



## ES-8700 JDSS

Benefit from scalable ZFS data storage with EUROstor's ES-8700 JDSS and Open-E JovianDSS. This software-defined storage solution is well-suited for a wide range of applications. It caters perfectly to the needs of enterprises that are looking to deploy a flexible storage configuration which can be expanded to a high availability cluster. EUROstor and Open-E can look back on a long-term strategic partnership. As a Platinum Partner, EUROstor has always been working hand in hand with Open-E to develop and deliver innovative data storage solutions. In fact, EUROstor supports worldwide enterprises in managing and protecting their storage with more than 300 cluster installations to date.

By partnering with EUROstor and Open-E, you receive highly efficient and reliable storage solutions that offer:

- Great adaptability
- Tiered and all-flash storage systems
- High IOPS through RAM and SSD caching
- Superb expandability with EUROstor's high-density JBODs – without downtime

EUROstor's ES-8700 JDSS offers not only great features, but also great flexibility – thanks to its modular architecture.



- › Enhanced Storage Performance
- › Tiered RAM and SSD cache
- › Data integrity check
- › Data compression and in-line data deduplication
- › Thin provisioning and unlimited number of snapshots and clones
- › Simplified management
- › Flexible scalability
- › Hardware independence

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But even with a standard configuration with nearline HDDs and SSDs for caching, you will be able to achieve high IOPS at a reasonable cost. Combined with high-performance Mellanox 40/56Gb Ethernet network cards (which were certified separately), the ES-8700 JDSS' modularity enables easy upgrading to high-availability cluster solutions.

Apart from great hardware and software, successful management of a storage environment depends on reliable technical support at every stage: from designing a solution and planning its implementation up to deployment and maintenance. EUROstor ensures that all your support needs are met thanks to a team of experienced technical engineers who are certified and trained for Open-E JovianDSS. EUROstor offers the following advanced support options for its ES-8700 JDSS:

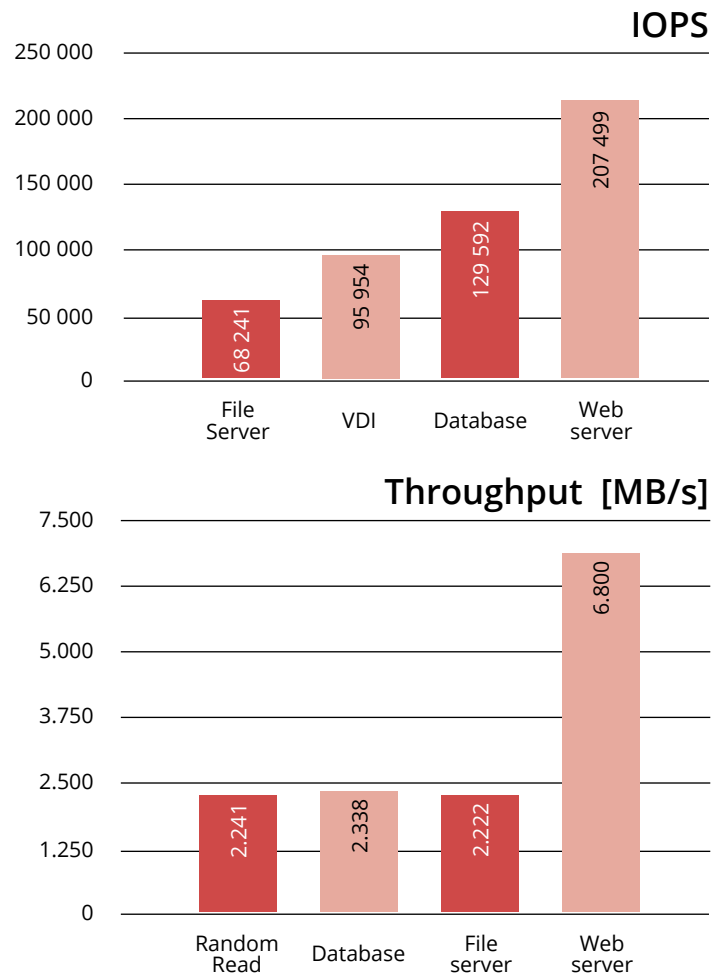
- **Next-business-day on-site service for hardware**
- **Up to 5 years of warranty**
- **24/7 software support**

## Enhanced storage performance

Today enterprise storage has to provide large capacities; it needs to be fast, affordable and include reliable support. This is exactly what EUROstor's ES-8700 JDSS offers: these Open-E JovianDSS based storage solutions are innovative Hybrid Storage Systems that can combine the capacity of HDDs with the performance of SSDs in a single solution. In doing so, they offer high performance while lowering cost. EUROstor's ES-8700 JDSS provides an overall efficiency boost and increased cache performance through capacity optimization technologies and advanced tiered SSD and RAM caching. Moreover, powerful tuning tools allow the ES-8700 JDSS systems to optimize performance equally for I/O heavy databases and high throughput videos. The ES-8700 JDSS uses thin provisioning to improve storage utilization and eliminate the cost of unused storage space. You get a highly scalable solution that allows you to simply add physical disks as your data grows. In addition, EUROstor's ES-8700 JDSS systems allow an unlimited number of snapshots and clones – greatly simplifying backups, replications and data recreation in case of accidental deletes and viruses. These are a must-have option for effective disaster recovery scenarios and provide scalability for virtual networks.

## Simplified management

Managing Open-E JovianDSS and its extensive features is easy and intuitive compared to many competing solutions. The WebGUI provides a quick overview and simple 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. when creating iSCSI targets or when expanding the size of your storage. This way, you are able to quickly and easily manage the ES-8700 JDSS with Open-E JovianDSS, keeping manual actions by the storage administrator at a minimum.



## Hardware independence

Commodity hardware can save you a significant amount of money and it allows customizing a server system specifically 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 you benefit from the best hardware compatibility on the market and the ES-8700 JDSS uses hardware components which are ideal for performance, reliability and compatibility. This way, you can choose the hardware you need – depending on price, performance, quality and availability – and you won't waste money on unnecessary components. Since you are not tied to one manufacturer, the components can be easily upgraded or exchanged. That is true hardware independence.

## Flexible scalability

The ES-8700 JDSS enables you to experience unlimited flexibility and to minimize the unappreciated downtime. Open-E JovianDSS uses a 128-bit file system that includes unlimited snapshots for easy backup, unlimited clones for easy duplication, unlimited capacity with volume sizes up to one zettabyte, as well as an unlimited amount of disks which can be increased on the fly without effort by using thin provisioning. There are no limitations and you can easily control the total cost of ownership and expand your storage infrastructure as your data grows.

# Service and support that you need



## Data integrity check

The ES-8700 JDSS storage system effectively detects data corruption, as even minor integrity violations could cause loss of data. The ES-8700 JDSS ensures reliability by checksumming individual blocks of data. Once faulty blocks have been detected they are automatically rewritten. If the same error is found several times, the data blocks are moved to different parts of the HDD. Each read/write is checked automatically and you can schedule to perform additional checks on blocks that are not accessed. All actions are done in atomic writes to ensure consistency of your data and to avoid data loss, even during power outages.

## Tiered RAM and SSD cache

The Open-E JovianDSS-based ES-8700 JDSS works as a tiered storage environment - significantly speeding up access to frequently accessed files. It uses a caching algorithm to cache "often used" and "recently used" data separately, and it provides the best performance for your storage by tiering hot data between RAM and SSD Cache. With the ES-8700 JDSS, data is always saved on HDDs and only hot data is stored in RAM and SSD to ensure data safety and to increase performance.

## In-line data deduplication

EUROstor's ES-8700 JDSS based on Open-E Jovian DSS offers data compression for minimizing storage capacity usage. The systems offer resource-friendly compression protocols at medium compression rates (lz4) as well as protocols that are able to achieve very high compression rates for archiving or backup (such as gzip-9). Additionally the in-line deduplication feature allows to remove redundant. The software checks each block for redundancy and if it finds one, 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 ES-8700 JDSS 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.

## Thin provisioning and unlimited number of snapshots and clones

The Open-E JovianDSS-based ES-8700 JDSS uses thin provisioning to improve your storage utilization by allocating just the exact amount of server space at the time it is required. You'll eliminate the cost of unused storage space and never again have to pre-allocate storage up front and buy too much hardware. In the ES-8700 JDSS there is no need for evaluating storage requirements and take the risk of rebuilding the entire system when it runs out of space. With this system it is easy to manage storage capacity and set notifications when physical space shrinks. This is a highly scalable solution, just add physical disks as your data grows.



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## Table Hardware information

	Default configuration	Options
CPU	2 x Intel® Xeon® Processor E5-2630 v3 2.40GHz	Intel® E5-2600 v3 family (up to 18 cores per CPU)
RAM	128GB DDR4 2133MHz	Up to 1TB DDR4 RAM
RAW Capacity	6.6TB	Scalable to Petabytes
Read Cache	400GB	All certified SATA/SAS SSDs
Write Log	400GB mirrored	All certified SATA/SAS SSDs
Hard drive interface	SAS 6Gb/s	SAS 12Gb/s
Network Interface	4 x 10GbE	1/10/40/56GbE optional (RJ-45 or SFP+ / QSFP)
Form factor	2U Rack (17.2" x 24.8" x 3.5")	Different chassis sizes available
Weight	24kg	-
Power	2 x 920W AC Platinum	-
Fan	3 x 80mm Hot-Swap fans	-

## About EUROstor

EUROstor has been manufacturer of storage systems for more than 10 years, located in Filderstadt near Stuttgart (Germany). Main products are EUROstor RAID systems and server based storage solutions sold to professional end users all over Europe.

### Contact Information:

**EUROstor GmbH**  
Hornbergstrasse 39  
70794 Filderstadt  
Germany

E-mail: [sales@EUROstor.com](mailto:sales@EUROstor.com)  
Website: [www.EUROstor.com](http://www.EUROstor.com)  
Tel.: +49 711/707091-70  
Fax: +49 711/707091-60



## 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.