

AN UPDATE ON THE INTEGRATION OF ADIOS INTO OPENFOAM FOR HANDLING DISK I/O

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The Adaptable I/O System (ADIOS) has been implemented in OpenFOAM using a modular approach to provide robust, scalable disk I/O. ADIOS, developed at Oak Ridge National Laboratory, provides a flexible means to handle data that needs to be written and post-processed. ADIOS allows OpenFOAM to efficiently read/write data and can be easily customized to provide optimal performance on a wide range of architectures and file systems.

An update of the ADIOS implementation in FireFOAM is shown, covering both read and write functionality. Performance benchmarks on several platforms have been made, comparing ADIOS output against the traditional OFstream output of OpenFOAM. Additionally, the ADIOS data is capable of being efficiently read by ParaView and/or python for post-processing. Opportunities for further improvements in the ADIOS implementation in OpenFOAM are identified.