

REPORT REPRINT

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With HCI, NetApp is aiming to push hyperconverged infrastructure to enterprise scale

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The company's recently unveiled HCI platform leverages SolidFire's all-flash scale-out architecture and performance management capabilities to support enterprise environments. Will it help NetApp make up ground against its fast-growing rivals?

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NetApp has joined the ranks of the major storage vendors taking aim at the hyperconverged infrastructure (HCI) market with the unveiling of its NetApp HCI product. Its Data Fabric has been a key component of its strategy in the past as the company seeks to be the connective tissue for customers' deployments undergoing digital transformation, and now NetApp is aiming to continue its enablement of digital transformation through flexibility and scaling. This is coupled with the growth of its flash array business and accelerating revenue.

THE 451 TAKE

While some may question if NetApp HCI is a hyperconverged infrastructure offering, the more important factor to focus on is if this product will be able to break past the scalability, performance consistency and efficiency issues that early adopters of first-generation HCI platforms have experienced. NetApp HCI's architecture differs from the majority of first-generation offerings in the HCI space in that it has separate storage and compute nodes, which the company believes will provide customers with granular scalability for storage, compute and memory resources.

The offering relies heavily on the storage management and efficiency capabilities of SolidFire, such as its integrated replication, de-duplication, high availability and storage QoS. It also features the ability to safely and efficiently consolidate mixed workloads by dynamically allocating, managing and guaranteeing performance independent of capacity while enforcing minimum, maximum and burst settings on an application or volume level.

CONTEXT

NetApp has shown profit growth over the past year. For Q4 of fiscal 2017, net revenue reached \$1.48bn, a year-over-year growth of about 7%, with full-year net revenue coming in at \$5.52bn. The Q4 all-flash array (AFA) business (including SolidFire products) posted rapid growth of 140%, with a run rate at \$1.7bn.

The vendor has a lot riding on the launch of NetApp HCI, given that it is entering the market late while a handful of its rivals are already inching toward annual run rates approaching \$1bn. Although the HCI sector is still a developing one, NetApp could no longer afford to be on the outside looking in and needed to make its way into the HCI RFPs that have been growing in volume over the past few years in the midrange and enterprise segments.

TECHNOLOGY

The key technology decision that the company had to make before bringing NetApp HCI to market was how to create an HCI offering that could scale beyond siloed environments while providing guaranteed performance and a simplified path to automation. Unlike predecessors that converged storage and application processing into consolidated nodes, NetApp has opted to keep storage nodes separate from compute nodes in its architecture. And this is a key point that critics and rivals will home in on.

NetApp highlights a few reasons why its architecture is better suited for the future than existing HCI rivals. First of all, the separation of storage and compute will allow NetApp HCI's storage nodes to provide consistent performance even if there is a surge of activity from the production VMs running on the systems – which could compromise the amount of memory and CPU available for storage in a key moment. NetApp also suggests that since storage and compute nodes are separate, customers will be able to physically scale up both resources independently.

PRODUCTS

The NetApp HCI appliance comes in the form of a 2U rack unit and building blocks of four nodes. A minimum configuration is a two-chassis deployment with two nodes of compute and four nodes of storage. Configurations fall into the categories of small, medium and large, with cores for VMs ranging from 16-36 and SSDs for storage in groups of six at 480GB each to 1.92Tb. The product makes use of several existing NetApp products, including its ONTAP Select software-defined storage, which can be used to add file services, as well as its SolidFire flash arrays. The appliance allows for independent scaling of compute and storage.

At the company's analyst event in Boulder, demos highlighted NetApp HCI's ease of use and simplified installation – which is aided by bundling 60-day VMware licenses and intelligent network setup tools to reduce the chance of human errors derailing a deployment. The vendor claims that NetApp HCI can be set up in 30 minutes through its intuitive deployment engine, which reduces 400+ inputs to fewer than 30. Like other HCI offerings, NetApp HCI is tightly integrated with VMware's vCenter to simplify management and the company notes that this allows virtualization administrators to use a familiar interface for 95% of operations.

NetApp has not yet revealed key details such as the pricing for its HCI offering. The vendor claims that it will have a significant price advantage over rivals since its storage nodes do not require VMware licenses. Another key area to watch will be the networking options that NetApp will make available for customers. To provide the resiliency and performance consistency that the company cites as key differentiators, it will need to offer networking capabilities that are scalable and automated to react to the changing requirements of workloads and VMs. VMware hypervisors will be supported at launch, and so far NetApp has not stated when it will add support for KVM, Hyper-V or other hypervisors.

COMPETITION

Hyperconverged infrastructure has been a heated area of the infrastructure market. Although it is still relatively small in size, the growth rate has been sizeable. HCI startups have amassed large amounts of VC funding and the incumbent storage players have been systematically rolling out HCI products of their own to keep pace with one another and meet demand. Nutanix, Dell EMC and VMware are the revenue leaders in this sector and will provide some hearty competition for NetApp. Nutanix has been a strong force and in addition to its successful IPO in September 2016, has cultivated relationships with IBM and Lenovo to cater to big data, artificial intelligence and the next generation of datacenters. HPE is also a solid HCI contender, having picked up SimpliVity earlier this year to complement its existing StoreVirtual line.

Other infrastructure players offering HCI products include the likes of Cisco, Cloudistics, Hitachi Data Systems, HyperGrid, Maxta, Pivot3 and Scale Computing. Cisco has shown some uptake in the customer base of its HyperFlex HCI offering after a year of availability. VMware's EVO:RAIL has faded away, but the company still caters to the space via a software-defined HCI approach that makes use of vSphere, vSAN and vCenter, although NetApp HCI is also integrated with vCenter. Cohesity and Rubrik have been gaining traction through their application of HCI to the secondary storage segment. Cohesity landed \$90m in a series C funding round in April and Rubrik raised an additional \$180m in a series D not long after, bringing its valuation to \$1.3bn. Although these vendors focus on the secondary storage market, making them less direct competitors, they are generating momentum that could be channeled into their respective HCI offerings.

SWOT ANALYSIS

STRENGTHS

From an HCI perspective, NetApp has the benefit of being able to capitalize on several existing technologies from its portfolio, such as ONTAP and SolidFire. Due to some key partnerships such as with VMware, it is a formidable force, evidenced by the revenue growth brought on by its AFA business.

WEAKNESSES

The company is a latecomer to the HCI market, with most major rivals having beaten it to the punch. NetApp will have to ensure that it can effectively differentiate from the competition.

OPPORTUNITIES

The addition of NetApp HCI brings the vendor into the server market, and could potentially broaden its appeal to generalists that otherwise would not have been familiar with its storage offerings.

THREATS

Although NetApp has adopted a proactive approach to working with hyperscale cloud players such as Microsoft and AWS, it will have to carefully navigate its customers' transition from on-premises systems to public clouds to ensure that it remains relevant.