

Symantec's Backup Exec 11d

Emphasis on Recovery That They Can Back Up

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Author: Lauren Whitehouse, Analyst

Abstract: Symantec unveiled a multitude of new features in Backup Exec 11d, with a focus on CDP application coverage, security features and platform support. More importantly, the company is succeeding in changing the data protection terrain to focus on recovery rather than backup.

The Devil is in the Details

When Backup Exec 10d was introduced about a year ago, Symantec began the shift from backup- to recovery-centric data protection by adding continuous data protection (CDP) capabilities for file systems. The cumbersome process of backing up to and restoring from tape at time-scheduled intervals was replaced with a streamlined backup/recovery process to disk that happens continuously as users write to systems equipped with a continuous protection agent. This eliminated the concept of the "backup window." The company also made recovery easier by providing a self-service recovery feature, allowing users to restore data from point-in-time backups – without IT intervention. While backup is performed primarily to disk, disk-to-disk-to-tape capabilities are available for those organizations that require off-site copies of tape for disaster recovery and compliance.

The continuous protection capability in 10d wasn't available for applications, such as Microsoft Exchange Server, Microsoft SQL Server, Microsoft Active Directory and Microsoft SharePoint Portal Server. If recovery of an individual element in these applications was required, it was necessary to execute a cumbersome, two-step, time-consuming backup process – a real chore with business-critical applications, such as Exchange. For Exchange, if speed of backup was required, then a full Exchange (or "store-level") backup was performed. Unfortunately, it's extremely difficult and time-consuming to recover an individual mailbox or item (e.g., message, contact, task, journal entry, appointment, etc.) from a store-level backup. To speed recovery of individual mailboxes or messages, a first pass store-level backup and then a second pass individual mailbox backup ("brick-level" backup) had to be executed – effectively doubling the time and capacity needed to protect Exchange at a granular level. Recovery of a mailbox or message was therefore streamlined. However, given the hassle of the two-step backup process and the time it takes, it's typical for brick-level backup to be executed less frequently or more selectively.

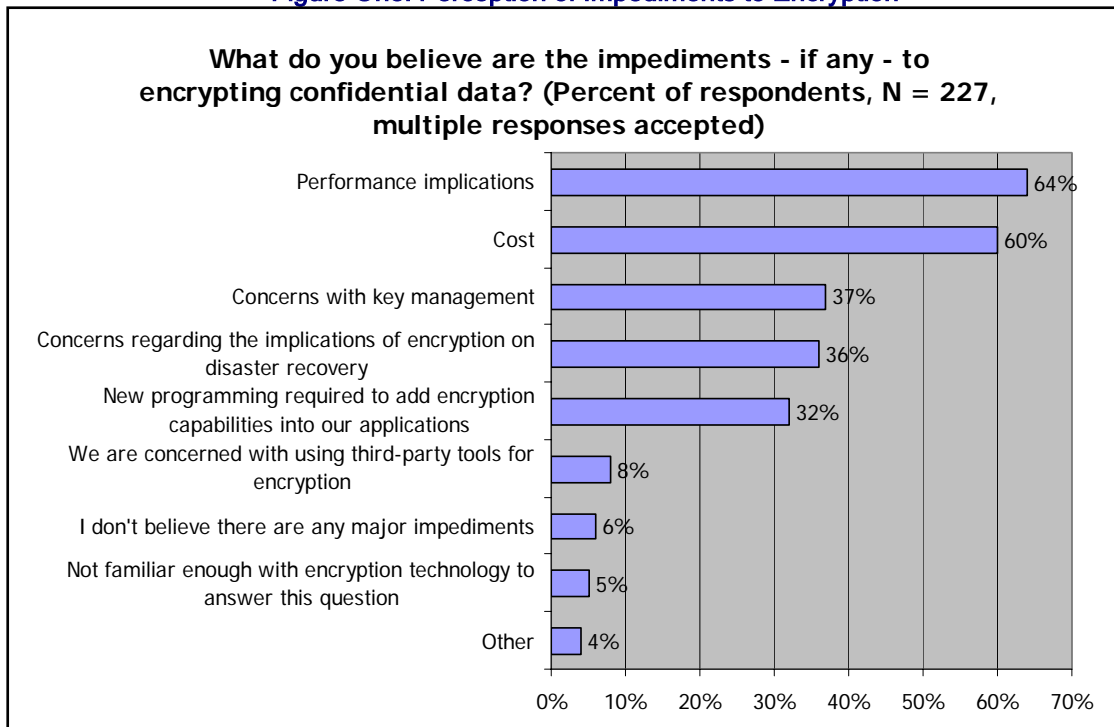
That's all changed with Backup Exec 11d. Now, continuous backup of transaction logs can be enabled as a feature when configuring the backup. Backup windows now become irrelevant and recovery is accelerated. When Exchange data needs to be recovered, a view of Exchange data can be browsed for the e-mail, folder or mailbox desired and the recovery happens in seconds. The same concept applies to Active Directory SharePoint and SQL. Backup Exec's Granular Recovery Technology allows individual SharePoint documents and Active Directory components to be recovered in seconds.

Integrating encryption is another important feature added to Backup Exec 11d. ESG Research found in a recent report that "data encryption is used infrequently" with 60% of users responding that they never encrypt their data when it is backed up to tape.¹ ESG Research also revealed that end-users "remain leery about the affect of encryption on system performance and the overall cost associated with purchasing and operating encryption technologies" (Figure One).²

¹ ESG Snapshot Study: *Information at Risk: The State of Backup Encryption*, March, 2005.

² ESG Research Report: *Protecting Confidential Data*, March, 2006.

Figure One: Perception of Impediments to Encryption



Symantec is tackling these issues head-on in Backup Exec 11d. The product now incorporates the ability to configure 128- and 256-bit Advanced Encryption Standard (AES) encryption at the job level. Encryption can occur at the client (to protect data in transit and at rest on disk) or at the media server (to protect data at rest on tape). This level of flexibility – encryption strength, specifying which data needs to be encrypted and where encryption occurs – addresses the performance concerns. Also, encrypting at the media server takes the encryption overhead out of the backup window. The availability of encryption as a built-in feature (i.e., at no extra cost) in Backup Exec also addresses the cost concerns. Encryption at the media server is a great alternative to costly security appliances or tape devices with cryptographic features. WORM tape support is also available to ensure that data cannot be overwritten.

Platform coverage is another theme of Symantec's announcement. Symantec introduced support for x64-bit clients in Backup Exec 10d. With 11d, Backup Exec Media Servers can now be run on x64-bit Windows servers, providing improved performance. Symantec also introduced NDMP support, enabling protection of Network Appliance filers.

More and more SMBs are using non-Microsoft platforms and applications in their environments. Backup Exec 11d now offers client support for Oracle RMAN/RAC (on Windows and Linux), IBM DB2, Mac OS X, HP-UX, Solaris 10 and SUSE 10. Enhancements to existing client and application agents are also covered in 11d. Microsoft SQL Server 2005 includes enhancements, such as restore redirection to alternate locations, verification and integration of SQL snapshots into the Backup Exec catalog for a consolidated view of copies. The Application agent for Lotus includes support for the latest edition of Lotus Domino and clustered Domino installations and the agent for SAP has more comprehensive database support, as well as support for SAP running in clustered environments. Finally, desktop and laptop agents not only support x64-bit environments, but also include delta file transfer which reduces the amount of data backed up.

It's All About Recovery

It's a simple concept. Make a copy of data and set it aside in case the original is lost or corrupted. As the original changes, update the copy so that changes aren't lost. When the copy is needed, make it easy to locate and provide a version history so any of the changed copies are available for recovery. And make

recovery fast, so that business isn't interrupted. Unfortunately, many of the backup applications available today have made the process of creating and recovering a copy of data much more complex and time-consuming. They've lost sight of the simple concept. This is not true of Backup Exec 11d.

Backup Exec 11d offers backup to disk, tape or disk and tape. Data can be backed up in scheduled intervals or continuously – for unstructured and (now) structured data typically seen in Windows-centric SMB or workgroup environments. If data needs to be recovered – including fine grain recovery of application elements – it can be accomplished quickly and easily – even by a non-IT person. This is the goal of several backup vendors targeting this market. The difference is that Microsoft is still beta testing its System Center Data Protection Manager v2 for features Symantec is delivering today. What about the other backup vendors? Several have made progress with CDP acquisitions, but none have been able to glue CDP together with their backup solution ... at least not yet. Symantec has an advantage because the company developed its own CDP technology as a feature of its backup solution. With its recovery-centric features, Symantec Backup Exec has been able to change the landscape for SMB data protection.

Symantec's expanded list of platform and application enhancements should also make end-users happy. While this release wasn't timed with a specific platform revision, Symantec is ready to support early adopters of the Windows Vista OS and 64-bit computing. Backup Exec's breadth of application coverage is much improved, but it still falls behind in coverage compared to some vendors' in its class. However, what the product may lack in application coverage is made up for by the aforementioned CDP capability that is applied to many of its application agents.

So what's missing? There's not much emphasis on data reduction capabilities in Backup Exec. While Backup Exec's CDP and the Desktop/Laptop option supports delta file transfer, it would be beneficial for the global single instancing in Symantec's PureDisk solution to be implemented throughout the Symantec data protection product line.

ESG's View

With 11d, Symantec appropriately changed its tagline for Backup Exec from "The Gold Standard in Windows *Data Protection*" to "The Gold Standard in Windows *Recovery*." Not only was the emphasis on recovery a smart move on Symantec's part – the market share leader taking a leadership stance on messaging – but they can back it up (pun intended). Backup Exec's CDP capabilities offer significant benefits to end-users who need to seamlessly and rapidly recover data.

SMB backup competitors abound and, at any point in time, one can claim feature advantages over another. Backup Exec 11d has caught up in many areas and has also leapfrogged its competition in others. The company should continue innovating and anticipating customer demands so they can retain their market leadership position. Changing the terrain to focus on recovery was a maneuver that should keep customers happy and competing vendors off-balance.