

StarWind

HyperConverged Appliance

Quick Start Guide

SEPTEMBER 2017

TECHNICAL PAPER



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In 2016, Gartner named StarWind "Cool Vendor for Compute Platforms".

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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

StarWind HyperConverged Appliance (HCA) is a complete turnkey solution designed to eliminate unreasonably high complexity and cost of IT infrastructures. StarWind HCA seamlessly integrates into any environment and takes application performance and availability to an entirely new level. StarWind further simplifies this process by helping each customer with migration and integration.

Also, StarWind HCA completely excludes customer effort in monitoring and supporting the infrastructure. By combining monitoring and proprietary analytics, StarWind ProActive Support ensures unprecedented uptime and provides insights on resource planning along with upgrade suggestions.

This document is intended for Windows system administrators who would like to know how to get started with StarWind HyperConverged Appliance. It provides detailed instructions on how to deploy StarWind HyperConverged Appliance.

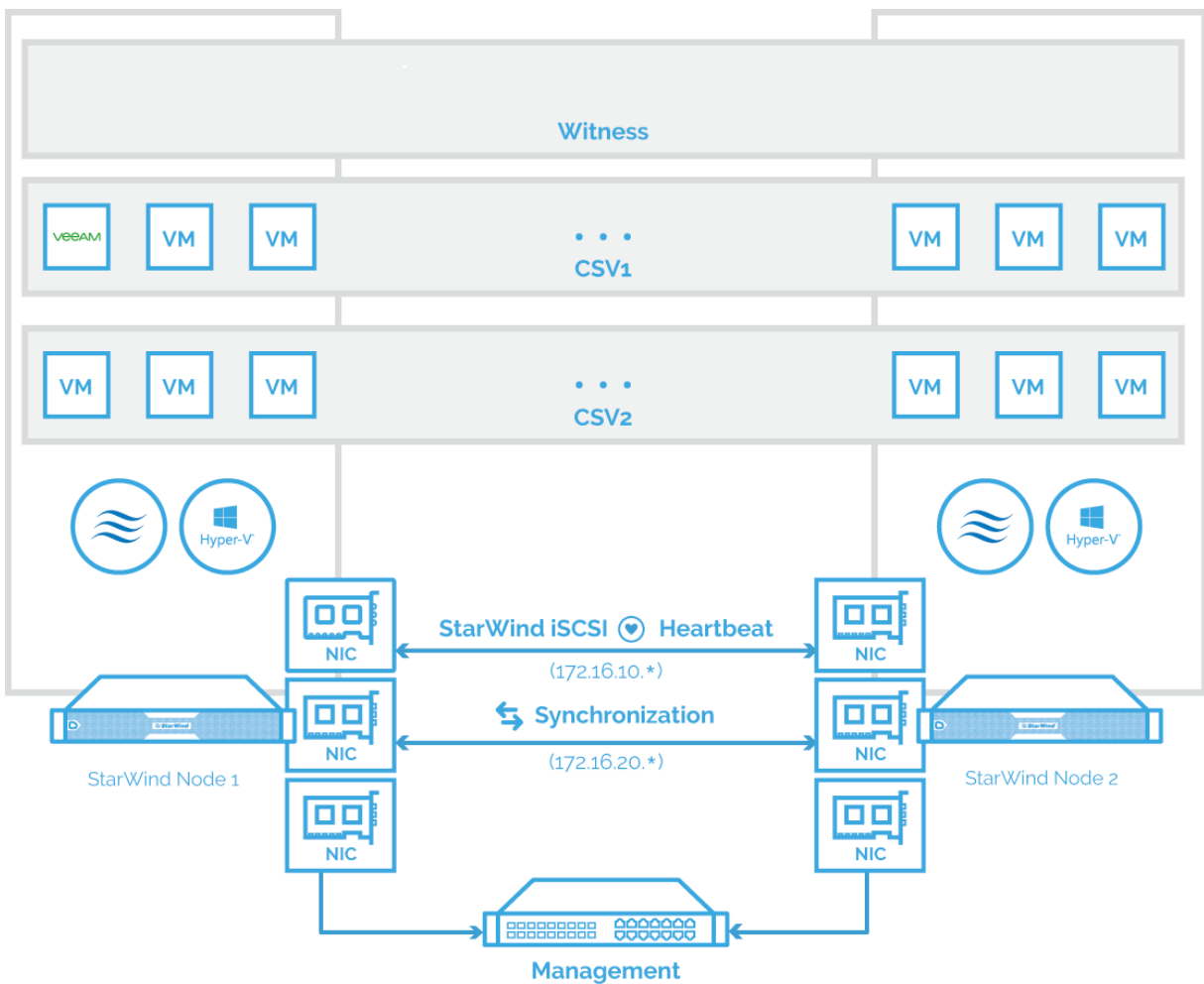
A full set of up-to-date technical documentation can always be found [here](#), or by pressing the **Help** button in the StarWind Management Console.

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

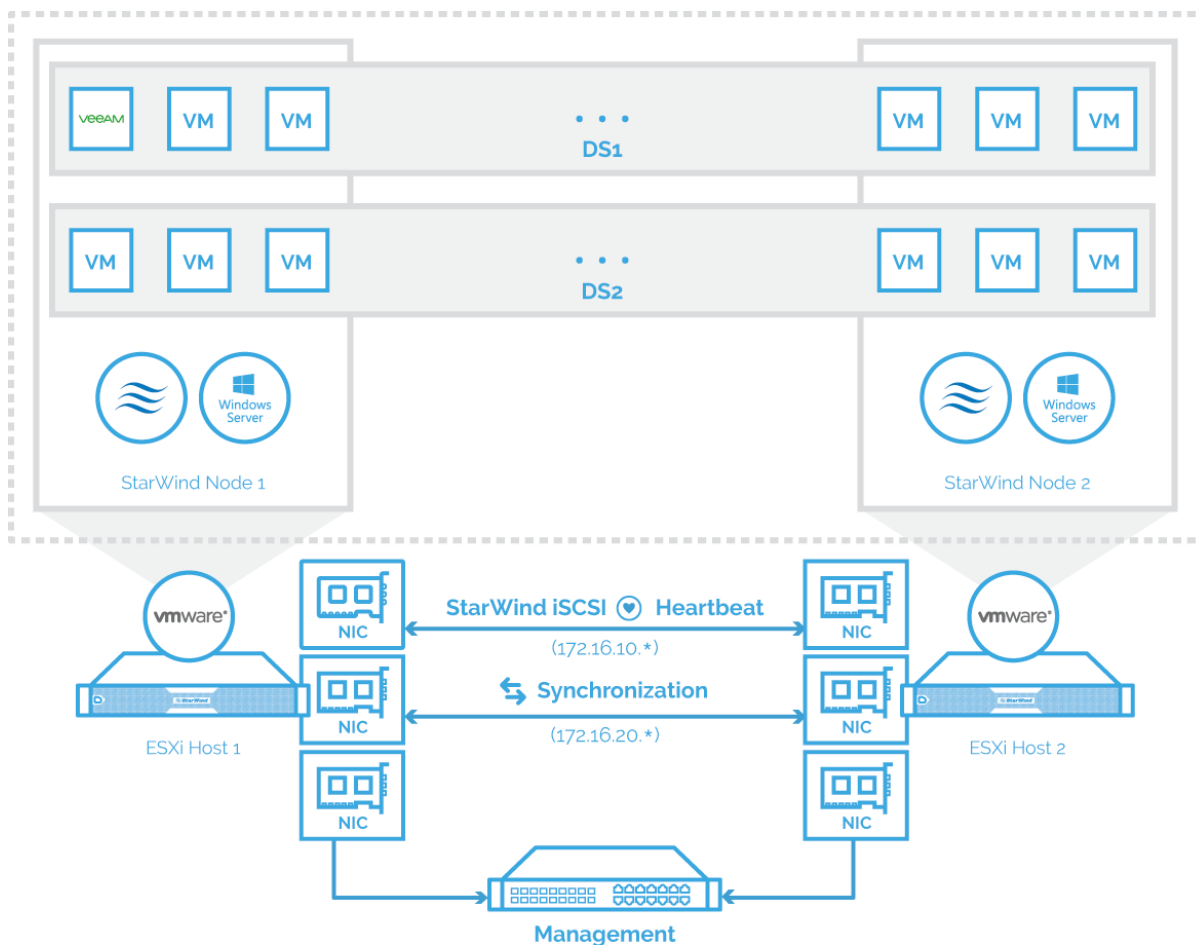
System diagram and description

Below you can find the network interconnection diagram for StarWind HyperConverged Appliance. It consists of two servers with a hypervisor installed (Hyper-V or VMware ESXi) and StarWind Virtual SAN on Windows Server 2012 R2 / Windows Server 2016 OS. In addition, it can include Veeam Availability Suite as a backup solution.

1. The scheme for StarWind HyperConverged Appliance with Hyper-V



2. The scheme for StarWind HyperConverged Appliance with VMware ESXi



The system is fully pre-configured and ready to be integrated into the existing infrastructure. Additionally, domain controllers or a vCenter Server can be configured as virtual machines running on the host.

To review all server technical specifications, please refer to the corresponding [Data Sheet](#).

Caution: before following any procedures described in this document, please read the safety instructions that are shipped with the system.

Servers naming and credentials

The StarWind servers by default are configured with the following domain names:

For Hyper-V scenario	For VMware ESXi scenario
SW-HCA-01	SW-HCA-VM-01
SW-HCA-02	SW-HCA-VM-02

The default credentials are:

Instance	Login	Password
iDRAC	root	calvin
Windows Server	administrator	StarWind2015
VMware ESXi server	root	StarWind2015
VMware vCenter	administrator@vsphere.local	StarWind2015!

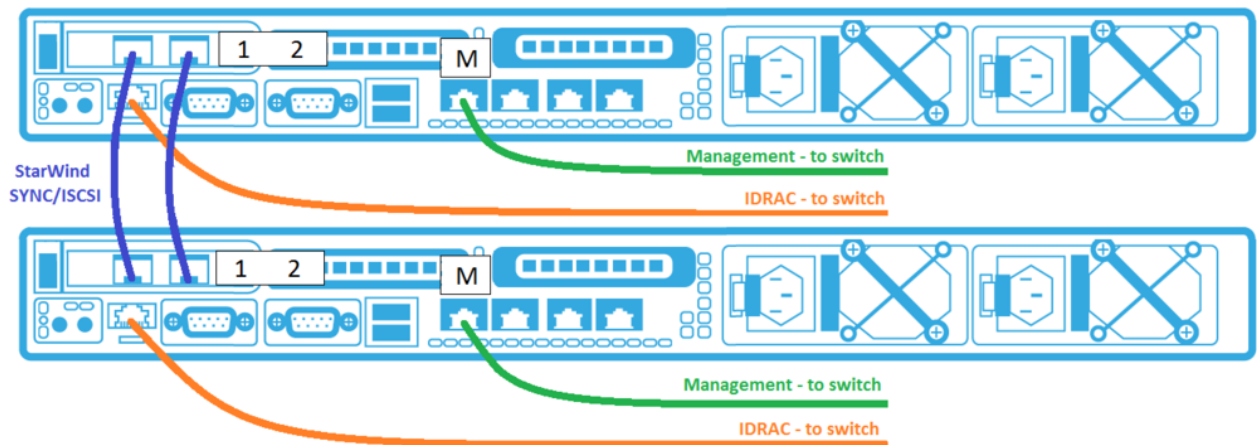
Getting started

There are several stages for setting up StarWind HyperConverged Appliance.

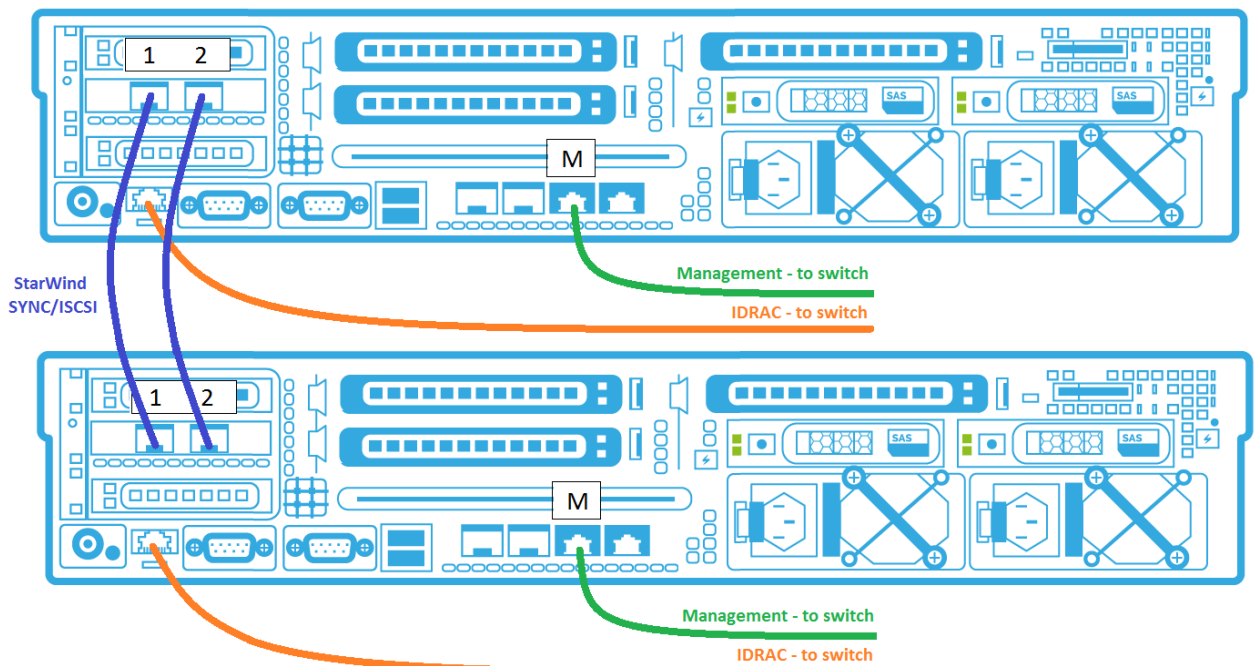
Step 1: Physical Setup

1. Install servers into the rack.
2. Plug all the servers and the switch into the AC power grid using the enclosed power cables.
3. Connect network interfaces as shown on the scheme below.

- Two 10 Gbps network interfaces will be used for StarWind VSAN Synchronization and iSCSI channels. It is recommended to connect them directly with SFP+ cables. Port 1 on the first server should be connected to Port 1 on the second server. Port 2 on the first server should be connected to Port 2 on the second server. Management (1 Gbps) and iDRAC interfaces should be connected to the network switch.



- Two 40 Gbps network interfaces will be used for StarWind VSAN Synchronization and iSCSI channels. It is recommended to connect them directly with SFP+ cables. Port 1 on the first server should be connected to Port 1 on the second server. Port 2 on the first server should be connected to Port 2 on the second server. Management (1 Gbps) and iDRAC interfaces should be connected to the network switch.



4. Turn the SW-HCA-01 server on.
5. Turn the SW-HCA-02 server on.

Step 2: Checking network connections

The system comes with the Windows operating system already installed, updated, and pre-configured including all necessary roles and features (like MPIO, Hyper-V, Failover Clustering, Remote Desktop connection, etc.).

Please follow the steps below to check the installed and connected systems. Identify server's Management and iDRAC IP addresses from DHCP server or by connecting a monitor to the server.

Step 2A. StarWind HyperConverged Appliance with Hyper-V

1. Log in to Windows servers via RDP or iDRAC console using provided credentials;
2. Open Network and Sharing Center and check that Sync and iSCSI network interfaces are connected.
3. Check the network connectivity between the HCA nodes by running the "*C:\HCA\StarWind HCA network test.ps1*" script. If the script has reported a "connectivity failed" message, please check the cable connections for StarWind synchronization and iSCSI links.
4. Join SW-HCA-01 and SW-HCA-02 to the existing domain.
5. Assign static IP addresses for Management interfaces on both servers and configure appropriate settings in your DNS server.
6. Check that you can ping the servers by Management interface IP address, hostname, and FQDN.
7. Assign static IP addresses for iDRAC on both servers and check that you can ping the servers by iDRAC IP address.
8. Log in to the servers and check that you can ping the partner server via Management IP address, as well as whether you can ping the DNS server.

Step 2B. StarWind HyperConverged Appliance with VMware ESXi

1. Log in to each ESXi server with vSphere client using provided credentials. vSphere client can be downloaded from the following link:
<https://my.vmware.com/web/vmware/downloads>
Alternatively, you can use the ESXi web client, which can be accessed at <http://xxx.xxx.xxx.xxx/ui/#/login>, where xxx.xxx.xxx.xxx stands for the IP address of the corresponding ESXi host.
2. Each server has one StarWind virtual machine already deployed and pre-configured.
3. Log in to StarWind VMs (SW1 and SW2) from the vSphere desktop or web client with provided credentials;
4. Open Network and Sharing Center and check that Sync and iSCSI network interfaces are connected.
5. Check the network connectivity between the HCA nodes by running the *"C:\HCA\StarWind HCA network test.ps1"* script.
6. Join StarWind VMs to the existing domain if necessary.
7. Assign static IP addresses for ESXi hosts and introduce appropriate settings into your DNS server.
8. Check that you can ping the StarWind VMs by Management interface IP address, hostname, and FQDN.
9. Assign static IP addresses for Management interfaces on both StarWind VMs and introduce appropriate settings into your DNS server.
10. Check that you can ping the StarWind VMs by Management interface IP address, hostname, and FQDN.
11. Assign static IP addresses for iDRAC on both servers and check that you can ping the servers by iDRAC IP address.
12. Log in to the servers and check that you can ping the partner server via Management IP address, as well as whether you can ping the DNS server.

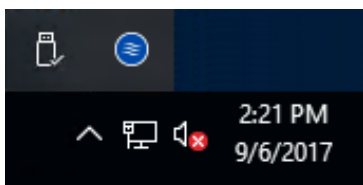
Step 3. Launching StarWind Virtual SAN

Once the operating system has been started, the StarWind management console splash screen will pop up.



Also, the corresponding services should be started in the Windows Service Manager.

In case you do not see the StarWind Management Console window, check the taskbar:



Open StarWind Management Console and check that all devices are in the Synchronized state. In case synchronization is in process, wait until synchronization is over before scheduling a remote session with a StarWind Technical Support Engineer for setup finalization.

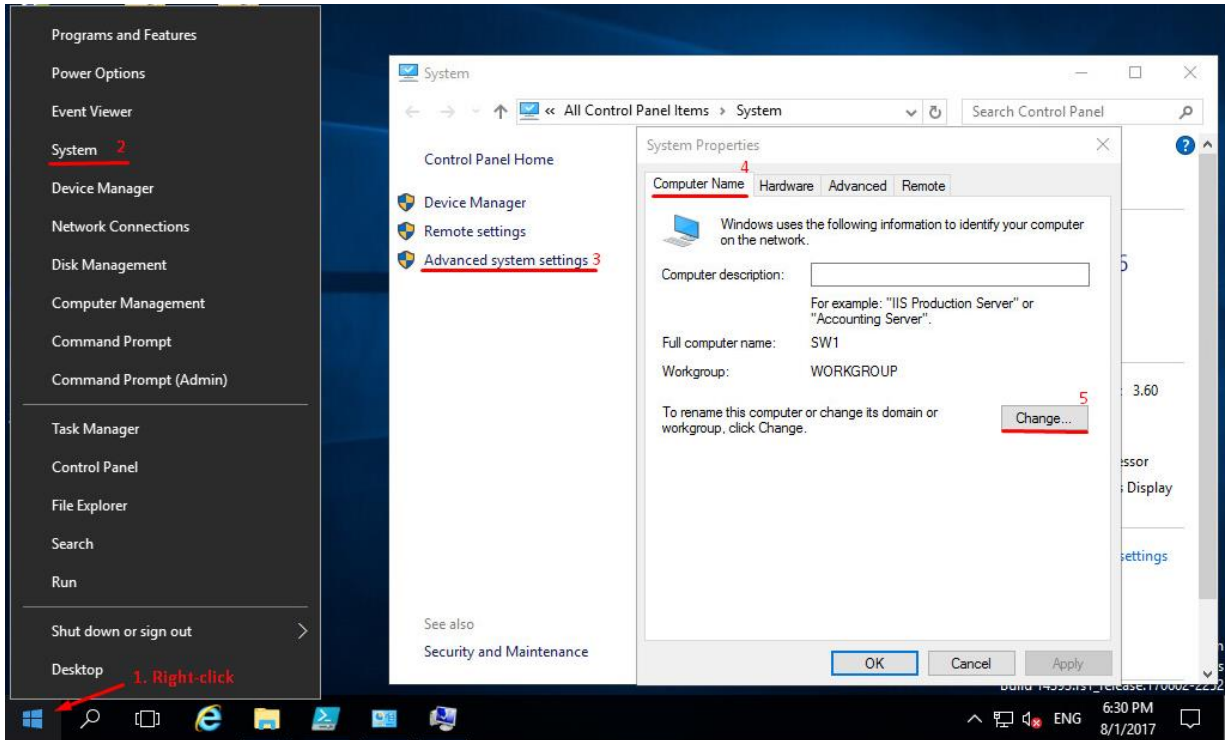
Optionally, StarWind Web Console can be deployed to manage StarWind services from your preferred web browser

Step 4. Joining servers to the domain

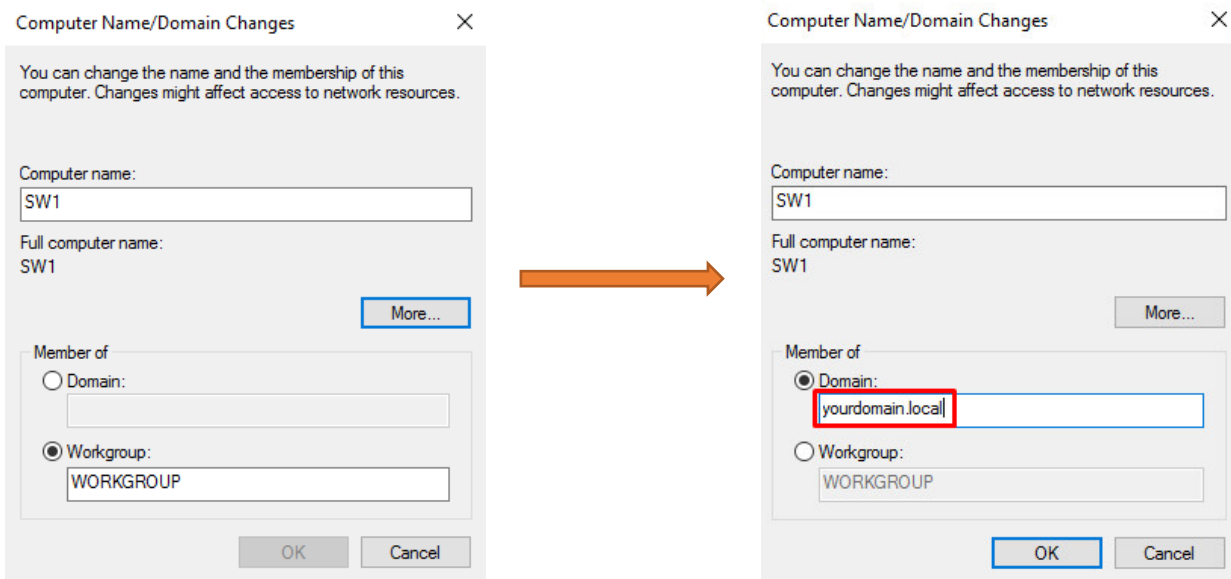
As a configuration option, a new domain can be created and domain controllers can be deployed by StarWind Engineers if there is no existing domain.

To join the HCA nodes to the existing domain, perform the following actions:

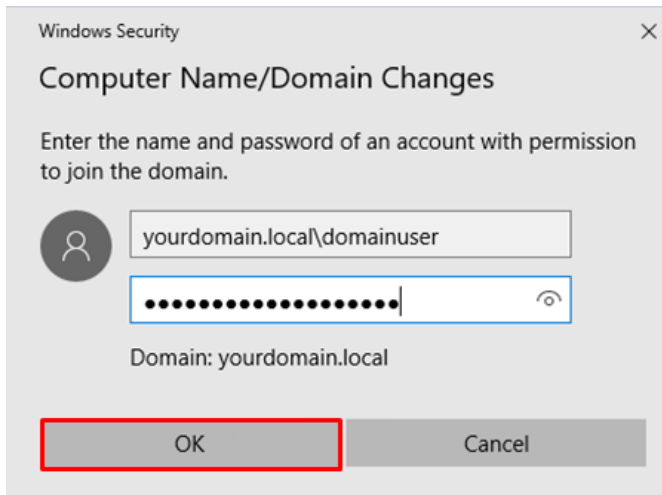
1. Go to System – Advanced System Settings – Computer Name and press the Change button.



2. In the popup window, select **Domain** instead of **Workgroup** and type the name of your domain in the corresponding field:



3. In the next window, enter the domain user credentials for joining the HCA node to the domain, and confirm by pressing OK:



4. Your HCA node will be joined to the domain and restarted. After this, perform actions 1-3 for the second HCA node.

Additional configuration options

StarWind HyperConverged Appliance can have StarWind Health service enabled as a part of ProActive Support as well as Veeam Availability Suite and 5nine software. Additionally, Cluster-Aware Updating can be configured upon request.

Summary

StarWind HyperConverged Appliance is a fully functional pre-configured solution that is ready to be integrated into the existing infrastructure or implemented into a new one. It provides solid virtualization infrastructure for SMB and ROBO by including full feature pack for virtualization:

1. Microsoft Hyper-V or VMware ESXi as a bare-metal hypervisor
2. StarWind as a storage virtualization solution
3. StarWind Health, Veeam Backup & Replication, and 5nine software (optional).

Contacts

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