

# Synopsys Common Licensing (version 10.9.2)

---

These installation notes describes how to install Synopsys Common Licensing (SCL) on UNIX and Windows platforms. For additional information about using SCL 10.9.2, see the *Synopsys Common Licensing Administration User Guide*. For troubleshooting assistance, see the Licensing QuickStart Guide at <http://www.synopsys.com/key>.

SCL 10.9.2 uses combined vendor daemon technology from Macrovision, which is based on FLEXlm 10.8.5.0 This technology provides the capability to run a single vendor daemon (`snpslmd`) to serve licenses to all Synopsys products. Other vendor daemons are no longer required—they are incorporated into SCL 10.9.2.

This chapter includes the following sections:

- [Legacy Daemons](#)
- [Media Availability and Supported Platforms](#)
- [Disk Space and Memory Requirements](#)
- [Downloading Synopsys Common Licensing Software](#)
- [Installing the Software on UNIX Platforms](#)
- [Installing the Software on Windows Platforms](#)
- [Setting Up the Licensing Environment](#)
- [Verifying the Installation on UNIX and Windows Platforms](#)

To install SCL, you must have write and execute permissions in the installation directory.

Note:

Installation of Synopsys tools and SCL is not order dependent. 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.

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

Copyright © 2007 Synopsys, Inc. All rights reserved. See <http://www.synopsys.com/copyright.html> for additional terms and conditions.

---

## Legacy Daemons

SCL 10.9.2 includes updated versions of `snpslmd` and the FLEXlm 10.8.5.0 `lmgrd` license manager daemon and `lmutil` utilities.

Unlike previous versions of SCL, which included many vendor daemons, SCL 10.9.2 includes only one vendor daemon, `snpslmd`. The `snpslmd` vendor daemon enables you to run tools based on any Synopsys vendor daemon, including `avantd`, `tmald`, CADABRA, `innologd`, `numeritchd`, `TE_CATS`, and so on.

[Table](#) shows the legacy vendor daemons incorporated into SCL 10.9.2. (Other vendor daemons are not supported. Tools based on such daemons are not compatible with SCL 10.9.2.)

Acquired company	Daemons
Analog Design Automation	<code>adalmd</code>
Avant! Corporation	<code>anagram</code> , <code>avantd</code> , <code>chrysalisd</code> , <code>hscd</code> , <code>metasoftd</code> , <code>saber_dmn</code> , <code>tmald</code>
Innologic Systems, Inc.	<code>innologd</code>
Integrated Systems Engineering	ISE-TCADd
Legacy and other daemons	EPIC, <code>everest</code> , <code>la_damon</code> , <code>leda</code> , <code>ssilmd</code> , <code>synopsysd</code> , <code>vcsd</code>
Nassda Corporation	<code>nassd</code>
Numerical Technologies	<code>numeritchd</code> , <code>TE_CATS</code> , CADABRA
Placeholder for future OEM partners	<code>snpsOEM2</code> - <code>snpsOEM3</code>
SIGMA-C	<code>sigmacd</code>
Zenpire Corporation	<code>snpsOEM1</code>

---

## Media Availability and Supported Platforms

SCL is available on CD and by EST. To use SCL successfully, make sure that you are running on a supported hardware platform and operating system and that you have applied the correct patches.

For a list of supported patches, see the Supported Platforms Guide on the Synopsys Web site. See [http://www.synopsys.com/products/sw\\_platform.html](http://www.synopsys.com/products/sw_platform.html) for latest information.

Table 1-1 shows the supported platforms for this release.

Table 1-1 Supported Platforms and Keywords

Platform	Operating system	Synopsys platform keyword
AMD Opteron	Red Hat Enterprise Linux v3, v4 <sup>1</sup>	amd64 (64-bit mode) linux (32-bit mode) <sup>2</sup>
Intel EM64T	Red Hat Enterprise Linux v3, v4 <sup>1</sup>	amd64 (64-bit mode) <sup>1</sup> linux (32-bit mode) <sup>2</sup>
IA-32 (X86)	Red Hat Enterprise Linux v3, 4 <sup>1</sup>	linux (32-bit mode) <sup>2</sup>
IA-32 (X86)	Windows 2000, XP	windows (msvc70)
IBM RS/6000	AIX 5.3	rs6000 (32-bit mode) aix64 (64-bit mode)
Sun SPARC	Solaris 9, 10 <sup>1</sup>	sparcOS5 (32-bit mode) sparc64 (64-bit mode)

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.

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.

### Note:

In addition to the above platforms, Red Hat Linux 7.2 (linux72) and HP-UX 11 (hp32 and hp64) are supported. However, these platforms are not recommended and will not be supported in a future release of SCL.

---

## Disk Space and Memory Requirements

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. However, for a full installation on all platforms, 950 MB is recommended. For a single platform installation, approximately 250 MB is recommended.

---

## Downloading Synopsys Common Licensing Software

To download SCL via Electronic Software Transfer (HTTPS),

1. Point your web browser to <http://www.synopsys.com/download>.
2. Click "HTTPS Authenticated Access."
3. Enter your Synopsys SolvNet username.
4. Enter your Synopsys SolvNet password.
5. Click the "Sign In" button.
6. After reading the legal page, Click on "Yes I agree to the above terms."
7. Choose the product name "Synopsys Common Licensing" from the pull-down list of available products."
8. Choose the latest product version (rev 10.9.x) from the pull-down list of available versions."
9. Click the download buttons next to the file names of the files you wish to download.

See the SolvNet Release Library at <http://solvnet.synopsys.com/ReleaseLibrary>, for instructions on the alternate FTP method of downloading Synopsys Common Licensing.

Note:

Authenticated access is required to download SCL. Before attempting to download the software, make sure you have a SolvNet user name and password.

For UNIX, make sure to download both the platform-specific file (for example, `scl_v10.9.2_sparc64.tar`) and the common file (for example, `scl_v10.9.2_common.tar`). Also download the `scl_INSTALL_README.txt`.

For Windows, download a single .exe or .zip file.

---

## Installing the Software on UNIX Platforms

You need to install, configure, and start a single copy of SCL software for all Synopsys tools. You must also have your latest license key file.

To install the SCL software from EST or from the CD, follow the installation 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. SCL is installed in a similar manner.

Note the following requirements:

- SCL is a stand-alone product and cannot be installed over an existing Synopsys product, including a prior version of SCL. You must create a new directory for SCL.
- You must download a platform file, a platform-independent (common) file, and the Synopsys Installer to a temporary directory. (See [“Synopsys Product File Download Methods” on page 1-17](#).)

Note:

Before running the installer, you must place the common and platform files in a temporary directory, then uncompress and untar them.

- If you are installing multiple platforms, you need to install the platform-independent package only once for each product. The platform-independent package contains files that are common to all the supported platforms.
- Before running the installer, be sure to set the `DISPLAY` environment variable correctly. For example,

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

- If you are upgrading to SCL 10.9.2, you need to stop your license server, then restart it using the updated `lmgrd` and `snpslmd` versions. (If you are not upgrading your SCL version but are moving to your latest license file, you will need to reread your license file.)

---

## Installing the Software on Windows Platforms

SCL uses the InstallShield installation setup program for Windows platforms. To install SCL on Windows 2000 and Windows XP, download the single `scl_10.9.2_windows.exe` file to a temporary directory. (See see “Downloading Synopsys Software” at [www.synopsys.com/install](http://www.synopsys.com/install))

1. Double-click `scl_10.9.2_windows.exe` to start the setup. The program starts automatically and the InstallShield appears. Click Next to continue.
2. View the Welcome Screen.  
Respond as necessary to each screen.
3. If you agree to the licensing terms, select “I accept the terms of the license agreement,” and click Next to continue.
4. Enter your site information. Enter your name, your site ID, and the e-mail address of your system administrator. For information about locating your site ID, see “[Finding Your Site Identification Number](#)” on page 1-2.
5. Choose the destination location. By default, this folder is `C:\Synopsys\SCL 10.9.2`. Click Next to install in this folder, or click Change to install in a different folder.

Note:

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

6. Verify your settings. Click Install to proceed or Back to change your settings.
7. Wait while the product is installing.  
During the installation process, you can exit the installation at any time by clicking Cancel.
8. Click Finish to complete the setup.

---

## Setting Up the Licensing Environment

Setup information is given in the following sections:

- [Obtaining the Latest License File](#)
- [Customizing the License File](#)
- [Starting Synopsys Common Licensing](#)
- [Setting Up the Environment for UNIX Users](#)

- [Setting Up the Environment for Windows Users](#)

For more information about licensing setup, see the following documents:

- Synopsys Licensing QuickStart Guide Web page (at <http://www.synopsys.com/keys>)
- *Common Licensing Installation and Administration Guide*

You can obtain a soft copy of the *Common Licensing Installation and Administration Guide* in Portable Document Format (PDF) from <http://www.synopsys.com/support/keys/docs/sclug.pdf>

---

## Obtaining the Latest License File

Before starting SCL 10.9.2, you must first obtain the license file.

Note:

SCL 10.9.2 requires that on a given server, all license files for all supported Synopsys daemons be aggregated into a single license file and a single 10.9.2 `snpslmd` vendor daemon.

To obtain your site's latest license key file,

1. Go to SmartKeys at <http://www.synopsys.com/smartkeys>, and click Key Retrieval.  
A Synopsys user name and password are required.
2. Under Key Retrieval, make sure the correct site ID is specified. (See ["Finding Your Site Identification Number" on page 1-2.](#))

---

## Customizing the License File

To customize the license file,

1. Modify the `SERVER` line so that the `hostname1` field contains the correct system host name. For example,

```
SERVER my_server 87654321 27000
```

2. Modify the `VENDOR` (or `DAEMON`) line so that it contains the full path to `snpslmd`. For example,

```
VENDOR snpslmd /usr/synopsys/scl/sparc64/bin/snpslmd
```

Note:

SCL 10.9.2 requires only the `snpslmd` vendor daemon. Remove any `DAEMON` lines that refer to `avantd`, `tmald`, `CADABRA`, `innologd`, `ISE_TCAD`, `numeritechd`, `TE_CATS`, or any other Synopsys vendor daemons incorporated into (supported by) SCL 10.9.2. For a list of vendor daemons incorporated into SCL 10.9.2, see [Table on page 1-2](#).

3. If not already present, add a `USE_SERVER` keyword to the key file after the `SERVER` line but before any `INCREMENT` lines.
4. Make sure that all lines wrap correctly. Comment lines must start with a pound sign (`#`) and not wrap. Every line must start with either a `#` or one of the following keywords: `SERVER`, `VENDOR`, `INCREMENT`, or `PACKAGE`. Lines can wrap only after a continuation (`\`) character.
5. After modifications, the license file should look like this:

```
SERVER my_server 87654321 27000
VENDOR snpslmd /usr/synopsys/scl/sparc64/bin/snpslmd
USE_SERVER
INCREMENT 1...
INCREMENT 2...
```

6. Save any changes in ASCII (.txt) format only.

---

## Starting Synopsys Common Licensing

SCL 10.9.2 requires that you use FLEXlm 10.8.5.0 tools (`lmgrd` or `LMTOOLS`) to start the license daemon. To start SCL on UNIX and Windows systems, log on as the license server administrator and follow these steps.

1. For the SCL 10.9.2 license server, stop all Synopsys daemons, including `avantd`, `snpslmd`, `tmald`, `CADABRA`, `innologd`, `ISE_TCAD`, `numeritechd`, `TE_CATS`, and so on (see [Table on page 1-2](#)). If these daemons are running, SCL 10.9.2 will not start. For example, enter

### UNIX:

```
% lmdown -c /path/to/synopsys.lic
```

or

```
% lmdown -c port@host
```

### Windows:

```
c: > lmdown -c \path\to\synopsys.lic
```

or

```
c: > lmdown -c port@host
```

2. Unset all Synopsys license environment variables that are set in the license administrator environment. For example, in C shell

```
% unsetenv AVANTD_LICENSE_FILE
% unsetenv LM_LICENSE_FILE
% unsetenv NASSD_LICENSE_FILE
% unsetenv SNPSLMD_LICENSE_FILE
% unsetenv TMLD_LICENSE_FILE
```

Note:

If you use a script to start SCL, modify the script to unset the variables listed above.

3. Start SCL 10.9.2 by using the following command:

**UNIX:**

```
% scl_root/platform/bin/lmgrd -c scl_root/admin/ \
    license/synopsys.lic -l scl_root/admin/logs/debug.log
```

Note:

A sample SCL startup script (scl\_start.sh) is available in the `scl_root/examples` directory.

**Windows:**

Use LMTOOLS to start SCL 10.9.2. Choose Start > Programs > Synopsys > SCL 10.9.2 > Launch lmttools.exe.

Note:

For more information on using LMTOOLS, see the *Synopsys Common Licensing Administration Guide*, version 10.9.2.

4. Verify that the FLEXlm `lmgrd` utility started correctly by viewing the debug log file. This file shows that `lmgrd` and `snpslmd` started and includes a list of available features. If SCL did not start correctly, you will see an error message. (For details, see [“Specifying a Debug License Log File”](#) on page 1-10.)

Note:

Use the error message to debug the problem, or send the license file and debug log information to your local Synopsys support center (go to <http://www.solvnet.synopsys.com> and click “Enter a Call to the Support Center”).

---

## Specifying a Debug License Log File

When you start the `lmgrd` daemon, you can specify a debug license log file to which diagnostic configuration information is directed. The debug license log file receives the output from the `lmgrd` daemon and the `snpslmd` daemon.

You can specify any name for the log file (for example, `license.log`). Note that you must have write access to the directory containing the debug license log file.

[Example 1-1](#) shows an example of debug log file output after the SCL 10.9.2 vendor daemon is started.

### *Example 1-1 Example Debug Log File Output*

```
12:40:50 (lmgrd) FLEXnet Licensing (v10.8.5.0) started on pluto (Sun) (7/30/2007)
12:40:50 (lmgrd) License file(s): /synopsys/scl/admin/license/synopsys.lic
12:40:50 (lmgrd) lmgrd tcp-port 27000
12:40:50 (lmgrd) Starting vendor daemons ...
12:40:51 (lmgrd) Started snpslmd (internet tcp_port 62605 pid 8668)
12:40:51 (snpslmd) FLEXnet Licensing version v10.8.5.0
12:40:51 (snpslmd) Synopsys Corporate Licensing (SCL) Release: version 10.9.2
12:40:53 (snpslmd) Started snpslmd on pluto for: SSS
12:40:53 (snpslmd) DC-Expert DC-Ultra-Features DC-Ultra-Opt
12:40:53 (snpslmd) Design-Compiler DesignWare HDL-Compiler
12:40:53 (snpslmd) Serving features for the following vendor names:
snpslmd CADABRA EPIC ISE-TCADd TE_CATS adalmd anagram avantd
chrysalisd everest hscd innologd la_dmon leda metasoftd nasss numeritchd
saber_dmn sigmacd snpsOEM1 snpsOEM2 snpsOEM3 slat ssilmd synopsysd tmalld vcscd
12:40:53 (snpslmd)-----
12:40:53 (snpslmd) Checking the integrity of the license file...
12:40:53 (snpslmd) Valid SSS feature found.
12:40:53 (snpslmd) The feature is needed to enable the other keys in your license
file.
12:40:53 (snpslmd)-----
12:40:53 (snpslmd) TCP_NODELAY NOT enabled
13:17:38 (snpslmd) OUT: "Design-Compiler" jdoe@mars
19:17:46 (snpslmd) OUT: "Design-Expert" jdoe@mars
19:20:40 (snpslmd) OUT: "HDL-Compiler" psmith@uranus
19:39:04 (snpslmd) IN: "Design-Compiler" jdoe@mars
1:13:24 (lmgrd) TIMESTAMP 7/31/2007
```

---

## Setting Up the Environment for UNIX Users

To reduce tool start-up time, it is recommended that you set the `SNPSLMD_LICENSE_FILE` variable rather than the `LM_LICENSE_FILE` or another legacy licensing variable.

Note:

SNPSLMD\_LICENSE\_FILE is supported only for tools based on the SCL `snpslmd` daemon. Earlier versions of Synopsys tools based on legacy daemons require that you set `LM_LICENSE_FILE` or another legacy licensing variable. If your environment has both earlier and more recent tool versions, consider setting both `SNPSLMD_LICENSE_FILE` and `LM_LICENSE_FILE` to point to the SCL license servers.

To set up a new user, create a Synopsys source file or modify each user's `$HOME` setup files.

1. Set `SNPSLMD_LICENSE_FILE`, `LM_LICENSE_FILE`, or a tool-specific license variable to specify the path to the Synopsys FLEXlm license server.

In the following example, it is assumed that the Synopsys license server is using TCP port 27000, the default. (However, you can specify another port by modifying the `SERVER` line of your site's key file, for example, `SERVER my_server 8308a297 26585`.)

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

```
setenv SNPSLMD_LICENSE_FILE 27000@my_server
```

or

```
setenv LM_LICENSE_FILE 27000@my_server
```

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

```
SNPSLMD_LICENSE_FILE=27000@my_server  
export SNPSLMD_LICENSE_FILE
```

or

```
LM_LICENSE_FILE=27000@my_server  
export LM_LICENSE_FILE
```

Note:

Path syntax (`/path/to/synopsys.lic`) is not supported unless a `USE_SERVER` line is added to the top of the license file, before any `INCREMENT` lines.

2. Add the `lm` utilities (`lmutil`, `lmstat`, and so on) executable files to the user path. For example,

- Add the following to the `.cshrc` file:

```
set path=(/usr/synopsys/scl/platform/bin $path)
```

- Add the following to the `.profile`, `.kshrc`, or `.bashrc` file:

```
PATH=/usr/synopsys/scl/platform/bin:$PATH  
export PATH
```

---

## Setting Up the Environment for Windows Users

To set up a new user for Windows platforms, you must set the `SNPSLMD_LICENSE_FILE`, `LM_LICENSE_FILE`, or a tool-specific license variable to specify the path to the Synopsys FLEXlm license server.

To set the variable,

1. Choose Start > Settings > Control Panel > System > Advanced > Environment Variables.
2. In the System Variables section, click New. Add, for example,

Variable name: `SNPSLMD_LICENSE_FILE`

Variable value: `27000@my_server`

Note:

Path syntax (`\path\to\synopsys.lic`) is not supported unless a `USE_SERVER` line is added to the top of the license file, before any feature (`INCREMENT`) lines.

---

## Verifying the Installation on UNIX and Windows Platforms

To verify that the installation and configuration were completed successfully,

1. Change directories and enter the following command:

**UNIX:** Change to the `scl_root/plat_arch/bin` directory and enter

```
% cd scl_root/plat_arch/bin
% ./lmstat -a -c license_file
```

**Windows:** Change to the `scl_root\msvc70\bin` directory and enter

```
C:\scl\msvc70\bin>lmstat -a -c license_file
```

2. The `-a` argument displays all available features. For the `-c license_file` argument, provide the path to the license key file you are using. For example,

```
% lmstat -a -c 27000@my_server
```

3. Check the output produced by the `lmstat` utility to ensure that the license server is up and running and the license key file is installed.

In [Example 1-2](#), the `lmstat` output identifies the status of all active licenses served by the pluto server and specified in the `synopsys.lic` file.

### Example 1-2 Example lmstat Output

```
Flexible License Manager status on Mon 7/30/2007 13:45
License server status: 27000@pluto
License file(s) on pluto: /synopsys/scl/admin/license/synopsys.lic
pluto: license server UP (MASTER) v10.8
Vendor daemon status (on pluto):
    snpslmd: UP v10.8
Feature usage info:
Users of SSS: (Total of 1 license issued; Total of 0 licenses in use)
Users of DC-Expert: (Total of 30 license issued; Total of 0 licenses in use)
Users of DC-Ultra-Features: (Total of 10 license issued; Total of 0 licenses in use)
Users of DC-Ultra-Opt: (Total of 10 licenses issued; Total of 0 licenses in use)
Users of Design-Compiler: (Total of 30 licenses issued; Total of 0 licenses in use)
Users of DesignWare: (Total of 5 licenses issued; Total of 0 licenses in use)
Users of HDL-Compiler: (Total of 20 licenses issued; Total of 0 licenses in use)
```

#### Note:

The output of `lmstat` shows the FLEXlm version rather than the SCL version. To determine the SCL version, use the `whatscl` utility included in the `scl_root/platform/bin` directory. The syntax for this command is `whatscl snpslmd`.

The example shows that the license server called `pluto` at port 27000 is active and that the configuration is for a single server.

Look for the following conditions:

- The “License server” line identifies the server port and host name.

```
License server status: 27000@pluto
```

- The “License file” line shows the location of the license key file used by the server.

```
License file(s) on pluto: /synopsys/scl/admin/license/synopsys.lic
```

- The “license server Up” line indicates that the `pluto` server (the `lmgrd` daemon) is up and that the configuration is for a single server.

```
pluto: license server UP (MASTER) v10.8
```

For single-server configurations, `lmstat` identifies the single server as the master.

If your system uses three-server redundancy, check to ensure that all three servers are connected, with only one of the three servers identified as the master server.

- The “Vendor daemon status” lines indicate that the `snpslmd` vendor daemon is up and running.

```
Vendor daemon status (on pluto): snpslmd: UP v10.8
```

- The remaining lines show the feature usage information.

