Simplifying Exchange 2003 Deployment and Management in an EMC SAN

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Management Summary

If you compare a traditional telephone with a mobile phone, you will find they have quite similar user interfaces. Both have number keys 0 to 9 with the letters A to Z, as well as * and # keys on the bottom left and right. Users operate them, basically, in the same way – by dialing the number of the person with whom they wish to speak. People who grew up using traditional telephones switched easily to mobile phones with little training – and immediately took advantage of the mobility and flexibility they provide.

If you apply this analogy to Microsoft *Exchange* deployments then a Storage Area Network (SAN) is to internal or direct-attached storage (DAS*)* what mobile phones are to traditional telephones. Like mobile phone's leap forward in flexibility, **SANs offer a big leap forward in deploying, scaling, and protecting information storage for critical applications like Exchange.** By deploying Exchange in a SAN environment and consolidating storage, companies can increase their resource utilization, simplify backup and recovery operations, improve application availability, and lower their cost of operations.

So why do many small- and mid-sized enterprises continue to deploy Exchange on standalone servers with internal storage? Shouldn't SANs – especially as iSCSI gains more and more traction – be as ubiquitous in Exchange deployments as mobile phones are in society today?

Unlike the consistent interface between traditional telephones and mobile phones, managing Exchange in a SAN environment differs from how an Exchange administrator in a small- or mid-sized company today is accustomed to operating. This can create a hurdle for those who aren't ready to acquire the expertise to implement and manage a SAN environment.

In response, EMC has introduced *Storage Administrator for Exchange*. It delivers a consistent management interface for Exchange administrators by automating storage management tasks and takes any potential skill gap off the table. It is attractive for administrators who want the benefits of consolidating Exchange on a SAN without the added management responsibility. EMC Storage Administrator for Exchange offers:

- Simple movement of Exchange data from current deployment to a SAN,

- Accelerated migration from Exchange 2000 to Exchange 2003,

- Exchange management tools to automate SAN storage provisioning, and

- Resuming email operations on an alternative Exchange server without clustering.

In short, if you can manage Exchange, you can also manage an EMC SAN. We expect most enterprises with more than 40 email users will find the benefits of Exchange 2003 and the capabilities of SAN compelling. Read on for the details.

Storage Administrator for Exchange

EMC's *Storage Administrator for Exchange* is a software product that plugs in to the *Exchange System Manager* GUI. It enables an Exchange administrator to migrate data and manage SAN storage without having to learn additional tools. The product takes care of the work behind the scenes through intelligent automation. In addition, it simplifies server failover without clustering (some may be interested in the product just for this feature).

With support for up to 3,000 mailboxes, Storage Administrator is ideally suited for small- and mid-sized IT operations, which correspond to small- and mid-sized enterprises (SMEs), as well as departments and branch offices of large enterprises. Storage Administrator supports EMC *CLARiiON AX* and *CX* storage[1].

Migration and Consolidation

As companies migrate to Exchange 2003, many are taking the opportunity to consolidate their server and storage systems. New capabilities in Exchange 2003 are driving and facilitating these activities, such as:

- **Support for more mailboxes per server** – server consolidation,

- **New** *Exchange Server Management Pack* – increased manageability,

- **Enhanced spam and virus protection** – better security,

- **Volume Shadow Copy Service (VSS) and individual mailbox recovery** – fast recoverability, and

- **Support for Exchange 5.5 ends December 2005** – ongoing technical support.

Servers and storage consolidation is a prime opportunity to lower IT infrastructure costs and improve the availability of critical applications like e-mail. Consolidation raises resource utilization (i.e., computing, storage) and simplifies management. SANs are a superior architecture for storage consolidation because they scale well, connect multiple, distributed servers, and facilitate centralized backup and data replication. Microsoft also supports and recommends SANs – both Fibre Channel and iSCSI – for Exchange server deployments.

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[1] *CLARiiON AX100/AX100i, CX300/CX300i, CX500/CX500i,* and *CX700/CX700i.*

Migrating Legacy Exchange Data to Exchange 2003

EMC's Storage Administrator helps migrate Exchange storage groups from old servers to new ones and can move mailboxes en masse. If the old server is running *Exchange 2000*, it automatically converts the database to *Exchange 2003*. Then it configures and intelligently places the data on a CLARiiON array according to best practices. Depending on your current deployment and the amount of data, this can take from minutes to hours. According to EMC, it can take as little as 4 hours to migrate 1,000 Exchange 2000 mailboxes at 100 MB each. Good work for a half day.

Therefore, Storage Administrator speeds the migration process and saves work in moving mailboxes. It also minimizes downtime and interruptions to worker productivity.

Automated SAN Storage Management

EMC Storage Administrator software automates SAN storage management within Exchange 2003 by converting standard Exchange System Manager inputs, such as quotas and number of mailboxes, into best-practice storage provisioning parameters that have been developed by EMC and Microsoft. For example, it distinguishes between database and log files and chooses the appropriate stripe size and RAID type for optimal performance and protection. It then creates, binds, and masks LUNs to the Exchange server. Storage Administrator monitors capacity and, as volumes fill up, automatically expands it (with the permission of the Exchange administrator).

In summary, EMC's Storage Administrator masks complexity, takes work out of SAN storage management, and helps lower operating costs. It removes the skill gap as a barrier to SAN adoption.

Exchange Server Failover

For high availability configurations, EMC's Storage Administrator can simplify failover to an alternate server. The administrator initiates the process manually within Exchange System Manager. It takes only a few minutes, and no data is copied. Since the data resides on a SAN and all servers are connected to it, it is just a matter of the Storage Administrator software automatically reassigning the Exchange storage groups to the alternate server.

This feature is a viable alternative to

deploying Exchange server clusters, which require additional software licenses and special training and configuration on the part of administrators. Storage Administrator provides an easier, low-cost option for high availability, so users can quickly resume productive work if a server goes down.

Conclusion

If you are migrating to Microsoft Exchange 2003 (or already running it) and want to gain the benefits of consolidating storage on a SAN, EMC Storage Administrator for Exchange presents a simplified way to do it. It makes the transition about as easy as learning to use your first mobile phone. So, if you know how to administer Exchange, you also know how to:

- Migrate legacy exchange data to Exchange 2003,

- Deploy, manage, and provision SAN storage, and

- Quickly recover after an outage by failing over from one Exchange server to another.

The catch? It is only for EMC CLARiiON arrays. But CLARiiON is a solid, established storage family, and the entry-level AX100 and AX100i options start under $10,000.

In all, EMC's Storage Administrator offers an attractive solution, especially if you are an SME or have similar requirements. As stated earlier, we expect most enterprises with more than 40 email users will find the benefits of Exchange 2003 and the capabilities of SAN compelling. **Don't be left behind.**

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About the Author

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