Why EMC Shops Must Consider

Hewlett Packard Enterprise 3PAR StoreServ

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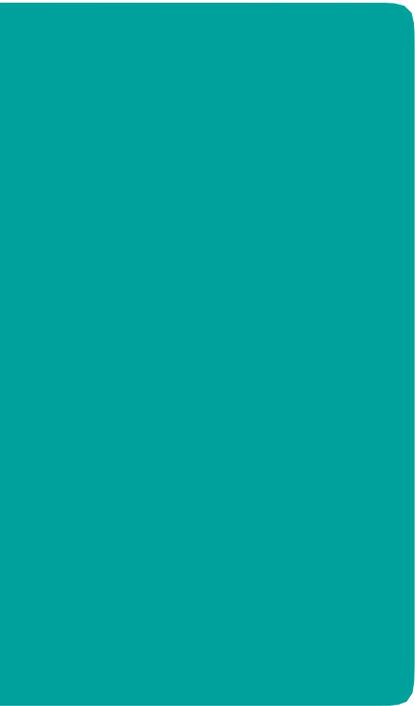
Why EMC Shops Must Consider Hewlett Packard Enterprise 3PAR StoreServ

With fewer resources at their disposal, enterprises must learn to adapt their infrastructures to meet the challenges of 21st-century IT. Virtualization is now a widely adopted strategy for superior resource utilization, but determining which storage components work best with particular architectures is still a daunting task.

Many enterprises are under pressure to deliver efficiencies in enterprise computing and user experience, but make assumptions that may not achieve these goals. One such assumption is that EMC storage is the best fit for VMware-based virtualized infrastructure, because EMC owns VMware. A second assumption is the belief that a single-vendor EMC implementation is more efficient. This paper discusses key comparative factors, why HPE 3PAR StoreServ steps forward as the superior, best-in-class choice for myriad deployments, and the reasons why changing or incorporating HPE 3PAR into your storage environment is the right step for your organization.

Examining the Assumptions

The enterprise storage market is fiercely competitive as Hewlett Packard Enterprise and EMC jockey to deliver the most comprehensive set of features and performance capabilities. Staying abreast of which products enable the organization to perform better is difficult, and brand loyalty often factors heavily in the decision.
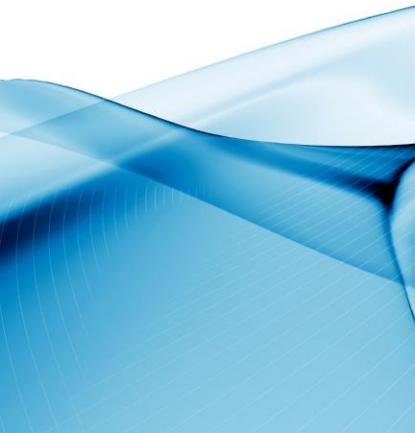
The general assumption when building enterprise architectures is that staying with one vendor provides a more consolidated, easier to manage environment. However, this assumption is only true to a certain degree. In the context of converged storage arrays, it is critical for enterprises to evaluate the capabilities and features of the arrays to achieve the best possible solution for their particular environment.

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To challenge the vendor-loyalty assumption, a comparison of the thin provisioning technologies in HPE 3PAR StoreServ and EMC storage products is instructive. The reasons to move to HPE 3PAR StoreServ are applicable to many virtualized environments, since the benefits are not limited only to VMware deployments.

Why Hewlett Packed Enterprise 3PAR StoreServ Outperforms EMC Storage

Integrating storage arrays affords enterprises the benefit of better utilization and lower total cost of ownership. The HPE 3PAR StoreServ 7400 makes use of wide striping technology and virtualization to increase performance dramatically. The array can scale out to as many as four active-mesh controllers, can accommodate as much 864 TB, and in most scenarios reduces administrative overhead by as much as 90%. Scalable, non-disruptive growth is a goal that many organizations desperately seek. These features, in a mid-range array such as the StoreServ 7400, were formerly only found in large, expensive high-end Enterprise-class storage arrays.

Also, compared to EMC storage, HPE 3PAR StoreServ gives enterprises the benefit of more simplified and efficient provisioning. HPE 3PAR StoreServ can provision thick or thin LUNs by simply assigning physical disks to a resource pool. The wide striping used by 3PAR will then make available all of the space on all of the drives to be provisioned.

On the other hand, provisioning EMC storage entails more configuration nuances to bind the right resources to thick and thin LUNs. This time-consuming process can create unbalanced performance and is prone to error, since this provisioning approach relies on people to determine which disks should be used and how they should be laid out. Additional steps are then needed to group several of the bound LUNs together, either for additional capacity or performance. This causes organizations to waste valuable man hours manipulating configurations.
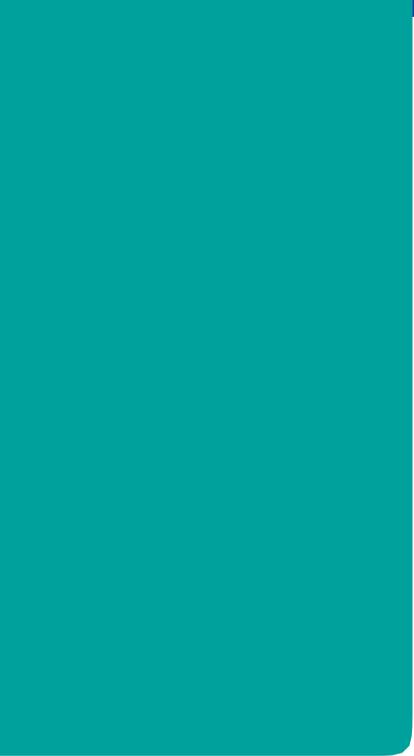
A side effect of this method is that it becomes far more difficult to add additional space to existing LUNS on EMC, as the binding process needs to be repeated and the resulting LUNS then need to be migrated into the new construct. On a 3PAR StoreServ array, one simply adds drives to the array, includes them in the storage pool and the space is now available – the ASIC will automatically balance the LUNS across the new additional drives.

EMC storage requires more administrative overhead and resources when migrating data from thick to thin LUNs. To convert thick LUNs to thin LUNs, EMC storage requires additional layered software products that run on the controllers, and require a space reservation. The reservation can be up to 20% of the size of the thin volume being created. By contrast, HPE 3PAR StoreServ can migrate data to thin LUNs much more efficiently and in real-time. Since the migration occurs automatically when migrating a LUN, this frees up resources to focus on more strategic needs. Also, since the provisioning is built in to 3PAR and handled by the onboard ASIC, no controller resources are needed and performance is not impacted.

Making the case for HPE 3PAR StoreServ even stronger, 3PAR also outperforms EMC storage when reclaiming unused space (i.e., zero-detecting, zero Reclamation) on a thin storage volume. EMC storage does not have the capability to reclaim unused storage space while data devices are running local replication. EMC utilizes a layered software product running on the controllers to handle these functions. Reclamation of space must be scheduled and run as a "batch job" after "data has been reviewed". Since it is not real time, there can be a large amount of space not available until the reclamation process finishes.

By comparison, HPE 3PAR StoreServ uses a custom ASIC to perform zero-detecting inline, which does not affect utilization levels at line speed. Since it is inline and also integrated with most OS (MS, Linux, HPE-UX) delete functions, the 3PAR array will reclaim the space and return it to the free space pool very quickly after a file is deleted.

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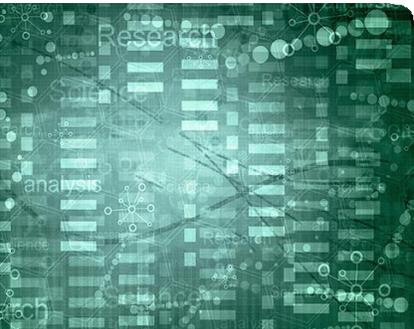
Taken as a whole, the reasons to choose HPE 3PAR StoreServ over EMC storage are numerous, and have a major impact on cost reduction, scaling non-disruptively, and reduced time to manage the arrays. These are:

- Thin provisioning technology

- An affordable price for mid-sized enterprises with large enterprise features

- A 4th Generation ASIC that provides real-time management of the Thin environment

This is all possible due to 3PAR StorServ's "from scratch" architectural design to address today's IT computing environments, which are very different from 20 years ago when EMC architectures were designed. It is no wonder that HPE 3PAR StoreServ earned the best-in-class award in the most recent DCIG 2014 Enterprise Midrange Array Buyer's Guide.

Comport Consulting Aligns Enterprises with Optimal Storage Solutions

With the benefit of 30 years of experience, Comport Consulting aligns enterprises with the right storage solutions and services to scale out infrastructure as to support business and technology goals. To reduce operational risk and bring the promised cost savings of virtualization and cloud to fruition, Comport Consulting analyzes specific pain points and provides solutions and services to help enterprises get the most out of their infrastructure. Through honest and direct consultations, Comport Consulting allows enterprises to meet the challenges of 21st-century IT.

For more specifics on storage, converged infrastructure and migrations, contact Comport Consulting to discover more about why HPE 3PAR StoreServ can be the superior choice over EMC storage.

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