Hyperconvergence evolution provides a stepping-stone to the software-defined data center

May 2016

TECHNOLOGY BUSINESS RESEARCH, INC.

Introduction

Enterprises around the world continue to grapple with the immense challenges associated with the growing complexity of their IT environments and the exponential growth of data. Heterogeneous IT ecosystems place unnecessary, excessive demands on IT resources and skills, creating gaps that can be difficult to overcome as businesses grow and IT deployments become larger and more complicated to support expanding data center operations. As IT teams scramble to accommodate emerging and immediate workload requirements across business units, IT costs and complexity will continue to spiral out of control without technology that directly addresses simplified operations and data center agility.

Virtualization has typically been the first phase of data center consolidation as it promised to deliver a more cost-effective and less complex alternative to traditional infrastructure technologies. However, as virtualization permeated deeper into IT ecosystems, IT organizations discovered virtualization can result in more complex and costly environments. This growing demand for more virtual machines (VMs) has resulted in difficult-to-manage VM sprawl while the demand for more storage capacity continues to create storage silos that also present management challenges. As a result, IT organizations today face higher hardware and software costs, as well as a strain on IT resources as they struggle to provide adequate support and management for virtualization and storage environments.

The increased traction of technology trends such as big data, analytics, cloud and Internet of Things (IoT) further compounds virtualization and storage hurdles. While these trends grow more critical to IT operations and business units, they add new management challenges and further impact costs, prompting customers to transition to converged, fully virtualized solutions available in the hyperconverged systems market. As a result, small and large organizations are adopting hyperconverged platforms for a wider variety of workloads.

Early adopters of hyperconverged platforms typically targeted the infrastructure for singular, discrete workloads, such as virtual desktop infrastructure. The market followed suit, with solutions that were relatively limited in the number and variety of workloads they could support. However, due to the generally high customer satisfaction of hyperconverged technologies, many customers have expressed continuing interest in deploying hyperconverged for mixed-workload environments, but require quality of service (QoS) and dynamic provisioning capabilities that manage and ensure the performance of all applications on the hyperconverged infrastructure.

For example, Pivot3, which recently acquired NexGen Storage, provides differentiated solutions through its dynamic hyperconverged technology, which includes hyperconvergence, flash storage and a QoS layer that lays the groundwork for the first-generation software-defined data center and provides a path to transition legacy systems to a software-defined infrastructure over time. Customers choose Pivot3 when they face a widespread hardware refresh that would require substantial investment to address their aging platforms, which increasingly pose management problems due to their complexity and tendency to hamper productivity. TBR believes Pivot3's strong performance, improved storage capacity, easy deployment and lower IT costs mesh with the continual challenges faced by IT customers.

All hyperconverged platforms are not created equal

A growing number of IT organizations look to hyperconvergence as a solution for modernizing their IT ecosystems. In TBR's *2H15 Hyperconverged Platforms Customer Research*, 73% of surveyed hyperconverged customers indicated they invested in hyperconverged to improve efficiency of internal processes or improve management of operations. The ability to leverage infrastructure that is fully virtualized across compute, storage and networking appeals to a wide range of IT personnel due to the technology's time, simplicity, scalability, ease of purchase and cost savings.

However, the cost and complexity of current infrastructures persist alongside the demands of running multiple workloads required to support business results. This drives the need for QoS and provisioning capabilities as well as a migration path to the ultimate goal of a software-defined data center, which promises agility, flexibility and cost savings for both IT and the business unit.

To deliver against these new challenges, hyperconverged platforms need to evolve into a more dynamic platform that not only boosts efficiency and decreases costs, but also dynamically scales and supports the specific requirements of demanding, mixed-workload environments.

The new Pivot3 delivers dynamic hyperconvergence and a seamless path to the software-defined data center

Pivot3's acquisition of NexGen Storage brings together two companies focused on technology and innovation. The acquisition will allow Pivot3 to deliver a more robust portfolio that defines and drives new requirements for the software-defined data center. The company's expanded portfolio will deliver comprehensive, end-to-end solutions that combine innovative hyperconverged infrastructure, high-performance storage, QoS management and dynamic provisioning. For customers this adds up to a cost-efficient, simplified solution that is easy to deploy and manage, with predictable performance for mission-critical and noncritical workloads.

Pivot3's patented software improves efficiency and scalability through features such as scalar erasure coding, which delivers up to 94% usable storage capacity and a 40% increase in storage performance as well as ease of deployment and management. For customers that need support for storage IO-intensive workloads, Pivot3's NexGen PCIe flash arrays provide an ideal platform that leverages NexGen QoS management and dynamic provisioning. For customers that need to support capacity-intensive workloads, Pivot3's hybrid arrays also leverage NexGen QoS management and dynamic provisioning.

Pivot3 is the first company to provide an innovative dynamic hyperconvergence platform, combining critical capabilities in the Pivot3 portfolio with NexGen high-performance technologies. The integration of Pivot3's scalar erasure coding with NexGen QoS management and dynamic provisioning delivers a dynamic hyperconverged platform that fully supports mixed-workload environments. By combining these functionalities, Pivot3 is redefining expectations for hyperconvergence as well as expectations from storage solutions. TBR believes this innovative approach will provide customers an easier, more cost-effective path to the software-defined data center.

Conclusion

TBR believes the combined technologies of Pivot3 and NexGen Storage create a robust portfolio of solutions that help customers choose the right infrastructure and priority for each of their workloads, applications and services, particularly as they relate to business value. Pivot3's dynamic hyperconvergence delivers a flexible, agile and dynamic infrastructure that uniquely processes business-critical and noncritical applications to improve business results. Pivot3's simplified data management and scalar erasure coding provide the seamless scalability and virtualized storage capabilities associated with traditional, complex and costly storage solutions.

About the New Pivot3

Pivot3 and NexGen are innovative-minded companies that share a rich history and reputation in the hyperconvergence and storage markets. Both companies have been offering software-based technologies on commodity hardware platforms that align directly to market demands for lower-cost, less-complex alternatives to traditional storage architectures. The combined entity is helping redefine the hyperconvergence market through a strategy of delivering dynamic hyperconvergence as a steppingstone to software-defined data centers.

Pivot3 was founded in 2002 and is headquartered in Austin, Texas.

About TBR

Technology Business Research, Inc. is a leading independent technology market research and consulting firm specializing in the business and financial analyses of hardware, software, professional services, telecom and enterprise network vendors, and operators.

Serving a global clientele, TBR provides timely and actionable market research and business intelligence in formats that are tailored to clients' needs. Our analysts are available to further address client-specific issues or information needs on an inquiry or proprietary consulting basis.

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