



# HEIDELBERG simplifies backups and restores flexibility

## Printing press manufacturer converts to HPE Data Protector Software and HPE StoreOnce

### Objective

Quicker, error-free backups and fast data restores for end-users

### Approach

Company quickly decided in favour of HPE Data Protector Software, then compared a number of different hardware solutions

### IT Matters

- Shorter backup cycles and easier administration of the entire backup environment
- Combination of HPE StoreOnce deduplication technology and LTO6 tapes has led to a 90 per cent reduction in the number of tapes required
- High degree of flexibility as the HPE StoreOnce allows data to be stored on a NAS, StoreOnce Catalyst or a virtual tape library
- Option for IT administrators to restore data remotely at the weekend or overnight in the event of an emergency (as they no longer have to access the tape library)

### Business Matters

- Faster restoration of unintentionally deleted data for end-users, sometimes within just a few minutes
- Higher data availability, partially due to hourly backups via HPE StoreOnce and HPE Data Protector Software



HEIDELBERG previously backed up its business-critical data to a tape library, but this has now been replaced by a combined hardware and software solution formed entirely of HPE products: an HPE StoreEver MSL 6480 Tape Library with LTO6 tapes, HPE Data Protector Software 9.0 and the HPE StoreOnce 4900 with deduplication technology. This all HPE solution has enabled the company to create backups and restores more flexibly than ever before.

### Challenge

#### Reliable backups, fast restores

Generations of printing companies all over the world have built successful businesses on the back of HEIDELBERG machinery. Heidelberg Druckmaschinen AG (HEIDELBERG) offers a wide range of products for every stage of the printing industry's process and value creation chain and digital workflows, from offset and digital printing solutions to pre-press and post-press products and consumables. In addition to this core business, the company also offers a comprehensive suite of software components which bring together all of the processes printing companies carry out on a day-to-day basis and provides individual consulting services, covering topics as varied as methods to increase productivity in print shops, environmentally friendly printing and tailored financing solutions for investment projects.

“We no longer have to worry about getting backups completed within certain time frames. The HPE StoreOnce deduplication feature has removed the restrictions on our processes and enables us to carry out backups and restores simultaneously. So we can backup data from programmes such as Microsoft® SharePoint much more frequently and incrementally throughout the day. This has made us much more flexible.”

— Peter Brecht, project manager and storage & backup administrator, HEIDELBERG

“We are an important supplier and reliable partner for the global printing industry. It is therefore essential for us to ensure that all of our employees around the world can always access the data they need for their processes. We can’t afford downtime, so reliable backups and fast restores are absolutely vital,” says Bernd Böckler, Heidelberg’s global data centre manager.

And it is not just Heidelberg itself that needs this data to be available at all times, many of its customers do too. For the past 10 years, HEIDELBERG has offered its internet based Remote Service product to companies around the world. What started off as an online fault management system has been expanded step by step towards more preventative services. The product’s latest feature is remote monitoring. This function allows HEIDELBERG to detect imminent machine errors at an early stage, long before they actually cause the machines to fail. Any restorative measures can then be taken as part of the company’s service plan. This gives its customers a high level of security in terms of production planning and increases machine availability dramatically.

Today, around 10,000 systems in 50 countries around the world are connected to HEIDELBERG’s Remote Service platform, and the company processes over 2,000 customer queries each month. Around 80 per cent of all electronic errors can be resolved remotely, so this system represents a powerful online service tool for technical production facilities both inside and outside of the print media industry.

The data required to provide this service, as well as data from the company’s Microsoft® Exchange system, file services and the databases for many of its applications, is stored in the company’s global data centre. These applications include both office software and more specialised programs used in areas such as production planning and manufacturing.

As well as site-specific applications, the global data centre also hosts a number of applications for other production facilities and sales and service units around the world across a total of around 400 virtualised and 100 physical servers.

#### **Inefficient tape storage**

The storage area network at HEIDELBERG’s global data centre currently holds around 170 TB of data with an additional 60 TB of direct attached storage – and volumes are only going to increase. Each day, all of this data is backed up using an automated process triggered by the HPE Data Protector Software. The company’s previous solution was an HPE StorageWorks ESL 712e tape library with 16 drives. It would use up around 2000 LTO3 tapes each year. Alongside this solution, the IT team also ran an HPE StorageWorks 9000 Virtual Library system, predominately for incremental or temporary backups that would then be used to transfer the data to the tapes for permanent storage.



“Due to the large number of tapes, the IT team was spending an immense amount of time on administration – mainly because we chose to store the cassettes at a separate location on the site for security reasons,” remembers Peter Brecht, project manager and the person responsible for storage and backups at the data centre. “This meant that restores could take a considerable amount of time, and we didn’t want our end-users to keep on having to wait. The number of errors in the backups was also on the rise. Each morning, my colleagues and I would have to first check if there had been any interruptions to the backups overnight, and if so, we had to restart the process from that point.”

Due to the ever-increasing data volumes, some backups took up to 24 hours. “This became a real problem as by that point the next backup would already have been triggered,” says Brecht.

## Solution

### Comprehensive solution from HPE

HEIDELBERG decided to look for a new, modern backup solution. The IT team began by creating a concept for the new infrastructure and defining their catalogue of requirements. “The first thing we agreed was that we wanted to continue using HPE Data Protector,” says Böckler. “We went to an event where HPE told us about the (then) latest 8.0 version. What we learned there convinced us that this would be the best product to meet our needs.”

“When version 9.0 was released shortly afterwards, there was no doubt in our minds - we were ready to move over.”

But the question of which hardware to use proved slightly more difficult. The company eventually narrowed down its selection of systems from three different manufacturers. “In the end, the main selling point was the fact that it is an all HPE solution: the combination of the HPE StoreEver MSL 6480 Tape Library, LTO6 tapes, HPE Data Protector Software 9.0 and the integrated HPE StoreOnce 4900 system means that we aren’t restricted when it comes to things such as the connectivity options available,” explains Böckler. “With HPE StoreOnce, HEIDELBERG can choose to store its backups on either a NAS, StoreOnce Catalyst or a virtual tape library.”

Brecht comments: “We would not have been able to have all of these options had we chosen to source components from different manufacturers. HEIDELBERG currently uses all three types of data storage. We have optimised the system’s performance by using HPE StoreOnce Catalyst over Fibre Channel as it means we no longer have to back up physical servers connected directly to the SAN via IP. We can now run part of the backup via the 8 GB Fibre Channel network, thereby relieving some of the IP traffic. So we can spread the load better.”

## Customer at a glance

### Hardware

- HPE StoreEver MSL 6480 Tape Library
- HPE StoreOnce 4900

### Software

- HPE Data Protector Software v9.0

## HEIDELBERG

HEIDELBERG achieved global sales of around 2.33 billion Euros in the 2014/2015 financial year. Around 60 per cent of these sales came from its new machinery business, which covers everything from printing presses for sheet offset, digital and flexo printing to prepress and postpress machines and software which brings all of a printing company's processes together. The remaining 40 per cent came from services, consumables and replacement parts. HEIDELBERG employs around 12,000 people across the globe.

## Benefits

### High backup flexibility

One of the main benefits Böckler highlights is the HPE StoreOnce deduplication technology, which identifies and eliminates redundant data before it is backed up – either on the application server, the backup server or even the target appliance itself. This is because the deduplication algorithm is fully integrated into the backup and recovery process and not linked to a hardware platform or an operating system.

“We are achieving a deduplication rate of 8.5 to 1,” says Böckler. “And by using new LTO6 drives, we have managed to reduce the number of tapes we store by 90 per cent to just 200. This makes the backups much easier for us to manage. The main advantage for the other departments is that we can restore data for them much faster than we could do before as we now backup everything to the HPE StoreOnce and only store a few tape copies.” Brecht explains: “We can even restore data from home if an emergency occurs at night or over the weekend.”

Another key benefit is that backups taking 24 hours to complete are now almost unheard of. “We no longer have to worry about getting backups completed within certain time frames. The wide variety of connectivity options the HPE StoreOnce offers has removed the restrictions on our processes and enables us to carry out backups and restores simultaneously. So we can backup data from catalogue such as Microsoft® SharePoint much more frequently and incrementally throughout the day. It has made us much more flexible,” says Brecht.

This backup flexibility could also be rolled out to the company's other sites, which are currently running their own solutions. The global data centre is considering whether to connect individual sites to the headquarters via HPE StoreOnce Virtual Storage Appliances (VSA) so that deduplication processes can be carried out using one single technology. Böckler comments: “This would mean that local backups could be created on the appliance and replicated to the HPE StoreOnce here at the headquarters. The individual sites would then no longer have to handle tape backups at all.”

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