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Micron Advances Persistent Memory with 32GB NVDIMM

First Solution Delivering 2933 MT/s Speeds to Eliminate Storage Bottlenecks

DENVER, Nov. 13, 2017 (GLOBE NEWSWIRE) -- At the SC17 show, Micron Technology, Inc., (Nasdaq:MU) today announced a new 32GB NVDIMM-N offering twice the capacity of existing NVDIMMs, providing system designers and original equipment manufacturers (OEMs) with new flexibility to work with larger data sets in fast persistent memory.

The solution is architected to support the increasing performance, energy efficiency and uptime requirements of data analytics and online transaction processing applications. Compared to server configurations using traditional far storage, deploying NVDIMMs can deliver up to 400 percent performance benefits.[i]

As data center storage volumes grow, database queries increasingly need key datasets to be retained in-memory to improve access speeds due to the rising business requirement for higher availability. Many businesses are seeing increased value in placing fast memory near the processor to reduce the need to transfer data from far storage.

Persistent memory delivers a unique balance of latency, bandwidth, capacity and cost by delivering ultra-fast DRAM speeds for critical data. What sets it apart from standard server DRAM is its ability to preserve information in the event of a power loss. Micron's technology provides a unique solution for near-memory data analysis and addresses rising bandwidth demands of data-rich applications in markets such as finance, medicine, retail, and oil and gas exploration.

NVDIMM has emerged as a critical persistent memory technology due to its ability to deliver the performance levels of DRAM combined with the persistent reliability of NAND. It reduces the bandwidth gap between memory and storage.

Applications which require frequent updates — such as journaling or transactional logging of metadata — now have the capability to leverage NVDIMM for these functions instead of traditional far storage. Micron's NVDIMM allows customers to raise read-centric performance by 11 percent and write-centric performance by 63 percent for block level data.

"As data sets get larger and larger, data access becomes increasingly critical to application performance," said Tom Eby, senior vice president for Micron's Compute and Networking Business Unit. "Our new 32GB NVDIMM-N equips system architects with a high-capacity persistent memory solution that can dramatically increase throughput and improve total cost of ownership."

VMware and Dell are collaborating with Micron to increase the performance for virtualized applications. With virtual persistent memory, customers can now run multiple operating systems in a virtualized environment while reducing overall network traffic.

"As the global leader in cloud infrastructure and business mobility, VMware recognized early the significant reduction of database and local storage latencies that Micron NVDIMM-N can bring to our virtualized customers using Dell PowerEdge servers," said Richard A. Brunner, chief platform architect and vice president of Server Platform Technologies at VMware, Inc. "Using the 16 GB NVDIMM-N from Micron for the Dell PowerEdge 14G servers, a future version of VMware vSphere(R) intends to efficiently grow the number and size of virtualized persistent memory workloads in the data center while ensuring the benefits of live migration, check-pointing, and legacy storage optimizations for NVDIMM. VMware looks forward to the improvements that can arise when the server industry starts deploying the new 32 GB Micron NVDIMM-N to our customers."

"Persistent memory solutions enables our customers to optimize intensive database and analytics workloads," said Robert Hormuth, vice president and fellow, Server Division CTO at Dell EMC. "Micron's advancement in persistent memory offering and Dell EMC engineering efforts to enhance NVDIMM capability of PowerEdge servers will boost application performance, reduce system crash recovery time and enhance SSD endurance for our customers."

Demonstrations of the new persistent memory solutions using Micron NVDIMMs running on a Dell PowerEdge 14G server will be showcased at SC17 at the Micron Booth (#1963).

Supporting resources

- A datasheet on the new 32GB NVDIMM-N is available here.
- Product photography can be downloaded here.

About Micron
We are an industry leader in innovative memory and storage solutions. Through our global brands — Micron®, Crucial® and Ballistix® — our broad portfolio of high-performance memory and storage technologies, including DRAM, NAND, NOR Flash and 3D XPoint™ memory, is transforming how the world uses information to enrich life. Backed by more than 35 years of technology leadership, our memory and storage solutions enable disruptive trends, including artificial intelligence, machine learning, and autonomous vehicles, in key market segments like cloud, data center, networking and mobile. Our common stock is traded on the NASDAQ under the MU symbol. To learn more about Micron Technology, Inc., visit www.micron.com

[i] Testing based on MSFT SQL2016 using NVDIMM-N as a write cache which benefits from low latency byte-level transactions, removing the overhead of both the IO bus and block mode operations of non-write cache systems.

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