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## Bytes are Bytes, Right?

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Through the first several decades of computing, two data storage abstractions/paradigms dominated common practice: Files and relational databases. While there is significant potential overlap between their use, it is often easy to decide which is more efficient for a particular application or workload. However, over the last twenty years, the rise of new patterns for parallel and distributed computing (i.e., those now loosely grouped under the “cloud” umbrella) have brought to the fore other kinds of storage technologies and techniques. Among this new group of options are NoSQL stores, object stores, and key-value stores.

The lines between these storage technologies are blurred, both because of overlapping application benefits and different design choices for various types of packages. What kinds of workloads benefit most from each paradigm? Who might an HPC user leverage these technologies? This talk will address these questions and more.

### Presenter Biography

Matthew L. Curry is a Senior Member of Technical Staff in the Center for Computing Research at Sandia National Laboratories. He first gained notoriety for creating one of the first systems-level applications for GPU Computing, Gibraltar: A software RAID system that offloads parity computation. He has since worked on RDMA transport libraries, parallel file system design, storage system service design, reliability modeling for resilient systems, performance characterization/prediction, and system software for ARM-based supercomputers.

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