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BRIEF

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The End of the Storage Silo? Pure's Enterprise Data Cloud Promises a New Era for Data Management

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Abstract: Pure Storage used its recent Accelerate conference to unveil a bold new vision. Based around the concept of the Enterprise Data Cloud, it's the latest phase in Pure's mission to disrupt the enterprise data landscape and tackle long-standing challenges within the storage domain head-on, reducing complexity, achieving scale, and, ultimately, enabling organizations to effectively manage their data, rather than storage, in a truly service-oriented fashion.

Context and Analysis

Despite the astonishing advances in the high-tech components that power modern data centers—super-fast processors, blazing network speeds, and advanced storage technologies capable of storing enormous volumes at ever-growing densities—the average IT environment is still weighed down by a combination of complexity, technical debt, and, chiefly, manually driven operations. Enterprise Strategy Group research suggests most IT environments are getting more complex, not less, and for many, this complexity growth is substantial.[1]

"The technology isn't the issue; it's the people and the process," is a refrain often heard from those frustrated individuals charged with managing today's data center environments. And while this is true to some extent, it's also the case that the underlying architecture of today's IT systems simply haven't kept pace with the fast-changing realities of what is expected from them.

The storage infrastructure is where these limitations are often most keenly felt. The scaling parameters of the storage environment are still largely confined to the system level, and although an individual storage array, or even cluster of arrays, may do a perfectly decent job of serving, storing, and protecting the data for the set of applications for which it was designed, this is no longer enough.

As organizations have continued to digitize, the number of applications and services deployed—and the accompanying data types and volumes—has skyrocketed. However, with many applications consuming varying data types and requiring different levels of performance from the underlying storage systems, enterprise storage has very much evolved in a supporting role, tailored to meet the demands of specific applications or groups of applications. Accordingly, storage system technologies evolved in line with these requirements.

The net result is that the enterprise storage landscape today is a fragmented patchwork of individual silos, each managed separately and with little or no coordination or even connection between them. While this model was broadly acceptable in the past, in the reality of today's environment—where an organization may have hundreds or even thousands of individual storage systems deployed across their business—these legacy approaches are being stretched to breaking point. Key issues include:

- **The cost of silos.** Storage today is typically procured and deployed in line with specific application requirements. Storage resources are difficult to reassign once deployed, so they are frequently underutilized and are deployed for "peak load." Overhead is high since IT staff spend disproportionate time provisioning and managing storage at an individual systems level, with little consistency between systems, while a lack of

[1] Source: Enterprise Strategy Group Research Report, *2025 Technology Spending Intentions Survey*, December 2024.

automation and integration—the top system-related challenge for storage environments, according to Enterprise Strategy Group research[2]—means systems management is largely reactive.

- **Security and governance challenges.** As the scale of the security threat to every organization continues to intensify, the data storage infrastructure is becoming a key target for attackers. Ensuring security and resiliency at the storage layer has, therefore, never been more important, but silo-centric storage approaches once again prevent organizations from easily creating backup and protection policies to their entire data environment.
- **The management of storage, not data, inhibiting innovation.** Silo-centric approaches require organizations to keep spending valuable time and resources managing storage. At a time when IT managers are under pressure to take on additional tasks that support the business, this is a lost opportunity. In addition, silo-centric approaches to storage typically inhibit organizations from taking more data-centric approaches. To fully take advantage of emerging technologies such as AI, organizations need to have broad visibility across the breadth of their data. According to Enterprise Strategy Group research, 63% of respondents said their organization regularly encounters issues with visibility across their data.[3]

In summary, IT leaders are increasingly questioning whether their data storage strategy is fit for purpose given the realities of the multiple substantial demands imposed by modern requirements.

Pure's Enterprise Data Cloud Vision

Enterprise Data Cloud (EDC) is Pure's vision for addressing long-standing storage challenges, enabling customers to focus on managing their data rather than storage. The EDC vision is delivered via the Pure platform, which builds on the multiple product-level innovations that Pure has delivered over the last several years.

The foundation layer of the Pure platform is the data plane—Pure's broad family of storage systems that utilize its DirectFlash storage hardware and Purity operating system, which can be deployed as a virtualized cloud of storage spanning block, file, and object storage into a single, API-driven platform, eliminating silos and manual management. On top of this, Pure has built an intelligent control plane comprising its Pure1 monitoring software and Fusion management capability.

It's this combination of a highly automated and declarative approach to storage provisioning and management, sitting on top of a virtualized "fleet" of storage resources, that enables Pure to create a differentiated approach with EDC. Breaking today's tightly coupled, manually driven, and rigid relationships between applications, data and the underlying storage resources can enable customers to create data environments that behave much more like consumer-grade digital services and public clouds, especially when the EDC is coupled with Pure's flexible consumption models, such as Evergreen//One.

The beauty of EDC is that it enables users to approach their storage from a fundamentally different perspective. Rather than managing each application separately, all workloads can be managed from a single place and on a consistent, highly automated basis, regardless of the underlying storage type or its physical location (extending to certain public cloud environments where Pure storage is deployed, as well as on-premises locations).

Crucially, EDC also spans the data protection and cybersecurity layer, enabling users to manage security, governance, and compliance requirements consistently and centrally, as well as effectively manage data copies for users such as developers and data scientists. And, because EDC has visibility into the entire hybrid cloud environment, IT operations teams can begin to execute more intelligent functions that optimize the broader storage environment (e.g., ensuring that spare capacity in the environment is taken advantage of when deploying a new application or that applications are moved or rebalanced over time to ensure performance SLAs are adhered to).

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[2] Source: Enterprise Strategy Group Research Report, *Navigating the Cloud and AI Revolution: The State of Enterprise Storage and HCI*, March 2024.
[3] Ibid.

And that's not all. In addition, Pure is creating a number of "recipes"—application connectors and templates that orchestrate workflows for deploying storage for specific applications within the EDC that can also respond dynamically to changing business needs. These recipes are designed to dramatically reduce the time spent on manual scripting to provision storage and the associated data protection requirements.

Supported environments initially include many commonly deployed enterprise workloads from the likes of VMware, Red Hat, Microsoft, and Oracle, as well as a number of data protection-specific apps from Rubrik, Veeam, Commvault, and Cohesity. For example, the integration with Rubrik would enable IT operations teams to execute an end-to-end security "recipe" that embedded security capabilities for a workload across the entire data lifecycle, from production to backup, with proactive threat detection and seamless, rapid recovery.

Conclusion

Pure's mission since inception has been to disrupt the enterprise storage market with innovations that challenge the status quo. Technologies such as its DirectFlash Modules, which are now capable of storing 150TB in a single device and will shortly be capable of double that capacity, have garnered substantial attention—and for good reason.

Yet, speak to Pure's customers, and it's not their love of the technology that shines through; it's their love of the experience. Essentially, Pure enables customers to spend less time managing and worrying about their storage because the company creates reliable products that are radically simple to use and manage. The EDC vision takes Pure's philosophy and essentially scales it up and out, enabling organizations to extend this approach from the individual system level to their entire data environment.

Of course, that environment has to be built on Pure storage today, but EDC represents the logical evolution of what the company has been doing for the last 15+ years. It's a compelling vision that will appeal to IT leaders who are weary of storage getting in the way of their efforts to modernize their IT environments. The EDC promise to set them onto a path to an increasingly service-oriented and data-centric future will be difficult to resist.

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