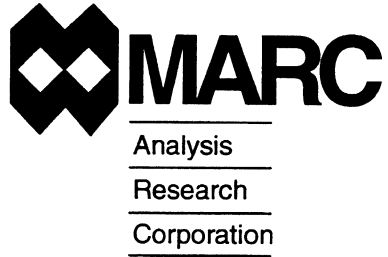


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MARC/Link-Pro

Installation Instructions
for UNIX Systems

14+ Release

MARC/Link-Pro Installation and Usage on UNIX machines

This document describes the installation and usage of the MARC/Link-Pro program on the UNIX platforms listed in Table 1. The instructions given require a basic knowledge of the machine you are loading the MARC/Link-Pro software. No attempt is made to teach the use of UNIX commands. A basic knowledge of Pro/ENGINEER software operation is also required to correctly setup the interface.

This document contains a quick installation section intended for the experienced MARC software users, a section containing details about the installation procedure, and a section concerning the usage of the MARC/Link-Pro interface.

Appendices include a sample installation session and hints about troubleshooting.

If you encounter a problem during the installation, please contact the customer support staff at the nearest MARC office listed below.

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Table 1 Versions of MARC/Link-Pro Running Under UNIX

Computer	Operating System Revision	Tape Load Command
HP 9000-700	HP-UX 9.0 or later	tar xvof /dev/rmt/0h
IBM RS6000	AIX 3.2 or later	tar xvf /dev/rmt0
Silicon Graphics	IRIX 5.2	tar xvof /dev/tape
SUN Sparc	Solaris 2.3 or later	tar xvof /dev/rst8

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Chapter 1: Read me first – Installation Prerequisites

Program revision	Throughout this document, the generic name <i>interface</i> is used to signify the name of your MARC/Link-Pro revision. However, the installation of your version requires you to use the actual name; e.g., <i>mape100</i> .
Before reading the tape	Change directory to your existing Mentat installation directory before reading in the MARC/Link-Pro version from the magnetic media. The MARC/Link-Pro program requires approximately 20Mbytes of permanent disk storage capacity. Current security configuration and the menus require the installation directory to be the same as your Mentat installation.
Note the license code	The MARC/Link-Pro version you received has a client specific administration number (e.g., MAPE100.U6123) which is basically a <i>license code</i> . This code is found on both the magnetic media and the accompanying either on your tape or on the front of your <i>MARC/Link-Pro Installation Guide</i> . As the installation procedure will prompt you for it, note it well.
Personal data	During installation, you are prompted to supply your name, address, telephone number, etc. This information is sent to the MARC office supplying you the installation passwords and is intended to keep your data up to date at MARC.
Password protection	<p>The MARC/Link-Pro version you received is protected against illegal usage by means of passwords. Until you obtain the passwords, you <i>cannot</i> run the program directly. Passwords are supplied to you from the nearest MARC office after you perform the first two installation steps. These steps are:</p> <ol style="list-style-type: none"> 1. Read in the magnetic media, set the correct path names in various background files, and generate a machine specific identifier for the purpose of creating passwords. 2. Send the machine specific identifier to the nearest MARC office. 3. Upon return of the passwords, enter these in the security. <p>Passwords are normally entered only once.</p>
Multiple machines NFS Fileserver	In the event a cluster of machines are using a single, shared disk to install the MARC/Link-Pro program, parts of the installation procedure must be executed on each machine using MARC/Link-Pro. For NFS Fileserver applications, the install script needs full access to several security files; the default NFS export options do not allow this level of access by root. Two approaches are possible – do not install as root, or if you must install as root, modify your NFS export options to include <i>-root=list</i> (where <i>list</i> can include hostnames and netgroups).
Should I be “root”?	Normally, there is no need to be logged in as root. However, you must have write permission to directories where files are copied to. The installation program prompts you for passwords of the owners of such directories.
hostname	Your machine <i>must</i> have a hostname. If no hostname is known, supply one with the command: <i>hostname my_choice_of_hostname</i> (or your system’s equivalent command to set the hostname).

Chapter 2: Quick Installation Procedure

Step 1: read tape	<code>cd "existing_Mentat_installation_directory"</code> <code>tar xvof "device"</code>	Read in the tape/cartridge or other type of magnetic media (if you are not familiar with the <i>tar</i> command, see Table 1 or the label on the tape for its syntax).
Step 2: set paths	<code>cd "existing_Mentat_installation"/maint</code> <code>./maintain_linkp</code>	Choosing <i>option 1</i> sets the pathname in MARC/Link-Pro files to correspond to the current location of the program.
	Menu Selection	You might be required to provide the password of the owner of the directory where Mentat is stored.
Step 3: system identifier	1) Install MARC/Link-Pro on your system 2) Security code submenu 2.1) Generate system identifier	Generate a unique system identifier. You are prompted for your license number which is either on your tape or on the front of your <i>MARC/Link-Pro Installation Guide</i> ; e.g. MAPE100.U6123. Also, you are prompted for your name, address, etc.
Step 4: send the system identifier to MARC	2.2) Show the system identifier(s) 2.3) Print the system identifier(s)	The system identifier is stored in the <i>mentat</i> subdirectory <i>security</i> in a file called <i>sid001.dat</i> . Send the contents of this file to the nearest MARC office. In return, you receive passwords. You can print this or these files directly.
Step 5: enter the password	2.5) Enter the passwords Do you want to rename license.new to license.dat ? Yes 0) Exit the license submenu	The passwords received from the MARC office is entered by the same installation script <i>maintain_linkp</i> . For a first time installation, choose the option <i>add new</i> and enter the license code, password, number of machines and processor code(s): one processor code for each machine allowed to run the MARC/Link-Pro program.
Step 6: Initialize directory	3) Initialize a Pro/ENGINEER working directory	You are prompted to supply the pathname to the directory where MARC/Link-Pro Interface is to be initiated from Pro/ENGINEER.
Step 7: checking	0) Exit from the Initialize submenu 0) Exit form the installation program	Repeatedly choose the <i>exit</i> option to leave the installation script. Go to the directory where the MARC/Link-Pro Interface is to be initiated from Pro/ENGINEER. Follow the instructions provided in a file named README to run the interface.

Chapter 3: Installation Procedure Information

Multiple machines In the event a cluster of machines using a single, shared disk is used to install the MARC/Link-Pro program, installation steps 2 and 3 need to be executed on each machine MARC/Link-Pro is used.

**Step 1:
read tape** The MARC/Link-Pro program is to be installed where the Mentat program resides. This location is called the *parent* directory. For example, if Mentat is installed at `/usr/software/mentat`, the parent directory is `/usr/software/mentat`. A subdirectory called *proe* is created when the magnetic media is read. You might want to check the contents against the list supplied in Appendix C of this document. If any subdirectory is missing, please contact MARC customer support for further details.

Note: See the label on the magnetic media or Table 1 at the beginning of this document for the syntax of the tar command for your machine, especially if the device name is system specific.

**Step 2:
set paths
patch
MARC** Set the path names in the MARC/Link-Pro background files to correspond to the location where you installed the version. You have to start the menu-driven installation shell script *maintain_linkp*. From the main menu list, choose *option 1* to set the path names in the MARC/Link-Pro background files to correspond to the current location of the MARC/Link-Pro version.

**Step 3:
system
identifier** Make preparations for the installation of the passwords. For this, you need to generate unique *identifiers* for each of the systems on which you intend to use MARC. Using the installation script *maintain_linkp*, choose *option 2* from the main menu list. A submenu appears. Choose *option 2.1* from this submenu for the generation of the system identifier.

Note: You are asked where the security files should reside. The default is the *parent* subdirectory *security*. This directory must have read and write access for all. You are asked to supply the license number on the magnetic media and in the accompanying letter; e.g. MAPE100.U6123. Next, you are asked for your name, address etc. See Appendix A for a sample session.

**repeat, if
needed**

Note: In case you are installing the program to run on more than one machine, please log in to all the machines and perform steps 2 and 3 for each machine. You end up with multiple identifier files *sid002.dat*, *sid003.dat*, etc., assuming you are using a single disk location linked across the network.

**Step 4:
send to
MARC** The system identifier is stored in the subdirectory *security* in a file called *sid001.dat*. With multiple platform licenses, you see files called *sid002.dat*, *sid003.dat*, etc. Send this file(s) to the nearest MARC office. The file(s) can be printed using the *maintain_linkp option 2.3*. Send the printout by telefax to the nearest MARC office. If you have access to E-mail, you can mail the system identifiers directly using the *maintain_linkp option 2.4*.

**Step 5:
password** After receiving the passwords from the MARC office, enter them by means of the same *maintain_linkp* program. Choose *option 2.5* of the security submenu to enter the passwords. For a first time installation, choose the option *add new* and enter the license code, password, number of machines, and processor code(s). One processor code is needed for each machine running the MARC/Link-Pro program. From this time onward, every time the passwords are (re)installed, you overwrite the existing license. This is the preferred option for password renewal.

Note: The password section makes no distinction between upper- and lower-case letters and ignores imbedded blanks.

**Step 6:
Initialize
working
directory** You will be prompted to supply the pathname to the directory where MARC/Link-Pro Interface is to be initiated from Pro/ENGINEER. This step is repeated for every file system location where the interface is to be executed. The *maintain_linkp* program copies a number of required files to the working directory. The (*config.pro* and *marc.dat* files) are required. You have the option of locating these files in alternate locations to be shared by all MARC/Link-Pro users at your site. Consult your site's Pro/ENGINEER administrator.

**Step 7:
checking** Repeatedly choose the *exit* option to leave the installation script:
0) *Exit from the Initialize submenu*
0) *Exit from the installation program*

Go to the directory where the MARC/Link-Pro Interface is to be initiated from Pro/ENGINEER. Follow the instructions provided in the file named README to run the interface.

Note: Should the MARC/Link-Pro program fail to start, please use the checklist in Appendix B to verify whether the installation was executed correctly. Contact MARC customer support if you are still unable to run the program.

Chapter 4 Running MARC/Link-Pro

This section describes the MARC/Link-Pro usage on UNIX based machines. The MARC/Link-Pro interface is started by a Pro/ENGINEER Part or Assembly sub-Menu called MARC. These Menus are defined in files stored in the "parent_directory"/proe/text subdirectory.

To utilize MARC/Link-Pro, run Pro/ENGINEER, create or retrieve a Part or an Assembly. After completion, you will notice a new button in the Part or Assembly Menu labeled MARC. Clicking on this button will transfer the geometry of the Part or Assembly into a Mentat database and start Mentat.

Alternatively the File menu in Mentat contains two new buttons. These are labeled "Pro/E .prt" and "Pro/E .asm". The first allows access to Pro/ENGINEER Parts and the second to Assemblies within Mentat. A valid license for Pro/ENGINEER is required, although it runs in a nongraphical form. Also, note that the full path to the part or assembly files is required for proper access.

Appendix A: Sample Installation of MARC/Link-Pro

In this appendix, a sample installation, assuming a single license installation, is demonstrated.

```
Step 1: read tape    cd "parent_directory"
                   tar xvof /dev/tape

Step 2: pathnames   cd "parent_directory"/
                   maint
                   ./maintain_linkp

                   MARC/Link-Pro Maintenance program for UNIX systems
                   MARC Analysis Research Corporation
                   Main menu
                   1) Install the MARC/Link-Pro interface on your system
                   2) Install Security
                   3) Initialize a Pro/ENGINEER working directory
                   4) Help
                   0) Exit from this program

                   select option 1
                   Selection : 1
                   Enter your proe command: ('proe', 'proe14', or '?') [proe]proe17
                   proeprt.exe file adjusted.
                   proeasm.exe file adjusted.
                   marc.dat file adjusted.
                   hit return to continue.

Step 3: system id   select option 2

                   MARC/Link-Pro license submenu
                   2.1) Install the license code      (install_spp)
                   2.2) Show the system identifier(s)
                   2.3) Print the system identifier(s)
                   2.4) Send the system identifier(s)
                   2.5) Enter the passwords          (license)
                   2.6) Clear logfile                (marcrst)
                   2.7) Make a new logfile           (mklog)
                   2.8) Reset all
                   2.9) Help
                   0) Return to install submenu

                   select option 2.1
                   Selection : 2.1
```

Enter your data

Enter the directory path to the security(/?/security) :
 Enter the directory path to the alternative security(/?/security) :
 New log file successfully created.
 Enter MARC license code () : **mape100.u6123**
 Current customer data :
 Your company name () : **PieMontVue Inc.**
 Your department () : **Computational Analysis**
 Your company address () : **Burbanksquare 13**
 Postal code and city () : **Woodslan, Ca 97001**
 Country () : **USA**
 Your name () : **John Smith**
 Your function () : **System Engineer**
 Your telephone number () : **498 877922**
 Your telefax number () : **498 877010**
 Any changes ? (Y/N) : **n**
 Current system data :
 Computer type () : **Silicon Graphics**
 Computer model () : **Challenge**
 Any changes ? (Y/N) : **n**
 **** Data written in file "sid001.dat".
 Send this file to MARC
 Selection : 2.3

Step 4: send the system identifier to the nearest MARC office

select option 2.3 to print, or 2.4 for E-mail

Step 5: enter passwords

MARC/Link-Pro license submenu

- 2.1) Install the license code (install_spp)
- 2.2) Show the system identifier(s)
- 2.3) Print the system identifier(s)
- 2.4) Send the system identifier(s)
- 2.5) Enter the passwords (license)
- 2.6) Clear logfile (marcrst)
- 2.7) Make a new logfile (mklog)
- 2.8) Reset all
- 2.9) Help
- 0) Return to install submenu

select option 2.5

Selection : 2.5

Enter selection :

0 = exit

1 = add new

Enter choice : 1

Enter MARC license code () : **mape100.u6123**

Enter password () : **m1p9 572p vpm6 dnr7 r5rf mcm1 m12d**

Enter the total number of processors codes (0) : 1

Enter processor 1 code, * to stop () : **bjy8 7cex vb6f1**

Checksum: **40388**

**** New license file correctly written.

Do you want to rename file "license.new" to "license.dat": y

select option 0 repeatedly to exit

Selection : 0

Selection : 0

Appendix B: Troubleshooting

- Cannot read tape**
- ◆ The device name listed in Table 1 may be incorrect for your system. Please consult your system manager.
 - ◆ Byte-swapping may have occurred. Try to read in the tape using either:


```
dd if=your_tape_dev_name conv=noswab | tar xvof -
```

 or:


```
dd if=your_tape_dev_name conv=swab | tar xvof -
```
- Cannot create**
- ◆ You have no write permission in the parent directory. Change with *chmod*.
 - ◆ You are reading in the tape without the option "o" so ownership of the files is set to that found on the tape.
- No "hostname"**
- ◆ The *interface* program requires that a so-called hostname is available. If it is not set, choose a name by:


```
hostname my_choice_for_a_hostname
```
- Security failed**
- ◆ Pathnames to files used by the password protection code are not set correctly. Executing installation steps 2 and 3 should solve this problem.
 - ◆ Every MARC/Link-Pro user should have read rights for the *parent* subdirectory *security*.
 - ◆ Every MARC/Link-Pro user should have read rights to the following files in the *parent* subdirectory *security*: **customer.dat**, **license.dat**
 - ◆ For limited licenses (e.g. limited number of simultaneous jobs) every MARC/Link-Pro user should have write access rights to the *parent* subdirectory *security* and the file **MARC.LOG** therein.
 - ◆ You are attempting to run on a machine that according to the MARC/Link-Pro password(s) you are not allowed to use.
 - ◆ Your license period expired. Check the date on your machine.
 - ◆ You are attempting to install the MARC/Link-Pro program out of the installation period. Check the date, reset if necessary, and reinstall passwords.
 - ◆ For limited licenses, lock cannot be set. If a file called **MARC.LOG** exists in the *parent* subdirectory *security*, remove it. It was probably left by an aborted MARC/Link-Pro session.
 - ◆ For limited licenses, currently there are too many MARC/Link-Pro jobs running. Try later. If the limit is not exceeded, the following can have occurred: when a MARC/Link-Pro job is started, an entry is made in the file **MARC.LOG** in the *parent* subdirectory *security*. If the job ends normally, this entry is removed. If a job aborts, the entry remains and must be removed manually:


```
cd "parent_directory"/maint
./maintain
choose option 2.6 from the license submenu
```

 If this does not solve the problem, create a new file **MARC.LOG** by means of the option 2.7.
 - ◆ Cannot access or read the file **customer.dat** in the *parent* subdirectory *security*.
 - ◆ For limited licenses, the file **MARC.LOG** in the *parent* subdirectory *security* corrupted while the MARC/Link-Pro session was active.

- Cannot open the display**
- ◆ MARC/Link-Pro requires the X-window device support eight-bit plane pseudo color. For X-windows, use *xdpyinfo* to see if your screen supports eight-bit planes. For SGI, the device supports GL or OpenGL.
 - ◆ If using a terminal other than the default screen belonging to the machine, set the X-window output device:
 - C-shell: setenv DISPLAY your_terminal_name:0.0
 - Bourne shell: DISPLAY = your_terminal_name:0.0
 - export DISPLAY
- MARC/Link-Pro runs OK, then aborts**
- ◆ This can happen when the model you are working on becomes very large. MARC/Link-Pro requires a considerable amount of memory to store the model. We advise that a minimum of 32 Mb core memory be available in your machine.
 - ◆ Save memory by switching off the double buffering mode.
- MARC/Link-Pro MARC Menus are not displayed**
- ◆ This would happen if the directory in which Pro/ENGINEER is running has not been initialized.

Appendix C: MARC/Link-Pro Files and Subdirectories

The MARC/Link-Pro version you received contains a full set of subdirectories and files listed below.

Table 5 Contents of the MARC/Link-Pro Distribution Tape

Basic set:	Contents: required as minimum
maint	shell script for installation of MARC/Link-Pro
bin	shell scripts and program for MARC/Link-Pro
menus	Modified file.m for MARC/Link-Pro
security	password security files
proe	Release notes, README file, config.pro, marc.dat and example part files
proe/text	part.aux, assembly.aux menu files