Mellanox Releases Independent Report Demonstrating ConnectX Ethernet NICs Outperform Competition and Ships First ConnectX-6 Dx Secure SmartNICs

ConnectX Delivers Higher Performance, Scalability and Efficiency for Cloud Networking Workloads in Side-by-Side Comparison

Mellanox Technologies, Ltd. (NASDAQ: MLNX), a leading supplier of high-performance, end-to-end smart interconnect solutions for data center servers and storage systems, today announced that laboratory tests by The Tolly Group prove its industry-leading ConnectX® 25GE Ethernet adapter significantly outperforms the Broadcom NetXtreme E series adapter in terms of performance, scalability and efficiency. Mellanox is extending this technology lead as ConnectX-6 Dx, the latest addition to the award winning ConnectX family, is being shipped to hyperscale customers.

The detailed comparison test by the independent Tolly Lab shows the Mellanox ConnectX-5 NIC delivers up to twice the throughput of the Broadcom NetXtreme E adapter for various environments and workloads common in cloud, enterprise, and flash-storage deployments. In addition, the testing showed that Mellanox can handle more connections, prevents packet loss, and consumes fewer host CPU cycles per packet. The full Tolly report is available for download from the Mellanox web site.

"Network adapter performance truly matters in cloud, storage and enterprise deployments," said Amit Krig, senior vice president of software and Ethernet NICs at Mellanox. "This Tolly report shows Mellanox is the clear leader in Ethernet networking performance, not just in throughput, but also in congestion management, preventing packet loss, and improving CPU efficiency. We're showing proof that ConnectX is the best at cloud networking, and the best just got betterâ€”and more secureâ€” with customer shipments of our ConnectX-6 Dx SmartNIC."

"The Mellanox ConnectX-5 25GbE adapter consistently demonstrated higher performance, better scale, and lower resource utilization," said Kevin Tolly, founder of the Tolly Group. "Our testing shows that with RoCE, storage traffic, and DPDK, the Mellanox NIC outperformed the Broadcom NIC in throughput and efficient CPU utilization. ConnectX-5 also used â€˜Zero-Touch RoCE' to deliver high throughput even with partial and no congestion control, two scenarios where Broadcom declined to be tested."

The ConnectX family of Ethernet NICs is a central element of high-throughput, low-latency server and storage connectivity solutions. The built-in hardware acceleration enginesâ€”including Advanced Switching and Packet Processing® (ASAP2) technology, DPDK acceleration, RDMA over Converged Ethernet (RoCE), NVMe over Fabrics (NVMe-oF), and GPUDirect®, and support for secure boot and firmware updates - make it ideal for diverse workloads in public, private and hybrid cloud environments, as well as storage networking.

The recently introduced, and now shipping, ConnectX-6 Dx is the world's leading secure cloud SmartNIC, which provides 200Gb/s Ethernet connectivity, along with PCIe 4.0 host connectivity, outstanding performance of up to 215 million packets per second and innovative hardware offload engines, including inline cryptographic acceleration engines for IPsec and TLS. This enables new use cases and deployment options for RoCE, including IPSec-encrypted connections, programmable congestion control, and Zero Touch RoCE - the ability to run RoCE over ordinary Ethernet networks to simplify deployment. In addition, the ConnectX-6 Dx is supported with all major operating systems and is backwards software compatible with and supports all the offloads and features found in previous generations of adapters.

Supporting Resources:

- Learn more about Mellanox ConnectX Ethernet NICs
- Read the Tolly Report, Mellanox ConnectX-5 vs. Broadcom NetXtreme
- Learn more about Mellanox ConnectX-6 Dx SmartNICs

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