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DELL EMC XTREMIO X2:
CSI PLUGIN FOR PERSISTENT STORAGE CONTAINERIZED APPLICATIONS

Realizing New Levels of Efficiency, Performance, and TCO for Containers

ESSENTIALS

Performance and Efficiency

- ✓ Predictable and consistent high performance with low sub millisecond latency
- ✓ 4 to 20 times data reduction using inline deduplication, compression, XtremIO Virtual Copies, and thin provisioning
- ✓ Ease of use; nothing to configure or tune

Applications

- ✓ Exceed the toughest SLAs for virtualized workloads
- ✓ Enable near real-time copies of production datasets
- ✓ Provide self-service operations for infrastructure and application teams

BUSINESS BENEFITS

- ✓ Utilize unique copy data management capabilities to unlock business agility through improved workflows
- ✓ Reduce costs by one third and provides smaller, incremental scaling options
- ✓ Achieves two times longer storage product lifecycles than traditional arrays
- ✓ Experience/Receive investment protection via Dell EMC's FutureProof Loyalty Program

As enterprises produce more and more data, many are turning to data storage containers like Docker, Kubernetes, and Mesosphere. Containers present significant benefits for supporting cloud-native apps and the transformation to micro-services as they continue to grow in popularity and adoption. Several important challenges associated with managing containers have been addressed by popular orchestration solutions such as Kubernetes. However, deploying production-ready Kubernetes clusters faces additional issues. The most noteworthy challenge, is determining the right persistent storage solution for containers.

Kubernetes is the de-facto standard for container orchestration for microservices and applications. However, when it comes to the complexity of persistent storage enterprise, the adoption of big data and databases using containers and Kubernetes is hindered by multiple challenges.

In order to effectively address the challenges of persistent storage, Dell EMC XtremIO provide its unique CSI Plugin, allowing our customers to deliver persistent storage for container-based applications on-premises for both development and production scale. With Dell EMC XtremIO X2's unmatched levels of performance, availability and TCO, organizations can now achieve the same levels of business agility offered by the public cloud, with the benefits of running them on premise.

KEY FEATURES

Multi-Dimensional Scale

- ✓ Scale-up and out using Online Cluster Expansion
- ✓ Consistent, predictable sub-millisecond latency as you scale
- ✓ Non-disruptive, granular scaling

In-Memory, All-the-Time Data Services

- ✓ Automatic thin provisioning
- ✓ Global in-line deduplication and compression
- ✓ Flash-optimized XtremIO data protection
- ✓ Data-at-rest encryption
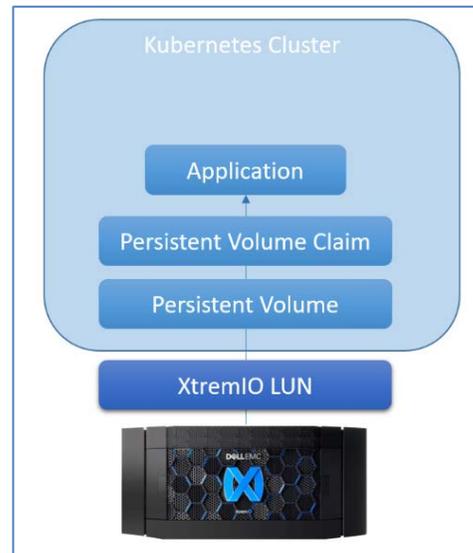- ✓ Agile, space-efficient data copies via XVC

Integrated Copy Data Management

- ✓ Leverages XVC which get the same performance and data services as source volumes
- ✓ Creates operational efficiency and agility for Dev/Test, analytics, and data protection workloads by allowing immediate, memory and space efficient, high performance copies that can be refreshed/restores in any direction
- ✓ Integrates with business applications to create automated storage management workflows
- ✓ Enables self-service models for DBAs and application owners

Metadata-aware Replication

- ✓ Metadata-aware: Never replicates data blocks that already exist at the target site.
- ✓ 30 second RPOs
- ✓ Requires up to 38% less storage
- ✓ Reduce WAN bandwidth by 75% or greater

Dell EMC XtremIO X2: Differentiated Architecture

Dell EMC XtremIO is a purpose-built all-flash array that provides consistent high performance with low latency; unmatched storage efficiency with inline, all-the-time data services; rich application integrated copy services and unprecedented management simplicity.

The next-generation platform, XtremIO X2, builds upon unique features of XtremIO, to provide even more agility and simplicity for your data center and business. Dell EMC XtremIO X2 provides the robust capabilities and built-in high availability and scalability that brings simplicity to the cloud native applications world, and creates a turnkey solution for data-heavy workloads. XtremIO CSI Plugin provides Kubernetes technology with built-in enterprise-grade container storage and uncompromising performance that extends Kubernetes' multi-cloud portability to the private cloud.

- ✓ Instantly provision hundreds of stateful applications with persistent volumes simultaneously with Dell EMC XtremIO X2's unmatched levels of performance, availability and TCO.
- ✓ Accelerate release times with orchestration and automated test/dev processes with the consistent, predictable sub-millisecond latency at any scale.
- ✓ Automate load balancing between multiple XtremIO storage systems.
- ✓ Set container-aware storage class policies using XtremIO QoS allowing policy-based maximum bandwidth limitations to be configured.
- ✓ Reduce costs for test and development environments using XtremIO XVC space-efficient data copies.
- ✓ Improve time to market for developers by enabling self-service storage consumption models for persistent application.
- ✓ Works with any distribution of Kubernetes that uses Kubernetes 1.13 or later as a base.
- ✓ Runs in a container by default and therefore runs on any Linux worker.

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