Open-E & Irlbacher Blickpunkt Glass & Thomas-Krenn

HIGH-AVAILABILITY STORAGE SOLUTION FOR AI-SUPPORTED IMAGE DATA & DEVELOPMENT – COST-EFFICIENT AND SCALABLE

HOW IRLBACHER USES OPEN-E JOVIANDSS TO STORE LARGE DATA SETS SECURELY AND EFFICIENTLY

Key facts:

- **Open-E JovianDSS Metro HA Cluster** with approx. 52 TiB net capacity and 2-way mirror
- Data storage platform for large, less performance-critical data from image processing, CRM, and development
- Thousands of raw image files per day (approx. 400 MB each) from AI-based quality inspection
- 14-day snapshot strategy + **Veeam backup** with additional **Amazon S3 backup server**
- Integration in a **Microsoft Hyper-V environment with a Windows file server** and additional VMs
- Future replacement of the old all-flash system is possible
- Cost-efficient standard hardware combined with high availability

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Requirements & Goals

Irlbacher Blickpunkt Glas GmbH is a family-owned company with nearly 90 years of experience in technical glass processing. At its headquarters in Schönsee (Upper Palatinate), Germany, customized solutions are developed for the medical sector, building and household technology, and industrial electronics. In addition to glass finishing, Irlbacher designs functional assemblies and electronic systems, from prototype to series production, both nationally and internationally.

In industrial manufacturing, Irlbacher **processes large volumes of data every day, especially image data from AI-supported quality control systems.** Each produced component is documented with raw image files of up to 400 MB. **Several terabytes are generated daily, which must be stored in a revision-safe manner and remain retrievable for up to five years.**

For performance-critical processes, Irlbacher uses an all-flash infrastructure that supports control systems, databases, and image capture and analysis during ongoing production. The high-performance storage environment ensures short response times and uninterrupted operation.

Raw image data from quality control and additional large data sets **are archived for longer periods** and must be accessible in high-performance environments. To meet these exact requirements, Irlbacher was looking for a **cost-efficient, scalable, and highly available extension to relieve the primary system and serve as a platform for future use cases.**

The goal was to find a **flexible, high-availability platform based on standard hardware that could reliably handle large data volumes while also being suitable as a potential successor to the existing primary system**. Based on a product recommendation from long-term partner **Thomas-Krenn.AG**, Open-E JovianDSS was identified as the ideal solution.

Objective

The goal of the project was to create **a high-availability platform for large-scale data storage based on standard hardware** that could be seamlessly integrated into Irlbacher's existing Windows and Hyper-V environment. At the same time, the system was intended to provide a **cost-effective extension to relieve the central storage solution, with potential for future workloads in IT, development, and production.**

A balanced combination of investment, **flexibility, and operational reliability** was crucial. The solution had to be easy to administer in daily use, cause minimal operational effort, and remain dependable even in the event of a failure.

The platform was expected to serve not only as **active storage for production-related data but also as a reliable backup target, especially with Veeam, integrated into the multi-layered backup strategy**. In addition, the system was to be expandable to a redundant site architecture (metro cluster) in the future.

Solution

In close cooperation with technology partner Thomas-Krenn.AG, an **Open-E JovianDSS Metro HA Cluster** was implemented, consisting of two nodes, each with one server. The systems were equipped with standard hardware, SAS HDDs, and SSDs, and delivered preconfigured. **After just half a day on site, the high-availability system was ready for operation.**

Customer Quote

With Open-E JovianDSS, we receive a lot of performance at a reasonable price. The interface is clear, and the high availability in this price range is unbeatable.

Andreas Albang, Head of IT, Irlbacher Blickpunkt Glas GmbH

In operation, the cluster handles central tasks such as storing large image datasets, managing technical development documents, and archiving mass data from the CRM. Access is provided through a central Windows file server VM on a Microsoft Hyper-V basis, fully hosted on the cluster. **The daily snapshot strategy and the multi-level backup concept (Veeam and Amazon S3 compatible backup server) provide additional fault tolerance and protection against data loss, without unnecessary complexity in daily use.**

The fast integration into the existing infrastructure and the clear web interface, which allows easy administration of the cluster, were especially valued. Failover functionality was tested extensively in advance and proved flawless in real-world operation.

Technical Highlights

- Approx. 52 TiB net capacity with 2-way mirror
- 2× 10 Gbit/s for management, 2× 10 Gbit/s for frontend, 2× 25 Gbit/s for cluster link
- Snapshots: daily, 14-day retention
- Integration into Microsoft Hyper-V with a Windows file server as central storage VM
- Use cases: CRM data storage, electronics development (build environments), AI image processing
- Target for Veeam backup and Amazon S3-compatible long-term archive

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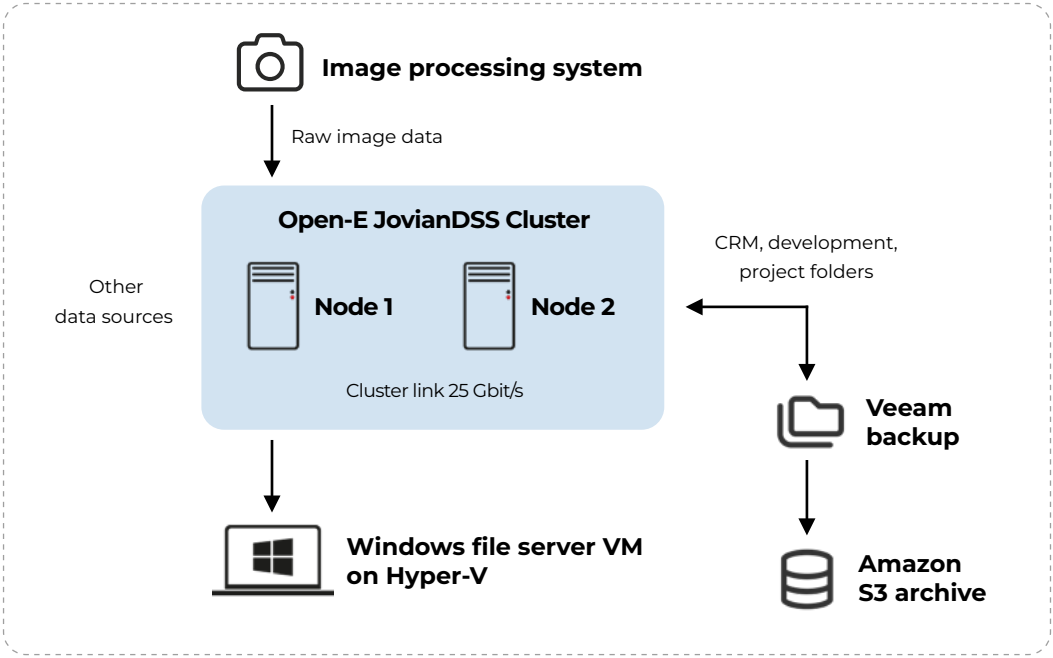
Role of the Partner: Thomas-Krenn.AG

Thomas-Krenn.AG supported the project throughout all phases, from consulting and hardware selection to preinstallation and smooth on-site commissioning. The technicians' experience in IP configuration and cluster setup was particularly valuable. After the quick handover, the system ran stably, without requiring support.

Typical Data Stored on the Open-E JovianDSS Cluster

- Raw image data from AI-supported quality control (up to 400 MB), stored directly
- CRM mass data, such as emails, attachments, and archived documents
- Build environments and source code for embedded software development
- General file server directories with project-related work documents
- Archiving of technical development data from electronics engineering
- Storage target for automated testing and inspection systems



Hardware

The components used were carefully selected for maximum compatibility and reliability when combined with Open-E JovianDSS. The mix of SAS HDDs, SSD boot drives, and modern network technology not only delivers high performance but also an excellent price–performance ratio. **By choosing standardized industrial hardware, the solution is easy to maintain and highly scalable in the long term**,ideal for data-intensive applications like those at Irlbacher.

Server (RI1212+, Thomas-Krenn.AG)*

Category	Specification
Mainboard	Supermicro X11SPi-TF
Processor	Intel Xeon Silver 4215R, 3.2 GHz, 8 cores, 11 MB cache
Memory	128 GB ECC DDR4 (4× 32 GB, 3200 MHz)
Boot Drives	2× 480 GB Samsung PM893 SATA SSD
Storage Drives	4× 16 TB WD Ultrastar DC HC550 SAS HDD
HBA Controller	Broadcom HBA 9500-8i SAS-SATA-NVMe

*two identical units

Network (per node)

Management	2× 10 Gbit SFP+ (Intel X722/X557 onboard)
Frontend	2× 10 Gbit SFP+
Cluster link	2× 25 Gbit SFP28
Transceiver	Flexoptix 8× 10 Gbit, 4× 25 Gbit (Broadcom-compatible)

Chassis & Accessories

Power supply	2× 920 W redundant (80Plus Platinum)
Other	2U chassis, mounting rails, hot-swap backplanes, SAS expander

Consumption (per device)

Power consumption	258 W according to the manufacturer
Heat output	880 BTU/h

Software & Services

Open-E JovianDSS Licenses	2× Open-E JovianDSS Product License 2× Open-E JovianDSS Storage Extension 64 TB 1× Open-E JovianDSS Advanced Metro HA Cluster Feature Pack (SAS, FC, Ethernet) 2× 60 months Open-E JovianDSS Standard Support (20 TB – 128 TB)
Services from Thomas-Krenn.AG	Remote consulting by Thomas-Krenn.AG (2 days) Preinstallation and basic configuration: IPMI, BIOS, Open-E JovianDSS OS, storage pool, high-availability setup, networks, documentation

Operational Experience

- Commissioning completed in less than one workday (preinstallation + remote support)
- Smooth startup, fully functional immediately
- Stable operation since go-live — no support cases so far
- High availability (Metro HA) confirmed in testing
- Intuitive administration via web interface
- Flexible expansion options for future requirements

Customer Quote

The installation was completed within a few hours — and we haven't had to contact support even once since then. It just works.

Andreas Albang, Head of IT, Irlbacher Blickpunkt Glas GmbH

About Irlbacher Blickpunkt Glas

Irlbacher Blickpunkt Glas GmbH specializes in advanced glass finishing, functional coatings, and complete mechatronic solutions from a single source. Based in the Upper Palatinate region, the company develops and manufactures customized system solutions for customers in industries such as medical technology, building technology, and household appliances.

About Thomas-Krenn.AG

Thomas-Krenn.AG is one of the leading manufacturers of custom server and storage solutions in Germany. As a certified Open-E partner, the company supports customers in planning, configuring, and operating high-performance SDS infrastructures.

About Open-E

Founded in 1998, Open-E is a leading developer of IP-based storage management software. Its flagship product, Open-E JovianDSS, is a robust storage application known for excellent compatibility with industry standards as well as ease of use and administration. It is also one of the most stable solutions on the market, offering outstanding value for money. Thanks to its strong reputation, experience, and reliability, Open-E is a trusted technology partner for major IT companies. Open-E has more than 41,000 installations worldwide and has received numerous industry awards. For more information about Open-E, its products, and partners, visit: **www.open-e.com**.

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More information:

- **Irlbacher Blickpunkt Glas GmbH** → info@irlbacher.com / tel:+49(0)96749200-0
- **Thomas-Krenn.AG** → info@thomas-krenn.com / +49 8551 9150 400
- **Open-E GmbH** → +49 898007770 / info@open-e.com