD Adams products. In the directory name, `x` represents the current version of MD Adams.
12. Mount the disk location that contains the copy of the MD Adams products (see Step 4).
13. Copy the installation program to this machine by entering the following command, where *install_dir* is the name of the disk depot:

```
cp /install_dir/INSTALL.ADAMS ./
```
14. Start the installation program and enter **3** to select the option, **Install MD Adams from your hard disk (step #2)**.
15. Enter the name of the MD Adams installation directory. This is the location where you want to install the MD Adams software (see Step 10).
16. Enter the disk depot mount point. This is the directory you used in Step 4 on [page 30](#).
17. Follow Steps 7 through 13 in [Installing MD Adams, 25](#), to complete the installation for the file server.
18. Now repeat the instructions for each file server.

Installing on a Heterogeneous Network

If you are installing the MD Adams products for use on different UNIX platforms (Sun, SGI, and so on) you are performing a heterogeneous installation. MD Adams installation directory can support multiple platforms. Binary files specific to each supported platform are located in architecture directories under each product directory. You can use a single installation directory to install all supported MD Adams platform binaries or multiple file servers to spread out the NFS load to multiple systems.

To install MD Adams on a heterogeneous network:

- Follow the instructions in [Installing MD Adams, 25](#), for each platform on which you are installing MD Adams products.

4 Licensing on UNIX

Overview

This chapter provides instructions for licensing the MD Adams software. You must complete the steps in [Installing MD Adams on UNIX, 19](#) before licensing the MD Adams software. Refer to [UNIX Installation Roadmaps, 87](#) for which procedure in this chapter to follow depending on your system configuration.

The chapter contains the sections:

- [About the MD Adams License Server, 35](#)
- [Licensing MD Adams When File and License Server Are Same Machine, 38](#)
- [Licensing MD Adams When File and License Server Are Different Machines, 39](#)
- [Starting the MD Adams License Server, 40](#)
- [Restarting the MD Adams License Daemons, 41](#)
- [Changing the License to Point to a Different License Server, 43](#)
- [Verifying a Successful License, 44](#)

About the MD Adams License Server

MD Adams licensing requires that you operate at least one license server. You can optionally request to use three MD Adams license servers (see About a Three-Server Configuration below). The MD Adams license servers can be on any of the supported MD Adams platforms connected to the network that runs the MD Adams products. MD Adams uses the FLEXlm[®], license system from Macrovision.

The following sections give you tips for selecting the license server and explain different configurations:

- [Tips for Selecting Your MD Adams License Server, 35](#)
- [About a Three-Server Configuration, 35](#)
- [About the License File Format, 36](#)

Tips for Selecting Your MD Adams License Server

You should select the machine to use as your MD Adams license server using the following guidelines. The machine should:

- Have a local file system that can hold the MD Adams license server software. If you use a remotely mounted file system for your MD Adams license server, you risk having your users unable to run the MD Adams products if the server goes down. You should never run the MD Adams license server from a diskless node on the network.
- Have enough system resources to robustly serve the number of MD Adams users requesting a license.
- Be on the same local area network (or sub-net) if the number of MD Adams license requests is in the range of hundreds per day.
- Be reliable. This means that it has reliable power and its hardware subsystems are in good working order.

You should consolidate your licenses because redundant license servers add complexity. Evaluate what you really want to achieve by using redundant license servers. More robust hardware systems, instead of redundant license servers, can better ensure less down time. You should look at ways to consolidate the number of license servers at the departmental, division, or even at the company-wide level.

About a Three-Server Configuration

For each of the license types, you can have three machines on your network that are designated as license servers. Selecting three license servers lets you back up the main license server in case one of the other machines is down. If your password certificate lists three machines under the `Server Host Name` column, you purchased the three-server configuration. You must install your passwords on **each** of the servers as explained in [Licensing MD Adams When File and License Server Are Same Machine, 38](#).

You should log in to one of the servers and open three shell windows. Log in to the other two servers in the different shell windows and repeat the procedures in this chapter for each server. You also need to

start each of the license servers as explained in [Starting the MD Adams License Server, 40](#). The order of startup is not critical. The first machine, however, to start the license daemons becomes the master server and serves licenses until it is unavailable.

About the License File Format

The license file sent by MSC.Software is complete, except for the path to the license daemon and the server name. The installation program will add this information when you select Option 4 from the installation menu.

Sample license

```
SERVER L30131 00047652480a 1700
DAEMON MSC /your_path/msc
FEATURE MDA View MSC 2007.1130 30-nov-2007 2 DDD03A3855FBFA721BB3 \
VENDOR_STRING=PID:10108,10208,10215,10229 HOSTID=00047652480a \
ISSUED=30-nov-2006 ck=48 SN=1364576-86ceaa6c30812cfc97ff
```

Following is an explanation of the components in your license:

- **SERVER keyword** - The **SERVER** line contains the MD Adams license server's hostname, unique **hostid**, and the **TCP** socket number that the procedures will use to communicate with license daemons.
- **DAEMON keyword** - The **DAEMON** line contains **MSC** (the name of the MD Adams license daemon) and the file system path to find that daemon.
- **FEATURE keyword** - **FEATURE** lines are the license for MD Adams software. A **FEATURE** line always contains:
 - **FEATURE keyword**
 - **FEATURE name** - The name of the license.
 - **Name of the MSC license daemon** (should be the same as the **DAEMON** line).
 - **Version number** - The major revision number of MD Adams for which the license will authorize use. You can also run previous versions of MD Adams that have a revision number less than the revision number of your license.
 - **Expiration date** - The date on which the license expires.
 - **Number of licenses granted (or tokens needed)** - The number of simultaneous uses of the product that the license authorizes.

Note: If the **FEATURE** name is **CAMPUS**, this value contains the total number of tokens available.

- **VENDOR_STRING** - The company (MSC.Software) that issued the password.
- **ISSUED date** - The date on which the license was issued. It acts as a time-stamp on the password; it is used with the **SUPERSEDE** keyword.

- `HOSTID` - The optional host ID locks the use of the product to a particular system.

Licensing MD Adams When File and License Server Are Same Machine

Follow the instructions below if your license server and file server are the **same** machine. You should log in to the system that appears in the `Server Host Name` column on the password certificate.

To set up licensing:

1. Start the installation program `INSTALL.ADAMS`.
2. Enter **4** to select the option, **Install MD Adams passwords on this license server**.
3. Enter **y** if the name of the MD Adams license server that appears in the prompt is the same as the machine designated as the server in your e-mail password certificate. (Depending on the type of license you have, the server name may not be listed in your e-mail certificate; in this case, use the `hostid` instead.)
4. The default is the machine to which you are logged on. If this is not your license server, enter **n**, log in to your license server, and start the procedure again.
5. Follow the instructions in the e-mail password certificate to locate the information required for licensing your MD Adams software.
6. At the prompt `Are your passwords in a file e-mailed from MSC.Software?`, enter **y**.
7. Enter the name of the text file that contains your passwords.
The installation program reads this file and constructs a properly formatted license data file (**license.dat**) for you.
8. If the installation program cannot read the file, open the original file and verify that you cut the information required for licensing at the correct locations.
9. Continue with [Starting the MD Adams License Server, 40](#).

Licensing MD Adams When File and License Server Are Different Machines

Follow the instructions below if your license server and file server are **different** machines or if you purchased a three-server configuration. You should log in to the system that appears in the `Server Host Name` column on the password certificate.

If you are installing passwords for a three-server configuration, you should log in to one of the servers and open three shell windows. Log in to the other two servers in the different windows and repeat the instructions in this section for each server.

1. Start the installation program `INSTALL.ADAMS`.
2. At the prompt, enter `4` to select the option, **Install MD Adams passwords on this license server**.
3. Enter `y` if the name of the MD Adams license server that appears in the prompt is the same as the machine designated as the server in your e-mail password certificate. (Depending on the type of license you have, the server name may not be listed in your e-mail certificate; in this case, use the `hostid` instead.)
4. The default is the machine to which you are logged on. If this is not your license server enter `n`, log on to your license server, and start again.
5. Enter the name of the installation directory you created for the MD Adams products.
6. At the `hostname` prompt, enter the name of the machine to which the CD-ROM drive is attached.
7. Enter the CD-ROM mount point (for example, `/cdrom`).
8. Enter the type of platform you want to install.
9. Select the MD Adams licensing file by entering `y` at the prompt and entering `n` to the remaining MD Adams products.
10. Follow the instructions in the e-mail password certificate to locate the information required for licensing your MD Adams software.
11. At the prompt `Are your passwords in a file e-mailed from MSC.Software?`, enter `y`.
12. Enter the name of the text file that contains your passwords.
The installation program reads this file and constructs a properly formatted license data file (**license.dat**) for you.
13. If the installation program cannot read the file, open the original file and verify that you cut the information required for licensing at the correct locations.
14. Continue with [Starting the MD Adams License Server, 40](#).

Starting the MD Adams License Server

Follow the instructions below for all of the license types, as well as the three-server configuration. For three-server configurations, you must repeat this procedure on **each** license server. You must enter the commands on each license server within one minute.

To restart the MD Adams license server:

1. Start the installation program `INSTALL.ADAMS`.
2. At the prompt, enter **5** to select the option, **Start the MD Adams license server on this system**. The MD Adams license daemons are automatically started.

Continue with the next section to allow the license daemons to automatically restart when you reboot your system.

Restarting the MD Adams License Daemons

You must modify the reboot procedure on your license servers to include a restart of the MD Adams license daemons during a system reboot. Follow the instructions below for all three of the license types, as well as the three-server configuration. For three-server configurations, you must repeat this procedure on **each** license server.

To restart the MD Adams license daemons:

1. Change to the directory */install_dir/network/arch*, where *install_dir* is the directory where the MD Adams products are installed and *arch* is the platform type of your license server.
2. Locate the file **reboot.txt**.
3. The information in this file goes into different files on different systems. Find your platform type below, and follow the instructions to add the MD Adams license server startup commands to your system.

Hewlett Packard HP-UX

- a. Log on as root.
- b. Change to the directory **rc2.d** by entering **cd /sbin/rc2.d**.
- c. Enter the command **ls *adams*** to locate the file. The files in the **rc2.d** directory begin **SXX**, where **XX** is a number from 01 to 99.
- d. Open the file that begins **SXXMSC**, where **XX** is greater than 50 and less than 99 into a text editor so that you can edit it. If the file does not exist, create it.

You must have permission to edit or create this file. If necessary, use the following command to set permissions:

```
chmod 777 SXXMSC
```

- e. Enter the commands found in the **reboot.txt** file. To change the *install_dir* text, change to your installation directory.

IBM AIX Systems

- a. Log on as root.
- b. Change to directory **/etc** by entering **cd /etc**.
- c. Copy the **reboot.txt** file, and then rename it as **rc.MSC**:

```
cp /install_dir/network/ibmrs/reboot.txt /etc/rc.MSC
```
- d. Using a text editor, open the file, **rc.MSC**, and replace every occurrence of the text **INSTALL_DIR** with the name of the MD Adams installation directory.
- e. Save the file, and then exit the text editor.
- f. Use the command **mkitab** to add a record of the file **/etc/inittab** to ensure that the license server is started during a system reboot:

```
mkitab "MSC:2:wait:/etc/rc.MSC"
```

Linux

- To add the MD Adams license server startup commands, follow the instructions provided by your operating system.

Silicon Graphics IRIX Systems

Sun Solaris (UltraSPARC) Systems

- a. Log on as root.
- b. Change to the directory **rc2.d** by entering `cd /etc/rc2.d`.
- c. Enter the command **ls *adams*** to locate the file. The files in the **rc2.d** directory begin with **SXX**, where **XX** is a number from 01 to 99.
- d. Open the file that begins with **SXXMSC**, where **XX** is greater than 50 and less than 99, into a text editor so that you can edit it. If the file does not exist, create it.

You must have permission to edit or create this file. If necessary, use the following command to set permissions:

chmod 777 SXXMSC

- e. Enter the commands found in the **reboot.txt** file. Be sure to change the *install_dir* text to be your installation directory.

The licensing of MD Adams products is complete. You can now verify that installation was successful by following the procedures in [Verifying a Successful License, 44](#).

Changing the License to Point to a Different License Server

1. Start the installation program with the **client** argument (for example, **install.adams client**) or select option 7.
2. Enter the port number that is used by the license server.
3. Enter the name of the MD Adams license server that has the licenses you want to use. This can be a different machine than the machine on which you installed the MD Adams products, which is the file server.

Verifying a Successful License

Follow the procedure below to verify that the MD Adams installation was successful.

1. Start the installation program on the license server **INSTALL.ADAMS**.
2. At the prompt, enter **8** to select the option, **Generate a problem report**. This automatically generates a report called **PROBLEM.RPT** that you can use to verify the MD Adams installation.
3. Using a text editor, open the **PROBLEM.RPT** file and review the information. Verify that each of the features installed are able to retrieve a license.

5

Installing MD Adams on Windows

Overview

The following sections explain how to install MD R2 Adams products and online documentation by running the MD R2 Adams installation program. It also includes information on licensing your MD R2 Adams.

- [Installing MD Adams, 46](#)
- [Installing the Adams/Controls Thin Client, 53](#)
- [Installing MD Adams in Silent Mode \(Batch\), 57](#)
- [Modifying the Installation, 59](#)

Installing MD Adams

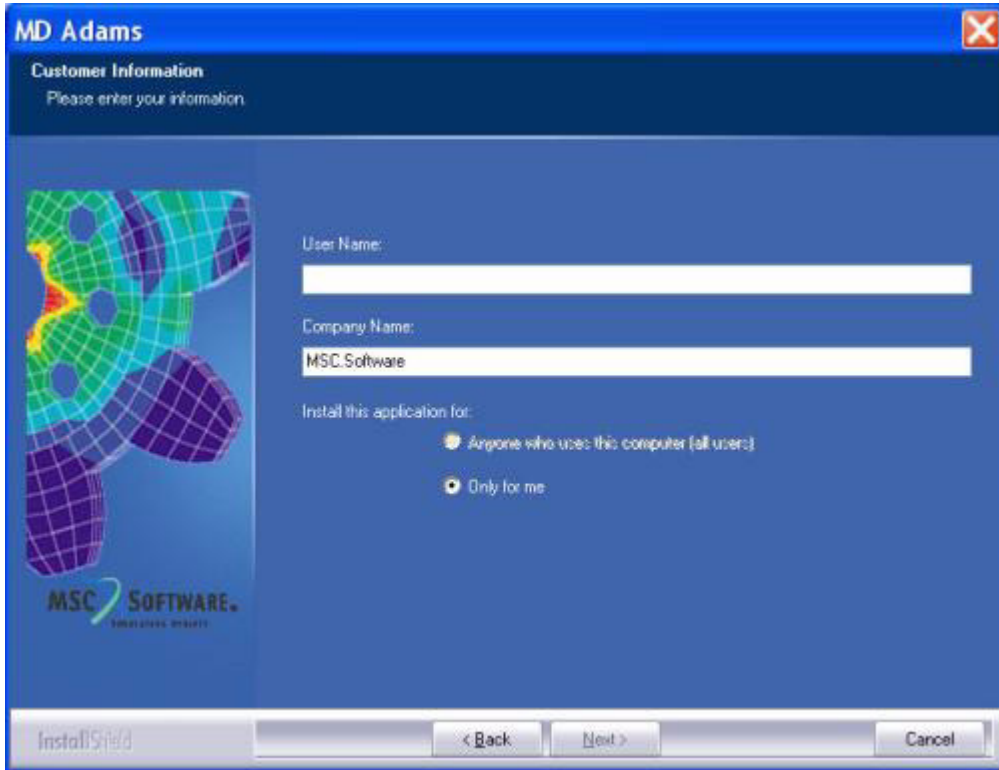
This section shows you how to install MD Adams software and documentation. If you already installed MD Adams for this release, refer to [Modifying the Installation](#) on page 59.

To install MD Adams :

1. Open Windows Explorer, browse to your MD Adams download and double click the MD R2 Adams self extracting executable file.
2. After extracting Adams files into your temp directory, double click
`c:\temp\MDR2Adams\setup.exe`

The Customer Information window appears as shown in [Figure 5-1](#) on page 47.

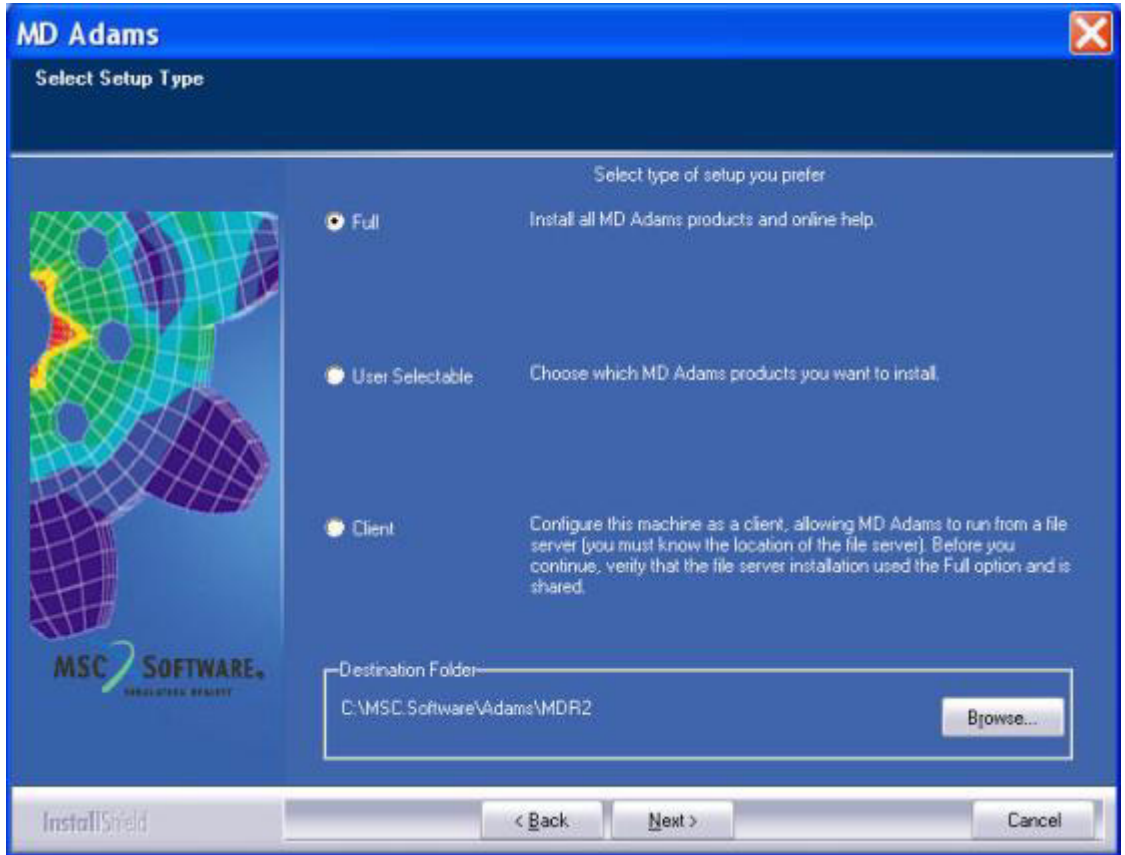
Figure 5-1 Customer Information Window



3. In the Customer Information window, enter your user and company name, and then select one of the following:
 - **Anyone who uses this computer (all users)** - Anyone logged on to this machine can run MD R2 Adams.
 - **Only for me** - A user must be logged on using the user name and password that was used at the time of installation.
4. Select **Next**.

The Setup Type window appears as shown in [Figure 5-2](#) on page 48.

Figure 5-2 Setup Type Window



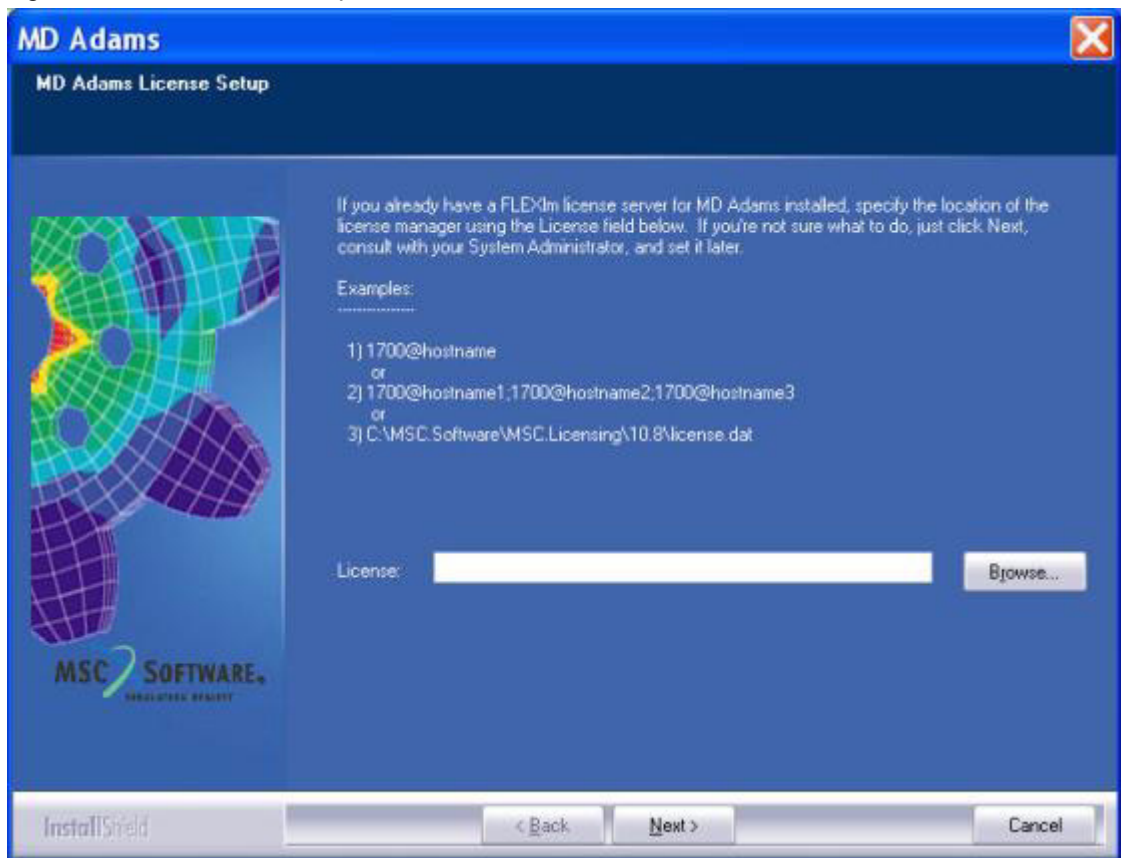
5. Select the type of installation you want to perform:
 - **Full** - Installs all MD R2 Adams products and documentation. Always use this option if you want to use this machine as a file server, allowing other machines to client to it.
 - **User Selectable** - Allows you to select the specific MD R2 Adams products and documentation you want to install.
 - **Client** - Allows you to link to a file server, where a full installation has already been installed. You must know the location of the shared installation directory before you continue with the installation.
6. If you would prefer MD R2 Adams to be installed in a folder other than the default destination folder, select **Browse**, and then select the desired folder.
The default directory for installing MD R2 Adams products is *c:\MSC.Software\Adams\MDR2*.
7. Select **Next**.
8. Depending on your selection in Step 5. on page 48, do one of the following:
 - **Full** - Continue to Step 9..

- **User Selectable** - In the Select Components window, select the components you want to install. Then, select **Next**.

Note: You cannot install the Adams/Controls Thin Client at the same time as other MD R2 Adams products. You must install it by itself. See [Installing the Adams/Controls Thin Client, 53](#) for more information

- **Client** - Enter the location of the shared directory where MD R2 Adams is installed.
9. Confirm the installation settings and then select **Next** to begin the installation.
 10. The License Setup window appears as shown in [Figure 5-3](#) on page 49.

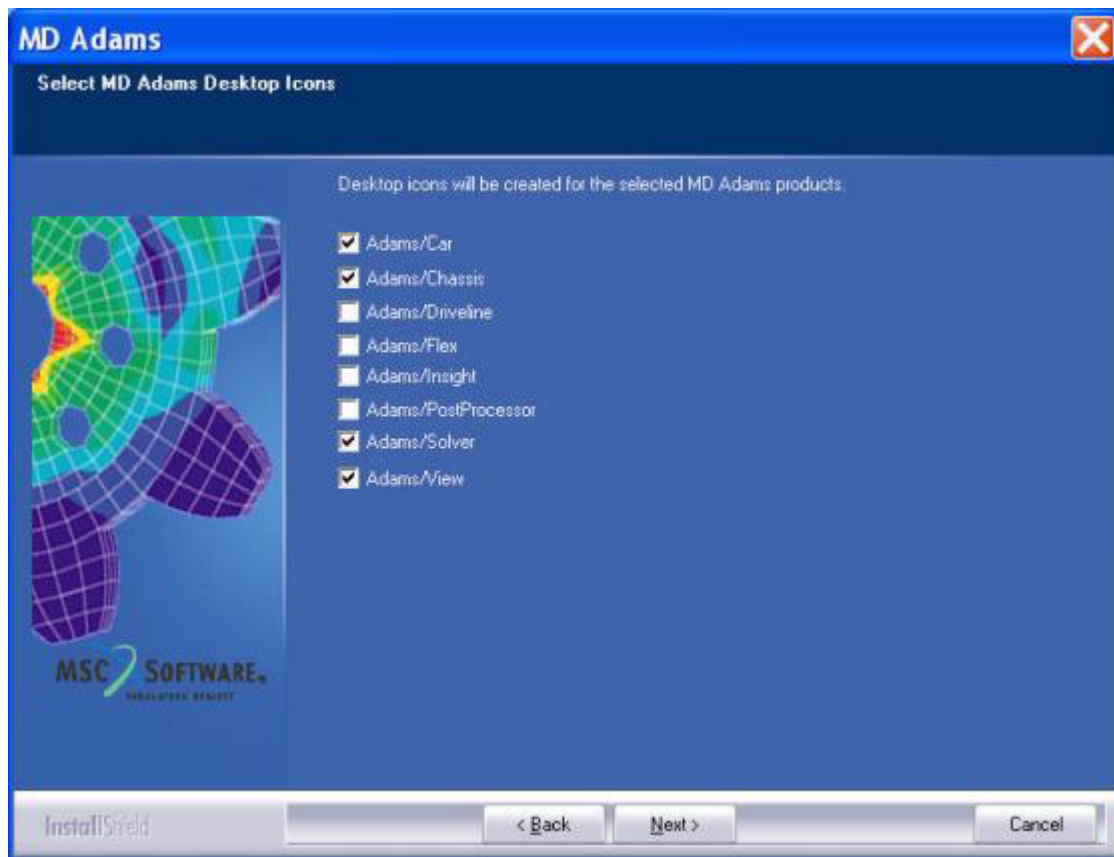
Figure 5-3 License Setup Window



11. Enter the name of the license server or the path to your license file. If you don't enter this information here, you can specify your license using the procedure in [Specifying your License, 64](#).
12. Select **Next**.

13. Specify whether or not you want to install the various desktop icons. If you select **Yes**, then select the products for which you want icons created, as shown in [Figure 5-4](#) on page 50.

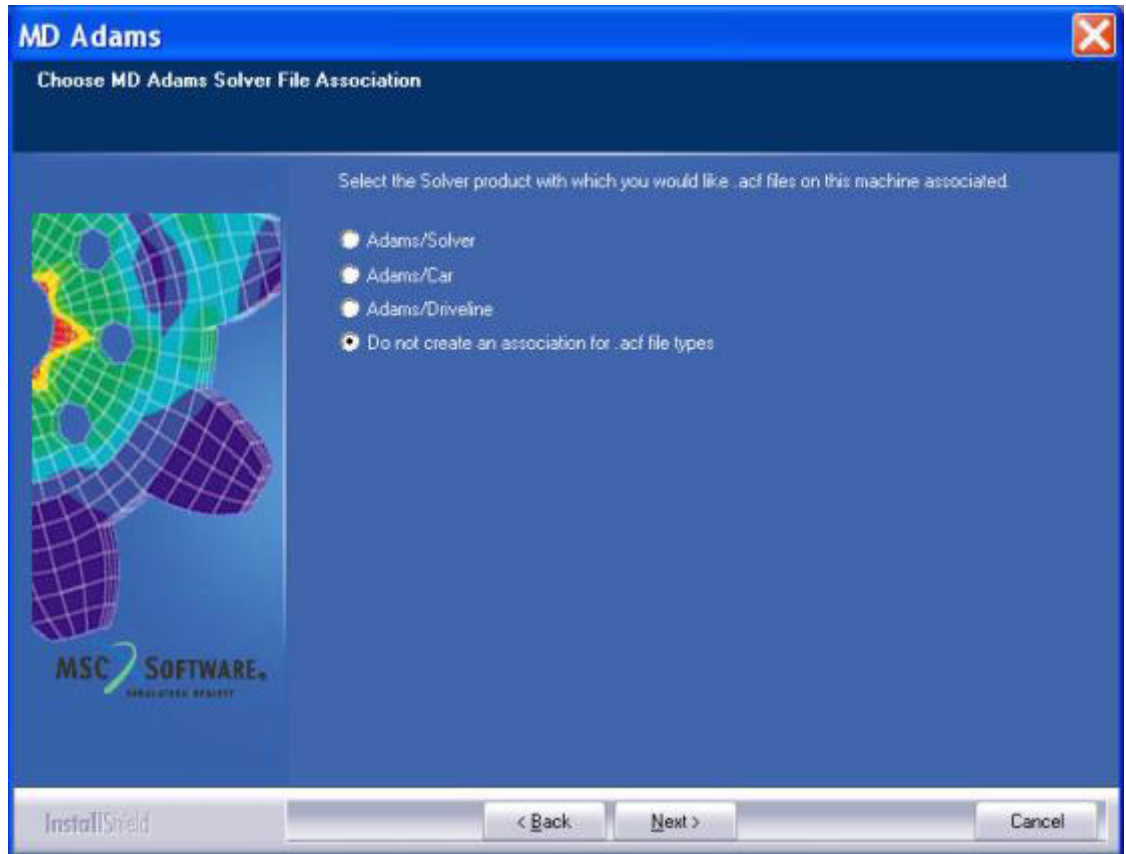
Figure 5-4 MD R2 Adams Desktop Icons Window



14. Select **Next**.

The Solver File Association window appears as shown in [Figure 5-5](#) on page 51.

Figure 5-5 Solver File Association Window

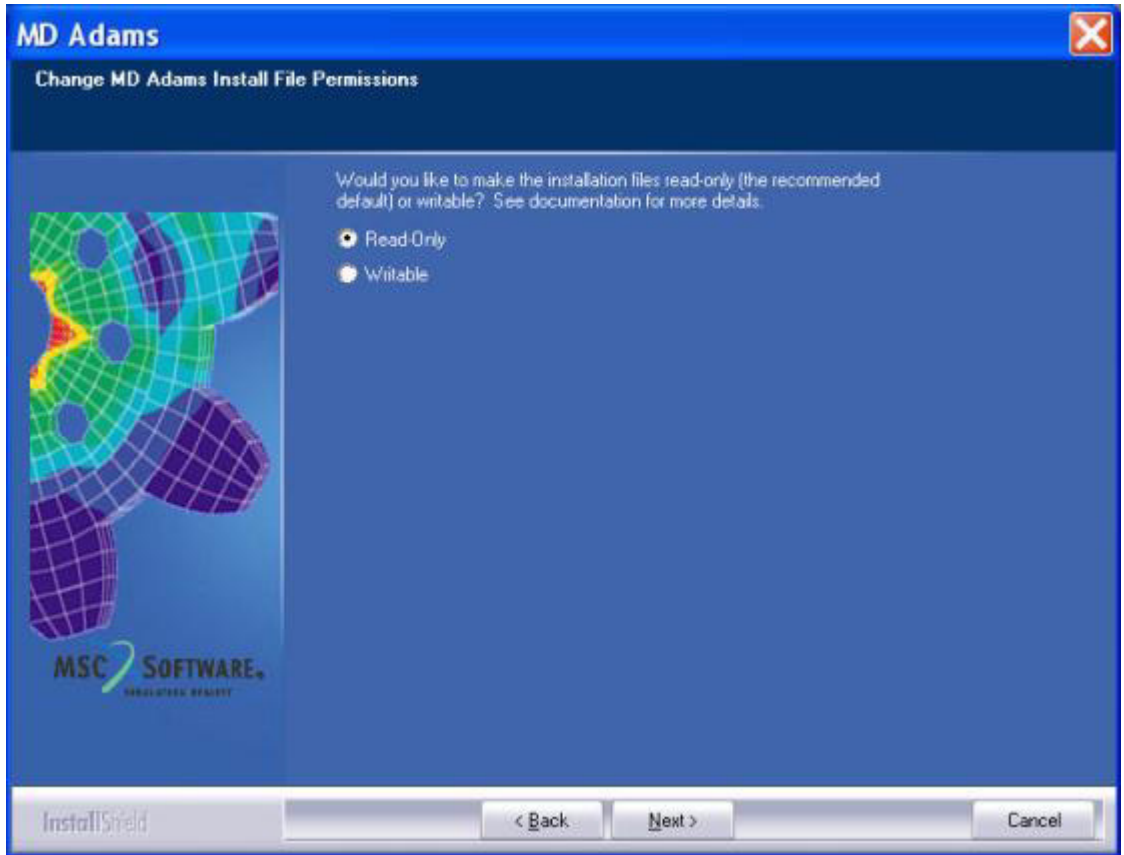


15. Select the solver product with which you want .acf files on this machine associated. You can also select not to associate .acf files with an MD R2 Adams product.

16. Select **Next**.

The Install File Permissions window appears as shown in [Figure 5-6](#) on page 52.

Figure 5-6 Install File Permissions Window



17. Select whether you want the installation files left as read-only or made writable.
 - If you leave them read-only, you may have to change the properties of the example files before running through the various tutorials.
 - If you make them writable, be sure to use extreme caution while using the installation files because you can overwrite them.
18. Select **Next**.
19. To view the readme file, select **I would like to view the README file**.
20. Select **Finish**.
21. If you installed Adams/Controls, you need to install the MD R2 Adams Extension for Easy5. Previously, this was done automatically by the Adams/Controls install program. For more information, refer to [Installing the MD Adams Extension for Easy5, 28](#).
22. If you want to use this installation as a file server (so that other machines can install from it), share the installation directory.

Installing the Adams/Controls Thin Client

The Adams/Controls Thin Client is a subset of Adams/Controls. This client can be helpful to Easy5 or MATLAB users who want to use TCP/IP communication when performing co-simulations with Adams/Controls, but don't want to do a full installation of Adams/Controls.

To install the Adams/Controls Thin Client:

1. Follow steps [Step 1](#) on page 46 through [Step 4](#) on page 47.
2. In the Select Setup Type window, select **User Selectable**.
3. Select **Adams/Controls Thin Client**, making sure no other products are selected.
4. Continue with [Step 9](#) on page 49 and complete the remaining steps in the installation procedure.

Note: You must install the MD Adams Extension for Easy5 to use the Adams/Controls Thin Client. For more information, see [Modifying the Installation, 59](#).

Installing the MD Adams Extension for Easy5

Note: This procedure is only necessary if you installed Adams/Controls.

To run MD Adams and Easy5 together, you must install the MD Adams extension into Easy5. To import models into MD Adams that were exported from Easy5 (containing components from licensed Easy5 libraries), you must also configure your computer so that MD Adams knows how to find your Easy5 license. The following procedures explain how to do this.

To install the MD Adams extension for Easy5:

1. Make sure that both Easy5 and MD Adams have been installed.
2. Make sure you have permission (that is, root ('superuser') privilege) to add and modify files in the Easy5 installation directory.
3. Identify the command line command used to start the MD Adams version you will use with Easy5, for example, `adamsmdr2`.

Note: If you are unable to identify a command line command to run MD Adams but you can identify the top-level directory of the MD Adams installation, you can use `-d "directory path"` in place of the command line command in the following steps.

4. Perform the following:
 - a. From the **Start** menu, point to **Programs**, point to **MSC.Software**, point to **MSC.EASY5 2005 r1.2**, point to **Shell**, and then select **Easy5 Command Shell**.
 - b. At the prompt in the command shell, enter:


```
install_adams_controls.ksh adams_command
```

 where *adams_command* is the command line command from Step 3 above.
3. Type **exit** to close the command window.
4. If you started Easy5, from the **File** menu, select **Quit**.

The MD Adams extension installation is complete. Be sure to configure your computer as described next.

To configure your computer to run licensed exported Easy5 models within MD Adams:

1. Start Easy5.
2. From the **File** menu, select **Open Command Shell**.
3. At the prompt in the command shell, type **easy5x -license**.

Easy5 displays the licensing information, beginning with the type of license and the server name (if a server license) or the path to the license file.

4. Write down the contents of the line that starts with **Active license file(s)**, and the value that appears in the line following it (for example, **1700@rainier**).
5. Perform one of the following:
 - If the line is **Active license file(s) [EASY5_LMD_LICENSE_FILE]**, set the environment variable **EASY5_LMD_LICENSE_FILE** to the output value displayed in Step 4 above (for example, **1700@rainier**).
 - If the line is **Active license file(s) [MSC_LICENSE_FILE]**, find the value of the environment variable **MSC_LICENSE_FILE** to see what license file MD Adams is using.
 - If Easy5 and MD Adams are using different licenses (or license servers), set **LM_LICENSE_FILE** to the value for the Easy5 license (for example **2500@bosco**).
 - If Easy5 and MD Adams are using the same license, your computer is configured properly.
6. For Windows platforms only, modify the Path environment variable to include the path to the lib_nt_IF8 subdirectory of your Easy5 installation tree.
 - If your Easy5 model contains components from a licensed library (for example, the Thermo-Hydraulic, Powertrain, or Gas Dynamics libraries), you will need to make sure MD Adams finds your Easy5 license. Failure to perform this step will result in the Easy5 license library not being found.
 - MD Adams supports the Intel Visual Fortran 9.1 compiler only. The Easy5 model import feature is not supported with the GNU or Intel FORTRAN compilers on Microsoft Windows.

To find the appropriate value for the variable:

- a. Start Easy5.
- b. Open an Easy5 command shell: from the Easy5 File menu, select Open Command Shell.
- c. At the command shell prompt, enter: `echo %EZHOME%`.
The output is the directory in which Easy5 is installed. You will use the directory information in Step 5 below. The usual value of EZHOME is:

```
C:\MSC.Software\MSC.EASY5\2005r1.2\
```

To apply the value of the environment variable:

- a. From the Start menu, point to Settings, and then select Control Panel.
- b. In the Control Panel dialog box, select the System icon.
- c. In the System Properties dialog box, select the Advanced tab.
- d. In the Advanced tab container, select Environment Variables.

MD Adams must know the path to the subdirectory of your Easy5 installation tree to be able to load `ez5_lmgr.dll`:

```
lib_nt_IF8 - For the Intel FORTRAN 9.1 compiler.
```

- e. Using the path from step 3, in the Environment Variables dialog box, append or create the path to the user variable as follows:

```
Variable Name = PATH
```

For the Intel FORTRAN 9.1 compiler, enter the following, where <CURRENT_VALUE> is the current value of PATH:

```
Variable Value = <CURRENT_VALUE>; %EZHOME%\easy5x\lib_nt_IF8  
and where the value of EZHOME is taken into account.
```

Installing MD Adams in Silent Mode (Batch)

By creating a batch setup file, you can automate the process of performing identical installs. You can customize this file with your preferred settings, put it on a server, and let other users perform their own installation using the same settings. This section shows you how to create and run the batch file.

To create the batch setup file:

1. From the **Start** menu, select **Run**.
2. In the Run dialog box, enter the following:

```
E:\MDAdams\setup.exe -r -f1"c:\temp\mysetup.iss"
```

where:

- **E:** is the location of your *setup.exe* file
- **f1** is a lower-case **f** and the number **1**
- **c:\temp\mysetup.iss** is the location and name of the batch setup file

3. Select **OK**.
4. Follow the installation instructions in the section, [Installing MD Adams, 46](#).
The batch installation file (*.iss*) is created.

To perform a batch installation:

1. Check the contents of the batch setup (*.iss*) file to make sure that it contains the correct installation directory location. For example, if it specifies **D:\MSC.Software\Adams\MDR2** as the install directory, and you don't have a **D:** drive, you can change it to **C:\MSC.Software\Adams\MDR2**. See [Figure 5-7](#) on page 58.
2. In a command window, enter the following command:

```
E:\MDAdams\setup.exe -s -f1"c:\temp\mysetup.iss"
```

where:

- **E:** is the location of your *setup.exe* file
- **f1** is a lower-case **f** and the number **1**
- **c:\temp\mysetup.iss** is the location and name of the batch setup file.

Figure 5-7 Sample setup.iss file

```

[InstallShield Silent]
Version=v7.00
File=Response File
[File Transfer]
OverwrittenReadOnly=NoToAll
[{B7A5A821-70DC-4E45-B569-D2F34C38A10B}-DlgOrder]
Dlg0={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-SdWelcome-0
Count=10
Dlg1={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-SdCustomerInfo-0
Dlg2={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-MSC_SetupType3-0
Dlg3={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-SdStartCopy-0
Dlg4={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-MSC_License-0
Dlg5={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-AskOptions-0
Dlg6={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-AskOptions-1
Dlg7={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-AskOptions-2
Dlg8={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-AskOptions-3
Dlg9={B7A5A821-70DC-4E45-B569-D2F34C38A10B}-SdFinish-0
[{B7A5A821-70DC-4E45-B569-D2F34C38A10B}-SdWelcome-0]
Result=1
[{B7A5A821-70DC-4E45-B569-D2F34C38A10B}-SdCustomerInfo-0]
szName=buildadm
szCompany=MSC.Software
nvUser=1
Result=1
[{B7A5A821-70DC-4E45-B569-D2F34C38A10B}-MSC_SetupType3-0]
szDir=C:\MSC.Software\Adams\MDR2 installation Directory
Result=301
SetupType=501
SetupName=Full
[{B7A5A821-70DC-4E45-B569-D2F34C38A10B}-SdStartCopy-0]
Result=1
[Application]
Name=MD Adams
Version=16.1.0
Company=MSC.Software Corporation
Lang=0009
[{B7A5A821-70DC-4E45-B569-D2F34C38A10B}-MSC_License-0]
szEdit1=1700@hostname License server
Result=1
[{B7A5A821-70DC-4E45-B569-D2F34C38A10B}-AskOptions-0]
Result=1
Sel-0=1
Sel-1=0

```

Modifying the Installation

Using the Add/Remove Programs capability of your Windows operating system, you can modify your current installation by installing or deleting specific components. You can also uninstall previous versions of MD R2 Adams products and documentation. Note that the uninstall program does not remove files that were created after the initial installation, such as your `license.dat`.

To modify the MD R2 Adams installation:

1. From the **Start** menu, point to **Settings**, and then select **Control Panel**.
2. Select **Add/Remove Programs**.
3. Select **MD R2 Adams**, and then select **Change/Remove**.
4. Follow the instructions on your screen to modify the MD R2 Adams installation. Select the **Next** button to continue through the installation.

The installation program asks you to choose the type of uninstall you want to perform. You can select:

- **Repair** - Reinstalls all components from the last install.
 - **Remove** - Removes all MD R2 Adams product and documentation files. It does not remove any files that you created in the installation directory.
5. When the uninstall is complete, select **Finish**.

6 Licensing on Windows

Overview

MD Adams products use a license server to manage the access to its products. Therefore, before you can run the products you just installed, you must license them. The next sections explain more about MD Adams licensing, the initial licensing options, and how you can manage the licensing after you've initially licensed the products.

- [Licensing Basics, 63](#)
- [Specifying your License, 64](#)
- [Setting up a Windows License Server, 65](#)
- [Replacing Codes \(Licenses\) on an Existing Windows Server, 66](#)
- [Customizing End-User License Administration, 67](#)

Licensing Basics

You can license MD Adams products in the following ways:

- **Set up a license server** that is available to your users through the network, and set up the number of users who can use MD Adams. The number of users who can run MD Adams concurrently depends on the number of licenses you purchased. Refer to your password certificate for information on the number of users who can run MD Adams.

You can run the license server on one machine or on three. We strongly recommend that you use a one-server configuration, however. If you select a three-server configuration, the machines act as backups to the other machines. You must install passwords on all of the server machines to set up a three-server configuration.

You can select to load only the licensing tools on the license server and install the MD Adams products only on the clients.

You also can set up the licensing so that it is locked to a particular machine or node. If your MD Adams licensing is node-locked, then users can only run MD Adams products on that machine. To see if you have purchased node-locked licensing, refer to your password certificate.

- **Set up a client** using an existing license server.

In both cases, the procedure for licensing MD Adams is the same. For a detailed description of the license file, see [About the License File Format, 36](#).

Specifying your License

You typically specify the license for MD Adams during the installation procedure (see Step 11. on page 49). However, you can modify the license type, location, or name at any time following the installation.

If you already installed MD Adams on your network and have a license server running, you can enter the hostname and TCP/IP port number of the license server to run MD Adams from that license server. If a license server is running on the current machine, the installation program shuts it down.

For MD Adams installations, the TPC/IP port number defaults to 1700 and is in the following format, where *hostname* is the name of the host:

1700@hostname

If you do not know the name of the host, enter the command **hostname** at a command prompt. Or, you can refer to the **SERVER** line of your password certificate/license file.

To specify or modify MD Adams licensing:

1. From the **Start** menu, point to **Programs**, point to **MSC.Software**, point to **MD R2 Adams**, and then select **Adams - License Setup**.
2. Enter the name of the license server or the path to your license file.
3. Select **Finish**.

Setting up a Windows License Server

You can use your Windows machine as the license server for other MD Adams installations.

Note: You must have the license file saved to your machine before completing this procedure.

To set up the license server:

1. Insert the Windows Products CD into your CD-ROM drive.

The MD Adams for Windows Installation System dialog box appears. If the setup program does not start automatically, open Windows Explorer, select your computer's CD-ROM drive, and double-click **setup.exe**. The Welcome dialog box appears.

2. Select **MSC.Licensing 10.8**.

The installation program displays an information window with your FLEXlm host ID. Make sure this is the same host ID included in your license file.

3. Select **Yes**.
4. Select **Next**.
5. Read the license agreement, and then select **I Accept**.
6. Select the directory where you want MSC.Licensing installed, and then select **Next**.
7. Verify the installation settings, and then select **Next**.
8. Select your license file.
9. Select **Finish**.
10. Exit the installation program.

For more information on FLEXlm, refer to your FLEXlm documentation.

Replacing Codes (Licenses) on an Existing Windows Server

Follow these steps if you have an existing MD Adams installation and have received new codes (as a renewal, change, and so on).

To update your passwords:

1. Place the new codes as a license file in the same directory as the existing **license.dat** file. Name it **license_new.dat**. Change the **SERVER** and **DAEMON** lines in the new license file to include the same port number, server name, and paths as the existing file. For example:

SERVER server1 123465 1700

DAEMON MSC c:\MSC.Software\MSC.Licensing\10.8\MSC.exe

2. Use Windows Explorer to rename the existing **license.dat** file to **license_old.dat**, and the new file to the current license file name (**license.dat**).
3. Run **lmtools.exe**, and then select **Config Services**.
4. Select the appropriate license server in the box below (if you have more than one).
5. Select the **Start/Stop/Reread** tab.
6. Select **ReRead License File**.

This should re-read the **license.dat** file and enable your new licenses. If there is a problem, or if the licenses are still not available, restart the system.

Customizing End-User License Administration

You can use the daemon options file provided with the license manager to customize the installation. This option file allows the end-user to:

- Reserve licenses for specified users or groups of users.
- Restrict the use of the software to certain people.
- Set software time-outs.
- Log activity for use with an optional report writer.

7 Running MD Adams Products

Starting MD Adams Products

This sections described how you can start your MD Adams products on UNIX and on Windows.

Starting MD Adams Products on UNIX

The MD Adams Toolbar is a starting point to using MD Adams products on UNIX. The toolbar is shown below.

MD Adams Toolbar tool - Right click to set up Toolbar, manage memory models, access online help and Technical Support resources and more



Product tools - Click to run product or right-click to configure products and create user libraries.

Hold the cursor over a tool to see the name of the associated product.

You can also use the MD Adams Toolbar to:

- Customize, keep track of, and organize multiple libraries of standard MD Adams products
- Create binaries
- Manage custom memory models and product preferences

For more information on these or other MD Adams Toolbar operations, see the Running and Configuring online help (from the **Help** menu in any product, select **MD Adams Help**, near the top of the pane on the left, select **Configuring MD Adams**).

To start a product on UNIX:

1. To display the MD Adams Toolbar, at the command prompt, enter the command **adamsmdx** where **x** is the version number, for example **adamsmdr2**.
2. Click on the tool representing the product you want to start.

Note: We recommend that you use the MD Adams Toolbar to start your MD Adams products, but if you want to automate certain operations, use the text-based Program Menu. For more information, see the Running and Configuring online help.

Starting MD Adams Products on Windows

You start any MD Adams product from the Start menu. You can also use the Start menu to:

- Change your license type
- Generate problem reports
- Set MD Adams preferences

For more information on these or other operations, see the Running and Configuring online help.

To start a product on Windows:

- From the **Start** menu, point to **Programs**, point to **MSC.Software**, point to **MD R2 Adams**, point to the name of the product you want to start, and then select the product type. For example, point to **ACar**, and then select **Adams - Car**.

Tip: Select the corresponding desktop icon for the product, if you installed it on your desktop.

Setting Preferences

This section describes how you can set preferences, such as your working directory, graphics setting, and memory model size.

Setting Preferences on UNIX

You use the Adams Registry Editor from the MD Adams Toolbar to set a variety of preferences. For information on the preferences you can set, see the Running and Configuring online help.

To display the Registry Editor:

- From the **MD Adams Toolbar**, right-click any product tool, and then select **Change <Product Name> Settings**.

Setting Preferences on Windows

You use the Settings menu to modify:

- Graphics settings
- Memory model size

To display the Settings dialog box:

- From the **Start** menu, point to **Programs**, point to **MSC.Software**, point to **MD R2 Adams**, and then select **Adams - Settings**.

Setting Your Working Directory

During a session in a default or custom product, you can select the directory where you want to place your model and output files.

For Adams/View, you can set the working directory from the Welcome dialog box.

To set your working directory:

1. From the **File** menu, select **Select Directory**.
2. In the dialog box that appears, select the working directory.

8

UNIX Administration and Configuration

Overview

This chapter describes some basic administration and configuration operations you might want to perform after you install the MD Adams products, and others that you might need to perform periodically as you obtain new passwords. These operations include the following:

- [Setting Up the Client Machine, 77](#)
- [Updating Passwords, 78](#)
- [Platform-Specific Commands, 80](#)

Setting Up the Client Machine

If you did not install the MD Adams software as root, you need to make MD Adams available to all the users by creating a link from a user directory to the installation directory.

To set up a client machine:

1. Mount the MD Adams installation directory from the central file server to each machine that is going to run MD Adams.
2. Create a startup command on **each** user's machine in the directory of your choice, using the commands:

```
ln -s /install_dir/mdi adamsmdr2
```

This link must be created in a directory that is in the user's path. Check the Path environment variable to see the directories that are already in the user's path.

Updating Passwords

If you receive new passwords from MSC.Software, follow the instructions below to update your passwords. If you receive new software along with the passwords, you should follow the complete installation instructions in [Installing MD Adams on UNIX, 19](#)

Note: If the license server started with root, you must be root to stop and start it.

The following are two ways to update your passwords:

- [Using the MD Adams Installation Script, 78](#)
- [Updating Outside the Installation Script, 78](#)

Using the MD Adams Installation Script

To update passwords using the installation script:

1. Log on to the MD Adams license server.
2. Move to Adams installation directory.
3. Start the installation program `INSTALL.ADAMS`.
4. At the prompt, enter **6** to select the option, **Stop the MD Adams license server(s)**.
5. At the prompt, enter **4** to select the option, **Install MD Adams passwords on this license server**.
6. Enter the new passwords by entering the name of the file containing the passwords.
7. At the prompt, enter **5** to select the option, **Start the MD Adams license server on this machine**.

Updating Outside the Installation Script

To update passwords outside the installation script:

1. Place the new codes as a license file in the same directory as the existing `license.dat` file. Name it `license_new.dat`. Change the `SERVER` and `DAEMON` lines in the new license file to include the same port number, server name, and paths as the existing file. For example:

```
SERVER server1 123465 1700
```

```
DAEMON MSC /msc/flexlm/bin/msc
```

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

```
# mv license.dat license_old.dat
```

```
# mv license_new.dat license.dat
```

3. Use the `lrmreread` command to force the `lmgrd` daemon to reset using the new license file.

```
# flexlm_install_dir/lmreread -c <path>/license.dat
```

where *flexlm_install_dir* is the directory where FLEXlm is installed.

Note: If you do not have an **lmreread** executable, copy **lmdown** and name it **lmreread**

You should now be able to run MD Adams products using the new licenses. If this fails, kill and restart the daemons as follows:

```
# flexlm_install_dir/lmdown -c <path>/license.dat
```

```
# flexlm_install_dir/lmgrd -c <path>/license.dat
```

Platform-Specific Commands

Table 8-1 lists common UNIX commands for installing from CD. In the commands:

- The # character in device file names represents the SCSI address of the media unit.
- cdrom_dir is the name of the CD-ROM drive

Table 8-1 Installation Commands

Machine:	Commands:
HP-UX HP-Itanium	<pre>pfs_mount -o rrip /dev/dsk/c#t#d# cdrom_dir</pre> <p>or</p> <pre>mount -r -F cdfs -o cdcase -o rr /dev/dsk/c#t#d# cdrom_dir</pre> <p>Note: The -o rr option requires that you install patches for the Rockridge Standard. For a complete list of patches, refer to the MD Adams Hardware Specifications at http://www.mssoftware.com/support/prod_support/adams/.</p>
IBM AIX RS/6000	<pre>mount -v cdrfs -r /dev/cd0 cdrom_dir</pre>
Linux	<p>mounts automatically or</p> <pre>mount /mnt/cdrom</pre>
SGI	<p>mounts by itself if vold is running or</p> <pre>mount -rt iso9660 /dev/scsi/sc0d#l0 cdrom_dir</pre>
Sun	<p>mounts by itself if vold is running or</p> <pre>mount -F hsfs -r /dev/dsk/c0t6d0s2 cdrom_dir</pre>

9 Troubleshooting

Overview

This chapter describes how to generate problem reports to send to MD Adams Technical Support. It also lists some common problems that can occur when installing, updating, and running MD Adams software, and recommends solutions to those problems.

- [Troubleshooting on Windows, 83](#)
- [Troubleshooting on UNIX, 84](#)

If you do not find your problem in this chapter or if the recommended solution does not solve your problem, then:

- Refer to the MD Adams Knowledge base at <http://support.mscsoftware.com/kb/>
- Contact MD Adams Technical Support as explained in [Getting Help, 8](#).

Troubleshooting on Windows

Generating Problem Reports

You can generate a report that examines your system configuration and places important debugging information in the file *adams_problem_report.txt*. If you have problems running Adams, you can generate this report and review it or send it to MD Adams Technical Support by fax or e-mail. As you review the report, refer to the sections in this chapter for explanations of many of the error messages that appear in the report.

Note: For correct results, you must run the problem report from the license server, not the client machine.

To generate and review a report:

1. From the **Start** menu, point to **Programs**, point to **MSC.Software**, point to **MD R2 Adams**, and then select **Adams - Troubleshooting Report**.

MD Adams creates a problem report in your home directory.

2. To review the report, open it into a text editor, such as Notepad.

Obtaining New Passwords

If you need new passwords, you can obtain them by calling your MSC.Software Sales Administrator.

When requesting new passwords, provide the following information:

- Request number and Schedule 1 number (**Sched 1 #**) from your password certificate. The request number is at the top of the certificate and the Schedule 1 number is in the **Administrative** Information section.
- System ID and host name of your CPU. Instructions for obtaining this information for your particular CPU are in the hardware and software specifications.

Troubleshooting on UNIX

Generating Reports and Verifying Software

The installation program provides two options for performing troubleshooting operations.

- **Generate a problem report** - Examines your system configuration and places important debugging information in the file **PROBLEM.RPT**. If you have problems running MD Adams, you can generate this report and review it or send it to MD Adams Technical Support by fax or e-mail.

Note: For accurate results, you must run the problem report from the license server, not the client machine.

- **Check hostid on the system** - Returns the hardware identification number from the system that is used for MD Adams licensing. This identification number is also included in the problem report.

To generate a problem report:

- From the installation program menu, enter **8** to select the option, **Generate a problem report**. If you do not have write permission in the working directory, you will be prompted to enter another directory in which to write the files.

To check hostid on the system:

- From the installation program menu, select **9** to select the option, **Check hostid on this system**.

Obtaining New Passwords

If you need new passwords, you can obtain them by calling your MSC.Software Sales Administrator.

Please provide the following information:

- License agreement number and Schedule 1 number (**Sched 1 #**) from your password certificate. The license agreement number is in the License Contract Information section of the password certificate and the Schedule 1 number is in the **Administrative Information** section of the password certificate.
- System ID and host name of your CPU. Instructions for obtaining this information for your particular CPU are in the hardware and software specifications.

About License Server System Resources

The MD Adams license server runs two processes: `lmgrd` and `MSC`. These processes do not require significant CPU use even for a large number of licenses.

Each time an MD Adams product talks to the license daemons, a process file descriptor is used. It is very rare that normal MD Adams license transactions would use up all of the available process file descriptors. The process file descriptor is allocated by a TCP socket. If you have a large number of licenses (200+), you should confirm that the number of sockets and process file descriptors limitations for your system is adequate to handle all of the licenses. See your operating system's documentation for the maximum number of file descriptors available on the system designated as your MD Adams license server.

The license server writes a debug log file as it runs. It writes an entry for each license request and return. If the file becomes too large, you can edit the log file periodically.

The MD Adams license daemons send small amounts of data across the network. Each license transaction requires approximately 1 KB of data. If there are a lot of transactions (in the hundreds), the network bandwidth use can become significant. If this happens, you should consider keeping the license server on the same local area network as the one being used for the MD Adams products.

Allocating Disk Space for Temporary Files

You can change the location of temporary files created when running MD Adams. By defining the environment variable `TMPDIR`, you can point to a file system that has enough disk space to hold your temporary files. You must select a file system that has space and a directory that you have write permissions for. For example, if you are using a UNIX C-shell you would add the following line to your `.cshrc` file:

```
setenv TMPDIR /new_location
```


10 UNIX Installation Roadmaps

Overview

This appendix describes the overall steps or roadmaps that you perform to install MD Adams products depending on your network configuration. Use these roadmaps to guide your installation. For complete installation and licensing instructions, see *Installing MD Adams on UNIX* on page 33. The roadmaps are:

- [File Server, License Server, and Client - Same Machine, 89](#)
- [File Server and License Server - Same Machine, Client - Different Machine, 90](#)
- [File Server and Client - Same Machine, License Server - Different Machine, 91](#)
- [File Server, License Server, and Client - Different Machines, 92](#)
- [File Server - Different Machine, License Server and Client - Same Machine, 93](#)
- [Multiple File Servers, Central License Server, and Single-to-Multiple Clients, 94](#)
- [Different UNIX Platforms - Heterogeneous Network, 96](#)

For assistance in determining which roadmap to follow, see [Table 10-1](#). It lists the seven types of configurations and the page that contains the roadmap for performing installation and licensing for that type of configuration. If your configuration is not in the table, review the options in each chapter and choose the ones that best fit your needs.

Table 10-1 Types of Installation and License Configuration

If the file server is:	The license server is:	The client is:	Then follow roadmap on:
Same machine	Same machine	Same machine	page 89
Same machine	Same machine	Different machine	page 90
Same machine	Different machine	Same machine	page 91
Different machine	Different machine	Different machine	page 92
Different machine	Same machine	Same machine	page 93
Multiple machines	One machine	One to multiple machines	page 94
Differing UNIX platform(s) on any of the machines (heterogeneous network)			page 96

File Server, License Server, and Client - Same Machine

This type of installation is typical of a single machine on a network. Only one engineer uses MD Adams so the installation is placed on that person's machine.

Table 10-2 Roadmap When All Same Machine

Do the following:	For more information, see the section:
1. Log on to the MD Adams user's workstation.	--
2. Create an installation directory.	Creating the Installation Directory, 22
3. Copy and start the MD Adams installation program.	Copying and Starting the MD Adams Installation Program, 23
4. Install MD Adams.	Installing MD Adams, 25
5. Install network passwords.	Licensing MD Adams When File and License Server Are Same Machine, 38
6. Start the license server.	Starting the MD Adams License Server, 40
7. Modify the system startup procedures so they include the restarting of the MD Adams license manager.	Restarting the MD Adams License Daemons, 41
8. Generate a troubleshooting report to verify that all products and files were properly installed.	Verifying a Successful License, 44

File Server and License Server - Same Machine, Client - Different Machine

This type of installation is typical of larger networks, where there may be one-to-many MD Adams users. Because there is more than one MD Adams user, a central server is used as both file server and license server. The MD Adams users work on personal machines, and access the software across the network using NFS.

Table 10-3 Roadmap When Only Client Different

Do the following:	For more information, see the section:
1. Log on to the central server.	--
2. Create an installation directory.	Creating the Installation Directory, 22
3. Copy and start the MD Adams installation program.	Copying and Starting the MD Adams Installation Program, 23
4. Install MD Adams.	Installing MD Adams, 25
5. Install network passwords.	Licensing MD Adams When File and License Server Are Same Machine, 38
6. Start the license server.	Starting the MD Adams License Server, 40
7. Modify the system startup procedures so they include the restarting of the MD Adams license manager.	Restarting the MD Adams License Daemons, 41
8. Generate a troubleshooting report to verify that all products and files were properly installed.	Verifying a Successful License, 44

File Server and Client - Same Machine, License Server - Different Machine

This type of installation is typical of a large network where central servers have been designated as license servers. MD Adams users work on personal machines and access the software locally to increase performance

Table 10-4 Roadmap When Only License Server Different

Do the following:	For more information, see the section:
1. Log on to the MD Adams user's workstation.	--
2. Create an installation directory.	Creating the Installation Directory, 22
3. Copy and start the MD Adams installation program.	Copying and Starting the MD Adams Installation Program, 23
4. Install MD Adams.	Installing MD Adams, 25
5. Exit from the installation program.	--
6. Log on to the license server machine.	--
7. Create a directory for MD Adams on the license server.	Creating the Installation Directory, 22
8. Copy and start the installation program from the CD to this directory.	Copying and Starting the MD Adams Installation Program, 23
9. Install network passwords, which unloads license software.	Licensing MD Adams When File and License Server Are Different Machines, 39
10. Start the license server.	Starting the MD Adams License Server, 40
11. Modify the system startup procedures so they include the restarting of the MD Adams license manager.	Restarting the MD Adams License Daemons, 41
12. Generate a troubleshooting report to verify that all products and files were properly installed.	Verifying a Successful License, 44

File Server, License Server, and Client - Different Machines

This type of installation is typical of a large network where central servers have been designated as file servers and license servers. MD Adams users work on personal machines, and access the software across the network using NFS.

Table 10-5 Roadmap When All Different Machines

Do the following:	For more information, see the section:
1. Log on to the central NFS server.	--
2. Create an installation directory.	Creating the Installation Directory, 22
3. Copy and start the MD Adams installation program.	Copying and Starting the MD Adams Installation Program, 23
4. Install MD Adams.	Installing MD Adams, 25
5. Exit from the installation program.	--
6. Log in to the license server machine.	--
7. Create a directory for MD Adams on the license server.	Creating the Installation Directory, 22
8. Copy and start the installation program from the CD to this directory.	Copying and Starting the MD Adams Installation Program, 23
9. Install network passwords, which unloads license software.	Licensing MD Adams When File and License Server Are Different Machines, 39
10. Start the license server.	Starting the MD Adams License Server, 40
11. Modify the system startup procedures so they include the restarting of the MD Adams license manager.	Restarting the MD Adams License Daemons, 41
12. Generate a troubleshooting report to verify that all products and files were properly installed.	Verifying a Successful License, 44

File Server - Different Machine, License Server and Client - Same Machine

This type of installation is typical of a medium-sized network where a departmental NFS server is used. A single MD Adams user works on a personal machine, and accesses the software across the network through NFS. The MD Adams user's machine also acts as the license server.

Table 10-6 Roadmap When License Server and Client are the Same Machine

Do the following:	For more information, see the section:
1. Log on to the central NFS server.	--
2. Create an installation directory.	Creating the Installation Directory, 22
3. Copy and start the MD Adams installation program.	Copying and Starting the MD Adams Installation Program, 23
4. Install MD Adams.	Installing MD Adams, 25
5. Exit from the installation program.	--
6. Log on to license server and client.	--
7. Mount MD Adams installation directory from file server on license server system through NFS.	--
8. Create a directory for MD Adams on this machine.	Creating the Installation Directory, 22
9. Copy and start the installation program from the CD to directory.	Copying and Starting the MD Adams Installation Program, 23
10. Install network passwords.	Licensing MD Adams When File and License Server Are Different Machines, 39
11. Start the license server.	Starting the MD Adams License Server, 40
12. Modify system startup procedures so they include the restarting of the MD Adams license manager.	Restarting the MD Adams License Daemons, 41
13. Generate a troubleshooting report to verify that all products and files were properly installed.	Verifying a Successful License, 44

Multiple File Servers, Central License Server, and Single-to-Multiple Clients

This situation is typical of large networks where multiple departmental file servers exist to split the NFS load of widely used applications such as MD Adams. The network also has a separate designated central license server machine. MD Adams users access the software through NFS from their personal machines. In this example, a central NFS server is used to create an online hard-disk copy of the UNIX Products CD-ROM, which makes installations on the multiple departmental file servers much easier.

Note: This procedure requires approximately 640 MB of scratch disk space

Table 10-7 Roadmap When Multiple File Servers, Single License Server

Do the following:	For more information, see the section:
1. Log in to the central NFS server.	--
2. Create an installation directory.	Creating the Installation Directory, 22
3. Copy MD Adams products to hard disk.	Duplicating and Installing MD Adams on Your Hard Disk, 30
4. Exit the installation program.	--
5. Log into a departmental file server.	--
6. Automount to the hard disk to which you copied the MD Adams products in Step 3.	--
7. Create an installation directory and change to it.	--
8. Copy the MD Adams installation directory from the hard disk (see Step 3) to this directory.	--
9. Run the installation program to install from disk.	Duplicating and Installing MD Adams on Your Hard Disk, 30
10. Exit from the installation program.	--
11. Repeat steps 5 to 9 for each departmental file server.	--
12. Log in to the central license server.	--
13. Create a directory for MD Adams on this machine.	Creating the Installation Directory, 22
14. Copy and start the installation program from the CD to the new directory.	Copying and Starting the MD Adams Installation Program, 23

Table 10-7 Roadmap When Multiple File Servers, Single License Server

Do the following:	For more information, see the section:
15. Install network passwords.	Licensing MD Adams When File and License Server Are Different Machines, 39
16. Start the license server.	Starting the MD Adams License Server, 40
17. Repeat Steps 11 to 15 if you have redundant file servers.	--
18. Modify the system startup procedures so they include the restarting of the MD Adams license manager.	Restarting the MD Adams License Daemons, 41
19. Generate a troubleshooting report to verify that all products and files were properly installed.	Verifying a Successful License, 44

Different UNIX Platforms - Heterogeneous Network

This situation is similar to the previous, except that multiple platforms may be involved. The license server can be UNIX or Windows. However, the file servers must be homogeneous. In other words, the UNIX file servers can only serve UNIX clients, and Windows file servers can only serve Windows clients. You can use different UNIX platforms for clients as long as the files for their platforms have been loaded onto the file server. Note that you may experience degraded performance for a Windows client due to network issues

Table 10-8 Roadmap for Heterogeneous Network

Do the following:	For more information, see the section:
1. Log in to the central NFS server.	--
2. Copy and start the installation program.	Copying and Starting the MD Adams Installation Program, 23
3. Install MD Adams.	--
4. Exit from the installation program.	--
5. Repeat Steps 1 through 4 for any additional platforms and file servers.	--
6. Log in to the license server machine.	--
7. Create a directory for MD Adams on this machine.	Creating the Installation Directory, 22
8. Copy and start the installation program from the CD to the new directory.	Copying and Starting the MD Adams Installation Program, 23
9. Install network passwords.	Licensing MD Adams When File and License Server Are Different Machines, 39
10. Start the license server.	Starting the MD Adams License Server, 40
11. Modify the system startup procedures so they include the restarting of the MD Adams license manager.	Restarting the MD Adams License Daemons, 41
12. Generate a troubleshooting report to verify that all products and files were properly installed.	Verifying a Successful License, 44

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