Marvell's New DragonFly Virtual Storage Accelerator Introduces Breakthrough Host Cache Architecture For Enterprise Storage

Embedded Marvell HyperScale Caching Technology leverages NVRAM and SSDs to enable 10x virtual server scaling while reducing storage costs by 50% or more

SANTA CLARA, Calif., April 4, 2011 /PRNewswire/ -- Marvell (Nasdaq: MRVL), a worldwide leader in integrated silicon solutions, today launched the Marvell® DragonFly™ Virtual Storage Accelerator (VSA) powered by HyperScale™ embedded processor technology.

(Logo: https://investor.marvell.com/image/Marvell_logo.jpg)

In what is a first for Marvell, the new DragonFly VSA, which plugs directly into all commercially available servers with a PCIe slot, combines Marvell's world-class chip technology with its newly designed circuit boards. The result is a breakthrough systems solution that is designed to achieve 10x server I/O performance, while reducing power, space and storage capital costs in the datacenter. What's more, the DragonFly VSA is perfectly suited for virtualized server applications, which have become hugely popular in the enterprise.

The DragonFly VSA represents an entirely new architecture in the industry, achieving the benefits of virtualization scaling and enterprise NAS/SAN/DAS storage cost reduction via turn-key hardware.

"The Marvell DragonFly VSA is a revolutionary product for enterprise-class cloud computing, offering powerful host server I/O cache acceleration to solve worsening storage I/O bottlenecks," said Pantas Sutardja, Chief Technology Officer at Marvell. "The HyperScale caching technology embedded in the DragonFly VSA is the product of leveraging our leadership in HDD, SSD storage technologies, and extending our advanced-integration capabilities. The DragonFly VSA presents itself as a powerful tool for data center architects in optimizing the costs of the server/storage infrastructure. We look forward to collaborating with visionary Cloud storage architects to achieve a leapfrog improvement in virtualization scalability."

"Addressing the issue of I/O bottlenecks in the enterprise is a real problem facing many data center managers," said Jeff Janukowicz, research manager for Solid State Storage Technologies at IDC. "A turn-key system solution, such as Marvell's DragonFly Virtual Storage Accelerator, that combines silicon with additional hardware in an industry standard PCIe card that addresses these performance concerns is an innovation that will be welcomed by many enterprise storage customers."

"Marvell is changing the game for organizations that have been faced with implementing multiple application servers to effectively run email, databases, warehousing and much more in a virtual or cloud environment," said Arun Taneja, founder and president, Taneja Group. "DragonFly VSA is moving performance up to the application server itself instead of relying on storage for the I/O cache. It simply plugs into the server and fits in seamlessly with existing architectures to provide a tremendous boost in systems efficiency and performance. It also releases the pressure on the backend storage to carry the entire load for IO yet uses the capacity-aspects of storage very effectively."

About DragonFly VSA

The DragonFly VSA is a purpose-built, turn-key solution that is designed to provide benefits to enterprise data centers (private clouds) and hosted service providers (public clouds). Powered by HyperScale embedded technology, the Marvell DragonFly VSA enables cloud computing deployments to break through the storage I/O barrier by enabling 10x virtual server IOPS while lowering NAS/SAN/DAS storage costs by 50 percent or more. The DragonFly VSA enables the creation of a next-generation cloud-optimized data center architecture where data is automatically cached in a low-latency, high-bandwidth "host I/O cache" in application servers on its way to/from higher-latency, higher-capacity storage. The DragonFly VSA is designed to create a host I/O write and read cache that is agnostic to storage protocols and can be configured as a data cache for NAS, SAN or DAS storage arrays.

The DragonFly VSA's distributed host I/O cache employs a two-level cache for very low-latency and high burst throughput. The two levels are composed of a level-1 non-volatile random access memory (NVRAM) cache and a level-2 cache created from off-the-shelf commodity SSD drives. The two-level cache enables consistent, high-level performance to applications running on the host server.

As an industry standard PCIe adapter, the DragonFly VSA offers a turn-key "appliance-on-a-card" that fits seamlessly into all commercially available rack-mount servers and is operating system independent. By offering an add-on card to commodity servers, the DragonFly VSA enables a cost-effective distributed host cache that incrementally scales IOPS and NVRAM/SSD capacity as your application servers grow over time.

Powered by embedded HyperScale technology, Marvell DragonFly VSA is designed to offer the following high-value features for cloud computing storage deployments:

- 10x write performance via flash-aware write buffering & re-ordered coalescing
- 10x read performance via intelligent block/file read caching algorithms
- HA synchronous mirroring for SPOF protection
- Zero-warm up cache upon power loss
- Multi-protocol storage caching (NFS, iSCSI, FCP, FCoE, SCSI DAS)

Availability

Marvell DragonFly VSA will be on display at the Storage Networking World conference on April 5-6 at the Santa Clara Convention Center, Booth #414. Beta trial sampling is expected in CQ3 2011.

Related Links:

- Product information: Link
- Product photos: Link
- Marvell Online Press Kits: Link

About Marvell

Marvell is a world leader in the development of storage, communications, and consumer silicon solutions. Marvell's diverse product portfolio includes switching, transceiver, communications controller, wireless, and storage solutions that power the entire communications infrastructure including enterprise, metro, home, and storage networking. As used in this release, the term "Marvell" refers to Marvell Technology Group Ltd. and its subsidiaries. For more information, visit Marvell.com.

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