



Lohmann & Rauscher's IT system can now survive a disaster

New strategy involves three data centres
and an HPE Converged Infrastructure

Objective

Ensuring business continuity even if an entire site fails

Approach

The company took an open approach when researching new solutions and compared multiple concepts from various manufacturers before deciding to install an HPE Converged Infrastructure with assistance from HPE partner Hansen & Gieraths

IT Matters

- The company benefits from a modern IT infrastructure with a high degree of virtualisation, which in turn simplifies synchronous and asynchronous mirroring of data and systems
- IT security has improved as the new concept ensures that all data and systems are stored completely redundantly
- IT infrastructure can be expanded to adapt to new business requirements without requiring additional large investments
- Consistent HPE Converged Infrastructure simplifies IT administration processes

Business Matters

- Business continuity is ensured, i.e. key business processes can be supported by the IT system less than 24 hours after a complete failure
- Fulfils auditors' requirements



Following a business impact analysis, Lohmann & Rauscher (L&R) decided to completely modernise its two existing data centres and create and connect a third for use in emergency situations. This process involved virtualising almost all of its servers and consolidating its storage systems. The medical product supplier now uses an HPE Converged Infrastructure, implemented by HPE partner Hansen & Gieraths (H&G).

Challenge

Insufficient business continuity measures

Lohmann & Rauscher (L&R) is a leading international supplier of high quality medical and hygiene products – from traditional bandages to modern care and treatment systems. Its customers include doctors, carers and chemists, medical retailers, wholesalers and hospitals. Created in 1998 following the merger of Lohmann and Rauscher, L&R has over 160 years of experience as a reliable, expert problem-solver for its customers. With over 4,000 employees, 39 subsidiaries and affiliated companies and over 130 selected partners, L&R has a strong presence in all of the world's important markets. This includes China, where its sales subsidiary has sites in Shanghai and Beijing.

Due to this high degree of internationalisation and centralisation, the IT administrators at L&R must ensure that its infrastructure, systems and applications are running correctly 24 hours a day, 7 days a week.

“Hewlett Packard Enterprise and H&G have really helped us to rethink our data centre concept: we have now completely modernised the two existing facilities and connected them to a new one for use in the event of a disaster. This process involved consolidating the storage systems and moving towards virtual servers in order to facilitate both synchronous replication between the two sites at Neuwied and asynchronous replication with the new emergency data centre.”

– Michael Krüger, administration / information systems (AIS) at L&R

This includes not only the file systems, databases and the email system, but also its critical SAP ERP system. This displays all of the company's core processes, including sales, purchasing, production, warehousing and reporting, together in a consistent structure using consolidated master data for the entire company. Having a consistent IT system across all of its production sites means that L&R can plan efficiently and control its processes around the world.

“Our development has meant that the central data centre at our Neuwied site has become increasingly important over recent years,” says Michael Krüger, a member of the Administration / IT Systems (AIS) team at L&R. “So it is all the more important for us to keep all of our systems highly available so there are no failures or losses of data.”

The data centre concept at the Neuwied site – the company's largest production and logistics site in Germany – previously consisted of two redundantly configured technology rooms 60 metres apart.

All of the data was stored on two different storage systems – two HPE StorageWorks P6300 Enterprise Virtual Arrays and two DataCore SANsymphony for VMware storage systems. Both were mirrored synchronously between the two rooms. “This design covered us if one of the systems or one of the rooms were to go down,” explains Krüger.

However, a business impact analysis carried out by external consultants at the request of the board showed that L&R was not sufficiently prepared for certain types of emergency situations. The consultants investigated the possible effects that natural, environmental and personnel related events might have on the company's IT system.

They concluded that the two-room concept used for the existing data centre would not be enough to ensure that important business processes could be supported in the event of an emergency. It could not cope with scenarios that would affect the entire area where the data centres were located. Such events could include earthquakes (not unlikely in the Neuwied area), power cuts lasting longer than the backup power system, longer evacuations following the discovery of a bomb, a gas leak, or even a plane crash (the site lies under flight paths to both Cologne and Frankfurt airports). According to the report, all of these scenarios could seriously affect L&R's business activities.

Solution

Complete data centre modernisation

“It was clear that we needed a further solution in addition to the two rooms at Neuwied to ensure that our data, applications and systems are really stored redundantly,” explains Krüger.



“But we were completely open in terms of deciding what it would look like – be it an Infrastructure-as-a-Service solution or an emergency data centre at one of our other sites, a provider or another company – we were willing to consider anything. The board’s requirements in terms of business continuity were a key factor. And for us in the IT Administration team, it was also important to minimise data loss, downtime and complexity.”

So L&R issued a tender, eventually narrowing the search to four closely-matched manufacturers. Their solutions covered the company’s entire IT environment, including the server and desktop virtualisation solutions from VMware and Citrix.

According to Krüger, it became clear during the conversations with the providers that the best solution would be for L&R to run its own emergency data centre at its German administrative centre in Rengsdorf. Although the site is only ten kilometres away from Neuwied as the crow flies, it is outside of the area vulnerable to earthquakes. The main advantage: the company could use its existing redundant 100 Mbit/s directional radio link.

Technologically, the concepts put forward by the providers differed mainly in terms of the replication method; some recommended synchronous replication of the systems between Neuwied and the new data centre, the others preferred an asynchronous approach.

Combination of synchronous and asynchronous replication

The suggestion to use asynchronous replication came from Hewlett Packard Enterprise and its partner Hansen and Gieraths (H&G). “The price of the asynchronous replication concept from HPE and H&G really impressed us,” remembers Krüger. “But it wasn’t the only reason we chose it. HPE and H&G really helped us to rethink and redesign our data centre concept as a whole. We decided to completely modernise the two existing facilities and connect them to a new one we could use in the event of a disaster. This process involved consolidating the storage systems and moving towards virtual servers in order to facilitate both synchronous replication between the two sites at Neuwied and asynchronous replication with the new emergency data centre.” Once you have a script that enables the virtual machines to access the storage system, you can easily mirror it and restart it again if it fails.

Benefit

Reinstating key business services within 24 hours

“H&G not only implemented the solution, they also passed on their expertise in virtualisation, particularly in how the hardware and VMware software work together,” says Krüger. “We felt like we were in good hands with HPE and H&G right from the start. We already knew that HPE’s technologies were an excellent choice due to our past experiences with the company. And the new HPE 3PAR StoreServ systems provide additional benefits in terms of high availability and transparent failover. We also felt like we could trust H&G to bring the project to a successful conclusion.”

Case study

Lohmann &
Rauscher

Industry

Medical products

Customer at a glance

Applications

SAP ERP

Hardware

- HPE 3PAR StoreServ 7200
- HPE BladeSystem c7000
- HPE ProLiant BL460 Gen8 Server Blades (VMware)
- HPE ProLiant BL465 Gen8 Server Blades (Citrix XenApp)
- HPE 8/24 SAN Switch

Software

- HPE 3PAR 7200 Reporting Software Suite
- HPE 3PAR 7200 Replication Software Suite
- VMware vSphere Enterprise

H&G Hansen & Gieraths

H&G is based in Bonn and has been providing complete IT systems to its customers for 30 years. As a traditional medium sized company with a flat hierarchy, its employees take a great deal of personal responsibility for their projects. Its slimline structures and dedication to quality, combined with its the agility as a medium sized company, guarantees an excellent price-performance ratio for its services and means it is flexible enough to respond to all requirements and changing market conditions. As a full service systems provider, H&G covers every area of IT including hardware, software, industry solutions and services. It provides its customers with a wide, well-balanced range of products – from individual printers to complex SAN infrastructures.

The solution now installed at L&R looks like this: The storage system has been consolidated to a total of three HPE 3PAR StoreServ 7200 systems. Two of these are installed at the data centres in Neuwied, where they are mirrored synchronously using the HPE 3PAR Replication Software Suite via a Fibre Channel. From these two data centres, there is an IP directional radio link that is used to asynchronously mirror all of the systems and data onto the third HPE 3PAR StoreServ 7200 system, which is due to be up and running in the very near future. Rather than mirroring the data to the third backup system synchronously with each transaction, it is mirrored asynchronously at regular intervals, completely separately from any productive transactions running on the main system.

The server infrastructure was also completely replaced. Again, this was supplied by HPE. "As HPE provided all of the hardware for the project, our data centre infrastructure is now very simple, which reduces our expenditure on administration," explains Krüger.

L&R's move to the new data centre infrastructure took place step by step as part of the virtualisation process. Around 95 per cent of the company's servers are now virtualised.

Once the backup data centre is up and running, the IT Administration team will have completely fulfilled the board's requirements, as it will ensure that the most important business services can be back up within 24 hours of a data centre failing. "This means that we can ensure business continuity even in the event of an emergency, which is also good news for our auditors," says Krüger. "Unlike with our previous solution – where our concept for mirroring resources broke down every now and again due to resource issues – we can now really be certain that all of our systems are mirrored redundantly across the two sites.

The new IT infrastructure is also much more flexible in terms of adapting to changing business requirements. We can expand it at a later stage without having to make further huge investments."

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