TECH BRIEF

Tintri VMstore™
ReplicateVM™

VMstore

VMstore ReplicateVM delivers high performance replication for data protection and disaster recovery. Manage your storage at the VM level to overcome the complexity and inefficiency posed by traditional replication technology. VMstore intelligent infrastructure provides VM-aware storage that simplifies enterprise data protection and disaster recovery (DR) in virtualized environments. VMstore ReplicateVM provides high-performance replication with VM-level customizable policies for easy-to-use failover, migration, and testing capabilities.

Simplified Data Protection with Efficient Per-VM Asynchronous Replication

Per-VM replication is a simple yet powerful concept. Instead of replicating the entire LUN, which normally contains tens to hundreds of VMs, you only need to replicate the particular VM(s) of interest. The efficiency improvements are substantial, including:

- WAN bandwidth reduction of up to 95 percent via integrated deduplication and compression.
- Recovery point objectives (RPO) of 1 minute, 15 minutes, or other desired levels that can be set on a per-VM basis.

"I've never seen per-VM replication functionality on any other storage I have used," said Ross Alaspa, application server architect for AMD. "Per-VM replication allows us to recover specific VM instances, so we can recover the environment more efficiently. Given the testing we have done so far; I expect it to help us reduce the time spent on the disaster recovery process by a factor of 10."

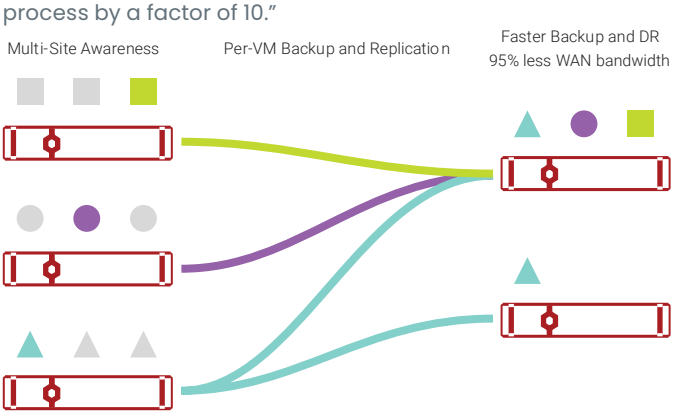

Figure 1 – Bandwidth-efficient per-VM replication

In addition to one-to-one replication, you can replicate individual VMs from multiple sites to a single remote DR location (many-to-one) or vice versa, or from a single source to up to four DR locations (one-to-many). This flexibility enables you to create multiple redundant copies for disaster recovery and data protection. In addition, replication activities can be easily configured, monitored and managed from Tintri Global Center (TGC).

ReplicateVM asynchronous replication integrates with VMware Site Recovery Manager (SRM). This brings the simplicity and efficiency of per-VM replication to SRM, enabling administrators to:

- Set up and execute recovery plans in minutes
- Automate workflows such as site failover, planned migrations, and failback
- Perform DR testing in an isolated infrastructure without disrupting the production environment

DR for Mission Critical Applications Enabled by Synchronous Replication

ReplicateVM also supports synchronous replication, with zero-minute RPO (Zero RPO) and single-click failover. It can be set up in minutes by an IT generalist. Other features and capabilities include:

- Zero data loss for inter-data center network distances of up to 100km
- Recovery time objectives (RTO) of 30 seconds or less for planned and manual failovers
- Bi-directional synchronous replication, where primary VMs and replica (secondary) VMs can be distributed on the same system, enabling flexible failover of individual applications without requiring failover of the entire system
- Real-time analytics for synchronous replication at the VMstore system and VM levels, with end-to-end visualization of VM latency including the replication component
- Eliminates the need to purchase and configure additional hardware such as FCIP converters, SAS switches, or specialized arrays

Tintri

Tintri Technology Makes the Impossible Possible

The following advanced capabilities are supported with ReplicateVM and other complementary Tintri technologies for VMstore.

- Mix asynchronous and synchronous replication policies on a single VMstore system to meet the needs of individual VMs or applications
- Protect your replicated data at rest transparently with optional SecureVM software.
- Develop advanced enterprise recovery workflows such as non-disruptive data center maintenance and data center migration with PowerShell or REST APIs and the VMstore Automation Toolkit.

ReplicateVM also provides a simpler and more flexible process for cloning VMs. As soon as a snapshot of the VM is created at the source, a clone VM can be instantaneously created at the source OR at the destination. No LUN replication or carving is required and no data is transferred between source and destination sites.

“I did an entire DC migration using ReplicateVM,” said Keith Pratola, Senior Cloud Architect for Atlantic Metro Communications. “It is by far the fastest replication I have seen when compared to other storage vendors or products. Best part, absolutely no