

EnSight 10.2 Installation Guide

Version 10.2.2(b)

Installation

The full installer, `EnSight102Full*`, installs the EnSight application as well as several supporting applications. It installs EnSight 10.2 for postprocessing solution data, EnVideo 10.2 for visualization of image files and playback of movies exported from EnSight, and EnVe 4.2 for video editing of movies exported from EnSight.

Minimum System Requirements

Platform	Minimum Version
Microsoft Windows	Windows 7
Macintosh	OS X 10.12 (Sierra)
Linux	Linux Kernel 2.6, glibc 2.12

A DirectX 10-capable graphics card from ATI or NVIDIA is required.

Windows

EXE

To install any of our products on Windows, begin by downloading an installer from our website. Windows installer files from our website have names like `EnSight102Full-10.2.2b.exe`. Once you download the file, double-click it to start the installation process. Follow the on-screen prompts to complete the installation. In the install wizard you can choose to disable some components that you may not need or change the installation location. Once the installer completes, you can double click the desktop icons to start our products. Notes:

- You can install a license file on your computer by copying a `slim8.key` file into one of these directories:
 - `C:\Program Files (x86)\CEI\license8\` (64-bit Windows - default folder)
 - `drive:\full\path\to\installation\location\license8\` (Custom installation folder)
- To run any of the products, double click on the icons on the Desktop or use the Start menu.
- The installation can be done in silent mode from the command line. This opens no windows and is ideal for scripted or remote installations.

```
EnSight102Full-10.2.2b.exe /S
```

ZIP

For users who don't manage their system with EXE, CEI also offers a ZIP (compressed archive) file. To install this package, change directory to the where you would like to install the CEI tree and unzip the file. The created CEI directory will be your installation location.

```
unzip EnSight102Full-10.2.2b-win64.zip
```

Alternatively, using the Windows File Explorer, move the ZIP file to where you would like the installation location to be and double click it. Windows will unpack the file into an installation.

You may delete the ZIP file when installation is complete.

Macintosh

DMG/PKG

We distribute an Apple installer package inside a disk image for all of our products. If you download the full EnSight product suite from the CEI website, your file should be named something like `EnSight102Full-10.2.2b.dmg`. Double-click this file to open the image. In the new Finder window that opens, you will see the installer package. Double-click the installer to launch it. Follow the prompts to install the software. In all cases, you need to have administrator privileges to perform the installation.

- Click on the Change Install Location button to install into a different location
- You can install from the command line using the 'installer' command. This option is ideal for scripted or remote installations. See the 'installer' man page for more options.

```
sudo installer -pkg EnSight102Full.pkg -target /
```

- You can install a license file for your computer by copying the `slim8.key` file into one of these directories:
 - `/Applications/CEI/license8/`
 - `custom installation location/license8/` (Custom installation folder)

Launch the applications from the Finder by double clicking on the `EnSight102`, `EnVideo102`, or `EnVe42` icons within the `/Applications/` folder.

Or, to launch applications from the terminal, type any of the following

```
open /Applications/EnSight102.app
open /Applications/EnVe42.app
open /Applications/EnVideo102.app
```

To make it easier to run CEI applications from the command line using unix-style scripts (e.g., `ensight102`, `envideo102`, `enve42`), set your `PATH` environment variable:

```
tcsh/csh:
    setenv PATH /Applications/CEI/bin:$PATH
sh/bash/ksh/zsh:
    export PATH=/Applications/CEI/bin:$PATH
```

TGZ

For users who don't manage their system with PKG, CEI also offers a TGZ (gzipped tar) file. To install this package, launch a Terminal. Change directory to the where you would like to install the CEI tree and untar the file. The created CEI directory will be your installation location.

```
tar xvzf /path/to/EnSight102Full-10.2.2b-apple.tgz
```

Be sure to set your `PATH` environment variable to reflect your installation location. For example, with a `/usr/local/CEI` installation location, use the following commands for your shell:

```
csh/tcsh:
    setenv PATH /usr/local/CEI/bin:$PATH
sh/bash/ksh/zsh:
    export PATH=/usr/local/CEI/bin:$PATH
```

Linux

For Linux, we package software in two formats that work for most common distributions. For RedHat-derived systems (including CentOS and Fedora), see the RPM section. For Debian-derived systems (including Ubuntu), see the DEB section. For users who do not use the DEB or RPM packaging systems, a compressed tar file is also available on our web site; see the TGZ section.

RPM

For RPM-based Linux distributions like RedHat, CentOS, and Fedora, CEI offers RPM packages for all of its products. You can use one of the many graphical package managers available for RPM system, or you can install these packages from the command line using the 'rpm' tool.

```
rpm -ivh EnSight102Full-10.2.2b-1.x86_64.rpm
```

If some dependencies are missing, `rpm` will inform you what additional packages need to be installed. Once the `rpm` is finished, you are ready to use the software. If you are a `csh/tcsh` user, be sure to issue the `rehash` command to recognize the new software. Start the products with any of the following commands: `ensight102`, `enve42`, `envideo102`

You can install a license file by copying the `slim8.key` file to `/usr/local/CEI/license8/slim8.key`

The default install location is `/usr/local/CEI/`, with launch scripts in `/usr/local/bin/`. You can install elsewhere by specifying the `--relocate` flag to the `rpm` command. Check your RPM documentation for more details. As an example, if you want to install into the directory `/apps/` instead of `/usr/local/`, use the following command

```
rpm -ivh --relocate /usr/local=/apps
EnSight102Full-10.2.2b-1.x86_64.rpm
```

This creates `/apps/CEI/`, with the launch scripts in `/apps/bin/`.

If you install to a location other than the default, you should update your `PATH` environment variable:

```
csh/tcsh:
    setenv PATH /full/path/to/CEI/bin:$PATH
sh/bash/ksh/zsh:
    export PATH=/full/path/to/CEI/bin:$PATH
```

DEB

For systems that use the Debian packaging system, like Debian and Ubuntu, CEI offers `.deb` packages. These `.deb` packages can be installed with any of the standard package manager tools including `'dpkg'`, which runs from the command line. First, use `'dpkg'` to queue the package for installation. For example:

```
sudo dpkg -i EnSight102Full-10.2.2b_amd64.deb
```

If some dependencies are missing, `'dpkg'` will warn you and queue `EnSight102Full` for installation once the dependencies are met. Run `'apt-get'` to install the missing software.

```
sudo apt-get install -f
```

The `install -f` option instructs `apt-get` to install the missing dependent packages and complete the `EnSight102Full` installation. After this completes, you are ready to use the software. If you are a `csh/tcsh` user, be sure to issue the `'rehash'` command to recognize the new software.

Start the products with any of the following commands: `ensight102`, `enve42`, `envideo102`

Notes:

- On Debian systems, CEI Products install to `/opt/CEI/`
- You can install a license file by copying the `slim8.key` file to `/opt/CEI/license8/slim8.key`

TGZ

For users who don't manage their system with RPM or DEB, CEI also offers a TGZ (gzipped tar) file. To install this package, change directory to the where you would like to install the CEI tree and `untar` the file. The created `CEI` directory will be your installation location.

```
tar xvzf /path/to/EnSight102Full-10.2.2b-all.tgz
```

Be sure to set your `PATH` environment variable to reflect your installation location. For example, with a `/usr/local/CEI` installation location, use the following commands for your shell:

```
csh/tcsh:
    setenv PATH /usr/local/CEI/bin:$PATH
sh/bash/ksh/zsh:
    export PATH=/usr/local/CEI/bin:$PATH
```

Licensing

CEI products employ the Simple License Manager (SLiM) system for licensing our products. When you purchase a CEI product, you are issued a license key that is either 'node-locked' or 'floating'. A node-locked license key is limited to a single computer or a small set of specified computers. A floating license can be shared among many computers on your network. Installation is slightly different for each. The license key file is always named `slim8.key`.

If you don't have a license file installed, EnSight will start as "EnSight Free," which is limited in capability. To use the full capabilities of EnSight, you will need to install a `slim8.key` license file.

Quick instructions

Node-locked licenses

To request a `slim8.key`, you need to run `slim8_get_info` from your CEI installation and submit the entire output to CEI or your local distributor of EnSight. For node-locked keys you need to run `slim8_get_info` on each computer you wish to license to run EnSight. Once you receive your `slim8.key` license file, copy it into the `license8/` directory on each computer you ran `slim8_get_info` on.

For node-locked licenses, you will *not* run the `slimd8` license manager.

Floating licenses

A floating license allows you to use EnSight on any computer in your network as long as they can communicate with the specified computer running the `slimd8` license manager. This requires that you have a floating license, that each computer intended to run EnSight has a copy of `slim8.key` installed (shared, network file systems make this easier), that the specified computer intended to run `slimd8` has a copy of the key, and that it is also running the `slimd8` license manager.

To request a `slim8.key`, you need to run `slim8_get_info` from your CEI installation only on the computer intended to run the `slimd8` license manager and submit the entire output to CEI or your local distributor of EnSight. Once you receive your `slim8.key` license file, copy it into the `license8/` directory on each computer intended to run EnSight as well as the computer you ran `slim8_get_info` on.

The license manager application needs to be running on the computer you ran `slim8_get_info` on. Start the license manager by running the command `slimd8_start`. Should you run into a problem, please review the Detailed Instructions and Troubleshooting sections below.

When the EnSight starts, it will read `license8/slim8.key` to determine the name of the computer running the `slimd8` license manager. It will communicate with the application to check out a token to run.

Detailed instructions

Key overview

EnSight keys can be either node-locked or floating. The choice for your installation was made when you purchased EnSight or requested a trial evaluation. In a node-locked installation, the `slim8_get_info` output for all computers intended to run the EnSight Client was provided to CEI. The EnSight Client will read the license key file (`slim8.key`) to determine if it is running on a licensed computer. The key file also contains information on the licensing company and expiration date.

Note: If you are installing a `slim8.key` for a trial evaluation, it will normally be node-locked. Trial keys allow node-locked operation on any computer at your site for a limited time. The advantage of a node-locked key is that it is simple to install – only the `slim8.key` file is required. You do not run the `slimd8` license manager with a node-locked key. The disadvantage is that you can only run the EnSight on only those computers for which you have submitted `slim8_get_info` information.

If you have purchased or are leasing an EnSight license, you have the option of a floating license in which the EnSight Client reads the `slim8.key` file as before, determines the name of the computer running the `slimd8` license manager, and then communicates with `slimd8` on that computer to check out a token. The number of concurrent EnSight sessions is tracked by the `slimd8` license manager. The advantage of a floating license is that EnSight may be used on any computer in your network as long as the maximum concurrent sessions has not been exceeded. The disadvantage is that the `slimd8` license manager must be installed and running in order to track the session count.

Requesting a key

If you have purchased a node-locked key, run `slim8_get_info` on each computer intended to run the EnSight Client. Send all the output from each of these to your EnSight representative for a `slim8.key`.

If you have purchased a floating key, run `slim8_get_info` only on the computer or computers intended to run the `slimd8` license manager. Send all the output from each of these to your EnSight representative for a `slim8.key`.

Key installation

Once you receive your `slim8.key`, place a copy of it in the `license8/` directory of each computer intended to run the EnSight Client. If the `slim8.key` is a node-locked key, it will only be those computers for which you submitted `slim8_get_info` output. Additionally, if the `slim8.key` is a floating key, place a copy of it in the `license8/` directory on each of the computers intended to run the `slimd8` license manager.

The EnSight Client will always look for the `slim8.key` file in the `license8/` directory. Be sure the `slim8.key` file is readable by all users of EnSight. In UNIX, execute:

```
chmod 644 slim8.key
```

Note that you cannot edit nor modify your `slim8.key`. Doing so will invalidate it.

If you are installing a node-locked key, your installation is complete. If you are installing a floating key, you must also run the `slimd8` license manager.

Running the slimd8 License Manager

For floating keys, you will run one or more `slimd8` license managers. They will run on the computers you ran `slim8_get_info` on when you requested your `slim8.key`. A `slim8.key` for a floating license will contain lines beginning with the word `'slimd'`. Each one of these lines corresponds to one computer for which `slim8_get_info` output was given.

Note that customers typically specify only one computer to act as their `slimd8` license manager computer. Multiple computers can be used as `slimd8` license managers as redundant backups. Typically, this is only needed in environments that have either network reliability issues or if those computers are taken out of service frequently for maintenance. In practice, most customers do not need to use redundant `slimd8` license manager computers.

After placing a copy of the `slim8.key` file in the `license8/` directory, the `slimd8` license manager must be running for EnSight to check out a token.

On a Linux machine, start the `slimd8` license manager by running the `slimd8_start` command. You can stop the `slimd8` license manager by running the command `slimd8_stop`. This command will succeed only when running it on the computer that is running the `slimd8` license manager.

On a Windows machine, go in the `license8/machines/win64`, right click on `slimd8_install.exe` and select "Run as administrator". Enter the list of Windows Services, find the `slimd8` service and start it. Make sure the Startup Type is set to Automatic to have the license manager restart automatically at every reboot of the machine.

Verify operation and check for errors by looking at the text log file found in the `license8/` directory. The log file will be named something like `slimd8-log-hostname.txt` where `hostname` will be replaced with the name of your computer. Most errors should be self explanatory. However, if you are having problems getting the `slimd8` license manager to run, please contact EnSight support. Note that log files will grow to a certain size and then automatically be rotated out with a trailing number. Also note that the `slimd8` license manager must be able to write to the `license8/` directory.

You can verify operation of your `slimd8` license manager by running the command `slimd8_status -v`. The `-v` gives verbose output (per-user information).

This completes the installation process. If you encounter problems, please consult Troubleshooting before contacting EnSight support.

Additional information regarding SLiM can be found in the installation location in the `license8/README.TXT` file.

Troubleshooting

- Do not run the `slimd8` license manager for node-locked licenses.
- You must have the `slimd8` license manager running for floating licenses.
- If you receive a new `slim8.key` (e.g., renewal), for floating keys you must restart any associated `slimd8` license managers after installing the new key.
- The `slim8.key` file cannot be edited by the customer. There is one exception: for floating keys, the "slimd" hostname can be changed in the `slim8.key` to address DNS issues in your network. Be sure not to change format or spacing in the file in any other way. All other changes require a new key from CEI or your local EnSight distributor.
- Be sure that your `PATH` environment variable includes `/path/to/installation/location/CEI/bin/`. The license manager requires that the `CEI/bin/` directory be in your `PATH`.
- The `license8/` directory must be writable by the user running the `slimd8` license manager. The license manager will write its log files into this directory.
- Customers running the `slimd8` license manager on a Windows computer are *strongly* encouraged to use the Windows Service `slimd8_service`. Installation (or removal) of this Service is performed by running the `slimd8` Service Installer for Windows: `license8\machines\win64\slimd8_install.exe`.
- The computer(s) running the `slimd8` license manager must be able to listen for TCP connections on the TCP port specified in the `slim8.key` file. The "slimd" line specifies the TCP port number immediately after the word "slimd". Typically, this port number is 7790 unless a different port is requested. Be sure your firewall or router is not blocking this TCP port.
- If EnSight cannot check out a token from a floating key, check the following:
 - Be sure the `slimd8` license manager is running;
 - Check the `license8/slimd8-log-hostname.txt` log file for errors;
 - Make sure firewalls, routers, etc aren't blocking access to the TCP port `slimd8` is listening on;
 - Run "telnet hostname 7790", where "hostname" is the name of the computer running the `slimd8` license manager and 7790 is the TCP port number specified in the `slimd8.key`, to verify that you can connect to the TCP port that `slimd8` is listening on;
 - Specify the command line option ``-v 3'` to `ensight102` to get verbose diagnostic output. It will show additional information as it tries to obtain a license token.
- **The licensing software is not FlexLM. FlexLM commands, environment variables, host id numbers, etc. do not apply to SLiM.**

Support

If you have problems with licensing, please contact your local EnSight distributor or CEI Inc. Be sure to include all of the following to ensure timely assistance:

- A description of the problem
- Your current `slim8.key` from the `license8\` directory.
- The entire error message from EnSight (typically found in the 'console' window). Note that running EnSight with the command line option ``-v 3'` will generate additional diagnostic output. Please use that when generating output for support.
- If you're using a floating license:
 - The output from `slimd8_status`.

- The `slimd8-log*.txt` file found in the `license8` directory.
- The output from `slim8_get_info` from the affected computer.