

Installing Synopsys Proteus

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Installing Synopsys Proteus: Proteus, Proteus LRC, Proteus MBAF, and Proteus RBAF

This document contains specific information to prepare for and verify installation of Proteus, Proteus LRC, Proteus MBAF, and Proteus RBAF, as well as links to installation instructions.

Note: The installation instructions in this document are the most up-to-date instructions available at the time of production. However, changes might have occurred. For the latest installation information, see the product release notes.

This document contains the following sections:

- [Media Availability and Supported Platforms](#)
- [Disk Space and Memory Requirements](#)
- [Installing the Software](#)
- [Setting Up the User Environment](#)
- [Verifying the Installation](#)
- [Accessing Synopsys Proteus Documentation](#)

To install Synopsys tools, it is recommended that you have system administrator privileges. You need write permission for the installation directory.

Media Availability and Supported Platforms

Synopsys Proteus products are available by electronic software transfer (EST) download or as tangible media (DVD or CD, depending on the image size). Obtain the appropriate binary executable files based on the operating system (OS) you need.

[Table 1](#) lists the supported compute platforms, operating systems, corresponding Synopsys platform keywords, and window environments for this release. Many platforms require operating system patches.

For detailed information, see the Supported Platforms Guide page on the Synopsys Web site. Go to <http://www.synopsys.com/qsc> and select the appropriate foundation for your release. This Web page provides information about supported hardware, operating systems, and required OS patches. If the required patch described on this page is not available from the platform vendor, install the most recent patch instead.

Table 1 Supported Platforms, Operating Systems, and Keywords

Platform	Operating system	Synopsys platform keyword	Window environment
x86_64	Red Hat Enterprise Linux v4, 5 ¹	amd64 (64-bit mode) ²	GNOME
x86_64	SUSE Linux Enterprise Server v9, 10 ¹	suse64 (64-bit mode)	KDE

1. Binary-compatible hardware platform or operating system. Note, however, that binary compatibility is not guaranteed. See <http://www.synopsys.com/qsc> for the latest information.

2. The 64-bit (x86_64) Linux software is binary compatible with the Intel EM64T or AMD Opteron running Red Hat Enterprise Linux. See <http://www.synopsys.com/qsc> for the latest information.

Note: The Synopsys Proteus product software is configured so that multiple platforms of this version can be installed in a single installation directory (*install_dir*).

Disk Space and Memory Requirements

Make sure you have enough disk space and memory for the Synopsys Proteus products' installation.

The minimum memory requirements for all Synopsys Proteus products are:

- Physical Memory: 512 MB (recommended: 2 GB or more)
- Swap Space: 1 GB (recommended: 2 GB or more)

The disk space requirements for the Synopsys Proteus product family vary depending on the platforms and tools selected for installation. The following tables show the minimum disk space required for installing each product on a particular platform.

Table 2 Proteus Disk Space Requirements

Operating system	Space required (MB)
Red Hat Enterprise Linux v4, 5 64-bit	729
SUSE Linux Enterprise Server (SLES) v9, 10 64-bit	747
All Platforms	1476

Installing the Software

The Synopsys Proteus products use the Synopsys Installer tool, which allows you to use a graphical user interface (GUI) or a text script. For information about downloading the Synopsys Installer and Proteus, see *Installing Synopsys Tools*, available at http://www.synopsys.com/support/installation/install_guide.html.

To install Synopsys Proteus products by EST, follow the procedures described in *Installing Synopsys Tools*.

Installing Synopsys Tools shows an example Synopsys media installation script for the synthesis tools. Proteus is installed in a similar manner.

The Synopsys Proteus products should be installed into the same directory location.

The products cannot be installed over any previous existing versions of the same product. In other words, a new version of Proteus cannot be installed over an existing version of Proteus. For each new version of the Synopsys Proteus products, you must create a new installation directory.

Important: The use of the xmscript application in Proteus requires that Motif, free software from <http://www.opengroup.org/openmotif>, be installed on your system. This is typically a part of your base operating system package, but if you have trouble launching xmscript, check to see that Motif is installed. If it is not, contact your workstation vendor for more information.

Setting Up the User Environment

A platform-independent wrapper script is provided for the Synopsys Proteus products. This script automatically determines the OS platform at runtime, which simplifies the setup required to use Synopsys Proteus.

The platform-independent wrapper script is located at *install-dir/bin* and includes the `-64bit` options.

Note: If you select a platform executable file that is not available, an automatic switch is made to an available platform based on your current environment. No warning message is issued.

To set up the user environment, you must

- [Specify the Executable File Location](#)
- [Set the License File Environment Variable](#)
- [Set Other Necessary Environment Variables and Job Control Keywords](#)

Specify the Executable File Location

Add the Synopsys Proteus directory containing the executable file to the `PATH` environment variable.

- If you are using the C shell, add the following line to the `.cshrc` file:

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

- If you are using the Bourne, Korn, or Bash shell, add the following line to the `.profile`, `.kshrc`, or `.bashrc` file:

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

Set the License File Environment Variable

You must install the Synopsys Common Licensing (SCL) software, retrieve your license key file, and define the `SNPSLMD_LICENSE_FILE` or `LM_LICENSE_FILE` environment variable before you can verify the Synopsys Proteus installation.

For information about downloading and installing SCL and on setting the license variable, see the *Synopsys Licensing QuickStart Guide*, which is available from <http://www.synopsys.com/Support/Licensing/Licensing/Pages/default.aspx>.

To set up your users, you must create a Synopsys source file, or modify each user's `$HOME` setup files (typically `.cshrc`, `.profile`, `.kshrc`, or `.bashrc`), as follows. In this example, `SNPSLMD_LICENSE_FILE` is used.

1. Set `SNPSLMD_LICENSE_FILE`. This variable specifies the path to the Synopsys FLEXlm license server.

In the following example, it is assumed that the Synopsys license server is using TCP port 27000, the default port. (However, you can specify another port by modifying the `SERVER` line of your site's keyfile—for example, "`SERVER myserver 8308a297 26585.`")

- Add to `.cshrc`

```
setenv SNPSLMD_LICENSE_FILE 27000@myserver
```

- Add to `.profile`, `.kshrc`, or `.bashrc`

```
SNPSLMD_LICENSE_FILE=27000@myserver  
export SNPSLMD_LICENSE_FILE
```

Set Other Necessary Environment Variables and Job Control Keywords

The following steps describe how to set other environment variables and job control keywords necessary to run Synopsys Proteus tools.

1. Set the `$PRECIM_HOME` environment variable to your Synopsys Proteus installation directory.

For C shell users:

```
setenv PRECIM_HOME /path_to_synopsys_root
```

For Bourne, Korn, or Bash shell users:

```
PRECIM_HOME = /path_to_synopsys_root  
export PRECIM_HOME
```

2. Source the `precim_setup` script provided in the installation directory.

For C shell users:

```
source $PRECIM_HOME/precim_setup.csh
```

For Bourne, Korn, or Bash shell users:

```
. $PRECIM_HOME/precim_setup.sh
```

3. Set the `$DISPLAY` environment variable for your workstation.

For C shell users:

```
setenv DISPLAY my_display:0.0
```

For Bourne, Korn, or Bash shell users:

```
DISPLAY = my_display:0.0
export DISPLAY
```

4. Load libProteus.so in IC WorkBench Plus.

IC WorkBench Plus might release with a version of the Proteus libraries that is not the latest shipping version. To use new modeling functionality in IC WorkBench Plus, you need to ensure that the latest version of libProteus.so is loaded into ICWB Plus.

The `precim_setup.csh` file, included with Synopsys Proteus products, will automatically set `$PROTEUS_LIB` to the proper location. If you run IC WorkBench Plus after setting up the Proteus environment, ICWB Plus will load the correct library automatically.

For more information on how to load libProteus.so into ICWB Plus, see the “Proteus Shared Libraries” section in the *IC WorkBench Plus User Guide*.

5. (Optional) Add the keyword `CHECKOUT_LICENSE` to your job control file to check out a specific license before running distributed processing. For example,

```
CHECKOUT_LICENSE "license_name_string1"
["license_name_string2" ... "license_name_stringn"]
```

... where `license_name_string` is a valid license name, such as "OPC", contained within quotation marks. Valid license names can vary from release to release and should be confirmed with your Synopsys account team.

Multiple license names, separated by a space, can be specified in one `CHECKOUT_LICENSE` command.

Note: Consult your Synopsys account team if you have questions about your product’s license keys.

Verifying the Installation

The following sections describe how to verify the Synopsys Proteus products' installation.

Verifying the Proteus Installation

To verify the Proteus installation,

1. Make sure you are in a directory where you have read/write privileges.

```
% cd $HOME
```

2. Invoke the tool by entering

```
% $PRECIM_HOME/bin/xmscript -v
```

If you see information about the product version, production date, and copyright, the installation was successful.

Verifying the Proteus LRC Installation

To verify the Proteus LRC installation,

1. Make sure you are in a directory where you have read/write privileges.

```
% cd $HOME
```

2. Invoke the PLRC main recipe by entering

```
% recipeGet lrc
```

3. Do a directory listing.

If you see the following files, the installation was successful:

- lrcBinaryLine.xjc
- lrcBinaryLine.blk
- lrcBinaryLine.flow

Verifying the Proteus MBAF Installation

Note: Proteus assist feature software is divided into Proteus Rule-Based AF and Proteus Model-Based AF. Purchasing Proteus MBAF will also include all RBAF functionality.

To verify the Proteus MBAF installation,

1. Make sure you are in a directory where you have read/write privileges.

```
% cd $HOME
```

2. Invoke the MBAF main recipe by entering

```
% recipeGet MBAF
```

3. Do a directory listing.

If you see the following files, the installation was successful:

- mbaf.xjc
- mbaf.blk
- mbaf.flow

Verifying the Proteus RBAF Installation

Note: Proteus assist feature software now is divided into Proteus Rule-Based AF and Proteus Model-Based AF. Purchasing Proteus RBAF will entitle you to a PA license, as well as an AF license for the RBAF GUI.

To verify the Proteus RBAF installation,

1. Make sure you are in a directory where you have read/write privileges.

```
% cd $HOME
```

2. Invoke the RBAF GUI by entering

```
% $PRECIM_HOME/bin/afgen -v
```

If you see information about the product version, production date, and copyright, the installation was successful.

Accessing Synopsys Proteus Documentation

The documentation for the Synopsys Proteus products is available as PDF files and from the product GUIs' Help windows.

In order for the user to view the Proteus or Proteus AF release notes in Adobe Reader from the product's help menu, you must put the release note PDF files in \$PRECIM_HOME/doc/<product>/.

Viewing and Printing Proteus Documentation in Portable Document Format

To view and print Proteus documentation in PDF, you must have Adobe Acrobat Reader installed on your machine.