StarWind Virtual SAN®

Enable iSER

2024

TECHNICAL PAPERS

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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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Annotation

Relevant Products

StarWind Virtual SAN

Purpose

This document guides on how to enable iSER (iSCSI Extensions for RDMA) support within StarWind Virtual SAN®. iSER is an advanced data transfer extension of iSCSI designed for RDMA (Remote Direct Memory Access) technology. It offers low latency, minimal CPU utilization, and inherits the security and simplicity advantages of iSCSI. Enabling iSER support in StarWind Virtual SAN can significantly enhance data transfer bandwidth, making it valuable for virtualized and cloud environments where efficient VM migration and data replication are essential.

Audience

This document is intended for IT professionals, system administrators, and storage specialists who are responsible for configuring and managing storage solutions, specifically within StarWind Virtual SAN environments.

Expected Result

The expected result is the successful enabling of iSER support within the selected StarWind Virtual SAN server.

Introduction

In addition to the industry-standard uplink protocols, StarWind Virtual SAN supports iSER, the topnotch data transfer extension of iSCSI for RDMA. The protocol has low latency and CPU utilization. What is more, it has inherited from iSCSI its security and simplicity advantages. With RDMA protocol suite, iSER supplies higher bandwidth for block storage transfers. These features are crucial for building virtualized or cloud environments, where the protocol allows boosting VMs' migration and data replication.
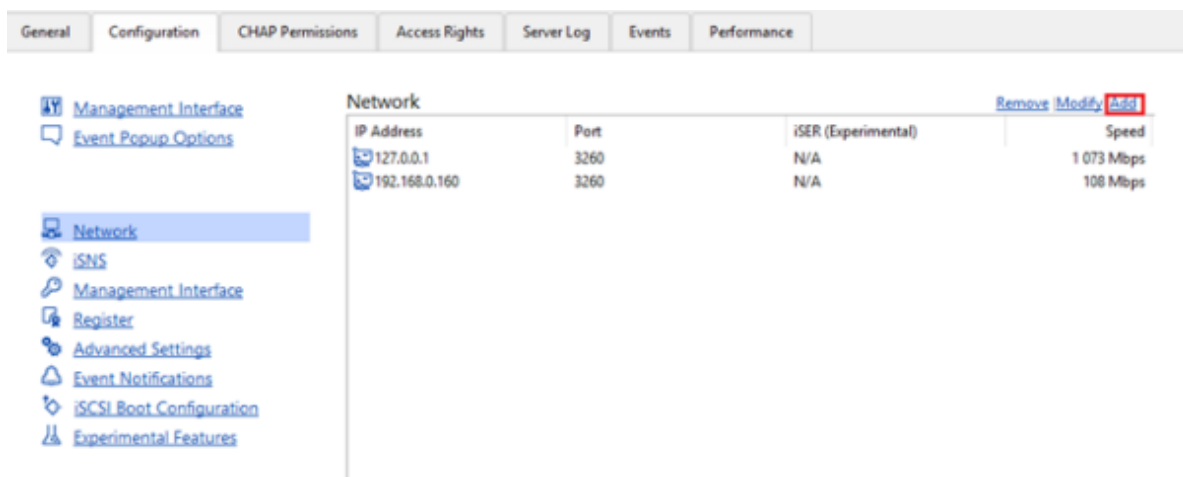NOTE: This guide assumes that the server and StarWind Virtual SAN are already configured.

Enabling Iser Support

1. Select the StarWind server where the iSER support is intended to be enabled.

2. Press the Configuration button.
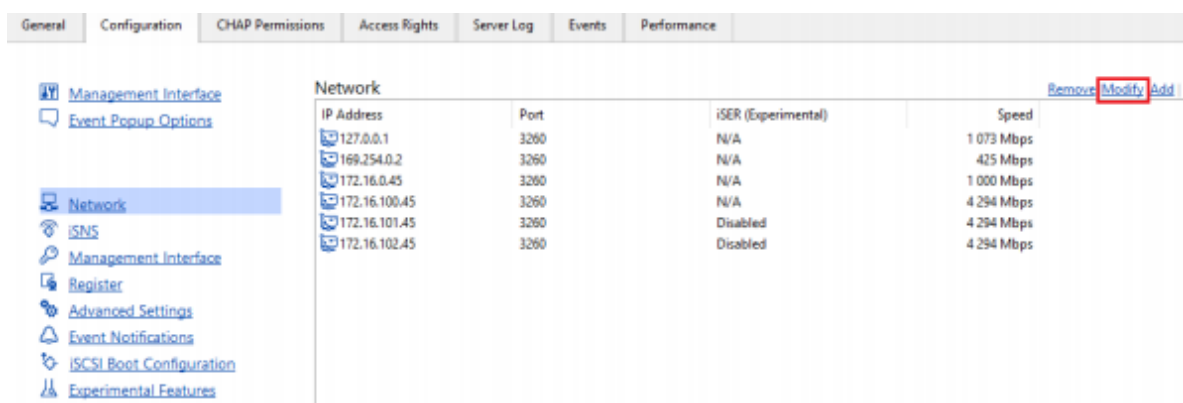
3. Navigate to the Network tab.
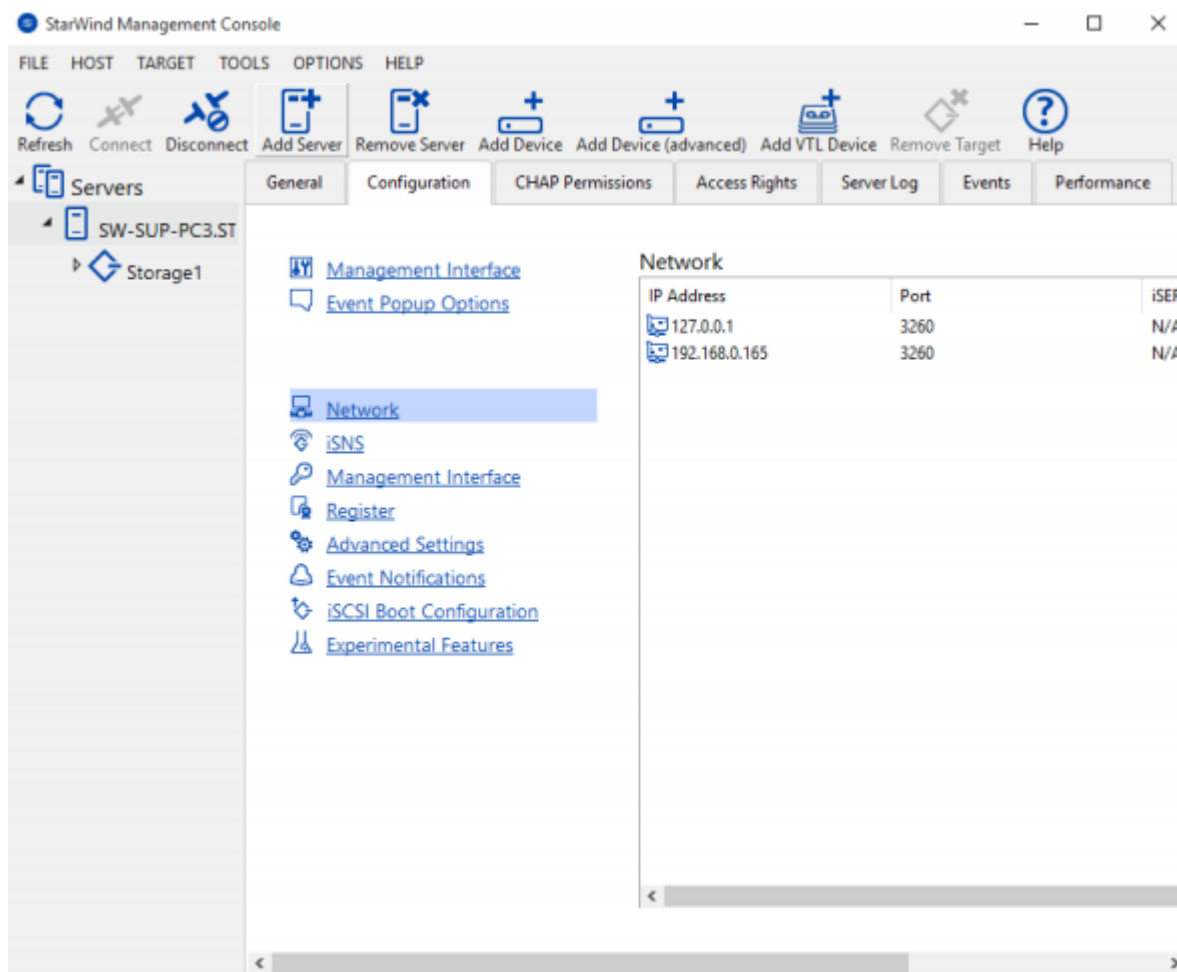
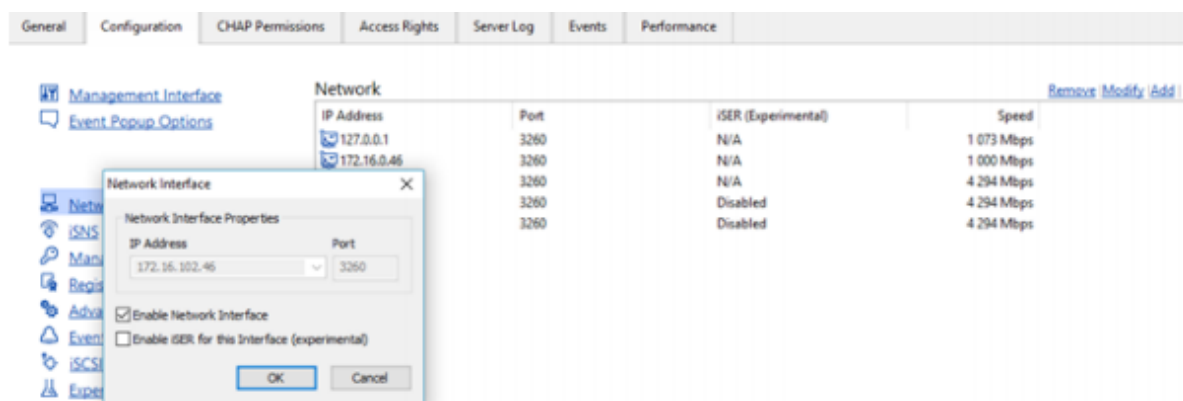4. Click Add to append new network connections.

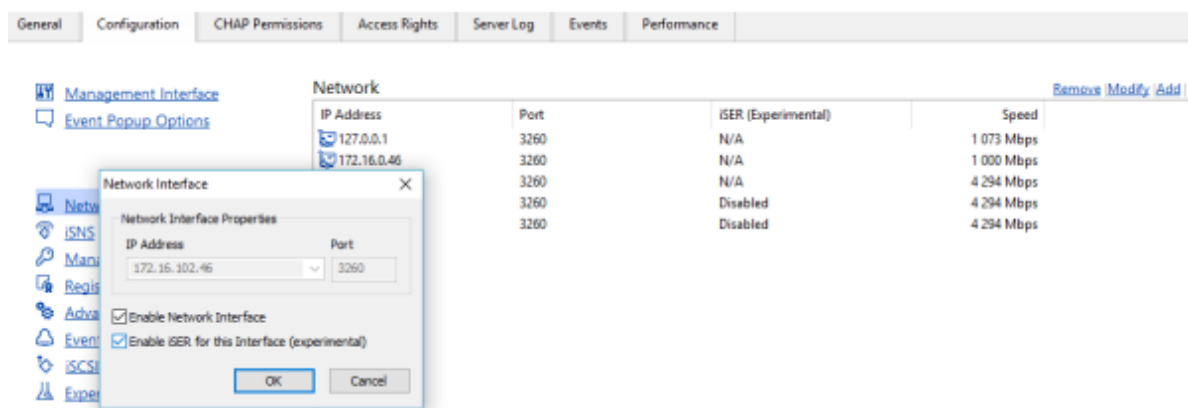5. Select the network interface on which iSER should be enabled.

6. Click the Modify button.
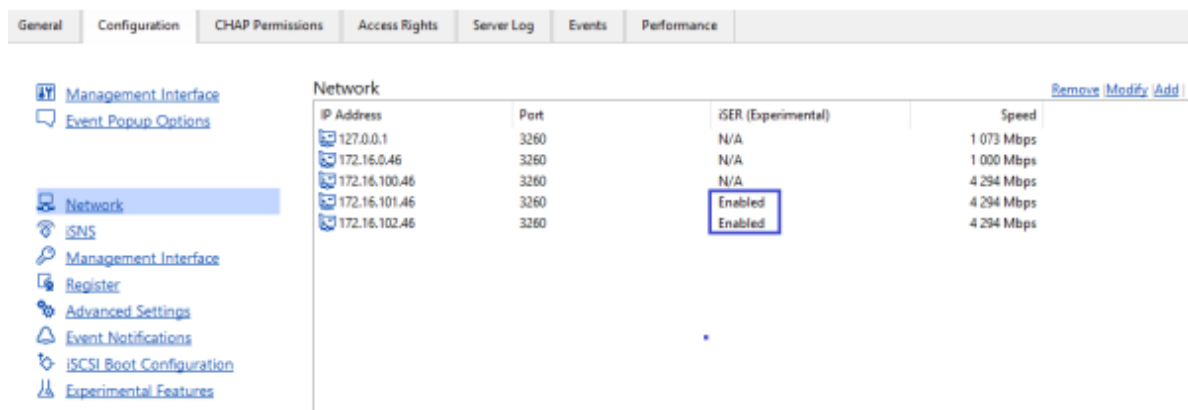

7. The Network Interface tab will appear.

8. Select Enable iSER for this Interface (experimental).

Click OK.

9. Check whether the iSER feature has been Enabled successfully.

Conclusion

By leveraging iSER's RDMA technology, users can achieve lower latency, reduced CPU utilization, and higher bandwidth for block storage transfers. This enhancement is particularly valuable in virtualized environments where efficient compute resources usage and performance are critical. Enabling iSER in StarWind Virtual SAN contributes to the optimization of storage performance and overall system efficiency.

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