Enabling Vendor-Neutral or Multi-Cloud Workflows in the Public Sector

Orchestrating Seamless Access and Control of Data in a Siloed World

PUBLIC SECTOR SOLUTIONS BRIEF

Overcoming the Silo Problem

A key data problem facing all government and civilian agencies is how to maintain secure access and control over a wide range of data that may be scattered across many vendor storage silos, multiple locations, and one or more public or private cloud service providers.

Even more challenging is the fact that this is not a static or one-dimensional problem: Ongoing mission-critical operations must proceed with little or no interruption while the following priorities are also implemented:

- Data center consolidation and IT modernization needs to move forward;
- The shift to more agile application environments leveraging cloud resources needs to increase;
- Cloud flexibility is also required, to enable a shifting landscape including hybrid environments of one or more on-premises data centers, plus multiple cloud service providers and regions;
- Operational silos must be reduced to embrace DevSecOps, which enables better collaboration across multidisciplinary teams while also enforcing cross-platform data services, and;
- New use cases must be rapidly supported for AI/ML and other innovative data-intensive workflows.

Solution Highlights:

- Siloed data infrastructures inhibit IT modernization & add cost and complexity.
- A vendor-neutral unstructured data orchestration system solves this problem.
- This enables always-on global file access and control of data services across any vendor storage type, location, and cloud provider.

The problem is that ensuring existing mission requirements are maintained while accommodating these necessary IT landscape and use-case changes creates significant operational friction, which can add complexity, costs, and risk. This also directly impacts the timelines needed to make the changes operational.

The Need for Vendor-Neutral Unstructured Data Orchestration

The traditional IT infrastructures that house unstructured data are inevitably siloed. Users and applications access their data via file systems, which is the metadata layer that translates the bits on storage into usable file and folder structures we see on our desktops.

The problem is that file systems are buried into a proprietary storage layer, which locks them into a vendor platform. Moving the data from one vendor's storage type to another, or to a different location or cloud, involves creating a new copy of both the file system metadata and the actual file essence. This proliferation of file copies and the complexity needed to initiate copy management across silos interrupts user access, and is a key problem that inhibits the IT modernization and consolidation use cases noted above.

The proliferation of file copies across silos interrupts user access, adds cost & risk and is a key problem that inhibits IT modernization.

In addition, data services for protecting, auditing, and placing data become siloed as well, resulting in a proliferation of point solutions, added operational complexity & costs, and interruption to users.

What is needed is a way to leverage existing storage and compute infrastructures from any vendor, while providing global access and automated control of data services across silos and locations without interrupting users or applications. And that is precisely what Hammerspace was designed to do.

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Hammerspace Bridges Vendor Silos, Locations, and Clouds

Instead of managing data by copying files from silo to silo, which interrupts user access and adds complexity, Hammerspace provides a vendor-neutral orchestration system for unstructured data that seamlessly bridges any on-prem or cloud-based storage type from any vendor. As a vendor neutral software-defined solution, Hammerspace bridges silos across one or more locations to create a cross-platform global data environment.

With Hammerspace, data services and file operations can be automated as background tasks, even on live data. Users and applications retain uninterrupted file access regardless of data placement actions, data services, or changes that occur to the infrastructure over time.

Users access the files as they do today, via standard file protocols; no need to install proprietary clients or rely on symbolic links or other proprietary tricks. All users and applications have secure access to files via standard protocols globally across any existing or new storage type, location, including multi-cloud use cases.

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Software-defined, Scale-Out Architecture Based upon Open Standards

As a software-defined solution Hammerspace was designed based upon open standards to leverage data in place on any existing vendor storage type. With a high-performance scale-out architecture, Hammerspace can be deployed on any combination of commodity bare-metal hardware, standard hypervisors, and/or cloud machine instances. Hammerspace supports distributed environments across multiple on-prem and/or cloud-based locations, all tied together in a multi-site, multi-cloud global file system.

This global data environment can dynamically expand and/or contract to accommodate burst workflows to cloud for variable use cases, all while enabling uninterrupted and secure global file access across them all. And rather than needing to rely on vendor-specific point solutions, Hammerspace leverages multiple metadata types including workflow-defined custom metadata to automate cross-platform data services and data placement tasks. This includes data tiering and placement policies, but also data protection functions such as cross-platform global audit records, undelete, versioning, transparent DR, WORM, and much more.

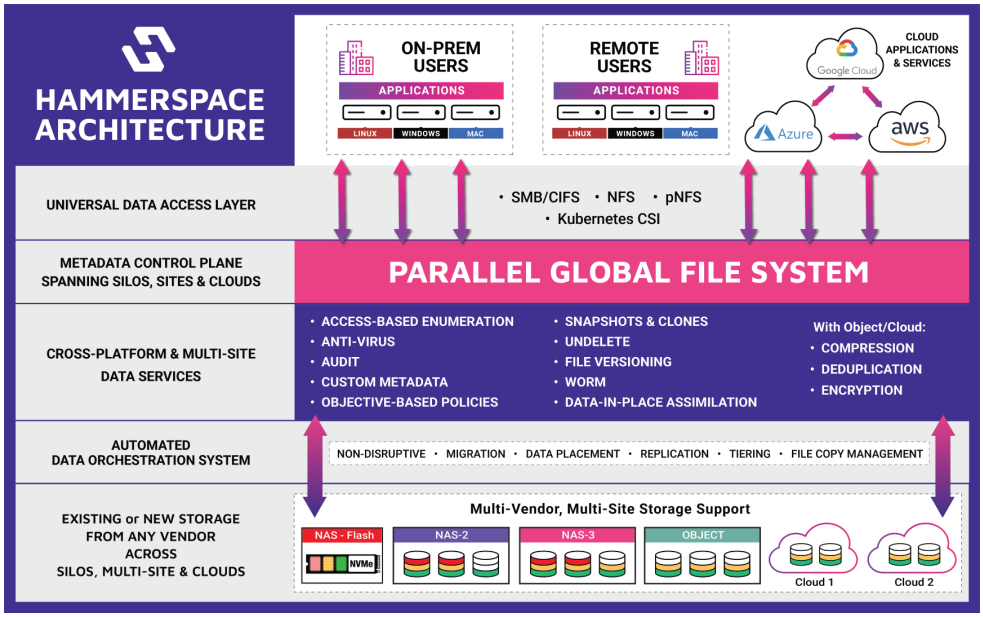
All data services can be globally automated, and invoked even on live data without user interruption across all storage types and locations.

IT Modernization & Consolidation needs Automated Data Orchestration

To keep existing operations across the many interconnected agency stakeholders running at peak efficiency while at the same time modernizing IT infrastructures to keep up with the next generation of data-centric use cases, the ability to step above vendor silos and focus on outcomes is crucial.

Hammerspace is the toolset that can help achieve that objective.

For more information please visit www.hammerspace.com, or email info@hammerspace.com.



A logical view of functional areas with Hammerspace architecture. The software is fully integrated in a single installer, including everything needed to get up an running on commodity hardware, VMs, or in the cloud.

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