



Impact Report

EMC's VCE aims to take hyperconvergence into hyperscale with VxRack

Analyst: [Simon Robinson](#) 7 May, 2015

Barely six months have passed since VCE officially moved into the EMC Federation mothership, but already there has been significant evolution of the converged infrastructure specialist's portfolio. The latest offering – announced at EMC World in Las Vegas, and available in the third quarter – is VxRack, a new hyperconverged offering in a turnkey appliance form factor. It will initially be available in a configuration that bundles EMC's ScaleIO software with ODM hardware and Cisco networking, and is aimed chiefly at emerging scale-out applications. EVO:RACK-based VxRack configurations running VMware's VSAN software instead of ScaleIO will follow.

The 451 Take

The announcement of VxRack is a potentially significant development in the evolution of the fast-growing hyperconvergence market. So far, most hyperconvergence deployments have been in relatively small environments. This is partly due to technical limitations, but mostly due to the opportunity; most hyperconverged players are focused on the low end because this is where there is a big need for simpler infrastructure. Plus, selling hyperconvergence into smaller environments is generally a faster process than selling it into the core datacenter. However, some hyperconvergence players – most notably Nutanix – are aggressively selling their products into core datacenters of large enterprises. In this sense, the availability of VxRack should validate the notion that hyperconvergence is good for large-scale environments, even if they may start small. For VCE and EMC, the message is that the company is not standing still when it comes to promoting next-generation infrastructures. The initial cut of the VxRack may lack some of the bells and whistles of some startups, but we think it will appeal to many prospects that are looking for a more flexible way to deploy converged infrastructure for next-gen applications than was previously available with Vblock.

Context

VCE's portfolio has moved on apace since EMC announced it was [bringing the convergence specialist into the Federation](#) in October 2014, in a move that saw it increase its ownership while Cisco's share shrank to 10%. Since then, the company's portfolio and strategy has moved on considerably. To recap, the main difference is that VCE is no longer bound to the rigid rules that stipulate that all offerings have storage from EMC, compute and networking from Cisco, and virtualization from VMware. Most notably, in March [VCE announced VxBlock](#), a new family of systems that offers NSX network function virtualization from VMware in addition to Cisco's ACI technology. At that time VCE also announced the Vscale scale-out architecture, a spine-and-leaf network backbone based on Cisco Nexus 9000 to connect multiple Vblock and VxBlock systems. It also announced VCE Vision 3.0, offering unified management across multiple Vblock and VxBlock systems.

From a business point of view, EMC says that there are now more than 1,500 VCE customers, running more than 2,000 Vblocks. EMC said in its Q1 earnings call that VCE revenue was up 30% year on year, exceeding its plan. It notes that 50-70% of revenue is currently coming from existing customers.

Strategy

With the new VxRack Systems, VCE now arranges its portfolio in a taxonomy of three different architectures. The first category is 'blocks.' Built on 'best of breed' hardware components with a variety of SAN storage options, these are mostly aimed at traditional transactional applications – Oracle, SAP, SQL, Exchange, etc.

The second category, based on the new systems, is 'racks.' These are more 'software defined' in nature, and are aimed more at next-generation databases (GemFire, NoSQL, etc.) that are generally better suited to scale-out architectures due to their composite/distributed nature, and often high and unpredictable growth rates. These applications – used to support social, mobile and big-data use cases, and often run in multi-tenant environments – often have resiliency built into them or can rely on software infrastructure resiliency, enabling them to run on COTS hardware. Although these are classified as tier two workloads, this really depends on how important that application is to the business; there are many NoSQL-based applications out there that are just as critical as Oracle.

The third leg of the taxonomy stool is 'appliances.' This is where EMC's EVO:RAIL bundle, VSPEX Blue, a hardware appliance built on VMware's VSAN hyperconvergence software, resides. It is targeted more at small-scale environments outside of the core datacenter, such as remote office/branch office and departmental use cases.

Products

So what is the VxRack? It will actually become a family of 'personalities' over time. As well as the initial system, which will be orderable from July and available in Q3, VCE plans to offer VxRacks built on the forthcoming EVO:RACK specification, which is built on VSAN for VMware-centric environments. EMC says it will offer more details on this, plus a preview, at VMworld 2015. It says additional configurations are also planned.

The first offering will be built on EMC's ScaleIO software. This offers scale-out hyperconvergence running on commodity VCE-branded ODM server hardware from undisclosed partners. The system also features Cisco's Nexus top-of-rack switch, and optionally includes the VMware vRealize software for management and orchestration. The key element of VxRack is scale; VCE says deployments can start at just four nodes (that's 16 servers in an 8U, quarter-rack configuration), but can scale linearly to more than a thousand nodes, spanning multiple racks of up to 38PB, in the process delivering more than 240 million IOPS. Each node contains four servers, with up to 24 disks per server, including both flash and HDDs. VCE says it will offer different configurations – around 15 individual SKUs are planned – so that customers can add compute- or storage-intensive nodes based on their requirements.

A key aspect of this initial personality is multi-hypervisor support; there's support for VMware vSphere and KVM at launch, and the system can also run bare-metal applications. VCE is including the Vision management software as an option, and notes that all VxRack systems will be manageable alongside VCE blocks and racks, with Vscale. Importantly, VCE says that the VCE experience of 'complete lifecycle management' – spanning engineering, manufacturing, management and support – comes as standard with VxRack. EMC says pricing for the new VxRack systems has yet to be finalized.

Competition

From a competitive point of view, the hyperconverged market continues to evolve apace. The market can broadly be broken down into three types of players. First, there are the major vendors with homegrown (or acquired) IP in hyperconvergence. This is actually a fairly small group. In addition to EMC with ScaleIO – which EMC will continue to offer as a stand-alone, as well as part of VCE – there's HP with StoreVirtual and VMware with VSAN. HDS recently announced a product in this space – the Hyper-Scale Platform (HSP) – although this is initially aimed at a fairly narrow use case: in-place analytics running on KVM. Additionally, many of the large OEMs have signed up for VMware's EVO:RAIL program, including EMC, NetApp, Dell, HP and HDS. Dell also OEMs Nutanix as the XC Web Scale Appliance.

The next group of players represents the hyperconvergence specialists. This group is led – in terms of customer adoption – by Nutanix, although there's a chasing pack made up of SimpliVity, Pivot3, Scale Computing and Maxta, while multiple additional players are coming to market, including Springpath, StratoScale, NIMBOXX, StorPool and StorMagic. Finally, the third group of players includes those that are pivoting into hyperconvergence as the opportunity grows; players here include Atlantis Computing, Gridstore and DataCore.

From a competitive point of view, we expect VCE will emphasize the scale-out nature of VxRack and multi-hypervisor support as differentiators, as well as the overall VCE experience. There are a couple of aspects that some competitors will likely seize upon – ScaleIO currently lacks data optimization

capabilities, such as de-duplication and compression, as well as enterprise-grade snapshots and replication.

SWOT Analysis

Strengths

VCE has established itself as the leading player in converged infrastructure with its Vblock offerings. It now gets to play in the white-hot hyperconvergence space with a scale story that few others can match.

Opportunities

Hyperconvergence has mostly been a low-end play to date, but organizations deploying new types of applications at scale could also benefit from the simplicity and scale of this model.

Weaknesses

The initial VxRack offerings running ScaleIO will lack some features offered by rivals, including data optimization, snapshots and replication technology.

Threats

The market for hyperconvergence has exploded into life recently, and fast-growing players such as Nutanix say they are already making significant inroads into larger environments. There's no free lunch for EMC here.

This report falls under the following categories. Click on a link below to find similar documents.

Company: [EMC](#) [VCE](#)

Other Companies: [Atlantis Computing](#), [Cisco](#), [DataCore Software](#), [Dell](#), [GemFire](#), [Hitachi Data Systems](#), [HP](#), [Maxta](#), [NetApp](#), [Nexus](#), [NIMBOX](#), [Nutanix](#), [Oracle](#), [Pivot3](#), [SAP](#), [Scale Computing](#), [ScaleIO](#), [SimpliVity](#), [Springpath](#), [StorMagic](#), [StorPool](#), [Stratoscale](#), [VMware](#), [Gridstore](#)

Analyst(s): [Simon Robinson](#)

Sector(s):

[Storage / General](#)

[Systems / General](#)