EnSight 10.0 Installation Guide

Installation

Requirements

These are the minimum system requirements for the EnSight product suite.

Platform	Minimum Version
Microsoft Windows	Windows XP
Mac OS X	10.6 (Leopard)
Linux	Linux Kernel 2.6, glibc 2.3

A DirectX 9 capable graphics card is recommended.
A DirectX 10 capable graphics card from ATI or nVidia is required for Volume Rendering.

Windows

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 EnSight100Full-10.0.0a.exe. Once you download the file, double click it to start the installation process. Follow the on screen prompts to complete the installation. As part of the install wizard, you can choose to disable some components that you may not need or change the installation folder. If you change the installation folder, this will be your new $CEI_HOME. Once the installer completes, you can double click the desktop icons to start our products.

Notes:

- You can install license file for all users on your machine by dragging your slim8.key file into one of these directories:
  - C:\Program Files (x86)\CEI\license8 (64-bit Windows - default folder)
  - C:\Program Files\CEI\license8 (32-bit Windows - default folder)
  - $CEI_HOME\license8 (Custom installation folder)
- The installation can be done in silent mode from the command line. This opens no windows and is ideal for scripted and remote installations.
  - EnSight100Full-10.0.0a.exe /S

Mac

For other CEI Products, we distribute an Apple Installer package. If you download the full EnSight product suite from the CEI website, your file should be named something like EnSight100Full-10.0.0a.dmg. Double click this file to open the DMG. In the new Finder window that opens, you should see the Installer package. Double click this file to open it with the Installer. Follow the on screen prompts to install the software.

Notes
- On the 'Installation Type' step, you can click the 'Customize' button to disable installation of some features.
- To run CEI tools from the command line, make sure to set your CEI_HOME and PATH environment variables.
  - For tcsh users:
  - setenv CEI_HOME /Applications/CEI
  - setenv PATH $CEI_HOME/bin:$PATH
- For bash users:
  - export CEI_HOME=/Applications/CEI
  - export PATH=$CEI_HOME/bin:$PATH
- You can install from the command line using the 'installer' command. This option is ideal for scripted and remote installations.
  - sudo installer -pkg EnSight100Full.mpkg -target /
- See the 'installer' man page for more options.
- You can install license file for all users on your machine by dragging your slim8.key file into one of these directories:
  - /Applications/CEI/license8
  - $CEI_HOME/license8 (Custom installation folder)

Linux

For Linux, we package software in two formats which work for most common distributions. For RedHat derived systems (including 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 tar file is also available on our web site.

RPM

For RPM based Linux distributions like RedHat and Fedora, CEI offers RPM packages for all of its products. You can install these packages from the command line using the 'rpm' tool.

- ◦ rpm -ivh EnSight100Full-10.0.0a-1.noarch.rpm

Once the rpm is installed, you're ready to use the software. If you're a tcsh user, be sure to issue the 'rehash' command to recognize the new software. Start the products with any of the following commands:

- ◦ ensight100
- ◦ reveal30
- ◦ enve40
- ◦ enliten100
- ◦ envideo100

You can also use any number of graphical package managers available for RPM systems.

In order to run our tools, you'll need to make sure you have all the required packages installed. Common missing packages include:

- ◦ compat-libstdc++-3.3
- ◦ tcsh

You can use 'yum' to install these.

- ◦ yum install tcsh
- ◦ yum install compat-libstdc++-33

Notes:
- ◦ CEI packages are marked 'noarch' because they contain both 32-bit and 64-bit Intel binaries.
- ◦ The default install location is /usr/local/CEI with launch scripts in /usr/local/bin.
- ◦ You can install elsewhere using the rpm '--relocate' flag. Check your RPM documentation for more details.
    - ▪ If you want to install to /apps instead of /usr/local, use the following command
    - ▪ rpm -ivh --relocate /usr/local=/apps EnSight100Full-10.0.0a-1.noarch.rpm
    - ▪ This creates /apps/CEI (your $CEI_HOME) and /apps/bin with launch scripts
    - ▪ Set your $CEI_HOME to /apps/CEI and add /apps/bin to your $PATH
- ◦ You can install a system wide license file by copying your slim8.key file to /usr/local/CEI/license8/slim8.key.

- If you install to another location, you need to update for CEI_HOME and PATH environment variables:
  - tcsh:
  - setenv CEI_HOME /full/path/to/CEI
  - setenv PATH $CEI_HOME/bin:$PATH
- bash:
  - export CEI_HOME=/full/path/to/CEI
  - export PATH=$CEI_HOME/bin:$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. In this example, we install the EnSight100Full package.

- sudo dpkg -i EnSight100Full-10.0.0a.deb

If your system has all the necessary dependencies installed, you'll be finished with the installation. If some dependencies are missing, 'dpkg' will warn you and queue EnSight100Full for installation once the dependencies are met. Run 'apt-get' to install 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 EnSight91Full installation. After this completes, you are ready to use our software. If you're a tcsh user, be sure to issue the 'rehash' command to recognize the new software.

- Start the products with any of the following commands
  - ensight100
  - reveal30
  - enve40
  - enliten100
  - envideo100

Notes:

- Our packages contain both 32-bit and 64-bit Intel binaries.
- For a 32-bit platform, you will need to use the '--force architecture' flag to install the software.
  - sudo dpkg -i --force architecture EnSight100Full-10.0.0a.deb
- For 32-bit, you may need to install dependent software by hand.
  - sudo apt-get install tcsh
- On Debian systems, CEI Products install to /opt/CEI.
- You can install a system wide license file by copying your 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 CEI_HOME.
- tar xvzf /path/to/EnSight100Full-10.0.0a-all.tgz

Be sure to set your CEI_HOME and PATH environment variables to reflect your installation location. For a /usr/local/CEI installation, use the following commands for your shell.
- tcsh:
  - setenv CEI_HOME /usr/local/CEI
  - setenv PATH $CEI_HOME/bin:$PATH
- bash:
  - export CEI_HOME=/usr/local/CEI
  - export PATH=$CEI_HOME/bin:$PATH

Licensing

CEI products employ the Simple License Manager (SLiM) system for licensing our products. When you purchase a CEI product, you're issued a license key that is either 'node locked' or 'floating'. A 'node locked' license key is limited to a single machine. A 'floating' license can be shared among many machines on your network. Installation is slightly different for each. The license key file is always called 'slim8.key'.

Quick Instructions

Node Locked Licenses

If you don't have a license file installed, EnSight and EnSight CFD will prompt you on start up for a license file. If you choose your license file from this dialog, it will be installed for your account and you'll be ready to start using the software. Other users can do the same, installing a copy of the license file in their own account.

If you would like to install the license file for all users of your computer, just place the license file in the 'license8' folder in your CEI installation (${CEI_HOME}/license8/).

To request a slim8.key you need to run 'slim8_get_info' 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 licensed to run EnSight.

Floating Licenses

The SLiM license manager (slimd8) needs to be running on a computer in your network. When the EnSight Client starts, it will read ${CEI_HOME}/license8/ slim8.key to determine the name of the computer running slimd8. It will communicate with slimd8 to check out a token to run.

To request a slim8.key you need to run 'slim8_get_info' and submit the entire output to CEI or your local distributor of EnSight. For floating keys you need to run slim8_get_info on the computer intended to run the SLiM license manager.

Once you receive your slim8.key file, copy it into ${CEI_HOME}/license8/ on each computer intended to run the EnSight Client as well as on the computer intended to run slimd8.

Start slimd8 by running the command slimd8_start. Should you run into a problem, please review the Detailed Instructions and Troubleshooting sections.

Detailed Instructions

Keying Overview

The EnSight Client software can be installed 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 EnSight Client installation, the slim8_get_info output for all EnSight Client systems were provided to CEI. The Client will read the license key file (slim8.key) to determine if it is running on a licensed host. The key file also contains information on the licensing company and expiration date.

Note: If you are installing for a trial evaluation, you will normally be installing EnSight as node-locked. Trial installations will use a key file which allows node-locked operation on any computer system at your site for a limited time.

The advantage of a node-locked EnSight installation is that it is simple to install – only the slim8.key file is required. The disadvantage is that you will only be permitted to run the EnSight on those workstations for which you have submitted slim8_get_info numbers.

If you have purchased or are leasing an EnSight license, you have the additional option of a floating EnSight Client installation in which the Client reads the slim8.key file as before. The number of permitted seats (concurrent executions) is tracked using the EnSight's Simple License Manager (or slimd8). The advantage of a floating EnSight Client installation is that EnSight can be executed from any workstation as

long as the maximum seat count has not been exceeded. The disadvantage is that a system daemon (slimd8) must be installed and run in order to track the seat count.

Key Installation

The contents of the slim8.key file are provided by your EnSight representative.

Note: All machines which will execute the EnSight Client must have access to the key file. The Client process will always look for the file in the ${CEI_HOME}/license8 directory.

Copy the slim8.key file into ${CEI_HOME}/license8/ Be sure the slim8.key file is readable by all users of EnSight. In UNIX execute:
% chmod 644 slim8.key

If you are installing a node-locked license, your installation is complete.

Floating License

Your designated host system will act as your license manager server and is referred to here as LM_HOST. The slim8.key file contains a slimd line that describes LM_HOST (the third word on the line is the name of the system). Most installations will run a single copy of the slimd8 and will therefore have only one slimd line. However, it is possible to run multiple (redundant) license managers. If this was requested, your slim8.key file will have a slimd line for each host. Execute the following steps for each host, replacing LM_HOST as appropriate.
1.   Log on to LM_HOST.
Note: if the license server is also going to run EnSight, then you can install both at the same time by checking the appropriate toggles on the installer. Should you wish to install SLiM separately to a different directory or for a different architecture, rerun the installer and install the SLiM license manager.
2.   Stop any existing versions of slimd8 that are currently running:
% slimd8_stop
3.   Copy the slim8.key file onto the LMHOST machine into the following directory: ${CEI_HOME}/license8/ Be sure the slim8.key file is readable by all users of EnSight. In UNIX execute:
% chmod 644 slim8.key
4.   The slimd8 daemon will listen for connections on the socket port number given as the first number on the applicable slimd line of the slim8.key file. If you did not specify a desired port number when you requested your key, port number 7790 is used. If this number conflicts with other usage at your site, you CANNOT change the key file – contact CEI for a new key.
5.   Start the slimd8 daemon. (Note that you must have set ${CEI_HOME} and the path to the bin directory for these scripts to work – even if all you are installing is the license manager).
% slimd8_start
6.   To check that the daemon is running properly:
% slimd8_status
The output should show a license token summary indicating that "slimd is running". The Simple License Manager (SLiM) is now running (if not, see Troubleshooting). If

you need to stop the daemon at any time, execute slimd8_stop.

If the license manager host is rebooted, the daemon will need to be restarted. On systems that are restarted infrequently, this is not a problem. However, you may want to consider adding the slimd8_start program to your system's boot procedures (remember to set ${CEI_HOME} prior to executing slimd8_start). Consult your local system administrator for assistance.

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

Additional information regarding SLiM can be found in ${CEI_HOME}/license8/ README.TXT.

Troubleshooting

- Node locked licenses do not run slimd8.
- The slim8.key file cannot be edited by the customer except for the slimd hostname as noted next. Be sure not to change format or spacing in the file. All other changes require a new key from CEI or your local EnSight distributor.
- Customers may change the hostname on the slimd line in the slim8.key file. Typically, this is not needed except in cases where EnSight client computers cannot resolve the Internet name as specified for the slimd host in the key file.
- Be sure that the environment variable CEI_HOME is defined for your installation and that the PATH environment variable includes ${CEI_HOME}/bin/. The license manager will not work without these defined.
- ${CEI_HOME}/license8/ must be a writable for the user running the slimd8 daemon. The daemon will write the log file in this directory.
- Customers running the slimd8 daemon on a Windows computer are strongly encouraged to use the Windows Service slimd8_service. Installation (or removal) of this service is provided by running the EnSight Installer for Windows found in %CEI_HOME%\license8\machines\win64\.
- The computer(s) running slimd8 must be able to listen for TCP connections on the TCP port specified in the slim8.key file on the slimd line. Typically, this port number is 7790 unless a different port is requested. Be sure your firewall or router is not blocking this TCP port.
- The licensing software is not FlexLM. FlexLM commands, environment variables, host id numbers, etc. have nothing to do with 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 insure timely assistance:
- A description of the problem
- Your current slim8.key from ${CEI_HOME}/license8/
- The entire error message from EnSight (typically found in the 'console' window).
- The output from slimd8_status if using a floating license.
- The slimd8-log*.txt file found in ${CEI_HOME}/license8/ if using a floating license.
- The output from slim8_get_info from the affected computer.