TECHWORLD

The storage array controller has primacy

HDS' storage vision

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HDS has set out on a distinctively individual storage product path. Sun, an OEM and possibly strategic partner, is ploughing a similar furrow. This involves the placing of storage service management intelligence at the front of disk arrays. It's not in the accessing servers; nor in appliances attached to fabric switches and directors; nor in the switches and directors themselves.

Instead it is in what we can loosely call very intelligent disk controllers, what IDC might describe as network storage processors. The fabric is relegated (my term) to a data-moving pipe, not a storage service-managing entity. Thus HDS' TagmaStore, a monolithic enterprise disk array, provides multi-vendor virtualisation and storage services. It has had a NAS capability added too, to emphasise its primacy.

In this HDS is radically diverging from approaches espoused by virtually every other storage vendor, apart from Sun. (Some newer suppliers also place intelligence in the array controllers, like 3Par with its InServ array and services but the majority pof vendors locate their virtualisation and storage management platform either in the fabric or in servers.)

Techworld talked to Vincent Franceschini, HDS' senior director, future technologies, about HDS's view of storage and it's directions.

TW: What does virtualisation mean for HDS?
VF: We're trying to understand what virtualisation means for the end-user. The original point products saved customers' disk blocks and helped consolidate storage across vendors. We belive consolidation is key. It needs to scale; that's a very important aspect; from hundreds of GB to petabytes. Different users along this range share some common requirements.

But it's not just about capacity scaling, its also about performance, data protection and other features. It's not something that's isolated. Virtualisation is a foundation technology for other functions, such as DLM (Data Lifecycle Management). Virtualisation helps customers achieve more.

We're trying to manage the storage resource. We can virtualise other vendors' storage but without a management layer that's meaningless. That's why we did Storage Manager (from AppIQ).

TW: What about its placement?
VF: Putting virtualisation and management in the fabric makes it much more complex. Also (coming at it from the fabric point of view) means supppliers like Cisco have a network-oriented quality-of-service (QOS). We see a need for a data-oriented QOS.

If you put virtualisation and management in the fabric there is a scaling factor. For example, you can snapshot thousands of LUNs out of a TagmaStore. How are you going to do that in the fabric? How big does the switch have to be?

These two solution types may have to co-exist. There are different customer requirements.

TW: Tell us about DLM.
VF: It is really about making sure the storage infrastructure is in sync with higher level requirements. Via policy-based systems we can drive where data is located on the storage network and define the criteria to move data around. As we expand our (management software) suite we will integrate more application-aware parameters.

TW comment: We can envisage a storage tiering system like a matrix with axes based on performance, media cost, protection level, a quality of service level and a file or folder's metadata.

TW: What about tape and optical media?
VF: DLM embraces both tape and optical media. Tape's role now is as a long-term archive, being fed by the lowest tier of disk storage, where data is in transit. We will have an API structure in our Tiered Storage Manager that will allow us to engage with ISVs.

TW: Is HDS heading towards providing a storage utility?
VF: We're evaluating the notion of grid computing and what it means. One thing is that it's about managing data