StarWind Virtual SAN®

FREE vs. PAID

AUGUST 2018

WHITE PAPER

BRIEF:

StarWind Virtual SAN® is a virtual shared storage that comes in two scenarios – for vSphere and for Hyper-V. StarWind® eliminates any need for a SAN or NAS or other physical shared storage. StarWind VSAN for Hyper-V installs on top of virtualized or bare metal servers, whereas StarWind VSAN for vSphere comes as a pre-packaged Linux VM. The software "mirrors" internal storage between hypervisor servers to create a fault-tolerant shared storage pool. It integrates into an operating system or hypervisor for performance and simplicity of use.

When using StarWind Virtual SAN to manage your business data, there are two options to consider, free and paid: install and "self-support" it or... Invest into our engineers to configure and "babysit" your virtualization infrastructure completely.

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Technical Support and Services

If you have questions about installing or using this software, check this and other documents first - you will find answers to most of your questions on the Technical Papers webpage or in StarWind Forum. If you need further assistance, please contact us.

About StarWind

StarWind is a pioneer in virtualization and a company that participated in the development of this technology from its earliest days. Now the company is among the leading vendors of software and hardware hyper-converged solutions. The company's core product is the years-proven StarWind Virtual SAN, which allows SMB and ROBO to benefit from cost-efficient hyperconverged IT infrastructure. Having earned a reputation of reliability, StarWind created a hardware product line and is actively tapping into hyperconverged and storage appliances market. In 2016, Gartner named StarWind "Cool Vendor for Compute Platforms" following the success and popularity of StarWind HyperConverged Appliance. StarWind partners with world-known companies: Microsoft, VMware, Veeam, Intel, Dell, Mellanox, Citrix, Western Digital, etc.

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Introduction

This document compares commercial and free versions of StarWind Virtual SAN. Commercial version is available in two scenarios – for Hyper-V and for vSphere. Free edition, unlike other vendors' similar offers, which are essentially cut and limited versions of the main products, StarWind Virtual SAN Free is a full-fledged production storage platform. The comparison will reveal the difference between the free vs. paid versions in detail and show the capabilities of different scenarios.

The common thing is that both versions can be configured as the principal storage provider to hyperconverged and converged environments. In the first case, StarWind can be used to virtualize the internal storage of the hyperconverged infrastructure thereby creating Virtual SAN between the clustered servers. Further, the hyperconverged storage can be carved up into new logical volumes. In the second approach, when the environment is separated into compute and storage resources, StarWind pools the resources of the storage servers and thereby builds the dedicated SAN/NAS storage cluster.

This white paper is intended for virtualization admins and StarWind users who need information on the commercial and free versions .

A full set of up-to-date technical documentation can always be found here, or by pressing the **Help** button in the StarWind Management Console.

For any technical inquiries please visit our online community, Frequently Asked Questions page, or use the support form to contact our technical support department.

StarWind Virtual SAN for Hyper-V

Paid version is an "a la carte"solution that comes with a few "bonus" features and effective support service. With commercial StarWind Virtual SAN for Hyper-V, you are in the caring hands of StarWind engineering team, who can assist you 24/7 with any issues.

Being an IT director or senior system administrator, CFO, or other decision maker in business is a complex task. It is essential to know how to estimate budget and optimize operational expenses of the company, care about uptime and general availability of the company's mission critical IT infrastructure, and actively look for highly performing, well-supported, and still inexpensive storage built with virtualization in mind. Yes? Then StarWind offers a proper solution to this challenge! A storage with truly Enterprise features, highest possible performance, unbeatable support plan, and strict Service Level Agreements.

Use cases include:

- Shared storage for Microsoft Hyper-V VMs and SQL Server DBs (HA iSCSI & CA SMB 3.1.1)
- Shared storage for Microsoft Failover Clusters, Exchange, Oracle and SAP DBs (HA iSCSI)
- Shared storage for KVM, Citrix XenServer and Xen Project VMs (HA iSCSI & CA SMB 3.1.1)
- HA file server (general purpose file sharing, VDI profiles, backups etc.) (SMB 3.1.1 & NFS 4.1)
- Scalable backup storage (iSCSI & VTL)

StarWind Virtual SAN for vSphere

The new product comes as a prepackaged Linux virtual machine to be installed as a VM on vSphere. As it is aimed at VMware vSphere users it will block any possibility of launching a Hyper-V environment. For now, there is an exploit allowing customers to launch this software on dedicated VMware servers and share storage with multiple servers.

Top-notch support provided. Technically, there is a complete "fire-and-forget" IT solution. Once one pulls the trigger and pays the bills, our qualified support engineers do initial PoC and production setup, they help with picking proper hardware configuration, provide 24/7 support, and, generally speaking, "babysit" your entire IT infrastructure!

Similar to StarWind VSAN for Hyper-V, VSAN for vSphere is a feature-rich software. There are only several exclusions: no LSFS, asynchronous replication and offline deduplication. That is only for now. In future versions, StarWind is planning to upgrade VSAN for vSphere and provide its users with a full set of features not available in other similar solutions on the market.

This version uses two different management interfaces: one for configuring StarWind, and one for configuring the actual virtual machine storage and networking. User has to go to the cockpit first to configure storage and networking. Once that is done, all the management is carried out through StarWind Management Console.

Use cases are:

- Shared storage for VMware vShpere Clusters (HA iSCSI)
- Shared storage for VMware ESXi VMs (HA iSCSI)
- HA storage (VDI, Backups) (HA iSCSI)

StarWind Virtual SAN Free

Free version comes with an unrestricted set of features: multi-tiered server-side caching is available out of the box, scale-up and scale-out are both allowed, VTL is not included.

StarWind Virtual SAN Free also supports any deployment scenario, such as: "Hyper-Converged", "Compute and Storage Separated", and various combinations. In the first scenario, StarWind Virtual SAN Free allows creating a hyperconverged infrastructure by converting the internal storage capacity of the clustered servers into a Virtual SAN. In the second scenario, when the environment is separated into compute and storage components, StarWind Virtual SAN Free can be used to build the dedicated SAN/NAS storage cluster. Free version can be deployed on a bare-metal Windows Server or installed inside a virtual machine.

Unrestricted protocol support. Highly Available iSCSI (including iSER), Continuously Available SMB 3.1.1 shares, and Failover NFS 4.1 mount points are all supported.

StarWind Virtual SAN Free is shipped with a set of ready-to-use PowerShell scripts that would help users to quickly deploy the Virtual SAN infrastructure and configure most of its features. Moreover, any StarWind Free user is allowed to modify existing scripts, create new ones, and share them with others. Finally, the free version doesn't have any synthetic performance limitations, so the resulting performance of this solution stands in line with Enterprise-class storage arrays.

Use cases include:

- Shared storage for Microsoft Hyper-V VMs and SQL Server DBs (HA iSCSI & CA SMB 3.1.1)
- Shared storage for Microsoft Failover Clusters, Exchange, Oracle and SAP DBs (HA iSCSI)
- Shared storage for KVM, Citrix XenServer and Xen Project VMs (HA iSCSI & CA SMB 3.1.1)
- HA file server (general purpose file sharing, VDI profiles, backups) (SMB 3.1.1 & NFS 4.1)
- Shared storage for VMware vShpere Clusters (HA iSCSI)
- Shared storage for VMware ESXi VMs (HA iSCSI)
- HA storage (VDI, Backups) (HA iSCSI)

Free version is intended to be self-supported or community-supported on public discussion forums. Our engineers will still do their best to help you with your possible technical "hiccups", but our delivery here is not guaranteed because of obvious reasons.

Comparison Matrix

Key Points	StarWind Virtual SAN		
	StarWind Virtual SAN for Hyper-V	StarWind Virtual SAN Free	StarWind Virtual SAN for vSphere
Maximum Number of StarWind Nodes	Unlimited		
Maximum number of initiator hosts	Unlimited		
Served Capacity	Unlimited		
License Life Time (TTL)	Perpetual		
Capacity Expansion Options	Scale-Up and Scale-Out		
Served Protocols (NAS & SAN)	**iSCSI** "Active-Active" mode (workload is distributed across all StarWind nodes) MPIO (Multipath I/O, Multipathing) iSER protocol support (RDMA) **SMB 3.1.1** SMB Direct (RDMA) SMB Multichannel SMB Transparent Failover **NFS v4.1** NFS Multichannel NFS over RDMA		

Key Points	StarWind Virtual SAN		
	StarWind Virtual SAN for Hyper-V	StarWind Virtual SAN Free	StarWind Virtual SAN for vSphere
Deployment Scenarios	"Hyper-converged" (Including the ability to run inside hypervisor kernel without a "controller VM") "Compute and Storage Separated"		
Deployment Methods	Windows Application, Windows VM-based, Cloud-based		Linux VM-based, Cloud-based
Supported Hypervisors	Hyper-V, Xen, KVM		vSphere
StarWind Virtual SAN Management Capabilities	Management Console, Web Console, PowerShell, VVOLs, SMI-S	Command line (Windows PowerShell), VVOLs, SMI-S	Management Console, Web Console
Features	All		All except LSFS, asynchronous replication and offline deduplication
Licensing	Standard (1 node, 4 TB), Professional (1 node, 6TB), Enterprise (1 node, unlimited TB), Datacenter (unlimited number of nodes and TB for one location)	n/a	Enterprise (1 node, unlimited TB), Enterprise KIT (3 node, unlimited TB)

Key Points	StarWind Virtual SAN		
	StarWind Virtual SAN for Hyper-V	StarWind Virtual SAN Free	StarWind Virtual SAN for vSphere
Technical Support Assistance (Give us a call to know more as this one is really something special in our Paid version!)	• Pre- and Post-Sale Technical Support via Phone, E-mail, and StarWind Forums • Remote Troubleshooting Sessions • 24/7/365 Premium Support options with 1 Hour Response Time • Strict Service Level Agreements • Dedicated Support Engineer • StarWind Virtual SAN Installation and Configuration Assistance • Hypervisor and 3rd Party Software configuration • StarWind Proactive Support	• Self-Supported or Community-supported on StarWind Forums	• Pre- and Post-Sale Technical Support via Phone, E-mail, and StarWind Forums • Remote Troubleshooting Sessions • 24/7/365 Premium Support options with 1 Hour Response Time • Strict Service Level Agreements • Dedicated Support Engineer • StarWind Virtual SAN Installation and Configuration Assistance • Hypervisor and 3rd Party Software configuration • StarWind Proactive Support

Contacts

US Headquarters	EMEA and APAC
📞 1-617-449-77 17 🖨 1-617-507-58 45 💬 1-866-790-26 46	📞 +44 203 769 18 57 (UK) 📞 +34 629 03 07 17 (Spain and Portugal)

Customer Support Portal: https://www.starwind.com/support
Support Forum: https://www.starwind.com/forums
Sales: sales@starwind.com
General Information: info@starwind.com

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