

# ESP Installation Notes

## Version D-2010.06

June 7, 2010

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These installation notes present information about installing ESP version D-2010.06 in the following sections:

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

To obtain the latest product Installation Guide, go to <http://www.synopsys.com/install>. For detailed licensing setup and troubleshooting assistance, see the *Licensing QuickStart Guide* at <http://www.synopsys.com/licensing>.

## Media Availability and Supported Platforms

ESP 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 <sup>1</sup>	amd64 (64-bit mode) <sup>2</sup> linux (32-bit mode) <sup>2</sup>	GNOME
x86_64	SUSE Linux Enterprise Server 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
x86	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	linux (32-bit mode) <sup>2</sup>	GNOME
x86	SUSE Linux Enterprise Server 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
IBM RS6000	AIX 5.3, 6.1 <sup>1</sup>	rs6000 (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/qsc> 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 or AMD x86\_64 processors running Red Hat Enterprise Linux.

For detailed platform support information, see the Release Specific Support page on the Synopsys Qualified System Configuration Web site at the following address:

<http://www.synopsys.com/qsc>

This Web page provides release-specific information about supported hardware, operating systems, and required operating system patches. If the required patch described on this page is not available from the platform vendor, install the most recent patch instead.

Synopsys products, including the Synopsys Installer, have been verified against the supported platforms listed in [Table 1](#).

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## Disk Space and Memory Requirements

The disk space requirement depends on the platform. [Table 1](#) shows the minimum space required for installing ESP on a particular platform.

*Table 1 Disk Space Requirements (in Megabytes)*

Operating System	Megabytes
Red Hat Enterprise, Linux v4, 5	500
SUSE Enterprise, Linux 9, 10	500
Solaris 10	500
AIX 5.3	500
Solaris 9, 10	500

ESP has the following minimum memory requirements:

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

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

ESP 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.

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## Installing the Software

ESP 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/install>

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

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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 file environment variable.

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### Specifying the Executable File Location

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

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

`-32bit | -64bit`

To set up the environment by using the platform-independent wrapper script, add the ESP 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 lines to the `.profile`, `.kshrc`, or `.bashrc` file:

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

Replace *install\_dir* with the ESP installation directory.

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## 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` or `LM_LICENSE_FILE` environment variable before you can verify the ESP 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/licensing>

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## Verifying the ESP Installation

This section describes the ESP Shell installation verification procedure and the Formality ESP installation verification procedure.

### Verifying the ESP Shell Installation

To verify the ESP Shell installation, run a small test case from the installation doc directory for the release.

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

```
% cd $HOME
```

2. Obtain a copy of test source files.

```
% mkdir ~/testinstall
% cd ~/testinstall
% cp ESP_install_dir/doc/esp/demo/install/* .
```

where *ESP\_install\_dir* is the ESP Shell installation directory.

3. Run a test case.

```
% esp_shell -f run_esp_shell.tcl
```

or

```
% ESP_install_dir/bin/esp_shell -f run_esp_shell.tcl
```

4. The `esp_shell.log` file created by the tool should look similar to the `esp_shell.log.GOLD` file.

## Verifying the Formality ESP Installation

To verify the Formality ESP installation, run a small test case from the ESP installation directory for the release.

Formality ESP requires that both Formality and ESP be installed. You must also set the UNIX environment variable `SYNOPTSYS_ESP_ROOT` to the ESP installation directory.

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

```
% cd $HOME
```

2. Obtain a copy of test source files.

```
% mkdir ~/testinstall
% cd ~/testinstall
% cp ESP_install_dir/doc/esp/demo/install/* .
```

where *ESP\_install\_dir* is the ESP installation directory.

3. Run a test case.

```
% fm_shell -esp -f run_fm_shell.tcl
```

or

```
% Formality_install_dir/bin/fm_shell -esp -f run_fm_shell.tcl
```

where *Formality\_install\_dir* is the Formality installation directory.

4. The `fm_shell.log` file created by the tool should look similar to the `fm_shell.log.GOLD` file.