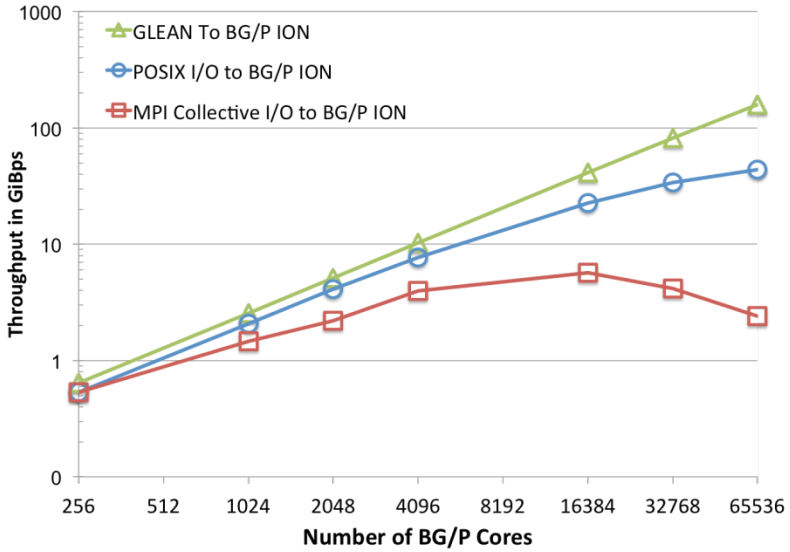
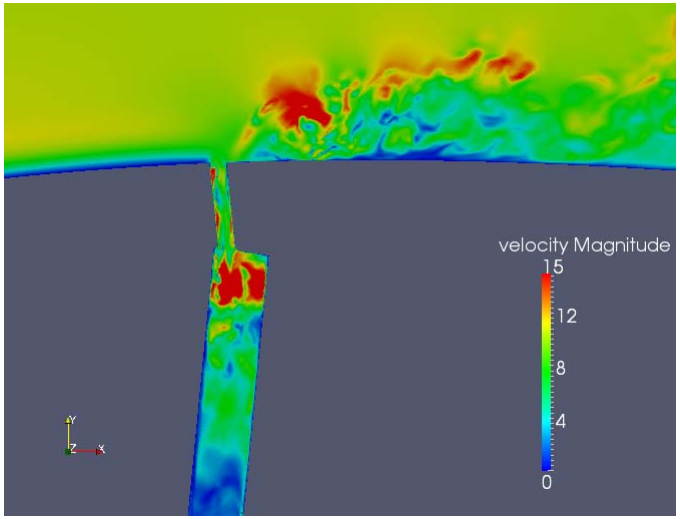
Highlight: GLEAN

- GLEAN is a flexible and extensible framework to facilitate simulation-time data analysis and I/O acceleration.
- Features include: topology-aware data movement, asynchronous data staging and burst buffering, leverages application data models, scalable analysis algorithms and infrastructure (in situ, co processing, in flight).
- Scaled to entire ALCF infrastructure (160K BG/P Intrepid cores), achieved multi-fold I/O improvement for FLASH, and demonstrated in situ analysis.



Strong scaling performance for 1GB data movement from ALCF Intrepid Blue Gene/P. Strong scaling is critical as we move towards systems with increased core counts.



Co-visualization of a 3.3 billion element PHASTA simulation of an aircraft wing running on 160K cores of ALCF Intrepid Blue Gene/P using ParaView on 100 nodes of ALCF Eureka analysis cluster enabled by GLEAN.