bluechip STORAGEline R52204s – Single Node

As a long-term Open-E Platinum Partner, bluechip has established a solution for companies that require reliable storage to virtualize their servers and implement a faultless and highly available storage infrastructure. The bluechip STORAGEline R52204s – Single Node hardware combined with the ZFS-based Open-E JovianDSS data storage software allows users to set up a powerful and cost-efficient NAS system based on iSCSI or Fibre Channel.

Not only can the server be effortlessly incorporated into the existing company network, but it also fulfills the storage demands in virtualized environments. All bluechip STORAGEline R52204s – Single Nodes are built with Intel® Xeon® Processors. The bluechip STORAGEline R52204s – Single Node guarantees secure data storage for the entire company environment.

With bluechip's complex know-how of Open-E's products, they are able to offer technical support for customers, whether it concerns the initial installation of the server, day-to-day actions like maintenance or capacity extensions.

- Guaranteed data protection
- Hardware independence
- Optimal resource utilization
- Flexible scalability
- Data integrity check
- Tiered RAM and SSD Cache
- Data compression and in-line deduplication
- Thin provisioning and unlimited number of Snapshots

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Guaranteed data protection

Data is your most important resource. This is why the Open-E JovianDSS-based bluechip STORAGEline R52204s – Single Node 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.

Optimal resource utilization

The bluechip STORAGEline R52204s – Single Node fully utilizes your storage resources thanks to many high-end features included in Open-E JovianDSS. These features are especially crucial when deploying virtual environments. With deduplication and compression you are able to virtually increase your storage size and use thin provisioning to easily grow physical storage capacity without downtime. More efficient use of disk space also allows for longer disk retention periods. Tiered caching will allow reaching high performance values from all disks which can be managed and monitored in the bluechip STORAGEline R52204s – Single Node. This server fully leverages hybrid storage, combining high performance and high capacity at an affordable price.

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 Jovian DSS we benefit from the best hardware compatibility on the market and the bluechip STORAGEline R52204s – Single Node uses hardware components which are ideal for performance, reliability and compatibility. This way we can

Flexible scalability

The bluechip STORAGEline R52204s – Single Node 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 Zettabyte, 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

Data integrity check

The bluechip STORAGEline R52204s – Single Node storage system effectively detects data corruption, as even minor integrity violations could cause loss of data. STORAGEline R52204s – Single Node 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.

Data compression and in-line deduplication

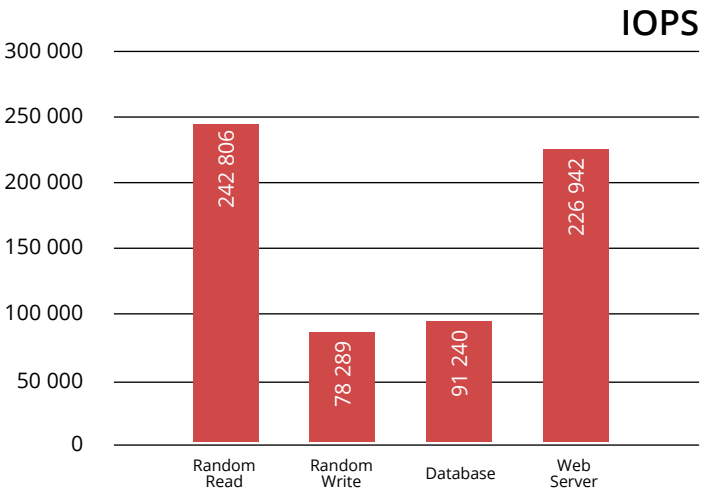
The bluechip STORAGEline R52204s – Single Node offers data compression for minimizing storage capacity usage and ultimately boosting performance and taking less space on your storage. Find resource-friendly compression protocols (lz4) with low system resource utilization at medium compression rates, but also protocols that are able to achieve very high rates for archiving or backup (as gzip-9). The in-line deduplication feature in the bluechip STORAGEline R52204s – Single Node removes redundant data and minimizes 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 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.

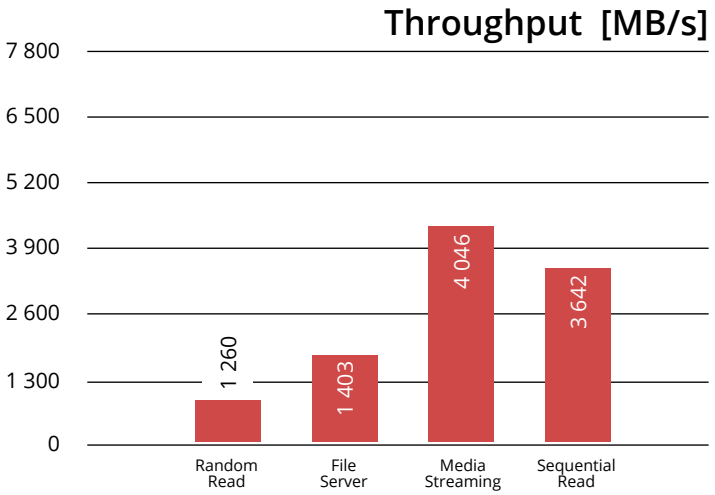
Tiered RAM and SSD Cache

Open-E JovianDSS-based bluechip STORAGEline R52204s – Single Node 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 STORAGEline R52204s – Single Node data is always saved on HDDs and only Hot Data is stored in RAM and SSD to ensure data safety and increase performance.

Thin provisioning and unlimited number of snapshots

The bluechip STORAGEline R52204s – Single Node uses thin provisioning to improve your storage utilization by allocating an exact amount of server space at the required time. You'll eliminate the cost of unused storage space and never again have to pre-allocate storage up front and buy too much hardware. There is no need for evaluating storage requirements and taking the risk of rebuilding the entire system when it runs out of space. Also, every bluechip STORAGEline R52204s – Single Node allows an unlimited number of snapshots – greatly simplifying backups, replications and data recreation in case of accidental deletes or viruses. Snapshots are a must-have option for effective disaster recovery scenarios. Schedule snapshots for months, weeks, hours or even minutes. With the bluechip STORAGEline R52204s – Single Node it is easy to manage storage capacity and set notifications when physical space shrinks.





Hardware details

	Default configuration
Motherboard	Supermicro X11DPi-N
CPU	2 x Intel® Xeon® Gold 5122 Processor 3.60GHz
RAM	8 x 16GB Kingston KSM26RS4/16HAI
Storage raw capacity	6TB
HDDs	20 x 300GB Seagate ST300MM0048
Read cache	3 x Samsung PM1633a
Write log	1 x 1TB Intel® SSDPE2KX010T7
Hard drive interface	1 x Microsemi Adaptec SmartHBA 2100-4i4e
Network interface	1 x Intel® Ethernet Controller X722 for 1GbE 2 x Intel® Ethernet Converged Network Adapter X520-DA2 2 x Intel® Ethernet Converged Network Adapter X550T
Form factor	2U

Individual configurations are available on: https://www.bluechip.de/konfigurator/server/

About bluechip

For more than 25 years, bluechip has developed, built and sold servers, workstations, desktop PCs, laptops and tablet PCs, tailored to individual customer requirements, for both simple and sophisticated business needs from a wide variety of fields. We are now able to refer to several hundred thousand satisfied users. You can put together your desired system very simply using the online configurator in the bluechip online shop – or ask your personal bluechip sales contact. In addition, we provide our specialist retailers, systems houses and resellers with a broad-based portfolio of cloud services, peripheral devices, laptops and components.

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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 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.