IDC Innovators

IDC Innovators: Containerized Application Storage Platforms, 2020

Lucas Mearian

THIS IDC INNOVATORS EXCERPT FEATURES: DIAMANTI

IN THIS EXCERPT

The content for this excerpt was taken directly from IDC Innovators: Containerized Application Storage Platforms, 2020 (Doc # US46800920).

Why Diamanti Was Chosen as an IDC Innovator

Diamanti combines a hyperconverged infrastructure (HCI), bare-metal plug-and-play appliance with a Kubernetes platform that includes integrated storage management. The solution addresses persistent storage needs of multicluster, management across on-premises, off-premises, and multicloud environments. Diamanti sells its D20 HCI appliances for enterprise deployments of Kubernetes clusters.

Company Name			
Founded 2014	**Number of Employees** 130	**Headquarters** San Jose, Calif.	**Number of Customers** Dozens
Product Name Spektra 3.0	**Founders** Gopal Sharma, Amitava Guha, Jeff Chou		**Typical Deal Size** $232,000
Profiled Product/ Service Container data storage services for enterprises	**Funding** ClearSky, CRV, Engineering Capital, Goldman Sachs, GSR Ventures, Northgate Capital, Threshold Ventures (formerly DFJ Venture), Translink Capital		**Geographic Mix** (% of Revenue by Major Region) North America: 70%, EMEA: 20%, APJ: 10%

IDC Innovator Assessment

- Diamanti offers appliance-based, high-performance persistent storage for containerized environments through the use of HCI hardware with I/O acceleration cards and NVMe drives and a multicluster, multicloud management software control plane. Insight into storage traffic gives it the ability to build in multiple layers of availability, including integrated volume snapshots, backup and restore, synchronous mirroring (for stretched clusters), and asynchronous replication for offsite disaster recovery.

- Users can provision and administer Kubernetes clusters hosted in the datacenter, at the edge, or in the cloud and manage them from that single control plane aimed at both enterprises and managed service providers. Diamanti's appliance-based container storage solution combines a software management tool with an integrated networking product, high-performance HCI hardware with I/O acceleration cards, and NVMe drives. The multicluster, multicloud management control plane adds to this by being a plug-and-play offering that can manage Kubernetes clusters, applications, and data, regardless of where the clusters reside.
- The company's Spektra management software currently supports Microsoft Azure as a source of persistent storage for containerized apps, with future support planned for AWS and GCP later this year.

Key Differentiator

The full-stack, appliance-based approach should offer better performance, visibility and data management through PCIe-based I/O offload cards for both networking and storage traffic.

Challenges

Diamanti does not currently offer DR capabilities between on premises and cloud. Diamanti faces competition from not only other start-ups but also established vendors currently developing their own solutions.

IDC INNOVATORS IN CONTAINERIZED APPLICATION STORAGE PLATFORMS

Container deployments are forecast to grow at high rates over the next several years, particularly among large enterprises. For Kubernetes and other container orchestration platforms to function in stateful environments, persistent storage is needed. While Kubernetes supports the construct of persistent storage through PersistentVolume (PV), it does not support storing the state of a production application natively. This is where third-party solutions are needed – not only to manage application data storage but also to migrate that data across distributed nodes, enabling mobility, security, and backup, and disaster recovery capabilities. This is an emerging market segment, and at this point, there are a limited number of companies offering solutions. IDC Innovators are emerging vendors that have demonstrated either a groundbreaking business model or an innovative technology – or both.

TECHNOLOGY DEFINITION

Containers are a lighter-weight, more portable alternative to virtual machines (VMs) for helping developers build, test, and deploy applications. A combination of primary and secondary storage is needed to enable the business requirements of those applications. Using traditional storage technologies built and optimized for VMs will likely be problematic for containerized environments that are more dense, dynamic, and require higher scalability.

Container-native and orchestration-aware software engines aggregate underlying storage and expose storage as software-defined devices. This allows IT administrators to take any cloud or on-premises storage and turn it into a single, shared clusterwide storage pool. These solutions create hyperconverged infrastructure (HCI)-like systems. They can also sit atop of traditional HCI solutions such as VMware vSAN to provide container-level granularity and cross-platform availability. Enterprise applications benefit from high availability in case of server failure and can easily fail over in seconds, even across availability zones in a public cloud.

Storage vendors can now provide enterprise-grade storage services such as snapshots, clones, and replication for containers. DevOps now enjoys container-native solutions for classic storage operations such as volume management (mounting, formatting, expanding, restoring, etc.), data migration, security, and QoS policies for volumes.

IDC INNOVATORS INCLUSION CRITERIA

An "IDC Innovators" document recognizes emerging vendors chosen by an IDC analyst because they offer an innovative new technology or a groundbreaking business model, or both, and were approved by the IDC Innovators Review Panel. It is not an exhaustive evaluation of all companies in a segment or a comparative ranking of the companies.

An IDC Innovators document highlights vendors that meet the following criteria:

- In IDC's opinion, the company exhibits innovative technology or a new business model.
- The company has annual revenue under $100 million at the time of selection.
- Customers are currently using the company's products and services (i.e., the products and services are not conceptual or in the process of being released).
- The product, service, or business model must solve or help to alleviate an IT buyer challenge.

In addition, vendors in the process of being acquired by a larger company may be included provided the acquisition is not finalized at the time of publication of the document. Vendors funded by venture capital firms may also be included even if the venture capital firm has a financial stake in the vendor's company.

Related Research

- *Portworx: Kubernetes Enterprise Storage Vendor Profile* (IDC #US46537520, June 2020)
- *Why Persistent Storage Matters for Your Containerized Applications* (IDC #US45521719, September 2019)
- *IDC Market Glance: Container Infrastructure Software, 1Q19* (IDC #US44146619, February 2019)

Synopsis

IDC Innovators are emerging vendors with revenue <$100 million that have demonstrated either a groundbreaking business model or an innovative new technology – or both. This IDC Innovators study identifies four companies with persistent storage solutions for containerized applications in the enterprise: Diamanti, Portworx, Robin.io, and StorageOS. The common thread running through these vendors is that they all provide a scalable platform that connects container applications to the underlying storage infrastructure as well as provides data protection and replication services.

"In putting this IDC Innovators study together, we looked closely at those companies that offer complete solutions," said Lucas Mearian, research manager, Storage and Computing Infrastructure Software Platforms Group at IDC. "Each supplier specializes in providing a varying level of services and visibility into and storage manageability with regard to existing enterprise infrastructure. It is therefore important for potential buyers to take time to investigate each solution and determine which is most closely aligned with their containerization initiatives, use of on-premises or cloud services, and enterprise IT requirements."

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Global Headquarters

5 Speen Street
Framingham, MA 01701
USA
508.872.8200
Twitter: @IDC
idc-community.com
www.idc.com