



By K. E. H. Polanski

DELL STORAGE AND COMMVAULT SIMPANA EASE ADOPTION OF MICROSOFT WINDOWS SERVER 2008

Migrating data associated with Microsoft® operating systems, applications, and other software can be a challenge administrators overlook when planning system upgrades. Dell™ PowerVault™ and Dell EqualLogic™ storage and CommVault® Simpana® data management software enable flexible data migration and transparent, release-specific data object recovery and backup to help simplify upgrades in enterprise environments.

When migrating to updated versions of Microsoft operating systems and applications, a key challenge administrators often overlook is how previous versions of this software—and even UNIX® or Linux® operating systems—handle data. Although this challenge is not always taken into consideration, it can derail, delay, and add significantly to the cost and complexity of upgrades. Difficulties with handling data in previous migration efforts can cause anxious IT departments to hesitate in providing access to updated application features and decide to live with a “good enough” environment, because their environment lacks a method for easily handling existing data.

Combining Dell PowerVault and Dell EqualLogic storage with CommVault Simpana data management software can help administrators overcome these challenges. By providing a simplified way to rapidly migrate data between different versions of Microsoft operating systems and applications, CommVault Simpana provides a powerful, flexible tool to ease adoption of the Microsoft Windows Server® 2008 OS and other Microsoft software.

HANDLING THE COMPLEXITIES OF DATA AND SYSTEMS MIGRATION

Updating typical enterprise environments based on Microsoft software can be a complex process. As Microsoft evolves its product lines, those products can become interdependent within enterprise systems—Microsoft Exchange servers, for example, require the Microsoft Active Directory® directory service (see Figure 1). Microsoft Office SharePoint® Server, which relies on Microsoft SQL Server® database systems, can also serve as the public folder system for Exchange. Components in an enterprise system based on Microsoft software require Windows® file systems, and the environment also likely includes client systems running the Microsoft Windows Vista® or Windows XP operating systems.

Adopting an updated version of a Windows file system or a Microsoft application can create a cascading effect in which systems and software must be upgraded simultaneously to continue to work properly. Also, administrators should keep in mind that almost all 2007 and 2008 Microsoft software can benefit significantly from a 64-bit architecture—and some, such as Exchange Server 2007, even require it. For this reason, IT departments may consider

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upgrading the network topology and storage architecture at the same time.

When thinking about the proper handling of data within a complex, inter-dependent systems environment, several challenges can confront IT departments, any one of which could derail a successful upgrade:

- **Legacy data archives:** Appropriate handling of existing tape archives can be challenging—because organizations often must maintain their ability to recover and use data backed up from previous versions of applications, they must also keep previous versions of the applications deployed.
- **Policy and security requirements:** Even when data may be usable, it may not adhere to requirements for secure access, which may cause organizations to inadvertently violate privacy laws, internal policies, and other security considerations.
- **Data migration flexibility:** The ability to flexibly move data among multiple versions of the same application—backward to previous versions and forward to newer ones—can help simplify management of mixed-version environments. These environments can be common for some period of time during migration efforts.
- **Data recovery rollback:** Administrators may plan for data recovery and can recover data back to previous versions of applications during testing, and when pulling back a move over to newer systems.
- **Transparent migration:** Administrators must ensure they can handle and migrate data easily and transparently without disrupting the production use of application systems.

MIGRATING DATA IN MICROSOFT ENVIRONMENTS

The combination of Dell PowerVault and Dell EqualLogic storage and CommVault Simpana data management software can help organizations meet the type of

technical requirements typically necessary to support rapid, flexible data migration. These requirements include comprehensive data management capabilities such as backup and restore for the types of data that Microsoft software can generate, combined with granular handling of individual data objects. This combination makes it possible to easily recover individual files, e-mail messages, documents, and other data objects from one version of Microsoft software to another.

For example, in environments running multiple versions of Exchange, using CommVault Simpana software as part of normal processes can help simplify restoring an e-mail message for an end user regardless of the version of Exchange used to create the original message. Furthermore, administrators can be confident that secure access is preserved for the restored e-mail message.

Providing continuous access to previous sets of e-mail data can be important for many reasons, ranging from maintaining end-user productivity to increased accuracy in meeting the requirements of an audit or legal discovery search. For

example, recovering an entire database may be advantageous for test purposes, to help ensure that the latest version of Exchange is running well before it is moved into a production environment.

Integration and awareness of Active Directory at the object and attribute level through systems migration can be critical for handling virtually any type of Microsoft data. Administrators can restore Active Directory objects and attributes such as user groups and names rapidly and easily, helping simplify systems management in ways that are particularly helpful when migrating data to updated versions of file systems and applications. Active Directory integration can also be critical for preserving Microsoft attributes of individual files, e-mail messages, attachments, and SharePoint documents and objects. Because Microsoft attributes must be preserved through a restore process, this integration helps ensure that secure access to files is sustained by tracking which users and user groups should have access to files.

Granular, object-level recovery during systems migration can also include one-step

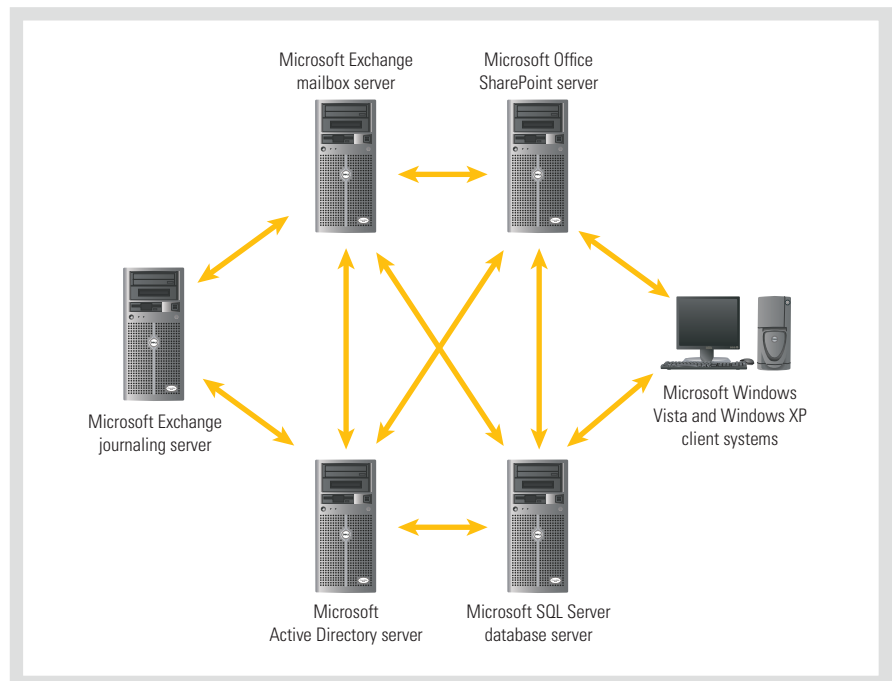


Figure 1. An environment comprising a mix of Microsoft operating systems and applications can present challenges when migrating data

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recovery methods to help ensure it is easier, faster, and more practical to manage than traditional recovery methods. For example, granular recovery in a SharePoint deployment *without* one-step document restore can be time-consuming, typically requiring the following steps:

1. Setting up a staged SharePoint environment, because documents and other objects cannot be restored directly back to the production SharePoint repository.
2. Recovering the documents to the staged environment.
3. Resetting the document attributes.
4. Adding the documents back to the production SharePoint repository.

Integration with Active Directory in addition to SharePoint awareness can allow preserving and recovering document attributes along with the data. And the ability to recover attributes and data together in one step can enable efficient recovery of an individual SharePoint document to a production SharePoint repository.

Managing Exchange e-mail messages and attachments can be similarly demanding. Efficient, granular protection requires support for the single-instance store capabilities in Exchange that can help prevent each e-mail and attachment from being written more than once in the backup data copy. This support helps reduce the space required to store the backup copy and the time required for the backup process. Recovery must include e-mail attributes to help ensure secure access, and in many cases secure access

to e-mail is a requirement for complying with organization policies, government audits, and regulations.

PLANNING FOR WINDOWS SERVER 2008 MIGRATION


The Microsoft Windows Server 2008 OS is the latest version of Windows Server and the server follow-up to the Windows Vista client OS release in 2007. Like the Microsoft software releases in 2007, Windows Server 2008 can leverage 64-bit server systems and add large-enterprise scalability and power to Microsoft environments. Windows Server 2008 continues to extend the value of other Microsoft technologies, including Exchange, SharePoint, and SQL Server systems. Windows Server 2008 also relies on Active Directory services, including single-sign-on security features.

CommVault Simpana can help ease management burdens because it provides comprehensive support for Windows Server 2008 for backup and recovery of files integrated with Active Directory and single sign-on. In combination with 64-bit Dell PowerEdge™ servers, CommVault Simpana can help deliver enterprise-scale power for backup and recovery processing. In combination with Dell PowerVault and Dell EqualLogic storage, CommVault Simpana software provides options for storing single-instance copies of Windows Server 2008 backup files and objects.

If administrators are already using CommVault Simpana to help protect existing Windows systems, then they are likely already prepared for migrating

Windows data to a Windows Server 2008 environment. CommVault Simpana helps simplify file restore processes from previous versions of Windows to these systems, and can enable the recovery of files from Windows Server 2008 systems to previous versions of Windows servers that may be present in some environments.

ENABLING FLEXIBLE, TRANSPARENT DATA MIGRATION

Migrating data between versions of Microsoft software can be a significant challenge when moving to Windows Server 2008 or deploying upgraded versions of Microsoft software. Combining Dell PowerVault and Dell EqualLogic storage with CommVault Simpana data management software offers a flexible, transparent way to manage release-independent data for Microsoft applications, delivering an additional level of flexibility when adopting upgraded versions of Microsoft operating systems and applications. 

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