iSCSI Train Gains Steam —
Dell Drives Ahead on the Fast Track

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The Transition to iSCSI

When a new technology grabs the attention of the I.T. community, it moves forward with the speed of a runaway freight train. You have three choices: Drive that train even faster, get on board for the ride, or get run over. Two new examples of this phenomenon are blade servers and data deduplication. Blade servers are being driven by the need to improve the utilization of open systems servers and the requirement to lower the total cost of ownership (TCO) of the I.T. infrastructure through consolidation. The uncontrolled growth of stored information and the need to control the TCO of the storage area network (SAN) are driving the data center to implement data deduplication programs to ease the strain on the I.T. budget caused by backup demands. Reducing both the cost and complexity of the SAN and providing less expensive and easier to use disk arrays for consolidation on blades is driving the data center to a third technology paradigm shift – the implementation of low-cost iSCSI disk arrays throughout the enterprise.

In the past few months alone, many of the leading storage providers have announced either their entry into the iSCSI market or upgrades to their iSCSI product set, specifically geared toward enterprise departments and the SME customer. One examples of this is IBM's introduction of an iSCSI version of their *DS3000* family. The *DS3300* is similar to IBM's SAS-based *DS3200* and Fibre Channel-based *DS3400*. Another example is Hitachi Data Systems, jumping into the fray in October with the *SMS 100*, on the heels of HP's announcement of their *All-in-One* family of iSCSI storage arrays. What do these iSCSI products have in common? With acquisition costs starting at under $5K, they are easy to use passengers on the train and reduce the TCO of the I.T. infrastructure.

In the same period, Dell got on-board with the introduction of the *PowerVault MD3000i*. With increased scalability, it has the capability to consolidate storage for up to 16 redundant hosts. Using their *MD1000* array attached to the MD3000i, Dell can scale this iSCSI storage array to 45 devices, enabling them to penetrate even deeper into the mid-sized enterprise arena. However, the MD3000i is just one product it cannot provide Dell with as broad of coverage for the entire storage market. On November 5th, Dell found an excellent way to approach that broader penetration with the announcement of their intention to acquire EqualLogic, a company with 500 VARs and about 2,500 customers, and their family of iSCSI storage platforms and virtualization software. With this acquisition, Dell will not be a passenger on the train; they will be driving it.

What Will Dell Acquire?

EqualLogic has based its claim to fame on its *PS Series* of SATA iSCSI storage arrays integrated with a full set of high-end management capabilities, including data protection, that

simplify the access to data from multiple servers, simultaneously. Their products enable the enterprise to virtualize storage access from the server. The PS Series represents a family of easy to deploy building blocks for simple SAN expansion, from the entry-level *PS50E* to the enterprise-class *PS400E*, with the PS50E capable of supporting 1.75TB of disk capacity and the PS400E capable of up to 10.5TB with dual storage controllers. The PS400E has a sustained system bandwidth of 300MBps for enterprise-level I/O and comes with a mirrored write-back cache with 72 hours of backup protection.

The PS Series was designed to a *peer storage architecture* concept, with all components and arrays functioning as peers, working together to share resources and distribute workloads evenly to optimize application performance while ensuring data protection. This enables the PS Series to automatically sense network topology, build RAID sets, and conduct a system health check. In addition, in September, EqualLogic announced a collaboration with VMware to deliver end-to-end disaster recovery automation for the PS Series, through VMware's *Site Recovery Manager*, improving EqualLogic's virtualization capabilities. EqualLogic's feature set also includes a standard auto-replication capability, eliminating the need to acquire separate storage replication software licenses.

The Clipper Group expects Dell to sell the EqualLogic lineup through EqualLogic's existing VAR channel, as well as to begin incorporating EqualLogic's technology into their own PowerVault lineup, extending the capabilities of the PowerVault family. The PS Series also complements the Dell/EMC family of Fibre Channel SAN arrays designed for the enterprise data center.

Conclusion

While other Tier 1 vendors, such as EMC, HP, and IBM, appear to be along for the iSCSI ride, Dell has decided to take control of the direction and speed of this movement. With EqualLogic, Dell will acquire a company fully involved in virtualizing the SAN environment on a common IP network infrastructure with an enterprise-class feature set, full SAN virtualization capabilities, and a fast, scalable midrange package. Designed for flexibility, ease of use, and rapid deployment, the PS Series can help the SME lower the TCO of the storage network. With a simple, centralized management architecture and disaster recovery tools, Dell has improved their iSCSI image with a single, bold stroke. The pending acquisition of a 500 VAR distribution channel should also enable Dell to increase the penetration of PowerEdge servers to the channel's customers. It should also enable Dell to sell even more Dell/EqualLogic storage on PowerEdge servers to their existing clients.

The PS Series will help enable Dell to support, fully, the data center consolidation efforts of enterprises both large and small, with Fibre Channel devices from their partnership with EMC and iSCSI platforms from this planned acquisition of EqualLogic.

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