TAROX

IT-Technologie made im Ruhrgebiet

open-e

TAROX ParX R2082i G5

TAROX ParX R2082i G5 is a high-performing Enterprise platform that supports Private Cloud environments and data centers. In a cluster setup with Open-E's ZFS- and Linux-based Software Defined Storage solution JovianDSS, the system is an ideal combination of performance and High Availability, at the same time offering exceptional efficiency and flexibility.

The innovative symbiosis of TAROX ParX R2082i G5 and Open-E JovianDSS offers customers the opportunity to deploy a High Availability storage solution that is state-of-the-art in regards to computing, RAM, storage, I/O and network components as well as reduced latency.

The system is suitable for:

- **VDI**
- **Databases**
- **Web servers**
- **HA environments**

Based on the long-term partnership of TAROX and Open-E, customers can rest assured that a storage cluster with TAROX ParX R2082i G5 is supported from A to Z – from the initial installation to everyday tasks and maintenance.

- Guaranteed data protection
- Enhanced storage performance
- Hardware independence
- Simplified management
- High Availability
- Data compression
- In-line data deduplication
- Tiered RAM and SSD Cache

TAROX ParX R2082i G5 cluster solution with Open-E JovianDSS

High Availability for Enterprise applications

Guaranteed data protection

Data is your most important resource. This is why the Open-E JovianDSS TAROX ParX R2082i G5 includes several mechanisms for data protection. Automatic and scheduled multi-layer data integrity checks ensure data consistency, while unlimited snapshots and clones make it is easy to implement a disaster protection strategy and to instantly roll back to a previous point-in-time. At the same time, a scheduled self-healing mechanism fixes malfunctions and automatically restores full data redundancy in the system. Even when a disk fails, the software-based spare function offers one disk to several RAID arrays, saving you money on extra hardware without compromising data safety.

Enhanced storage performance

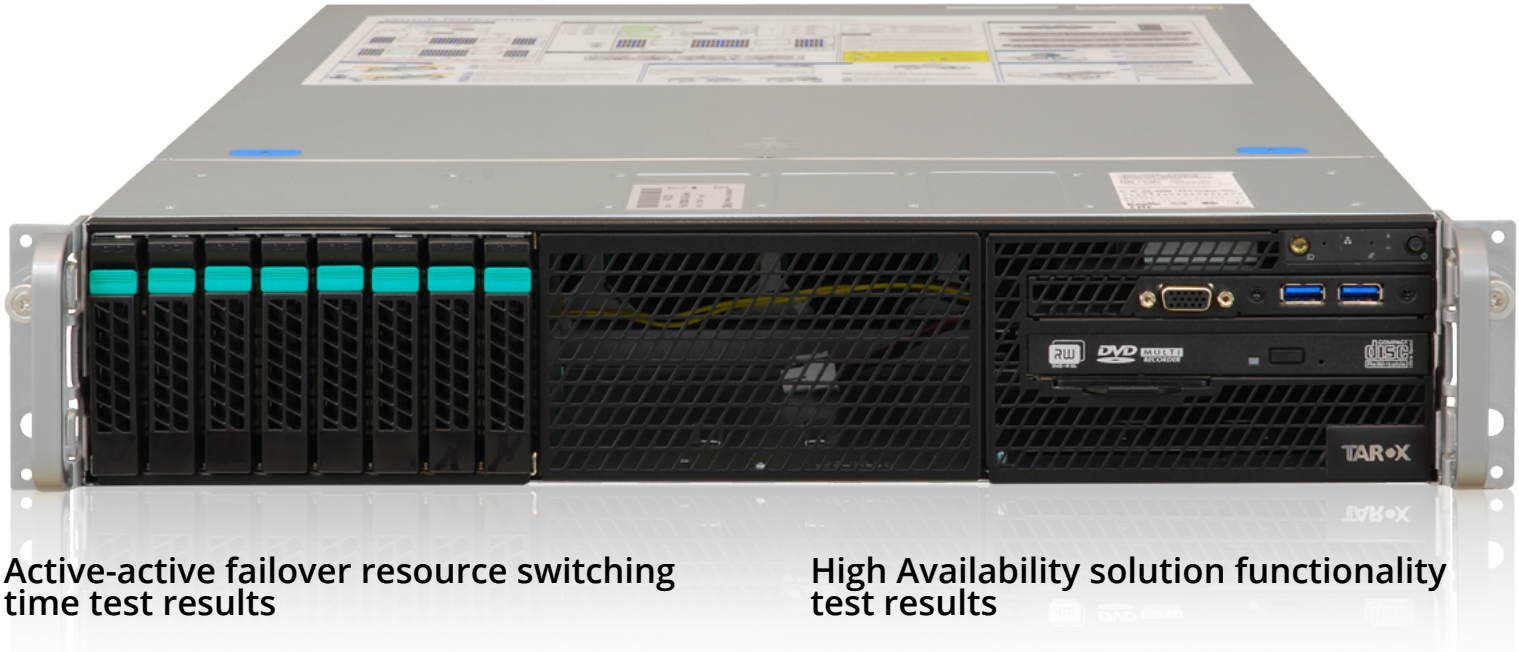
Nowadays, enterprise storage has to provide big capacity while also being fast, affordable and include reliable support. This is exactly what TAROX ParX R2082i G5 has to offer. Open-E JovianDSS-based TAROX ParX R2082i G5 is an innovative hybrid storage system fusing the capacity of HDDs with the performance of SSDs in a single solution that offers high performance while lowering cost. Additionally, by leveraging capacity optimization technologies and advanced tiered SSD and RAM caching, TAROX ParX R2082i G5 provides an overall efficiency boost and increased cache performance. On top of that, powerful tuning tools allow the system to optimize on I/O heavy databases or high throughput video editing equally well and predefined profiles save annoying testing time.

Hardware independence

Commodity hardware can save you a significant amount of money and allows you to customize a server system specific to your needs. But you need to be an expert if you want to create a solution which is perfectly adapted to the requirements of your environment. With Open-E JovianDSS we benefit from the best hardware compatibility on the market and the TAROX ParX R2082i G5 uses hardware components which are ideal for performance, reliability and compatibility. This way we can choose the hardware you need – depending on price, performance, quality and availability – and you won't waste money on unnecessary components. True hardware independence.

Simplified management

Managing Open-E JovianDSS and its extensive features is easy and intuitive compared to many competing solutions on the market. The WebGUI provides a quick overview and management of all storage resources and features. After extensive analyses of storage usage and user interaction the clicks per step in each functionality have been reduced to a minimum, i.e. in creating iSCSI targets or when expanding the size of your storage. This way, you are able to quickly and easily manage TAROX ParX R2082i G5 with Open-E JovianDSS, barely involving actions of a storage administrator.



Active-active failover resource switching time test results

Total number of targets	Switching time [seconds]	Performance test results [passed/failed]
2	26	passed
10	30	passed
20	31	passed

High Availability solution functionality test results

Functionality test name	Functionality test results [passed/failed]
Automatic Failover triggering after reboot test	passed
Automatic Failover triggering after power-off	passed
Automatic Failover triggering after I/O test	passed

TAROX ParX R2082i G5 cluster solution with Open-E JovianDSS

High Availability through innovative storage features

High Availability

The TAROX ParX R2082i G5 is a perfect option if you are looking to deploy a High Availability cluster setup with NFS or iSCSI for storing business- critical data. With the Open-E JovianDSS High Availability Cluster Feature Pack the TAROX ParX R2082i G5 ensures reliability and redundancy through failover in case of a failure. By using the cluster management software, all features related to the cluster setup can be quickly accessed and maintained - everything is in one place and guarantees ease of use for the storage administrator. Moreover, Open-E JovianDSS includes an independent Virtual IP (VIP) addresses feature. With this, VIPs can be used by multiple servers and flexibly switched at all times. When a hardware failure is detected, VIPs are automatically moved from the primary to the secondary node without the client servers noticing a timeout.

Tiered RAM and SSD Cache

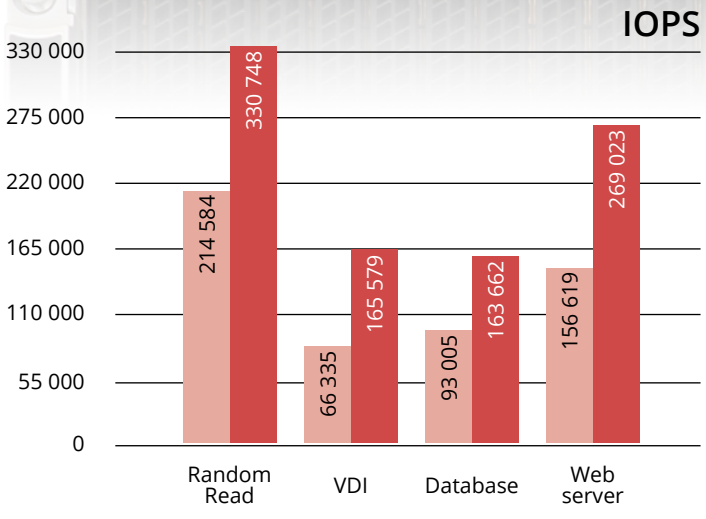
Open-E JovianDSS-based TAROX ParX R2082i G5 works as a tiered storage environment - dramatically speeding up access to frequently accessed files. It uses a caching algorithm to cache “often used” and “recently used” data separately, and provides the best performance for your storage by tiering hot data between RAM and SDD Cache. In TAROX ParX R2082i G5 data is always saved on HDDs and only Hot Data is stored in RAM and SSD to ensure data safety and increase performance.

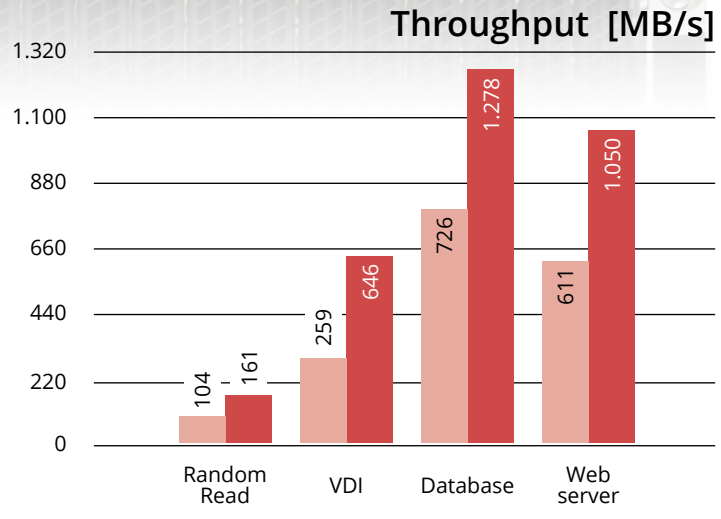
Data compression

The Open-E JovianDSS-based TAROX ParX R2082i G5 offers data compression for minimizing your storage capacity usage. Smaller data blocks means that the system can read and write quicker, ultimately boosting performance and taking less space on your storage. In TAROX ParX R2082i G5 you will find resource-friendly compression protocols (lz4) with low system resource utilization at medium compression rates, but also protocols that are able to achieve very high rates for archiving or backup (as gzip-9). Compression in combination with deduplication, virtualization or high availability solutions further reduce acquisition costs, power and cooling costs, and rack space throughout the system lifecycle.

In-line data deduplication

The in-line deduplication feature of Open-E JovianDSS-based TAROX ParX R2082i G5 removes redundant data and minimizes your storage capacity usage. The software checks each block for redundancy in the system, and if it finds a match the new block isn’t written; instead, a shortcut leading to the original block is created. Such a system can reach a deduplication ratio of 3:1 or more, which means that if you place 3TB of data on TAROX ParX R2082i G5 it will only use 1TB of physical disc space. This feature is especially interesting for highly repetitive data, i.e. in VDI, server virtualization or backup, where much higher deduplication ratios can be reached.





Active-Passive Active-Active

TAROX ParX R2082i G5

Hardware information:

	Default configuration
Head Node	
CPU	2 x Intel® E5 2623v3
RAM	8 x 16GB
Hard drive interface	SAS
Network interface	4 x QLogic 10Gbit
Form factor	2U rack with 8 x 2,5" disks
Weight	37kg
Power	2 x 1.100W
Power consumption	Idle: 19W Load: 1.000W
Fan	Redundant
JBOD J2242i	
Raw capacity	9,6TB
Read cache	2 x 800GB
Write log	2 x 200GB

About TAROX

TAROX is a leading IT supplier for integrated solutions and consistent product portfolios aimed at SMB customers in Germany, Austria and Switzerland. The company's teams support systemhouses and retailers with solutions for their B2B and government customers. The know-how of TAROX' Smart Business concept is a combination of its five areas of expertise: machines, distribution, consulting, data and services.

Comprehensive services are provided through manufacturing of own brands, distribution of selected products by world-leading suppliers, and providing complete solutions. This service portfolio is backed by 20 years of experience in combining the perfect hardware and software for customer environments.

The main goal at all times is to provide the relevant information at a reasonable price-performance ratio to ensure smooth business procedures and enhance the value of solutions. Many awards and certifications verify the exceptional reliability of TAROX as well as the satisfaction of their customers, suppliers and industry experts.

The standards of quality at TAROX demand the deployment of suitable systems to provide state-of-the-art IT environments for SMB users. Close contact to the SMB market is the main reason for the specialists at TAROX to develop innovative technology tailored to the specific needs of their clients. Both of the company's CEOs are vouching for this quality.

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About Open-E

Open-E is a well-established developer of IP-based storage management software. Open-E JovianDSS and Open-E DSS V7 are robust, award-winning enterprise storage applications which offer excellent compatibility with industry standards, and are the easiest to use and manage. Additionally, they are some of the most stable solutions on the market and undisputed price/performance leaders. Open-E accounts for over 27,000 installations world-wide and has received numerous industry awards and recognition. Thanks to our reputation, experience and business reliability, Open-E has become the technology partner of choice for industry-leading IT companies.

For further information about Open-E, its products and partners, visit http://www.open-e.com/

About the Open-E JovianDSS Server Certification

Open-E JovianDSS delivers software-defined storage which results in a wide variety of different hardware requirements such as performance range, capacity capability, and connectivity. To ensure compatibility and robust storage environments, all selected partners offer storage systems which are tested, benchmarked and certified by Open-E. This way, customers are able to use solutions that require exceptional security and redundancy, without compromising performance.