



ARCHITECT NETWORK

10 NEW FEATURES FOR VERITAS BACKUP EXEC™ 10

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VERITAS Backup Exec 10

For over a decade VERITAS Backup Exec™ software has provided the best data protection available to growing companies and large, market-leading enterprises alike. It is the gold standard in Windows data protection. With the release of VERITAS Backup Exec 10 *for Windows Servers*, VERITAS is introducing the Backup Exec Suite, delivering continuous data protection and the fastest disk-based data recovery in a simple to grow, simple to manage single solution. An integrated set of backup and recovery software, VERITAS Backup Exec Suite includes VERITAS Backup Exec 10 *for Windows Servers*, VERITAS Replication Exec™ 3.1, VERITAS Storage Exec™ 5.3, and VERITAS Backup Exec Smartlink™. Together, these products provide a scalable and manageable backup and recovery solution designed to meet the evolving needs of today's businesses.

VERITAS Backup Exec 10 incorporates new features and functionality that improve data protection, simplify backup and recovery management, and enhance scalability. A new Central Admin Server Option provides simplified, centralized management of the Backup Exec environment. New synthetic and Off-Host backup features, both of which can be staged to disk, speed the process of protecting valuable corporate data and help administrators manage the ever-dwindling backup window. Additional support for Linux, Microsoft SharePoint Portal Server, and virtual servers extends the scope of the Backup Exec infrastructure. And the Desktop-Laptop Option and environmental check utility improve the Backup Exec installation process providing administrators with further productivity gains.

Central Control of the Backup Exec Infrastructure

As organizations deploy more disk capacity in response to growing demands for storage, and remote facilities come under management control of centralized storage administration, maintaining effective control of the backup and recovery infrastructure becomes increasingly challenging. Ensuring that all resources are adequately protected, and enforcing consistent backup and recovery standards and procedures throughout the organization, can be time consuming and prone to error as administrators repetitively go from media server to media server performing backup and recovery tasks.

The Central Admin Server Option

The VERITAS Backup Exec 10 Central Admin Server Option transforms multiple, stand-alone Backup Exec media servers into a single, integrated enterprise data protection environment. Installed on a Backup Exec media server, the Central Admin Server Option provides administrators with a central hub for managing all Backup Exec media server activity. With a single console for controlling backup and recovery functionality, the Central Admin Server Option dramatically boosts productivity and reduces the total cost of ownership of the Backup Exec infrastructure.

The Central Admin Server supports the fast and effective dissemination of changes to managed media servers within the Backup Exec infrastructure. This eliminates the need for administrators to repetitively modify individual media servers, saving time and reducing manual errors. The console of the administration server also gives administrators a platform for centralized monitoring of job logs, catalogs, device and media information, and backup policies.

The Backup Exec media servers managed by the Central Admin Server can be grouped into logical pools. Job delegation functionality then allows backup and recovery processing to be offloaded to any available media server in the pool. The central administration server monitors backup and recovery processing and can restart failed jobs, or rerun jobs on a different media server if a media server fails. Distributing backup and recovery operations across media servers on the network provides fault tolerance and allows the Central Admin Server to load balance Backup Exec processing. This

bulletproofs backup and recovery processing, optimizes the use of all available resources and enhances the scalability of the Backup Exec infrastructure.

Backup Policies

Backup Exec 10 provides support for backup policies that allow the administrator to determine what to protect, and when, in advance of running the backup job. Each backup policy has a job template and a selection list. The job template contains attributes specifying the devices, settings, and scheduling of the backup job and the selection list identifies the protected resources to be backed up.

Policies allow the administrator to implement sophisticated backup strategies and help enforce consistent standards and procedures throughout the Backup Exec infrastructure. For example, a policy can be created to perform monthly full backups, with weekly and daily incrementals, implementing a Grandfather, Father, Son media rotation scheme.

Faster Backup and Recovery

Escalating data growth and 24-by-7 application availability demands are placing enormous pressure on the backup window – the period of time during which administrators scheduled backups. Faster and lower-impact backup processing is the only hope administrators have for satisfying the need for data protection within the continually-closing backup window.

VERITAS Backup Exec 10 introduces several new features that promise to reduce the time it takes to backup and restore data resources. Enhancing the existing disk-based backup functionality, Backup Exec 10 now supports multi-staged backups, providing a virtual tape-like capability that improves the speed of the backup process. And the Advanced Disk-Based Backup Option includes the new Synthetic Full and Off-Host backup features.

Synthetic Full Backups

Instead of running time-consuming full backups, the Backup Exec Synthetic Full Backup process performs incremental backups that are then combined, or synthesized, with a previous baseline backup to produce a new full backup image. The baseline backup image can be either a conventional full backup or the result of a previous Synthetic Full backup process.

Every time a Synthetic Full backup is run it results in a new Synthetic Full backup image. This not only reduces the processing needed to perform a full backup – incremental backups run much faster than full backups and consume less network bandwidth – but it also reduces the processing needed during a restore, as the repetitive recovery of the full backup image and each subsequent incremental image is eliminated by processing a single Synthetic Full backup image.

Synthetic backups reduce the load on the production server during backup processing. Incremental backups, used as input to the synthetic backup process, have less impact on the production server, and the process of combining the incremental backup with the previous Synthetic Full backup to create a new baseline backup image requires no additional transfers of data between the protected server and the Backup Exec media server.

Off-Host Backups

In a SAN environment, it is relatively easy to unmount volumes from one host and mount them to another because the process does not involve an incremental increase in network processing. By

moving volumes between servers processing can be offloaded from one host to another. Backup Exec uses this SAN capability to provide a low-impact Off-Host backup option.

The Backup Exec Off-Host Backup feature uses the Flashsnap option of VERITAS Storage Foundation for Windows, or similar third-party transportable snapshot functionality embedded in a storage device, to perform low-impact backup processing. The snapshot functionality ensures the integrity of the application data before performing a rapid, near-zero impact backup of protected volumes. By mirroring the volumes containing the snapshot image, and then splitting the mirror, the snapshot data can be disassociated from the host server and mounted to a Backup Exec media server, where it is backed up without impacting the host server. After the backup has completed the snapshot volume can be mounted back on the host server and resynchronized.

Off-Host backup processing allows the CPU and IO load from backing up protected data to be moved off the host server and onto the Backup Exec media server. Integration with transportable snapshot functionality effectively eliminates the backup window and ensures integrity of the application data.

Multi-Staged Disk Backups

Backup Exec 10 provides enhanced backup and recovery processing with support for new multi-staged disk backups. Rather than write backup images directly to tape, multi-staged backups are initially written to disk and migrated to tape at a later date. This functionality is often referred to as disk-to-disk-to-tape, or D2D2T.

Multi-staging to disk speeds backup processing by performing disk-to-disk IO rather than disk-to-tape. Mount and load delays associated with tape processing are eliminated. And constraints on the number of concurrently running backup jobs are freed because backups are no longer dependent on a physical tape drive and can write directly to disk. The disk-based backup images each have an associated retention period, and, when the images are eventually written to tape, the accumulated volume of disk-based data is more likely to provide the capacity necessary to support high-performance streaming of the tape drive.

Restore processing also benefits from multi-staging backup images to disk. If a restore requires a backup image that already exists on disk, delays waiting for a tape mount are eliminated and the restore process continues immediately. The random access nature of disk IO also allows pertinent data in the backup image to be located quickly, eliminating the time-consuming sequential read processing of tape. When compared to the restores from multiplexed tape, disk-based backups provide a clear performance advantage.

Enhanced Platform and Application Support

A critical element in lowering the cost of managing the backup and restore infrastructure is the ability to address the data protection needs of differing platforms and packaged applications from a single solution. VERITAS Backup Exec 10 expands support for operating environments and common software packages.

Remote Linux and UNIX Agent

With a new Remote Agent for Linux or UNIX Servers, Backup Exec 10 allows administrators to backup and restore Linux, UNIX, and Solaris hosts connected to the network from a Backup Exec for Windows media server. The remote agent is installed on the Linux or UNIX server and supports full, differential, incremental, working set, and user-defined backup types. With the capabilities offered by the new

remote agent, administrators are able to incorporate non-Windows environments into the backup and recovery strategies managed by Backup Exec policies at the Central Admin Server.

The Remote Agent for Linux or UNIX Servers utilizes the Agent Accelerator technology used in the Backup Exec Remote Agent for Windows Servers, and supports data compression at the source to speed backup performance and minimize network bandwidth. Both 32- and 64-bit Linux and UNIX environments are supported.

Microsoft SharePoint Portal Server Integration

Microsoft SharePoint Portal Server (SPS) is a highly scalable web-based collaboration environment backed by Microsoft's SQL Server database. VERITAS Backup Exec 10 provides agent support for SPS 2001 and 2003 and the SQL Server back end. The agent provides the granularity needed to specify which components of SPS need to be backed up, avoiding costly backups of the entire environment and dramatically reducing restore time for individual SPS objects.

Backup Exec's SPS agent will backup the SPS configuration database, portal sites and their associated databases, Windows SharePoint Service sites and their associated databases, the single sign on database, and the document library store and document libraries. Restores can be made to the original SPS or redirected to another SPS information store.

Backup Exec 10 fully supports distributed SPS farm configurations in which multiple front-end SharePoint Portal Servers are backed by one or more Microsoft SQL Server databases. This allows administrators to provide consistent data protection for the SPS infrastructure as the server farm is built out. Backup Exec communicates directly with the web servers that participate in the server farm to determine the topology of the SPS environment. Administrators are then provided with a tree view of the SPS farm allowing specific SPS resources to be selected for backup or restore.

Virtual Server Support

VERITAS Backup Exec 10 provides full support for virtual server environments, such as Microsoft's Virtual Server and EMC's VMWare. Each virtual server instance on a physical host is treated as if it were a real server and requires installation of a separate Backup Exec remote agent. For instances running databases, such as Microsoft Exchange or Microsoft SQL Server, the specific Backup Exec remote agent for that package is recommended.

The Backup Exec Intelligent Disaster Recovery (IDR) option eliminates the need to manually reinstall the entire operating system after a system crash. If the Backup Exec IDR option is being used in a virtual server environment only a single instance of the agent is required to ensure coverage for the physical host. In a disaster scenario, guest virtual servers can be rebuilt from the recovered physical host.

Installation Advances

Ensuring that new resources are fully protected by Backup Exec is a core component of an administrator's job. Two new features in Backup Exec 10 promise to enhance the installation process and extend data protection to previously uncovered environments.

Environmental Check Utility

The Backup Exec Installation Check Utility runs before Backup Exec is installed. The utility validates the system environment of the new media server, including verifying for supported operating system

and service packs. The utility also checks third-party applications, such as Microsoft Internet Explorer, ODBC, and MDAC, for the correct versions. If discrepancies are found the administrator is alerted before the installation process starts. This can save significant time by avoiding roll-backs when incompatible target environments are discovered during an installation.

Enhanced Desktop-Laptop Option

Backup Exec 10 improves the Desktop and Laptop Option (DLO) by providing a silent, push-based command line installation that takes place without interruption to the end-user. DLO offers continuous protection for files on desktops and laptops regardless of whether a computer is connected to the network at the time of the backup or not. The DLO agent copies backed up data files to a local User Data Folder according to an administrator- or user-defined schedule. If the backup occurs when the computer is not on the network, the agent synchronizes the folder with the Backup Exec media server's designated Network User Data Folder when the computer reconnects. In addition, the Backup Exec DLO will synchronize data between multiple computers so that, for example, a user with a desktop and laptop can ensure both machines have the same files at all times. The Backup Exec DLO allows end-users to restore their own files without help from the IT administrator.

Conclusion

With expanded capabilities and new functionality, VERITAS Backup Exec 10 addresses the need of network and storage administrators to accomplish more with fewer resources. Productivity enhancing features, like the Central Admin Server Option, promise to dramatically reduce the amount of time administrators spend managing media servers and provide a platform for new functionality that will ease the burden of protecting distributed data resources. The new Advanced Disk-based Backup Option brings enterprise-class data protection functionality within reach of every organization. And the expanded coverage, offered by features like the remote agent for Linux and UNIX server, will help administrators provide support for all resources from a single, unified backup and recovery solution. The new features within VERITAS Backup Exec 10 promise to dramatically lower to total cost of ownership of the data protection infrastructure.



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