

Formality[®] Installation Notes

Version B-2008.09

September 8, 2008

These installation notes present information about installing Formality version B-2008.09 in the following sections:

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To ensure a successful installation, create the Synopsys root directory before beginning the installation process.

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

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Media Availability and Supported Platforms

When the Milkyway Environment software is initially released, it is available by electronic software transfer download. At a later date, it becomes available 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 operating systems and keywords for this release.

Table 1-1 Supported Operating Systems and Keywords

Platform	Operating system	Platform keyword	Path keyword
AMD Opteron	Red Hat Enterprise Linux v4, v5 ¹	amd64 (64-bit mode)	AMD.64
EM64T	SUSE Enterprise Linux 9, 10 ¹	suse64 (64-bit mode) suse32 (32-bit mode)	SUSE.64 SUSE.32
IA-32 (x86)	Red Hat Enterprise Linux v4, 5 ¹	linux	IA.32
Sun SPARC	Solaris 9, 10 ¹	sparcOS5 (32-bit) sparc64 (64-bit)	SUN.32 SUN.64

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

To install a product, select the appropriate platform keyword. To set an environment variable, select the appropriate path keyword.

Disk Space and Memory Requirements

The Formality tool has the following minimum memory requirements:

- Physical Memory – 256 MB (1 GB recommended)
- Swap space – 512 MB (2 GB recommended)

For large designs, the expected amount of required memory is approximately 1 million bytes per 2,000 gates.

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.

Accessing Memory Beyond 2 GB With 32-Bit Tools

In general, UNIX-based systems support a maximum memory of 2 GB for 32-bit processes. However, the Formality tool can extend memory beyond 2 GB.

Note:

Available memory is space not used by the 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 need to go over 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. For more information, see the document *Installing Synopsys Tools* at <http://www.synopsys.com/install>.

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 in the shell that you are using: C, Bourne, Korn, or Bash. If there are system-wide limits on the data size you can create, you can remove them or override them. You can do this in one of two ways:
 - Enter one of the following commands:

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

Formality 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 Formality, see the document *Installing Synopsys Tools* at <http://www.synopsys.com/install>.

To install Formality follow the procedures described in the document *Installing Synopsys Tools*. This document provides a Synopsys media installation script. Formality is installed in a similar manner. Formality is a stand-alone product and cannot be installed over an existing Synopsys product, including a prior version of Formality. You must create a new directory for Formality.

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.

Specifying the Executable File Location

To set up a new Formality tool user, add the Formality 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=($SYNOPSYS/bin $path)
```

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

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

For information about the Synopsys setup file, see the *Formality User Guide*.

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

Verifying the Formality Installation

To verify the Formality installation,

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

```
% cd $HOME
```

2. Invoke the Formality shell by entering the following command:

```
% $SYNOPSYS/bin/fm_shell
```

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

3. Exit `fm_shell` by entering `exit` on the command line.
4. Run the Formality GUI on each installed platform by entering the following command:

```
% $SYNOPSYS/bin/formality
```

You can also invoke the GUI by entering

```
% $SYNOPSYS/bin/fm_shell -gui
```

5. Exit the GUI by choosing File > Exit in any GUI window.

