STORAGE LEADERS ACCORDING TO GARTNER'S MAGIC QUADRANT - SUMMARIZED

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Storage is a hot topic in IT Today. Since Cloud Computing and Big Data have emerged as IT's top trends, storage has never been so important. I was fortunate to come across the Gartner

Magic Quadrant for disk arrays today. Although many smaller more niche storage vendors are making a name for themselves, I wanted to conduct some research among the leaders. I figured I would share some of that information on my blog. Please note that Gartner's analysis was published March 31, 2013. There have been some significant announcements made since then from some of those storage vendors. Nonetheless I think this is a good indication and summary of the storage leaders out there today. What I also like is that Gartner (if applicable) mentions the virtual storage offerings each vendor offers.

My intent when writing this blog was to understand what the industry storage leaders are offering today. I found this exercise very interesting. I hope this blog can serve as a reference point for anyone looking to possibly invest in additional storage in the near future for their enterprise.

As we can see from the Diagram below, the 6 usual suspects have emerged as the leaders once again.

Garnter Magic Quadrant for Storage & disk arrays

Since March, EMC has launched their Virtual Storage initiative: ViPR. Also I was present at HP Discover where HP continued to made strides with their HP VSA StoreOnce product line.

Here is summary of the leaders taken from the Gartner Magic Quadrant for Storage & Disk Arrays. In alphabetical order.

DELL

Dell products mentioned in this article

Dell EqualLogic - Dell EqualLogic products are iSCSI-based storage area network (SAN) systems.

Dell Compellent - A highly virtualized storage solution with automated data management features, including tiering and thin provisioning, for enterprise and cloud computing environments as part of the Fluid Data technology.

Dell is a storage vendor whose portfolio has been created through a series of acquisitions. Dell's sales force has not learned to sell value, but leads and sells on features, performance and price. It does not lead from a business solution perspective. Historically, this behavior has not been successful in the enterprise, but may be successful as array features become standardized and buyers become more price sensitive; however, this transactional selling technique is a risk for customers who require a closer consultative solution-based relationship. Dell is simultaneously trying to grow system sales in enterprise data centers with its Compellent storage line, while offering the EqualLogic series to SMBs. Compellent storage systems span the midrange and enterprise markets,
and have been upgraded to scale in performance and capacity. Dell also offers the Exanet-based Fluid File System, which is used with the EqualLogic and Compellent arrays to provide a multiprotocol file and block storage array. Gartner believes Dell's commitment to developing and owning new innovative storage technologies will improve its ability to provide highly competitive storage arrays.

Strengths

Dell offers customer-orientated pricing, upgrade and support models, such as inclusive software pricing with the EqualLogic perpetual licenses and specialized "Copilot" technical support for the Compellent storage arrays.
For customers wishing to use converged server and storage fabric-based systems to reduce operational tasks, Dell has integrated EqualLogic storage into its blade systems.
Across its product line, Dell storage is competitively priced in the market.

Cautions

Limited appeal as a "storae" vendor. Dell has a lack of presence in the traditional high-end storage market and its relative lack of success in the fast-growing NAS and object storage market segments.
Although the Compellent storage offers autotiering features, customers need to be aware

that data movement between tiers does not occur in real time, but is driven by monitoring data collected in default 24-hour monitoring windows.

Clients report that support and help desk calls for Compellent have deteriorated slightly since Compellent's acquisition by Dell.

EMC

EMC products mentioned in this article

EMC VMAX - V-Max systems are enterprise-class storage platforms intended for open systems and mainframe computing.

EMC VNX - Replacing CLARiiON and Celerra products in 2011. Unified storage with unsurpassed simplicity and efficiency, optimized for virtual applications.

EMC VPLEX - A virtual storage solution introduced by EMC in May 2010.[1] VPLEX implements a distributed "virtualization" layer within and across geographically disparate Fibre Channel storage area networks and Data Centers.

EMC ViPR - EMC's initiative around Software Defined Storage.

EMC is known as the disk storage market leader. EMC management has a vision for improving disk storage, understands the power of effective marketing and sales, and is willing to invest heavily in internal development activities, acquisitions, marketing programs and events to ensure that it can set market expectations. EMC has tightly integrated its VPLEX with VMware to enhance the attractiveness of the EMC VMAX and VNX storage systems in virtualized server environments. EMC is continuing to enhance VMAX, VNX and Isilon series performance, functionality, software agents and management tools to improve ease of use and value.

Strengths

Recent examples of high-impact announcements include New VMAX models, VNX performance and functional enhancements, such as increasing the number of snaps/logical unit number (LUN), and Isilon security and ease-of-use improvements

EMC has a large ecosystems and partnerships that increase EMC storage system attractiveness

Vast choice of complementary products like VPLEX and RecoverPoint enable EMC to deliver stretched clusters over distance, continuous disaster protection (CDP) and disaster recovery (DR).

Cautions

The VNX system is a dual-controller design that lacks automatic controller load balancing and scalability available with some competitive products.
Isilon, still lacks native data compression and/or deduplication that may increase its cost as a big data solution.
The overhead and limitations of various value-add features, such as thin provisioning and autotiering (Fully Automated Storage Tiering for Virtual Pools [FAST VP]) and architectural holdovers, require storage administrators to have high skill levels to ensure optimal performance and the use of new features.

IBM

IBM products mentioned in this article

IBM Pure Systems - IBM's family of expert integrated systems is built for cloud, big data & analytics.

IBM SmartCloud - Marketed under the name IBM SmartCloud, IBM offers IAAS services to enterprises of various sizes.

IBM DS8870 series - IBM System Storage DS8000 is designed for high performance, reliability, and flexibility and works in a range of open server operating environments and the IBM System zmainframe.

IBM Storwize V7000 - IBM Storwize systems are virtualizing RAID storage systems with raw storage capacities up to 1.44PB.

IBM SONAS - IBM enterprise storage platform based on GPFS technology. This system implements NAS based protocols over a large-scale global name space.

IBM Nseries - The IBM N Series solutions are rebranded NetApp FAS arrays, with multiprotocol architecture that natively implements block- and file- based protocols (FCP, iSCSI, NFS, CIFS, FCoE). The system is designed to offer application integration and storage efficiency, with block level de-duplication on primary data and other features.

IBM is the second-largest vendor in the storage market. IBM has chosen to concentrate on high growth business verticals (healthcare, government, finance, telco), midsize and enterprise users where it has advantages in knowledge and professional services It also concentrates on

emerging high-growth markets, such as Africa, China, India, Russia and the Middle East. IBM is also entering the appliance market with its Pure Systems appliances that combine server, software, storage and networking into an integrated pretested solution. IBM plans to enter the cloud market with its SmartCloud initiatives.

Like other companies with large portfolios, IBM has decided to sell storage arrays containing its own intellectual property. This will help it better control its business, lower the cost of goods and work with partners in smaller markets, such as high-performance computing. IBM's current storage portfolio includes the high-end DS8870 series; the scale-out XIV; the midrange Storwize V7000, which supports SAN and NAS protocols and in-line data compression that is often performance neutral to positive; and two NAS offerings: the Scale Out Network Attached Storage (SONAS) and Nseries.

Strengths

The combination of recently refreshed storage offerings and new marketing and sales strategies should reward IBM storage customers with improved operational efficiencies and help non-IBM storage customers negotiate more competitive pricing and receive more attentive service.
Storwize V7000 in-line data compression is a potential game changer, because it can shrink capacity demands by up to 80%.
IBM is well-positioned to participate in the rapidly growing business analytics market because of its participation in the high-performance computing (HPC) market as a server, storage and software provider, and its technical expertise in basic research and vertical markets.

Cautions

IBM's inability to build sales revenue momentum makes it very difficult for the company to claim technical or product leadership in the storage market.
IBM's slow and corporate-focused, decision-making process can delay certification of new software releases and increase the perceived risk of choosing IBM storage solutions.
Improvements in Storwize V7000 scalability and XIV performance are increasing product overlap between these block storage systems.

Hitachi

Hitachi products mentioned in this article

Hitachi VSP - Hitachi claims their Virtual Storage Platform is the *only* 3-D scaling storage platform

designed for all data types.

Hitachi HUS - Hitachi Unified Storage VM can manage all of your existing storage and consolidate all of your data in a single, virtualized platform to ease the management of information.

Hitachi NAS - Hitachi NAS Platform (HNAS) and Hitachi Unified Storage (HUS) file module are advanced, high performance and highly scalable network attached storage (NAS) systems. HNAS is a competitive solution with active-active clustering (2 to 8 nodes), single namespace up to maximum capacity, multiprotocol file services, native tiering and migration, virtualized file systems and the most usable capacity.

Hitachi Command Suite - Hitachi Command Suite is integrated storage management software which simplifies and automates management tasks to streamline application availability, performance and access to critical data.

Hitachi is a large multibillion-dollar company with diverse global activities and is responsible for selling and supporting its disk storage solutions in Japan. Hitachi Data Systems uses a combination of direct and indirect go-to-market models to reach its target markets. Hitachi Data Systems' core disk storage offerings include the Hitachi Virtual Storage Platform (VSP), a leading high-end disk storage platform, the Hitachi Unified Storage (HUS) platforms for the midrange markets, the Hitachi NAS (HNAS), an emerging offering for the NAS market, and the recently announced HUS VM entry-level enterprise system that blends the modular HUS hardware and VSPcompatible software. To simplify management of mixed infrastructures, the Hitachi Command Suite consolidates management of Hitachi Data Systems disk storage platforms under a common tool.

Strengths

The high-end VSP platform is distinguished by its performance scalability, capacity scalability, utilization efficiency software, data protection and replication software, and its widely used virtualization function.
The symmetric active/active controller architecture with automatic load balancing sets the richly featured HUS platform apart from competing dual-controller midrange disk array systems, because each controller can access all the LUNs with equal performance.
Active/active clustering (two to eight nodes), cluster namespace, multiprotocol file services, 256TB volumes, virtualized file systems and expansive scalability make HNAS a competitive solution for deployment to support big data workloads, as well as consolidating multiple NAS filers.

Cautions

The widely deployed Hitachi VSP, released in September 2010, is due for a hardware refresh within the next six to 12 months, incorporating the latest Intel CPU technologies. The HUS platform is composed of discrete components that utilize disparate provisioning, data protection and replication software to support block-, file- and object-access protocols. The lack of controller-based data deduplication and compression inhibits HNAS competitiveness in applications that benefit from these data reduction functions.

HP

HP products mentioned in this article

HP Enterprise Virtual Array – Originally part of the Compaq portfolio, the EVA or Enterprise Virtual Array is an enterprise storage disk array sold by HP.

HP 3PAR StoreServ - HP 3PAR StoreServ Storage is a family of modern storage systems with Tier-1 models that range from less than $40,000 to multi-million dollar systems found in the world's largest cloud data centers.

HP StoreVirtual 4000 - HP StoreVirtual 4000 Storage, based on the LeftHand operating system, is a scale-out storage platform that is designed to meet the fluctuating needs of virtualized environments. Its software-defined storage VSA software, and ProLiant rack and BladeSystem-based hardware models provide options to fit any infrastructure and budget.

HP StoreOnce – Make a choice between the iSCSI or Virtual Storage Appliance models. HP StoreOnce VSA eliminates the need for dedicated infrastructure and enables efficient data mobility from remote sites to centralized data centers.

HP StoreAll - Supporting file and object in the world's most scalable storage platform for unstructured data, HP StoreAll Storage is hyperscale, harnessed, instant, economic storage for today's and tomorrow's datacenter

HP is managing a diverse portfolio of storage systems. The portfolio includes the P4000 (aka LeftHand Networks); the older P6000 Enterprise Virtual Array (EVA) series that still has a large installed base; the 3PAR StoreServ series that, with the addition of new entry-level models, is *providing users with a common architecture growth path that stretches from entry-level two-node to* large eight-node configurations; the XP P9000 series, for which Hitachi is the OEM; and an NAS business that is still dominated by solutions based on Microsoft Storage Server.

HP's decision to concentrate its R&D investments on fewer competitive products does not appear to be a reaction to the company's financial difficulties. Instead, the move recognizes the need to keep the 3PAR StoreServ and StoreOnce/StoreAll architectures competitive in a rapidly evolving marketplace by focusing R&D resources on executing faster against HP's much improved product road map. The results of this concentration of R&D resources on HP's two strategic architectures are mixed. 3PAR feature and functional enhancements are being announced with some regularity, but the R&D investments have not yet resulted in a cadence of NAS feature enhancements, and P4000 enhancements have focused primarily on repackaging to run on blade servers and in virtual machines.

Strengths

3PAR successfully competes with products from other vendors, and is the cornerstone and foundation for HP's storage business. The 3PAR model range is easy to manage, performance is good, it spans the traditional midrange and the high-end storage segments, and it has replaced many competitors' high-end storage arrays at a lower acquisition price.
HP's channel provides a competitive advantage by providing extensive sales coverage and route to market, compared with its storage competitors, making all products and services easily accessible to existing and potential customers.
The StoreVirtual 4000 (aka LeftHand Networks) and the StoreAll 9000 (aka Ibrix) storage systems are offered with all software included in the base price of the sold product, thus enabling fast sales cycles and avoiding extra software license expenditure when upgrading orexpanding these storage arrays.

Cautions

The EVA series is not HP's strategic offering in the midrange storage market; rather, it is intended to give the EVA users one more technology refresh before they move onto 3PAR storage systems. Gartner expects the EVA products will be discontinued, and for product development and support to wind down over the next three years.
The slow integration of StoreOnce data reduction technology into various disk array products and additions to the compatibility matrix require additional due diligence by prospective users.
Overlaps between HP's various storage offerings require users to tightly manage the bidding process to ensure that the solution being bid best matches forecast growth rates, performance/throughput, availability and budget needs.

NetApp

NetApp products mentioned in this article

NetApp FAS - NetApp Fabric-Attached Storage (FAS), or NetApp's network attached storage (NAS) device are NetApp's offering in the area of storage systems. A FAS functions in an enterprise-class storage area network (SAN) as well as a networked storage appliance. It can serve storage over a network using file-based protocols such as NFS, CIFS, FTP, TFTP, and HTTP.

NetApp Data Ontap - The Data ONTAP operating system implements a single proprietary file-system called WAFL. When used for file storage, Data ONTAP acts as an NFS server and/or a CIFS server, serving files to both Unix-like clients and to Microsoft Windows clients from the same file systems.

NetApp V Series - NetApp V-Series uses the power of Data ONTAP to make your third-party storage more efficient and flexible. NetApp V-Series open storage controllers enable management of storage arrays from multiple vendors.

NetApp has two unified storage offerings, the FAS and V Series, that are built on a common software architecture and marketed as general-purpose storage. The FAS Series makes up the majority of NetApp's sales. The V Series is an in-band virtualization appliance that enables users to provision their NAS storage requirements with SAN storage and use the same management interface, features and replication services across NAS and SAN storage.

NetApp is focused on improving FAS and V Series' competitiveness in large mission-critical environments. Early signs are promising, but this is still a work in progress that requires ongoing improvements in marketing, sales, product features and professional services. NetApp bases its appeal as a channel and technology partner on the following: It holds double-digit market share, which makes it an attractive technology and VAR partner; it does not threaten to compete against its technology partners; it works with ISVs to build and maintain a large ecosystem; it is quick to integrate with important middleware from vendors such as Oracle, Microsoft and VMware; and it continues to invest in keeping its storage arrays competitive.

Strengths

> Clustered Data Ontap adds a horizontal scale-out capability to FAS and V Series systems, which enables these configurations to have characteristics that are almost indistinguishable

from traditional enterprise arrays.

Out-of-band deduplication and NetApp Flash Pool cache reads and writes without the complexity normally associated with autotiering, keeping the FAS and V Series cost-effective in many environments.

NetApp has simplified its hardware/software pricing model by creating software bundles and including the Essentials Bundle in the basic system pricing.

Cautions

Professional services is strongly recommended when converting from Data Ontap 7- Mode to clustered Data Ontap.

Customers planning to convert from Data Ontap 7-Mode to clustered Data Ontap v8.1 should be aware that SnapVault will not become available until v8.2 becomes available, sometime in 2013, and that MetroCluster support will only be available in the release after v8.2.

Clustered Data Ontap v8 volumes do not span high availability (HA) node pairs and, therefore, their performance does not scale with the addition of HA node pairs to the cluster.

Thank you to Gartner's research for providing us the information and the strengths & weaknesses for the vendor's mentioned in this blog.

Thank you.

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