HPC Systems, Netlist, and Nyriad to Accelerate the Adoption of Persistent Memory and GPUs for Storage

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SAN JOSE, Calif., Jan. 24, 2018 /PRNewswire/ -- Netlist, Inc. (NASDAQ: NLST), Nyriad® and HPC Systems today announced their joint collaboration to deliver superior throughput, IOPs and resilience for high performance Lustre storage solutions for large and small files targeted at large-scale cluster computing.

HPC Systems is a leading expert in configuring Lustre solutions for scientific work-loads. In collaboration with Netlist and Nyriad, they bring to market next generation solutions that achieve superior performance and resilience at a lower cost than previous solutions based on RAID controllers. Netlist's NVvault®, non-volatile NVDIMM combined with Nyriad's GPU-accelerated storage enables larger, more parallel Lustre OSD nodes to achieve higher throughput and higher IOPs with scale.

Teppei Ono, President of HPC Systems, said, "This collaboration is one of the exciting revolutions in high performance computing where larger scale solutions result in a leap in efficiency. With Nyriad's NSULATE technology, we get higher performance and resilience the more drives we add to a node. At larger storage scales with higher throughput, we can dispense with RAID controllers and use NVDIMM's from Netlist to achieve millions of IOPs for large and small file transactions."

Mario Martinez, Netlist Senior Director of Marketing, said, "The CPU and RAID controller have become major obstacles to efficiently scaling parallel storage. With the team at HPC Systems and Nyriad, we introduce a new architecture based on our NVvault NVDIMM to bypass these obstacles altogether and deliver an innovative and superior performing solution."

Nyriad Chief Technology Officer Alex St. John stated, "Netlist's NVvault combined with using the GPU for storage processing gives us the maximum possible IOPs and a solution for overcoming the performance challenges introduced by the Meltdown and Spectre patches to the operating system.

Through the utilization of NVDIMMs to transfer data directly to the GPU for storage-processing, the Linux kernel obstacles are bypassed and we can deliver enhanced performance and resilience."

To find out more about the HPC Systems, Netlist and Nyriad collaboration please visit Netlist's booth at the Persistent Memory Summit, in San Jose, CA on Wednesday January 24th, held during the SNIA Annual Membership Symposium.

Netlist's NVvault® DDR4 is an NVDIMM-N that provides data acceleration and protection in a JEDEC standard DDR4 interface. It is designed to be integrated into industry standard server or storage solutions. NVvault is a persistent memory technology that has been widely adopted by industry standard servers and storage systems. By combining the high performance of DDR4 DRAM with the non-volatility of NAND Flash, NVvault improves the performance and data preservation found in storage virtualization, RAID, cache protection, and data logging applications requiring high-throughput.

Nyriad's NSULATE™ solves these problems by replacing RAID controllers with GPUs for all Linux storage applications. This enables the GPUs to perform double duty as both I/O controllers and compute accelerators in the same integrated solution. The combination of Netlist NV Memory with NSULATE™ produces the best of both worlds, with low-latency IOPS achievable by any storage solution combined with maximum data resilience, security, throughput and efficiency in the same architecture.

About HPC Solutions http://www.hpc.co.jp
HPC Systems Inc. is a leading system integrator of High Performance Computing (HPC) solutions. Since its inception in 2006, the company has quickly established itself as a technology and performance leader in Japanese small-to-mid-range HPC market. The company plans for further growth and developments in world class HPC Cloud solutions, to support customers research and technological development worldwide.

About Netlist - www.netlist.com
Netlist is a leading provider of high-performance modular memory subsystems serving customers in diverse industries that require superior memory performance to empower critical business decisions. Flagship products NVvault® and EXPRESSvault® enable customers to accelerate data running through their servers and storage and reliably protect enterprise-level cache, metadata and log data by providing near instantaneous recovery in the event of a system failure or power outage. HybriDIMM™, Netlist's next-generation storage class memory product, addresses the growing need for real-time analytics in Big Data applications and in-memory databases. Netlist holds a portfolio of patents, many seminal, in the areas of hybrid memory, storage class memory, rank multiplication and load reduction. Netlist is part of the Russell Microcap® Index. To learn more, visit www.netlist.com.

About Nyriad® - www.nyriad.com
Nyriad is a New Zealand-based exascale computing company specializing in advanced data storage solutions for big data and high-performance computing. Born out of its consulting work on the Square Kilometre Array Project, the company was forced to rethink the relationship between storage, processing and bandwidth to achieve a breakthrough in system stability and performance capable of processing and storing over 160Tb/s of radio antennae data in real-time, within a power budget impossible with any modern IT solutions.

Contacts:
The Plunkett Group
Mike Smargiassi or Sharon Oh

NLST@theplunkettgroup.com
(212) 739-6740

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