

IF/Prolog V5.3

Installation Guide

Is there

anything you would like to tell us about this manual?
Please send us your comments.

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1 Preface

The IF/Prolog system from Siemens AG Austria is an implementation of the ISO Prolog standard (ISO = International Standardization Organization). This standard was prepared by ISO Working Group 17, comprising representatives from various national standardization bodies.

IF/Prolog also contains interfaces and predicates which extend the language and ensure compatibility with earlier versions of the product.

The Standard dictates us to supply a strictly conforming mode, where the Prolog system only accepts and supplies conforming language predicates. To invoke this mode, see the section on invoking IF/Prolog in the User's Guide.

Since we do not claim to be perfect, you should contact us should you encounter any problems; your critique and suggestions are most welcome.

We wish you every success and pleasure with IF/Prolog.

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2 IF/Prolog under Windows '95, '98 and Windows NT

The distribution media of IF/Prolog V5.3 is a CD-ROM. To install the IF/Prolog system, please proceed as follows:

1. Put the CD-ROM into your CD-ROM drive.
2. Activate the installation program. This may be done by activating the CD-ROM drive in your file manager or explorer.
3. You will be asked, in which directory your IF/Prolog shall be installed.
This directory will be your `PROROOT` directory.
4. Then you will be asked for the name of a program group. You can either select an existing program group from the list shown, or choose your own group name, or select the default.
5. When the installation is complete you should open your `PROROOT` directory and check if the following subdirectories exist:

```
bin
c
demos
prolib
manuals
```

Additionally, a file named *key* should exist in the `PROROOT` directory. It holds your personal license information. The proroot information will be set automatically into your *autoexec.bat* resp. *config.sys* file.

3 Installing IF/Prolog under Unix

This section contains all information you need to install IF/Prolog on a UNIX machine.

3.1 Installation

IF/Prolog can be installed either for general use by the system administrator (superuser) or for private use by any individual user.

The following commands should be executed to install IF/Prolog. Please refer to the following section (*Further Explanations*) for detailed explanations of each step.

For installation on Linux please consult the *README* file on **Disk1** of the Linux distribution.

3.2 Installation from a local tape drive

1. **cd /tmp**
2. **tar xvf <device> inst.tar**
<device> denotes the REWIND device entry for the tape drive.
3. **tar xvf inst.tar**
4. **sh ./install <device>**
5. Answer the questions the installation script puts to you.
6. Add the environment variable **PROROOT** to your environment and add *\$PROROOT/bin* to your command search path.
7. Enter your IF/Prolog license in the file *\$PROROOT/Key*.
8. **prolog**

3.3 Installation over a network connection from a remote host

1. **cd /tmp**
- 2a. **tar tvf <device>**
- 2b. **tar xvf <device> <tarfile> ...**
<device> denotes the REWIND device entry for the tape drive.
- 2c. Move the tarfiles to the directory on your local machine where you want to install IF/Prolog.
3. **tar xvf inst.tar**
4. **sh ./install tarfiles**
5. Answer the questions the installation script puts to you.
6. Add the environment variable PROROOT to your environment and add *\$PROROOT/bin* to your command search path.
7. Enter your IF/Prolog license in the file *\$PROROOT/Key*.
8. **prolog**

3.4 Installation of compressed files

In some cases the IF/Prolog shipment may reach you as a compressed tarfile. If so, please move the tarfile to the directory where you wish to install IF/Prolog, uncompress it using a command like **gunzip IFProlog52A.tar.gz** and extract the contents of the tarfile with **tar xvf IFProlog52A.tar**. You can then proceed with step 3 of the above installation procedure.

3.5 Further Explanations

If you are not familiar with installing software on a Unix machine please read the following additional information. There is an entry for each step in the installation procedure.

1. As a precaution against accidentally overwriting existing files we recommend installing from the */tmp* directory.
2. <device> denotes the standard rewind device entry for the device you wish to read from. Device entries usually have names like */dev/tape*, *dev/rmt0*, ... If you are unsure about the correct device entry to use, consult your system manuals or ask a colleague responsible for the system maintenance of the machine you are using.

The IF/Prolog files are written on the tape in standard Unix **tar** format. Each **tarfile** contains a number of files which are transferred to a subdirectory on your machine while the tarfile is read. The IF/Prolog delivery tape contains one file (tarfile) for the IF/Prolog development system, one file for every additional interface available (e.g. OSF/Motif, Informix, Constraints) plus one file containing the installation scripts.

You first read the tarfile containing the installation scripts from the tape.

- 2a. Read the contents of the distribution tape.
- 2b. Read all tarfiles on the remote machine.
- 2c. Transfer the tarfiles to the machine where you want to install. You can use **r_cp** (remote copy), **ft_p** in binary mode or any other appropriate tool. Change the current directory (**cd**) to this directory.
3. Extract the installation scripts from the corresponding tarfile.
4. The installation script reads additional files from the medium depending on which part(s) of IF/Prolog you wish to install. If you have installed the files from a remote machine, the installation procedure will simply assume that the relevant tarfiles are already in the **PROROOT** directory.
5. The installation procedure will ask you a few questions as to where to install IF/Prolog and how to configure the IF/Prolog kernel. You may install any interface you like and have disk space for, but you can only use those interfaces of IF/Prolog for which you have purchased a license. The IF/Prolog kernel automatically generated during installation will include all installed interfaces. You have to execute the script *link_prolog* if you want to bind a smaller kernel that excludes those interfaces for which you have no license.

If you are installing from tape, the installation script will suggest an installation directory. If you execute the *./install* script as the superuser, this default directory is system dependent. Otherwise, the default directory is the subdirectory *prolog* in the home directory of the person installing. However, you can install IF/Prolog in any directory you have write access to.

IF/Prolog will be generated according to the options you chose. You can always generate alternative or additional IF/Prolog kernels with different options at a later time by executing the *link_prolog* script delivered with the IF/Prolog system.

6. IF/Prolog uses the **PROROOT** environment variable to dynamically load additional data when needed. The way to set an environment variable depends on the command shell you use. Below we list the commands for the more common shells.

Korn shell, Bourne shell, or a related shell

```
Bourne shell (sh):  set PROROOT=<directory>
                   export PROROOT
Korn shell (ksh):  typeset -x PROROOT=<directory>
```

You should add those commands to the file *.profile* in your home directory. Then those commands will be executed automatically every time you login. Setting the PROROOT environment variable is not necessary when you install IF/Prolog as a superuser and select the system dependent installation directory proposed by the installation script.

You can always call IF/Prolog with the command *\$PROROOT/bin/prolog* or with the full directory path name. To call it just by *prolog*, you must add the subdirectory *\$PROROOT/bin* to the PATH environment variable. Look in your *.profile* file for a line

```
PATH=<some directories>
```

and edit it to include the IF/Prolog installation path:

```
PATH=...:$PROROOT/bin:...
```

If you cannot find this line, add the lines

```
PATH=$PATH:$PROROOT/bin
export PATH
```

C shell or a related shell

```
setenv PROROOT <directory>
```

You should add this command to the file *.login* in your home directory. Then this command will be executed automatically every time you login. Setting the PROROOT environment variable is not necessary when you install IF/Prolog as a superuser and select the system dependent installation directory proposed by the installation script.

You can always call IF/Prolog with the command *\$PROROOT/bin/prolog* or with the full directory path name. To call it just by *prolog*, you must add the subdirectory *\$PROROOT/bin* to the *path* or PATH environment variable.

Look in your *.login* file for a line

```
set path = ( <some directories> )
```

and edit it to include the IF/Prolog installation path:

```
set path = ( ... $PROROOT/bin ... )
```

If you cannot find this line, add the line

```
set path = ( $PROROOT/bin $path )
```

7. See section *Licensing* in this guide.
8. IF/Prolog should now display an introductory message and a prompt. Type a simple query, e.g.
`write(hello).`

to ensure your IF/Prolog system works. To leave IF/Prolog, type `halt`.

To run some demos have a look at the *PROROOT/DEMOS* subdirectories.

3.6 Troubleshooting

If you have problems in installing IF/Prolog, you can always get in touch with your IF/Prolog vendor. The installation procedure creates an installation log *install.log* in the directory where you started the installation.

Below we list some known sources of trouble.

Tape read errors

Before reading the tarfiles and extracting them, make sure that you have enough disk space.

First check whether you use the correct device entry. Then try to read the tape from a tape drive on a different machine. If this works, please install over a network connection as explained above.

IF/Prolog binary cannot be generated

IF/Prolog makes some system dependent assumptions on the places where certain libraries are to be found. Please check the paths in the file *link_sys.sh* and change if different on your machine. Also, it usually calls the C compiler to bind the IF/Prolog kernel. If a C compiler (`cc`) cannot be found, it tries to use the linker (`ld`). As a last resort a prelinked kernel will be installed. Please check the commands in the file *link_com.sh* and adapt to your machine. If you have some advanced knowledge of Unix you can also try to trace the installation script or *link_prolog* in order to locate and fix problems.

Licensing problems

Please make sure that the license is correct for the machine you installed IF/Prolog on, that the license information was correctly entered in the file *Key*, and that this file has read permission for you.

Shared Library problems

If IF/Prolog cannot find some shared libraries at startup, please check whether you have these libraries on your machine. If they are not on your machine, you cannot run IF/Prolog before installing them. Otherwise your environment must be configured to include the respective directories in the lookup path. For example, on a Sun machine there is an environment variable `LD_LIBRARY_PATH` that has been set to */usr/X11R5/lib:/usr/IXMOTIS12B/lib* in order to allow access to X and OSF/Motif shared libraries.

4 Licensing

First, you should invoke the IF/Prolog system to check that the installation was successful.

The IF/Prolog system should start, but immediately you should get a message "PROLOG license/keyinformation missing". This happens, because your personal key information is not yet in the previously mentioned file *Key* in the PROROOT directory.

The license will be generated by your IF/Prolog distributor or vendor or by the IF/Prolog Development and Support, if you supply the following information:

1. Your machine identification. You get it by invoking the program $\$PROROOT/bin/-machid$ (UNIX) or $\$PROROOT\bin\machid.exe$ (MS-Windows). The machine identification is a hexadecimal number.
2. Your configuration: runtime system or development system with or without additional packages, like constraints, motif, bdd.
3. Your name and company.

You will then get the key from your distributor. Edit the file *Key* under the PROROOT directory and create a line similar to the example line. Your key line must not have a comment sign # at the beginning. Please do not forget to add an end-of-line character to each licence key entry.