StorMagic

DATA SHEET

STORMAGIC SvSAN
WITH KVM HYPERVISORS

STORMAGIC SvSAN

StorMagic SvSAN is the virtual SAN that makes the complex world of virtualized storage simple. Perfect for edge computing environments, the technology is based on software-defined storage that eliminates the need for physical SANs. SvSAN is designed to be very simple to install and manage whether deployed as part of a hyperconverged solution or as a storage-only target for any server environment.

SvSAN is installed as a virtual storage appliance (VSA) on top of a hypervisor, and creates highly available shared storage by synchronously mirroring

data between two server nodes. SvSAN runs on any x86 server and can be deployed on either VMware vSphere, Microsoft Hyper-V or Linux KVM hypervisors. This document outlines the benefits and details of using StorMagic SvSAN specifically with open-source KVM hypervisors.

KVM HYPERVISORS

Linux KVM (Kernel Virtual Machine) hypervisors are becoming an increasingly popular choice for organizations looking to virtualize their IT infrastructure. As open-source software, with a highly active user and support community, a KVM hypervisor provides organizations with a free, lightweight solution that isn't tied
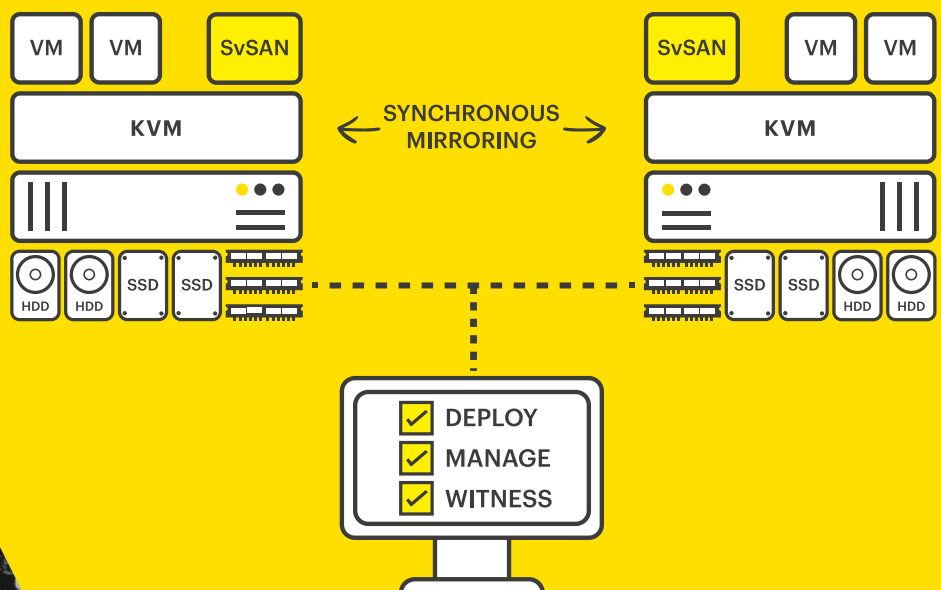
A typical two-node SvSAN configuration

to ongoing maintenance or upgrade costs. Furthermore, a KVM hypervisor enables the flexibility to only deploy features that are needed in that environment. The many built-in features on paid hypervisors add unnecessary complexity and cost. Features that might not come with standard distributions of KVM can be added by leveraging third party open-source tools as required, enabling organizations to customize their hypervisor to their exact requirements.

The lightweight, cost-effective and flexible architecture of KVM mirrors StorMagic SvSAN's design and capabilities, making the two a perfect fit for many environments. However, an important difference to bear in mind between paid and free hypervisors is that free versions don't have built-in management interfaces. To address this, open-source GUI-based management tools like oVirt or Red Hat Virtualization (RHV) are used.

WHY COMBINE SvSAN WITH KVM?

Deploying StorMagic SvSAN on KVM hypervisors enables an organization to create hyperconverged infrastructure at a surprisingly low cost. With fast, scripted deployment, integration guides and easy management using oVirt or RHV, it is a simple, hassle-free installation process. The benefits of avoiding the 'hypervisor tax' are amplified by SvSAN's lightweight architecture and low hardware requirements. All of this ensures an organization can build a solution on any x86 server with any combination of storage inside. This flexibility gives an IT team more choice and more control over their infrastructure, enabling them to tailor it to precise requirements.

REQUIREMENTS

SvSAN has very low system requirements. The minimum tolerances for operating SvSAN when using a KVM hypervisor are shown in the table below. Additionally, any x86 server, any CPU and any storage type can be used when deploying SvSAN onto a KVM cluster.

CPU	1 x virtual CPU core[1] ❡ 2 GHz or higher reserved
Memory	1GB RAM[2]
Disk	2 x virtual storage devices used by VSA ❡ 1 x 512Mb Boot Device ❡ 1 x 20Gb Journal Disk
Network	1 x 1Gb Ethernet ❡ Multiple interfaces required for resiliency ❡ 10Gb Ethernet supported ❡ Jumbo frames supported

[1] When using SvSAN's data encryption feature to encrypt data, 2+ virtual CPUs are recommended
[2] Additional RAM may be required when caching is enabled

DISTRIBUTIONS

StorMagic SvSAN is available on CentOS, RHEL (Red Hat Enterprise Linux) distributions of Linux KVM. Furthermore, SvSAN has been officially tested and certified on Red Hat. The specific versions of these distributions that are compatible with SvSAN are detailed in the table below. Please note that SvSAN's compatibility with these distributions was made available from SvSAN Version 6.2 Patch 5 and onwards.

Linux Distribution		SvSAN Version	
		6.2	6.2 U5
CentOS	7.5	●	●
	7.6	●	●
	7.7		●
	7.8		●
	8.0	●	●
	8.1		●
	8.2		●
RHEL	7.7		●
	7.8		●
	8.1		●
	8.2		●

FEATURES OF A KVM HYPERVISOR

An important consideration when deciding whether to use an open-source KVM hypervisor is its range of features, which will always be more limited than a paid hypervisor such as vSphere

or Hyper-V. Nevertheless, by pairing a KVM hypervisor with a management interface such as oVirt or RHV, an organization can still enjoy key hypervisor features such as:

- Virtual machine high availability and failover
- Virtual machine migration
- Virtual machine snapshots
- Virtual machine resource hot add
- Virtual machine load balancing
- A centralized, simple management interface

Should an organization require additional features not offered 'as standard' within oVirt or RHV, then there is the potential for leveraging third party plugins to provide additional functionality. Because of its open-source architecture, a KVM hypervisor can be supplemented with additional tools that enable the creation of a custom-built solution that delivers exactly what an organization requires. Thus, with the correct level of expertise, an organization can build an open-source hypervisor solution using KVM that is a like-for-like match for a paid-for alternative.

FURTHER READING

SvSAN's features, capabilities and architecture, right down to the code are the same regardless of what hypervisor it is installed upon. The key benefit of using a KVM hypervisor with SvSAN is the significant cost savings that can be realized. Read more about SvSAN and its features and requirements **in the product data sheet**. You can take a detailed look at how SvSAN is deployed and managed through the comprehensive **deployment guide and manual**.

Explore some of the many features of SvSAN such as **Predictive Storage Caching,** or the **witness service** in more depth with our **extensive library of white papers**.

If your organization is ready to test SvSAN, you can do so free of charge, with no obligations. Simply download our **fully-functioning free trial of SvSAN** from the website.

If you still have questions, or you'd like a demo of SvSAN you can contact the StorMagic team directly by sending an email to **sales@stormagic.com**

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