

Working with Kitware

At Kitware, we believe that accelerating innovation will make the world a safer, healthier, and better-informed place. That's why we deliver innovative solutions to our customers built on open source technology. Kitware specializes in custom software development in the areas of medical computing, computer vision, and scientific visualization. We also offer technical support and training services for our platforms and tools. Since we were founded in 1998, Kitware has developed a reputation for world-class, interdisciplinary technical expertise that meets our customer's needs.



To learn more about our scientific visualization expertise and the benefits of using open source technology, send us a message at kitware@kitware.com

Open Source Platforms



ADIOS

I/O framework for enabling high-performance, scalable, and flexible I/O for next-generation computing applications.



CMB

Explore all the components of the CMB suite, from pre-processing tools to post-processing visualization options.



CMake

Control the software compilation process using this powerful, cross-platform build environment.



ParaView

The world's leading open source post-processing visualization engine.



trame

An easy-to-use web framework to create stunning, interactive web applications compactly and intuitively.



VTK

Learn how to process images and create 3D computer graphics using this premier visualization system.



Visualize Your World

Innovative Scientific Visualization Solutions

Visualization is a key step in obtaining insight into your data, so it's important to manage, analyze, and visualize data regardless of scale, platform, or application. Kitware delivers cross-platform, interactive visualization applications to our customers and collaborators.

Visualization Software Built for You

Don't miss out on the details. Schedule a meeting with our team to make sure you're getting the most from your data. Contact us at kitware@kitware.com.

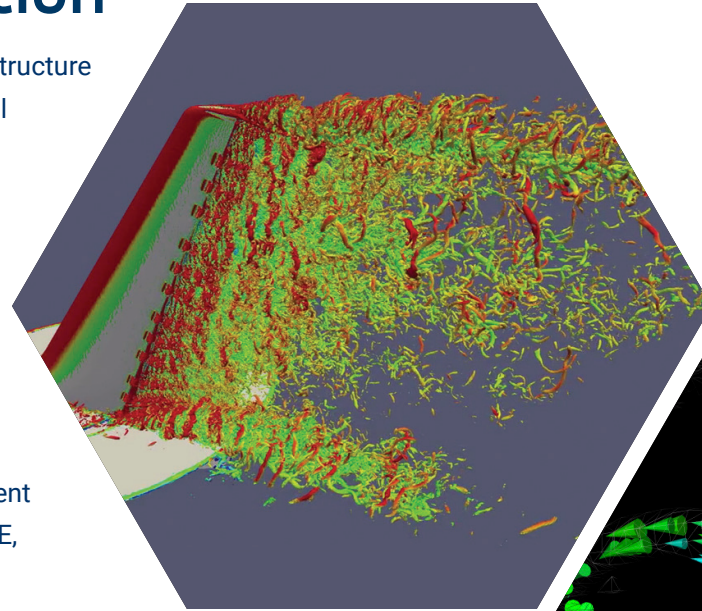


Custom Software that Makes an Impact

Kitware has decades of experience working with government labs, research centers, universities, and commercial organizations. Our team works closely with each of our customers to design custom workflows, user experiences, and interfaces from the ground up. We specialize in delivering tailored software solutions that help you achieve your goals.

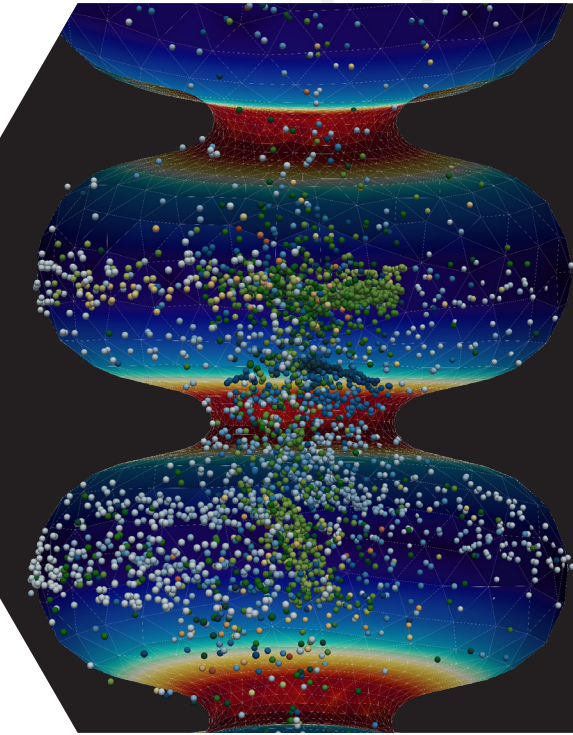
In situ Analysis & Visualization

In situ analysis and visualization is crucial if you don't have the infrastructure to store large-scale data. It provides cost savings, increased temporal accuracy, and additional computational resources. We developed **Catalyst**, a lightweight version of the popular ParaView server library that can be embedded into parallel simulation codes to perform in situ analysis and visualization at runtime. This technology has been used to fuel various industries, including rotorcraft analysis and design, ocean systems research, atmospheric changes, and thermal hydraulics processes inside nuclear reactor cores. We can integrate Catalyst into other simulation codes, including ones from the Department of Energy (Albany, MPAS-O, and Sierra), the Department of Defense (AdH, GEMS, Helios, and SMURF), and others (BEC, LESLIE, PHASTA, Code Saturne, CAMV, and UH3D).



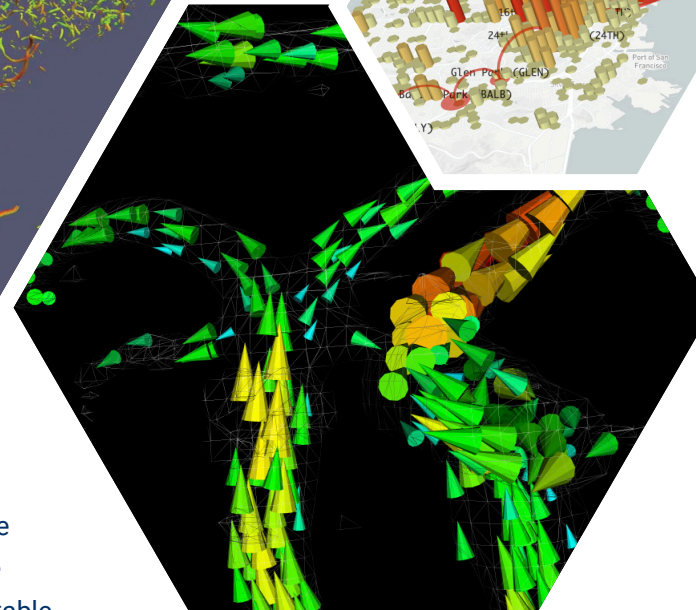
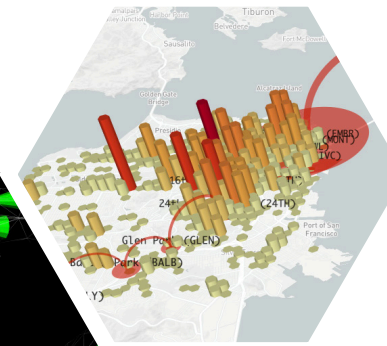
End-to-end HPC Simulation Workflows

We can help you manage simulation workflows from start to finish. Our approach is modular, not monolithic, and manages the core resources required to define a simulation: geometric models, simulation information, and meshes. This technology, called Computational Model Builder (**CMB**), can be easily tailored to various types of simulations and domains, and leverage existing and future simulators, mesh generators, and HPC toolkits.



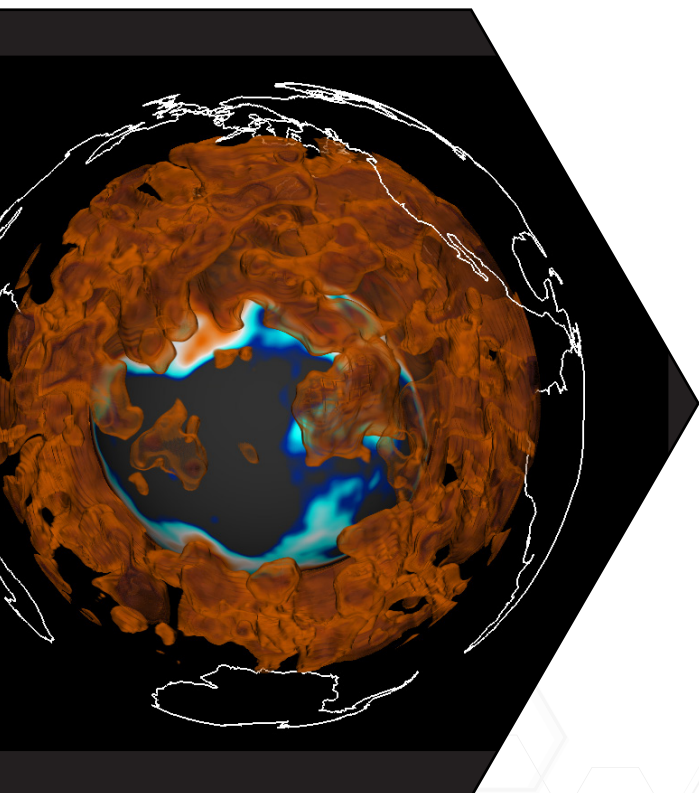
High-Performance I/O

I/O is one of the most pressing challenges with large-scale simulations and can be a major bottleneck when not done properly. Kitware is one of the major partners of the Adaptable I/O Systems (**ADIOS**) framework used to address this challenge. We can deliver a highly optimized I/O and coupling infrastructure that enables efficient data exchanges to move data to the storage system and between multiple codes running concurrently through in situ and in transit processing. Together with our visualization infrastructure (VTK and ParaView) it enables efficient data analysis, visualization, code coupling, and checkpoint/restart generation.



Web-based Visualization

In what we consider to be a breakthrough technology development, Kitware has developed **trame**, a simple, easy-to-use, Python- and web-based visual analytics framework that weaves powerful open source components and systems together. Based on the culmination of decades of work with the visualization systems ParaView, VTK, and VTK.js, trame enables the creation of applications meeting the requirements above with simple Python scripts; and leverages Python's powerful integration capabilities to leverage open platforms such as Vuetify (for powerful GUIs), Plotly, and Matplotlib.



Why Open Source?

Open source software is in our DNA. Kitware has spent decades developing powerful open source platforms that have strong user communities. We use this technology as the foundation of our custom solutions, saving our customers time and money. Leveraging open source technology also means that our solutions come with permissive licensing, so you can choose to contribute it back to the open source community or keep it proprietary.