



# RIZ IT-Motion

## Cloud Computing Services Case Study

### CUSTOMER QUOTE:

“The elimination of batteries in the Dot Hill RAID solution saves us significant time and costs in our data centre. Few other solutions today have eliminated cache backup batteries and the associated support costs are often overlooked!”

### KAI DÜSTER

Managing Director



### BACKGROUND

RIZ IT-Motion GmbH were founded in April 2001 to provide data centre hosting and IT services to companies operating from the newly established Innovation and Technology Centre in the town of Radolfzell, Germany which is centrally located between the cities of Konstanz and Zurich.

Initial clients were start-up companies who relied on RIZ IT-Motion to deliver a solid and dependable managed ICT infrastructure that would allow them to concentrate on developing their core business. In addition to supporting ICT services for the entire business park, RIZ IT-Motion established an extensive, secure, on site data centre to provide core IT services such as Exchange server hosting, Citrix thin client services and subsequently VMware Enterprise Cloud Services.

With the further addition of hosted solutions such as managed physical servers plus a broad spectrum of IT consulting services, the reputation of RIZ IT-Motion as a trusted and innovative supplier of cloud based services spread beyond the 70+ enterprises located at the RIZ Innovation and Technology park.

Fast forward to 2011 and RIZ IT-Motion now serves hundreds of clients from diverse industry sectors with cloud based enterprise IT computing services across all of the German speaking countries in Europe.



## Key Storage Issues

With a rapidly growing client base, RIZ IT-Motion needed to standardise on a storage architecture that would allow them to seamlessly roll-out both managed server installations and expand cloud based services within their data centre. The new storage infrastructure would need to deliver on performance, reliability, ease of deployment and support, but also provide simple scalability with minimal incremental cost.



Kai Düster and cofounding partner Calin Rotaru evaluated several networked RAID solutions from leading tier 1 storage vendors; time and time again the following issues were encountered:

- Cache back-up batteries were included in most designs which incur support costs for annual maintenance and battery disposal
- Systems would run with degraded performance when cache batteries were in need of replacement
- In many cases, system capacity expansion was only possible through the purchase of an expansion licence at additional cost alongside the purchase of expansion disks or additional chassis
- The graphical user interface (GUI) of many systems were not very intuitive and most lacked the option for a command line interface (CLI)

RIZ IT-Motion worked closely with Stuttgart based IT distributor Stordis GmbH who had advised them previously on several high performance computing projects within their data centre. Stordis introduced the Dot Hill AssuredSAN range of RAID arrays as an ideal storage solution that would address the issues Kai and Calin had encountered in their RAID system evaluations.

## Reducing Costs while Maximising Data Centre Efficiency

Kai Düster explained the significance of cache backup battery elimination in the RIZ IT-Motion data centre:

## CUSTOMER QUOTE:

“Expansion of the Dot Hill AssuredSAN systems is straightforward without the need to purchase expansion licences. We can add new storage into the data centre, provision LUNs to the cloud and have everything up and running within an hour.”

Kai Düster, Managing Director, RIZ IT-Motion.

“Several unique features of the Dot Hill range caught our eye, the first being the EcoStor™ technology which completely eliminates the use of batteries in the cache backup design. The elimination of batteries saves us significant time and cost in our data centre. Few other solutions today have eliminated cache backup batteries and the associated support costs are often overlooked!”

RIZ IT-Motion also appreciated the simple web based GUI that is standard across the Dot Hill range, regardless of the host interface. “We found the Dot Hill web based GUI to be very intuitive plus they offer a command line interface (CLI) which we find very useful to speed the deployment of incremental storage, or to gather certain metrics from the systems,” explained Kai.

Unlike many competitive offerings the capacity of the Dot AssuredSAN systems can be increased with JBOD expansion chassis which do not need expansion licences. “Expansion of the Dot Hill AssuredSAN systems is straightforward without the need to purchase expansion licences. We can introduce new storage into the data centre, provision LUNs to the cloud and have everything up and running within an hour,” highlighted Kai Düster.

RIZ IT-Motion initially started with a Dot Hill AssuredSAN™ 2730T RAID unit supporting a mixture of 3.5” SAS and SATA drives to cater for different storage performance needs. All AssuredSAN series RAID units are housed in a compact 2 rack unit (2U) footprint which can house either 24 x 2.5” or 12 x 3.5” HDDs including up to 2 RAID controllers and dual redundant power supplies. During their evaluation of storage solutions Kai Düster

and Calin Rotaru found that many competitive offerings appeared to be space efficient upon first inspection, but needed additional rack space and depth when redundant power supplies were a requirement. Furthermore, the Dot Hill AssuredSAN family offered a wide range of upgrade paths, all of which ensured re-use of any existing investments in the product family. Many competitive offerings involved a complete replacement of the entire array installation when moving up the chain in terms of features or performance.

With a rapid rise in demand for cloud based services RIZ IT-Motion soon had a need for additional storage, and like all data centres space is a premium, therefore a storage solution with even greater performance density than the initial AssuredSAN 2730T was needed. "We were adding 14 servers per month just for our cloud based services, and many clients opt for a full disaster recovery solution which in turn calls for additional storage," added Calin Rotaru, managing director at RIZ IT-Motion. "Stordis advised us to consider 2.5" drive technology for its performance density, and Dot Hill were the only vendor with a viable solution on the market," added Calin Rotaru.

The choice to move to 2.5" drive technology was also a timely one as it coincided with Dot Hill's release of the AssuredSAN 3000 series which added 8Gb Fibre Channel, 10Gb iSCSI and 6Gb SAS host interface options to the range.

## Laying foundations for a fast growing Cloud Infrastructure

RIZ IT-Motion are experiencing a rapid demand for their cloud based IT services. "Our typical cloud services customer will have between 10 and 60 staff and operate in a sector where IT is important to their business processes but they do not want to invest in IT support staff, or indeed have the headache of maintaining business continuity should things go wrong. Doctors, architect firms and other consultation based services feature regularly in our customer base," explains Calin Rotaru, "As a provider of cloud based services reputation is key, one badly managed incident will propagate quickly among the user community, so we must ensure we deploy dependable IT systems and the Dot Hill solutions have proven themselves in that regard. That is important for us as 90% of our customers come to us through referrals, we do very little marketing or advertising".

## Seamless scalability with complete flexibility

Having gained confidence in the AssuredSAN 2730T which had been used with Veeam Software to provide full scale replication of their VMware environment, the initial capacity that was specified was outgrown and RIZ IT-Motion introduced an AssuredSAN 3720 8Gb Fibre Channel RAID head which houses 24 x 2.5" 600GB SAS drives. In fact, a single AssuredSAN 3000 series configuration can scale up to a maximum of 288TB using 3TB SATA drives, and beyond as larger capacity drives become available.

## Full certification and support for virtualised environments

The Dot Hill AssuredSAN platform provides a scalable foundation for the virtual server architecture at RIZ IT-Motion. The full certification of all Dot Hill AssuredSAN arrays with VMware® ESX and vSphere provides peace of mind when deploying a consolidated virtual storage infrastructure. Inclusion of support for the VAAI API will also be a welcome feature with the potential to improve write operations by up to 40% and save much needed virtual machine CPU cycles.

## CUSTOMER BENEFITS AND OUTCOMES

Cost effective performance and capacity expansion

Peace of mind with fully certified VMware external RAID storage arrays

Simple web based storage management without the need for server based agents

Maximum performance density with the option for 2.5" or 3.5" drive technology



## About AssuredSAN 3000 Series

The AssuredSAN arrays are equipped with 2.5-inch drives or 3.5-inch drives, supporting mixed-drive configurations of SAS, SATA, and SSDs. AssuredSAN arrays also feature a number of eco-friendly enhancements such as energy saving drive-spin-down and Dot Hill's patented EcoStor™ battery-free alternative for cache memory, which leverages a combination of super capacitors and flash memory that outlasts traditional batteries nearly fivefold.

Dot Hill's AssuredSAN 3000 Series arrays are easy to configure and manage via the RAIDar 2.0 intuitive web-based interface which provides storage setup and monitoring without the need for host-based software. AssuredSAN users gain configuration and installation efficiencies via wizards and schedulers for snapshots and replication.

AssuredSnap™, AssuredCopy™ and AssuredRemote™ data protection software is available with the AssuredSAN 3000 Series offering excellent tools to support business continuity. AssuredSnap and AssuredCopy data protection software also provides out-of-the-box tools to maximize development team collaboration through non-disruptive, isolated copies of source data that can be processed in parallel, rapidly accelerating development cycles.

The AssuredSAN 3000 external RAID systems can deliver up to 36TB of storage in a single 12 drive 2U chassis using 3TB SATA drives. The systems can be expanded if required to a total of 8 chassis which currently offers up to 288TB when using 96 3TB SATA drives.

For more information about Dot Hill Systems, visit <http://www.dothill.com>.

For more information Stordis, visit <http://www.stordis.com>.

RIZ IT-Motion's web site is located at <http://www.riz-itmotion.de>

