StorMagic

DATA SHEET

StorMagic SvSAN Witness

OVERVIEW

Many organizations nowadays are heavily dependent on IT for everyday operations, and as such, the availability and uptime of these systems is critically important. Loss of service equates to loss of productivity which, depending on the severity, can have a huge impact on an organization.
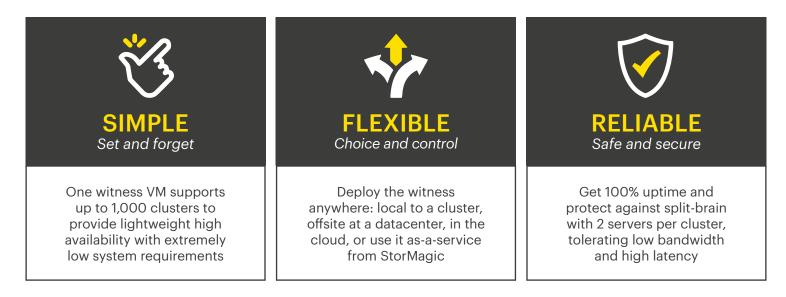
Adding high availability to a business's infrastructure is like adding in an insurance policy, protecting the organization from disruptive downtime. When one node fails or is taken offline, the others remain operational, enabling employees to keep working.

Businesses that require high availability in their applications can design their storage infrastructure in such a way as to create redundancy and eliminate single points of failure. However, in order to properly mitigate against failures and the threat of downtime in 2-node, shared storage clusters, an additional element is required - the "witness."

THE STORMAGIC SvSAN WITNESS

StorMagic SvSAN is a virtual SAN solution that creates highly available hyperconverged storage across two nodes or more. SvSAN's ability to provide highly available shared storage on a minimum of just two nodes is a key differentiator, and is made possible by the use of its lightweight witness.

The SvSAN witness prevents split-brain scenarios from occurring in 2-node SvSAN clusters by regularly checking the state of each node in the cluster. The only data passing between the witness and the SvSAN nodes is the 'heartbeat' - the witness is not in the data path. This allows it to tolerate significant latency and low bandwidth, and can therefore be located great distances from the clusters it provides quorum service for, even if they are in remote, harsh environments.

SIMPLE
Set and forget

One witness VM supports up to 1,000 clusters to provide lightweight high availability with extremely low system requirements

FLEXIBLE
Choice and control

Deploy the witness anywhere: local to a cluster, offsite at a datacenter, in the cloud, or use it as-a-service from StorMagic

RELIABLE
Safe and secure

Get 100% uptime and protect against split-brain with 2 servers per cluster, tolerating low bandwidth and high latency

SvSAN WITNESS SYSTEM REQUIREMENTS

CPU	1 x virtual CPU core (1 GHz)
Memory	1GB (reserved)
Disk	1GB VMDK
Network	1 x 1Gb Ethernet NIC When using the witness over a WAN link use the following for optimal operation: • Latency of less than 3000ms, this would allow the witness to be located anywhere in the world • 9Kb/s of available network bandwidth between the VSA and witness
Operating System	The SvSAN witness can be deployed onto a physical server or virtual machine with the following: • Windows Server 2019 and 2022 (64-bit) • Hyper-V Server 2019 and 2022 (64-bit) • Raspbian Buster (32-bit) • vCenter Server Appliance (vCSA) [1] • StorMagic SvSAN Witness Appliance • Ubuntu 20.04

[1] VMware vSphere 6.7 and higher

SvSAN WITNESS DEPLOYMENT OFFERINGS

DEPLOY SOFTWARE - LOCALLY OR REMOTELY

The SvSAN witness is included with every SvSAN license as a piece of additional software that can be run as a VM, or installed on hardware as lightweight as a Raspberry Pi. It can be sited locally to a cluster, or remotely over a WAN link at another location or in the cloud. For any multi-site deployment, the witness can be located at HQ, or in a datacenter, providing quorum to the SvSAN clusters at each location - up to 1000 clusters per witness.

DEPLOY IN THE CLOUD - WITNESS-AS-A-SERVICE

Alternatively, the witness is available as a cloud subscription service, purchased on top of an SvSAN license. This product is known as witness-as-a-service (WaaS) and is part of a suite of features that make up StorMagic Cloud Services. Instead of installing the witness on hardware, an organization can simply connect their SvSAN clusters to the WaaS feature provided by StorMagic and manage everything from one location, with nothing to maintain.

For more information on the licensing and pricing of StorMagic SvSAN, the witness and WaaS, please refer to the **SvSAN pricing webpage**.

SvSAN WITNESS FEATURES AND BENEFITS

• Provides the arbitration service in a cluster leader election process
• Is a passive element of an SvSAN configuration and does not service any I/O requests for data
• Maintains the cluster and mirror state
• Has the ability to provide arbitration for thousands of SvSAN mirrors
• Is serviced remotely from the StorMagic Cloud
• Used over a wide area network (WAN) link
• Can tolerate high latencies and low bandwidth network links
• Is a unique service provided by StorMagic

Want to read more about how the witness works, its tolerances and failure scenarios? **Consult the SvSAN witness white paper for a more in-depth explanation.**

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