



## InfiniBand 10Gb/sec Technology Demonstrates Excellent High Performance Computing Scalability

*Mellanox 64-Node InfiniBand Cluster Delivers One-Half Teraflop of Processor Power*

Santa Clara, Calif. and Yokneam, Israel, - June 17, 2003 - Mellanox™ Technologies Ltd., the leader in InfiniBand<sup>SM</sup> silicon, today announced new High Performance Computing (HPC) cluster performance data provided by Linux Networx demonstrating that InfiniBand delivers excellent scalability and superb LINPACK benchmark results. These results build upon previously demonstrated InfiniBand record performance of greater than 850 MB/sec of MPI bandwidth and excellent sub-6 microsecond user level latencies. The InfiniBand architecture was developed by the top server and storage OEM companies to enable industry-standard clustering for the server, database, communications, data storage, embedded and HPC markets. InfiniBand has now demonstrated the ability to effectively scale into high port count HPC clusters.

"We have been anxious to evaluate the performance of InfiniBand HPC clusters," said Joshua Harr, chief technology officer of Linux Networx. "As a leader in high performance computing solutions, we are always on the lookout for new technologies that can deliver better computing price-performance to our customers. The performance and scalability that we've achieved with these InfiniBand benchmarks indicates that this is a HPC technology with great potential."

In a recent test at Linux Networx, an InfiniBand cluster delivered near-linear efficiency as the cluster size was scaled to 64 nodes. A measured LINPACK performance result of 505 Gflops was achieved, and these results were achieved without the opportunity to optimize the cluster. In a separate test cluster of 48-nodes the near-linear scalability efficiency was also demonstrated by the InfiniBand interconnect.

"With only a modest 64-node cluster of Intel standard servers, InfiniBand Technology was able to deliver over one-half teraflop of performance," said Dana Krelle, vice president of marketing for Mellanox Technologies, Ltd. "We consider this a key step in demonstrating the superior level of performance that can be achieved with 10 Gb/s InfiniBand HPC clusters. Mellanox will continue to optimize all aspects of these clusters to further improve the results."

The InfiniBand 10Gb/sec test cluster results are based upon 48-nodes of Linux Networx Evolocivity<sup>®</sup> II (E2) with dual Intel<sup>®</sup> processors, and a second separate cluster with 64-nodes of Linux Networx Evolocivity II (E2) with dual Intel processors. Both used GNU Compiler 3.2, OSU MVAPICH 0.9, Mellanox MTPB23108 HCAs and a Mellanox InfiniScale 96-Port Switch. MPI software, MVAPICH (MPI for InfiniBand on VAPI Layer), was provided by the Department of Computer and Information Science at Ohio State University.

### **About InfiniBand Architecture**

InfiniBand Architecture is the only 10 Gb/sec ultra low latency clustering, communication, storage and embedded interconnect in the market today. InfiniBand, based on an industry standard, provides the most robust data center interconnect solution available with reliability, availability, serviceability and manageability features designed from the ground up. These parameters greatly reduce total cost of ownership for the data center. Low cost InfiniBand silicon that supports 10 Gb/sec RDMA transfers is shipping today providing eight times the bandwidth of Ethernet and three times the bandwidth of proprietary clustering interconnects. With an approved specification for 30 Gb/sec, InfiniBand is at least a generation ahead of competing fabric technologies today and in the foreseeable future.

### **About Mellanox**

Mellanox is the leading supplier of InfiniBand semiconductors, providing complete solutions including switches, host channel adapters, and target channel adapters to the server, communications, data storage, and embedded markets. Mellanox Technologies has delivered more than 50,000 InfiniBand ports over two generations of 10 Gb/sec InfiniBand devices including the InfiniBridge, InfiniScale and InfiniHost devices. Mellanox InfiniBand interconnect solutions today provide over eight times the performance of Ethernet, and over three times the performance

of proprietary interconnects. The company has strong backing from corporate investors including Dell, IBM, Intel Capital, Sun Microsystems, and Vitesse as well as, strong venture backing from Bessemer Venture Partners, Raza Venture Management, Sequoia Capital, US Venture Partners, and others. Mellanox has been recognized with awards in 2001 and 2002 from Computerworld, Network Computing, Red Herring, and Upside magazines as a key emerging technology company. The company has major offices located in Santa Clara, CA, Yokneam and Tel Aviv Israel.

For more information visit Mellanox website at [www.mellanox.com](http://www.mellanox.com)

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