



Centralized Management for Symantec Backup Exec™ 11d for Windows® Servers

Using the Central Admin Server Option

Centralized Management for Symantec Backup Exec 11d for Windows Servers

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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 toward 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, the 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:

- Time-consuming administration of multiple stand-alone backup servers
- Consistent backup failures
- Inability to proactively monitor all active jobs on multiple media servers
- Inefficient usage of storage resources
- Lack of central reporting of the entire storage environment
- Insufficient system information and lack of timely alerts

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 in 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.

The Symantec Backup Exec 11d Central Admin Server Option offers 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.

Key benefits

- Simple to grow and 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

Product highlights

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

Feature	Description	Benefit
Centralized administration	<ul style="list-style-type: none"> Provides a single console for managing the entire Backup Exec environment Creates and delegates jobs to multiple Backup Exec media servers Defines device and media sets 	<ul style="list-style-type: none"> Provides a 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	<ul style="list-style-type: none"> Automatically load balances jobs across media servers Provides job failover from one Backup Exec server to another Centralizes or replicates catalogs for restores 	<ul style="list-style-type: none"> Increases efficiency and usage of storage resources Removes single point of failure Eliminates manual connection restores
Proactive insight (reporting and monitoring)	<ul style="list-style-type: none"> Monitors in real time all job activity dispatched by the CAS Provides holistic reporting for the entire storage environment Centrally defines notification and alert settings 	<ul style="list-style-type: none"> Improves reaction time and reduces the time to resolve issues Easily identifies trends across the entire Backup Exec environment Helps ensure accurate notification of alerts across the network

What's new in version 11d?

Feature	Description
Disconnected managed media server	Operations can continue uninterrupted on the managed media server even when there is no network connection to the CAS.
Catalog management enhancements	Distribute, centralize, or replicate catalogs in a Central Admin Server environment.
Monitoring enhancements	Monitor jobs created locally on the managed media server, as well as jobs that have been delegated to the managed media server from the CAS.
Data transfer enhancements	The amount of data that can be transferred between a managed media server and CAS has been significantly increased, and the rate of transfer of job logs to the CAS has been fine-tuned.

How it works

Conceptual overview

The Backup Exec Central Admin Server Option 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 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 single server-oriented Windows backup solutions, CASO uses a state-of-the-art architecture built on the following concepts.

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 administration server, 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 (see Figure 1).

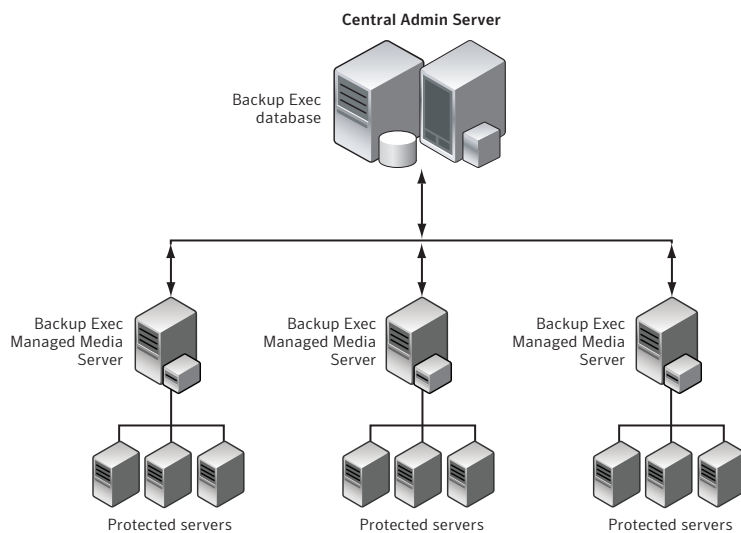


Figure 1. Central Admin Server Option architecture

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The Central Admin Server Option includes the following components.

Central administration server

A Backup Exec 11d 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 and load balancing
- Managing notification and alerts
- Job monitoring and reporting
- Job history and job logs
- Centralized restore jobs

Managed media servers

Backup Exec media servers, with one or more backup storage devices attached, fall under the management of the CAS. They are responsible for the actual processing of backup and restore jobs. Now with Backup Exec 11d, managed media servers can operate in persistent or nonpersistent network connections.

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 Backup Exec 11d 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 CAS. 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.

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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.

Resiliency

Disconnected managed media server

To reduce network traffic, or if there is no persistent network connection with the CAS, managed media servers can be configured to operate independently from the CAS while maintaining a level of centralization. This is ideal for remote branch offices where network connectivity may be intermittent. Disconnected managed media servers can receive copied jobs from the CAS and be monitored and reported by the CAS.

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

In the CASO environment, you can choose the catalog location. With Backup Exec 11d, there are three possible catalog locations:

- **Distributed**—Image files, which are small files that contain information about the backup set, are distributed to the CAS from every managed media server. History files, which contain detailed information about the backup set, remain on the managed media server. A distributed catalog provides increased performance, centralized restore capability, and decreased network traffic.
- **Centralized**—All catalog files and information for the managed media server are kept on the CAS. A centralized catalog is ideal for complete central control of the catalogs and if the network can handle the extra bandwidth required.
- **Replicated**—All catalog files are replicated from the managed media server to the CAS. Both the managed media server and the CAS store the catalog produced by the managed media server. Replicated catalogs provide high availability by keeping the complete catalog structure in two separate locations.

Flexible catalog location allows the CAS to initiate restore operations from the CAS, rather than having to manually run restore operations at each managed media server, and takes into account bandwidth considerations.

Centralized restore

Using CASO, you can run restore operations from the 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.

Insight

Centralized reports

Centralized reports are available and can be viewed at the CAS for all locally monitored and 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. In version 11d, the amount of data that can be transferred between a managed media server and CAS has been significantly increased, and the rate of transfer of job logs to the CAS has been fine-tuned.

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 onsite. 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 troubleshoot issues associated with backup job failure.

The solution must be scalable, executing the deployment and allowing monitoring and management of hundreds of remote backup servers from a single console (see Figure 2). 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 remote branch offices allows IT administrators to:

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

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- Deploy managed media servers that can operate with intermittent network connections

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 improves IT staff productivity.

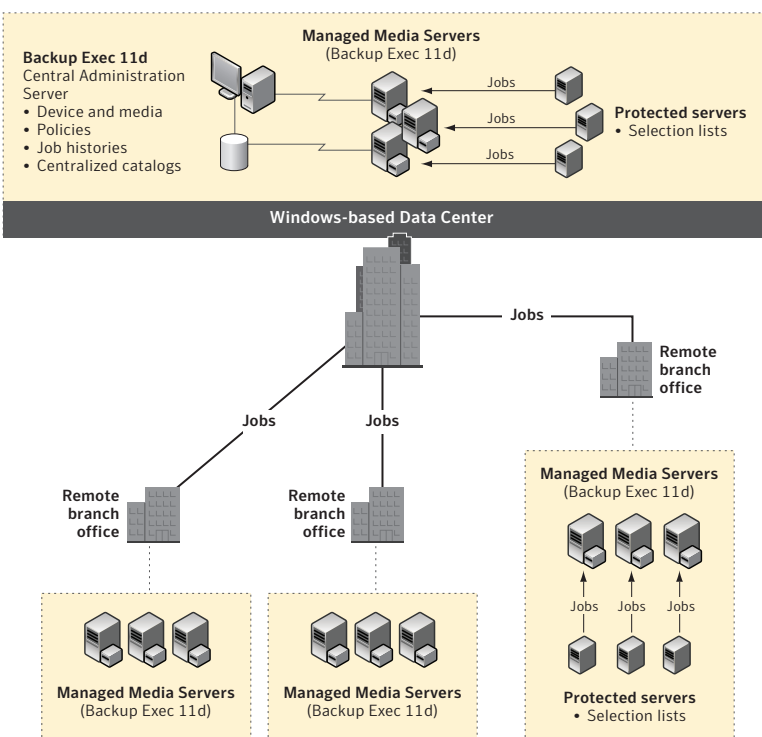


Figure 2. Wide area network

Summary

In an era of continuing data growth, organizations need simple, centralized, scalable management. The Backup Exec 11d for Windows Servers Central Admin Server Option gives Windows based organizations the flexible, powerful solution they need to manage backups and restores across a distributed organization—with multiple servers in one campus or distributed among remote offices. It can help you manage the explosive growth of data and avoid the pitfalls of Windows single server-based backup, all with reduced management requirements.

About Symantec

Symantec is the world leader in providing solutions to help individuals and enterprises assure the security, availability, and integrity of their information.

Headquartered in Cupertino, Calif., Symantec has operations in more than 40 countries.

More information is available at www.symantec.com.

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Symantec Corporation
World Headquarters
20330 Stevens Creek Boulevard
Cupertino, CA 95014 USA
+1 (408) 517 8000
1 (800) 721 3934
www.symantec.com

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