Tintri Operating System

Simplify, Accelerate, and Protect Your Data Center Workloads

Tintri VMstore is purpose-built to deliver what traditional storage platforms can't, true Workload-Aware Data Management. VMstore puts your applications and workloads at the center of your infrastructure. The application-centric approach to infrastructure delivers AI-driven software technology as self-service capabilities when and where you need them for automation, orchestration, observability, and scaling. With VMstore, you experience a simplified administrative workflow increasing operational efficiencies by up to 95%, liberating teams to focus on strategic projects.

The Tintri Operating System (TxOS) and the VMstore storage architecture it supports, powers every Tintri VMstore system. Tintri OS enables a dynamic, flexible architecture, featuring workload services that are easy to assemble, integrate, tear down, and reconfigure. Teams can take action at the VM, container persistent volume, and database level, including setting replication policies, crunching analytics, and defining Quality-of-Service (QoS). Tintri OS greatly simplifies the interaction between the application infrastructure, the workloads running on top of it, and the underlying VMstore system(s) that serve that infrastructure. TxOS also incorporates several data protection and high availability features into the VMstore systems including: protection against double-drive failures, failed drive rebuild even under data read-error scenarios, and real-time error correction.

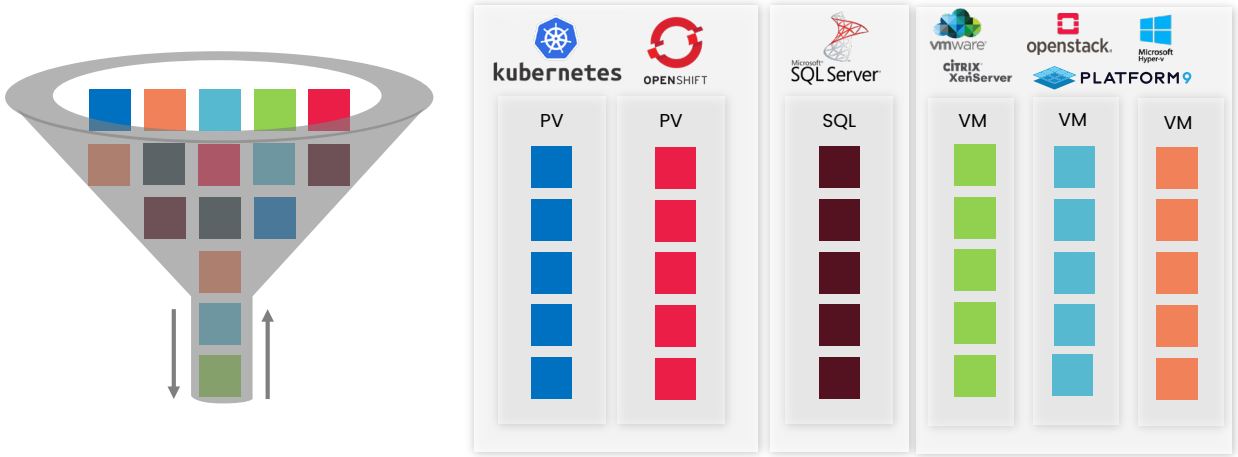

Figure 1 – FIFO "I/O blender" vs. Tintri VM "lanes"

Guaranteed Application Performance

With Tintri OS, application performance becomes predictable, and over-provisioning becomes unnecessary, even with mixed workloads. Unlike traditional storage systems that don't differentiate among workloads and simply funnel them all through the FIFO "I/O blender," each distinct workload, persistent volume, VM or database on VMstore gets a dedicated resource "lane" (see Figure 1). Automatic workload balancing eliminates noisy neighbor problem that plague other storage platforms.

Automated Quality-of-Service (QoS)

Traditional storage requires users to user intervention to manage performance levels. Tintri OS leverages proprietary AI features to power automated QoS to ensure that every application performs as required. Simply set minimum and maximum performance thresholds for individual VMs, container persistent volumes, databases, or applications to further optimize QoS. VMstore fundamentally understands each I/O request and allocates resources automatically. VMstore is purpose-built with imbedded AI at the foundation not an afterthought. In turn, you can leverage those capabilities to build and charge for various QoS tiers in a multi-tenant environment.

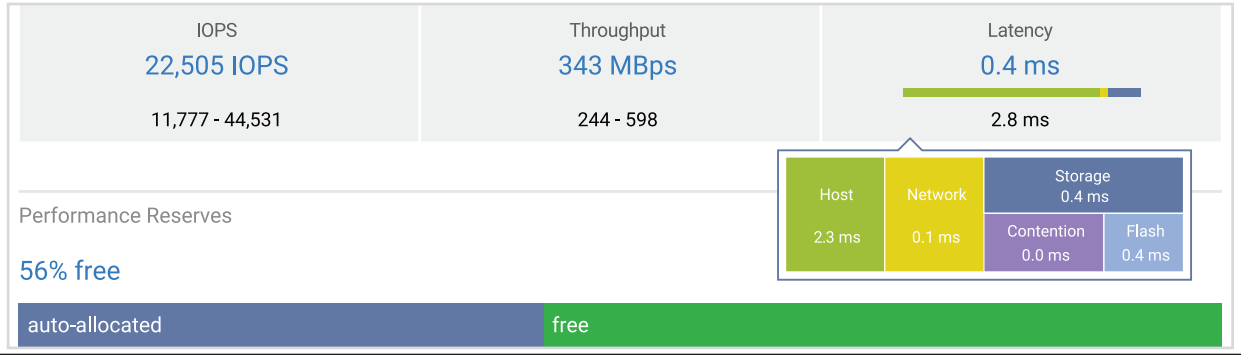

Figure 2 – End to end real-time analytics

Real-Time Analytics

Unlike standard infrastructure that aggregates and averages metrics over hundreds of managed workloads, Tintri OS enables deeper visibility into each and every application. With the VMstore, you gain visibility across compute, network, and storage resources. Identify underperforming applications and address the root cause of latency in a couple of clicks. Pinpoint latency down to network, host or storage with individual VM, container and database visualization. Real-time and historical data provides immediate, actionable troubleshooting, and insightful trend analytics.

Multi-Hypervisor Support

Run multiple hypervisors and container orchestration – including those from VMware, Kubernetes, Hyper-V, Platform 9, Citrix Hypervisor, OpenShift and OpenStack – as well as SQL Server databases, all concurrently on a VMstore system without partitioning their respective storage resources. The list of support integration points is ever growing, Tintri offers the freedom of choice where to run your workloads.

Built-In Data Protection and Recovery

Safeguard your data automatically through flexible, policy-based data protection, featuring locking, immutable snapshots, from the workload level up to your entire virtual or physical environment. Fully integrated backup and DR solutions based on primary and/or secondary data management without sacrifice.

Tintri VMstore Software Suite

VMstore offers a wide range of value-added features and integrations so you can realize the full potential of your virtualized environment:

ReplicateVM
High-performance asynchronous replication for data protection and disaster recovery. Workload-level customizable policies for failover, migration, and testing capabilities. Recovery point objectives (RPO) of as little as one minute. Multi-site DR can be supported with great flexibility: one-to-one, many-to-one and one-to-many replication configurations on a per-workload basis.

Synchronous Replication
Recover mission-critical virtual and cloud applications with zero RPO disaster recovery and single-click failover.

SyncVM
Advanced snapshot management for copy data management. This includes flexible point in-time recovery for applications, file level restores from snapshots and child application updates from a master application snapshot.

SecureVM
Built-in encryption for data-at-rest and supports manual key rotation and integration with external enterprise key management systems to cryptographically secure an entire lost or stolen VMstore system.

Cloud Connector
Enables local snapshots to be stored in the public cloud for data protection, eliminating the need for tapes or dedicated secondary sites.

Tintri Global Center (TGC) Advanced

Scale-out
Create a single federated resource pool of up to 64 VMstore systems, leveraging AI to optimize placement of every application across the entire pool globally.

SQL-Integrated Storage
View, manage, and protect individual SQL Server databases with the same ease and efficiency that apply to your virtual applications. Automated QoS and the ability to recover databases in seconds with zero-impact snapshots.

Experience carefree workload management. Experience Tintri. To learn more about how Tintri OS and VMstore can turbocharge your business success through a simplified, intelligent infrastructure, visit tintri.com/vmstore. Or better yet, contact your Tintri representative or infrastructure partner and request a demo of VMstore, powered by Tintri OS.

Tintri

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