WHITE PAPER

VERITAS™

Centralized Management for VERITAS Backup Exec™ *for Windows Servers*

VERITAS Backup Exec™ 10 *for Windows Servers*

Central Admin Server Option

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EXECUTIVE SUMMARY

Small, medium, and large organizations or enterprises face an explosive growth of data that must be protected and backed up. This challenge is made more difficult by the movement from stand-alone Windows server backup to backup over the LAN and by the need to manage multiple backup servers centrally and efficiently with constrained IT resources.

The trend to LAN-based backup is driven largely by two factors. First, valuable data resides on servers inside and outside the data center, so it must be backed up from multiple sources. Second, limitations of traditional stand-alone Windows server backup architecture add to the complexity of day-to-day management. As a result of these limitations, IT or backup administrators are faced with:

- Inefficient administration of multiple stand-alone backup servers
- Tedious initial job creation and ongoing job changes
- Inefficient usage of storage resources
- Continuous backup failures
- Inability to proactively monitor all active jobs on multiple media servers
- Lack of central reporting of entire storage environment
- Insufficient system information and lack of timely alerts

KEY BENEFITS

- Simple to grow and simple to manage, with centralized management of multiple Backup Exec servers by a central Backup Exec console
- Improved reliability with job load balancing and failover, maximizing hardware efficiency and operational resiliency
- Scalable architecture
- Proactive insight with central monitoring, reporting, and notification

Remote offices and distributed networks offer a different set of challenges to those companies unable or unwilling to consolidate their data protection and storage management to a central location. The development and setup of backup jobs is extremely time-consuming when many backup servers are deployed. And this effort is magnified when backup servers are remotely distributed. Proactive monitoring of media server activities and the ability to report on backup, restore, and storage management activities are key to an organization's, and administrator's ability to effectively manage a highly distributed storage network.

VERITAS Backup Exec™ 10 *for Windows Servers* introduces the Central Admin Server Option (CASO), which provides simplified, centralized management that delivers a robust and scalable solution for managing multiple Backup Exec media servers. The functionality lets today's storage administrator maximize a Backup Exec software investment by providing centrally managed operations, load balancing, fault tolerance, monitoring, and reporting for many Backup Exec media servers, whether in a Windows data center or distributed throughout the network.

PRODUCT HIGHLIGHTS

The Central Admin Server Option (CASO) creates a one-to-many relationship between a central admin server and managed media servers. This dramatically reduces administration time, while increasing resiliency and visibility of Backup Exec software in a Windows environment.

Feature	Description	Benefit
Single Point of Administration (Centralized Management)	• Provides single console for managing the entire Backup Exec environment • Creates and delegates jobs to multiple Backup Exec media servers • Defines device and media sets	• Provides single point of administration and control, unifying independent Backup Exec servers • Dramatically cuts the time and effort required to make changes • Reduces duplication of effort
Operational Resiliency	• Automatically load-balances jobs across a media servers • Provides job failover from one Backup Exec server to another • Centralizes catalogs for restores	• Increases efficiency and usage of storage resources • Removes single point of failure • Eliminates manual connection restores
Proactive Visibility (Reporting and Monitoring)	• Monitoring in real time all job activity dispatched by the central admin server • Provides holistic reporting for the entire storage environment • Centrally defines notification and alert settings	• Improves reaction time and reduces the time to resolve issues • Easily identifies trends across entire Backup Exec environment • Ensures accurate notification of alerts across the network

HOW IT WORKS

CONCEPTUAL OVERVIEW

The Backup Exec Central Admin Server Option (CASO) transforms your stand-alone Backup Exec media server-based environment into a centrally managed data-protection solution. In the CASO-enabled environment, the Central Administration Server (CAS) provides a single point of management and administration for the Backup Exec environment. The CAS is where you make decisions on what data and servers are to be protected in your environment. Unlike server-oriented Windows backup solutions, CASO uses a state-of-the-art architecture built on the following concepts:

Administration
Use of a Backup Exec 10 *for Windows Servers* media server as a CAS can:

- Store catalogs, device and media information, policies, jobs, and selection lists.
- Manage your data-protection operations across multiple managed media servers.
- Efficiently manage data protection for all network resources using a policy-based implementation.

Resiliency

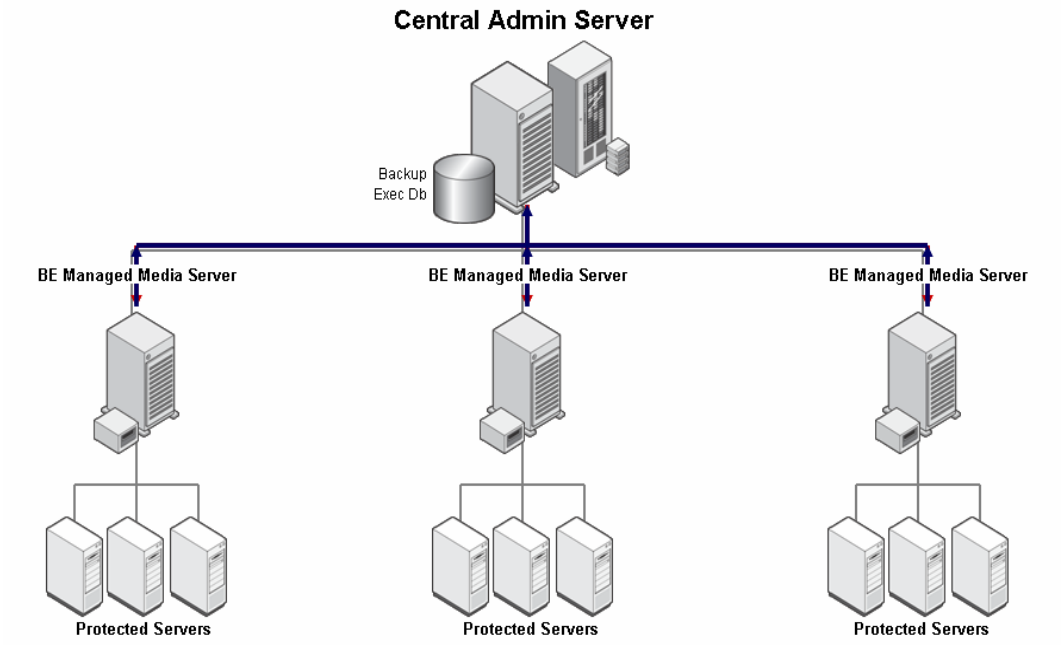
- Use existing storage hardware using job load-balancing concepts, so you can automatically delegate the processing of backup and restore jobs to various Backup Exec media servers on your network.
- Use fault tolerance, ensuring that resources are automatically protected by an available managed media server.
- Use a scalable architecture to handle the future growth of data on your network.

Insight

- Use automated job distribution from the CAS, so you can monitor all job activity on managed media servers.
- Use a central database for reporting on all managed media servers.
- Use central alert and notification settings for all managed media servers.
- Use of job history and job log information generated by the managed Backup Exec media servers.

ARCHITECTURE

The Backup Exec Central Admin Server Option unifies multiple, independent Backup Exec servers to provide one central point of administration and control. In a CASO-enabled Backup Exec environment, a group of standard stand-alone Backup Exec media servers are managed and monitored from a Backup Exec media server where the CASO software has been installed. This media server, known as the Central Admin Server (CAS), becomes the single point of administration for a CASO-based Backup Exec data-protection environment, and it is where all Backup Exec related administration tasks occur.



Central Administration Server Option Architecture

The Central Admin Server Option components include:

Central Administration Server (CAS)
A Backup Exec 10 media server can be configured as a CAS, where it is used for central administration tasks such as:

- Creating backup jobs by creating policies and selection lists from a centralized location.
- Centralizing job delegation by targeting a managed media server to run a job and then delegating the job to the selected managed media server for processing.

The central administration server is also used to centralize:

- All job policy functionality
- Management of notification and alerts
- Job monitoring and reporting
- Job history and job logs

The CAS can also run centralized restore jobs. To do so requires centralizing the storage of all backup operation catalogs on the CAS.

Managed Media Servers (MMS)
Backup Exec media servers, with one or more storage devices attached to them, fall under the management of the CAS. They are responsible for the actual processing of backup and restore jobs. By default, the catalogs produced by managed media servers are stored locally at the managed media server where they are produced.

A CAS can also be targeted as a managed media server to process jobs.

FEATURES AND BENEFITS OF CASO

ADMINISTRATION

Centralized Console

Implementing this type of architecture gives you the flexibility to manage the VERITAS Backup Exec 10 *for Windows Servers* environment from a simple, centralized and convenient console. Using CASO means you can now remotely administer individual Backup Exec media servers from a centralized console.

After configuring a CASO environment, you create policy and selection lists at the central administration server. Jobs created from these policies and selection lists can use the CASO job delegation feature, which automatically delegates Backup Exec jobs among the various storage devices connected to the managed media servers in the CASO environment.

Jobs are automatically created and submitted to the CAS's job queue after a policy is applied to a selection list. Queued jobs are processed in priority order. Depending on job parameters and system configuration, the CAS then delegates jobs, using job-delegation techniques, to available storage devices in a selected device pool.

RESILENCY

Centralized Job Delegation

Job delegation is the automatic load-balancing of jobs among the various storage devices attached to the Backup Exec managed media servers. These storage devices, when logically grouped in device pools, process jobs delegated from the CAS as they become available. For example, if a drive pool contains two storage devices and one is busy processing a job, the CAS automatically delegates another job to the idle storage device.

The advantage of job delegation is realized when a policy is targeted to a device pool that spans multiple Backup Exec managed media servers. When multiple managed media servers and their devices are available to the CAS for job delegation, the efficiency of Backup Exec for Windows Servers is greatly improved because job processing does not have to wait for a specific device or managed media server to become available.

Centralized Job Failover

If the job ends in an error or if managed media server communications are down, the CAS determines what to do with the job by invoking enabled default or user-defined error-handling rules that specify how the job will be handled if an error condition appears. For example, if communications are lost with a managed media server, jobs lost will automatically be deployed to another managed media server.

Centralized Catalog Storage

After CASO is installed and configured, you have the option of either continuing to store catalogs locally at the media server where they are produced or moving them to the CAS for centralized storage.

Storing catalogs on the CAS lets you initiate restore operations from the CAS, rather than having to manually run restore operations at each managed media server.

Centralized Restore

Using CASO, you can run restore operations from a CAS, letting you restore complete resources or individual files to their original locations. You can also redirect these restore items to different locations on your network.

After selections are made, restore jobs are created and submitted to the CAS job queue for job delegation among the managed media servers in the media server pool.

VISIBILITY

Centralized Reports
Centralized reports are available and can be viewed at the CAS for all delegated jobs that use the CASO job-delegation feature.

Centralized Job Logs and History Details
Job logs and the job history for each job can be automatically copied from the managed media servers to the CAS, giving you access to the information from either the CAS or the managed media servers.

Centralized Alerts
Using CASO, alerts generated at the managed media server are sent to the CAS, where they are displayed.

DEPLOYING CASO IN REMOTE BRANCH OFFICES

As an organization's business becomes distributed using the remote office model, so does their valuable data. The data at these remote locations is changing constantly and must be protected daily. The organization's IT management needs a backup and restore solution that will protect the data at these remote sites with the same high degree of reliability they have achieved in the data center.

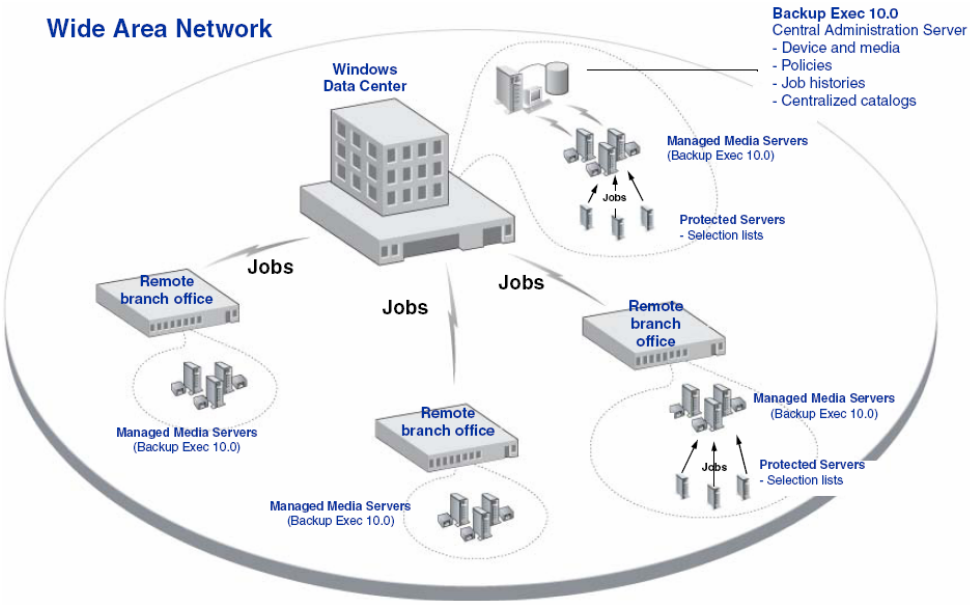
For example, the data center employs server-knowledgeable and application-literate administrators on-site. When backup software, tape libraries, or media must be installed or maintained, an administrator can quickly do the job. However, this expertise is usually not available at the branch office or retail store hundreds of miles away. Furthermore, employees at the remote site are usually not trained to create, maintain, and monitor backup jobs or investigate or trouble-shoot issues associated with backup job failure.

The solution must be scalable, executing the deployment and allowing monitoring and management of hundreds of remote backup server from a single console. Because an organization's many remote sites may be "cookie cutter" images of themselves, the solution should have features that minimize an administrator's repetitive deployment and management tasks.

The deployment of CASO in the remote branch offices allows IT administrators to:

- Complete backup server deployment
- Deploy and setup backup jobs
- Centrally monitor backup jobs and servers
- Get alert and notification
- Investigate remote problems

Since IT administrators can manage distributed backup servers from a single data center console, they don't need to travel to any remote sites, which significantly improved IT staff productivity.



USING CASO TO MAINTAIN BACKUP EXEC NETWORK STORAGE EXECUTIVE 8.6 FUNCTIONALITY

For sites running VERITAS Backup Exec Network Storage Executive (available only with Backup Exec 8.6 software), a migration path is provided to upgrade your existing NSE 8.6 installations to Backup Exec 10 *for Windows Servers* and CASO. By doing so, you maintain the centralized benefits of your previous NSE installations while incorporating the latest in technology with CASO.

CASO SYSTEM REQUIREMENTS

The Central Admin Server Option is recommended for any environment with five or more Backup Exec Servers. Based on internally testing, a single CAS can manage up to 100 to 120 Backup Exec media servers. CASO comes with MSDE, a light version of SQL, and that is accepted for environments where the CAS manages up to 20 or so media servers. For environments with more than 20 Backup Exec media servers, it is recommended that SQL Server be used for the underlying database or another instance of the CAS be introduced.

SUMMARY

In an era of continuing data growth and the need for simple, centralized, scalable management, the Backup Exec 10 *for Windows Servers* Central Administration Server Option gives the Windows-based organizations the flexible, powerful solution to manage backups and restores across a distributed organization — whether one that has multiple servers in one campus or distributed among remote offices — meeting the need of today's enterprise. It can help you manage the explosive growth of data and avoid the pitfalls of Windows Server-based backup, all with reduced management requirements.