If only Pure had a bigger view of storage

By Andrew Glinka, Vice President Competitive Intelligence | June 2022

Annual user conferences are exciting events for everyone. But let's be honest, some conferences are more exciting than others. Some vendors view the world through a wider lens. They innovate on a bigger scale. They advance technology frontiers in bigger, more consequential steps.

Dell Technologies World premiered this year just one month prior to Pure//Accelerate techfest22. Dell announced over [500 new software features](#) across its storage array portfolio, which are all free to existing customers. At //Accelerate, Pure made just one storage array announcement, which will entail a forklift upgrade for existing customers. If only Pure had a bigger view of storage, it could have modernized its storage arrays with more flexible architectures and more advanced software features. Pure could have introduced API-integrated cyber-protection with network-isolated operational airgap functionality to help protect customers' recovery data. Pure could have vested customers with more consumption choices and self-service empowerment. There were so many opportunities for Pure to wow their customers with a bigger view of storage, if only they had…

If Pure had a bigger view of unstructured data storage…

…then they would have designed FlashBlade//S clusters larger than 10 nodes and 20PB of raw capacity to broadly consolidate workloads across the business for the long term. If Pure had planned a more encompassing approach to simplicity, they would have enabled file/object interoperability on the same data. If Pure had imagined an unstructured data architecture to keep its customers modern as NAND technologies evolve, they would have enabled existing FlashBlade clusters to upgrade non-disruptively to FlashBlade//S clusters, and they would have enabled greater media diversity on FlashBlade//S so

customers would be able to non-disruptively merge in future NAND enhancements. If Pure had a bolder view of storage economics, they would have equipped FlashBlade//S with the policy intelligence, scale, and hardware diversity to support both production and archival data effectively. If Pure had conceived a more aggressive design for data reduction, they would have added deduplication and dramatically improved usable capacity on FlashBlade//S—and they wouldn't have throttled compression on the performance-optimized S500 blades. If Pure had a stronger sense of the extreme performance needed by modern workloads such as AI, ML, analytics, genomic sequencing, and EDA workloads, they would have enabled NVIDIA Magnum IO GPUDirect support on FlashBlade//S out the gate. If Pure had taken a more determined approach to steel their customers' file and object data

against cyber-attacks, they would have integrated real-time detection; policy-driven lockout; file/object/host IP tracking; and air-gap security functionality enablement directly with the Purity/FB OS.

Fortunately, Dell's PowerScale and ECS systems can offer Pure's customers the capacity scale, media diversity, software intelligence, extreme performance, storage economics, and directly integrated security features they need to modernize on a bigger scale and stay that way as their unstructured data infrastructure continuously evolves. Dell PowerScale and ECS can enable unstructured data infrastructure that eclipses FlashBlade//S on many levels. For example, with PowerScale Dell delivers:

- A scale-out architecture that integrates media advances without forklift upgrades
- Up to 25x greater node scale-out and 4.5x greater capacity scale-out
- Software intelligence, hardware diversity, and scaling breadth to optimally address production and archival in the same cluster
- Global compression and dedupe, plus approximately 80% efficiency on raw media with five nodes or more
- File/object duality on the same data, plus more expansive protocol support and more complete protocol version support
- Extreme performance for HPC, AI/ML/DL workloads via NVIDIA GPUDirect
- OS-integrated security features that monitor user behavior and help protect data in real time with user file system lockouts, snapshots, file and object tracking, and infected host IP tracking—along with integrated network-isolated cyber-vault automation for offline data management

ECS complements PowerScale as a fully integrated, multi-cloud-capable, EB-scale content repository with up to 11-nines data durability. ECS is equipped with strong consistency and expansive S3 support, including S3 API extensions such as fanout. ECS is available for on-premises deployment, as well as through a fully managed on-demand data service.

If Pure had a bigger view of primary data storage…

…then they would have announced a meaningful architecture advancement for the FlashArray portfolio. But FlashArray remains a dual-controller, scale-up-only design. Unable to scale capacity independent of performance, FlashArray restricts flexibility and can create silos of capacity and performance in the infrastructure. How can such a rigid architecture help power a future of rapid data growth?

By contrast, Dell has a much broader persepctive and flexible approach to scaling. For example, PowerStore provides a scale-up and -out foundation for any future need. Its architecture scales in increments as small as one drive at a time, and scales out both capacity and performance up to four arrays, for a massive 18PBe of capacity per cluster.[1] Also, unlike Pure FlashArray, PowerStore can reach maximum capacity on any model without expensive controller upgrades or proprietary flash modules.

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[1] Assumes 4:1 average data reduction. Actual results may vary.

With PowerMax, Dell has a highly differentiated architecture for mission-critical workloads. In sharp contrast to FlashArray's scale-up-only architecture, PowerMax is designed with tightly coupled controllers, resulting in true enterprise scalability, availability, and performance that can help to catapult mission-critical datacenter infrastructrure into the far-distant future.

If Pure had a bigger view of container storage…

…then they would have announced additional options for container support. Pure's approach with Portworx makes customers rely on software-defined data services, circumventing FlashArray's data services. Instead, Portworx software uses precious host resources to deliver data services such as replication, which can potentially impact storage array performance. What about an open system that lets you build your own container orchestration environment?

With Portworx, customers must rely on a software-defined data layer that is not only in-band, but also overlaps, duplicates, or replaces important storage functions. How much overhead can that create for the servers it runs on? What if there's a problem in the Portworx software?

Dell's approach is much more comprehensive. Container Storage Modules (CSMs) enable Kubernetes administrators to easily leverage Dell's many years of enterprise storage development. CSMs deliver enterprise storage for Kubernetes across Dell's portfolio of industry-leading storage array platforms through simple integration and automation across storage and cloud-native apps. CSMs leverage Dell storage arrays' built-in data services such as replication, provisioning, and more, to enable superior performance and functionality over a software-only approach.

Even more exclusive is Dell's portfolio of products that enable expansive choices in delivering next-gen container apps with the broadest DevOps-ready platform portfolio fully validated with all major hyper-scalers and container orchestration platforms.[2] Containers are about flexibility and choice. Can Pure's narrow software-defined approach fit into that future?

If Pure had a bigger view of on-demand services…

…then they would have announced a comprehensive ITaaS approach for enterprises. However, Pure remains a storage-centric vendor with incomplete infrastructure offerings and limited decommissioning capabilities, a limitation that does not bode well for fully managed as-a-Service lifecycle management for enterprises.

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[2] Based on Dell analysis of integrated systems for Kubernetes distributions, March 2022.

Dell APEX offers a comprehensive and industry-leading portfolio from a single vendor through a single console. Pure lags in the benchmark ITaaS market taxonomy, as it cannot compete in the client, server, or hyper-converged segments. As a result, Pure's customers are required to spend time and money acquiring additional solutions and engaging with a variety of outside vendors in order to fulfill their IT needs.

If Pure had a bigger view of cyber-security…

…then they would have significantly expanded their security capabilities to help customers harden their data enviornment without having to rely solely on tamper-proof snapshots, or having to engage with outside vendors for more comprehensive protection. However, Pure continues to position tamper-proof snapshots as the foundation of its cyber-resiliency capability, and it still steers customers to third-party data protection vendors, which increases complexity.

Dell knows that tamper-proof snapshots aren't enough. Dell also knows that best-in-class cyber protection requires a couple of safeguards that are absent from the traditional backup vendors Pure partners with, for example:

- A network-isolated cyber data vault that is policy-controlled from within the vault using strictly controlled access tools to help protect your recovery data from attackers.
- An artificial intelligence and machine learning technology that uses a machine learning model trained on millions of samples across thousands of malware strains to recognize data within backups files that have been affected by malware.

Both these protections are available with Dell's PowerProtect Cyber Recoverery solution, with full integration of CyberSense to add an intelligent layer of protection.

Epilogue: If Pure had a view of storage like Dell's…

…then they would certainly have announced more at //Accelerate this year. What's more, they would have likely been at the drawing board for many years leading up to //Accelerate to build a modern storage and on-demand services portfolio that could rival Dell's. In particular, Pure would need a much bigger view of unstructured data— one of significantly greater scale, diversity, intelligence, extreme performance, storage economics, and directly integrated cyber protection than they have today with FlashBlade//S. Pure would also need a much bigger view of primary storage—one that affords a more flexible approach to scaling and a more powerful foundation for mission-critical workloads than they have today with FlashArray. Additionally, Pure would need a much more comprehensive view of container storage—one that provides more storage choices and enables a more seamless experience with existing storage infrastructure than they have today with Portworx. Further, Pure would need a bigger view of on-demand services—one that provides enterprises with more technology choices than they have today with Evergreen//One. And finally, Pure would need a much bigger view of cyber-security—one that goes beyond tamper-proof snapshots and handing off customers to outside vendors for proper cyber-protection.

#PowerOverPure

About the author: Andrew Glinka is Vice President, Competitive Intelligence at Dell Technologies. Andrew is an 11-year Dell Technologies veteran and brings over 23 years of experience in technology sales, management, and operations. Prior to assuming his current role, Andrew served as Global Director of Sales Strategy for the Data Protection Solutions Division. He has also managed the Global Software Sales team as well as other sales teams in the Data Protection Solutions Division. Prior to joining Dell through the EMC acquisition, Andrew owned and operated an IT Managed Services business in Virginia for over 8 years before successfully selling the company.