SSD market busy

By Deni Connor - Network World
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Everything was coming up SSDs last week. Major solid state drive (SSD) manufacturer STEC announced last week that it was entering the PCIe-based SSD fray with an advanced drive that supports both Single-Level Cell and Multi-Level Cell (SLC and MLC) configurations and a caching solution that can greatly increase the performance of servers accessing direct attached or shared storage.

While the STEC PCIe drive has been rumored for some time, the caching software was a surprise. A number of companies have been developing caching software, but this is the first PCIe SSD from a major SSD manufacturer that has an integrated cache solution supporting both read and write cache functions.

The new Kronos PCIe is advertised as a high-endurance enterprise class SSD that currently comes in four versions, with two more on the horizon. The Kronos SLC version supports 240GB and 480GB capacities, 110K random read and 100K random write IOPs (4KB) and 1.1GBps bandwidth for both sequential reads and writes. The Kronos Turbo supports 480GB SLC capacity and 980GB MLC capacity with 220K random read IOPs (4KB) and 200K random write IOPs, and 2.2GBps bandwidth for sequential reads and writes. Both models have a five-year warranty with provisos of 30x capacity writes per day (SLC) and 10x capacity writes per day (MLC).

These are serious performance numbers and are exemplar of STEC's long experience in advanced controller development. Unlike some PCIe implementations, the STEC approach uses a lightweight block-io server driver with all flash control functions performed by the silicon on the PCIe board. The MLC Kronos target MSRP is a low $10 per GB, putting STEC into a very aggressive pricing position, which is appropriate considering the competitive landscape in the PCIe market.

The EnhanceIO SSD Cache solution supports VMware, Hyper-V and Linux implementations. Unlike some cache solutions, EnhanceIO supports both write-through read caching and write caching, with power failure backup provided by super-capacitor implementations directly on the PCIe board. While EnhanceIO is a companion product to the Kronos line, it is SSD agnostic and can drop into an environment with products from other manufacturers.

The Kronos line and cache software rounds out what can be argued is the most complete enterprise SSD line in the industry, which includes the ZeusRAM DRAM SSD, the Kronos PCIe drive, the ZeusIOPs 6Gb SAS drives (now available in both SLC and MLC configurations), the ZeusIOPs Fibre Channel drives, which led the way for SSD implementations in mainstream enterprise storage, the MACH16 SATA drives and a line of embedded products that are used in military and aerospace applications.