Running Virtual Machines

with

≡Broadberry

open-e ∞
JovianDSS

Open-E JovianDSS is a ZFS- and Linux-based Data Storage Software designed especially for enterprise-sized Software Defined Storage environments. Combined with VMware vSphere ESXi, it is a cost-effective, flexible and scalable solution for virtualization that offers highest performance and data efficiency.

Open-E JovianDSS based virtualized storage setups with High Availability and/or a sophisticated Hyper-converged Infrastructure offer the best value and quality due to:

- ✔ **Storage and Backup for virtual environments**
- ✔ **Fast implementation and ease of use**
- ✔ **VMware Ready™ Storage certification**
- ✔ **Cost-effectiveness**
- ✔ **Accepted solution on the market**

Software solution with Storage and Backup for virtual environments

✔ Data storage software that includes On- and Off-site Data Protection and the optional High Availability cluster feature

✔ Can be implemented as a stand-alone data storage server or as Storage Virtual Appliance (SVA)

✔ Enables consistent backup of Virtual Machines and user data, including databases, and provides advanced schedules and retention plans - lowering RPO (Recovery Point Objective)

✔ Safe and reliable thanks to advanced data protection mechanisms of underlying ZFS file system

Fast implementation and ease of use

✔ Can be installed as a storage for ESXi within minutes and gets connected in a few steps only

✔ Intuitive WebGUI simplifies storage administration

✔ Professional technical support for the complete storage setup including VMware implementation

VMware Ready™ Storage certified

✔ Storage Certification for VMware vSphere® 5.5, 6.0, 6.5, 6.7 and 7.0

✔ Works effectively with VMware infrastructures

✔ Advanced solutions with vSphere integrated and validated, including disaster recovery, multipathing, offload capabilities, High Availability clustering and storage management
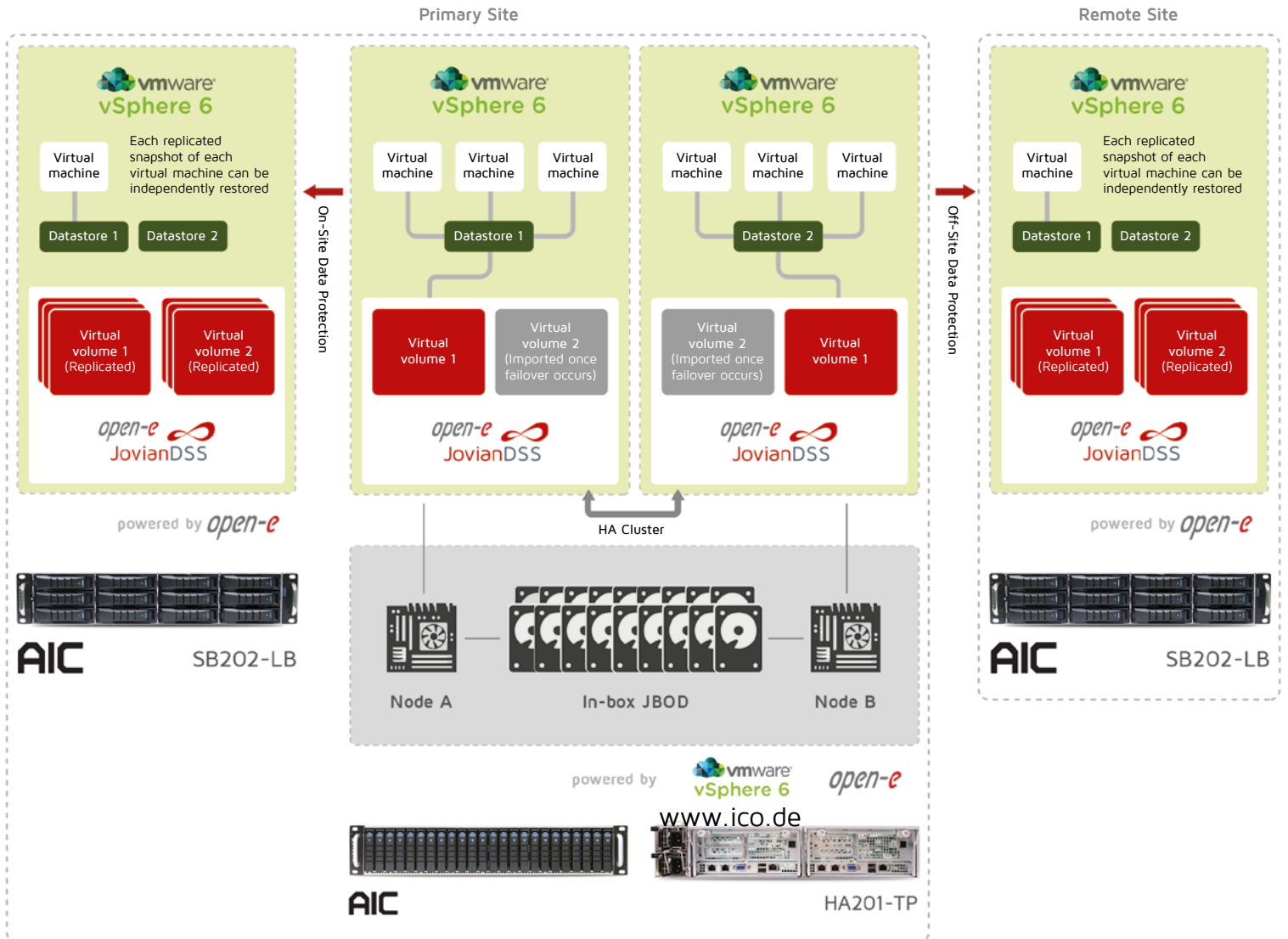
Cost-effective

✔ Inexpensive product licenses and technical support options, compared to other storage software (Nexenta, Datacore, Falconstor, ...)

✔ The licensing system is based on the capacity of each storage environment, and designed to be as fair as possible for users

✔ Lowers Total Cost of Ownership (TCO) through built-in storage virtualization with thin, thick and over-provisioning and deduplication

✔ Free, built-in backup feature, no third party software necessary

Accepted on the market

✔ 95% of Open-E customers use our software for virtualization with VMware

✔ 37.000 Open-E software installations in 100+ countries to date

✔ 400+ reseller and distributor partners worldwide

Two-node Hyper-converged Solution
based on AIC HA201-TP with
On- & Off-site Data Protection

By using Open-E JovianDSS with VMware vSphere® 5.5, 6.0, 6.5, 6.7 and 7.0, Enterprises can achieve Business Continuity and architect HA Storage Setups.

Primary Site

Remote Site

vSphere 6

Virtual machine — Each replicated snapshot of each virtual machine can be independently restored

Datastore 1 — Datastore 2

On-Site Data Protection

Virtual volume 1 (Replicated) — Virtual volume 2 (Replicated)

powered by open-e

AIC — SB202-LB

vSphere 6

Virtual machine — Virtual machine — Virtual machine

Datastore 1

Virtual volume 1 — Virtual volume 2 (Imported once failover occurs)

vSphere 6

Virtual machine — Virtual machine — Virtual machine

Datastore 2

Virtual volume 2 (Imported once failover occurs) — Virtual volume 1

HA Cluster

Off-Site Data Protection

vSphere 6

Virtual machine — Each replicated snapshot of each virtual machine can be independently restored

Datastore 1 — Datastore 2

Virtual volume 1 (Replicated) — Virtual volume 2 (Replicated)

powered by open-e

AIC — SB202-LB

Node A — In-box JBOD — Node B

powered by vSphere 6 — open-e

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AIC — HA201-TP

What is On- & Off-site Data Protection in Open-E JovianDSS?

Backup of everything
All running virtual machines with applications and data, even databases backups are consistent.

Solved problem of backup window
Backup window reduced to minutes, only data changes are replicated every interval.

Protection against Ransomware
Very frequent snapshots with instant access to all data provide quick way to roll-back to the state before a virus attack.

Instant access to and restore of previous data versions
Old data versions can be accessed and restored quickly. Via SMB every user has direct access to „Previous Versions" without the help of an administrator.

Optional removal and rotation of backup media
Thanks to Export/Import users can safely remove the backup media (disks), rotate with other sets, or ship to another location.

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✔ **In regard to VMware, what does Open-E JovianDSS do exactly?**
Open-E JovianDSS provides storage appliance - a physical data storage server or Storage Virtual Appliance, accessed via iSCSI, FC and/or NFS protocol. Additionally, the storage has a built-in native backup and recovery functionality.

✔ **Is Open-E JovianDSS fully compatible with VMware ESXi / vCenter?**
Yes. The compatibility is confirmed through "VMware Ready for Storage" certification.

✔ **How high is the manageable storage capacity in Open- E JovianDSS?**
Open-E JovianDSS is able to scale up to zettabytes of storage, although the maximum tested manageable storage capacity up to date is 5PB (petabytes) of RAW storage.

✔ **How does Open-E JovianDSS protect my data?**
Open-E JovianDSS guarantees highest data protection thanks to a set of advanced features that provide **Data Integrity with JovianDSS, for example**:
   • Data and Metadata Check-summing
   • Self-Healing: Detecting and correcting Silent-Data-Errors with Scrub utility
   • Atomic Transaction Writes: continuously consistent data, no need for repairing the file system

✔ **How does a High Availability Storage Cluster setup consisting of VMware and Open-E JovianDSS work?**
Open-E JovianDSS cluster constantly monitors storage for IO errors. In casy any errors are detected, the software moves the pool and its configured virtual IP from the affected node to another one. This operation is completely transparent for VMware machines and ensures the data are still available, even after a severe hardware failure of one of Open-E JovianDSS nodes.

✔ **Can Open-E JovianDSS be used as an alternative for vSAN?**
Yes, Open-E JovianDSS can be used as a Storage Virtual Appliance (SVA) which is a solution that is equivalent to VMware vSAN. JovianDSS can work as a shared storage and as a part of a hyperconverged environment.

✔ **Can I extend the capacity of the VMware later on and how does this work with Open-E JovianDSS?**
You can freely add more space to volumes and datastores as you go on the VMware side. Also, Open-E JovianDSS contains a functionality that enables adding additional pools, data groups, zvols or datasets.

✔ **Is it possible to run Open-E JovianDSS as a virtual machine on VMware ESXi?**
Yes. Open-E JovianDSS contains built-in VMware Tools, including VMware storage and network drivers.

✔ **Performance is not as critical as a stable system. How stable is your software in a virtual environment and how can you confirm it?**
Each released version went through detailed and extensive QA tests. Additionally, we conduct a Hardware Certification Program which aims to prove that certain hardware will work stable with Open-E JovianDSS software. There is a wide network of Open-E clients who work with Open-E JovianDSS as storage for VMWare and it is proven that such systems are running without any interruption. Apart from that, Open-E JovianDSS is based on ZFS which is recognized as one of the most stable file systems.

✔ **Can I build cloud solutions with Open-E JovianDSS and VMware?**
Yes, JovianDSS can be used as a storage backend for cloud solutions, since it works with ESXi, which is a part of vCloud.

✔ **My storage team is interested in testing Open-E JovianDSS. What tools do you have for them?**
We offer a free 60-day **Open-E JovianDSS Trial** for single node or high availability cluster configurations. Additionally, you can use a **free Storage License Calculator** which helps calculate storage capacity depending on configuration and displays the exact license required for your storage setup with Open-E JovianDSS. For further assistance, you can contact pre-sales technical support.

✔ **What backup products do you support?**
Open-E JovianDSS features a service called On- & Off-site Data Protection. It is based on snapshots and retention plans and can be configured with local or remote backup location.
On- & Off-site Data Protection supports consistent backup for VMware virtual machines. Clients are also allowed to use third party backup solutions which do not involve using internal backup clients (for example Veeam).

✔ **How long is the reaction time once we report a support case?**
SLA (Service Level Agreement) of support team is 4 hours for Premium support level. All Customers are eligible to contact the Support Team via phone or email as long as the support licence is valid. Usually Engineers are able to answer the ticket within 30 minutes, depending on the complexity of the registered case.