Tintri Operating System

Raising the IQ of Your On-Premises Data Center

Experience Different! If you want to experience a superior level of agility and simplicity in your data center, standard infrastructure won't do. You need intelligent infrastructure that can deliver advanced software technology as self-service capabilities when and where you need them for automation, orchestration, extensibility, and scale. With intelligent infrastructure you'll enjoy a streamlined administrative experience where your operations are dramatically simplified so you can focus on your business.

The Tintri Operating System (OS) and the VMstore storage architecture it supports, powers every Tintri VMstore system. Tintri OS enables a dynamic, flexible architecture, using storage services that are easy to assemble, integrate, tear down, and reconfigure. Organizations can take action at the VM, database, and application level, including setting replication policies, crunching analytics, and defining quality of service. Tintri OS greatly simplifies the interaction between the virtualized infrastructure, the VM(s) running on top of it, and the underlying VMstore system(s) that serve that infrastructure. The OS also incorporates a number of 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.
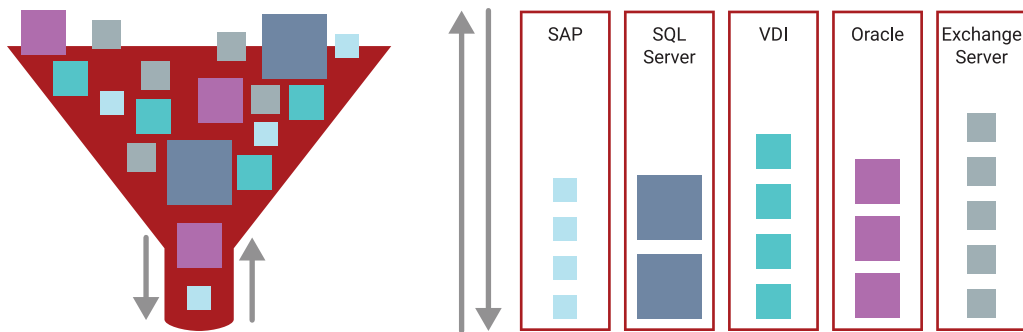

Figure 1 – FIFO "I/O blender" vs. Tintri VM "lanes"

Application Performance Certainty

With Tintri OS, application performance becomes more predictable, and over-provisioning becomes unnecessary, even with mixed workloads. Unlike traditional storage systems, which do not differentiate among VMs and simply funnel them all through the FIFO "I/O blender," each VM and database or application on VMstore has its own "lane" (see Figure 1). This addresses the noisy neighbor problem, while ensuring balanced performance among VMs and applications.

Automated Quality of Service

Traditional storage requires users to manually intervene to manage performance levels. Tintri OS provides automated quality of service to ensure that every application performs as desired. You can set minimum and maximum performance thresholds for individual VMs, databases, or applications to optimize QoS. In turn, you can use those capabilities to build and charge for various QoS tiers in a multi-tenant environment.
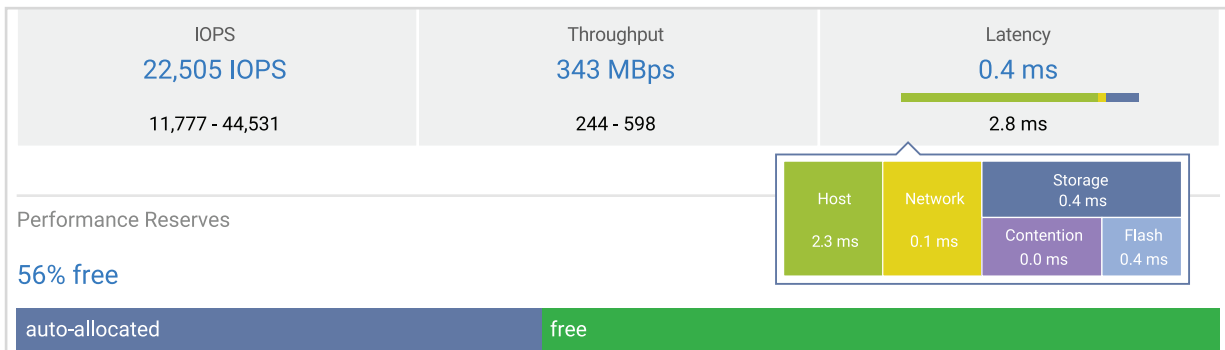

Figure 2 – End to end real-time analytics

Real-Time Analytics

Unlike standard infrastructure that aggregates and averages metrics over hundreds of virtualized workloads, Tintri OS enables deeper visibility into every application. With VMstore intelligent infrastructure, you'll have visibility across compute, network, and storage resources. You can identify underperforming applications, and address the root cause of latency in less time, with less effort. You can pinpoint latency from network, host or storage with individual VM-, container- and disk-level visualization. Real-time and historical data provides immediate, actionable troubleshooting, and insightful trend analytics.

Multi-Hypervisor Support

You can run multiple hypervisors – including those from VMware, Microsoft, Citrix, Red Hat, and OpenStack – as well as SQL Server databases, all concurrently on a VMstore system without partitioning their respective storage resources.

VMstore Software Suite

The capabilities of Tintri OS can be extended with the VMstore Software Suite, which is sold separately, to bring the following benefits to VMstore customers:

Scale - VM Scale-out can create a single federated resource pool comprising many VMstore systems, then intelligently optimize the placement of every application across the entire pool.

Replication - ReplicateVM offers VM-level asynchronous replication and synchronous replication for fast, flexible disaster recovery. Asynchronous replication provides a recovery point objective (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-VM basis. For highly mission-critical applications, synchronous replication offers a data loss / zero RPO alternative.

Copy Data Management - SyncVM provides 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.

Data-At-Rest Encryption - SecureVM provides 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.

Public Cloud Integration - VMstore Cloud Connector enables local snapshots to be stored in the public cloud for data protection, eliminating the need for tapes or dedicated secondary sites.

Experience Different! 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.