



# Maastricht University Switches to Tintri for Better VDI Performance



## VM-Aware Systems Speed Virtual Desktops and Simplify Storage Management

[www.maastrichtuniversity.nl](http://www.maastrichtuniversity.nl)

### Industry

- Higher Education

### Geography

- Maastricht, Netherlands

### Virtualization environment

- VMware Horizon (>1,400 desktops)
- Traditional storage: Direct attached storage (DAS) systems

### VM profile

- Over 200 applications for students and employees, including VMware App Volumes for VDI apps, MS Office Suite, and AutoCad systems

### Key challenges

- Local storage was providing inadequate performance for virtual desktop environment

### Tintri solution

- One Tintri VMstore™ T540 system for testing and two Tintri T850 systems for production

### Primary use case

- The two Tintri T850 systems are being used for the university's new VMware VDI environment

### Business benefits

- Improved VDI performance
- Simplified storage management
- Obtained much higher IOPS storage at a lower cost than DAS

## Maastricht University

Maastricht University (UM), the most international university in the Netherlands, stands out for its innovative approach to learning and international outlook. With almost 16,000 students and 4,000 staff, UM offers a wide choice of academic programmes, all of which are designed to bring out the best in its students.

## IT Challenges

Maastricht University had originally deployed its Citrix XenApp environment using direct attached storage (DAS) systems. Since the environment was reaching end-of-life, the university's IT team decided to look for more innovative storage and software options to improve performance of the campus-wide virtual desktop deployment. "We looked at what was needed to pursue a fully functional VDI environment," noted Lucien Haak, Maastricht University's IT manager. "It was not just the storage that needed a refresh, the entire virtual environment had to be changed. The objective was also to allow our students more freedom in what they run within their virtual desktops."

The university's IT team started by creating a test environment to compare the performance of the Citrix and VMware virtualization solutions. They also compared VMware's App Volumes with Unidesk's desktop and application management platform. After reviewing the test results, Maastricht University made the decision to migrate from its existing Citrix environment to VMware Horizon View and VMware App Volumes for the added functionality and improved performance. Once they identified the best virtualization and management solutions, they started looking for a more economical and faster storage platform for the infrastructure refresh.

Haak became very interested in the Tintri systems after watching a webinar describing how Unidesk was using Tintri storage. "That's how we first connected with Tintri," he noted. "We knew that DAS was far too slow for the virtual environment. According to everything we saw and heard, the Tintri solution would be able to provide much higher IOPS at a significantly lower price, so we made the decision to replace our DAS storage with Tintri in 2013."

“Our main goal for the upgrade was to obtain higher IOPS for less money and easier management. We achieved both objectives by moving to Tintri.”

**Lucien Haak**, IT Team Manager, Maastricht University

## Faster Deployment

Maastricht University purchased a Tintri T540 for its testing and development environment, and two Tintri T850 systems for production. The two T850s are located in separate data centers for business continuity purposes. “The Tintri deployment went very quickly,” Haak reported. “We enlisted the help of the Tintri Professional Services organization, and the entire process took less than two hours.”

## Higher Performance for VDI

Maastricht University’s virtual desktop environment is running much faster on the VMware and Tintri platform. The IT team has now scaled the deployment to provide 1,100 concurrent VDI sessions for students. A second phase of VDI deployment is planned for the near-term, where they will provide approximately 400 additional virtual desktops for the university’s employees.

“It is hard to quantify exactly how much faster our VDI environment is due to Tintri, since we also switched the software and several other components of the virtual environment at the same time,” Haak admitted. “But we conservatively estimate that 80% of the performance improvements in our VDI deployment can be attributed to the faster Tintri systems. Our Tintri systems are currently dedicated to the VDI solution, but we are getting ready to create a new environment for our servers. The performance improvements have been so great for our virtual desktops, that we are looking at using Tintri for the new server environment as well.”

## Simpler Management

Storage management is also much simpler with Tintri, Haak reported. “The Tintri environment is significantly easier to maintain because we don't have to create LUNS and manage the SAN anymore. We recently performed an upgrade to the Tintri OS and it worked like a charm. It finished in just an hour and we didn't have to take our systems off line. With Tintri, we don't have to spend a lot of time managing our storage environment anymore.”

## Recommending Tintri to Other Universities

“Our main goal for the infrastructure upgrade was to obtain higher IOPS for our VDI environment for less money and easier management,” concluded Haak. “We achieved both of our objectives by moving to Tintri. We are now recommending the VM-aware systems to other universities in the Netherlands. A few of their IT teams have already visited our datacenter as a reference, and several of them are now making plans to migrate their storage systems to Tintri as well.”

## About Tintri

Tintri builds smart storage that sees, learns, and adapts, enabling IT organizations to focus on virtualized applications and business services instead of managing storage infrastructure. Tintri VM-aware storage eliminates planning and complex troubleshooting by providing VM-level visibility, control, insight and agility. Tintri powers hundreds of thousands of virtual machines running business critical databases, enterprise apps, desktops and mobile apps, and private cloud deployments. Tintri helps global enterprises such as AMD, F5 Networks, GE, NEC, NTT, MillerCoors and Time Warner maximize their virtualization and cloud investments. For more information, visit [www.tintri.com](http://www.tintri.com) and follow us on Twitter: [@Tintri](https://twitter.com/Tintri).



### Global HQ

303 Ravendale Dr.  
Mountain View, CA 94043  
United States  
+1 650-810-8200  
[info@tintri.com](mailto:info@tintri.com)

### EMEA HQ

Fountain House 10th Fl  
130 Fenchurch Street  
London EC3M 5DJ  
+44 (0) 203 053 0853  
[emea@tintri.com](mailto:emea@tintri.com)

### APAC HQ

9 Temasek Boulevard  
Suntec Tower 2, #09-01  
Singapore 038989  
+65 6407 1359  
[apac@tintri.com](mailto:apac@tintri.com)

### Japan HQ

Level 6, Kishimoto Building  
2-2-1 Marunouchi, Chiyoda-ku,  
Tokyo 100-0005 Japan  
+81 (3) 6213-5400  
[info.japan@tintri.com](mailto:info.japan@tintri.com)