Portworx brings Kubernetes backup and recovery to the masses with stand-alone service

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The Kubernetes storage specialist continues to enhance its platform with data management capabilities. It recently made generally available a stand-alone version of its backup software to bring application-consistent recovery to a wider market outside of its existing enterprise storage customers.

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Introduction

Portworx has made a name for itself as a provider of persistent storage for containerized apps leveraging Kubernetes. Not settling just for storage, the vendor's platform continues to evolve and it has expanded its features with more data protection, management and migration capabilities in the forms of products PX-DR, PX-Backup and PX-Migrate. Portworx recently made generally available its PX-Backup service and is now offering those capabilities as a stand-alone product to meet the cloud-native data-protection needs of a wider user base outside of its existing enterprise storage customers.

451 TAKE

With the increasing adoption of containers for stateful and business-critical applications such as databases, there will be a growing need to provide the same levels of availability, protection and security required for applications running on traditional infrastructure. A key selling point for Portworx has been its ability to offer a holistic platform for Kubernetes storage and data management, when other vendors in this space tend to prioritize one over the other. The robustness of the company's Kubernetes-native storage ecosystem has landed it some sizeable enterprise customers and helped it foster partnerships with a growing number of public cloud and container orchestration providers.

There are several storage options available for organizations with productionized and stateful containerized apps, but relatively few backup products catering specifically to the Kubernetes space, where data protection and management present a new and different set of challenges. PX-Backup looks to mitigate that complexity for existing Portworx enterprise storage customers, but as a stand-alone offering, it also provides its cloud-native technologies to the broader Kubernetes market, and could serve as a gateway to the Portworx storage platform as a whole as customers seek to address business continuity (BC), disaster recovery (DR), data protection, security and other Kubernetes-focused storage functionality.

Context

Cloud-native storage vendor Portworx was founded in 2014 and is currently headquartered in Los Altos, California. The company has taken in $55.5m in funding – its most recent round was in March 2019 and was valued at $27m. Portworx has over 145 customers and features logos from sizeable organizations such as Kroger, Comcast and T-Mobile. The vendor claims to have closed 13 deals with a value over the $100,000 mark in Q1 2020. Although its PX-Backup product launched recently, Portworx's DR platform has been on the market longer and has resulted in a 15% attach rate for the DR add-on among its enterprise storage customers.

According to 451 Research's Voice of the Enterprise: Storage, Data Management & Disaster Recovery survey of IT infrastructure decision-makers, 43% of organizations that have containers in use rely on legacy or existing data-protection tools as their primary data-protection strategy for container apps and data volumes. While demand may be tempered a bit based on maturity of an organization's container strategy, the need for new approaches to BC/DR that are better suited to containerized, stateful applications is evident.

Strategy

Portworx maintains several partnerships. Most recent among them is its partnership with Google as a qualified vendor in the hyperscaler's Anthos Ready Storage initiative. This initiative features firms that can offer what Google deems optimal for running Anthos on-premises. Portworx also partners with multiple other vendors, including Red Hat, where it provides a storage option for its Openshift Container Platform. These partnerships represent Portworx's desire to remain agnostic in the Kubernetes space and leverage every viable Kubernetes platform as a pathway to market.

In terms of data protection, Portworx recognizes the difference between disaster recovery and backup, although it can offer customers both as needed. DR is a more of a formula than a single element, making the protection of stateful workloads the more difficult challenge, so Portworx released its DR capabilities first, ensuring that customers could maintain application availability and data protection with extremely low RTO/RPOs. While backup is a component of a DR strategy, the longer-term data retention it provides is also important to an organization for regulatory compliance and other data governance concerns.

Between PX-DR and PX-Backup, the company offers a Kubernetes-focused, application-centric approach to backup and restore, high availability, DR and workload migration. And by providing these capabilities as easy-to-access and -automate services, it mitigates complexity for next-generation developers that may be less familiar with data-protection considerations such as establishing common data-protection policies or maintaining and testing a backup plan. This represents a common, educational challenge that vendors such as Portworx will encounter as data management becomes an increasingly important consideration for organizations maintaining data-rich stateful apps built on containers.

Products

Portworx offers two flavors of its platform, Essentials and Enterprise. Essentials is a free version of the platform with a cap of five nodes and 5TB of storage per cluster, and a more limited feature set. Portworx Enterprise raises the ceiling to more than 1,000 nodes and unlimited storage per cluster. Portworx Enterprise is comprised of six key components that cover storage, migration, backup, DR, security and automated capacity management.

As of April, PX-Backup has entered GA and can be bought without a customer having to first purchase Portworx Enterprise. PX-Backup enables users to perform application-consistent backup, recovery and migration of Kubernetes apps running on-premises or in a cloud. Its UI provides a simple dashboard for setting backup schedules and managing backup policies granular to pods, applications and namespaces. PX-Backup is dynamic in that new rules do not always need to be made to protect an application as a rule specifying a namespace that will automatically back up (during the next scheduled backup event) new applications or pods added to that namespace since the creation of the initial rule.

The pricing for Portworx Enterprise is based on nodes starting at $0.55 per node hour per server for VMs and $1.65 per node hour for bare metal (with the caveat of a minimum of 1,000 node hours per month). In addition to this pay-as-you-go model with no annual commitment, Portworx also offers an annual license agreement with pricing based on the number of nodes in a cluster. PX-Backup is priced on a per cluster basis.

Competition

There are a variety of old and new vendors targeting storage for containers and Kubernetes, but those addressing the data-protection and management needs of Kubernetes-based apps are less numerous. Kasten was an early entrant into this space and the startup specializes in cloud-native data management that includes application-centric backup, DR and mobility. NetApp recently announced Project Astra, a Kubernetes distribution-agnostic platform for application data lifecycle management that is currently in alpha. MayaData provides a feature called Data Migration as a Service, which leverages the open source tool Velero. Velero, a project supported by VMware, also represents a form of competition in this space. Cohesity, which has made a name for itself with its hyperconverged data management platform, offers backup and recovery capabilities for the Kubernetes namespace. Datrium, perhaps best known for its DVX disaggregated hyperconverged infrastructure platform, has expanded into disaster recovery-as-a-service (DRaaS) and offers DRaaS capabilities for Kubernetes-based apps on VMware Cloud for AWS.

Earlier this year, longtime data-protection provider Catalogic released KubeDR, an open source tool for the protection of etcd, an important data repository used in Kubernetes. Other container storage firms, including Diamanti and StorageOS, offer data-protection capabilities such as replication as part of their platforms, although this necessitates the deployment of these platforms for primary storage purposes. The competitive landscape in this sector continues to grow, but as mentioned, many end users are relying on legacy data-protection tools that are not tailored to containerized applications so the traction of legacy products will present a challenge for vendors in this space.

SWOT Analysis

STRENGTHS
Portworx provides a storage ecosystem that spans primary and secondary storage needs as well as BC/DR and application migration for the Kubernetes platform. It has already established a strong customer base with large organizations that were early adopters of Kubernetes.

WEAKNESSES
Many of the company's enhanced capabilities are only available to customers who adopt the entire Enterprise Storage platform, with the exception of the new PX-Backup offering.

OPPORTUNITIES
There is increasing adoption of container technology for hosting stateful, business-critical workloads. This will increase the need for BC/DR and data-protection capabilities, and the potential for a substantially growing market.

THREATS
More vendors are gravitating toward the opportunities of container data management and protection, and many legacy data-protection firms will likely pivot their offerings to address this new market.