

VCS Installation Notes

Version Y-2006.06

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These installation notes present the latest information about installing VCS in the following sections.

This chapter contains the following sections:

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The instructions in this chapter also apply to VCSi.

Media Availability and Supported Platforms

When VCS 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. See http://www.synopsys.com/products/sw_platform.html for latest information.

Table 1-1 *Platforms and Keywords*

Platform	Operating system	Synopsys platform keyword	Additional keywords ¹
AMD Opteron	Red Hat Enterprise Linux v3	amd64 (64-bit mode) linux (32-bit mode) ²	amd64_32
EM64T	SUSE Enterprise Linux 9	suse64 (64-bit mode) suse32 (32-bit mode) ²	suse64_32
HP PA-RISC 2.0	HP-UX 11.0, 11.11 (11i) ³	hp64 (64-bit mode) hp32 (32-bit mode)	hp64_32
IA-32 (X86)	Red Hat Enterprise Linux v3	linux (32-bit mode) ²	
IBM RS/6000	AIX 5.3	rs6000 (32-bit mode)	
Sun SPARC	Solaris 9, 10 ³	sparc64 (64-bit mode) sparcOS5 (32-bit mode)	sparc64_32

1. *These keywords assume 64-bit compilation with 32-bit simulation.*

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.*

3. *Binary-compatible hardware platform or operating system. Note, however, that binary compatibility is not guaranteed.*

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 VCS 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 [“Configuring the Environment” on page 1-10](#).

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

VCS uses the Synopsys Installer tool, which allows you to use a graphical user interface (GUI) or a text script. For information about downloading Synopsys Installer and VCS, see [“Synopsys Product File Download Methods” on page 1-17](#).

To install VCS by EST or from the DVD (or CD depending on image size), follow the procedures described in [“Installing Products with the Synopsys Installer” on page 1-29](#).

[Example 1-1 on page 1-35](#) shows a Synopsys media installation script for the synthesis tools. VCS is installed in a similar manner.

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

Setting the Environment Variables

This section discusses the following environment variables:

- VCS_HOME
- SNPSLMD_LICENSE_FILE

It is recommended that you place these variables in your \$HOME/.cshrc or \$HOME/.profile file as your default settings.

Setting the VCS_HOME Environment Variable

Follow these steps.

1. Set the VCS_HOME environment variable to point to the installation root directory.

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

```
% setenv VCS_HOME /usr/synopsys/vcs/version
```

- If you are using the Bourne shell, add these lines to the .profile or .bashrc file:

```
% VCS_HOME=/usr/synopsys/vcs/version
export VCS_HOME
```

2. Add \$VCS_HOME/bin to your search path.

- If you are using the C shell, enter

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

- If you are using the Bourne shell, enter

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

3. (Optional) To include the optional utilities shipped with VCS in the path, do the following:

- If you are using the C shell, enter

```
set path = ($VCS_HOME/bin \
$VCS_HOME/`$VCS_HOME/bin/vcs -platform`/bin \
$VCS_HOME/`$VCS_HOME/bin/vcs -platform`/util \
$path)
```

- If you are using the Bourne shell, enter

```
PATH=$VCS_HOME/bin \
$VCS_HOME/`$VCS_HOME/bin/vcs -platform`/bin \
```

```
$VCS_HOME/`$VCS_HOME/bin/vcs -platform`/util \  
$PATH  
export PATH
```

Setting the SNPSLMD_LICENSE_FILE Environment Variable

You must install the SCL software and define the `SNPSLMD_LICENSE_FILE` variable before you can verify the VCS installation. See the *Synopsys Common Licensing Installation Notes* at <http://www.synopsys.com/install> for information about downloading and installing SCL.

Verifying the VCS Installation

To verify the VCS installation,

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

```
% cp -r $VCS_HOME/doc/examples/verilog/comp_run .  
% cd ./comp_run  
% vcs ./addr4.v -R -debug
```

If VCS creates a `simv` file in the `comp_run` directory, the VCS installation was successful.

2. Run the DVE GUI on each installed platform by entering

```
% dve
```

3. Exit the GUI by choosing File > Exit in the DVE window.

Customer Support

The VCS support page on the Synopsys Web site is regularly updated with the latest information. To check this page for application notes, online help updates, and other valuable information, go to

<http://www.synopsys.com/products/simulation/simulation.html>

You can also send an e-mail message to VCS Support at

`vcs_support@synopsys.com`

