A periodic newsletter with links to blogs and industry news for subscribers to the Architecting IT blog.

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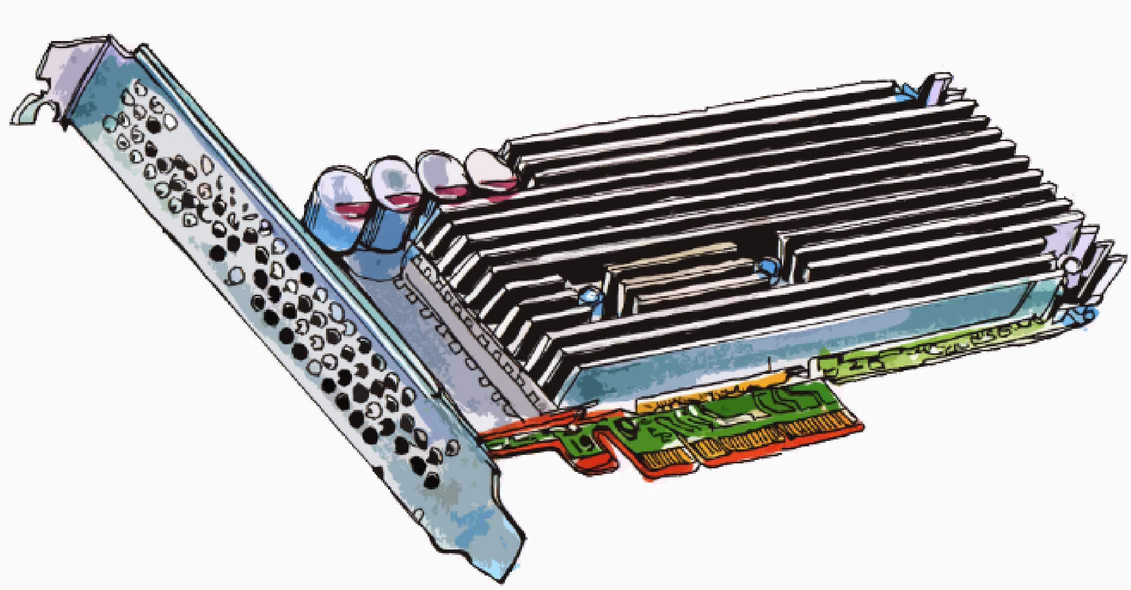
This is newsletter #22, up to 31 March 2016.



The Changing Face of Enterprise Storage

Over the past month I've attended two conferences with a very distinct storage bias. The first was Pure //Accelerate 2016 (do they have trademark on the double slash?), the second Storage Field Day 9, part of the Tech Field Day series. Both of these events highlight evolution in the enterprise storage industry, something that was re-emphasised with the latest figures from both Gartner and IDC.

The Gartner numbers show that as we knew, all-flash systems is a rapidly growing market segment (or not, more on that in a moment).   The details are reported over at The Register and the total at just over $1bn for the last reported quarter certainly seems impressive. However headlines belie the truth and it's not until you dig down into more detail that things become more interesting. Looking at the IDC Quarterly Enterprise Storage figures produced a couple of weeks earlier and we see a set of figures that show everyone in decline over the quarter and the year, except for HPE and the generic "other" category.

So how can EMC and IBM be both seeing significant growth in all-flash systems yet overall having declining revenue? The answer is simply that sales of all-flash systems are replacing sales of traditional storage, but overall those (storage) businesses have no actual growth (actually they are worse because they are in decline). Of course revenue doesn't translate to customers, however traditionally, all-flash systems are priced at a premium to legacy arrays. This implies that even fewer actual all-flash units are being shipped than traditional systems used to be.

For EMC, this attrition of their storage business is a major concern (at least for the EMC board). New products are not replacing old revenue fast enough; DSSD creates a new market niche but is unlikely to be a growth area to replace all those VNX and VMAX systems being decommissioned. EMC has traditionally sold products at high margin, with massive markup on hardware, something that in the future will be hard to match. The impending acquisition by Dell means product acquisitions are unlikely and a rationalisation of the storage portfolio will be on the cards anyway.

IBM has similar issues to EMC but seems to have decided that their legacy storage business can just wither on the vine. All the focus is in FlashSystem and their rebranded Spectrum products. NetApp are trying to dig themselves out of the mess by acquisition and better thinking in terms of their approach to cloud and data mobility. Hitachi continues to follow the same path as before, although they have released new hardware solutions that could pick up revenue from the lower end of the market where they traditionally didn't play.

Only HPE (3PAR) stands out as a success. Over the years, the company has continued to add features and functionality to the 3PAR range, taking what was a good hardware solution and making it suitable for all market segments, large or small. However the question for HPE has to be what they do next. There's only a limited amount of new features that can be added to a storage platform before it becomes overly complex; remember 3PAR was founded in 1999, so the original architecture is now 17 years old - not far off the mythical 20-year lifespan of storage appliances before they start losing their edge.

Upstarts and Disruption

Part of the problem for enterprise storage incumbents is the rise in startups selling new solutions. Think Coho Data, Tegile, Tintri, Pure Storage, Kaminario and others. These companies are seeing triple digit growth (albeit from a low base), which means their ideas are resonating with customers. I suspect too that their business practices (Pure with Evergreen, Kaminario with Perpetual) are also a draw; the legacy enterprise vendors traditionally abused their position with massive markups on maintenance in years 4/5 or enticing renewal/refresh deals that left a bad taste in the mouths of many customers.

The problem is, the storage market is becoming too fragmented. My NASCAR vendor slide shows the scale of the “problem”, with many vendors chasing the customer dollar. Almost certainly many of these startups will fail or be acquired for a steal, their IP integrated into other products, however some like Pure and Nimble are determined to go it alone as independent entities. Can we really have a storage-only vendor these days? This question isn't fully answered; of the original "big six" vendors, NetApp will remain the only pure independent. However we're seeing the rise of other companies (Pure/Nimble already quoted), plus others like DDN focusing on the object market that may challenge the traditional "block is king" assumption.

Another issue facing storage companies is the changing market towards integrated and hyper-converged systems. Customers (apparently) want simplicity and managing separate components is a significant overhead. However, storage systems particularly flash-based systems are massively simpler to operate than they used to be and there’s no reason why storage can’t be managed by another team.

Then there’s the threat from public cloud and the move to place more workload outside of the primary data centre. If you are a startup, why both these days with any on premises infrastructure?Barring restrictions around regulation, you may as well get someone else to worry about things like email and CRM, as well as the flexibility of powering up IaaS on demand. This change to an operationally focused technology acquisition model means the idea of spending millions on storage hardware in one hit may be alien to many new companies. Also those who are established don't want to have to be "all in" on a product for 3 years or more, with all the negativity the idea of lock-in means.

Where Next?

So where are we headed? 2016 is looking to be a pivotal year for storage. The Dell/EMC merger/takeover (which we will assume will complete) means a rationalisation for a whole suite of products. Software Defined Storage continues to bubble up, but hasn't really achieved as much as it promised. If (public) Cloud continues to be the growth area for technology, then traditional storage will continue on the decline.

All-flash will continue to be a non-segment, with flash systems simply being an array with different media. In fact I expect hybrid to come to mean an array/appliance with multiple media types that could all be flash of varying types in it.

Storage vendors need to be offering more than storage. They need to show how their products provide added value than just reliably storing and retrieving data. That means addressing issues of mobility, integration with the application, analytics and data intelligence. In fact, storage needs to disappear into the background to the extent that we take it for granted because the overheads of management simply go away.
It sounds odd for me to be calling for the death of the storage administrator, a role that has kept me in clover over the last 30 years. However I think the time is right for storage to be an enabler rather than a discipline in its own right.

What do you think?

Chris Evans

New Architecting IT Blog Posts - March 2016

- Hybrid Cloud and Data Mobility (30 March 2016)
- Pure //Accelerate 2016 - FlashBlade (29 March 2016)
- Build or Buy - A Tale of Two All-Flash Strategies (24 March 2016)

- Storage Performance: Why I/O Profiling Matters (18 March 2016)
- Storage Field Day 9 Preview: VMware (13 March 2016)
- Object Storage: S3 API Advanced Features (11 March 2016)
- Storage Field Day 9 Preview: Intel (9 March 2016)
- Storage Field Day 9 Preview: Violin Memory (8 March 2016)
- Storage Field Day 9 Preview: NetApp (7 March 2016)
- Object Storage: S3 API and Security (7 March 2016)
- Hyper-Convergence - It's all About the Appliances (3 March 2016)
- FlashForward - A new UK-Based Conference on Flash Storage (1 March 2016)
- TECHunplugged Returns to London! (1 March 2016)

TECH.UNPLUGGED

TECHunplugged will return to London on Thursday 12 May 2016. The venue is The Kensington Close Hotel, Wright's Lane, London W8 5SP.

The event is free for end users (fee for vendors). Details can be found here (EventBrite registration page) with the ability to register and check out the agenda.

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