Buyer Case Study

Large geo-imaging firm leverages Tintri for consolidating dev/test environments

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IDC OPINION

Virtualized workloads now occupy dominate shared storage environments in enterprise data centers. Storage systems have undergone a major transformation to support server virtualization. However, in spite of this transformation, at the very core, storage platforms still work with older constructs like logical units, volumes and raid groups. Even today the bulk of storage platforms still treat the hypervisor as a generic server with a set of applications running on them. The unit workload in a virtualized environment i.e. a virtual machine does not have any relevance inside the storage system. In other words, most traditionally designed storage systems lack the capability to handle virtualized workloads in an intelligent fashion. This mismatch means that in spite of the convergence of management interfaces, storage systems remain one of the most complex components of any virtualized environment – making the overall environment more expensive to implement and manage. The approach taken by Tintri in designing their VMstore storage solution from the ground up for modern (virtualized) data center paradigms offers several advantages over traditional storage platforms:

- **Simplified management:** Dramatic reduction in setup times by eliminating complex storage configuration or tuning. Storage constructs are automatically aligned to virtual machines and virtual disks, and not LUNs and volumes. This also helps businesses benefit from a hybrid storage approach - the performance of flash/SSD with the economics of high capacity HDD. Built-in quality of service (QoS) ensures that the system can scale to handle a large complex mixed and multi-workload virtualized environment.

- **Reduced costs and resource burden:** Since the storage system understands VM-level constructs, VM administrators can get a global view of all VMs stored and identify performance and capacity trends without having to deal with underlying storage. At the same time, they can instantly identify performance hot spots at the hypervisor, network and storage level - and proactively address situations before they become issues. This translates to reduced resource burden and ongoing costs.

- **Reduced risk and granular risk mitigation:** Unlike traditional storage systems, administrators can protect individual VMs with customizable policies. They can leverage VM-level instant snapshots and clones taking up no additional space and WAN-efficient replication requiring only a fraction of the bandwidth.

IN THIS BUYER CASE STUDY

This IDC Buyer Case Study examines a large geo imaging company's consolidation of their dev/test environment on the Tintri storage platform. IDC recently spoke with the Sr. Manager IT Architecture and Implementation at the Company about his experience in consolidating their dev/test infrastructure, the reasons for selecting Tintri as the storage provider and his experience thus far.

SITUATION OVERVIEW

Organization Overview

The geo imaging company is a leading global provider of commercial high-resolution earth imagery products and services. Sourced from their own advanced satellite constellation, their imagery solutions support a wide variety of uses within defense and intelligence, civil agencies, mapping and analysis, environmental monitoring, oil and gas exploration, infrastructure management, Internet portals and navigation technology. The Company's collection sources and comprehensive image library (containing over 4 billion square kilometers of earth imagery and imagery products) allows them to offer a range of on- and offline products and services designed to enable customers to easily access and integrate their imagery into their business operations and applications.

Challenges and Solution

As a multi-vendor shop consisting of storage solutions from Hitachi Data Systems, Isilon and NetApp, The Company's IT department was not new to the inadvertent sprawl caused by multiple technologies and vendor solutions. However as a means to streamlining the infrastructure of their delivery platform, the IT department at The Company was asked to evaluate next generation storage solutions specifically with the following goals in mind:

- Infrastructure consolidation: Limit sprawl by consolidating storage infrastructure for VMware-based server and desktop virtualization infrastructure.

- Self-service infrastructure (Ease of use): Allow VMware administrators to provision storage for VMs directly from the vCenter portal. Focus on a simple and easy to use solution that could intelligently manage VM-level constructs.

- Reduction in OpEx and CapEx costs: Starting with the dev/test environments, The Company wanted to cut down on infrastructure costs – by doing more with less.

- Reduction in management/maintenance overhead: A more streamlined approach that would cut down on resource overhead and set the Company on a path of DIY infrastructure.

The Company's IT teams were generally happy with their existing infrastructure so they took their time in evaluating and testing different solutions. They tested most solutions for their endurance in handling image storage – which is generally large block sequential reads and writes. They also put the storage systems through the paces for Linux and Windows virtual machines and examined the ability for the platform to provide end-to-end visibility that was comparable with the "high-end" storage arrays installed in their infrastructure.

Results

Having tested the Tintri solutions for over nine months, the Company settled on the Tintri Storage platform for their engineering dev/test and dev/ops infrastructure: Since the Tintri platform is optimized for virtual infrastructure, it was no surprise that it performed extremely well as the storage for virtual

machines – but its performance for other workloads such as a repository for images was not particularly noteworthy. Yet, the IT team was so impressed by the performance of Tintri solution that they recommended its deployment as the storage solution for their dev/ops infrastructure. The Company initially procured a couple of T540s for testing but quickly expanded their footprint to include their VDI environment as well. Today the Tintri footprint at the Company stands at eight T540 for dev/test and four T540 for VDI. Each T540 provides13TB of usable capacity – which is stretched further by the use of storage efficiency techniques like compression and deduplication.

The biggest beneficiaries of the Tintri deployments have been the Linux and Windows systems teams. With self-service storage provisioning at their fingertips, they have been able to slash deployment times – something that their business teams appreciate. The Company's storage teams firmly believe that Tintri – and solutions like it will set The company on a path of self-service infrastructure. They have been able to adopt a level of self-service in their data center when it comes to service of field-serviceable failed components like hard drives. By offloading some of the "run-and-maintain" tasks they have been able to focus on longer term initiatives. At the same time, the end-to-end visibility ensures that they can get full usage data in the same manner as their high-end arrays. The success of deploying Tintri storage in the dev/test infrastructure is encouraging the Company to take the next step of deploying the same solution for production environments.

ESSENTIAL GUIDANCE

IT departments often work on a shoestring budget. They are always looking to doing more with less and cutting down on extraneous expenditure in the environment. One of the biggest sources of expenses is engineering dev/test environments – a necessity in most environments and a silent money sink. Dev/test environments however play a crucial role – they can serve as important test beds for introducing new infrastructure solutions. Successful introductions in dev/test environments often set the tone for their follow on deployment into other workloads.

Suppliers like Tintri should continue to leverage successes at the Company to expand their footprint into more verticals and use case. They should also expand their support for other virtualization environments and gain a stronger foothold in production mission critical environments. While VMware dominates the market today, hypervisors from Microsoft, Red Hat and Oracle offer compelling alternatives. As the market diversifies, it will be important for suppliers like Tintri to be able to address the full virtualization market, especially as customers begin adopting multiple hypervisors over coming quarters and look for solutions that can work across heterogeneous environments.

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