

## A Study of Fluid Element Tracing in Global MHD Simulations via Parallel Data Processing on the NICT Science Cloud

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The NICT Science Cloud is a cloud system designed for scientific researches, and expected as a new infrastructure for big data sciences. Not only parallelization of CPU as in super-computers, but I/O and network throughput parallelization are crucial for the big data science. A high-performance visualization system is constructed on the NICT Science Cloud using Gfarm/Pwrake middleware. We examined performance of this parallel visualization environment for a set of computer simulation with 1000 files (2.3TB in all). After setting higher priority to access to local file on local disk, we finally achieved 124 times higher visualization using 192 core cpu.

