Clasen Datensysteme is a solution provider known throughout Europe for more than 25 years in the furniture retail sector. In 2004 they started supporting the business processes at Möbel Preiss, a furniture supplier.

When in 2014 the previously productively used storage solution from DELL at Möbel Preiss had to be replaced with a new system, separation of storage hardware and storage software was a major concern. Software-defined storage was just the right concept. The idea was to have a standard 19” server with an Enterprise-class software and an excellent technical support. The company decided for an Open-E product.

With the Open-E DSS V7 Active-Active cluster solution Open-E had a perfectly established product with a price / performance ratio that no other solution provider could offer at that time. Additionally, it was offered independently of hardware.

Soon the company decided for a solution based on a regular Intel server components and SAS hard drives. For Möbel Preiss the highest possible system availability and good performance has always been very important. However, in 2019, after an error with the power supply of the server rack, several switches and computers made one of the two Open-E DSS V7 cluster nodes unusable. Of course, Open-E DSS V7 proved its redundancy features. Fixing the hardware components has become critical. What is more, the Open-E DSS V7 license key was about to expire. Therefore, due to positive experience of Clasen Datensysteme in other projects with Open-E, a direct change from DSS V7 to Open-E JovianDSS was recommended to Möbel Preiss.
In addition to technical fixes the two storage nodes had to be equipped with 64 GB RAM each. But the migration from the Open-E DSS V7 cluster to the Open-E JovianDSS Metro Cluster was made easy by lending an additional independent Open-E JovianDSS storage system. Ultimately, both DSS V7 storage nodes could be decommissioned and reconfigured with Open-E JovianDSS without affecting business operations.

Nevertheless, Open-E DSS V7 turned out to be a very good data storage software. But it could not fully retrieve the demanded performance with NVMe and SSD storage.

With Open-E JovianDSS, the automatic backups in form of snapshots enable extremely fast and easy access to all data. The automatic compression of the volumes work very effectively and almost unnoticed. Failover management and replication are based purely on Zpools and the drives are available on both nodes. This is much more robust and significantly easier to manage than with the previous solutions. What is more, the risk of a so-called „split-brain“ situation is much lower with Open-E JovianDSS.

**Hardware details**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motherboard</td>
<td>SuperMicro</td>
</tr>
<tr>
<td>Chassis</td>
<td>19&quot; Rackmount Version, 2 HE</td>
</tr>
<tr>
<td>Processor</td>
<td>1 x E5-1620v4 - (4-Core, 3.5 GHz)</td>
</tr>
<tr>
<td>RAM</td>
<td>96 GB DDR4 RAM, ECC 32GB before the update, additional 64GB for Open-E</td>
</tr>
<tr>
<td>RAID</td>
<td>1x ARECA 8port 12Gb/s SAS RAID – RAID 6</td>
</tr>
<tr>
<td>HDD</td>
<td>12 x 1.2TB SAS 10k HDD</td>
</tr>
<tr>
<td>Ethernet</td>
<td>2x Intel 10Gbit NIC</td>
</tr>
<tr>
<td>Software</td>
<td>Open-E JovianDSS</td>
</tr>
</tbody>
</table>

**Customer feedback**

*Möbel Preiss, Bernd Neumann, Head of IT Infrastructure*

„I’ve been managing the IT infrastructure of Möbel Preiss for more than 20 years. I was able to see many server systems coming and going. But the Open-E DSS V7 cluster solution turned out to be a solution tailor-made for us. In comparison to the DELL storage solution we used before, we achieved real redundancy and it was noticeably faster. In my opinion, Open-E has raised the bar even higher with Open-E JovianDSS. We are thrilled with the ease of use, the quality and stability of the storage software and we are pleased that now with the two existing storage nodes have been using for several months it led to our fullest satisfaction. Impressive was also the Open-E Support Service who despite many obstacles did their best to provide us with at least one working node the next day. What is more, we did not notice any change in performance.“
**Open-E JovianDSS Advanced Metro High Availability Cluster**

**Client 1**

- Bond0 (SMB, NFS or iSCSI)
- Ping Node (SMB, NFS or iSCSI)
- JovianDSS node-a
  - Storage Client Access
  - Port used for WEB GUI management, Ring, Ping node, bond0 (active backup)
  - Remote Disks

**Client 2**

- Bond0 (SMB, NFS or iSCSI)
- Ping Node (SMB, NFS or iSCSI)
- JovianDSS node-b
  - Storage Client Access
  - Port used for WEB GUI management, Ring, Ping node, bond0 (active backup)
  - Remote Disks

**Legend:**

- LAN
- iSCSI

**Data server (DSS1) node-a**

- RAID System 1
- Port used for WEB GUI management
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond0
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond1
- Volume Replication, Auxiliary connection (Heartbeat)
- iSCSI volumes
- iSCSI targets

**Data server (DSS2) node-b**

- RAID System 2
- Port used for WEB GUI management
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond0
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond1
- Volume Replication, Auxiliary connection (Heartbeat)
- iSCSI volumes
- iSCSI targets

**Switch 1**

- RSTP/Port Trunk

**Switch 2**

- RSTP/Port Trunk

**Note:**

- To prevent switching loops, it’s recommended to use RSTP (802.1w) or Port Trunking on network switches used to build A-A Failover network topology.

**Open-E DSS V7 Active-Active iSCSI Failover**

**Client 1**

- MPIO 1, MPIO 2
- Ping Node
- MPIO 1, MPIO 2

**Client 2**

- MPIO 1, MPIO 2
- Ping Node

**Legend:**

- LAN
- iSCSI

**Data server (DSS1)**

- Switch 1
- Switch 2

- RSTP/Port Trunk

**Note:**

- Please use external tool to monitor failures in connections between switches.

**Legend:**

- LAN
- iSCSI

**Client 1**

- Port used for WEB GUI
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond0
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond1
- Volume Replication, Auxiliary connection (Heartbeat)
- iSCSI volumes
- iSCSI targets

**Client 2**

- Port used for WEB GUI
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond0
- Storage Client Access, MultiPath Auxiliary connection (Heartbeat)
- bond1
- Volume Replication, Auxiliary connection (Heartbeat)
- iSCSI volumes
- iSCSI targets

**Hardware setup**

Open-E JovianDSS Advanced Metro High Availability Cluster

Remote disks mirroring paths for Cluster over Ethernet
About Möbel Preiss

Möbel Preiss was founded on April 1, 1949 as a wholesaler for carpentry supplies and furniture. In 1972, Möbel Preiss joined the successful purchasing association VME in Bielefeld, today’s furnishing partner. In 1980, Walter Preiss transferred the business to his son Walter Preiss Junior and his wife Rita. With entrepreneurial spirit and a strong sense of responsibility for the employees, Walter and Rita Preiss systematically built and expanded the company Möbel Preiss which has shortly become very successful.

In 2009 it was decided to build a new furniture store in Fordstraße in Kastellaun. On more than 25,000 square meters, it has been possible to build a state-of-the-art furniture store, which is characterized by the personal touch of a family-run business. Today, more than 150 employees work for Möbel Preiss and realize the interior design dreams of the region with competence and great care. More info: www.moebel-preiss.de

About Clasen Datensysteme

In 1985, the success story began with the founding of Clasen Datensysteme GmbH by Rudolf Clasen. The goal was to develop an ERP system for the furniture sector that is both more efficient and less expensive than any other software solution in the industry known to date. The customer base includes furniture retailers and furniture stores from all purchasing associations. The success of Clasen Datensysteme GmbH is essentially based on the personal contact with the customer and good cooperation. Continuous development and the use of innovative operating systems make the IT system solutions from Clasen Datensysteme reliable and secure. More info here: www.clasen-online.de

About Open-E

Open-E, founded in 1998, is a well-established developer of IP-based storage management software. Its flagship product Open-E JovianDSS is a robust, award-winning storage application which offers excellent compatibility with industry standards, and is the easiest to use and manage. Additionally, it is of the most stable solutions on the market and undisputed price performance leader. Thanks to its reputation, experience and business reliability, Open-E has become the technology partner of choice for industry-leading IT companies. Open-E accounts for over 30,000 installations world-wide and has received numerous industry awards and recognition, also with its product Open-E DSS V7. For further information about Open-E, its products and partners, visit www.open-e.com

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