StarWind Native SAN 5.8 for Hyper-V with VM Backup

StarWind Software is a global leader in storage management and SAN software for small and midsize companies. StarWind's flagship product is SAN software that turns any industry-standard Windows Server into a fault-tolerant, fail-safe iSCSI SAN.

With more than 30,000 global users in over 100 countries, StarWind helps customers manage, simplify and secure their virtual environments with reliable and affordable shared storage solutions.

The Cheapest Way To run Hyper-V

Works with Windows Server® 2008 R2

New Features and Improvements

Core: Multi-LUN support has been added for non-HA targets.

Deduplication

- Plug-in has been improved to support data journaling;
- Snapshots feature support has been added;

High availability:

StarWind High Availability is now substantially upgraded

- **Standard raw image files** can be used for creation of **HA devices**.

Microsoft iSCSI transport **for synchronization channel** has been substituted by the **StarWind own transport technology**, which is significantly easier to configure.

- **Several network interfaces** can be used for synchronization and heartbeat channel.
- Now **Heartbeat channel is a must** for building High Availability storage cluster. It's recommended to use a client network as the heartbeat channel. This channel transfers the service messages only, thus producing no additional network traffic.
- **Switch partner feature**. New partner node can be assigned to the existing HA device node. Old partner should not be used after switching HA device to the new partner node. Client MPIO connections should be reconfigured to use the path to the new partner instead of the old one.
- **Automatic HA device synchronization** after HA cluster nodes failure. When HA device identifies the node that has the most recent and correct data, it brings this node online automatically and synchronizes it with the other node.

Note: If the device cache mode is write-back and at least one node has been turned off incorrectly (for example, after power outage), the HA device cannot run the synchronization procedure automatically.

- **"Mark as Synchronized"** option. It allows to mark unsynchronized HA device as synchronized without actual data synchronization. This command can be used in disaster recovery after the failure of the both HA nodes. For example, if some hardware was damaged on one of the nodes, but it is impossible to replace/fix it immediately. In this case you can mark the undamaged node as "synchronized" and continue the working process. As soon as the other node is fixed and returns online, it starts data synchronization.
- Possibility to **extend the size of HA device on the fly**.

SPTI

- **Buffer alignment parameter** is used for checking the device properties during the service initialization. It also provides access to physical devices via iSCSI.

StarWind iSCSI SAN is qualified for use with VMware, Hyper-V, XenServer and Linux and Unix environments. StarWind Software focuses on providing small and midsize companies with affordable, highly availability storage technology which previously was only available in high-end storage hardware. Advanced enterprise-class features in StarWind include Automated HA Storage Node Failover and Failback (High Availability), Replication across a WAN, CDP and Snapshots, Thin Provisioning and Virtual Tape management.

RAM disk

Serial ID generation algorithm has been changed. Now, serial ID is unique across different machines on the network. You can still add predefined IDs to a configuration file for RAM devices.

Essentials

✔ **Hardware VSS provider** for Deduplication and CDP devices. It is now available as a separate download.

✔ **StarWindX**. This module combines COM-object and set of PowerShell commandlets enabling management of the StarWind virtual devices by the third-party scripts and software. It is now available as a separate download.

✔ **Hyper-V Backup Plug-in** for virtual machines provides
- Agentless architecture
- VHD format of archives
- Network Centralized Management
- Single-click backup
- Global Deduplication
- Restore of the entire virtual machine
- Sandbox mode for VM testing
- VM cloning

Installation notes

Installation: You can install StarWind Native SAN for Hyper-V 5.8 over the existing installation of this solution.

Warning #1: CHAP authentication is not supported for HA device images created in 5.4 and earlier versions of the software.

Warning #2: The existing HA devices cannot be upgraded to version 5.8 without bringing the storage offline for a short time.

To update the existing HA devices:

1. To prevent data loss, disconnect the clients from the HA node (if it is possible).

2. Update the StarWind service on the first HA node and wait until it is started. At this step HA node is unable to synchronize its HA devices and is not connected to the client. Client requests are processed by the second HA node.

Note: The next step disconnects the existing client.

3. Update the StarWind service on the second HA node and wait until it is started.

4. Start synchronization on the first HA node. The second node changes its state to "ready" and starts processing of client connections. Now you can safely connect to the HA device.

5. Wait until synchronization is finished. Now the first HA node can process the client connections too.