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Pure Storage unveils plan to Accelerate the ‘modern data experience’

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Approaching its 10th birthday, Pure Storage used its annual user conference to unveil a plan it believes will take it through the next decade, and beyond. Envisioning its role as enabling the ‘modern data experience,’ the company unveiled a number of new products and capabilities that are designed to help it get there.

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Introduction

Approaching the 10th anniversary of its formation, Pure Storage chose its annual user conference in Austin, Texas, to unveil a plan it believes will take it through the next decade and beyond. Envisioning its role as enabling the 'modern data experience,' the company intends to build on its strong first decade in flash-based storage. It also unveiled a number of new products and capabilities that are designed to help it get there.

451 TAKE

The market for on-premises infrastructure may be in flux as IT organizations wrestle with their journeys to cloud and digital transformation, but one might not know that looking at Pure. Indeed, like any good Texas BBQ, the company continues to smoke hot, and has made an impression on the enterprise storage market over the last decade. It has arguably delivered on its founding mission to become 'the Apple of the datacenter' in terms of providing a radically simpler, more intuitive way of delivering storage. The raft of announcements at its Accelerate conference demonstrate that Pure is not resting on its laurels. It has certainly been a disrupter in the primary storage market, and its challenge now is to apply its philosophy to an entire portfolio of capabilities. That is arguably a more difficult challenge, but one we believe Pure will not shirk from.

Context

While Pure is known chiefly for its solid state, mostly flash-based, primary storage systems, the company says it was founded to disrupt the market in two ways: innovation that focuses specifically on simplicity (not a word historically used with enterprise storage systems), and fostering a customer-centric culture.

On both of these counts, the evidence is strong that the strategy is working (its latest innovations are explored below). On the customer front, it also continues to build a strong case. It notes an industry-leading NPS of over 86 (higher, it says, than even Tesla and Apple). Moreover, it continues to add new customers at a strong clip; on average it's adding more than six customers per day, with a total globally that is north of 6,600. Considering it entered a notoriously competitive market space with a number of large, often entrenched, incumbents, that is good.

Strategy

One noteworthy aspect of Pure's strategy has been to improve its foothold in large enterprises. This has long been fertile ground for all infrastructure IT providers, storage included, given the level of spending concentration among this cohort (many large enterprises spend vast amounts on storage equipment). Establishing a foothold here can bring significant rewards. What's more, many CIOs are looking to pare down the number of suppliers, raising the stakes further.

After reorienting its sales operation more strongly to large enterprises over the last few quarters, Pure claims to be making progress here with Global 2000 and Cloud 1000 organizations. Sales are still overwhelmingly concentrated in North America (less than a third come from overseas), while the company has yet to turn a profit. With a salesforce much more squarely focused at larger enterprises, Pure is doubling down on having more products and services to sell – the enterprise storage market has always been broad, and any successful player will need a portfolio of capabilities.

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At Accelerate, Pure announced a substantial expansion of its portfolio. The company's first decade was about delivering the All Flash Datacenter (an ambition possibly ahead of its time, but progressing nonetheless). Pure says the second decade will be about transforming enterprise storage into a 'modern storage data experience' – meaning being able to cater to any enterprise storage requirement, regardless of workload, protocol, consumption model or cloud.

In addition, it needs to expand its appeal and usability of storage beyond the core infrastructure/IT operations team, into emerging roles such as DevOps, DataOps and even AIOps. Indeed, in a recent Voice of the Enterprise Storage survey, 75% of customers anticipate that AI/ML capabilities will help simplify infrastructure management, suggesting that expectations are high for the potential of AI-enhanced infrastructure.

Products and services

Pure announced a slew of new capabilities at its Accelerate conference, which were aimed at delivering this modern experience. They can be grouped into three broad groups: on-premises storage, cloud-based offerings and consumption models.

On-premises storage

Pure has announced FlashArray//C, described as the industry's first capacity-optimized AFA. The system will initially use TLC flash, but will eventually support QLC flash to create a lower-cost, high-capacity tier with all the same features (Pure1 management, de-duplication) and an expected Six Nines availability as its high-performance systems.

Pure says the system – which is available now – will offer all-flash storage at SATA-based disk economics, which will bring into its orbit a number of less demanding but still important applications that were previously out of reach because its AFA was essentially overkill. FlashArray//C will initially deliver up to 4 to 5.2PB of effective capacity, although performance will be in the milliseconds range (versus microseconds) for its high-performance systems. Use cases will be tier-2-type workloads such as backup/DR, dev/test and certain noncritical VM workloads.

The company also announced a new caching offering, DirectMemory Modules. Here, Pure has bundled its own DirectMemory Cache software with Intel's Optane-powered DIMMs (or Data Center Persistent Memory Modules, in Intel parlance) to offer a non-disruptive read caching option to boost OLTP/OLAP performance for FlashArray//X systems. This is also available immediately.

For AI and data science workloads, Pure announced an expanded set of AI Ready Infrastructure (AIRI), based around its FlashBlade NAS and object platform with partner NVIDIA. This includes the AI Data Hub, described as an end-to-end AI pipeline offering that helps customers deploy AI applications quickly and at scale. Pure also said it would be offering AIRI as a Service for customers that don't manage their infrastructure; it's working with select third-party partners such as Managed Service Provider Core Scientific, which builds out AIRI for its own customers to build and deploy AI workloads to.

There was a new capacity enhancement for the FlashBlade NAS and object system, which now (in directed availability) supports up to 8PB in a single namespace – double the previous capacity. Pure says FlashBlade customers are now adding 20PB of capacity every month, and that the company has accrued almost \$500m in cumulative revenue in the two and a half years since FlashBlade was launched.

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A further announcement was a new VM-analytics capability for its Pure1 management software: VM Analytics Pro. Pure has previously offered a 'light' version of this, which discovers and maps the infrastructure from VM-to-storage, offering best practice configuration, anomaly detection, and the like. This new, paid-for version extends the metadata storage from seven days to up to three years. This, Pure says, provides customers with a much richer set of data to benchmark and understand their infrastructure requirements over time. An example would be to look at 'Black Friday' performance over several years, and use this to optimize the infrastructure for future years.

One issue that did not get a tremendous amount of airplay at the conference was Pure's intentions regarding its Compuverde acquisition earlier this year. The company reiterated its plan to integrate Compuverde's file storage capabilities into the block-based FlashArray platform, thus providing an ability to consolidate the storage of modest file content such as database logs into FlashArray. The company says it is aiming for a 'nice' integration, and not simply a NAS gateway, but is not yet speaking about specific timelines. We would expect some initial delivery within the next year.

Cloud-based services

Another key element of Pure's strategy is to make its technology available for consumption in public clouds. Pure got started here later than some (but not all) rivals, but the company says Cloud Data Services and its Pure-as-a-Service strategy (detailed below) are now key focus areas. In this regard, Pure said the Cloud Block Store (CBS) for AWS (first previewed last year) is now generally available. CBS allows customers to essentially run a virtual FlashArray in the AWS cloud, with the goal of offering a consistent level of data management both on-premises and in cloud environments. Pure focused on the need for public cloud environments to have more enterprise-class storage features, such as space-efficient instant snapshots, clustering, replication and data-at-rest encryption, as well as efficiency-boosting features (e.g., de-duplication, compression, thin provisioning).

CBS is deployed using CloudFormation. It uses AWS EC2 auto-scaling groups, and a combination of S3 (object storage) and the Elastic Block Store service. S3 acts as the persistent storage layer to provide the highest level of durability available in AWS, while EBS is used as a cache to improve performance. The initial versions of CBS used EBS as the storage layer; but Pure found it was not reliable enough, which led to the change to S3 for persistence. Additionally, using instance stores allowed CBS to overcome the multi-attach limitation of EBS (which doesn't allow multiple EC2 instance to talk to the same volume). By leveraging instance stores, Pure says, CBS can give customers high availability and non-disruptive upgrades (hardware and software). Finally, instance stores leverage spread placement, limiting physical failure domains, which Pure says EBS alone cannot offer.

Pricing starts at \$2,000 per month for 10TB of reserved capacity, with discounted prices for larger amounts of capacity – 20TB of reserved capacity is \$3,000 per month, and 50TB of reserved capacity is \$6,000 per month. Pure also offers discount prices for 12-month subscriptions – with 10TB capacity going for \$20,000, 20TB capacity at \$30,000, and 50TB of capacity priced at \$60,000.

From a hybrid-cloud perspective, the addition of the block storage offering adds a new data mobility option, since it can use Pure's replication technology to efficiently move data bidirectionally between on-premises, public and hosted environments. CBS also has the ability to support HA replication across availability zones to provide an additional level of resiliency. Pure says DR to Cloud is another good use case for this service – with customers storing snapshots on Amazon S3, and then restoring the data on Cloud Block Store to act as a DR target. When the primary site is recovered, the Cloud Block Store can leverage Pure's replication to migrate data back for failback operations.

Pure also announced CloudSnap for Azure, which allows customers to send compressed snapshots to Azure to simplify data transfer from on-premises to the cloud and for leveraging cloud storage for long-term retention. Pure's first CloudSnap service was designed for AWS; and with this service now available on Azure and with Google GCP support coming in the future, it is clear that Pure is working to fill out its multi-cloud strategy.

Pure as a Service

As part of its commitment to 'modernize' data and storage, Pure announced that it was expanding its existing consumption offerings (formerly known as ES2) to provide customers with a consumption-based payment model for all of its products. Under the new Pure-as-a-Service umbrella, this will obviously span public cloud-based offerings such as CBS, but will also extend to on-premises and hybrid cloud usage models.

The company believes that it kick-started a step change in the way enterprise storage is managed over time with its Evergreen program, and is aiming to bring the same level of simplicity and transparency to utility-based, pay-as-you-go consumption. In reality, Pure says this is more of an ongoing evolution of ES2, a consumption-based model it introduced last year for FlashArray, rather than a brand new capability. It says it has multiple customers already using utility-based pricing at scale across multiple verticals, including government and healthcare, as well as for MSP and SaaS customers.

Competition

Pure's entry into the storage market a decade ago has undoubtedly made an impression. Its aggressive promotion of all-flash economics forced large incumbents to react – probably sooner than many would have liked – while a focus on simplifying the overall storage experience through programs such as Evergreen continues to spawn similar strategies from rivals. Pure claims that it is the only storage-focused vendor of scale that is truly investing in innovation, and that by contrast, key rivals are looking to cut back spending and consolidate.

The likes of Dell EMC, Hewlett Packard Enterprise, Hitachi Vantara, NetApp and IBM would strongly disagree with such a claim. What's more, they all remain entrenched and capable rivals to varying degrees, and the battle to unseat them will become more pronounced as Pure increases its focus on the most lucrative large enterprises. Against this backdrop, the announcements Pure has made to expand its portfolio are important – as noted, many end-user organizations are looking to consolidate suppliers, so product breadth is becoming more important.

SWOT Analysis

STRENGTHS

Pure is viewed as, and indeed is, a disruptor in the enterprise storage market, and its all-flash arrays have established an important foothold supporting many critical applications for organizations globally.

WEAKNESSES

Pure is still largely viewed as a storage specialist rather than a generalist, and it has yet to replicate its success in home markets outside of the US.

OPPORTUNITIES

More organizations are thinking about their data infrastructures in a different, more holistic way – those that do will be looking for suppliers that can help them on a more strategic basis, spanning multiple clouds, applications and consumption models.

THREATS

The competitive landscape remains as cutthroat as ever, especially in the prized large enterprise space. The more Pure focuses here, the more rivals will invest to respond.