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INFOSTOR**PRODUCT WRAP-UP FROM SUPERCOMPUTING**

By Ann Silverthorn

We wrap up our coverage of this week's Supercomputing 2005 conference in Seattle, which had about 9,000 attendees, with a number of announcements related to InfiniBand and storage for high-performance computing (HPC) environments.

The highest-profile storage event at the show was StorCloud, a consortium of vendors that built a virtual on-site "storage on request" capability to support researchers and demonstrate high-bandwidth applications at the conference.

Some of the goals of the StorCloud project were to

- Provide at least one petabyte of capacity to show participants;
- Approach 1TB-per-second infrastructure bandwidth; and
- Provide 1GBps backup bandwidth.

More than 25 vendors (mostly storage) participated in the StorCloud initiative. BlueArc's Titan Storage Systems, for example, were deployed as NAS gateways front-ending Sun/StorageTek disk arrays.

Intransa demonstrated its 10GBps Ethernet-based IP SAN powering an HPC visualization application hosted by Sandia National Laboratories in the StorCloud exhibit. Intransa will also participate in the StorCloud Challenge in conjunction with Japan's National Institute of Advanced Industrial Science and Technology (AIST). Both demonstrations will use Intransa's IP5500 iSCSI storage systems. At Supercomputing 2005, the IP5500 was accessed via 10Gbps N210 server adapters from Chelsio.

In addition to the InfiniBand announcements made by Engenio, SGI, and Isilon (see InfiniBand makes a comeback at Supercomputing Show and Isilon accelerates clustered storage), RAID Inc. and Texas Memory Systems also made InfiniBand-related product announcements.

RAID Inc. partnered with SilverStorm Technologies to showcase a SAN with 4Gbps Fibre Channel, Serial Attached SCSI (SAS), iSCSI and SATA II, as well as SilverStorm's InfiniBand switches and accelerator technology for Oracle RAC applications. RAID Inc. also partnered with SilverStorm and Microsoft to demonstrate a cluster supporting Microsoft's Windows Compute Cluster Server 2003 software. The cluster incorporated SilverStorm's 12-port, 4x (10Gbps) InfiniBand switches.

Solid-state disk manufacturer Texas Memory Systems demonstrated an InfiniBand interface and scaleable performance of 2.5Gbps to 120Gbps using 4x InfiniBand connections. The InfiniBand interface allows the solid-state disk to natively connect to HPC servers and Oracle grid environments. The demonstration also included InfiniBand host channel adapters (HCAs) from Mellanox.

In another Supercomputing 2005 announcement, Panasas introduced the next generation of its ActiveScale Storage Cluster to address performance, management, deployment and integration demands of commercial customers. Panasas is now shipping 800GB StorageBlades to deliver 8TB of capacity per 4U shelf and up to 80TB per cabinet. The company also introduced three-, five-, and 10-shelf rack systems that ship in a 42U cabinet. Panasas' new I/O Router provides integration with clusters built on either InfiniBand or Myrinet networks.

Broadcom was also at the Supercomputing conference demonstrating its RAIDCore PCI Express (PCIe) Serial Attached SCSI (SAS) and Serial ATA (SATA) RAID controller cards in an HBA format. Broadcom's demonstration included a SAS RAID controller with an integrated PCIe host bus architecture. The implementation of the PCIe host bus enables 2GBps full-duplex bandwidth between the processor and the storage system to address the needs of HPC applications. In addition, the demo featured Broadcom's SAS technology with high-capacity SATA II drives.