



Vivavo Selects Chelsio For Hybrid Cloud Storage Infrastructure

Business Overview

Vivavo is a hybrid cloud service provider and infrastructure pioneer delivering scalable cloud infrastructure solutions that simplify the IT needs of its business customers. Vivavo selected Chelsio's Unified Storage Server (USS) software to enable the creation of a low cost, highly scalable and high availability cloud storage infrastructure.

The Challenges

Give businesses the options and flexibility to build a secure, high performance, and scalable infrastructure for hosting web applications using a combination of cloud (virtual), dedicated (physical), and co-located servers connected via a private dedicated network.

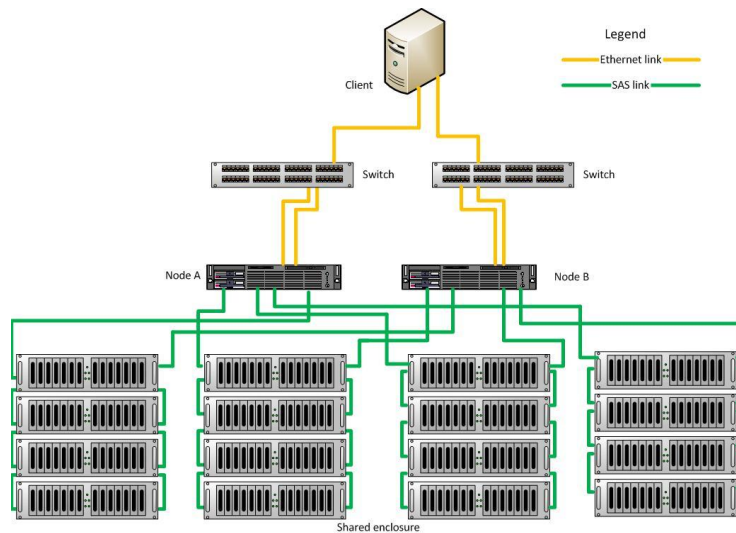
The Solution

Chelsio Unified Storage Server (USS) is a 10GbE/1GbE high performance iSCSI SAN, NAS, and RDMA storage solution. USS is all the software necessary to instantly convert any 64-bit x86 Intel or AMD-based systems into a Unified Storage Target.

With Vivavo, two head nodes with USS version 2.2 are installed on SW RAID level 1. Each node has 24 core processors with 200GB memory. Two Chelsio T420-CR dual-port 10GbE adapters are installed in each of the nodes. One T420-CR is used to maintain the heartbeat of the cluster; the other T420-CR has each of its ports connected to a 10GbE switch. The two ports are configured in a network cluster for network failover.

Each of the servers has two dual-port SAS cards. For storage the setup consists of 16 dual headed SAS JBODs with 12 disks of three Terabytes each. Four of these JBODs are cascaded and connected to one SAS port of the USS-1.

The next four JBODs are cascaded and connected to the other port of the SAS card. Similarly the other two sets of four JBODs are cascaded and connected to the USS-1. The JBODs are connected similarly to USS-2. The JBODs are configured in RAID 10 with two spares each. Using Thin Provisioning, the total storage pool for this set-up is about ½ petabyte. The clients access the storage via iSCSI targets.



Vivavo uses shared HA with a SAS daisy chain to deliver highly reliable cloud storage services

“The Chelsio USS software has proven to be a tremendous asset to enabling high performance, scalability and high reliability for storage clouds. The combination of USS and the T4 Unified Wire adapters is a powerful, scalable solution for our cloud storage applications.” – Francis Au, executive director, Vivavo

Demonstrating HA

This cluster has redundancy built at every level, including disk failure, network failure and power failure.

- To verify the storage redundancy one of the SAS cables is pulled from Node A (refer to network topology diagram) and the data path fails over to the other SAS port of the same SAS card. Similarly other storage redundancy paths can be verified.
- To verify network redundancy network cable from the switch to one of the USS servers is pulled and the network seamlessly fails over to the other switch. Chelsio’s support for bonding helps in the network failover.
- To verify power redundancy, power cable of Node A is pulled and Node B takes over as the primary node.

Business Benefits

Chelsio helps cloud infrastructure companies implement high performance, scalable, highly reliable storage solutions by taking advantage of the USS features such as support for iSCSI target, CIFS, NFS, FTP, HTTP, Thin Provisioning volumes, Volume cloning, snapshots, instant restore from snapshots, volume encryption and replication compression.

About Vivavo

Since 2006 VIVAVO has been a leading Hybrid Cloud service provider with extensive expertise and experience in operating complex, on-demand cloud, dedicated and mixed cloud infrastructures throughout the worldwide.

About Chelsio

Chelsio is a leading technology company focused on solving high performance networking and storage challenges for virtualized enterprise data centers, cloud service installations, and cluster computing environments. Now shipping its fourth generation protocol acceleration technology, Chelsio is delivering hardware and software solutions including Unified Wire Ethernet network adapter cards, unified storage software, high performance storage gateways, unified management software, bypass cards, and other solutions focused on specialized applications.