

Product Announcement

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EasyCo LLC unveils "ultra performance" storage solution for enterprise servers.

EasyCo announces the release of its "Managed Flash Technology" storage solution for Linux servers. Dubbed "The 300,000 RPM Disk Drive", MFT combines Flash memory based Solid State Drives (SSDs) with a patent pending drive management layer which results in disk performance that is 10 to 30 times faster than 15K RPM disk drives when working with random IO operations.

Flash SSDs only solve the "read half" of the enterprise performance equation. By delivering 2,000 to 7,000 4K read IOPS (IOs Per Second), Flash SSDs randomly read 10 to 30 times faster than 15K SCSI drives. Unfortunately, the random write performance of Flash SSDs is terrible. With random write rates of only 13 to 50 IOPS, even applications that do as few as 5% writes will spend 95% of their time writing. This renders existing, unmanaged Flash SSDs as unsuitable for most enterprise applications. This is what SSD manufacturers refer to as "the random write problem" of flash technology.

EasyCo's Managed Flash Technology solves the Flash SSD random write problem and delivers sustained random write performance that is more than 100 times faster than the bare solid state flash drive. As a result, random write speeds increase from the 8 to 50 range to 3,000 to 10,000 IOPS. Without MFT, Flash SSDs are only marginally faster than desktop hard disk drives. With MFT, Flash SSDs are accelerated *into a class by themselves*.

EasyCo's president, Sam Anderson, laughs about the first production data tests. "In our first live test, a prospect copied 218,000 of their own records, deliberately sorted out of sequential order, from one database file to another. Running on a 15K SCSI drive, the file to file copy took over 45 minutes. In fact, at one point, the client called to ask if the server had hung (they were testing remotely). The same job on an MFT Flash drive took only 2 minutes and 45 seconds, or 3,963 IOPS."

Chief Technical Officer Doug Dumitru commented: "That's only half the story. The MFT technology can also be used in situations with lots of file system RAM cache." Many users load up a server with enough memory to store the entire active database. This solves read performance issues, but doesn't help applications that do a lot of writes. MFT allows you to build a system using RAM to eliminate all disk reads and push real-time writes to an ordinary disk array at >100,000 random writes/sec. "It's like having a non-volatile ramdisk without any special hardware." Even small servers can benefit from this behavior. Many database import operations end up 100% write-bottlenecked. A database import job importing 2.2 million voter records for a local political campaign went from 50 minutes with a traditional hard disk to less than 3 minutes with MFT. This shows how even small databases can benefit from the fast write performance that MFT delivers.

EasyCo foresees a huge market for its MFT solution. Over the years, processors and memory have grown exponentially faster while disk drives have remained essentially the same. The mechanics of rotating hard disks have only improved about ten-fold in the last three decades in terms of random IO performance, while CPUs are more than 5000 times as fast. For many applications this means that random disk IO is the dominant bottleneck in terms of application performance. Even servers running non disk intensive applications are

hitting the limits of disk drives. Everything from departmental mail servers to web application portals need random disk IO and hard disks just are not keeping up.

The MFT solution addresses this issue on several fronts. First, it allows servers to scale. With MFT, you can support as much as 10 to 30 times the number of users or hits with existing CPUs and RAM configurations. Doing this with traditional hard disks would require arrays consisting of dozens or even hundreds of drives. While hundred drive arrays do exist, MFT lets you reach the same level of performance with a handful of solid state disks occupying 1/50th the space and consuming 1/500th the power. Second, MFT can put the snap back into an application. The ultra low latency of solid state drives directly translates into quicker screen responses and better interactivity, even with busy servers. The third front is the performance of single threaded jobs. These batch jobs are stuck in a time warp, at the performance levels of a decade ago with nowhere to go. Adding drives does not help. With MFT running, the morning “picking ticket” job finishes in 10 minutes instead of 2 hours, and a rebuild of your data mining cube finishes in hours instead of days. One customer reports that their end-of-day job went from 10 hours and 57 minutes to just 27 minutes after migrating to an entry-level MFT server.

EasyCo is now shipping Linux servers pre-configured with raid protected Flash SSD MFT storage subsystems. Available configurations range from 7 GB to over 600 GB of ultra performance solid state storage. These configurations deliver from 2,000 RW IOPS to over 50,000 RW IOPS depending on drive model and quantity. In comparison, 15K SCSI drives are about 200 IOPS per drive. End-user pricing starts at under 2,500 US Dollars and extends upwards to over \$50,000 depending on the configuration. Excellent reseller discounts are available.

Windows solutions and storage appliance solutions should be available by the fourth quarter '07. EasyCo is also seeking qualified Linux system integrators, as well as server and storage appliance manufacturers who wish to distribute the MFT solution with their hardware.

More information about MFT is available at <http://www.easyco.com>.

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EasyCo LLC is a privately held company with offices in Pennsylvania and California.