

First Look: Copan Systems Revolution 200T

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Will MAID Clean Up Messy Tape Backups?

The revolution 200t is a highly scalable Serial ATA (SATA) disk backup system from Copan Systems, Longmont, CO, that employs a new technology called massive array of idle disks (MAID). It's a virtual tape library (VTL) that emulates a number of popular tape libraries and tape drives. "While we see a number of secondary storage applications for our technology, we see the biggest need for tape replacement," says the company's CTO and founder, Alope Guha.

With MAID, large groups of disks can be arranged in arrays with little space between each disk because as many as 75% of the disks within the array remain idle at any given time. This cuts down on heat and vibrations--only the disks that contain information that's being accessed spin up. The Revolution 200T scales from 56TB to 224TB, housing up to 896 250GB SATA drives.

The Revolution 200T's storage costs \$3.50/GB. Other VTL systems using ATA disk and RAID range from \$6/GB to nearly \$20/GB. Libraries are priced much lower--their top end being about \$3.50/GB. But those evaluating VTL systems will want to balance their service level expectations with the system's price and future savings.

Mike Kahn, managing director of The Clipper Group, says Copan is offering "a new low-cost storage tier that's compatible with tape, faster than tape, but with a much lower TCO than is possible with plain, always-spinning ATA arrays pretending to be tape systems."

A CTO at a potential competitor that makes an ATA-based disk VTL, says that while it's important to be mindful of the cost when building scalable arrays for secondary storage, these must be weighed against the primary benefit of standard disk systems--reliable high-speed I/O performance. Using a number of calculations, the CTO demonstrated that the savings of a MAID system are negligible vs. an ATA-disk RAID system, given the decreasing power consumption and increased density of today's disks. He used similar calculations to show that the overall cost savings don't justify giving up the I/O performance of typical ATA-based RAID systems.

According to Copan, it takes 10 seconds for a disk to spin up to the first byte (TTFB) of data; on average, 25% of the Revolution 200T disks are powered up at one time. Typical access speed for tape

TTFB is 60 seconds or longer.

The bottom line? Copan is taking an innovative approach to long-term data storage with the Revolution 200T. If it can deliver significant cost savings over tape, offer an acceptable degree of performance and data protection and continue to build in next-generation technologies, then its MAID-based array will reduce some of the pain associated with tape backups and restores.

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