



About The Schwarz Group

The Schwarz Group is a leading international trading company with around 12,900 retail outlets and 500,000 employees in 33 countries. The group generated a total turnover of 125.3 billion euros in the 2020 financial year. Divided into the divisions of production, trade, and environment, the Schwarz Group covers the entire value chain. Lidl and Kaufland form the pillars in food retailing. Many private label products on their shelves, from ice cream to beverages, come directly from Schwarz Produktion. The environmental service provider PreZero pursues the vision of closed-loop recycling in waste and recycling management and thus invests in a clean future. Schwarz services provide support for administrative and operational issues.

Schwarz IT is the strong technology partner of the entire Schwarz Group. As a central IT service provider, Schwarz IT is responsible for the selection and provision of IT infrastructure, IT platforms, and business applications. By continuously taking into account current technological developments, Schwarz IT identifies innovative options for action. In close cooperation with the departments, Schwarz IT develops professional and efficient IT solutions. Schwarz IT is the digital heartbeat of the Schwarz Group. Efficient, fast, and flexible.

To ensure high availability for all production applications, the Schwarz Group operates a network of several data centres around the headquarters in Neckarsulm, which are synchronously mirrored as part of a metrocluster. The group's infrastructure is virtualised on VMware and more than 5,000 of the 40,000 VMs are considered mission critical.

Schwarz Group uses Zerto to protect its data centre against natural disasters

Geodiverse disaster recovery (DR) strategy needed for data centre housing critical virtual infrastructure close to a nuclear reactor

Challenges

- Securing the company's headquarters metrocluster against a regional disaster
- Eliminating a "single point of failure" scenario within the global group
- Providing DR for all of the group's central infrastructure-critical VMs
- Replicating on the hypervisor level, not on the storage level

Solution

- Zerto allowed for a geo-diverse DR strategy, enabling replication over 300 kilometres regardless of latency
- Adding another level of redundancy on top of the HA-layer of the metrocluster

Zerto Results

- Possibility to recover any VM with only a 5 to 10 second RPO
- Easy management of the solution
- Recover individual VMs with a few clicks
- Prove recoverability of single VMs to the audit department
- Strong API offers possibilities for customisations

The challenge: A new DR strategy required a new replication solution

SIT provides high availability for all of the group's production VMs via the metrocluster around Neckarsulm. However, due to latency requirements, the metrocluster is located within a small radius of approximately 15 kilometres around the group headquarters, making the setup a potential single point of failure. This concern weighed particularly heavily for the Schwarz Group because the company headquarters is located less than twenty kilometres away from the Neckarwestheim nuclear power plant. In the event of a regional disaster incident at the nuclear power plant, not only would the company headquarters be affected, the impact would extend to all of the data centres in the metrocluster network. In order to eliminate this risk as part of a comprehensive DR plan, the management of the Schwarz Group commissioned SIT in 2015 to eliminate the potential single point of failure and to be able to guarantee DR for the entire site. This meant building a DR data centre located between 200 and 400 kilometres away from the metrocluster around Neckarsulm that could run global operations in the event of a regional disaster.

The team set out to find a suitable location for a new DR data centre within a radius of 400 kilometres and finally decided to build a completely new data centre on the former site of a decommissioned coal-fired power plant in Riedersbach near Salzburg. In addition

to the sufficient distance from Neckarsulm, approximately 300 kilometres, the location offered optimal conditions: secure power supply with favourable prices, direct access to cooling water, and a fast fibre optic connection, which made two dedicated lines with 40 Gb/s possible.

Distance to DR data centre necessitates switch to asynchronous replication

The new DR data centre, built from scratch in Riedersbach, was the first important building block of the new DR strategy. Another important building block was the choice of replication solution. Synchronous replication, as used within the metrocluster, was no longer possible at a distance of more than about 50 kilometres, due to excessive latency introduced by the required distance of over 300 kilometres.

In order to find a suitable solution, the SIT team analysed the market to find out which technological solutions could be considered for the new DR strategy. Hardware-based solutions on the storage level were very quickly ruled out, as those technologies were seen as outdated, and replication was desired to take place at the hypervisor level. In contrast to high availability, synchronous replication is not required for disaster recovery.

“In conclusion, we are very happy with the Zerto solution, the team's communication, and technical as well as organisational support. We appreciate that suggestions for improvement from customers like us are heard, evaluated, and implemented accordingly through the use of feature requests. We also like the fact that Zerto is continuously improving the product from version to version by adding new features. Zerto has delivered on its promises. The solution covers our use case perfectly, which is allowing the ability to run our virtual infrastructure in another region in the event of a regional disaster.”

The Schwarz Group

CDP-based replication tipped the scales in favour of Zerto

After weighing the alternatives, the Schwarz Group chose Zerto. One of the most important factors in this decision was that Zerto's replication is not based on snapshots but on asynchronous CDP (continuous data protection). Snapshot-based replication, as offered by other solutions, is rarely effective even in smaller environments. With the scale of the Schwarz Group environment, replication in this way is virtually impossible. As one SIT employee explains: "The replication delta of our environment is simply too large to meaningfully replicate classic snapshots over a limited bandwidth. In fact, continuously streaming blocks over a CDP engine is the only way to move this amount of VMs with the required RPO over this distance." The only solution that covered all the requirements was Zerto. Another important reason for Zerto was the platform's strong API: "We at SIT script and code a lot to optimally adapt solutions to our environment and conditions. A clean API on the back end is very important to us."

SIT installed the solution itself after consultation with Zerto's support team during a proof of concept, which was very successful and proved the platform's capabilities quickly. The solution provides disaster recovery for all of the group's critical VMs with very short RTOs and RPOs. "Because Zerto's CDP engine sets checkpoints every 5 to 10 seconds, we can recover any VM with only a 5 to 10 second RPO. Managing the Zerto solution is also very easy. We can test the recoverability of individual VMs with a few clicks and prove that to the audit department."

About Zerto

Zerto, a Hewlett Packard Enterprise company, empowers customers to run an always-on business by simplifying the protection, recovery, and mobility of on-premises and cloud applications. Zerto's cloud data management and protection solution eliminates the risks and complexity of modernization and cloud adoption across private, public, and hybrid deployments. The simple, software-only solution uses continuous data protection at scale to converge disaster recovery, backup, and data mobility. Zerto is trusted by over 9,500 customers globally and is powering offerings for Microsoft Azure, IBM Cloud, AWS, Google Cloud, Oracle Cloud, and more than 350 managed service providers. www.zerto.com

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