Summary

AIC and RAIDIX joined hands to introduce a fully redundant, fault-tolerant, Cluster-in-a-Box solution. AIC's high-availability storage server solution HA401-CP2 features an Intel® Server Board, which supports Intel® Xeon® processor E5-2600 /E5-2600 v2 product family. When installed with RAIDIX software, the performance of those processors is maximized and this contributes to the overall performance of storage.

The chosen AIC configuration, powered by RAIDIX software, perfectly suits the HPC market demand for a cost-effective solution which should provide 99.999% availability and productivity. The solution is also scalable thus allows users to build a wide variety of HPC storage architectures to better suit their needs.

Configuration

- ✓ AIC HA401-CP2
- ✓ LSI 9300-8i 12Gb/s SAS Host Bus Adapter (per node)
- ✓ RAIDIX software

AIC HA401-CP2 comes with built-in dual LSI SAS 2x36 SAS expanders and PCIe Gen3 slots. LSI's 9300-8i HBA adds internal 12Gb/s SAS and 6Gb/s SATA connectivity to the HA401-CP2 across 8 lanes of PCIe® 3.0 connectivity. Together they provide great throughput as bottleneck is not even in the picture. To scale for high-performance storage, AIC's 2U24Bay 12Gb/s JBOD J2024-01 and LSI 9300-8e 12Gb/s SAS Host Bus Adapters can be added.

When running RAIDIX software on the aforementioned Cluster-in-a-Box storage architecture, no additional expensive modules are required to provide fast failover and data integrity. Everything is implemented on a software level. Here are some of the benefits of RAIDIX software:

- ✓ Fast failover
- ✓ High performance
- ✓ Cost effectiveness
- ✓ HA Lustre OSS+OST in one platform
- ✓ Different IO interfaces - IB, FC, iSCSI

Top Benefits of the HA401-CP2

- ✓ A storage server that leverages the features of SBB standards with the use of COTS components.
- ✓ Fully redundant and fault-tolerant. All FRUs are hot swappable and feature channels in the backplane which allow the use of 10 GbE, NonTransparent Bridging [NTB] or SAS for inter-chassis communication.
- ✓ Dual processor SBB with maximum memory and IO support.

Top Features of RAIDIX Software

RAIDIX software is absolutely essential when it comes to building the most cost effective and top performing storage system possible. End customers operating in the data intensive environment have a high demand for fault tolerance and data security. As a result, those professionals (including those in media production, HPC, healthcare and more) choose storage powered by RAIDIX because of its key characteristics that include but are not limited to:

✓ **Top Productivity: 20 GBPS Per Core**

A storage powered by RAIDIX anticipates workflows of the future and is specifically optimized for sequential data-intensive workloads. It is content operations responsive with an automatic app-optimized QoS. By controlling all disk operations, RAIDIX uses the fastest disks in the array when performing read and write operations and eliminates disk latency factor.

✓ **99.999% Storage Uptime and Availability; Data Integrity and Security**

Triple parity RAID guarantees high sustainable performance even if 3 hard drives fail. Active/Active dual controller storage architecture secures full fault tolerance. Silent data corruption detection and correction mechanism prevents data from silent errors.

✓ **Cluster-in-a-Box**

The cluster-in-a-box storage architecture enables clasterization of all storage services, including a parallel FS installed onto the storage platform. The proprietary failover mechanism significantly reduces failover time and the connectivity-related latencies.

✓ **Flexibility**

No two businesses are created equally, which is why flexibility is such an important part of storage solutions. Likewise, businesses need solutions that will be able to grow and evolve as their own organizations do the same things. The RAIDIX software platform allows a wide selection of hardware components, including the ability to provide storage resources locally to the file system as well as through different interfaces like FC, IB, iSCSI. A compatibility with different interfaces allows organizations to tailor an enterprise class storage solution and HPC infrastructure to fit to any budget.

About AIC

AIC is a leading provider of both standard OTS, off-the-shelf, and OEM/ODM server and storage solutions. With expert in-house design capabilities, validation, manufacturing and production, our broad selection of products are highly flexible and are configurable to any form factor or custom configuration. AIC leads the industry with nearly 20 years of experience in mechanical, electronic, system-level engineering as well as a dedication to product innovation and customer support. Headquartered in Taiwan, AIC has offices and operations throughout the United States, Asia and Europe.

About RAIDIX

RAIDIX is a high performance SAN and NAS storage software development company. We tailor our product to fit industry-specific data storage needs in three diverse sectors: Media and Entertainment, Healthcare, and High-Performance Computing (HPC).

Our patented RAID calculation algorithms provide users with the best in class storage performance. We support InfiniBand, iSCSI, and Fibre Channel interfaces, transforming standard x86_64 server hardware into an optimized cost-efficient storage solution.

Founded in 2009, RAIDIX brings years of previous data storage experience to our clients. Together with a deep understanding of industry-specific processes, our vast technical expertise provides specific solutions through each of our software product families.