Freshly minted and IPO-bound, Nutanix adds all-flash, replication options

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High-flying Nutanix, the hyper-converged specialist that says it's all about enabling Web-scale infrastructure for the enterprise, has revealed the latest addition to its expanding product portfolio: an all-flash system. The new product comes a few weeks after Nutanix closed $140m in series E funding – just nine months after its $100m series D – and highlights the company's belief that the window of opportunity to grow substantially is now open. The company says it's now valued at more than $2bn, compared with $1bn in January. An IPO seems an increasingly likely exit, although acquisition cannot be ruled out in the fast-changing IT infrastructure market.

The 451 Take

CEO Dheeraj Pandey sums up Nutanix's value proposition in one pithy sound bite: enabling 'the revenge of the private cloud.' As more enterprises measure their own relative progress in IT (or lack thereof) to the yardstick of the hyperscale giants – and realize the extent of the gulf – they are increasingly willing to entertain more radical approaches. So far the strategy seems to be working, although Pandey concedes that it's still early. He also notes that it's up to the industry to collectively persuade customers to overcome their own inertia and convince them of the value of such converged approaches. Whether that will happen sufficiently across the board is still a matter of debate, although the recent efforts of VMware in this area – especially with EVO:RAIL – should help by raising awareness. For the time being, Nutanix's progress remains impressive by any measure, and it remains the poster child of the brave new hyper-converged world.

Context

We last covered Nutanix at the start of the year, when it revealed its $101m series D funding round. Since then, things have moved on apace for the five-year-old startup, and the company said in August that it was on a $200m run rate after just 12 quarters of sales, further cementing its belief that it is the fastest growing startup since Sun Microsystems in the mid-1990s. Total funding for the company now stands at $312m. Unusually, the identities of the two lead participants in the latest round were not disclosed, with Nutanix only saying the round was led by two premier Boston-based public market investors with more than three trillion dollars in combined assets under management.

Overall customer count is up – more than 800 in total (compared with 200 in May 2013, when its revenue run rate was about $80m) – and the company says more than 30 customers have now spent over $1m on Nutanix gear; this speaks to Nutanix's belief that it is a valid consideration for mainstream midsized and large enterprise datacenter use, running mission-critical applications. Around 70% of its customers have made a repeat purchase within a year of buying their first systems, and the company says it's selling into a broad range of verticals. A sampling of disclosed customers includes Airbus, Honda, ConocoPhillips, Total SA, Toyota, US Navy and Yahoo Japan. Around one-third of revenue currently comes from outside of North America. Overall headcount is now above 700 worldwide, spanning 35 countries. There are around 80 staff members in the EMEA region. International sales typically comprises 30-40% of the total in any one quarter.

Business model

Nutanix says that VDI still accounts for around 40% of deployments, although this number is declining as a percentage as other use cases are added. Nonetheless, Pandey stresses that VDI is the most mission-critical application that many organizations have, since the loss of desktop access is most disruptive to business operations. The learning experience through implementing this application has helped build the character of Nutanix, Pandey says.

It has also provided the foundation for a 'land and expand' strategy that has seen Nutanix take on additional workloads. After VDI, database is the most common application, although this is focused on Microsoft and other environments rather than Oracle, which continues to be a licensing pain for customers when it comes to virtualization, although Nutanix says there are signs of momentum here. Other common workloads include Web server and middleware platforms, and there's also a 'long tail' of applications such as analytics (especially Splunk) and file workloads. Nutanix says its largest customer started with a test and dev environment on its platform; it then moved over its entire Citrix environment, followed by its SQL Server estate. This organization now spends $15m

with Nutanix.

Nutanix operates a 100% channel mode, with more than 1,000 partners worldwide. The company believes its global OEM agreement with Dell, which will see Dell embed Nutanix software on its own servers, sold as the XC Web-Scale Converged Appliance, will provide a substantial boost to sales globally. It highlights Dell's strength in rack-based servers and 'clarity of focus,' noting that it was sales momentum with Dell that really helped take VMware mainstream a decade ago. However, Nutanix doesn't plan to hold back on its own go-to-market efforts, and is putting in place a lead registration program to minimize any sales conflict with Dell's direct capability. Pandey says the partnership 'needs empathy both ways.' Although Dell will essentially sell the same capability as Nutanix, there will be room for differentiation. Dell might offer different node configurations to Nutanix, while Nutanix's own channel will be selling some new products – such as the recently announced NX-9000 All-Flash appliance – before Dell.

Products

Meanwhile, Nutanix continues to build out its product portfolio and feature set. One notable new addition is the NX-9000 appliance, billed by Nutanix as the industry's first all-flash hyper-converged platform (although at least one other player – Gridstore – has also announced such a capability). The appliance is designed for performance-hungry applications such as OLTP databases to run large working sets entirely in flash. Although it says it developed the system because customers asked for it, it also notes that most customers will continue to buy its appliances configured as a hybrid of both disk and flash. Nutanix is not disclosing specific performance capabilities of the system – it's still working on the data, it tells us – although it believes is will be competitive with dedicated all-flash arrays (AFAs). The benefits of its own approach are support for scale-out, efficiency via its data optimization technologies (including de-duplication and compression), and support for any application and I/O size. Pricing for the NX-Series, which can be configured using 800GB or 1.6TB Intel SSDs, starts at $110,000 per node with a base configuration of 4.8TB of raw capacity (with 6x800GB SSDs), although we note that Nutanix recommends a minimum of three nodes in any one cluster. It's not providing a 'dollars per usable gigabyte' number post-optimization, saying it believes such numbers used by many rivals in the all-flash space are misleading and annoying for customers.

Additionally, Nutanix says that it will release a 'stretch cluster' capability in the next version of its software – Nutanix Operating System (NOS) 4.1 – later in October. This will be Nutanix's first synchronous mirroring capability, and stretches data stores for VM clusters across metro distances to provide zero RPO and 'near-zero' RTO (measured in minutes) without data loss in the event of

site failures. As such, Nutanix believes this will be an important feature as it targets more mission-critical applications that cannot tolerate any downtime. Nutanix says the feature allows datacenters to be up to 400km apart – around five milliseconds of latency. Nutanix also says that the feature is natively integrated into NOS and can be implemented with no hardware changes. Nutanix adds that these features come in addition to existing data protection and HA features, which include unlimited local snapshots (with TimeStream), one-to-many asynchronous replication, DR to remote clusters and backup to public cloud services – initially Amazon Web Services.

Meanwhile, Nutanix has a large pipeline for future enhancements. One key area will be to continue to develop its Prism UI management interface; the company believes that having a central and unified point of infrastructure management will eventually become its strongest differentiator. As part of this, it plans to bring software-defined networking into view, although it will do this with a partner-led approach rather than reinventing the SDN wheel. Additionally, the company is working on further optimization and efficiency features. For example, a forthcoming erasure-encoding capability will provide a more capacity-efficient method of storing data redundantly across multiple nodes; it currently uses RAID-based mirroring for drive protection, which carries at least a 100% overhead.

Competition

After something of a slow start, the hyper-convergence space has burst into life in the last couple of months, and now a variety of players are jostling for attention. While Nutanix remains the poster child for the emerging space, there's no doubt that VMware has garnered a huge amount of attention for its own hyper-converged play, courtesy of VSAN. Nutanix believes the entry of VMware into the arena is hugely important – as well as endorsing the market from both a software viewpoint (with vSAN) and hardware perspective (with the EVO:RAIL partner program), the fact that VMware is unencumbered with having to maintain a legacy storage franchise (EMC's majority ownership aside) means it can evangelize the broader market without having to worry about cannibalization. And while it's true that the first version of vSAN has some limitations, VMware is planning to add more scale, improved snapshot capabilities and support for all-flash configurations in the next spin. It will likely become a more formidable competitor over time; it has already racked up more than 300 VSAN customers after just two quarters of sales. In the meantime, Nutanix claims it's displacing flagship EMC systems in accounts, including VMAX, as well as the VCE-derived Vblocks.

Nutanix believes the recent and pending product and feature additions will continue to put daylight between itself and the competition, and that its scale-out design, data efficiency features, multi-hypervisor support and management interface are all major differentiators. Nonetheless, it

can expect to come into conflict with a growing cadre of players, both large and small. HP seems to be doubling down on hyper-convergence with its StoreVirtual VSA (based on LeftHand technology), although HP has also announced it is joining the EVO:RAIL program, and EMC also has its own play here courtesy of ScaleIO. Meanwhile, partner Dell is hedging its bets; as well as the pending Nutanix-based XC system, it is an EVO:RAIL partner and offers Microsoft-based hyper-converged appliances running on Hyper-V with Storage Spaces.

The startup and specialist space is also getting crowded: SimpliVity probably trails second behind Nutanix in terms of deployments and awareness. Although Nutanix recognizes SimpliVity as a lower-end play, it claims it will struggle to scale into larger enterprise deployments. Other startups include software-only player Maxta, open source specialist NIMBOXX and a couple more players (at least) still in stealth. Meanwhile, erstwhile VDI specialist Atlantis Computing has made a pivot into hyper-convergence with its USX play, while DataCore and StorMagic are also in the mix.

Additionally, the NX9000 pitches Nutanix into the all-flash space, which is also noisy right now due to big money going into the likes of Pure Storage and SolidFire. Nutanix believes flash belongs in the host – where it can deliver lower latencies – and not in an external SAN. Storage-centric rivals scream that the economics of hyper-convergence do not work at a certain scale because compute and storage do not grow at the same rate. Nutanix responds by noting that it continues to add more compute/storage configurations to cater to this, and adds that the overwhelming opex savings of hyper convergence massively outstrip any misaligned resources. The argument will doubtless continue, and it will be left to customers to decide.

SWOT Analysis

Strengths

Nutanix is the darling and poster child of the hyper-converged space. A large amount of funding and a big valuation – not to mention a sizeable customer base and a strategic partnership with Dell – mean it has pretty much delivered on every goal of a startup of this age.

Weaknesses

There are still a couple of feature gaps, such as no support for Xen and a reliance on RAID mirroring for disk protection.

Opportunities

More organizations are assessing whether hyper-converged offerings are a good replacement for legacy approaches that implement storage, servers and networking separately.

Threats

Skeptics of hyper-converged approaches claim the model does not work at scale, and creates additional management silos. Meanwhile, the competitive landscape is getting louder.