IDC PERSPECTIVE

A New NetApp Is on the Rise

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EXECUTIVE SNAPSHOT

FIGURE 1

Executive Snapshot: NetApp — Delivering Value for Enterprises Undergoing Digital Transformation

Enterprise storage customers that have not dealt with NetApp in the past few years may not even recognize the vendor. In the past year in particular, the vendor has undergone a significant and broad-reaching evolution that positions it to cater to the needs of enterprises undergoing digital transformation in ways that differentiate it from its competitors in meaningful ways. This document summarizes those changes, presenting a "new" NetApp whose offerings mesh well with industry trends and customer needs.

Key Takeaways

- NetApp has undertaken significant positive change in five key areas: hybrid cloud integration, storage consumption models, customer experience (CX), the pursuit of a primarily software-defined infrastructure strategy, and the planting of its stake in the ground as a leader in SAN (block-based workloads) in addition to retaining its crown as the leader in enterprise NAS.

- NetApp is leveraging leading-edge technologies for enterprise use in a variety of areas, including NVMe, persistent memory, and artificial intelligence/machine learning (AI/ML).

- With its public cloud–based offerings, NetApp can now provide true enterprise storage capabilities to a variety of new customer types starting at well under $100/month (for 50GB).

Recommended Actions

- IT organizations undertaking technology refreshes that are moving toward a hybrid multicloud strategy should at least familiarize themselves with what NetApp offers in this area as its portfolio represents the leading edge at the intersection of enterprise storage and hybrid cloud.

- New constituencies like cloud architects and DevOps managers should take note of Azure NetApp Files, a cloud-based enterprise file offering that is quick to provision, low risk, and low cost and is available directly from first-party public cloud providers like Microsoft.

- Regardless of whether customers look at NetApp or not, they should be evaluating enterprise storage vendors capabilities in the same areas that have been instrumental to NetApp's evolution (hybrid cloud, consumption models, CX, NVMe technology, use of AI/ML to drive business value, etc.).

Source: IDC, 2019

SITUATION OVERVIEW

In the past 10 years, the enterprise storage industry has undergone significant evolution. Those large established vendors that lead in one era do not necessarily evolve effectively when major new technologies drive major change. One of the hallmarks of a truly great company (and a great long-time partner to its customers) is its ability to adapt to these types of changes while maintaining industry leadership. NetApp, a $6+ billion vendor of information technology (IT) infrastructure, rose to prominence in the 1990s with its high-performance, highly available, and easy-to-deploy filers but has evolved as the storage industry has evolved over the past two decades to establish and maintain leadership in other technology areas as well like unified storage and all-flash arrays (AFAs). The vendor is currently undergoing another major evolution, and there was significant discussion of steps the vendor has taken to evolve their business at the recent NetApp Insight event (NetApp's annual end-user conference, which was held in late October 2019).

The major changes in the enterprise storage industry in the past few years have revolved around several key areas:

- The IT organizations of most successful, growing businesses have started the process of digital transformation (the move to much more data-driven business models) and are deploying new artificial intelligence- and machine learning (AI/ML)-driven workloads to help inform better business decisions.

- The new data-driven business model requires significantly more agility on the part of IT organizations, a fact which has led to rapid growth in the use of cloud-based services, the deployment of more software-defined infrastructure, the domination of primary external storage revenue by solid state technologies, and significant interest in subscription-based consumption models.

- As organizations evolve their IT infrastructure to meet changing performance, availability, scalability, and agility requirements, they are looking to cloud technologies to increase agility and provide access to newer technologies needed in the burgeoning big data analytics arena such as accelerated compute, AI/ML, and massively scalable cold storage. They are also looking to cloud technologies to offload IT infrastructure management responsibilities and move more infrastructure and workloads to operational expenditure (opex) models. Overall, cloud-based spend (public and private) is moving from 42% of total information and communications technology spend in 2018 to 50% by 2023, and 52% of IT organizations already had a hybrid cloud environment in place in 2019.

In 2019, the enterprise storage market exhibited a revenue growth slowdown. Coming off of a banner year in 2018, the slower industry revenue growth in 2019 appeared even more pronounced, and many of the top enterprise storage vendors (in terms of market share by revenue) were affected by this slowdown. In response to this, NetApp has made a number of changes — so much so that many prospective customers that have not dealt with NetApp in the past 12-18 months may not even recognize the vendor. Some of these changes were in fact implemented as early as 2018, based on the vendor's understanding of the evolving enterprise storage market direction, and have in fact already started to bear fruit. The "new" NetApp is a very different company than it was just two short years ago, and the company's adjusted direction meshes well with both industry trends and evolving enterprise customer needs. Based on IDC's analysis of these changes over the past 18 months, this document calls out five key aspects of the vendor's new offerings, areas of focus, and business strategy that traditional IT customers (as well as new constituencies for enterprise storage purchases like cloud architects and DevOps managers) may find both surprising and appealing.

So You Think You Know NetApp …

Most IT personnel who have managed storage over the past 20 years or so are familiar with NetApp as a company. Based on the most recently released quarterly revenue, the vendor holds the number 2 market share position in external enterprise storage and the number 2 market share spot in AFAs. But unless IT executives have been engaging with NetApp over the past 12-18 months, they likely have a dated view of the vendor's offerings, capabilities, and strengths. At the recent NetApp Insight event, this dichotomy was readily apparent and was made all the more important by the fact that the capabilities of the "new" NetApp are strongly keyed to where the IT infrastructure market is going. Here are some important things in this new era of digital transformation that IT executives may not be aware of about NetApp today:

- **First, NetApp was the first established storage provider to understand the importance of the evolution to hybrid cloud (back in late 2015) and it has maintained leadership in this area since then**. The company announced the NetApp Data Fabric at that time and has energetically expanded the hybrid cloud capabilities of its entire portfolio over the past four years. Since 2016, NetApp has had the most complete (in IDC's opinion) hybrid cloud offering encompassing multipublic cloud capabilities, extensive hybrid cloud integration points with its on-premises IT infrastructure, unified AI/ML-infused control planes that provide single-pane-of-glass management for hybrid cloud environments, and enterprise-class web-scale infrastructure offerings for on-premises and private cloud environments. These capabilities provide "public cloud" advantages while overcoming common public cloud challenges (performance, availability, governance, compliance, etc.). NetApp has been first to market with many hybrid cloud integration capabilities over the years and, despite the fact that many of its competitors have introduced similar offerings, continues to innovate at a rate sufficient to keep them the industry leaders in this arena.

  Over the past year, the vendor continued to push the envelope on hybrid cloud capabilities with new NetApp Data Fabric announcements. With the introduction of Azure NetApp Files (ANF), NetApp is making an enterprise-class file service available on public cloud environments as a first-party offering with a low entry price point. Microsoft sells this, not NetApp, giving the product significantly more reach, particularly into smaller accounts that may not yet know NetApp. ANF is based on NetApp's venerable ONTAP storage operating environment but purchased and paid for as a Microsoft Azure-based subscription service, and its availability as a true enterprise-class first-party file-based service directly from a major public cloud provider differentiates it from other public cloud-based offerings in the market to date. Turbocharged by the introduction of ANF, NetApp is becoming one of the largest and fastest-growing provider of file services in the public cloud: its cloud data services business experienced 167% year-over-year growth (a growth rate tied with number 2 provider Microsoft, according to IDC data), and end users spent well over $100 million with cloud providers for NetApp's data services (which includes ANF, Cloud Volumes Service, and Cloud Volumes ONTAP) in 2019.

  NetApp is pursuing a multipublic cloud strategy; has introduced a number of offerings across Amazon Web Services, Microsoft Azure, and Google Cloud Platform (most recently with support for Google's Anthos open application modernization platform); and is working toward extending its common, feature-rich "public cloud experience" with unified management and true enterprise capability across both on-premises and off-premises environments (regardless of public cloud provider). To enable automation that spans on-premises and public cloud-based infrastructure, NetApp has strongly committed to the use of Kubernetes with the NetApp Kubernetes Service (NKS) and has introduced new tools (Cloud Insights, Fabric Orchestrator, FabricPool, etc.) that make it easier to manage and drive business value with hybrid multicloud

environments. NetApp also introduced NetApp HCI (software-defined, enterprise-scale hybrid cloud infrastructure) to give customers an option for traditional or private cloud deployments that delivers the advantages of the "public cloud experience" for on-premises infrastructure.

As part of NetApp's strong emphasis on hybrid cloud integration, the ONTAP operating environment gives traditional on-premises storage administrators ample opportunity to work with and leverage cloud technologies and ultimately repurpose themselves as cloud specialists. This is based on the vendor's extensive hybrid multicloud functionality, ability to access full ONTAP functionality for cloud-based storage services, and the availability of cloud-based tools that provide single-pane-of-glass administration and management for both on-premises and off-premises storage infrastructure.

▪ **Second, in the past year, NetApp has made major changes in its product and sales strategies to make the company agnostic as to whether its customers buy on-premises or public cloud-based infrastructure from them.** This removes the tension that still exists in many enterprise storage vendors' sales forces between on-premises and cloud-based infrastructure sales. It also gives customers more freedom to locate workloads in the optimal location (on premises or off premises) based on their requirements rather than sales account team preference for a particular consumption model type.

▪ **Third, NetApp has made significant investments to improve its ability to deliver a consistently superior customer experience (CX) across its entire customer base, despite the fact that many of its core customers already view NetApp as offering industry-leading CX.** CX goes beyond just the quality of technical support – it focuses on the entire storage life-cycle experience of the customer from initial short list creation through purchase, deployment, management, expansion, technical support, technology refresh and, ultimately, retirement, taking into account the ease of doing business with the vendor, the ability of the vendor to become a trusted advisor to its customers, and the willingness of customers to recommend the vendor to their peers.

In 2018, the vendor created a central group, headed by a NetApp executive, to define and coordinate a consistent approach to CX across the entire company. That group established baseline metrics for CX that applied companywide and has been evolving the vendors' products, services, and workflows to improve these metrics over time. Extensive primary research into CX-related areas performed both by NetApp and by outside contractors helped this group define areas for improvement for NetApp, and many of the announcements in 2H19 specifically leveraged these results. NetApp's coordinated efforts in the CX arena have resulted in key changes in how they do business:

▪ At the October NetApp Analyst Insight conference, NetApp introduced Keystone to further simplify the customer experience. It includes a broad-reaching subscription-based consumption model that makes it much easier to buy, consume, and operate IT infrastructure. Customers make three simple decisions – where do they want to operate (in the cloud or on premises), what type of data services do they want (block/file/object), and who should manage it (NetApp or the customer) – and NetApp does the rest. Keystone allows IT services to be provisioned more quickly, reduces the cost of managing storage, and increases IT stability and predictability while at the same time allowing customers to move IT infrastructure assets off the balance sheet.

▪ NetApp introduced a Cloud Customer Group that is specifically focused on understanding how its customers want and need to leverage cloud-based services so that the vendor can continue to innovate to maintain its hybrid multicloud leadership. Since this organization was launched in 2019, it has grown NetApp's online community sixfold (an outcome that indicates the value this drives for customers).

- NetApp has gone all-in on the use of AI/ML to drive value for customers and improve overall CX. The vendor's cloud-based predictive analytics platform (Active IQ) is one of the most mature in the industry, and the vendor has been extending the platform's coverage to include more storage systems and offerings (including public cloud services) in its portfolio. Data collected by Active IQ is used to expose risk factors and prevent problems before they affect operations, improve the efficiency of storage system resource utilization, speed trouble ticket issue resolution, and help automate routine operations. Data collected across all of NetApp's customer touch points (over 200 billion data points per day) is now being analyzed using AI/ML to make its customers' lives better in a systematic manner, driving higher performance and availability, easier administration, and lower cost.

- NetApp has put a number of guarantees in place for its enterprise storage customers that are intended to further improve the overall CX. These include guarantees on performance, 100% data availability, storage efficiency (data reduction) ratios, predictable maintenance pricing, and solid state media endurance.

- **Fourth, at this point, NetApp is more of a software rather than a hardware company.** Yes, the company does still sell hardware associated with appliances but it has been moving functionality out of hardware into software for years, more broadly enabling the use of lower-cost commodity hardware technologies while still providing its enterprise-class functionality differentiation. This is important for customers that are looking for increased deployment flexibility and agility, for easier technology refresh, and for better hybrid cloud integration capabilities. And customers should also note that NetApp is not just a storage vendor – through reference architectures and channel partners, it offers validated IT infrastructure solutions with converged (with Cisco) and hyperconverged infrastructure as well as accelerated compute (for AI/ML and other big data analytics workloads [with NVIDIA]) platforms.

  With its software-centric strategy, NetApp provides a variety of software-defined datacenter options. Through a long-standing relationship with VMware, NetApp offers deep integration with virtualized infrastructure technologies from VMware (a key vendor in software-defined datacenter). NetApp's hyperconverged infrastructure offerings (NetApp HCI) support the ability to scale compute and storage resources independently, giving VMware customers the option to scale storage capacity as necessary without having to purchase additional VMware software (which is licensed based on the number of cores in a CPU rather than storage capacity). For those customers interested in open source-based software-defined datacenter options, NetApp offers fully verified and supported reference architectures that leverage Red Hat OpenShift, Google Anthos, and related technologies like Kubernetes and Docker.

  The vendor's strategic orientation has also shifted from being a storage provider to being a data services provider. Messaging around new offerings from the vendor emphasizes how it provides data services for digitally transformed (or transforming) companies that are looking to better leverage data to drive their own business growth and how NetApp's Data Fabric strategy makes it easier to deploy and manage data in hybrid multicloud environments to drive business value.

- **Fifth, NetApp should not be thought of as just a NAS vendor.** NetApp originally started as a NAS vendor in the mid-1990s. By 2002, it had pioneered the concept of the "unified storage" platform – an enterprise-class storage system that could simultaneously support both block- and file-based storage. Today, NetApp has tens of thousands of systems deployed in production, with 42% of them running mission-critical block-based applications like Oracle, SQL Server, SAP, and other key strategic workloads (as of January 2020). Many of these systems only support block-based workloads (despite their unified storage capabilities).

NetApp's block-based performance, availability, and scalability are on par with that of its most capable block-based competitors.

In recent years, NetApp has noted an increasing percentage of customers that buy and use its systems as a "dedicated" platform for their most mission-critical block-based enterprise workloads. Through the end of 2019, NetApp was one of the fastest-growing "SAN vendors" (by revenue) among the established enterprise IT infrastructure vendors. Based on customer demand, in late 2019, NetApp introduced the NetApp All SAN Array (ASA), an ONTAP-based storage platform that is specifically optimized to run only block-based workloads. This all-flash system features performance and other optimizations (like symmetric active/active controllers that support virtually instantaneous failover recovery and more intuitive management of block-based environments), giving customers that want to keep block- and file-based workloads on separate dedicated platforms anyway additional options. The availability of the ASA puts NetApp on a more even footing with its block-based competitors and will ultimately give customers more block-based options as NetApp rolls the ASA into its converged infrastructure offerings.

Two Additional Aspects to the "New" NetApp

Despite all the offerings from NetApp that extend its capabilities beyond just storage, the vendor continues to innovate in that arena as well. NetApp is a leader in the emerging persistent memory and NVMe technologies that will become increasingly important to next-generation workloads in "digitally transformed" IT organizations over the next several years. NetApp began shipping NVMe-based versions of its flagship all-flash FAS (AFF) systems in mid-2018 and was one of the first established enterprise IT infrastructure vendors to support NVMe over Fabrics (NVMe-oF) host connections on these enterprise-class systems. The vendor's July 2018 acquisition of PlexiStor led to the announcement of MAX Data, a persistent memory-based software solution that, by leveraging Intel Optane DC persistent memory, provides applications with storage latencies under 10 microseconds while offering all the enterprise-class capabilities of ONTAP-based storage. That is the lowest latency available from any enterprise-class, shared storage platform in the industry today.

Finally, the vendor also spoke publicly about changes it has been making in 2H19 to increase the emphasis on new customer acquisition. This document has already mentioned cloud-based offerings like Azure NetApp Files, Cloud Volumes Service, and Cloud Volumes ONTAP that provide multiple entry points to NetApp technology for constituents (like Cloud Architects and DevOps Engineers) that have not been traditional NetApp customers. These offerings have very low price points, are quick and easy to deploy, and exhibit none of the "risk" associated with traditional enterprise storage purchases yet they showcase differentiating NetApp capabilities in the areas of performance, availability, scalability, and functionality.

In October, the vendor announced a new chief marketing officer (CMO), James Whitemore, who had come over with the SolidFire acquisition in 2016. Whitemore had been acting CMO for most of 2019 and was instrumental in NetApp's efforts to market to "new" customers (those defined as having spent less than $50,000 with the vendor over the past four years). NetApp is attending cloud, developer, and other trade shows it had not been attending in the past to explain how its offerings make the lives of these constituencies better. Additional investments have been made in "hunter" sales resources (that have been prevalent in NetApp's competitors for years) while at the same time expanding account team composition to include resources focused on CX much earlier in the purchase process. According to data shown at the NetApp Analyst Insight conference, these efforts are demonstrably increasing the percentage of quarterly revenue NetApp generates from new customers.

ADVICE FOR THE TECHNOLOGY BUYER

IDC has noted that, on a purely functional basis, there are many enterprise storage vendors that can meet customer requirements for performance, availability, scalability, and manageability. As a result, many enterprise storage vendors are investing in other areas to generate meaningful differentiation that drives business value for customers. These areas include hybrid cloud integration strategies and capabilities, the overall quality of CX vendors deliver, and how they leverage AI/ML to drive value in the areas of performance, availability, capacity utilization, infrastructure efficiency, and cost. Initial purchase prices are important, but total cost of ownership is more important, particularly as equipment depreciation life cycles increase due to newer technologies like scale-out architectures, software-defined infrastructure, and the ability to support nondisruptive technology refresh.

Customers looking to deploy new workloads and/or refresh IT infrastructure as they digitally transform their companies should consider NetApp, particularly if hybrid cloud integration is a key strategic concern. Customers will see a company driving industry leadership in new storage technologies like NVMe, persistent memory and/or storage class memory, and hybrid cloud integration, as well as a company that is proliferating the CX that keeps its core customers committed to NetApp across a much broader set of constituencies. This is clearly no longer the NetApp that you may have known from the past, and the company is very intelligently making strategic investments in those areas of differentiation that are key to digital transformation.

LEARN MORE

Related Research

- *Worldwide All-Flash Array Market Shares, 1H19: Share Percentages Are Evolving But Share Ranking Remains Stable Among Top Vendors* (IDC #US45620819, November 2019)
- *The Evolving Market for Enterprise Storage: Hybrid Cloud, NVMe, and Software Defined Are the Next Wave* (IDC #US45598619, November 2019)

Synopsis

This IDC Perspective analyzes NetApp's transformation in the past 18 months. In the past 12–18 months, the NetApp executive team has driven significant change within the vendor to optimize its offerings and presentation to customers undergoing digital transformation. These changes were very evident at the NetApp Analyst Insight conference held in late October 2019. Many prospective customers that have not dealt with NetApp in the past 12–18 months may not even recognize the vendor, and the vendor's new direction meshes well with both industry trends and evolving enterprise customer needs. This document reviews those changes, offering an introduction to the "new" NetApp for prospective customers.

"Established enterprise storage vendors that want to stay in business as the industry transitions to enable digital transformation need to change their business models as well," said Eric Burgener, research vice president, Infrastructure Systems, Platforms and Technologies at IDC. "NetApp has been very open about discussing its own evolution as an enterprise vendor, and it is clear how it is changing the company and how it deals with customers to drive improvements in the overall customer experience."

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