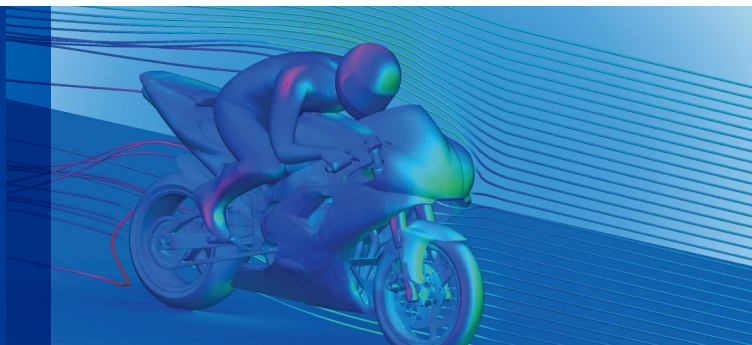


OpenFOAM®

Open Source Computational Fluid Dynamics



OpenFOAM® Computational Fluid Dynamics

Computational Fluid Dynamics (CFD) is a branch of fluid mechanics that uses numerical methods and algorithms to solve and analyze problems that involve fluid flows. Computers are used to perform the calculations required to simulate the interaction of liquids and gases with surfaces.

CFD is an essential capability every company, large or small, can and should benefit from having as a resource. With OpenFOAM® (Open Field Operation and Manipulation), SGI's open platform for CFD, any company can model and simulate the interaction of liquids and gases with surfaces – addressing one of the key challenges in creating almost any product, from bikes to aircraft, from propellers to turbines, from potato chips to silicon chips.

Unlike proprietary legacy solutions, OpenFOAM is open and offers customers immediate access, the freedom to customize and extend its existing capabilities, and gives a full view of the inner workings of the software.

OpenFOAM, the leading open source CFD software package, consists of over 80 solver and 170 utility applications—a total of over 1 million lines of code—to solve anything from complex fluid flows involving chemical reactions, turbulence and heat transfer to solid dynamics and electromagnetics.

SGI OpenFOAM Package

Building on the open source OpenFOAM Foundation software, the SGI OpenFOAM Package provides customers a complete distribution with added performance, features, and ease of use. Along with SGI's OpenFOAM Premium service, customers have a production ready, fully supported platform on which to base their business critical CFD calculations.

The SGI package is a complete distribution: fully validated, tested for reliability, and pre-packaged for ease of installation and use. It is optimized for SGI platforms and integrates a runtime version of the SGI Message Passing Toolkit (MPT), SGI's industry leading MPI implementation, enabling OpenFOAM calculations to run up to 35% faster on platforms such as SGI's Altix ICE integrated high performance bladed cluster.

Future releases of the SGI OpenFOAM Package are planned to include an easy to use GUI, additional solvers and meshing tools, support for additional architectural components such as GPUs and Intel MIC (Many Integrated Core) processors, and post-processors. Through SGI's OpenFOAM Premium service, customers have an annual software subscription including access to new features as they are added to the SGI OpenFOAM Package.

For customers wanting to test the SGI package, grow a production OpenFOAM environment as their workload increases, or be able to supplement their capacity, the SGI OpenFOAM Package is also available as a service on SGI's HPC cloud service, Cyclone.

Services for OpenFOAM

To ensure you get the most out of OpenFOAM, SGI Global Services provides a full suite of Support, Consulting, Development, and Training offerings.

Support Plans

SGI Customer Services offers world-class support, consistently achieving industry-leading customer satisfaction ratings. Our worldwide reach provides our customers with mission critical, 7x24 support in 150 metropolitan areas in more than 25 countries across the globe. For more than two decades, SGI customers have relied on the dedication of our team of technical computing experts, averaging more than 12 years of experience with the latest high performance, technical computing technologies.

SGI offers support plans for both the SGI OpenFOAM Package and OpenFOAM Foundation. For customers who need a production ready, fully supported CFD platform, our OpenFOAM Premium Plan for the OpenFOAM Package distribution provides up to 5-years of comprehensive support, software updates, access to high impact patches and additional discounts on our training courses. Our comprehensive support includes unlimited installation assistance, basic configuration support and operational advice, assistance with CFD calculations, web and email problem resolution, and 5x9 phone support for Severity 1 issues.

OpenFOAM®

Open Source Computational Fluid Dynamics

For customers using the open source version - OpenFOAM Foundation - the OpenFOAM Advanced Plan offers customers up to 40 hours (per annum) of support and development services. The SGI Advanced Plan includes assistance with installation and

configuration support, general operational advice, assistance with CFD calculations, and web or email problem resolution. Customers can also apply a portion of the 40 hours towards short-term development help to customize the applications or solver code.

Support Plans

| Service Plan Features | OpenFOAM Premium* | OpenFOAM Advanced |
|--|----------------------|-------------------|
| Duration | 1-, 3- or 5- Years | Up to 40 hours/yr |
| SGI OpenFOAM Training Services Discount | ● | |
| High Impact/SecurityPatch Access | ● | |
| Software Update Subscription | ● | |
| Phone Support <small>Severity 1 issues 24-hour response 5x9 PPM coverage</small> | ● | |
| Development Services | Available Separately | ● |
| Web & Email Problem Resolution | ● | ● |
| Assistance with CFD Calculations | ● | ● |
| General Operational Advice | ● | ● |
| Basic Configuration Support | ● | ● |
| Installation Support | ● | ● |

* Available for SGI OpenFOAM Package only

Consulting & Development Services

In addition to Support, SGI also offers a wide variety of consulting & development Services. Consulting Services include onsite CFD planning workshops, evaluation and proof of concept services, OpenFOAM implementation, and migration to OpenFOAM. Assigned onsite consultant contracts are also available. Consulting is offered as a custom engagement to match the customer's needs.

For OpenFOAM support contract holders, SGI also offers OpenFOAM Development Services to assist with custom development work, porting OpenFOAM to new platforms, or using the OpenFOAM libraries to program new applications and libraries for use within OpenFOAM.

Development projects can range from adding a single small new feature, to writing entire applications or libraries, or migrating the contents of an outdated in-house software package to the

OpenFOAM environment. The access to source code means anything can be customized to suit our customer's needs including solvers, utilities and pre- and post-processing.

Training

SGI offers two, 2-day training courses, Foundation and Advanced, at a variety of locations worldwide. The Foundation course provides an introduction to the open source OpenFOAM distribution, while the Advanced course is designed to enable students to use OpenFOAM effectively on real engineering problems and develop the CFD toolbox to suit their needs. Additional discounts on training are available to our OpenFOAM Premium contract customers.

For more information regarding Services for OpenFOAM, please contact your local SGI Sales Representative.

Corporate Headquarters

46600 Landing Parkway
Fremont, CA 94538
tel 510.933.8300
fax 408.321.0293

www.sgi.com

Global Sales and Support

North America +1 800.800.7441
Latin America +55 11.5185.2860
Europe +44 118.927.8000
Asia Pacific +61 2.9448.1463