

David Flynn

Session 1

Title:

From Permanent Holdings to GPU Node Local Drives: Orchestrating Data Across Multi-Site, Multi-UID Silo Environments

Abstract:

HPC sites were built around simulation and large-scale scientific computing, but most are now also being asked to support AI training, inference, and hybrid workflows that place very different demands on data infrastructure. The problem is not just performance. It is that data is fragmented across permanent holdings, archival systems, parallel file systems, cloud repositories, and local NVMe on GPU nodes, often spanning multiple sites, multiple administrative domains, and multiple UID spaces. That fragmentation has become a direct barrier to feeding accelerated compute efficiently.

In this talk, David will discuss the Hammerspace standards-based approach to orchestrating data across multi-site, multi-UID silo environments through a common name environment. The focus is on how a unified namespace, combined with intelligent data orchestration, can bridge permanent holdings and active data pipelines to local drives on GPU nodes without forcing mass migration into yet another storage silo. This includes making distributed data visible in a consistent way, aligning data locality with compute locality to meet workflow objectives, and enabling efficient movement or access across sites, clouds, storage tiers, and protocols.

The session will examine why this matters now for both HPC and AI. Traditional HPC workflows increasingly intersect with AI pipelines for model training, retrieval, inference, and analysis, all of which require faster, more dynamic access to distributed data. Attendees will gain a practical view of how a common namespace can reduce operational complexity, improve utilization of GPU infrastructure, and create a more scalable architecture for the convergence of high-performance computing and AI.

Bio

Hammerspace co-founder and Chief Executive Officer David Flynn is a recognized leader in IT innovation who has been architecting disruptive computing platforms since his early work in supercomputing and Linux systems.

David pioneered the use of flash for enterprise application acceleration as founder and former CEO of Fusion-io, which was acquired by SanDisk in 2014. He served as Fusion-io President and CEO until May 2013 and board member until July 2013. Preceding his position as CEO, David was Fusion-io technical found and CTO, where he created the company's foundational research and development efforts, as well as the development of short- and long-term technological roadmaps.

Previously, David served as Chief-Architect at Linux Networx where he was instrumental in the creation of the OpenFabrics stack and designed several of the world's largest supercomputers leveraging Linux clustering, InfiniBand, RDMA-based technologies.

David holds more than 100 patents in areas across web browser technologies, mobile device management, network switching and protocols to distributed storage systems. He earned a bachelor's degree in computer science at Brigham Young University and serves on boards for several organizations and startup companies.