

TCAD Installation Notes

Version S-2021.06 (June 2021)

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These installation notes present the latest information about installing the Synopsys® TCAD tools in the following sections:

- [Supported Platforms and Operating Systems](#)
- [Installing the Software on Linux](#)
- [Setting Up the User Environment on Linux](#)
- [Verifying the Installation on Linux](#)
- [Accessing Documentation](#)

Note:

These installation notes contain the most up-to-date instructions at the time of production. However, changes might have occurred. For the latest installation information, see the tool release notes or documentation available from the Synopsys SolvNetPlus support site at <https://solvnetplus.synopsys.com>.

Supported Platforms and Operating Systems

You can download TCAD tools by electronic file transfer upon initial software release. The software is also available at a later date on physical media.

Table 1 Supported platforms, operating systems, and keywords

Compute platform	Operating system ¹	Synopsys platform keyword	Desktop window environment
x86_64	CentOS 7.3.1611+ ²	linux64 (64-bit mode)	GNOME
x86_64	Red Hat Enterprise Linux 7.3+ ³ , 8+ ³	linux64 (64-bit mode)	GNOME

1. The plus sign (+) in X.Y+ refers to operating systems on a major release X that were released after a minor release Y. For example, 7.3+ means that besides 7.3, later 7.x releases are also supported, such as 7.4, 7.5, and 7.6.

2. Baseline version.

3. Binary-compatible operating system or distribution version.

Note:

TCAD tools have been tested against CentOS 7.3 only. You might experience difficulties using binary-compatible or later releases.

The Red Hat Enterprise Linux operating system is available as different variants. You must use Red Hat Enterprise Linux Workstation or Server to run TCAD Sentaurus tools.

Go to the Release Specific Support page at <https://www.synopsys.com/qsc> for the latest release-specific information about supported platforms, operating systems, and required operating system patches. If any required patch described on this page is not available from the platform vendor, then install the most recent patch instead.

Special Requirements for TCAD to SPICE Tools

TCAD to SPICE tools require a batch queuing system with which they can submit jobs. The following queuing systems are supported:

- IBM Platform LSF and compatible queuing systems (such as OpenLava)
- Sun Grid Engine and compatible queuing systems (such as Open Grid Scheduler and Univa Grid Engine)

Installing the Software on Linux

TCAD tools use the Synopsys Installer, which allows you to install the tools using either a text script or a graphical user interface. Use the latest version of the Synopsys Installer to install the tools.

TCAD Sentaurus can be installed in the same directory (`$STROOT`) used for earlier TCAD Sentaurus releases (this is recommended).

System Requirements on Linux

To install and run TCAD tools on Linux, you require the following:

- An x86_64 processor
- One of the supported Linux operating systems listed in [Table 1 on page 2](#)
- Operating system patches where noted on the Release Specific Support page at <https://www.synopsys.com/qsc>

Table 2 *Disk space required to install TCAD tools on a single platform*

Tool	Disk space [MB]
Raphael™	3356
Raphael™ FX	961
Taurus™ Medici	167
Taurus™ TSUPREM-4™	114
TCAD Sentaurus™ ¹	9425

1. TCAD to SPICE products are integrated in TCAD Sentaurus.

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Installing the Software on Linux

The following sections describe how to download and install the TCAD tools you have purchased. These steps are common to all TCAD tools. If you encounter any problems, contact your local support team (see [Contacting TCAD Support on page 20](#)):

- [Creating a SolvNetPlus Account](#)
- [Downloading the Synopsys Installer](#)
- [Downloading the Synopsys Common Licensing Software](#)
- [Downloading TCAD Tools](#)
- [Downloading the License File \(SmartKeys\)](#)
- [Downloading Manuals](#)
- [Installing the Synopsys Installer](#)
- [Installing the SCL Software on Linux](#)
- [Editing the License File](#)
- [Starting the License Manager](#)
- [Automatically Starting the License Manager](#)
- [Installing the SCL Software on Windows](#)
- [Starting the License Manager on Windows](#)
- [Installing TCAD Tools](#)
- [Cleaning Up Installation Files](#)

Creating a SolvNetPlus Account

SolvNetPlus is the primary support site for Synopsys customers. You can use it to:

- Download software, license files, and documentation
- Submit questions to Support
- Search for information about frequently asked questions

Note:

You will need to know your Synopsys Site ID to access SolvNetPlus.

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Installing the Software on Linux

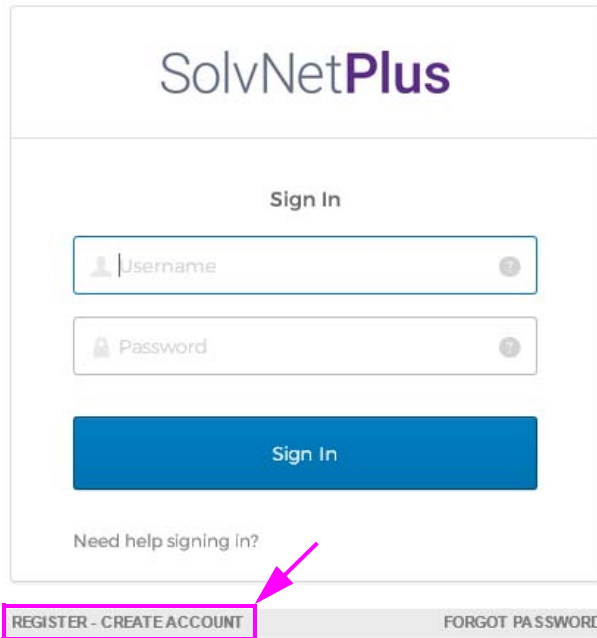
To create a SolvNetPlus account:

1. Go to <https://solvnetplus.synopsys.com>.

Use Chrome or Firefox.

The Sign In page opens.

2. Click the **REGISTER - CREATE ACCOUNT** link.



3. Proceed with the registration.

Caution:

For the **Email** field, enter your corporate email address.

Do not use @gmail.com or @yahoo.com addresses.

The domain will be verified against the Synopsys customer database.

If you encounter problems with your registration, contact your local TCAD Support team (see [Contacting TCAD Support on page 20](#)).

After you have completed your registration, you can access the features of the SolvNetPlus site. You can:

- Search for articles, documentation, and release notes related to tools
- Access tool manuals
- Submit or view Support questions

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Installing the Software on Linux

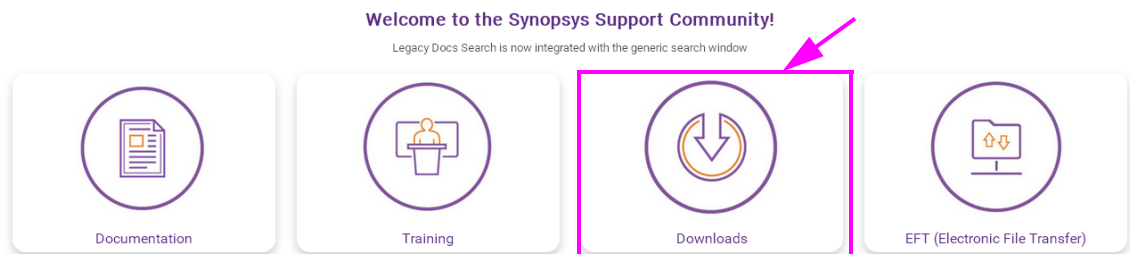
- Download the following:
 - Synopsys Installer
 - Synopsys Common Licensing software
 - TCAD software
 - License file

Downloading the Synopsys Installer

To download the Synopsys Installer:

1. Go to <https://solvnetplus.synopsys.com>.
Use Chrome or Firefox.
2. Enter your user name and password.
3. Click **Sign In**.

The SolvNetPlus home page opens.



4. Click **Downloads**.
The Downloads page opens.
5. On the **My Product Releases** tab, scroll through the list and click **Synopsys Installer**.
6. Click the latest version.

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Installing the Software on Linux

7. Click **Download Here**.

Download Details: Synopsys Installer: 5.2

[Download Here](#) [FTPS Download Instructions](#)
[SFTP Download Instructions](#)

RELEASE ALERTS

[Sign up](#) for Synopsys Installer

RELEASE NOTES

[> View release notes](#)

INSTALLATION GUIDE




[> View installation guide](#)

OVERVIEW

Release Type
Feature

8. Accept the terms regarding software downloads.

9. Select the following file:

<input type="checkbox"/> Name ▲	Size ▲
<input type="checkbox"/>  checksum_info.txt	191 B
<input type="checkbox"/>  installer_INSTALL_README.txt	9.51 KB
<input checked="" type="checkbox"/>  SynopsysInstaller_v5.2.run	15.39 MB

10. Click **Download File(s)** in the upper-right corner of the page.

11. Proceed with the download.

Downloading the Synopsys Common Licensing Software

To download the Synopsys Common Licensing (SCL) software:

1. Go to <https://solvnetplus.synopsys.com>.

Use Chrome or Firefox.

2. Enter your user name and password.

3. Click **Sign In**.

The SolvNetPlus home page opens.

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Installing the Software on Linux

4. Click **Downloads**.
5. On the **My Product Releases** tab, scroll through the list and click **Synopsys Common Licensing**.
6. Click the latest version.
7. Click **Download Here**.
8. Accept the terms regarding software downloads, if prompted.
9. Select *both* the common file (`scl_v*_common.spf`) and a platform-specific file (for example, `scl_v*_linux64.spf`).

Note:

For Windows, select only the Windows executable (`scl_v*_windows.exe`).

10. Click **Download File(s)** in the upper-right corner of the page.
11. Proceed with the download.

Downloading TCAD Tools

To download any TCAD tool:

1. Go to <https://solvnetplus.synopsys.com>.
Use Chrome or Firefox.
2. Enter your user name and password.
3. Click **Sign In**.
The SolvNetPlus home page opens.
4. Click **Downloads**.
5. On the **My Product Releases** tab, scroll through the list and click the link for one of the TCAD tools you purchased.
6. Click the latest version of the tool.
7. Click **Download Here**.
8. Accept the terms regarding software downloads, if prompted.
9. Select *both* the common file (`*_common.spf`) and a platform-specific file (for example, `*_linux64.spf`).
10. Click **Download File(s)** in the upper-right corner of the page.

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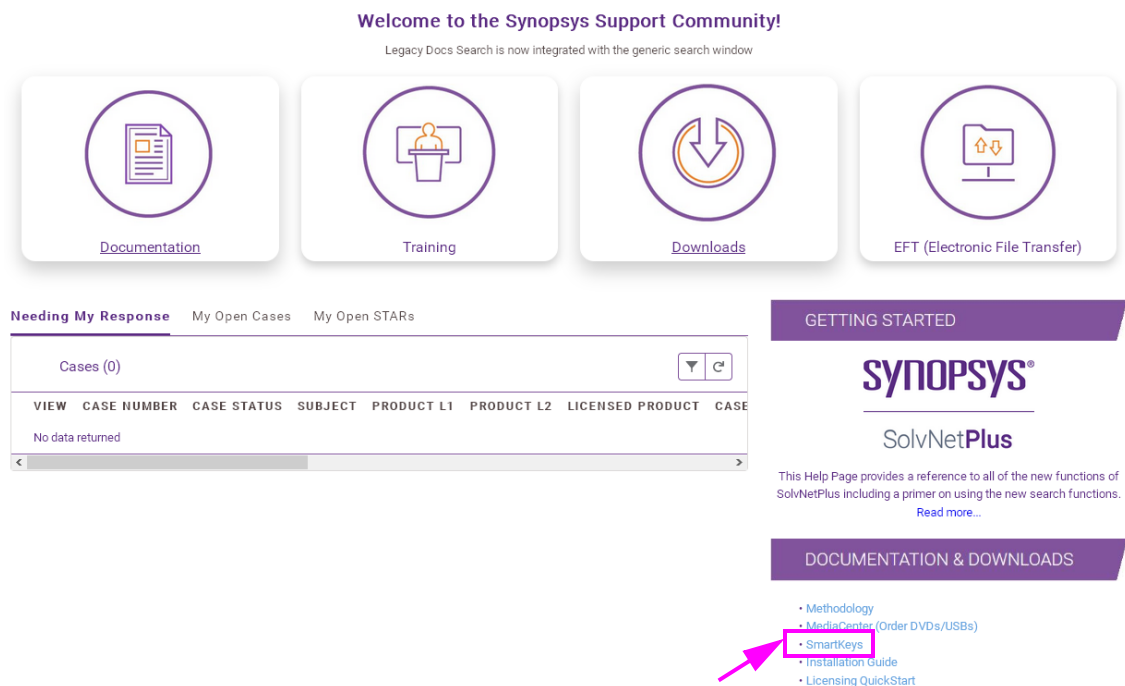
Installing the Software on Linux

11. Proceed with the download.
12. Repeat Steps 5–11 for all the TCAD tools you want to install.

Downloading the License File (SmartKeys)

To download the license file:

1. Go to <https://solvnetplus.synopsys.com>.
Use Chrome or Firefox.
2. Enter your user name and password.
3. Click **Sign In**.
The SolvNetPlus home page opens.
4. Under DOCUMENTATION & DOWNLOADS, click **SmartKeys**.



5. On the SmartKeys home page, click **Key Retrieval**.
6. On the Key Retrieval page, fill in the fields.
7. Click **Retrieve Key**.

Downloading Manuals

Documentation for TCAD tools is included with the software release (see [Accessing Documentation on page 21](#)).

You can also access the documentation (in PDF format) separately for all TCAD tools from the SolvNetPlus site.

To download manuals from SolvNetPlus:

1. Click **Documentation**.

The Documentation page opens.

2. Click a product link.

The product page opens with links to documentation.

Installing the Synopsys Installer

To install the Synopsys Installer:

1. Go to the directory where you will install the software:

```
cd /opt/synopsys
```

2. Create a temporary directory:

```
mkdir tmp ; cd tmp
```

3. Move the installer packager to the temporary directory:

```
mv /path/to/SynopsysInstaller_v5.2.run .
```

4. Ensure the Synopsys Installer is executable:

```
chmod 755 SynopsysInstaller_v5.2.run
```

5. Unpack the Synopsys Installer:

```
./SynopsysInstaller_v5.2.run
```

Installing the SCL Software on Linux

Note:

If your license server is a Windows machine, continue the installation with [Installing the SCL Software on Windows on page 14](#).

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Installing the Software on Linux

If your license server is a Linux machine, perform the following steps to install the SCL software on Linux:

1. Move the package files to the temporary directory you created. For example:

```
cd /opt/synopsys/tmp
mv /path/to/scl_v2021.03_*.spf .
```

2. Run the installer:

```
/opt/synopsys/tmp/setup.sh -legacy
```

If you encounter problems with the graphical user interface of the installer, then use the batch version:

```
/opt/synopsys/tmp/installer -legacy
```

3. Follow the setup instructions.

When you are asked for the installation (or target) directory, enter:

```
/opt/synopsys/scl/2021.03
```

This path assumes that the main installation directory is `/opt/synopsys`.

Editing the License File

To edit the license file:

1. Copy the license file to the `/opt/synopsys/scl/2021.03/admin/license` directory, and rename the file to `license.dat`.
2. Edit the license file such that the `SERVER` line shows the host name of the license server and the `VENDOR` line shows `snpslmd snpslmd`. For example:

```
#-----
SERVER myLicServ 3CA9F4153A48 27020
VENDOR snpslmd snpslmd
USE_SERVER
INCREMENT SSS snpslmd 1.0 10-sep-2021 1 5EF6B96CD8898BB4BBA1 \
  VENDOR_STRING="b7cad 85c79 f0d51 3bb6a 59726 06abd 5eda6 5d3c4 92770 17111 \
  01020 0d75a b68b1 07d3d d200a aa6f6 a740b d8db5 b1cbe 4a722 \" \
  NOTICE="Licensed to Synopsys Switzerland LLC [DO NOT DELETE/MODIFY SSS \
  OR ANY OTHER KEYS IN THIS FILE]" \
  SN=RK:0:0:985248 ISSUER="Synopsys, Inc. [03/10/2020 8:21:21 17935 3.16.2]" \
  START=10-Mar-2020
INCREMENT 3D snpslmd 2021.06 10-sep-2021 20 VENDOR_STRING=^1+S \
  SUPERSEDE ISSUED=10-sep-2021 ck=38 SN=RK:3016-0:2344069:985248 \
  START=10-mar-2020 AUTH={ tmaId=( LK=2E96591CF65ECA9CC935) \
  snpslmd=( LK=0EC6294C3CD54888C934) }
```

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Installing the Software on Linux

Note:

Firewalls and Internet security programs can block TCP ports and prevent the SCL software from running. If you have a firewall installed, then modify the license key file to assign a port to the `snpslmd` daemon at the end of the `VENDOR` line (usually, this is determined randomly). Then, on your firewall, open both the `lmgrd` and `snpslmd` ports. For example:

```
SERVER my_server 0003DC78E712 27020
VENDOR snpslmd snpslmd port=27021
```

Starting the License Manager

To start the license manager:

1. On the license manager host, enter the following commands:

```
cd /opt/synopsys/scl/2021.03/admin/license
/opt/synopsys/scl/2021.03/linux64/bin/lmgrd -c license.dat
-l license.log
```

Note:

Check that you have the correct operating system.

2. Check the `license.log` file for any errors.

For more information about license management and troubleshooting license errors, go to <https://www.synopsys.com/licensing>.

3. If you want to start the license manager automatically at boot time, see [Automatically Starting the License Manager](#).

Note:

If you use a FLEXlm options file with `MAX` user limits to control license access per user, then you must set the following environment variable before starting `lmgrd`:

- On Bash shell: `export SCL_QUEUE_ON_MAX=1`
- On C shell: `setenv SCL_QUEUE_ON_MAX 1`

Automatically Starting the License Manager

To set up the license manager to start automatically:

1. From the SolvNetPlus site, read the “Automated UNIX Startup Script for the SCL Server” article and download the boot script (<https://solvnetplus.synopsys.com/s/article/Automated-UNIX-Startup-Script-for-the-SCL-Server-1576173358077>).
2. Open the script in a text editor, and customize the following variables:
 - `FLEX_USER_ACCOUNT="root"` (non-root user is recommended)

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- `SCL_root="/opt/synopsys/scl/2021.03"`
- `SCL_bin_dir="${SCL_root}/linux64/bin"` (check the operating system)
- `SCL_keyfile_path="${SCL_root}/admin/license/license.dat"`

3. Save the script to:

```
/opt/synopsys/bin/synopsysflexlm
```

4. Set permissions in a shell by entering:

```
chmod 755 /opt/synopsys/bin/synopsysflexlm
```

To test the script for the automated startup of the license manager:

1. In a shell, for example, enter:

```
/opt/synopsys/bin/synopsysflexlm start  
sdevice -v
```

You should see the version of `sdevice` without any license warning.

2. If you see a license warning:

- Check the license log in `/opt/synopsys/scl/2021.03/admin/logs`.
- For further information, go to <https://www.synopsys.com/licensing>.

To install the boot script, as root, enter the following in a shell:

1. Copy the startup script to `init.d`:

```
cp /opt/synopsys/bin/synopsysflexlm /etc/rc.d/init.d
```

2. Set permissions:

```
chmod 755 /etc/rc.d/init.d/synopsysflexlm
```

3. Set links in `init.d`:

```
chkconfig --add synopsysflexlm
```

4. Reboot your machine, and verify that the tools are running, following the instructions in the previous procedure (without starting the server manually).**Note:**

To install the boot script on other platforms, see the comments in the boot script for installation.

Installing the SCL Software on Windows

Note:

This is an optional section. It applies only if you install the license manager on the Windows operating system.

To install the SCL software on Windows:

1. Start the downloaded installation file by double-clicking `scl_v*_windows.exe`.

Note:

On Windows 10, you might see an error message that administrator privileges are required. In that case, right-click `scl_v*_windows.exe` and choose **Run as administrator**.

2. Click **Next**.
3. Enter your site ID, your name, and your contact details.

If a user encounters licensing issues, this information will be displayed.

4. Click **Next**.
5. Accept the terms and conditions.
6. Click **Next**.
7. Choose an appropriate location for the installation.
8. Click **Next**.
9. Copy the license file to:

```
C:\Synopsys\SCL\2021.03\admin\license
```

10. Edit the license file as described in [Editing the License File on page 11](#).

Starting the License Manager on Windows

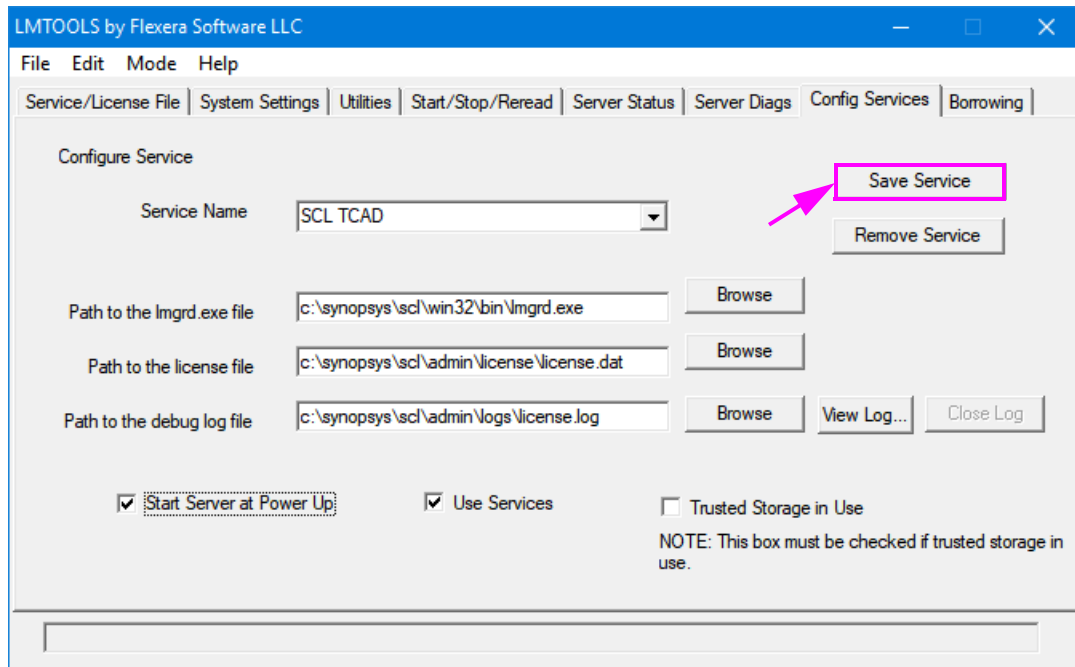
To start the license manager on Windows 10:

1. From the **Start** button, choose **Synopsys > Imtools**.

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Installing the Software on Linux

2. On the **Config Services** tab, configure the service as shown here, and click **Save Service**.



3. To start the license server, click the **Start/Stop/Reread** tab, and click **Start Server**.

Installing TCAD Tools

Note:

Ensure you have sufficient free hard disk space for the installation (see [Table 2 on page 3](#)).

To install each TCAD tool that you downloaded:

1. Move the package files to the temporary directory you created:

```
cd /opt/synopsys/tmp
mv /path/to/*.spf* .
```

2. Run the installer:

```
/opt/synopsys/tmp/setup.sh -legacy
```

If you encounter problems with the graphical user interface of the installer, then use the batch version:

```
/opt/synopsys/tmp/installer -legacy
```

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Setting Up the User Environment on Linux

3. Follow the setup instructions.

When you are asked for the installation (or target) directory, enter the main installation directory (if you have previous versions installed already, use the same installation directory):

```
/opt/synopsys
```

Cleaning Up Installation Files

To remove all temporary installation files, enter:

```
rm -r /opt/synopsys/tmp/*
```

Note:

Before you can run your TCAD tool, your environment must be configured following the steps in [Setting Up the User Environment on Linux](#).

Setting Up the User Environment on Linux

This section provides tool-specific information for setting up the user environment on Linux.

Setting Up the Environment for TCAD Sentaurus

Note:

TCAD to SPICE products are integrated in TCAD Sentaurus.

Configuring TCAD Sentaurus

To configure TCAD Sentaurus, some environment variables must be set, and the binaries must be included in your path:

1. Assuming you are running a C shell (such as `csh` or `tcsh`):

```
setenv STROOT /opt/synopsys
```

(replace with the actual installation directory)

```
setenv LM_LICENSE_FILE 27020@myLicServ
```

(replace with the actual port and host name of the license server)

```
setenv STDB $HOME/db
```

(replace with the actual directory where simulation projects will be stored)

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Setting Up the User Environment on Linux

2. Add the binary directory to your path:

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

3. To make these settings permanent, you can add the above lines to your shell profile, which is typically `.cshrc` in your home directory.
4. If you use a Bourne, Korn, or Bash shell (such as `sh`, `ksh`, or `bash`), the corresponding commands for the previous steps are:

```
export STROOT=/opt/synopsys  
export LM_LICENSE_FILE=27020@myLicServ  
export STDB="$HOME/db"  
export PATH="$PATH:$STROOT/bin"
```

To make these settings permanent, you can add these lines to your shell profile, which is typically `.profile`, `.kshrc`, or `.bashrc` in your home directory.

Note:

To determine your shell type, enter the following command in a shell:

```
echo $0
```

If you purchased the TCAD Sentaurus Calibration package, follow the installation procedure in `/opt/synopsys/current/Calibration_Library/README`.

Verifying the Installation

Test the installation in a shell by entering, for example:

```
sprocess -v  
sdevice -v  
garand-ve --version
```

If you see information about the tool version, production date, and copyright, then the installation is successful.

Troubleshooting TCAD Sentaurus

This section presents the following topics:

- [Error: System Hangs on Large Simulation Running on Linux Platform](#)
- [Sentaurus Structure Editor Fails to Start Properly in Interactive Mode](#)
- [Illegal Instruction Error When Running Sentaurus Visual With Mesa Libraries](#)
- [Problems With Graphics Cards for Sentaurus Visual](#)
- [No Picture Export in Sentaurus Visual](#)

Error: System Hangs on Large Simulation Running on Linux Platform

If your Linux system is configured to enable memory overcommit and you run a simulation that exceeds the memory resources on your system, then it might lead to the system hanging.

Check whether memory overcommit is switched on, on your machine, by entering the following command in a shell:

```
/sbin/sysctl vm|grep overcommit_memory
```

A value different from 2 means overcommit is switched on.

To avoid this behavior, you can use `ulimit` (Bash shell) or `limit` (C shell) to prevent using more memory than your system has available. For example, on a machine with 4 GB RAM, if using the Bash shell, enter:

```
ulimit -d 4096000
```

For the C shell, enter:

```
limit datasize 4096000
```

Alternatively, your system administrator can deactivate memory overcommit.

Sentaurus Structure Editor Fails to Start Properly in Interactive Mode

In rare cases, when launching Sentaurus Structure Editor in interactive mode, depending on your graphics card, X server configuration, and possibly remote connection, the graphical user interface of Sentaurus Structure Editor might not render with the standard graded blue background or the tool might become unresponsive.

In this case, you can try the following steps:

1. Start Sentaurus Structure Editor in non-OpenGL mode by entering:

```
sde -noopenGL
```

2. For X server with Composite extension, hide composite-aware visuals by entering the following in a C shell:

```
setenv XLIB_SKIP_ARGB_VISUALS 1
```

3. Send OpenGL commands always through X (indirect rendering) by entering the following in a C shell:

```
setenv LIBGL_ALWAYS_INDIRECT 1
```

4. Deactivate the shared-memory extensions by entering the following in a C shell:

```
setenv XLIB_NO_SHM 1
```

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Setting Up the User Environment on Linux

For more details about working with environment variables, for example, in a Bash shell or how to make these settings permanent, see [Configuring TCAD Sentaurus on page 16](#).

Illegal Instruction Error When Running Sentaurus Visual With Mesa Libraries

Mesa libraries shipped with the TCAD Sentaurus package now require the AVX extension to be available on the host CPU. This is a known unresolved issue in Mesa libraries affecting several versions (see <https://gitlab.freedesktop.org/mesa/mesa/-/issues/3860>).

Therefore, if Sentaurus Visual cannot detect a GPU or VirtualGL installed, then Sentaurus Visual defaults to use Mesa libraries, requiring the AVX extension.

If AVX instructions are not available, then Sentaurus Visual exits with an error with an *Illegal instruction* message.

To test whether a CPU has AVX extension activated, run the following command:

```
cat /proc/cpuinfo | grep -i "avx" | wc -l
```

If the result is 1 or higher, then the CPU has AVX support and Sentaurus Visual will run with Mesa libraries.

If the result is zero (0), then the CPU has no AVX support. In this case, use another computer or upgrade your CPU. Most commercial CPUs with fewer than 10 years in the market have AVX support.

Problems With Graphics Cards for Sentaurus Visual

On some specific graphic cards, Sentaurus Visual does not display 2D or 3D plots, or sometimes does not start.

In these cases, set `setenv XLIB_NO_SHM 1` in a shell, and start Sentaurus Visual from within that shell.

If this helps, you might want to add this setting to your `.cshrc` file.

No Picture Export in Sentaurus Visual

When exporting graphics in Sentaurus Visual using the command-line option `-batchx`, the X window Virtual Framebuffer package (xvfb) must be present on the machine.

To install xvfb:

1. Log on as root, for example, in a shell, enter: `su -`
2. Install the xvfb package by entering in the shell:

```
yum install xorg-x11-server-Xvfb
```

Setting Up the Environment for Raphael and Raphael FX

Configuring Raphael and Raphael FX

Follow the procedure in [Configuring TCAD Sentaurus on page 16](#).

Verifying the Installation

Test the installation in a shell by entering, for example:

```
raphael rcx -v  
raphael rcfx -v
```

If you see information about the tool version, production date, and copyright, then the installation is successful.

Setting Up the Environment for Taurus Medici and Taurus TSUPREM-4

Configuring Taurus Medici and Taurus TSUPREM-4

Follow the procedure in [Configuring TCAD Sentaurus on page 16](#).

Verifying the Installation

Test the installation in a shell by entering, for example:

```
tsuprem4  
medici -v
```

If you see information about the tool version, production date, and copyright, then the installation is successful.

Contacting TCAD Support

To contact TCAD Support:

- USA: support-tcad-us@synopsys.com
- Europe: support-tcad-eu@synopsys.com
- Japan: support-tcad-jp@synopsys.com
- Korea: support-tcad-kr@synopsys.com

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Verifying the Installation on Linux

- Asia-Pacific: support-tcad-ap@synopsys.com
- For licensing issues also: support_center@synopsys.com

Verifying the Installation on Linux

To verify the installation of TCAD tools:

- For TCAD Sentaurus, see [Verifying the Installation on page 17](#).
- For Raphael and Raphael FX, see [Verifying the Installation on page 20](#).
- For Taurus Medici and Taurus TSUPREM-4, see [Verifying the Installation on page 20](#).

Accessing Documentation

To access TCAD documentation:

- For TCAD Sentaurus, from Sentaurus Workbench, choose **Help > Manuals**, or go to `/opt/synopsys/tcad/current/manuals/PDFManual/front.pdf`.
- For the TCAD Sentaurus Tutorial, from Sentaurus Workbench, choose **Help > Training**, or go to `/opt/synopsys/tcad/current/Sentaurus_Training`.
- For Raphael, go to `/opt/synopsys/raphael_2021.06.0/manual_pdf`.
- For Raphael FX, go to `/opt/synopsys/raphaelfx_2021.06.0/manual_pdf`.
- For Taurus Medici, go to `/opt/synopsys/taurus-medici_2021.06.0/manual_pdf`.
- For Taurus TSUPREM-4, go to `/opt/synopsys/taurus-tsuprem4_2021.06.0/manual_pdf`.
- Go to the SolvNetPlus support site at <https://solvnetplus.synopsys.com>.

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To view and print the documentation in Portable Document Format (PDF), use a PDF viewer that supports PDF version 1.6.

Note:

If you use Adobe Acrobat Reader DC, for example, when you click a link to another PDF file, this viewer reuses the same window by default.

To set up the viewer so that a new window opens when following links:

1. Choose **Edit > Preferences**.
2. Under Categories, click **Documents**.
3. Deselect **Open cross-document links in same window**.
4. Click **OK**.

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