

Installing Synopsys® Tools

Version D-2010.06, June 2010

SYNOPSYS®

Copyright Notice and Proprietary Information

Copyright © 2010 Synopsys, Inc. All rights reserved. This software and documentation contain confidential and proprietary information that is the property of Synopsys, Inc. The software and documentation are furnished under a license agreement and may be used or copied only in accordance with the terms of the license agreement. No part of the software and documentation may be reproduced, transmitted, or translated, in any form or by any means, electronic, mechanical, manual, optical, or otherwise, without prior written permission of Synopsys, Inc., or as expressly provided by the license agreement.

Right to Copy Documentation

The license agreement with Synopsys permits licensee to make copies of the documentation for its internal use only. Each copy shall include all copyrights, trademarks, service marks, and proprietary rights notices, if any. Licensee must assign sequential numbers to all copies. These copies shall contain the following legend on the cover page:

“This document is duplicated with the permission of Synopsys, Inc., for the exclusive use of _____ and its employees. This is copy number _____.”

Destination Control Statement

All technical data contained in this publication is subject to the export control laws of the United States of America. Disclosure to nationals of other countries contrary to United States law is prohibited. It is the reader's responsibility to determine the applicable regulations and to comply with them.

Disclaimer

SYNOPSYS, INC., AND ITS LICENSORS MAKE NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Registered Trademarks (®)

Synopsys, AMPS, Astro, Behavior Extracting Synthesis Technology, Cadabra, CATS, Certify, CHIPit, Design Compiler, DesignWare, Formality, HAPS, HDL Analyst, HSIM, HSPICE, Identify, Leda, MAST, ModelTools, NanoSim, OpenVera, PathMill, Physical Compiler, PrimeTime, SCOPE, Simply Better Results, SiVL, SNUG, SolvNet, Syndicated, Synplicity, Synplify, Synplify Pro, Synthesis Constraints Optimization Environment, TetraMAX, the Synplicity logo, UMRBus, VCS, Vera, and YIELDirector are registered trademarks of Synopsys, Inc.

Trademarks (™)

AFGen, Apollo, Astro-Rail, Astro-Xtalk, Aurora, AvanWaves, BEST, Columbia, Columbia-CE, Confirma, Cosmos, CosmosLE, CosmosScope, CRITIC, CustomExplorer, CustomSim, DC Expert, DC Professional, DC Ultra, Design Analyzer, Design Vision, DesignerHDL, DesignPower, DFTMAX, Direct Silicon Access, Discovery, Eclipse, Encore, EPIC, Galaxy, Galaxy Custom Designer, HANEX, HapsTrak, HDL Compiler, Hercules, Hierarchical Optimization Technology, High-performance ASIC Prototyping System, HSIM^{plus}, i-Virtual Stepper, IICE, in-Sync, iN-Tandem, Jupiter, Jupiter-DP, JupiterXT, JupiterXT-ASIC, Liberty, Libra-Passport, Library Compiler, Magellan, Mars, Mars-Rail, Mars-Xtalk, Milkyway, ModelSource, Module Compiler, MultiPoint, Physical Analyst, Planet, Planet-PL, Polaris, Power Compiler, Raphael, Saturn, Scirocco, Scirocco-i, Star-RCXT, Star-SimXT, StarRC, System Compiler, System Designer, Taurus, TotalRecall, TSUPREM-4, VCS Express, VCSi, VHDL Compiler, VirSim, and VMC are trademarks of Synopsys, Inc.

Service Marks (SM)

MAP-in, SVP Café, and TAP-in are service marks of Synopsys, Inc.

SystemC is a trademark of the Open SystemC Initiative and is used under license.

ARM and AMBA are registered trademarks of ARM Limited.

Saber is a registered trademark of SabreMark Limited Partnership and is used under license.

All other product or company names may be trademarks of their respective owners.

Contents

What's New in This Release	vi
About This Guide	vi
Customer Support.	ix
1. Preinstallation Setup	
Finding Your Site Identification Number	1-2
Acquiring a License	1-2
Creating the Synopsys Root Directory	1-3
Defining the SYNOPSIS Environment Variable.	1-3
Checking Your Hardware and Software Configuration	1-4
Supported Platforms and Operating Systems	1-4
Product Availability.	1-5
64-Bit Platform Support	1-5
Multiple-Platform Installation	1-6
Configuring the Environment	1-7
Operating System Requirements.	1-7
System Limits	1-7
Changing Personal Limits	1-7
Checking the Data Size Limit.	1-8
Increasing the Data-Size Limit.	1-8
Changing an Unlimited Data Size	1-8
Checking the Stack Size	1-8
Obtaining Swap Space Information	1-9

2. Installation Preparation

Overview of Installation Process	2-2
Synopsys Installer Download and Installation.	2-2
About the Synopsys Installer Software	2-2
Obtaining the Synopsys Installer	2-3
Obtaining the Synopsys Installer From SolvNet	2-3
Obtaining the Synopsys Installer by FTP	2-4
Obtaining the Synopsys Installer by CD	2-4
Uncompressing the Synopsys Installer File.	2-4

3. Product Installation

About the Synopsys Installer	3-2
Synopsys Product Installation File Download Methods	3-2
About Product Installation Files	3-3
Downloading the Product Installation Files From SolvNet.	3-3
Downloading the Product Installation Files by FTP	3-4
Installing Products With the Synopsys Installer	3-5
Running the Installer in Text Mode.	3-5
Running the Installer in GUI Mode.	3-9
Running the Installer on Product Installation Files	3-9
Product Installation Files From CD or DVD.	3-11

Index

Preface

This preface includes the following sections:

- [What's New in This Release](#)
- [About This Guide](#)
- [Customer Support](#)

What's New in This Release

Information about new features, enhancements, and changes, along with known problems and limitations and resolved Synopsys Technical Action Requests (STARs), is available in the *Synopsys Installer Release Notes* in SolvNet.

To see the *Synopsys Installer Release Notes*,

1. Go to the Download Center on SolvNet located at the following address:

<https://solvnet.synopsys.com/DownloadCenter>

If prompted, enter your user name and password. If you do not have a Synopsys user name and password, follow the instructions to register with SolvNet.

2. From the list of products, select Synopsys Installer, and then select the latest release in the list of versions that appears.
3. Under Release Notes, click the link titled "Click here to view release notes."

About This Guide

This document provides the information and procedures required to install Synopsys tools, using the Synopsys Installer.

- The installation instructions in this guide reflect the latest version of Synopsys software.
- This document includes download and installation instructions common to all Synopsys products that use the Synopsys Installer.
- For installation information regarding a specific Synopsys tool, see <http://www.synopsys.com/install> to refer to the product installation notes for that tool.
- For information about downloading and installing the Synopsys Common Licensing (SCL) software, see the *Synopsys Licensing QuickStart Guide* at <http://www.synopsys.com/licensing>.

Audience

This guide is written for system administrators responsible for installing Synopsys software tools. All instructions in this guide are for UNIX systems, unless otherwise indicated.

Related Publications

For additional information about Synopsys tools, see

- Documentation on the Web, which is available through SolvNet at <https://solvnet.synopsys.com/DocsOnWeb>.
- The product download or the CD or DVD directory.
- Any product-specific installation note.

Conventions

The following conventions are used in Synopsys documentation.

Convention	Description
Courier	Indicates command syntax.
<i>Courier italic</i>	Indicates a user-defined value in Synopsys syntax, such as <i>object_name</i> . (A user-defined value that is not Synopsys syntax, such as a user-defined value in a Verilog or VHDL statement, is indicated by regular text font italic.)
Courier bold	Indicates user input—text you type verbatim—in Synopsys syntax and examples. (User input that is not Synopsys syntax, such as a user name or password you enter in a GUI, is indicated by regular text font bold.)
[]	Denotes optional parameters, such as <i>pin1 [pin2 ... pinN]</i>
	Indicates a choice among alternatives, such as <i>low medium high</i> (This example indicates that you can enter one of three possible values for an option: low, medium, or high.)
–	Connects terms that are read as a single term by the system, such as <i>set_annotated_delay</i>
Control-c	Indicates a keyboard combination, such as holding down the Control key and pressing c.
\	Indicates a continuation of a command line.
/	Indicates levels of directory structure.
Edit > Copy	Indicates a path to a menu command, such as opening the Edit menu and choosing Copy.

Customer Support

Customer support is available through SolvNet online customer support and through contacting the Synopsys Technical Support Center.

Accessing SolvNet

SolvNet includes an electronic knowledge base of technical articles and answers to frequently asked questions about Synopsys tools. SolvNet also gives you access to a wide range of Synopsys online services including software downloads, documentation on the Web, and “Enter a Call to the Support Center.”

To access SolvNet, go to the SolvNet Web page at the following address:

<https://solvnet.synopsys.com>

If prompted, enter your user name and password. If you do not have a Synopsys user name and password, follow the instructions to register with SolvNet.

If you need help using SolvNet, click HELP in the top-right menu bar or in the footer.

Contacting the Synopsys Technical Support Center

If you have problems, questions, or suggestions, you can contact the Synopsys Technical Support Center in the following ways:

- Open a call to your local support center from the Web by going to <https://solvnet.synopsys.com> (Synopsys user name and password required), and then clicking “Enter a Call to the Support Center.”
- Send an e-mail message to your local support center.
 - E-mail support_center@synopsys.com from within North America.
 - Find other local support center e-mail addresses at <http://www.synopsys.com/Support/GlobalSupportCenters/Pages/default.aspx>
- Telephone your local support center.
 - Call (800) 245-8005 from within the continental United States.
 - Call (650) 584-4200 from Canada.
 - Find other local support center telephone numbers at <http://www.synopsys.com/Support/GlobalSupportCenters/Pages/default.aspx>

1

Preinstallation Setup

This chapter provides information about steps to complete before you install Synopsys tools.

The following sections are included:

- [Finding Your Site Identification Number](#)
- [Acquiring a License](#)
- [Creating the Synopsys Root Directory](#)
- [Defining the SYNOPSIS Environment Variable](#)
- [Checking Your Hardware and Software Configuration](#)
- [Configuring the Environment](#)

Finding Your Site Identification Number

Before installing any Synopsys products, you should locate and make a note of your site identification number (ID).

You can locate your site ID in

- Your Synopsys Order Notification e-mail
- The header information in your Synopsys license file
- The package with your Synopsys tools if you receive physical media

The site ID information is in the following format:

```
# SYNOPSYS INC. KEY CERTIFICATE  
# Site ID: xxx
```

Provided that you entered a valid site identification number during installation, you can check it at any time by viewing your `site_info` file.

```
$(SYNOPSYS)/admin/license/site_info
```

If you are still unable to locate your site ID, contact your Synopsys sales representative.

Although you will need your site ID to open a support call or to register for SolvNet, you can install your product by using the default site identification number, which is 000. When you are prompted to enter your site ID during the installation process, you can leave the default value of 000 and press Enter to continue the installation.

Acquiring a License

The Synopsys Common Licensing (SCL) system provides a single, common licensing daemon for all Synopsys tools. The SCL software and the documentation describing how to install and configure it are separate from the tools that use it.

Before you can use Synopsys tools, you must do the following steps:

- Retrieve your license key file from the SmartKeys Web page at the following address: <https://solvnet.synopsys.com/SmartKeys>
- Install the SCL software.

Note:

You can install SCL before or after you install your Synopsys tools. However, you cannot use your Synopsys tools until you have installed, configured, and started SCL.

For more information about licensing installation and setup, refer to the Synopsys Licensing Quickstart Guide Web page at <http://www.synopsys.com/licensing>.

This Web page includes a link to the latest *Synopsys Common Licensing Administration Guide* under the Documentation section. The *Synopsys Common Licensing Administration Guide* is also included in the Synopsys Common Licensing download directory and on the Synopsys Common Licensing CD.

Creating the Synopsys Root Directory

To create a new root directory for this Synopsys release, follow these steps:

1. Log in, using the `su` command, to a normal, non-root account

```
% su - non-root_username
```

2. Enter

```
% mkdir -p /install_dir/synopsys/product_version
```

3. To set the permissions on the new directory, enter

```
% chmod 755 /install_dir/synopsys/product_version
```

Important:

Install each version of the software in a new directory. Do not install different versions of Synopsys software in the same directory.

Defining the SYNOPSIS Environment Variable

Set the `SYNOPSIS` environment variable (`$SYNOPSIS`) in the shell that you are using: C, Bourne, Korn, or Bash. In the following examples, the `root_directory` argument is the name of the Synopsys root directory.

If you are using the C shell, enter the following command to set the `SYNOPSIS` environment variable:

```
% setenv SYNOPSIS root_directory
```

If you are using the Bourne, Korn, or Bash shell, enter the following command to set the `SYNOPSIS` environment variable:

```
# SYNOPSIS=root_directory; export SYNOPSIS
```

Note:

The `SYNOPSYS` environment variable is not required. In some cases, another environment variable must be set; in other cases, no variable is required. For details, see the individual product installation notes.

Checking Your Hardware and Software Configuration

You must check your hardware and software configuration, including patch requirements, before you attempt to install any Synopsys tools.

Supported Platforms and Operating Systems

Table 1-1 lists the supported platforms, operating systems, and corresponding Synopsys platform keywords for this release. Many platforms require operating system (OS) patches.

Note:

Individual products may not support all the platforms listed in Table 1-1. Refer to the product-specific installation notes for information about supported platforms.

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>

Select the appropriate foundation for your release. This Web page provides release-specific information about supported hardware, operating systems, and required OS 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 as listed in Table 1-1.

Table 1-1 Supported Platforms, Operating Systems, and Keywords

Compute platform	Operating system	Synopsys platform keyword	Desktop window environment
x86_64	Red Hat Enterprise Linux v4, 5 ¹	amd64 (64-bit mode) ² linux (32-bit mode) ²	GNOME
x86_64	SUSE Linux Enterprise Server v9, 10 ¹	suse64 (64-bit mode) suse32 (32-bit mode)	KDE

Table 1-1 Supported Platforms, Operating Systems, and Keywords (Continued)

Compute platform	Operating system	Synopsys platform keyword	Desktop window environment
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 Linux Enterprise Server v9, 10 ¹	suse32 (32-bit mode)	KDE
Sun SPARC	Solaris 9, 10 ¹	sparc64 (64-bit mode) sparcOS5 (32-bit mode)	CDE
IBM RS6000	AIX 5.3, 6.1 ¹	aix64 (64-bit mode) 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 information 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 running Red Hat Enterprise Linux.*

Product Availability

Products are initially made available for download by electronic software transfer (EST) with CD or DVD media available at a later date. Only eligible sites can receive CD or DVD media.

The main contact at each customer site is automatically notified by e-mail when Synopsys products are available for download. Sites eligible for CD or DVD media receive a notification when CD or DVDs are available.

64-Bit Platform Support

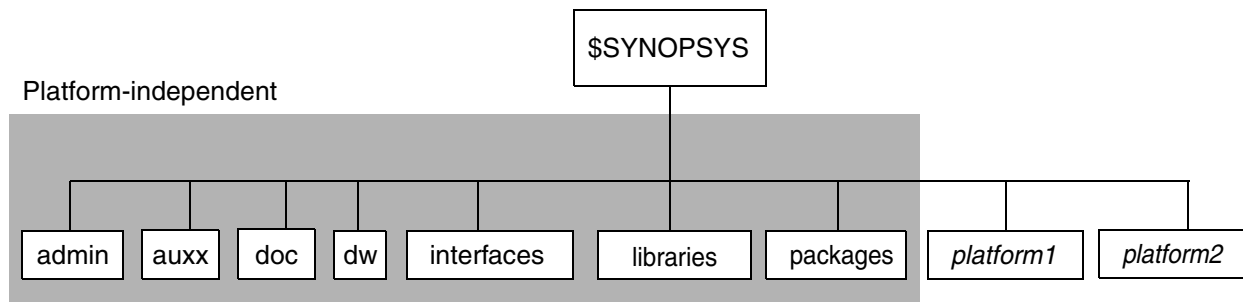
The Synopsys tools support 64-bit operation on x86_64, SPARC, and RS6000 compute platforms. When you run the tools in 64-bit mode, the upper limit for virtual address space is extended beyond the 4-gigabyte limit imposed by the 32-bit mode, allowing you to process larger designs. With both the 32-bit and 64-bit platforms installed, you have the flexibility to run either 32-bit or 64-bit applications without running out of memory.

You can install the 64-bit version of the Synopsys tools in the same root directory as the 32-bit version or in a separate directory. When you start the tool by executing the tool invocation script, most tools default to 32-bit mode. To determine how to invoke the tool in 64-bit mode, see the product installation notes for the specific tool.

Multiple-Platform Installation

When you install tools on a network that connects different platforms, the result is the directory tree shown in [Figure 1-1](#).

Figure 1-1 Illustration of a Multiple-Platform Installation



Each Synopsys product includes a platform-independent package containing files common to all platforms as indicated by the shaded box in [Figure 1-1](#). When you select multiple platforms, the installation script installs one platform-independent package and a platform-dependent package for each selected platform.

If you have previously installed a product on one platform and want to install it on another platform,

1. Rerun the installation script for the product.
2. In the installation script,
 - Answer **n** to the query about installing the platform-independent package.
 - Specify the new platform when queried about which platform to install.

Configuring the Environment

The UNIX kernel defines hard per-process limits on the maximum amount of memory that can be used, and the `limit` command creates soft limits. These limits can cause processes to fail even when memory is available. For example, these limits might lead to a memory-related tool fatal error or a segmentation fault (signal 11) error.

Operating System Requirements

The following C-Shell commands set the proper system limits for running Synopsys products on the Solaris OS. However, check the tool documentation for any tool-specific requirements. The numerical value below is in kilobytes.

```
% unlimit filesize
% unlimit datasize
% limit stacksize 8192
```

Note:

Do not set the stacksize to “unlimited”. Doing so may cause your tool to run out of memory.

System Limits

The following limits are applicable to Synopsys tools:

- Data size – The maximum data size, including stack, for the process. This is the most important limit. It can be set at two levels:
 - The system level – Limits are enforced for all users who run on that system
 - On a per-user basis – Limits are enforced only for the user running on a particular system
- CPU time – The maximum CPU seconds per process
- The maximum size of a file generated by a software failure

Changing Personal Limits

You can change your personal limits on all machines by using the `limit` command (C shell) or `ulimit -s -d` command (Bourne, Korn, or Bash shell).

Checking the Data Size Limit

If you have enough swap space but still encounter OS limits, use the `limit` command to find out what the value of the `datasize` variable is set to. The `limit` command is a built-in C shell command. Make sure you are in C shell before you execute `limit`.

The `limit` command displays user-level limits:

```
% limit
cputime      unlimited
filesize     unlimited
datasize     524280 kbytes
stacksize    8192 kbytes
coredumpsize unlimited
descriptors  256
memorysize   unlimited
```

Note:

In this example, a single process is permitted to use up to 524 MB.

Increasing the Data-Size Limit

If your user-level data size limit is too low, you can increase it by entering

```
% limit datasize xxxxm
```

where `xxxx` is the number of megabytes and `m` stands for megabytes.

Changing an Unlimited Data Size

On some Sun SPARC systems, setting the data size to unlimited leads to a data size of only 2 GB. To set a larger data size, set the data size explicitly. For example, set the data size to 3.8 GB by using the following command:

```
% limit datasize 3891m
```

Checking the Stack Size

If you still encounter OS limits and the data size is sufficient, check the stack size. Do not set a stack size of “unlimited.”

The default stack size is sufficient, and depending on the OS, is typically set to 8,192 or 10,240 KB. A stack size that is larger than the default will cause the data size to be smaller than required. Because the stack size is taken at the beginning of the process, it uses memory that would normally be available for data. Therefore, you should set the stack size higher than the default only when necessary.

Obtaining Swap Space Information

If you receive an “out of memory” error message, make sure that you are not running out of swap space on the system.

For example, a large job is running on a machine that has abundant swap space, and you attempt to run Design Compiler on the machine. The application, however, terminates with a fatal out-of-memory message before the machine runs out of swap space.

This situation may occur because UNIX limits the amount of memory a process can consume while it is running. If a process reaches these limits before the system runs out of swap space, the job terminates with the fatal out-of-memory error message. These limits are built into the UNIX OS to prevent a single job or process from consuming all system resources (swap space, CPU time, number of processes, and so on), thereby depleting resources for other processes.

You can use the `swap -l` command for Sun Solaris systems to obtain swap space information. For example,

```
% swap -l
swapfile          dev  swaplo  blocks  free
/dev/dsk/c0t3d0s1 32,25    8  822520  628872
```

Note:

To determine available swap space on systems other than Sun Solaris, contact your system administrator.

2

Installation Preparation

This chapter provides information about obtaining and installing the Synopsys Installer.

The following sections are included:

- [Overview of Installation Process](#)
- [Synopsys Installer Download and Installation](#)

Overview of Installation Process

To install Synopsys tools, follow these steps:

- Obtain the Synopsys Installer installation file by EST download or from the CD.
- Uncompress the Synopsys Installer installation file in a standalone directory. Adding this directory to your path is recommended.
- Download the Synopsys product installation files by EST, or obtain a CD or DVD.

Note:

Only sites that qualify to receive media may obtain a CD or DVD.

- Run the Synopsys Installer and specify the Synopsys product installation files to install. This step is covered in [Chapter 3, "Product Installation."](#) You can run the Synopsys Installer in text mode or in GUI mode.

Synopsys Installer Download and Installation

Use the Synopsys Installer to install product installation files. You can obtain the Synopsys Installer by EST or CD. After you uncompress the Synopsys Installer installation file in its own directory, you then can download and install product installation files. Installing the Synopsys Installer is covered in the following sections:

- [About the Synopsys Installer Software](#)
- [Obtaining the Synopsys Installer](#)
- [Uncompressing the Synopsys Installer File](#)

If you encounter any problems, see SolvNet article 023842, "Synopsys Installer 2.x Troubleshooting," at <https://solvnet.synopsys.com/retrieve/023842.html>.

About the Synopsys Installer Software

If you are installing by EST, you must download the latest version of the Synopsys Installer from the SolvNet Download Center or from the "rev" directory of the Synopsys FTP site at <ftp.synopsys.com>. The file to download is `installer_version.tar.Z`, where *version* is the latest version of the Synopsys Installer. For the Download Center or the FTP site, a SolvNet user name and password is required. The `installer_version` file includes the scripts and files for installation by GUI or command line. When you install a new product release, always use the latest version of the Synopsys Installer. Note that the Synopsys Installer is backward compatible with previous product releases.

Instead of downloading the Synopsys Installer into each product's temporary directory, you should download it and uncompress it in an empty, standalone directory. If you run the Synopsys Installer, you will be prompted to provide a path to the temporary directory containing the product installation files.

Obtaining the Synopsys Installer

Obtain the Synopsys Installer by Electronic Software Transfer (EST) download or from the CD. Only authorized sites are eligible to order CD media. You can obtain the Synopsys Installer software in one of the following ways:

- By HTTP from the SolvNet Download Center
- By File Transfer Protocol (FTP)
- By CD

For help with EST download problems, contact the Synopsys Electronic Software Transfer (EST) department:

E-mail support: est-adm@synopsys.com

Telephone support:

Canada, United States, and International +1 650-584-1631

Europe 353 1 436 8880

Note:

The EST department does not help with installation or licensing issues. For help with such issues, contact your local Support Center.

To access the online EST Troubleshooting Guide, go to http://www.synopsys.com/Support/Pages/EST_Guide.aspx

Obtaining the Synopsys Installer From SolvNet

To download the Synopsys Installer from SolvNet, follow these steps:

1. Go to the Download Center at <https://solvnet.synopsys.com/DownloadCenter>.
2. If requested, enter your Synopsys SolvNet user name and password.
3. Under My Product Releases, choose Synopsys Installer.
4. Choose the latest product version from the list of available versions, and click Download Here.
5. Click "Yes, I agree to the above terms."

6. Click the download button to the right of `installer_v<latest_version>.tar.Z` and any other file you want to download.
7. Follow the browser prompts to select a destination directory.
8. Uncompress and untar the tar.Z file to obtain the Synopsys Installer. See [“Uncompressing the Synopsys Installer File”](#) for more information.

Obtaining the Synopsys Installer by FTP

To download the Synopsys Installer by FTP, follow these steps:

1. Start an FTP session to `ftp.synopsys.com`.

```
% ftp ftp.synopsys.com
```

2. Enter your SolvNet user name and password.

3. Type `binary` at the FTP prompt to set the transfer mode to binary.

```
ftp> binary
```

4. At the FTP prompt, enter the following commands:

```
ftp> cd /rev
ftp> ls installer* #Look for the latest "installer" directory
ftp> cd installer_v latest_version
ftp> get installer_INSTALL_README.txt
ftp> get installer_v latest_version.tar.Z
```

5. Uncompress and untar the tar.Z file to obtain the Synopsys Installer. See [“Uncompressing the Synopsys Installer File”](#) for more information.

Obtaining the Synopsys Installer by CD

Starting with version A-2007.12, the Synopsys Installer comes on a separate CD and is no longer included with product CDs. The Synopsys Installer tar.Z file on the CD is the same as the EST tar.Z file.

Uncompressing the Synopsys Installer File

After you download the Synopsys Installer tar.Z file or copy it from CD, you obtain the Synopsys Installer by uncompressing the `installer_version.tar.Z` file in a separate installer directory, `cd /usr/synopsys/installer`. For example,

```
% cat installer_version.tar.Z | uncompress | tar xvf -
```

3

Product Installation

This chapter provides information about installing Synopsys products.

For product installations, you do not need to untar the product tar file. Beginning with the Synopsys Installer version 2.0 release, the Synopsys Installer works with unextracted product installation tar files.

If you are using an older Synopsys Installer, upgrade to version 2.0 or higher before installing products.

Note:

If you need a Synopsys Installer older than version 2.0, you must first untar the product tar files before installing products. This procedure is not covered in this chapter.

The ArchPro, CosmosScope, Magellan, Saber and Saber HDL, and Saber Optional tools do not use the Synopsys Installer. For installation information for one of these products, see the product installation notes for that specific tool.

The following sections are included:

- [About the Synopsys Installer](#)
- [Synopsys Product Installation File Download Methods](#)
- [Installing Products With the Synopsys Installer](#)

About the Synopsys Installer

It is recommended that you do not untar the product tar files before installation. However, the Synopsys Installer also accepts .taz or .bz2 files already extracted from EST files or from older CD-ROM images. But, if the temporary source directory contains both tar files and extracted .taz or .bz2 files, this warning message is issued when running the Synopsys Installer:

```
Both EST tar file(s) and CD image are found under <directory>.
Installer will discard CD image and proceed with EST tar file(s) only.
Answer Yes to continue or No to select a different directory [yes].
```

Answering yes to this question causes the Synopsys Installer to continue with the installation. The Synopsys Installer ignores the extracted .taz or .bz2 files and uses only the unextracted tar files.

Limitation for CD or DVD products:

When providing a temporary path for expanding an image, do not use environment or shell variables as part of the path name. The Synopsys Installer cannot handle them correctly.

Synopsys Product Installation File Download Methods

After installing the Synopsys Installer, you can download Synopsys product installation files in one of the following ways:

- By HTTP from the SolvNet Download Center
- By File Transfer Protocol (FTP)
- By CD or DVD

For each product, you must download one common file, a platform-independent package, and one or more platform-specific installation files.

For help with EST download problems, contact the Synopsys Electronic Software Transfer (EST) department:

E-mail support: est-adm@synopsys.com

Telephone support:

Canada, United States, and International +1 650-584-1631

Europe 353 1 436 8880

Note:

The EST department does not help with installation or licensing issues. For help with such issues, contact your local Support Center.

To access the online EST Troubleshooting Guide, go to http://www.synopsys.com/Support/Pages/EST_Guide.aspx

Important:

Install each version of the software in a new directory. Do not install different versions of Synopsys software in the same directory.

About Product Installation Files

Before downloading the product installation files, first install the Synopsys Installer. See [Chapter 2, "Installation Preparation."](#) You should download the Synopsys Installer into a separate directory so that you can use the same Synopsys Installer for each Synopsys product that uses the common installation method.

Product installation files are packaged as tar files and those that the Synopsys Installer supports use the following naming convention:

```
productname_productversion_common.tar  
productname_productversion_platform.tar
```

For each tool you want to install, substitute the appropriate product name and version for *productname_productversion* and Synopsys platform keyword for *platform*. For supported platforms by release, go to the Download Center.

Important:

For each product you must download one common file, a platform-independent package, and one or more platform-specific files.

For TetraMAX, download one common file and one or more platform-specific files for TetraMAX overlay over synthesis (tx) or TetraMAX standalone (txs). If you are licensed for TetraMAX IddQTest, also download TetraMAX IddQTest (idq).

Downloading the Product Installation Files From SolvNet

You can download multiple product installation files into the same temporary directory.

To download product installation files from SolvNet, follow these steps:

1. Create an empty temporary directory to use for downloading your product installation files. For example,

```
% mkdir /tmp/product
```

2. Go to the Download Center at <https://solvnet.synopsys.com/DownloadCenter>.
3. If requested, enter your Synopsys SolvNet username and password.

4. Under My Product Releases, choose the product you wish to download.
5. Choose the latest product version from the list of available versions and click Download Here.
6. Click the download button to the right of each file you want to download. (You may download multiple files simultaneously.) For most products, you will need to download a common file and a platform-specific file.
7. Follow the browser prompts to select the temporary destination directory specified in Step 1.

Downloading the Product Installation Files by FTP

You can download multiple product installation files into the same temporary directory. For the latest FTP instructions, see the Download Center on SolvNet.

To download product installation files by FTP, follow these steps:

1. Create an empty directory to download your product installation files into. For example,

```
% mkdir /tmp/product  
% cd /tmp/product
```

2. Start an FTP session to ftp.synopsys.com.

```
% ftp ftp.synopsys.com
```

3. Enter your SolvNet user name and password.

4. Type `binary` at the FTP prompt to set the transfer mode to binary.

```
ftp> binary
```

5. At the FTP prompt, enter the following commands:

```
ftp> cd /rev  
ftp> cd productname_productversion  
ftp> get productname_productversion_common.tar  
ftp> get productname_productversion_platform.tar
```

Note:

You can obtain the latest product-specific download instructions from the Download Center, which is accessible through SolvNet.

Installing Products With the Synopsys Installer

This section provides information about installing Synopsys tools. You install most Synopsys tools by using the Synopsys Installer on product installation tar files that are available by EST download or from CD or DVD.

Before installing Synopsys tools, make sure your file permission settings are correct. In general, a permission of 022 is recommended. This can be set with the `umask 022` command. However, if your specific product requires stricter access rights, they will be applied automatically during installation. See the UNIX man pages for more information about `umask`.

When installing Synopsys tools, you should log in as a normal, non-root account and should

- Have write permission for the installation directory
 - Run the Synopsys Installer from a supported platform and operating system
- See [Table 1-1 on page 1-4](#) for the list of supported platforms and operating systems.

You can install many Synopsys products from the command line (text mode), or by using a graphical user interface (GUI mode). Procedures for using both methods are in the following sections:

- [Running the Installer in Text Mode](#)
- [Running the Installer in GUI Mode](#)

Running the Installer in Text Mode

To install Synopsys products by using the Synopsys Installer in text mode,

1. Set the `DISPLAY` environment variable. For example, in C shell type

```
% setenv DISPLAY my_display:0.0
```

Note:

The text installer will not run unless a valid `DISPLAY` variable is set. The text installer requires this step because the post-installation scripts of some products are GUI-based.

2. Add the standalone installer directory to the UNIX path. For example, in C shell type

```
% set path=(/usr/synopsys/installer $path)
```

3. Start the Synopsys Installer in text mode by entering:

```
% installer
```

This brings up the Synopsys Installer in text mode. To install Synopsys tools, you should log on at the root or have system administrator privileges. You need to have write permission for the installation directory.

Note:

The installer installation file should be in a separate standalone directory. When you run the installation script, you will be prompted to provide a path to the temporary directory containing the product installation files.

4. Answer the installation program prompts.

Important:

When you are prompted to choose a location for installing the software, do not select the download or temporary directory. You must specify the full path to the destination directory. Do not install different versions of Synopsys software in the same directory.

5. Repeat steps 1, 2, and 3 for each tool you want to install.

Note:

Before you can run Synopsys tools, the Synopsys Common Licensing (SCL) software must be installed. In addition, a licensing variable such as `SNPSLMD_LICENSE_FILE` or `LM_LICENSE_FILE` must be set. For details about Synopsys licensing software, see the Synopsys Licensing QuickStart Guide Web page at <http://www.synopsys.com/licensing>.

Example 3-1 shows these steps in a sample Synopsys media installation for Synthesis tools on the Sun SPARC platform.

Example 3-1 Synopsys Media Installation for the Synthesis Tools

```
Synopsys(R) Installer
Version 2.3.0
Copyright (C) 2010 Synopsys, Inc.
All Rights Reserved
```

```
Instructions:  The list within {} shows the choices for a given option.
               The entry within [] shows the default selection when you
               press the Return key.  You can cancel the installation by
               entering quit when prompted for input.
```

```
Your site ID number is in the upper-right corner of your Synopsys license
key certificate.  If you have trouble locating it, contact your Synopsys
representative.
```

```
Site ID number [100]:
```

```
The site administrator is your site's main contact for Synopsys licensing and
other tool issues.  You can leave your own name or type a different name.
```

```
Site administrator [customer]:
```

```
The contact information is the phone number and/or e-mail address
of the site administrator.
```

Site contact information [customer@yourcompany.com]:

Enter the path to the top-level directory containing the EST (ftp) or CD/DVD-ROM product files for this version [/usr/customer]: /tmp/EST

Enter the path to temporary directory for expanding the product tar files (need 833M for all)[.]:

```

Installer: Extracting release information from syn_vD-2010.03-SP2_amd64.tar ...
Installer: Extracting release information from syn_vD-2010.03-SP2_amd64.tar
successfully
Installer: Extracting release information from syn_vD-2010.03-SP2_common.tar ...
Installer: Extracting release information from syn_vD-2010.03-SP2_common.tar
successfully
Installer: Extracting release information from syn_vD-2010.03-SP2_linux.tar ...
Installer: Extracting release information from syn_vD-2010.03-SP2_linux.tar
successfully
Installer: Extracting release information from syn_vD-2010.03-SP2_suse32.tar ...
Installer: Extracting release information from syn_vD-2010.03-SP2_suse32.tar
successfully
Installer: Extracting release information from syn_vD-2010.03-SP2_suse64.tar ...
Installer: Extracting release information from syn_vD-2010.03-SP2_suse64.tar
successfully

```

The following version are available under /tmp/EST:

```
[ 1] D-2010.03-SP2  - (syn)
```

Select a version to install [1]:

Release selected: D-2010.03-SP2

Select Synopsys product(s) to install:

```
[ 1] syn  - Core Synthesis Tools
[ b] back - Back to Select Another Version
```

Enter list of products to install (or just enter "b" to go back to select another version)[1]:

Product(s) selected: syn

The platform-independent package for a particular product contains support files that are common to all the platforms.

The first time you install a product to a directory, you must install the platform-independent package (common file).

Install common file for product syn [yes]:

The common package will be installed for syn

Select platform(s) to install:

```
[ 1] amd64      - Linux AMD Opteron; 64-bit
[ 2] linux     - Red Hat Enterprise Linux
[ 3] suse32    - SUSE LINUX Enterprise Server 9; 32-bit
[ 4] suse64    - SUSE LINUX Enterprise Server 9; 64-bit
```

Enter the list of platform(s) to install [1]: 1 2

Platform(s) selected: amd64 linux

Enter the full path to the directory where you want to install Synopsys D-2010.03-SP2 products. If the directory does not exist, it will be created. [/usr/synopsys/D-2010.03-SP2]:

Create destination directory /usr/synopsys/D-2010.03-SP2,
Answer Yes to create the directory or No to select another directory. [yes]:

Here is your final selection for installing Synopsys Tools:

VERSION: D-2010.03-SP2
PRODUCTS: syn
PLATFORMS: amd64 linux

Synopsys Media Directory (from): /tmp/EST
Synopsys Install Directory (to): /usr/synopsys/D-2010.03-SP2

Platform-Independent Package(s) for : syn

Disk space required: 833 MB
Disk space available: 86046 MB

If all the information is correct, continue with the installation.
Install? [yes]:

Wait while cksum is being verified.

Installer: Extracting syn_vD-2010.03-SP2_common.tar ...
Installer: Extracting syn_vD-2010.03-SP2_amd64.tar ...
Installer: Extracting syn_vD-2010.03-SP2_linux.tar ...
Installing amd64 code for product syn
Installing platform_independent code for product syn
Installing linux code for product syn
Create site_info...

Installation has finished successfully.

Entry "b" to go back to install another product or any other key/Return to quit[]:

Synopsys tools require that a supported version of Synopsys Common Licensing (SCL) be installed and serving the necessary licenses. For information on how to obtain SCL, or your license key file, see <http://www.synopsys.com/keys>

For any postinstallation setup requirements, see the product-specific chapters in the Installation Guide at <http://www.synopsys.com/install>

To receive timely Synopsys support on tool related issues, you must install ViewConnect support software along with other Synopsys tools. If you have not yet installed ViewConnect, go to <https://solvnnet.synopsys.com/viewconnect#d> to download and install the required binary files.

Running the Installer in GUI Mode

To install Synopsys products by using the Synopsys Installer in GUI mode,

1. Set the `DISPLAY` environment variable. For example, in C shell type

```
% setenv DISPLAY my_display:0.0
```

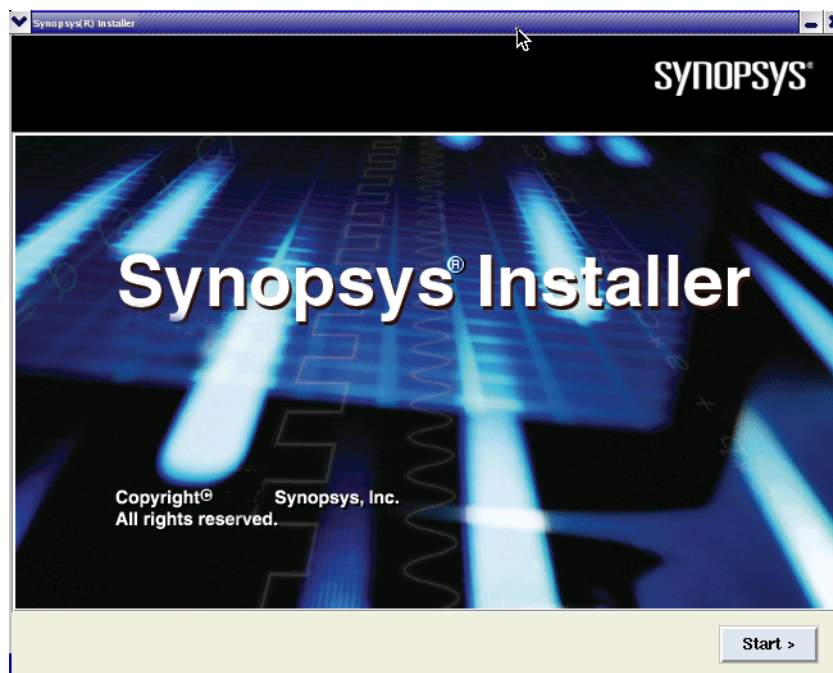
2. Add the standalone installer directory to the UNIX path. For example, in C shell type

```
% set path=(/usr/synopsys/installer $path)
```

3. Start the Synopsys Installer in GUI mode by entering

```
% installer -gui (or setup.sh)
```

This brings up the Synopsys Installer GUI.



Note:

The installer -gui (or setup.sh) installation file should be in a separate standalone directory. When you run the installation GUI, you will be prompted to provide a path to the temporary directory containing the product installation files.

Running the Installer on Product Installation Files

The program starts automatically, and the Synopsys Installer screen appears. Click Start to begin the installation and respond as necessary to each screen.

Note:

During the installation process, you can exit the installation at any time. If you click Cancel during the product-specific installation, you will be returned to the Synopsys installation setup program. To exit completely, you must click Finish.

1. Enter your site ID and the name and e-mail address of your license administrator.

Your site ID is in the package with your Synopsys tools if the tools were shipped to you, or it is in your Synopsys Order Notification e-mail if you downloaded them. For more information on how to locate your site ID, see [“Finding Your Site Identification Number” on page 1-2](#).

Note:

The default site identification number is 000. When you are prompted to enter your site ID during the installation process, you can leave the default value of 000 and press Enter to continue the installation.

Click Continue to view the next screen.

2. Browse or enter the path to the product installation files. If you are running the Synopsys Installer in a location that is different from the location of the product installation files, browse for the directory containing the files or enter the path to the directory.

Click Next to continue.

3. Select the version of the release you want to install.

Click Next to continue.

4. Select the products you want to install. Each standalone product must be installed in an empty directory.

Click Next to continue.

5. Review the product package. The platform-independent package, or common file, is selected automatically. This file is required when you are installing a new version of a product for the first time. If you do not want to install the common file, deselect the box next to the appropriate tool.

Click Next to continue.

6. Select the platform. You can select one or more platforms on which to install the products.

Click Next to continue.

7. Select the directory in which you want to install the product. You can browse for a directory or enter the full path to the destination directory in the Install to dialog box.

Click Next to continue.

8. Verify the selected information, and then click Install to begin the installation or click Back to change information.

9. Wait while the products are installed. Click Cancel to return to the Synopsys installation setup program.

The Installation progress bar lets you track progress as the program installs the products. You can also see where you are by checking the current action.

10. When the program completes the installation, click Install Another Product if you want to install additional products, or click Finish to exit the program.

Note:

Before you can run Synopsys tools, the Synopsys Common Licensing (SCL) software must be installed. In addition, a licensing variable such as `SNPSLMD_LICENSE_FILE` or `LM_LICENSE_FILE` must be set. For details about Synopsys licensing software, see the Synopsys Licensing QuickStart Guide Web page at <http://www.synopsys.com/licensing>.

Product Installation Files From CD or DVD

You can install Synopsys products from CD or DVD. Only authorized customers are eligible to order CD or DVD media.

For brevity, the remainder of this document uses CD for CD or DVD. If your product is on a DVD, substitute DVD for CD in the instructions below and use the commands appropriate for your specific DVD-ROM configuration.

The instructions for installing the Synopsys Installer from CD are identical to those for installing it by EST except that instead of downloading the Installer files using FTP, you must copy them to a mounted hard drive.

Note:

The Synopsys Installer cannot be run directly from CD-ROM.

Before beginning installation, you must either download the Synopsys Installer or copy it from a Synopsys Installer CD onto a mounted hard drive. After copying the installer files to a hard drive, uncompress it. See “[Uncompressing the Synopsys Installer File](#)” on page 2-4 for details.

To install a Synopsys product from a CD, follow these steps:

1. Insert the product CD into the CD-ROM drive.
2. Mount the CD if necessary. For example, enter

```
% mount -o ro /dev/dsk/c2t1d4s0 /cdrom
```

Mounting the CD might require root access privileges. If you do not have root access privileges, see your system administrator for assistance.

Mounting instructions vary by operating system. See your system man pages for the correct CD mounting commands.

Note:

By default, some systems mount the CD-ROM drive automatically.

3. From the Synopsys Installer directory, run the installer on the product installation files on the CD. See See [“Uncompressing the Synopsys Installer File” on page 2-4.](#) for details. When prompted for the source directory, enter the path to the CD-ROM directory containing the product files. When prompted for a temporary directory to expand product files, enter the path to a temporary directory on your hard drive. This directory is deleted once installation is finished.
4. When installation is finished, unmount the CD by using the appropriate command for your operating system. For example, enter

```
% umount /cdrom
```

Note:

If you are running the Sun Solaris vold daemon, use the `eject` command to unmount the CD.

5. Remove the CD from the drive.

Index

C

CD, installing 3-11

D

downloading software by FTP 3-4
downloading Synopsys Installer 2-2

E

environment variable, SYNOPSISYS 1-3
EST files
 installing by using a GUI 3-9
 installing by using a text script 3-5, 3-9

G

graphical user interface, Synopsys Installer 3-9

I

installation
 multiple platform 1-6
 prerequisites
 creating root directory 1-3
 setting environment variable 1-3
 scripts

 Synopsys media for synthesis tools 3-6
 installation process overview 2-2
 installer (*see* Synopsys Installer)

M

media installation, Synopsys media installation
 for synthesis tools 3-6
multiple-platform installation 1-6

O

operating system
 patches 1-4
 supported 1-4

P

platforms
 64-bit 1-5
 installing additional 1-6
 installing multiple 1-6
prerequisites for installing products
 creating root directory 1-3
 setting environment variable 1-3
product installation files
 downloading by FTP 3-4
 installing from CD 3-11

R

root directory, creating 1-3

S

SCL (*see* Synopsys Common Licensing)

site identification number, finding 1-2, 3-10

software

 downloading

 FTP 3-4

 Web 3-3

 installing

 EST files by using a text script 3-5, 3-9

 from CD 3-11

Synopsys Common Licensing 1-2

SYNOPSYS environment variable 1-3

Synopsys Installer

 downloading by FTP 2-4

 uncompressing and untarring 2-4

 using a GUI 3-5

 using a text script 3-5

Synopsys Installer commands

 installer 3-5

 installer -gui 3-9

Synopsys platform keywords 1-4

Synopsys Qualified Runtime System

 Configuration 1-4

Synopsys root directory, creating 1-3

U

umask setting 3-5