

# Formality<sup>®</sup> Installation Notes

## Version C-2009.06

June 8, 2009

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These installation notes present information about installing Formality version C-2009.06 in the following sections:

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

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.

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## Media Availability and Supported Platforms

Formality is available by 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	Windowing Environment
x86_64	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	amd64 (64-bit mode) linux (32-bit mode) <sup>2</sup>	GNOME
x86_64	SUSE Enterprise Linux v9, 10 <sup>1</sup>	suse64 (64-bit mode) suse32 (32-bit mode)	KDE
x86_64	Solaris 10	x86sol64 (64-bit mode) x86sol32 (32-bit mode)	CDE
IBM RS6000	AIX 5.3	rs6000 (32-bit mode) aix64 (64-bit mode)	CDE
x86	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	linux (32-bit mode) <sup>2</sup>	GNOME
x86	SUSE Enterprise Linux v9,10 <sup>1</sup>	suse32 (32-bit mode)	KDE
Sun SPARC	Solaris 9, 10 <sup>1</sup>	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/Pages/default.aspx> for latest information.

2. The 32-bit (x86) and 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/Support/Licensing/Pages/default.aspx> for latest information.

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## Disk Space and Memory Requirements

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

*Table 2 Disk Space Requirements (in Megabytes)*

Operating System	Megabytes
Red Hat Enterprise, Linux v4, 5	182
SUSE Enterprise, Linux 9, 10	181
Solaris 10	196
AIX 5.3	251
Solaris 9, 10	211

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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.

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## Accessing Memory Beyond 2 GB With 32-Bit Tools

The Formality 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 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.

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.

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## 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, see *Installing Synopsys Tools* at <http://www.synopsys.com/Support/Licensing/Installation/Pages/default.aspx>.

To install Formality, follow the procedures described in *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 versions of Formality. You must create a new directory for Formality.

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## 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.

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### Specifying the Executable File Location

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

The platform-independent wrapper script is located at *install\_dir/bin* and include the following options:

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

Note:

If you select a platform executable file that is not available, you are automatically switched 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 Formality bin directory 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
```

Replace `install_dir` with the Formality installation directory.

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## 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/Support/Licensing/Installation/Pages/default.aspx>.

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## Verifying the Formality Installation

To verify the Formality Installation, make sure you are in a directory where you have read/write privileges.

```
% cd $HOME
```

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

If you are in GUI mode, enter

```
% install_dir/platform/syn/bin/icc_shell -gui
```

If you are in shell mode, enter

```
% install_dir/platform/syn/bin/icc_shell
```

Replace *install\_dir* with the Formality installation directory and platform with the appropriate platform (see [Table 1](#)).

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