Leading Software Provider Drives Cloud Native Transformation with Virtuozzo Storage

Summary

A common challenge enterprises face when modernizing applications is finding a storage solution that is able to support both existing apps and new, cloud native apps and microservices. While the transformation to microservices may take years, there are solutions available today that can provide persistent storage for containerized applications, while maintaining support for applications that still require traditional storage. These solutions are helping put companies on the path to next generation apps and microservices. Learn how a leading enterprise software provider has successfully begun its transformation to microservices supported by Virtuozzo Storage.

Virtuozzo Storage made it possible for the software company to embark on its cloud native journey by integrating traditional virtualization workloads and new microservices-based applications run by Kubernetes clusters without the need to upgrade hardware or alter its software stack.

Challenge

A global enterprise software provider that develops software as a service (SaaS) applications needed to modernize running its applications to support future growth. The company's enterprise apps are designed to enable the assessment of IT service costs and communicate those costs to business leaders for planning, budgeting, and forecasting purposes. Growth is driven by a broad contribution across five product lines, including cost transparency and IT planning.

In order to support its growth and remain competitive in the future, the company is moving from a classic three-tier architecture supported by deployment in Linux containers and virtual machines (VMs) to a new, cloud native application paradigm in which applications are sets of microservices deployed using Docker containers and a Kubernetes container orchestration platform.

In order to support the transformation, the company required a way to preserve the main functionality that runs on top of traditional virtualization and, at the same time, provide infrastructure for cloud native apps backed by a reliable, production-ready software-defined storage solution – without having to deploy multiple siloed storage solutions.

The company required a storage solution that:

- Supports storage for VMs, Linux containers and Kubernetes in a single solution.

- Allows it to deploy storage using generic hardware side-by-side with compute.

- Combines "all flash" hot storage and archiving cold storage in a single platform.
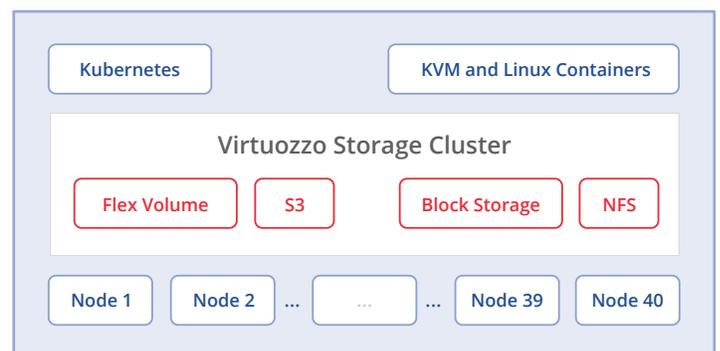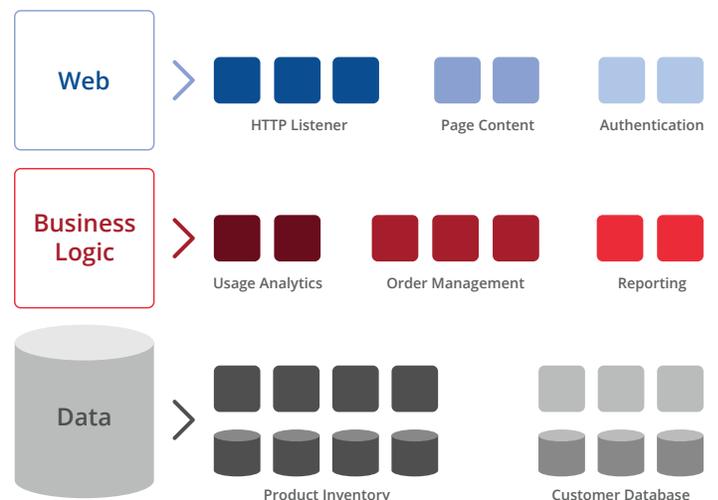
Solution

The company implemented Virtuozzo's solution to eliminate its traditional fragmented storage architecture. Virtuozzo provides a software-defined storage solution that is flexible, scalable, and enables storage and compute resources to be integrated into a single scaling unit. The solution provides a highly available, distributed system with built-in software redundancy. Storage runs on top of commodity hardware, using locally attached hard drives and creates storage pools available to all servers.

The company utilizes Virtuozzo Storage for Block, NFS storage to support classic apps and persistent volumes, and S3 storage for cloud native apps. By deploying Virtuozzo's Storage solution, the company is able to use the same hardware compute nodes with no extra hardware costs. The company now runs more than 20 hyperconverged clusters with several petabytes of primary storage capacity.

Results

Virtuozzo has enabled the company to consolidate resources and avoid fragmentation by using a single storage platform that can support apps now and in the future. In addition, shared and fault tolerant storage enables high availability for classic and cloud native apps. Further, it has enabled the company to switch its IT Ops from reactive maintenance mode to planned maintenance. With true linear scale out performance they are able to scale clusters on-demand without any delays.

Virtuozzo Storage made it possible for the company to enable its cloud native transformation by integrating traditional virtualization workloads and new microservices-based applications that run inside Kubernetes clusters without the need to upgrade hardware or alter their software stack.

Virtuozzo Benefits

NATIVE STORAGE INTEGRATION

Provides native integration with Kubernetes and transparent kubectl integration to help manage persistent data in container-based environments.

FAULT-TOLERANT BY DESIGN

Provides flexible redundancy schemas and a highly available control panel for both cluster management and Kubernetes volume management. Ensures solution is easy to maintain and requires low OPEX.

BUILT-IN SNAPSHOT MANAGEMENT

Protects data at the block storage level with snapshot scheduling and policy management, providing simplified operations and preserving a high level of reliability.

EASY TO SCALE

Deployment scales up to hundreds of nodes with petabytes of capacity via high performance software-defined storage.

MULTI-FUNCTIONAL STORAGE

Includes iSCSI, NFS, disaster recovery and object storage with geo-replication.

HIGH PERFORMANCE

Local flash allows fast, unfettered application access to storage.

FOR MORE INFORMATION

Visit Virtuozzo:
www.virtuozzo.com

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