

White Paper

# iSCSI

## Introduction

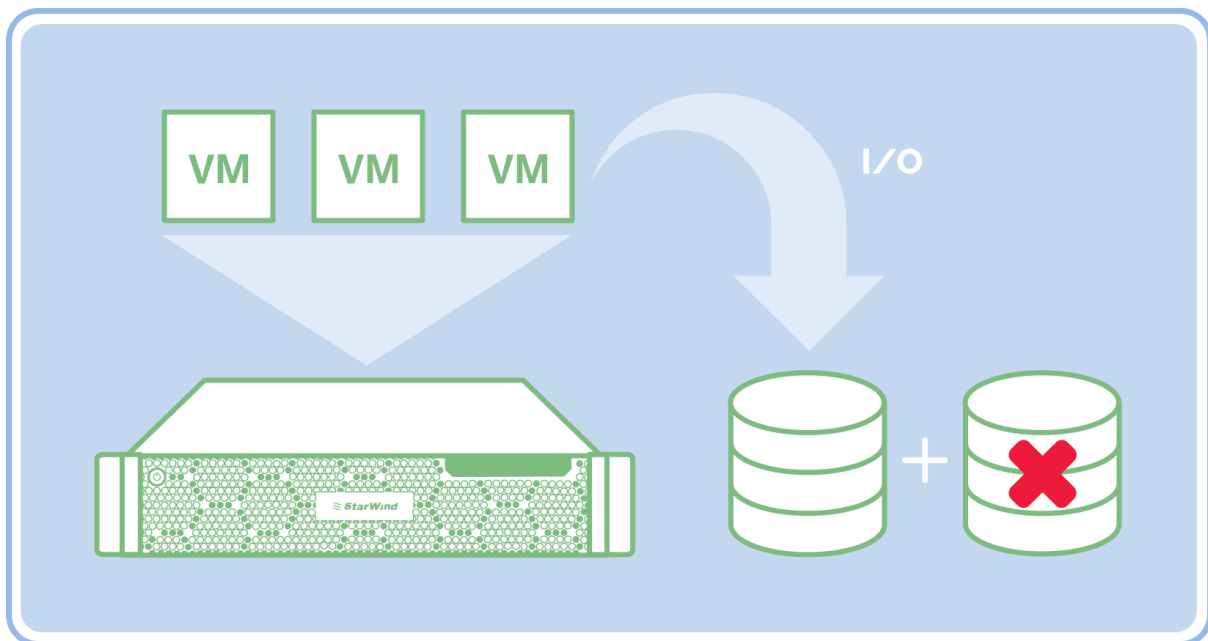
Modern businesses require storage in unprecedented amounts, which results in a demand for storage systems that are fast and can be easily accessed by multiple VMs and applications. The storage itself should preferably be highly available to ensure the applications can reach maximum uptime figures. Fibre Channel is one option to ensure such speed and throughput, but it will cost a pretty penny and requires definitive hardware to support itself. Fortunately, iSCSI, a block protocol that works over regular Ethernet, is easy to implement, fast, and perfectly fits any contemporary shared storage system.

## Problem

To function quickly and properly, a lot of applications nowadays, and VMs working on top of hypervisors, require block-level access to storage. This can be resolved by including more disk or flash drives into the respective servers. However, every server has limited slots for a limited number of drives.

Alternatively, to ensure optimal performance, clustered environments required shared storage and instantaneous levels of access to it. Such a storage system should also be highly available in order to handle any potential failure that any hardware component may encounter, even at the level of the storage itself.

With this in mind, there are various roads you could take to resolve these matters. Using physical shared storage and Fiber Channel are among them. But to build a Fiber Channel (FC) infrastructure, businesses would need dedicated HBAs and SANs with FC support, which will skyrocket the costs of addition and implementation.

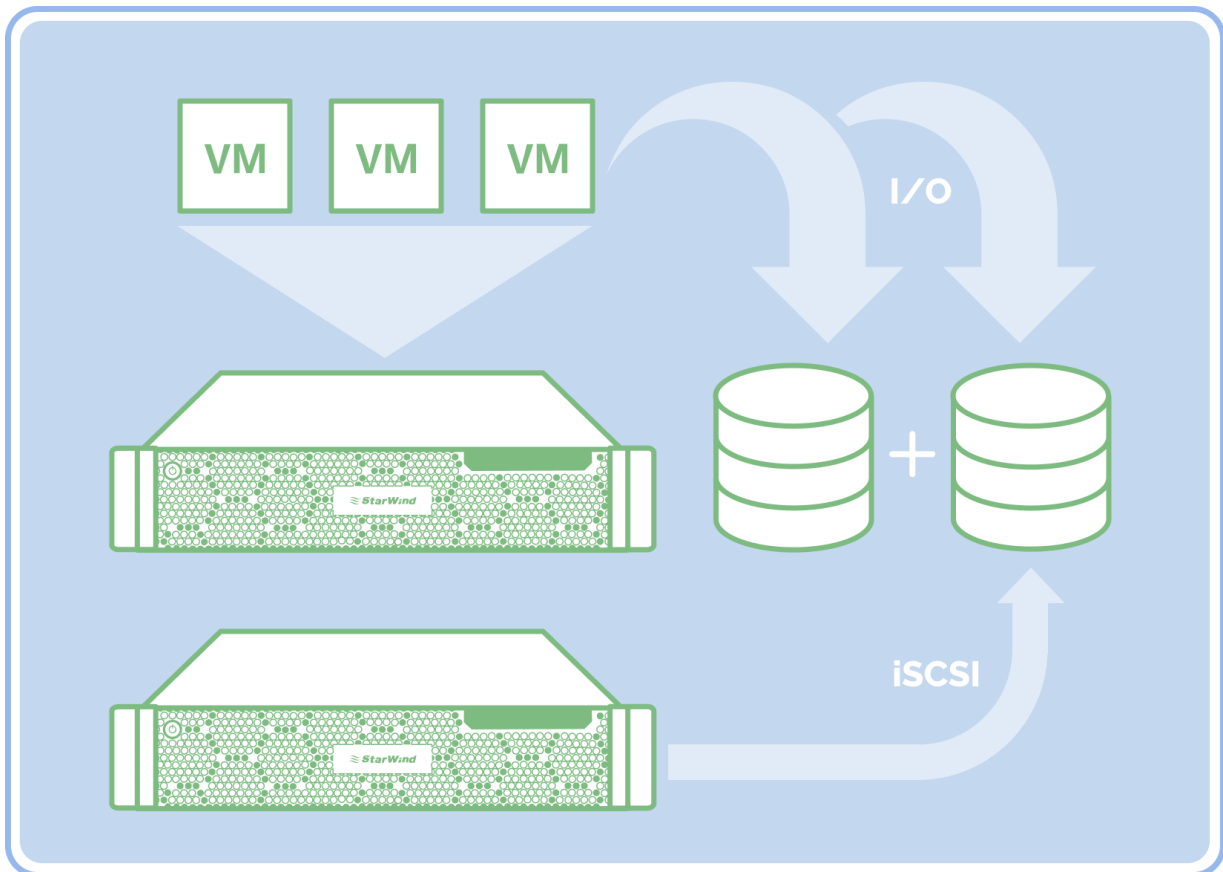


Amount of storage that could be added to a single server is limited

## Solution

StarWind provides iSCSI storage to any industry-standard application and/or hypervisor. It's capable of using any type of underlying storage that you need, whether local disks or storage connected through network. Thanks to StarWind Highly Available devices being shared via iSCSI network, your data will be replicated across multiple nodes, which increases uptime and handles multiple hardware failures.

StarWind running over iSCSI perpetuates that all that's necessary for it to work and provide HA is regular Ethernet infrastructure. Subsequently, StarWind is innately simple in terms of deployment, which, in turn, minimizes integration costs and complexity. It also makes everything easier in operation. Additionally, StarWind iSCSI target enables performance at underlying storage levels, making it perfect for any workload.



Storage served via iSCSI is presented as local to applications

## Conclusion

StarWind VSAN uses iSCSI performance for sharing the Highly Available storage for your VMs and applications. By utilizing the iSCSI protocol, StarWind brings the ease of deployment, administration simplicity and minimum implementation costs.

## Contacts



### Phone number

+1 617 449 77 17  
+44 2037 691 857  
+34 629 03 07 17



### Fax

+1 617 507 58 45



### Voice Mail

+1 866 790 26 46



### Customer Support Portal

[www.starwind.com/support](http://www.starwind.com/support)

### Support Forum

[www.starwind.com/forums](http://www.starwind.com/forums)

### Sales

[sales@starwind.com](mailto:sales@starwind.com)

### General Information

[info@starwind.com](mailto:info@starwind.com)

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