Creating a High Availability Shared Storage in the Hyper-V Virtual Environment

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Vyatcheslav Potekin, IT Director, Medved Holding Group

**CHALLENGE**

Our business is booming, company staff is nearly doubling every year resulting more and more e-mails and on-line documents that require storage. Our remote offices opened overseas result no more maintenance and backup windows at night.

One day we realized that we couldn’t afford to run entirely physical company IT infrastructure anymore because of constantly increasing amount of servers and unguaranteed uptime resulting in the lost deals. We needed to completely rebuild our whole company IT infrastructure.

There was the necessity to virtualize our IT infrastructure. We decided to use Microsoft Hyper-V for virtualization and suddenly found out that in order to use all benefits of this technology we required something we hadn't run yet and had no experience to deal with – Storage Area Network.

**SOLUTION**

The solution we chose was StarWind Virtual SAN. First minutes of running this software revealed one of its major benefits: it installed not inside virtual machine under control of the guest operating system but on top of Hyper-V itself in so-called “parent partition” where primary Windows operating environment executes. This meant we didn’t need to buy additional servers and extra Windows licenses and could create our shared storage using the existing resources.

With StarWind Virtual SAN we managed to build highly available SAN space. The storage we got provides great stability and shows outstanding performance. It supports active-active High Availability, makes our storage fully redundant, and guarantees zero downtime of virtual servers.

With StarWind Virtual SAN totally supporting Hyper-V we completed our virtualization project successfully and turned the whole company IT infrastructure to fully high available. We did not invest any single dollar into extra operating system licenses or additional hardware. On the contrary, we managed to reduce amount of servers nearly in a half! The only thing that required the money investment was StarWind Virtual SAN software itself. But with extremely reasonable pricing per Hyper-V host and a huge volume discount it was probably the most usable and valuable software we had ever purchased.
Challenge
To create a High Availability shared storage supporting Hyper-V virtual environment

Solution
StarWind Virtual SAN

Results
• Cost-effective SAN for Hyper-V
• Reduction of hardware resources
• Highly available and easy-to-use shared storage
• 44% in savings!

RESULTS

Cost savings
StarWind Virtual SAN impressed us by its innovative approach to HA clustering. Since this software is designed for Windows-based environments and runs on top of hypervisor on the same server, we needed only two cluster nodes to create fully high available storage cluster. Such configuration didn’t require additional servers for storage.

We estimated that if we had applied the traditional SAN architecture (using dedicated SAN servers), we would have used at least two additional hardware boxes. Evidently, more hardware would have added costs and complexity to our IT environment.

We are at the initial stage of our virtualization project and our first deployment consists of 3 Hyper-V hosts. Even with this small deployment we were able to achieve considerable savings of $8,565 or 44% on the hardware alone! All in all, building of HA storage cluster cost us 19 650 (hardware and software) instead of 39 300 that would have been required with one of the traditional SAN solutions.)

High level of resource utilization
With StarWind Virtual SAN operating we left behind poor resource utilization and cluster nodes standing in the shadow. Using active-active scenario we forgot about the problems related to the unguaranteed cluster node switch time. StarWind Virtual SAN guarantees that our business will be up and running even in case of a failure.

Reliability and performance
The functionality provided by StarWind Virtual SAN for Hyper-V allowed us to create the Disaster Recovery Plan and reliably protect our data in case of sudden failure or disaster. Our storage built in 10 Gig Ethernet provides outstanding performance that meets the requirements of our most resource-intensive applications. With StarWind we made our shared storage redundant and rock-solid.