



## EMC Pulls Forward in Automated, Open Storage Management

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### Management Summary

The race is on! Competitors are speeding forward and jockeying for position. The crowd shouts and hollers. In the distance lies the finish line. It is not a line stretched across a track, though, and the race is not the Indy 500 or Kentucky Derby. **It is the enterprise storage industry, and the players are vendors driving toward a common goal, though one that is not easily attained – management simplicity in multi-vendor storage environments.** The idea is to make it easier and less costly to manage storage. It sounds simple, but it is hard to do because storage is complex, especially heterogeneous, networked storage. Progress in this event is measured in steady, incremental steps, not the momentary crossing of a line. But it is a race, nonetheless.

**Storage vendor EMC recently announced several advances that place it in a leading position in this race.** Its strategy for simple, automated, open storage management is *AutoIS*, and its software product family is *EMC ControlCenter*. New or enhanced products include:

- The new *Automated Resource Manager* automates storage provisioning and enables customer-defined tiered storage classes.
- *StorageScope*, *Common Array Manager*, *SAN Manager*, and *Replication Manager* support additional third-party applications and storage devices.
- *EMC Data Manager* now offers an automated backup event management engine.
- The new *EMCLink* service proactively monitors and analyzes storage issues for applications and operating systems.

It seems like a dizzying array of products and services, but all address unique aspects of multi-vendor storage management. Since management costs far exceed storage acquisition costs over time, there is an economic rationale for each one. **More importantly, EMC's suite is integrated and works together to comprehensively address the whole issue of storage management.** Being a storage-centric company, and a significant player in the storage industry, EMC has a lot to gain from an all-inclusive approach, and a lot to offer its customers. **If you are looking for simplicity, or just want to get storage costs under control, EMC has made significant strides in expanding the breadth and depth of its storage management solutions.** Read on for more details.

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## The World Wants Simplicity

Few of us get up in the morning and think, “I wish my life were busier and more complicated.” Rather, we prefer a simpler life and look for ways to do more with less. Dishwashers save us from washing and drying by hand. Automatic payroll deposit saves a trip to the bank. The shortcut around traffic saves time on the way to work. These tools and techniques are about leverage, simplicity, and automation, and they give us our life back. We all want *that*.

Storage is no exception. **For many enterprises, storage management is a glaring problem that demands a better way.** Available capacity sits underutilized and in the wrong places. It requires too much time and skilled labor to administer. At the same time, storage is a necessity. **Enterprises require more and more of it because information continues to grow and become more central to running a business in the Information Age.**

So, there is a need for management simplicity in multi-vendor, networked storage environments. This is the end game of the big race in the storage industry, and this is what EMC has set out to deliver.

### EMC AutoIS: For Simplicity's Sake

EMC's strategy for simple, automated, open storage management is *AutoIS*. While not a product, it articulates the vision of management simplicity and provides a goal for product development. The software family for storage management is *EMC ControlCenter*. EMC recently announced a variety of new or enhanced software products under the ControlCenter “umbrella”.

The most notable is *Automated Resource Manager (ARM)*, which automates the process of storage provisioning. From the storage array to the SAN to the host server, there are a variety of time-consuming tasks involved in adding or allocating storage, and ARM makes short work of it all. It takes actions based on user-defined policy, and administrators can

establish tiered storage classes<sup>1</sup> and more precisely assign capacity based on the quality of service (QoS) requirements.<sup>2</sup> ARM supports EMC *Symmetrix* and *CLARiiON*, and HP *StorageWorks* arrays, with forthcoming support for other arrays.

EMC has enhanced *StorageScope* to support nearly every major storage (including internal and JBOD disk), switch, and server resource for end-to-end capacity management and reporting. It added more third-party and EMC device and/or application support to *Common Array Manager* (discovers and monitors storage devices), *SAN Manager* (previously ESN Manager), and *Replication Manager* (automates data replication). All of these are part of the EMC ControlCenter family.

Furthermore, the *EMC Data Manager* solution for centralized backup now automatically detects and fixes backup problems. In addition, *EMCLink* is a new automated knowledge service that proactively monitors and makes recommendations for tuning or fixing storage-related issues for a variety of applications and operating systems. **Release dates range from immediately through December.**

**In short, EMC has expanded the breadth of support and depth of feature set of its open storage management offering.** Value increases with the number of storage arrays, switches, host bus adapters, volume managers, file systems, and applications it supports. It also increases with the variety of features and functions it delivers. **Together, the dimensions of breadth and depth define the playing field in the race for management simplicity. They will ultimately enable enterprises to effectively manage the entire storage infrastructure.**

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<sup>1</sup> For a detailed discussion about tiered storage classes, see *Tiered Storage Classes Save Money – Getting the Most Out Of Your Storage Infrastructure* in **The Clipper Group Explorer** dated August 29, 2002, at <http://www.clipper.com/publications.htm>.

<sup>2</sup> That is, specifies storage characteristics that determine performance, availability, and cost.

## The Whole Solution and Nothing But

Due to its substantial resources and position in the industry, EMC has the ability and vision to pursue a *whole and integrated* solution for storage management, from the storage devices to the application. **Though the aspects of storage management are many and complex, EMC is clearly weaving a tapestry to cover all of it.**

**There is an added value in a whole and integrated solution.** The alternative is to deploy an application with a limited scope or a series of disparate point applications. The ControlCenter family addresses the various facets of storage management based on a common view of the infrastructure and a clear understanding of what each application does. This ensures that the applications are internally consistent, can interoperate, and do not overlap or compete with one another. **As a result, enterprises can avoid a tradeoff between solutions with less functionality and the interoperability risks of buying multiple point applications from multiple vendors.** Moreover, administrators can learn and use one console rather than many, saving time, effort, and training.

## Benefits to the Bottom Line

While AutoIS makes the life of an IT administrator more productive, the greater benefit is the economic impact to the enterprise. This occurs in several ways:

- **Lower operating costs through simplified storage management.** Smart software allows each administrator to handle much more storage, especially by automating much of the tedious, repetitive work. This is a major benefit because management costs are several-to-many times acquisition cost over the useful life of storage – and only compound as the amount of information grows.
- **Lower acquisition costs by improving storage utilization and mix.** The ability to discover, correlate, provision, and reallocate storage resources allows enterprises to use capacity more efficiently. They do not need to buy and carry

as much storage “headroom”. Furthermore, tiered storage classes allow enterprises to deploy a more rational mix of storage. For example, administrators can assign highly robust storage to mission-critical applications and less-costly storage to other applications. This helps optimize the overall mix of cost, performance, and availability.

- **Improve the performance and availability of enterprise applications.** Automated storage management enables more consistent storage quality of service levels to users and applications. It also eliminates some of the potential for human error (e.g., “Oops, wrong port!”). As a result, enterprises can expect better application performance and availability, and ultimately more productive business processes.

**These are all benefits that affect the bottom line.**

## Conclusion

With its cumulative efforts in developing automated, open storage management, including the recent announcement, EMC is well positioned in the race for management simplicity. **The momentum behind AutoIS suggests that EMC is in the race for the long haul and is intent on winning.**

Forget, for a moment, that EMC also sells storage hardware. **If your enterprise feels the pain of storage management and is looking for a comprehensive solution, consider EMC ControlCenter.**



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