

## **Top 20 Converged SAN Features Requested by Customers**

This document is a starting point for customers wanting to implement a Converged Storage Area Network (CSAN). It consists of a wish list of customer requirements accumulated from various CSAN customers (now over 20 features).

Please use or delete any features or requirements you wish; this is only a template for generating ideas about requirements.

# **XYZ Corporation**

Converged Storage Area Network (CSAN) Project

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## Overview

XYZ organization wishes to implement a Converged Storage Area Network (CSAN) for use in its current computing environment. The purpose of this document is to establish a key set of requirements that will be used to reach a decision. This document does not necessarily weight or rank the importance of each feature; it simply lists potential criteria that we will use to measure a vendor's offer. Responding to and completing this document does not constitute any commitment on our part to purchase a SAN in the future.

## Project Goals

- Improve the performance characteristics of our existing applications
- Establish a solid data storage platform with no single point of failure thus virtually eliminating data loss from equipment failure
- Reduce the impact of human or external force (viral) data loss
- Reduce data management expenses
- Improve End-User customer service with increased uptime of applications

## Business Features

The CSAN manufacturer must have a solid presence in the Storage Networking industry and be recognized as a viable, long-term supplier.

The CSAN manufacturer must have a sufficient support organization to provide 24/7 services.

The CSAN must provide integrated and automatic functions for volume management, virtualization, backup and recovery, de-duplication and data replication.

All pricing proposals should include three years of Next Business Day support/maintenance for comparison.

The CSAN must be considered 99.997% reliable with no single point of failure.

## Technical Features

The CSAN must provide full redundancy with no single point of failure. This means multiple network connections, controllers, cache, disks and power supplies at a minimum. If additional equipment is needed, please explain.

The CSAN must be easily upgraded with little or no downtime needed to upgrade firmware or replace Field Replaceable Units (FRUs).

The CSAN performance must scale as additional disks are added. We do not want to be restricted by the controllers and network connections as we add capacity.

The CSAN must provide inline, real time de-duplication for primary data. We do not want to have to allocate additional space for post-write de-duplication.

The CSAN de-duplication design must operate in a Global environment. We do not want de-duplicating blocks in one data center to be “re-hydrated” as they move to remote data centers.

The CSAN must support inline compression for primary data to further reduce redundant data. The overhead caused by compression should not impact performance by more than 1%.

The CSAN must be presented as a single architecture that can grow on demand without interruption. If we add an additional CSAN unit, it must be able to “join” the original and become seamlessly available. We do not want to manage two (or more) CSAN units as separate devices (regardless of the existence of a single console).

The CSAN must allow multiple generations of hardware procured over time to work on the same volumes at the same time. We do not want to be forced into a “forklift” upgrade to replace older equipment that is in good working order simply to take advantage of newer technology that may be available in the future (higher capacity drives, etc.).

The CSAN must be VM-centric in terms of data protection. We want to be able to manage policy at the virtual machine and data center levels.

The CSAN must offer replication, at a minimum, in these forms: 1:1, 1:Many, Many:1.

The CSAN must provide Public Cloud integration.

We have current and future CSAN projects that may require any or all of the following features: Volume Management, Volume Snapshot, Volume Cloning, Storage Virtualization, Auto-Replication, De-duplication, Compression, Auto-Load Balancing and Multi-Path I/O. Please answer the following for each function:

- Is the function included with the base hardware unit?
- Is the function priced based on the capacity of the base hardware unit?
- Is there any host-side software required for the function? If so, how is it priced?