PrimeTime® Installation Notes
Version B-2008.06

June 9, 2008

These installation notes present information about installing PrimeTime version B-2008.06 in the following sections:

The PrimeTime installation includes all products in the PrimeTime suite: PrimeTime, PrimeTime SI, PrimeTime PX, and PrimeTime VX.

See also http://www.synopsys.com/install for additional installation and licensing information.

Media Availability and Supported Platforms

PrimeTime is available by electronic software transfer (EST) download upon initial software release, and at a later date on DVD (or CD depending on image size). Obtain the appropriate binary executable files based on the operating system you need. Table 1-1 shows the supported platforms for the B-2008.06 release.

Table 1-1 Supported Platforms and Keywords

Platform	Operating system	Synopsys platform keyword
AMD Opteron	Red Hat Enterprise Linux v4, v5[1]	amd64 (64-bit mode) linux (32-bit mode)[2]
EMT64T	SUSE Linux Enterprise 9, 10	suse64 (64-bit mode) suse32 (32-bit mode)
IA-32 (X86)	Red Hat Enterprise Linux v4, v5[1]	linux (32-bit mode)[2]
IBM RS/6000	AIX 5.3	rs6000 (32-bit mode) aix64 (64-bit mode)
Sun SPARC	Solaris 9, 10	sparcOS5 (32-bit mode) sparc64 (64-bit mode)

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

2. The 32-bit (x86) Linux software is binary compatible with Intel EM64T or AMD Opteron running Red Hat Enterprise Linux. Note, however, that binary compatibility is not guaranteed.

Disk Space and Memory Requirements

The disk space requirement varies, depending on the platform and tool selected for installation. During the installation process, Synopsys Installer displays the required disk space.

The minimum physical memory required is 150 MB. The recommended minimum physical memory is 1 GB. The minimum swap space is 256 MB. The recommended minimum swap space is 2 GB. For large designs, the expected amount of required memory is approximately 1 million bytes per 2,000 gates.

Accessing Memory Beyond 2 GB With 32-Bit Tools

The PrimeTime tool can extend memory beyond 2 GB. Note that available memory is calculated as space not used by the operating system (OS), the windowing system, or other applications.

To access memory beyond 2 GB,

1. Make sure your server has Solaris 9 or later loaded.
2. Make sure your server has at least 4 GB of memory (physical and swap space) available.

   Note:

   Physical memory equals data size plus stack size and stack size is used before data size. Therefore, setting stack size to a large value causes problems for designs that are larger than 2 GB. If you set the stack size too high, you cannot get enough memory for your data. To check the settings, use the `limit` command at the system prompt.
3. Make sure the system you are using does not have restrictions that prevent you from using more than 2 GB of memory.
4. Create unlimited data size using the C, Bourne, Korn, or Bash shell. If there are system-wide limits on the data size you can create, you can remove them or override them.

   - Enter one of the following commands based on the shell you are using:

     For the C shell,

     ```
     % limit datasize 3800000
     ```

     For the Bourne, Korn, or Bash shell,

     ```
     # ulimit -S -d 3800000
     ```

   - Modify the kernel of your server. This approach allows everyone using your server to extend memory beyond 2 GB.

Installing the Software

PrimeTime uses the Synopsys Installer tool, which allows you to use a text script or a graphical user interface (GUI). For information about downloading the Synopsys Installer and PrimeTime, see the document *Installing Synopsys Tools* at http://www.synopsys.com/install.

To install PrimeTime, follow the procedures described in *Installing Synopsys Tools*. This document provides a Synopsys media installation script. PrimeTime is installed in a similar manner.

PrimeTime is a stand-alone product and cannot be installed over an existing Synopsys product, including a prior version of PrimeTime. You must create a new directory for PrimeTime.

Setting Up the User Environment

To set up the user environment, you must specify the location of the executable file and set the license environment variable.

PrimeTime provides platform-independent wrapper scripts located at *primetime_root*/bin. These scripts automatically determine the platform and execute the correct executable file in the *primetime_root/platform*/syn/bin directory. (You no longer have to change the UNIX search path for specific platforms; however, specifying the path using the old method still works.)

The platform-independent wrapper scripts support the following options:

```
-32bit|-64bit
```

Note:

If you do not specify an option, PrimeTime attempts to use 32-bit binary files. If you select an executable file that is not available, the tool terminates with the following error message: “cannot find pt_shell_exe.”

Specifying the Executable File Location

To set up a new PrimeTime user,

1. Add the directory containing the pt_shell executable file to the `PATH environment variable`.

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

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

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

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

   Note:

   PrimeTime does not require the `$SYNOPSYS` variable.

2. (Optional) Place a .synopsys_pt.setup file in the user's home directory.

   This step enables you to customize the default setting for the setup file.

   If you are using the C shell, enter

   ```
   % cp primetime_root/admin/setup/.synopsys_pt.setup
   ```

   If you are using the Bourne, Korn, or Bash shell, enter

   ```
   # cp primetime_root/admin/setup/.synopsys_pt.setup
   ```

   You can modify this file to customize the settings for each user.

Setting the SNPSLMD_LICENSE_FILE Environment Variable

You must install the Synopsys Common Licensing (SCL) software and define the `SNPSLMD_LICENSE_FILE` variable before you can verify the PrimeTime installation.

For information about downloading SCL, installing SCL, or setting the license variable, see *Installing Synopsys Tools* at http://www.synopsys.com/install.

Installing Make CCS Noise

The Make CCS Noise program is installed automatically with Liberty NCX and PrimeTime SI. However, before running `make_ccs_noise`, you must set either the `MTB_TPATH` or `CCSN_TPATH` environment variable under the operating system to a specific path in the Make CCS Noise installation, as shown:

```
% setenv MTB_TPATH $synopsys/ccsn/platform
```

or

```
% setenv CCSN_TPATH $synopsys/ccsn/platform
```

where `$synopsys` is the directory where Liberty NCX or PrimeTime SI was installed, as specified in the Synopsys installer script, and *`platform`* is the name of the platform on which `make_ccs_noise` is being invoked: `linux`, `sparcOS5`, `sparc64`, `suse32`, `suse64`, or `amd64`. For example,

```
% setenv CCSN_TPATH /tools/pt_2007_12/ccsn/amd64
```

In the configuration file, set the `perl_path` command, which specifies the path to the Perl interpreter, and point it to the following path:

```
set perl_path $CCSN_TPATH/perl/bin
```

where `$CCSN_TPATH` is the directory where Make CCS Noise was installed. Make sure that you specify the full path rather than use an environment variable.

Make CCS Noise Sed Version

The Make CCS Noise installation script requires that you have the GNU version of `sed` on your installation machine. Determine which `sed` version you have by typing the following command at the shell prompt:

```
% sed --version
```

If it returns `GNU sed version <version number>`, the version is correct. However, if it returns `sed:illegal option -- -`, the version of `sed` will not work. You should try reinstalling Make CCS Noise on a Linux machine. Some Solaris machines do not support the GNU version of `sed`.

Verifying the PrimeTime Installation

To verify the installation of PrimeTime

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

   ```
   % cd $HOME
   ```

2. Invoke the tool by entering one of the following commands from a licensed machine:

   ```
   % primetime_root/bin/pt_shell  #start PrimeTime shell

   % primetime_root/bin/pt_shell -gui  #start PrimeTime GUI
   ```

   If you obtain the correct prompt, or if a GUI appears, the installation was successful.