

# Liberty™ NCX Installation Notes

## Version D-2009.12

December 7, 2009

---

These installation notes present information about installing Liberty NCX version D-2009.12 in the following sections:

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

Note:

The installation instructions in this chapter are the most up-to-date available at the time of production. However, changes might have occurred. For the latest installation information, see the product release notes or documentation.

See also <http://www.synopsys.com/Support/Licensing/Installation/Pages/default.aspx> for additional installation and licensing information.

---

## Media Availability and Supported Platforms

Liberty NCX is available by electronic software transfer (EST) download upon initial software release, and at a later date on DVD (or CD depending on image size).

[Table 1](#) shows the supported compute platforms, operating systems, Synopsys platform keywords, and windowing environments for this release.

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

Compute platform	Operating system	Synopsys platform keyword	Desktop windowing environment
x86_64	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	amd64 (64-bit mode) linux (32-bit mode) <sup>2</sup>	GNOME
x86_64	SUSE Linux Enterprise v9, 10 <sup>1</sup>	suse64 (64-bit mode) suse32 (32-bit mode)	KDE
x86_64	Solaris 10	x86sol64 (64-bit mode) x86sol32 (32-bit mode)	CDE
x86	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	linux (32-bit mode) <sup>2</sup>	GNOME
x86	SUSE Linux Enterprise v9, 10 <sup>1</sup>	suse32 (32-bit mode)	KDE
Sun SPARC	Solaris 9, 10 <sup>1</sup>	sparc64 (64-bit mode) sparcOS5 (32-bit mode)	CDE

1. Binary-compatible hardware platform or operating system. Note, however, that binary compatibility is not guaranteed. See <http://www.synopsys.com/Support/Licensing/SupportPlatform/ReleaseSupport/Pages/default.aspx> for the latest on supported platforms, including required OS patches.

2. The 32-bit (x86) and 64-bit (x86\_64) Linux software is binary compatible with the Intel EM64T or AMD Opteron processors running Red Hat Enterprise Linux.

---

## Disk Space and Memory Requirements

The disk space requirement depends on the platform. [Table 2](#) shows the minimum space required for installing on a particular platform.

*Table 2 Disk Space Requirements (in Megabytes)*

Synopsys platform keyword	Megabytes
common (platform-independent files)	.5
amd64	73
linux	71
suse64	38
suse32	70
x86sol64	46
x86sol32	88
sparc64	46
sparcOS5	86

The recommended minimum physical memory is 1 GB. The recommended minimum swap space is 2 GB.

---

## Installing the Software

Liberty NCX uses the Synopsys Installer, which allows you to use a text script or a graphical user interface (GUI). For information about downloading the Synopsys Installer, see *Installing Synopsys Tools*, which is available at the following address:

<http://www.synopsys.com/Support/Licensing/Installation/Pages/default.aspx>

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

---

## Setting Up the User Environment

To set up the user environment, you must specify the location of the executable file and set the license file environment variable.

---

### Specifying the Executable File Location

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

The platform-independent wrapper script is located at *install\_dir/bin*.

To set up the environment by using the platform-independent wrapper script, add the Liberty NCX bin directory to the `PATH` environment variable.

- To set up the environment using the C shell, add the following line to the `.cshrc` file:

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

- To set up the environment using the Bourne, Korn, or Bash shell, add the following line to the `.profile`, `.kshrc`, or `.bashrc` file:

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

Replace *install\_dir* with the Liberty NCX installation directory.

To access man pages on Liberty NCX commands and variables, set the `MANPATH` environment variable.

- To set the variable in the C shell, add the following line to the `.cshrc` file:

```
setenv MANPATH $SYNOPSYS_NCX_ROOT/ncx/man
```

- To set the variable in the Bourne, Korn, or Bash shell, add the following line to the `.profile`, `.kshrc`, or `.bashrc` file:

```
MANPATH=$SYNOPSYS_NCX_ROOT/ncx/man
export MANPATH
```

---

### Setting the License File Environment Variable

You must install the Synopsys Common Licensing (SCL) software, retrieve your license key file, and define the `SNPSLMD_LICENSE_FILE` environment variable before you can verify the Liberty NCX installation.

For information about downloading SCL, installing SCL, or setting the license file variable, see the *Synopsys Licensing Quickstart Guide*, which is available at the following address:

<http://www.synopsys.com/Support/Licensing/Licensing/Pages/default.aspx>

---

## Setting the SYNOPSIS\_NCX\_ROOT Variable

To run the Model Adaptation System (library formatting) operations and the Library Quality Assurance System utility, you must set the path for the `SYNOPSIS_NCX_ROOT` variable in your `.cshrc` file and point it to the Liberty NCX installation directory location. If you are using the C shell, add the following line to the `.cshrc` file:

```
setenv SYNOPSIS_NCX_ROOT path_to_NCX_Install_Directory
```

where `path_to_NCX_Install_Directory` is the directory where Liberty NCX was installed. If you are using the Bourne, Bash, or Korn shell, add these lines to the `.profile`, `.bashrc`, or `.kshrc` file:

```
SYNOPSIS_NCX_ROOT = path_to_NCX_Install_Directory  
export SYNOPSIS_NCX_ROOT
```

To invoke the Make CCS Noise program, you need either a Liberty NCX license or the availability of a PrimeTime SI license. After you invoke Make CCS Noise, you need a Library Compiler license and an HSPIICE license. Make CCS Noise uses a single Library Compiler license even for distributed processing on multiple hosts, plus one HSPIICE license for each host used during characterization.

However, before running Make CCS Noise, you must set the `SYNOPSIS_NCX_ROOT` environment variable to the specific path where Liberty NCX was installed, as shown:

```
% setenv SYNOPSIS_NCX_ROOT path_to_NCX_Install_Directory
```

where `path_to_NCX_Install_Directory` is the directory where Liberty NCX was installed, as specified in the Synopsys installer script.

You must also set the `path` environment variable to the appropriate platform, as shown:

```
% set path = (path_to_NCX_Install_Directory/ccsn/platform $path)
```

where `platform` is the name of the platform on which `make_ccs_noise` is being invoked. The supported platforms are: `linux`, `sparcOS5`, `sparc64`, `suse32`, `suse64`, or `amd64`.

You no longer need to set the `MTB_TPATH` or the `CCSN_TPATH` environment variables to `$synopsys/ccsn/platform`. The `MTB_TPATH` and `CCSN_TPATH` environment variables are not required.

**Note:**

You no longer need to set the Perl environment to run Perl scripts. Liberty NCX infers the Perl path automatically.

---

## Verifying the Liberty NCX Installation

To verify the Liberty NCX installation,

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

```
% cd $HOME
```

2. Invoke the tool by entering the following command on a licensed machine. To start Liberty NCX in shell mode, enter

```
% install_dir/platform/syn/bin/ncx
```

Replace *install\_dir* with the Liberty NCX installation directory and platform with the appropriate Synopsys platform keyword. See [Table 1](#) for more information.

If you see information about the product version, production date, and copyright, the installation was successful.