Broadberry

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Broadberry CyberStore JDSS

With Broadberry CyberStore JDSS organizations can easily implement High Performance Storage. Being based on the proven Open-E JovianDSS software, the solution ensures highest data integrity, redundancy, unlimited scalability and high IOPS - all in one system. It addresses the needs of enterprise users seeking a unified NAS and SAN solution which is high-performing and adaptable to different needs.

Suitable applications:
- **Databases**
- **Virtualization**
- **Mass storage**
- **Backups**

Broadberry CyberStore JDSS takes advantage of the ZFS-on-Linux architecture and easily manages storage resources with intuitive navigation, predefined profiles and scriptable

REST API. The storage system is VMware Ready and certified for the latest vSphere 6.0 and has been tested and approved for integration with Citrix and Hyper-V.

In addition to great hardware and software, you can count on a reliable technical support directly from Broadberry, helping you from designing and implementing the solution, to deployment and maintenance. You can sleep easy knowing that you get 24/7 hardware and software support from experienced technical engineers certified and trained for Open-E JovianDSS.

Open-E and Broadberry have been strategic partners for over 10 years. Together we were able to help multiple businesses with constant development and delivery of innovative data storage solutions.

› Guaranteed data protection
› Enhanced storage performance
› Flexible scalability
› Simplified management
› Data integrity check
› In-line data deduplication
› Tiered RAM and SSD Cache
› Unlimited number of snapshots and clones

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Guaranteed data protection

Data is your most important resource. This is why the Open-E JovianDSS-based Broadberry CyberStore JDSS 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 Broadberry CyberStore JDSS has to offer. Open-E JovianDSS-based Broadberry CyberStore JDSS 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, Broadberry CyberStore JDSS 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.

Flexible scalability

The Broadberry CyberStore JDSS will let you experience unlimited flexibility and minimize 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 Zetabyte, as well as unlimited amount of disks which can be increased on the fly without effort by using thin provisioning. There are no limitations and you may easily control the total cost of ownership and expand your storage infrastructure as data grows.

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 Broadberry CyberStore JDSS with Open-E JovianDSS, barely involving actions of a storage administrator.

Data integrity check

The Broadberry CyberStore JDSS storage system effectively detects data corruption, as even minor integrity violations could cause loss of data. Broadberry CyberStore JDSS ensures reliability by check-summing individual blocks of data and 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 plus you can schedule to perform checks on not accessed blocks. All actions are done in atomic writes to ensure consistency of your data and to reduce data loss, even during power cuts.
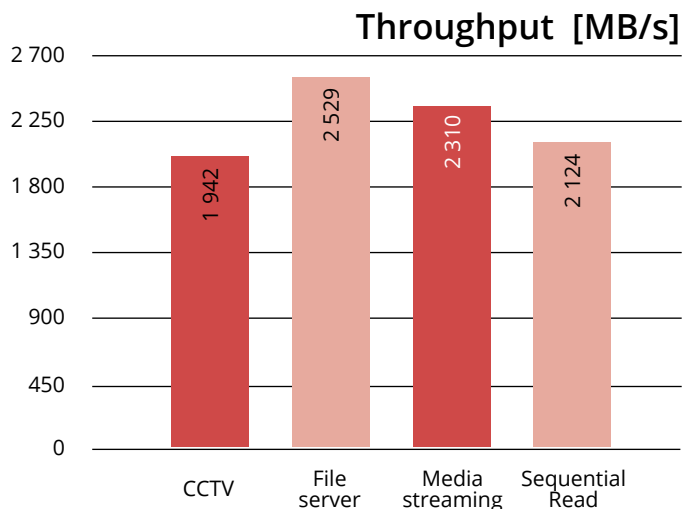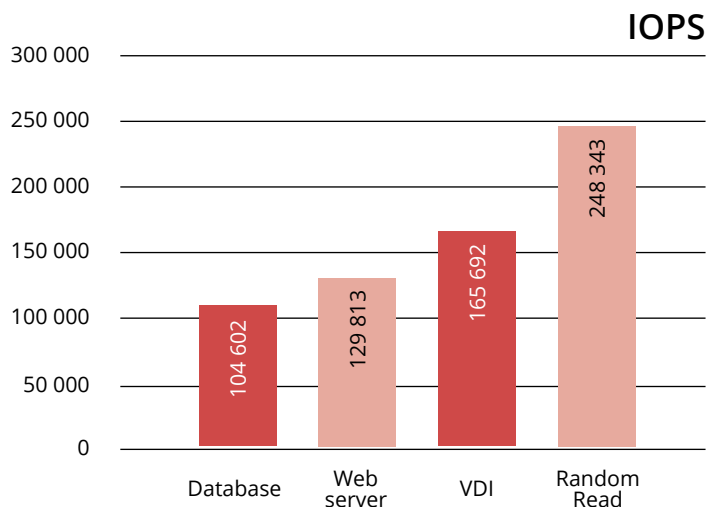
Tiered RAM and SSD Cache

Open-E JovianDSS-based Broadberry CyberStore JDSS 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 Broadberry CyberStore JDSS data is always saved on HDDs and only Hot Data is stored in RAM and SSD to ensure data safety and increase performance.

In-line data deduplication

The in-line deduplication feature of Open-E JovianDSS-based Broadberry CyberStore JDSS 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 Broadberry CyberStore 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.

Unlimited number of snapshots and clones

Every Open-E JovianDSS-based Broadberry CyberStore JDSS allows an unlimited number of snapshots and clones – greatly simplifying back-ups, replications and data recreation in case of accidental deletes or viruses. Snapshots are read-only points-in-time and allow for easy roll-back. They are a must-have option for effective disaster recovery scenarios and in Broadberry CyberStore JDSS you may schedule snapshots for months, weeks, hours or even minutes. Whereas, a clone is a writable copy of a snapshot and allows to easily duplicate virtual machines and scale out for virtual networks instantly and without duplicating data.

IOPS

Category	IOPS
Database	104 602
Web server	129 813
VDI	165 692
Random Read	248 343

Throughput [MB/s]

Category	Throughput
CCTV	1 942
File server	2 529
Media streaming	2 310
Sequential Read	2 124

Broadberry CyberStore JDSS details

Hardware information:

	Default configuration	Options
CPU	2 x Intel® Xeon® Processor E6 2660 v3 2.60 GHz	Xeon E5 2609 v3, Xeon E5 2620 v3, Xeon E5 2640 v3
RAM	128GB DDR4 RAM	32GB, 64GB, 256GB
RAW capacity	96TB	Various drive options from 10 to 1000TB
Read cache	200GB	100GB, 400GB, 800GB
Write log	100GB (redundant)	200GB, 400GB, 800GB (redundant)
Hard drive interface	SAS 6Gb/s	-
Network interface	2 x 10GbE NIC (copper)	1GbE, 10GbE, 40GbE
Form factor	2U Rack (16.93" x 27.95" x 3.44")	-
Weight		-
Power	740W redundant power supplies Platinum Level (94%)	-
Power consumption	Idle: 130W Heavy load: 515W	-
Fan	3 x redundant and hot-swap cooling fans	-

About Broadberry

Established in 1989, Broadberry Data Systems is a leading manufacturer of high-end custom rackmount servers, NAS and iSCSI SAN storage servers and high performance graphics workstations and has offices in both the United States and Europe. We supply a variety of products to suit all your business needs. Specializing in rackmount servers, high capacity storage servers, high performance workstations and bespoke rackmount server configurations, we can custom configure a system to fit your every business demand.

Setting the standard for quality, reliability, and performance, Broadberry Data Systems provides the high-end computer user with the superiority and the dependability needed along with an affordable price. Every system is custom configured and built to order, ensuring customers only get the most up to date systems.

Our goal is to develop and deliver the highest quality, proven, reliable and cost effective solutions to our customers through continuous product development and system design.

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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.