

NanoTime™ Installation Notes

Version D-2009.12

December 7, 2009

These installation notes present information about installing NanoTime version D-2009.12 in the following sections:

- [Media Availability and Supported Platforms](#)
- [Disk Space and Memory Requirements](#)
- [Installing the Software](#)
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Note:

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

See also <http://www.synopsys.com/Support/Licensing/Installation/Pages/default.aspx> for additional installation and licensing information.

Media Availability and Supported Platforms

NanoTime 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).

[Table 1](#) shows the supported compute platforms, operating systems, Synopsys platform keywords, and windowing environments for this release.

Table 1 Supported Platforms, Operating Systems, and Keywords

Compute platform	Operating system	Synopsys platform keyword	Desktop windowing environment
x86_64	Red Hat Enterprise Linux v4, 5 ¹	amd64 (64-bit mode) linux (32-bit mode) ²	GNOME
x86_64	SUSE Enterprise Linux v9, 10 ¹	suse64 (64-bit mode) suse32 (32-bit mode)	KDE
x86_64	Solaris 10	x86sol64 (64-bit mode) x86sol32 (32-bit mode)	CDE
x86	Red Hat Enterprise Linux v4, 5 ¹	linux (32-bit mode) ²	GNOME
x86	SUSE Enterprise Linux v9,10 ¹	suse32 (32-bit mode)	KDE
Sun SPARC	Solaris 9, 10 ¹	sparc64 (64-bit mode) sparcOS5 (32-bit mode)	CDE

1. Binary-compatible hardware platform or operating system. Note, however, that binary compatibility is not guaranteed. See <http://www.synopsys.com/Support/Licensing/SupportPlatform/ReleaseSupport/Pages/default.aspx> for the latest on supported platforms, including required OS patches.

2. The 32-bit (x86) and 64-bit (x86_64) Linux software is binary compatible with the Intel EM64T or AMD Opteron processors running Red Hat Enterprise Linux.

Disk Space and Memory Requirements

The disk space requirement depends on the platform. [Table 2](#) shows the minimum space required for installing NanoTime on a particular platform.

Table 2 Disk Space Requirements (in Megabytes)

Synopsys platform keyword	Megabytes
common (platform-independent files)	50
amd64	210
linux	200
suse64	210
suse32	200
x86sol64	325
x86sol32	275
sparc64	300
sparcOS5	270

The minimum physical memory required is 256 MB. The recommended minimum physical memory is 1 GB. The minimum swap space required is 512 MB. The recommended minimum swap space is 2 GB. For large designs, the expected amount of required physical memory is approximately 1 GB per 100,000 transistors or library cell instances.

Accessing Memory Beyond 2 GB With 32-Bit Tools

NanoTime can extend memory beyond 2 GB.

Note:

The 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 at least 4 GB of memory (physical and swap space) available.

Note:

Physical memory equals data size plus stack size. 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, enter the `limit` command at the system prompt.

2. Make sure the system you are using does not have restrictions that prevent you from using more than 2 GB of memory.
3. 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

NanoTime uses the Synopsys Installer, which allows you to use a text script or a graphical user interface (GUI). For information about downloading the Synopsys Installer, see *Installing Synopsys Tools*, which is available at the following address:

<http://www.synopsys.com/Support/Licensing/Installation/Pages/default.aspx>

To install NanoTime, follow the procedures described in *Installing Synopsys Tools*. NanoTime is a standalone product and must be installed in an empty directory, using the latest version of the Synopsys Installer. Do not install NanoTime over an existing Synopsys product, including prior versions of NanoTime.

Setting Up the User Environment

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

Specifying the Executable File Location

A platform-independent wrapper script is provided for NanoTime. This script automatically determines the operating system platform at runtime, which simplifies the setup required to use NanoTime.

The platform-independent wrapper script is located at *install_dir/bin* and includes the following options:

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

Note:

If you select a platform executable file that is unavailable, an automatic switch is made to an available platform based on your current environment. No warning message is issued.

To set up the environment by using the platform-independent wrapper script, add the NanoTime bin directory to the `PATH` environment variable.

- To set up the environment using the C shell, add the following line to the `.cshrc` file:

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

- To set up the environment 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
```

Replace *install_dir* with the NanoTime installation directory.

Setting 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` environment variable before you can verify the NanoTime installation.

For information about downloading SCL, installing SCL, or setting the license file variable, see the *Synopsys Licensing Quickstart Guide*, which is available at the following address:

<http://www.synopsys.com/Support/Licensing/Licensing/Pages/default.aspx>

Verifying the NanoTime Installation

To verify the NanoTime installation,

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

```
% cd $HOME
```

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

- To start NanoTime in shell mode, enter

```
% install_dir/bin/nt_shell
```

Replace *install_dir* with the NanoTime installation directory.

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