Adds Enterprise Flash Cache Software

On 3 November, 2014, Samsung announced the acquisition of Proximal Data, a US-based start-up focused on enterprise flash caching software. This acquisition is presented as an enterprise compliment to Samsung's existing software acquired through the December 2012 acquisition of NVELO.

Who is Proximal Data?

Proximal Data is a software start-up focused on accelerating virtual machines (VMs) in a virtualized server environment by using flash storage in the server to cache critical portions of data that is shared on the network's SAN (Storage Array Network).

Typically this flash would be installed as a PCIe card or SSD available from a number of sources.

This company's only product - AutoCache software - embeds caching intelligence into the VMware or Hyper-V hypervisor. Proximal claims that this improves VM density, efficiency, and performance up to three times that of an uncached system.

Proximal lists as investors: Avalon Ventures, Divergent Ventures, Correlation Ventures, and individuals Steve Tomlin (of Avalon), Kevin Ober (of Divergent), and David Coats (of Correlation).

As of the writing of this Alert the Proximal Data website is still unchanged, and could be a useful source for those who would like to understand the technology and company in more depth.

Why Would Samsung Want Proximal?

Samsung has taken a number of steps recently to try to expand the market for its NAND flash chips, including aggressive client SSD marketing, competing in the smartphone market, and releasing a family of enterprise SSDs.

Today's greatest SSD growth is in the enterprise, a market in which Samsung, with its strong consumer focus, has a decided disadvantage. Samsung hopes to use Proximal's technology to gain a toehold in the enterprise market that can be expanded into the domination that the company strives to achieve in any market it enters.

Samsung's Approach to Acquisitions

It would be an understatement to say that Samsung rarely acquires technology. The company nearly always develops new technologies using internal resources - something of a "Make or Buy" decision that always lands on the "Make" side. This important part of the corporate culture appears to work well for the company - its home-grown technologies consistently rank among the best.

According to a Wikipedia article Samsung has only attempted acquisitions (excluding its tender offer for SanDisk) thirteen times. This may not be altogether accurate, but the small number cited in the article compares against roughly a half-dozen acquisitions performed by HGST and a like number by SanDisk over the past three years, or the hundred-plus acquisitions performed in a single year by Cisco prior to the Internet bubble burst.

Objective Analysis sees any Samsung acquisition as a drastic step taken to achieve something that Samsung believed that it could not accomplish by itself in a timely manner.

Samsung's semiconductor business has only acquired two companies to our recollection over the past 25 years - Grandis, an MRAM technology firm, and NVELO, a maker of client caching software.

Does NVELO's Acquisition Help Explain Proximal's Future?

NVELO may have provided two benefits to Samsung. Prior to its acquisition NVELO produced caching software that allowed a small SSD paired with a large HDD to provide most of the performance of a very large SSD at a fraction of the cost. This quite clearly worked against Samsung's desire (especially after having spun off its HDD operations) for all PCs to convert to SSD-only designs.

Samsung discontinued this product, removing any threat it would have posed to the SSD market.

Samsung also redirected NVELO's efforts to the development of acceleration software for SSDs, both allowing the PC's DRAM to cache SSD data, and allowing an SSD's internal mechanisms to cache hot data on SLC flash and cooler data on MLC or TLC.

It is quite possible that Samsung will use Proximal's technology in the same way for the enterprise market. Proximal's solution of caching storage array data in server-based flash may be redirected into a product that uses DRAM to cache data in a solid state storage environment, or to produce solid state storage arrays that use an internal storage hierarchy to boost performance.

Samsung as an Enterprise Storage Competitor

Existing participants in the enterprise storage market can view this move as an expression of Samsung's intent to participate fully, but is it a threat? Objective Analysis does not expect for Samsung to become an important part of this market for some time. Many other pieces of the puzzle will need to be put in place before the company's can successfully dominate the flash storage market.

Samsung's only current presence in the enterprise storage market consists of SSDs that the company calls "Enterprise" products, but Objective Analysis' clients are well aware that this term is not well defined and its use does not guarantee that these SSDs will actually find favor among sophisticated enterprise

users.

The company's sales organization is fine-tuned to high-volume OEM businesses and the consumer market, but does not currently include the kind of sales channels or support organization necessary to compete against established storage array vendors.

Objective Analysis does expect for Samsung to participate in this market, but the need to establish sales and support channels will delay any serious inroads for a number of years.

Objective Analysis publishes reports detailing NAND flash and SSD markets. These reports can be purchased for immediate download from our website.

_____

Jim Handy
OBJECTIVE ANALYSIS
Semiconductor Market Research
www.Objective-Analysis.com
Forbes.com/sites/jimhandy
TheSSDguy.com
TheMemoryGuy.com
PO Box 440
Los Gatos, CA 95031-0440
USA
+1 (408) 356-2549