



EnSight

EnSight Lite

The power of Lite includes:



- Easy to use and learn.
- Interfaces to all major CAE solvers including FEA, CFD, structures, crash, dynamics and hydrocodes through dozens of data readers.
- Command language able to run scripts, macros and batch operation.
- Computes new variables with a vast number of calculator functions.
- Free viewers Reveal, EnLite, EnVideo allow easy sharing of images, animations, and geometry.
- Handles natively a wide range of data types to maximize use with the widest range of data possible:
 - Structured, unstructured, and mixed.
 - 1D, 2D, and 3D linear and quadratic elements as well as n-sided 2D and n-faced 3D.
 - Constants, scalars, vectors, tensors, complex scalars, and complex vectors.
 - Vertex-based and element-based variables.
 - Steady-state as well as transient with full connectivity changes such as failed elements or adaptive meshing.
 - Rigid body transforms.
- Reads and writes in a documented and "open" native file format. Your data will not become trapped in a proprietary file format.
- Comprehensive, industry-leading documentation.
- Runs on 32-bit Windows, Linux and Macintosh.

EnSight

EnSight software includes all the power of EnSight Lite plus the following features:



- Runs standalone or distributed using client-server operation on Windows, Macintosh, Linux, SGI, SUN, IBM, and HP.
- Reads multiple data sets and enables you to run comparisons between them. The data can originate from different solvers and/or different disciplines.
- Runs in parallel on up to 2 processors on shared memory computer systems.
- Post-processes data remotely with client-server operation.
- Collaboration
- Customize your EnSight GUI with Python
- Reading and Writing "context" template files to standardize post-processing
- Use of textures for realism
- Keyframe animation for fly-thru and other camera animations
- Flow feature extraction: Boundary Layer, Shocks, Vortex Cores, Separation
- Advanced flow visualization: massed particles, surface traces, and transient pathlines
- Support for 64-bit systems

EnSight Gold

All the power of EnSight plus these major features for distributed parallel post-processing and Virtual Reality:



- DMP parallel processing on cluster systems
- SMP parallel processing support for more than 2 processors.
- Supports multi-pipe display to drive VR planar and non-planar display environments such as a RAVE or multi-panel display wall.
- Automatically decompose data for parallel processing on SMP or DMP architectures.
- Collaboration between remote users.
- Makes use of multicore nature of new processors.
- "Heads Up" Macro (HUM) for creating customized VR interfaces and interaction using VR input devices for head tracking and manipulation.
- Support for 3D input devices by Trackd® or write your own using CEI's provided API.
- Output to POV-Ray ray-tracing program for photorealistic images.

EnSight DR

The power of EnSight Gold plus these industry-leading capabilities for Distributed Rendering:

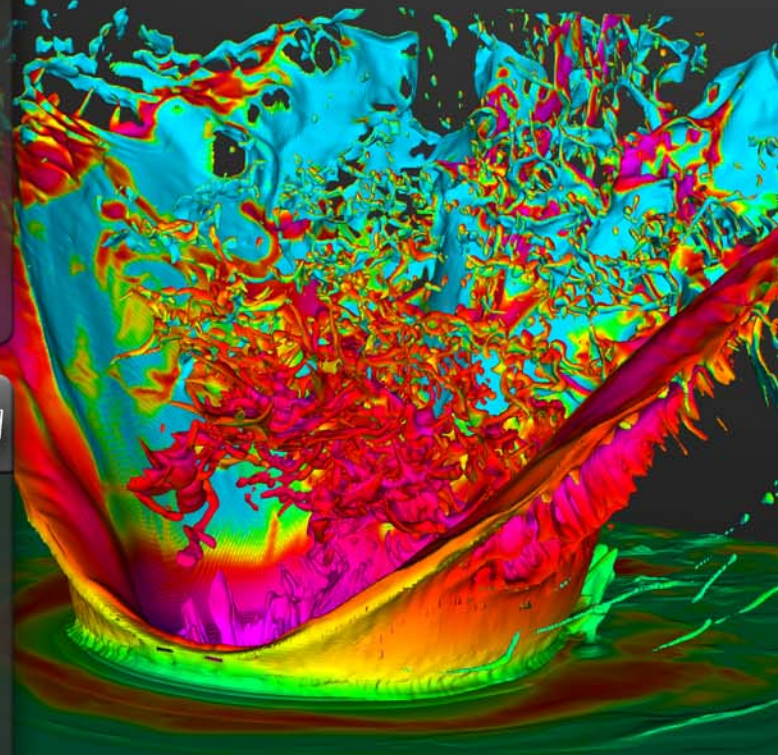


- Cluster based rendering via parallel compositing - allowing the largest scenes imaginable to be displayed to the user's remote desktop at high frame rates.
- Cluster based rendering via parallel compositing for display to non-planar display systems such as RAVE.
- Cluster based rendering via Chromium for display to planar multi-tile displays.
- Use multiple graphics cards simultaneously to boost rendering performance.

Extreme Visualization

Are you seeing all you should see in your engineering and scientific post-processing? If not, then EnSight is the tool for you. With the largest set of features of any visualization/post-processing tool in existence, EnSight lets you see what you've been unable to display and document in the past. An icon-based user interface enables you to learn the program quickly and to move easily into layers of increased functionality. Plus, EnSight works on all major computing platforms and supports interfaces to most major CAE programs and data formats.

CEI offers several forms of EnSight, described in brief detail on this page.



More Information

For an in-depth comparison chart showing the different versions of EnSight, visit the website,

www.ensight.com/product-comparison-chart.html

EnSight

One Viewer to Rule Them All

Features:

Graphical User Interface

- Provides easy access for the casual user with limited learning time, no programming ability required
- Point and click operation
- Intuitively control view, rotate, zoom, & time
- Smart defaults based on data
- Load data easily by double-click or "recently loaded" menu
- Define keyboard & mouse to match other CAE applications
- Configure site and user preferences according to individual
- OpenGL graphics

Global and Part Attributes

- Visibility of elements, lines or nodes
- Transparency, color and lighting parameters
- Line, hidden line and surface display
- Line style and thickness
- Representation mode (3D, edge, feature angle)
- Symmetry operations, mirroring
- Variable threshold and element blanking
- Reduced polygon display

Distribution and Documentation

- Easily install from CD, DVD, or web installer
- Complete documentation including: Getting Started, Installation, How-To, User, Command, and other manuals. Hardcopy versions available for purchase online.

Query

- Node/element variable values
- Node/element labels
- Element connectivity
- Dataset summary
- Min/max values
- Distance between nodes

Plotting

- Extract plot data from probe position vs. time or along a line through the model space
- Animated plotting showing current time and dependent value
- Integrated view of plots and 3D geometry for superior appearance
- Control plotting and reuse layouts with common language and templates

Page Layout and Reports

- 16 independent and flexible viewports
- Solid, blended, inherited, or bitmap backgrounds
- Plots and geometry mixed or separated for superior presentation
- Annotation includes dataset variables and constants
- Bitmap overlays or watermarks
- Multiple light sources position and intensity
- Flexible legends and variable color palettes
- TrueType Fonts and Internationalized Language Support

Animation

- Easy to use and professional quality
- Single record button for most movies
- Keyframe animation for ultimate flexibility for part explosion, transparency animation, splined camera animation, and fly-around animation
- Viewport tracking to follow moving parts
- Streamline, Linear Load, Mode Shape, Plane Sweep, Isosurface and Transient Solution animations
- Direct movie output to Animated GIF, AVI, EVO, FLV, MOV, and MPEG
- Direct image output to BMP, JPEG, PNG, PS, TIFF
- Video embedding w/time synching options
- Camera & splines for walk through animations
- Movie titles and merging via EnVe
- 3D movie scene output: EnLiten, VRML, and stereo EVO movies
- Photorealistic movies via POV-Ray ray-tracing program

CFD Flow Feature Extraction

- Boundary Layer Parameters (δ , δ^* , Θ , H, Cf)
- Vortices
- Shock Surfaces
- Surface Flows
- Flow Separation and Reattachment

Particle Tracing and Path Lines

- Interactive trace seeding from point, line, plane, part, or file
- Massed particle tracing with drag, buoyancy, gravity, viscosity, etc.
- Oil-streak or surface-restricted tracing
- Transient or steady-state tracing
- Parallel trace calculations for high performance
- Highly accurate trace calculation

Other Features

- Contours/Isosurfaces/Isovolumes
- Vector Arrows
- Elevated Surfaces/Profile Plots
- Data Probe
- Clipping and Cutting
- Developed or "Unrolled" Surfaces
- Material Species Extraction
- A/B Simulation Comparison
- Displacements
- Tensor Glyphs
- Offset Parts
- Subset Parts and Part Groups

Multi-physics and FSI

- Read multiple cases from different solvers simultaneously to combine CFD data with FEA data for FSI post-processing, or FEA data with rigid-body dynamics data
- Offset timelines to synchronize multiple datasets
- Map results from one solution onto another solution, even another grid, and compare values

CFD Input Interfaces

- ACCUSOLVE
- ADINA-CFD
- ANSYS/FLOTRAN
- CFD++
- CFF
- CFX
- CGNS
- COBALT
- CRAFT/ CRUNCH
- DTF
- ESPERANZA
- ESTET
- FAST
- FIDAP
- FIRE
- FLOW-3D
- FLUENT
- FOAM
- GASP/GUST
- FV-UNS
- KIVA
- LEWICE
- N3S
- OVERFLOW-2
- PAM-FLOW
- POLY2D/POLY3D
- POLYFLOW
- POWERFLOW
- SC-TETRA
- SPLITFLOW
- STAR-CD
- TASCFLOW
- TECPLOT
- TETRUS
- USM3D
- VECTIS
- WIND

FEA Input Interfaces

- ABAQUS EXPLICIT
- ABAQUS STANDARD
- ANSYS
- I-DEAS
- LS-DYNA
- MSC.ADAMS
- MSC.DYTRAN
- MSC.MARC
- MSC.NASTRAN
- MSC.NASTRAN input file
- MSC.PATRAN
- PERMAS
- RADIOSS

Other Input Interfaces

- ANALYZE/NIFTI-1
- CTH
- EDEM
- EXODUS
- HDF5 MESH API
- MFIX
- MOVIE BYU
- MP-SALSA
- NETCDF
- SAGE
- SILO MESHTV

Manufacturing Input Interfaces

- FLOW-3D
- MAGMA
- SUPERFORGE
- TRUCHAS/TELLURIDE

CAD

- ACIS
- CATIA v4 & v5
- IGES
- IV
- OBJ
- Parasolid
- Pro/ENGINEER
- SolidWorks
- STEP
- STL
- Unigraphics

Command Language

- Python scripting
- Batch processing
- Automatic file recognition
- A command for every user action in the interface
- Automatically records commands for editing and playback
- Commands can be saved as named macros
- Macros replayed at any time or assigned to keyboard keys
- Sessions archived in binary form and then quickly restored

Licensing

- Nodelocked or floating licenses
- Versions for Windows, UNIX, Linux and Macintosh
- 32-bit and 64-bit platforms at no additional cost
- Performance by parallel processing
- Versions for distributed, client/server installations
- One license key controls everything
- Time-limited trial version for purchase evaluations