



Advanced Applications Germany Delivers Hosted SAP Cloud Service Using Tintri VM-Aware Storage Systems

ADVANCED APPLICATIONS

Tintri Global Center Simplifies Management and Speeds Troubleshooting Across Multiple VMstore Systems

www.a2pp.com

Industry

- Hosted IT service provider

Geography

- Rottweil, Germany

Virtualization environment

- VMware vSphere
- Cisco UCS servers
- Previous storage: NetApp and HP 3Par systems

VM profile

- SAP hosted service with >500 VMs (MaxDB, SQL Server, and Oracle databases)
- MS Exchange Server

Key challenges

- Insufficient visibility across multiple systems hindered management and troubleshooting
- High latency of legacy storage systems negatively affected end-user experience
- The need to meet performance requirements led to overprovisioning, increasing data center footprint and operational expenses
- VM provisioning was resource-intensive, reducing IT productivity

Tintri solution

- Five Tintri VMstore hybrid and all-flash systems and Tintri Global Center

Primary use case

- Hosted SAP services for over 50 clients

Business benefits

- Gained VM-level visibility across all systems, reducing management time by 2x
- Accelerated troubleshooting by 4x
- Improved operational efficiency by boosting database performance
- Increased system responsiveness with a 70% drop in latency
- Obtained the ability to meet SLAs using Tintri QoS
- Reduced storage footprint by 80%

IT Challenges

Advanced Applications Germany is an SAP Gold partner specializing in process analysis and design, implementation, and customization. Bülent Cira is the IT Infrastructure Team Leader at Advanced Applications. He and his team of seven IT admins are responsible for managing all the infrastructure for the company's SAP and ERP cloud services.

Advanced Applications provides its hosted services from two data centers in Germany: one for active production data, the other is a standby facility. Prior to moving to Tintri, the IT environment consisted of a mix of NetApp and HP 3PAR storage systems, Cisco UCS blades, and Cisco Nexus switches. "We guarantee 99.9% uptime for our clients' database applications," noted Cira. "Unfortunately, high latency on the existing NetApp and HP storage systems was negatively impacting the end user experience. We needed a solution that could provide higher performance and a consistently lower latency in order to meet our SLAs."

Advanced Applications' IT team was also having difficulty with system management and capacity planning. "With limited visibility into our mixed storage environment, we ended up over-provisioning storage just to stay ahead of our IOPS requirements and end-user demand. But this led to increased capital and operational costs and poor storage resource utilization for our organization."

VM provisioning was also a challenge in the previous environment. "Our LUN and volume-based storage systems made administering the virtual environment very complex," noted Cira. "Tasks such as provisioning, cloning, backing up, and restoring at the VM-level required elaborate orchestration between multiple management applications. We needed to find a storage system that natively understood VMs."

“Tintri’s VM-aware storage and flash-based performance is enabling us to meet the performance demands of our customers’ mission-critical SAP database applications.”

Bülent Cira, IT Infrastructure Team Leader, Advanced Applications Germany

Solution

Advanced Applications purchased its first Tintri system in 2015. They now have five Tintri systems deployed across two geographically isolated datacenters.

Results

Lower Latency and Higher Performance

Before moving to Tintri, Advanced Applications’ existing storage systems were causing high and inconsistent latency for the hosted services. By moving from NetApp to Tintri, application latency has been reduced by 70 percent. “We can now provide a consistently good experience to all of our end users because of Tintri’s high performance, flash-first architecture,” noted Cira.

Reducing Footprint from 16U to 3U

“Tintri enabled us to consolidate our storage, further increasing operational efficiency. It used to take 16 rack units to accommodate our storage needs, and the Tintri systems only fill 3U, considerably reducing power and cooling needs at all of our datacenters,” said Cira.

Simpler Management

Native integration between Tintri and VMware, fast and easy VM provisioning, per-VM snapshots and per-VM clones all reduce administrative overhead in Advanced Applications’ fully virtualized SAP environment. “Operations such as server provisioning, backing up, and restoring data are very simple, thanks to Tintri’s VM-aware architecture,” said Cira. “Creating application-consistent snapshots to backup individual VMs is simple, as Tintri is natively integrated with vCenter. We can customize policies on a per-VM basis directly on the storage system. It only takes seconds to create a VM, which significantly improves administrative productivity. As a result of moving to Tintri, we’ve been able to cut the time spent managing our NetApp and HP systems in half.”

Better Visibility Using Tintri Global Center

Before using Tintri Global Center, Advanced Applications’ IT team had to rely on multiple management tools to gain visibility into the infrastructure, and then pull all of the data together. “We had to look at the graphs in the Tintri user interface, as well as all of the graphs in the VMware user interface, and then try to pull all of the data together,” explained Cira.

Advanced Applications is now using Tintri Global Center to manage all of five VMstore systems. “Tintri Global Center enables us to see information from all of our systems in one place,” Cira said. “We constantly use the performance metrics in Tintri Global Center, especially in regard to I/O and latency. As a result, troubleshooting issues is now four times faster.”

Ensuring QoS

Tintri technology provides the ability to set different quality of service (QoS) and data protection policies on each service group (or groups of VMs). “When our developers started their batch jobs on one storage system, other systems would exhibit I/O problems. We solved that problem using Tintri’s QoS feature and Tintri Global Center.”

Advanced Applications created three different service groups, one for development, one for test, and one for production systems, and set different I/O limits on the virtual machines within each group. “The process of carving out LUNs and customizing them based on different SLA agreements is not easy to manage with traditional storage systems, because QoS is at the LUN level and not at the VM level,” explained Cira. “Tintri ensures QoS at the virtual disk level. With Tintri Global Center, we can dynamically manage all of our virtual machines and service groups using without any user interaction.”

Easier Backup and Faster Restores

The move to Tintri also helped Advanced Applications improve disaster recovery. “We are doing scripted backups with Tintri, where we take snapshots of all of our databases on an hourly basis. This was not possible on our previous storage platform, since it was so difficult to manage. Restoring from the Tintri snapshots is also very easy. It takes just a few clicks, and we’re back in business in less than an hour,” noted Cira.

Summary

“Tintri’s VM-aware storage and cost-effective flash-based performance is enabling us to easily meet customer SLAs and the performance demands of their mission-critical SAP database applications. Our Tintri systems are working beautifully, and management is a breeze with Tintri Global Center,” concluded Cira.

