

UKW achieves 7x faster backup performance with Veeam



Organization

[University Hospital of Würzburg](#) (UKW) is a maximum care hospital located in Germany. Comprised of 24 clinics and research institutions, UKW has 7,900 employees and 1,452 beds. It treats around 350,000 patients annually.

Solution

[Veeam Data Platform](#)

[Advanced Edition](#)

[Veeam Backup for Microsoft 365](#)

Industry

Healthcare

Region

Europe

“ Harnessing the capabilities of Veeam has provided substantial performance improvements. We can now back up our network file shares around seven-times faster — eliminating the risk of backup jobs interfering with clinical systems. ”

Andreas Störlein

System Administrator, University Hospital of Würzburg

Challenge

University Hospital of Würzburg relies on digital systems to support everything from patient admissions to surgical procedures. Faster backup and recovery processes, stronger defenses against cyberthreats, and seamless data portability that enable more cost-efficient virtualization platforms were key to future-proof their operations.

Results

- Enables seamless and reliable transition from VMware to Proxmox virtualization platforms
- Enables rapid, fine grain recovery for 1,340 servers and 1.3 PB of data
- Shrinks backup windows for 300 TB of important hospital data by up to 7x

Business Challenges

At the University Hospital of Würzburg (UKW), every minute counts. As a maximum care hospital, UKW offers a broad range of medical treatments, and takes on some of the most complex cases in its service area. The hospital's world-class research and training facilities never stand still, and it's ranked among the top 15 German hospitals.

UKW's top-quality treatment and research is underpinned by a complex network of IT systems that must be available 24/7 to empower clinicians to respond efficiently to any situation. Classified as an operator of critical infrastructure (KRITIS) by the German government, UKW must meet strict security requirements, such as being able to prove that it is adequately protected from cyberattacks.

For many years, UKW has relied on Veeam Data Platform to protect some of its most important workloads, including its ERP applications and electronic health record systems. But as the years went by, the hospital's backup and recovery architecture struggled to keep up with growing volumes of medical imaging data and a rising number of mission-critical applications. At the same time, with the rise of ransomware attacks across the healthcare sector, UKW sought to introduce immutable backups to its data protection strategy.

Furthermore, UKW had made a strategic decision to move some of its virtual workloads from VMware vSphere to Proxmox Virtual Environment (PVE) to achieve greater cost-efficiency.

“As our data volumes increased, the backup windows for some of our systems were getting longer and longer. To ensure smooth operations in the long term, we aimed to optimize our backup architecture, accelerate our data protection processes, and strengthen our defenses against cyberthreats such as ransomware.”

Andreas Störlein

System Administrator, University Hospital of Würzburg





The Veeam Solution

Building on its strong relationship with Veeam, the organization decided to modernize and optimize its backup and recovery environment.

“Veeam always keeps up with the latest developments and trends in data resilience, which means they continue to be the perfect choice for UKW,” said Störlein.

Following Veeam best practices, the hospital deployed the latest Veeam features and capabilities on high-performance servers and storage infrastructures. Today, UKW protects approximately 1.3PB of data across 1,200 virtual servers, 140 physical servers, and around 50 mission-critical physical desktops. Protected systems include databases, specialized hospital software, and their central network attached storage (NAS) solution.

“Harnessing the latest capabilities of Veeam has brought about substantial performance

improvements,” Störlein said. “In particular, we can now back up our network file shares around seven-times faster, eliminating the risk of backup jobs interfering with clinical systems. Plus, with the broad choice of optimized Veeam integrations, we can protect any workload easily and effectively.”

Using hardened repositories in Veeam, the hospital creates immutable backups to mitigate the risk of ransomware and other cyberattacks. By following expert recommendations by Veeam specialists, UKW stores a copy of its backups in a highly efficient object storage solution with S3 API support.

UKW’s healthcare data integration platform provides data to a wide range of critical systems, including medical devices that require around-the-clock availability. By adopting continuous data protection technology from Veeam, the organization can ensure high availability without needing complex and expensive clustering solutions.

The hospital also benefits from Veeam’s granular and instant recovery capabilities.

“Veeam allows us to pull out individual emails or files and restart our virtual machines (VMs) extremely fast,” said Störlein. “Clinical staff across departments rely on IT systems to support their work with patients. With rapid recovery from Veeam, we can help minimize the risk of delays to patient care.”

To help it meet stringent regulatory requirements around data protection, UKW uses Veeam SureBackup to automatically verify the integrity of its backups. And with Veeam ONE, the organization can monitor the performance of its virtual environment and backup jobs intelligently with automated anomaly detection, without adding manual work for its lean IT team.

“Veeam ONE helps us make sure that our systems and backups are running smoothly,” said Störlein. “It also enables us to quickly identify bottlenecks and other technical issues, proactively reducing the risk of slow-downs and downtime for our mission-critical applications.”

To improve operational cost-efficiency, UKW is now moving some of its virtual workloads from VMware vSphere to Proxmox Virtual Environment (PVE). Because Veeam offers complete data portability across both hypervisors, the hospital will use Veeam to facilitate the migration while ensuring that sensitive patient data is secure throughout.

Looking to the future, the hospital plans to embrace containerization with Kubernetes. By standardizing its approach to deploying and managing applications, the aim is to free up time to develop innovative digital solutions to support doctors and researchers with saving lives.

“Having just one backup tool with Veeam for both virtualization environments is very useful as it will help us migrate faster and streamline operations.”

Andreas Störlein
System Administrator, University Hospital of Würzburg



The Results

Enables seamless and reliable transition from VMware to Proxmox virtualization platforms

Supporting UKW's larger strategic IT goals, Veeam ensures data portability across hypervisors and enables the hospital to migrate from VMware to Proxmox easily, using just a single backup solution for both environments.

Enables rapid, fine grain recovery for 1,340 servers and 1.3 PB of data

With Veeam, UKW can recover anything from individual files to entire VMs in minutes from a single point of control, while also protecting all data against cyberthreats with immutable data backups.

Shrinks backup windows for 300 TB of important hospital data by up to 7x

Using storage snapshots, UKW reduces the risk of large backup jobs that overrun regular maintenance windows, helping to ensure reliable service for staff and patients

About Veeam Software

Veeam, the #1 global market leader in data resilience, believes every business should control all their data whenever and wherever they need it. We're obsessed with creating innovative ways to help our customers achieve data resilience. We do that by offering purpose-built solutions that provide data backup, data recovery, data portability, data security, and data intelligence. Headquartered in Seattle, with offices in more than 30 countries, Veeam protects over 550,000 customers worldwide, who trust Veeam to keep their businesses running. Learn more at www.veeam.com or follow Veeam on LinkedIn [@veeam-software](https://www.linkedin.com/company/veeam) and X [@veeam](https://twitter.com/veeam).

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