

Our quest to find the best backup/restore, disaster recovery, replication and business continuity product looks at the latest versions of CA ARCserve and Backup Exec.



Executive Summary

CA ARCserve (r16) outscored Symantec Backup Exec 2012 in every category. CA ARCserve is more feature-complete, is more reliable, costs less, scales better and is far easier to use. CA ARCserve supports more OS platforms, works with more virtual environments, partners with more cloud vendors and integrates with more applications. Moreover, CA ARCserve excels at providing maximum uptime and availability for critical servers and applications. Backup Exec 2012 lacks Continuous Data Protection and High Availability capabilities.

Unfortunately, Symantec's recent substantial enhancements to Backup Exec 2012 fall short of CA ARCserve's basic feature set. A key issue is Backup Exec 2012's new user interface, which makes Backup Exec unproductive, confusing and difficult to operate.

CA ARCserve r16 has again earned the Network Testing Labs World Class Award for best data protection and business continuity.

Both CA ARCserve and Symantec Backup Exec have each undergone major changes since the last time we gauged their relative merits for performing backup, data recovery, replication and high availability. Both have a raft of new features.

How do the new versions of CA ARCserve and Backup Exec measure up? Which is best suited to your particular computing environment?

We decided to look closely and in detail at the abilities and shortcomings of both CA ARCserve and Backup Exec 2012. In this report, we compare and contrast the two products, feature by feature.

CA ARCserve's components are CA ARCserve Backup, CA ARCserve D2D, CA ARCserve Replication and CA ARCserve High Availability.

Symantec Backup Exec 2012's components are Backup Exec 2012, Symantec System Recovery 2011, a Backup Exec 3600 Appliance, a virtual-only Backup Exec V-Ray Edition and Backup Exec.cloud.

For clarity's sake, note that Symantec has changed the name of its disk-to-disk image-based approach from *"Intelligent Disaster Recovery"* (IDR) to *"Simplified Disaster*

Disclosure: Production of this report funded by CA, Inc.

Recovery” (SDR). Symantec’s disk-to-disk component is *System Recovery 2011*. CA’s disk-to-disk image-based component is *CA ARCserve D2D*.

CA ARCserve’s new features are

Image-based Backup Enhancements

- **Integrated Access to Cloud Storage** – Integrated configuration of the cloud connection to Amazon Simple Storage Service (Amazon S3) and Windows Azure storage
- **Backup Throttling** – Optimizes the resources allocated to each backup
- **Granular Mailbox Recovery** – Restores individual Exchange emails, attachments, files and folders from a single-pass backup
- **Desktop/Laptop Protection** – Performs Infinite Incremental snapshot backups and bare-metal restores for your desktops and notebooks
- **Encryption** – Advanced Encryption Standard (AES)-128, AES-192 and AES-256 encryption for privacy and confidentiality
- **Windows Explorer Shell Integration** – Navigate and manipulate recovery points directly from within Windows Explorer
- **Auto Update** – Downloads and painlessly installs the latest ARCserve updates, hot fixes and service packs
- **Central Protection Manager** – Web-based console for viewing and managing all protected servers and clients has automated Active Directory discovery, remote deployment, simplified policy-based administration, Storage Resource Manager (SRM) reporting, status, grouping, search and restore, basic workflow and event logging
- **Central Reporting** – Centralized, detailed reporting, with a customizable dashboard, for all devices, settings and policies (local and remote)
- **Central Host-Based VM Backup** – Backs up all VMs in a single pass
- **Central Virtual Standby** – Transforms image-based backups into runnable VMware Virtual Machine Disk (VMDK) or Microsoft Virtual Hard Disk (VHD) virtual server format
- **Higher Integration** – Add image-backup protected servers to the file-backup Manager catalog, migrate image-based recovery points to tape and retrieve those recovery points directly from tape, replicate recovery points offsite and retrieve the offsite data as if it were local

File-Based Backup Enhancements

- **Archive Manager** – Identify and migrate data that meets specific archiving policies to less expensive storage to reduce storage costs while addressing compliance requirements

(Continued) CA ARCserve's new features are

- **Integrated Cloud Storage** – Configure and use cloud storage for offsite data protection, archiving and system availability for business continuity and disaster recovery
- **Snapshot and File-level Integration** – Use combinations of image backups and file backups to restore specific data
- **Synthetic Full Backup Improvements** – Use computing resources frugally yet transparently to store incremental backups
- **Backup Images to Tape** – Copy disaster recovery disk images to tape for secondary storage
- **WinPE (Windows Preinstallation Option)-compliant Disaster Recovery** – Use Microsoft's WinPE technology to drive bare-metal restore operations
- **Improved Tape Management** – Maximize and consolidate both disk and tape storage to lessen computing resource usage
- **SaaS Data Protection** – Image-based backup, restore and system recovery and comes bundled and integrated with Microsoft Windows Azure cloud storage

Replication and High Availability Enhancements

- **Full System Protection** – Replicates a complete Windows systems (operating system, system state, applications and data) to an offline virtual server, monitors the system and application, and offers automatic and push-button failover for high availability. Includes BMR recovery and non-disruptive failback to restore the original production server.
- **Amazon Cloud (Amazon Web Services [AWS] and Amazon Elastic Compute Cloud [Amazon EC2]) Integration** – Use Amazon's data center resources to have a cloud-based Replica server
- **Windows Server 2008 Failover Cluster Support** – Complements a Windows Server failover cluster with data replication to any local or remote site; integrated with Microsoft System Center Operations Manager
- **Secure Communication** – 128-bit Secure Sockets Layer (SSL) encryption (no virtual private network (VPN) or IPSec tunnel necessary)
- **VMware vCenter Server v4 Support** – Replication and failover for the VMware management system

Backup Exec 2012's new features are

- **The New User Interface** – Replaces earlier versions' backup job orientation to a server-centric model
- **New Backup Paradigm** – Simplifies backup job scheduling

(Continued) Backup Exec 2012's new features are

- **Guided Restore** – Uses a one-step-at-a-time Wizard to help an administrator restore data
- **Interactive Alerts** – Associates alerts with a source to help you identify a problem server, job or storage device
- **New Storage Setup Wizard** – Step-by-step help in configuring disk, tape, cloud or storage pool backups
- **Simplified Disaster Recovery** – System image (including the OS) backup and restore
- **Convert to Virtual Machine** – for Hyper-V and VMware
- **Automatic Updating of the Backup Exec Software** – Uses Symantec's "LiveUpdate"
- **Minor Reports Improvements** – Color coding, larger fonts, additional data columns and output in either HTML or PDF
- **Improved Search** – Can search for more detail in backup sets
- **New Notifications** – Email or text messages when alerts occur
- **Find Unprotected Data** – Discover data that's not backed up
- **True Image Restore** – Finds and collects latest-changed data when re-assembling a synthetic backup set
- **Checkpoint Restart** – Can restart from point of failure
- **New PowerShell interface** – Command Line Interface (CLI) works with Windows PowerShell
- **Various Agent Changes** – Updates and improvements to the VMware, Hyper-V, Exchange Server, SharePoint, Mac, Linux and Enterprise Vault agents

The categories we used in this evaluation are

- ❖ Image-based backup features
- ❖ File-based backup features
- ❖ Replication/high availability features.
- ❖ Overall features

For each feature, we provide a detailed ranking of the products and we explain the rankings when they're dissimilar. The first feature chart reveals how well CA ARCserve r16 and Backup Exec 2012 fare in performing image-based backup and recovery.

Image-based Backup

An image-based full system backup contains everything about a computer at the moment the backup copy was made – the operating system, the system's current state and the data file disk blocks. The backed up image can later be restored (termed a Bare Metal Restore operation, or BMR) either to the same computer or to another computer of different brand and type.

Additionally, image-based backup products offer granular recovery at the application and file level for faster recovery.

Image-based Backup Features Comparison Table

(Scoring from 0 to 5, with 5 the highest)

Feature	Symantec Backup Exec 2012	CA ARCserve r16
Snapshot/image backup technology	3	5
Operating System support	5	5
Virtual server support	4	5
Physical <--> virtual server support	4	5
Cloud capabilities	3	3
RTO/RPO (for disaster recovery – see note)	3	5
Granular recovery	5	5
Off-site replication of images	4	5
Bare Metal Recovery (BMR)	5	5
Virtual standby for cold-failover	2	5
Client support	5	5
Image archiving, retention and versioning	5	5
Centralized management	4	4
Centralized reporting	3	5
SaaS subscriptions with cloud storage	4	5
RMM integration for MSPs	4	4
Image-based backup features aggregate ranking	3.9	4.8

Image-based Backup Notes

Both CA ARCserve r16 and Backup Exec 2012 offer snapshot/image-based backups. The CA ARCserve r16 and Backup Exec 2012 image-based backup components can both create snapshots as often as every 15 minutes.

Backup Exec 2012's approach uses "Symantec Volume Snapshot Provider (VSP)" or Microsoft Volume Shadow Copy Server (VSS), with "hardware provider" as a first option and "system provider" (VSS software) the secondary option. CA ARCserve's approach employs the industry-standard Microsoft Volume Shadow Copy Server (VSS).

CA ARCserve's image-based backup is built on its patent-pending **Infinite Incremental (I² Technology)** that enables users to only perform a full backup once (the first time it's used) and then only perform incremental backups from that point forward. This technology has been designed to intelligently manage the backup of only blocks of data that have changed since the last backup and present a consolidated point-in-time view of the protected volume for multiple recovery types, reducing your recovery time.

Both products offer synthetic backups, in which a full backup is assembled, or synthesized, from a baseline full backup and subsequent incremental backups. Symantec terms its synthetic backup **Advanced Disk-based Backup Option (ADBO)**. ADBO users must periodically create a new full backup (ADBO's scheduling options for starting a new recovery point set, or base, are weekly, monthly, quarterly or yearly). I², on the other hand, does not have this limitation – hence the name "Infinite Incremental."

The "Advanced Disk-based Option" is expensive. It's only available as part of Symantec's Enterprise Server Option (which adds \$3,400 to Backup Exec's list price). As Symantec says, "Enterprise Server Option combines Advanced Disk Backup Option, Central Admin Option and the SAN Shared Storage Option into a single purchasable option for simplified licensing."

I² is faster than ADBO and uses less storage space. For a complete system comprising 300 GB, Figure 1 shows the relative performance of CA ARCserve r16 (I²) and Backup Exec 2012 (ADBO).

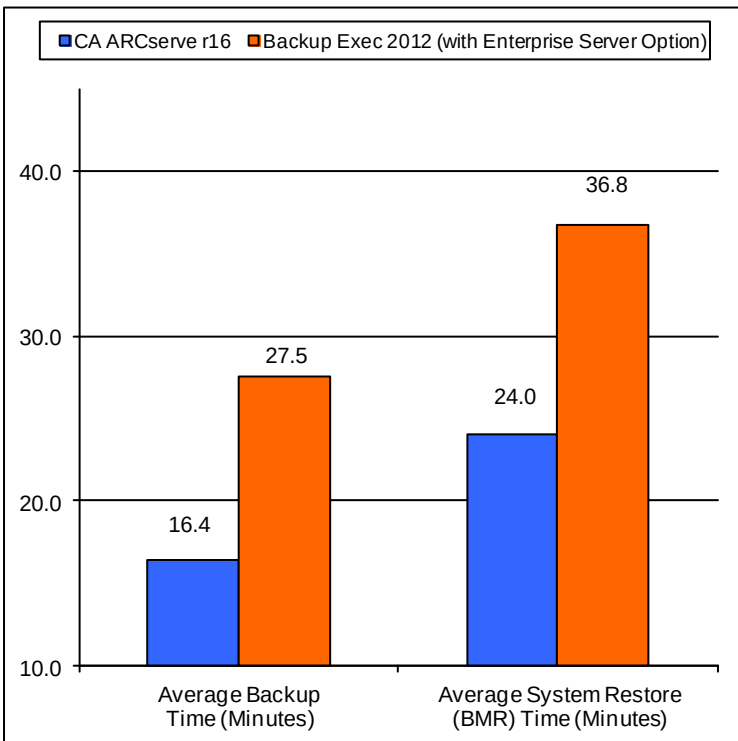


Figure 1.

I² vs. ADBO backup/restore performance

CA ARCserve also used 14% less storage space than Backup Exec 2012 (120 GB vs. 137 GB) when we tested the creation of monthly full backups and used each product's highest level of compression. (ADBO has 4 compression levels for the recovery point: None, Standard, Medium and High. I² has 3 levels: None, Standard and Maximum.)

Using infinite incrementals (one full backup at the outset and incremental thereafter) – but telling Backup Exec 2012 to continue creating monthly full backups with incrementals during the month – we saw that I² used about half ADBO's space at the end of two months (144 GB vs. 290 GB) and about a third of ADBO's space at the end of three months (161 GB vs. 457 GB). Figure 2 depicts the resulting storage requirements.

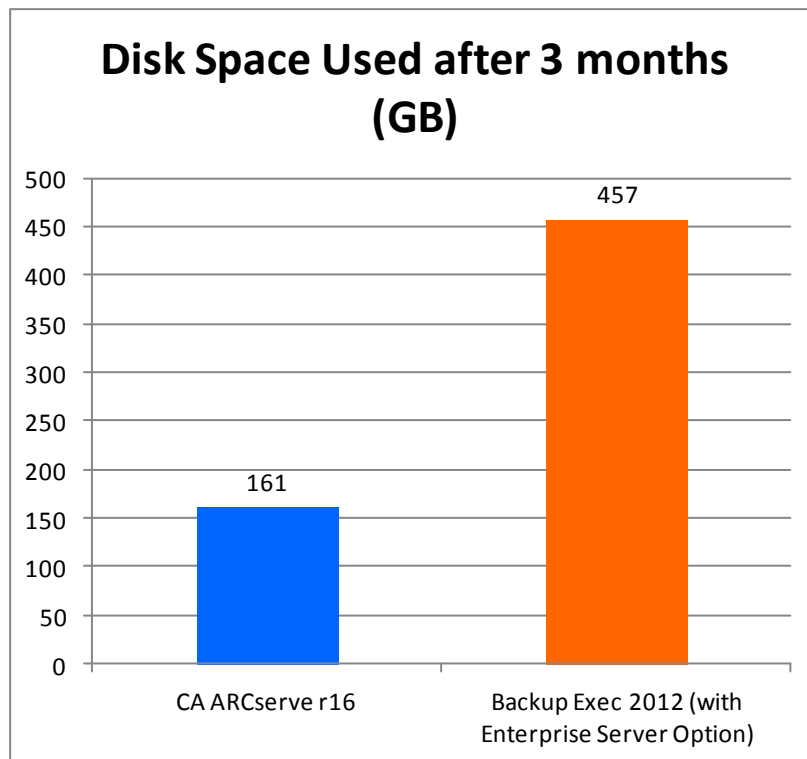


Figure 2.

I² vs. ADBO disk storage utilization

ADBO's administration is a bit more sophisticated than its predecessor. For instance, it has a "Limit the number of recovery point sets saved for this backup" option, which limits the number of recovery point sets that can be saved for this backup. Symantec says, "You can limit the number of recovery point sets to reduce the risk of filling up the hard drive with recovery points. Each new recovery point set replaces the oldest set on your backup destination drive. This option appears only if you are creating a recovery point set." Managing older backup sets used to be a manual affair in Backup Exec 2010.

System Recovery 2011 by itself, without ADBO (via the purchase of Enterprise Server Option), can only do whole-system image backups. It can't do incremental backups. System Recovery 2011 is perhaps useful to people who make ad hoc full backups before installing or upgrading software and who perhaps use (large) flash drives as backup media. It's otherwise fairly useless.

Note that Backup Exec 2012 can select only file system data for synthetic backup.

Virtualization Support

While Backup Exec 2012 only supports VMWare ESX and Microsoft Hyper-V, CA ARCserve supports VMWare ESX and vSphere, Microsoft Hyper-V, Citrix XenServer and Redhat KVM.

Virtual Standby – CA ARCserve also offers Virtual Standby, a feature wherein up-to-date copies of backup images (recovery points) are available for immediate use in case of a system outage, thus offering near-instantaneous system recovery. CA ARCserve's Virtual Standby feature automatically converts recovery points into VMDK and VHD formats and automatically registers with the hypervisor. It offers automated and manual failover. Furthermore, CA ARCserve's virtual standby works in either physical-to-virtual (P2V) or virtual-to-virtual (V2V) failover modes.

Backup Exec 2012 has Virtual Machine Auto-Recovery for VMware, which attempts to automatically restore a failed virtual machine in order to recover lost application services. However, this restricted-to-the-local-virtual-server action is little help in a disaster recovery situation.

Cloud Support – Backup Exec 2012's limited cloud support works just with Nirvanix Storage Delivery Network. Symantec hopes that other cloud-based storage vendors will develop software (OST) plug-ins that a customer can install on a cloud-connected Backup Exec 2012 server. CA ARCserve's hybrid data protection approach provides automated copying and archiving of critical files to the Amazon's AWS S3 and Windows Azure clouds after image-based backups complete. After the first file copy to the cloud, only incremental changes are transmitted from that point forward helping address low-speed cloud connections. CA ARCserve also offers version control and retention policies to help reduce cloud storage costs while addressing compliance needs.

To its credit, Backup Exec 2012 has a "Back Up to Disk and then Duplicate to Cloud" option that sends backup data to disk and then creates a duplicate copy of the backup sets for storage in the Nirvanix cloud. Backup Exec 2012's cloud configuration is a simple, wizard-based affair. Moreover, CA ARCserve can't perform a complete backup to the cloud, as Backup Exec 2012 can.

Note on RTO/RPO Performance Testing – To measure CA ARCserve's and Backup Exec's Recovery Time Objective (RTO) and Recovery Point Objective (RPO) performance, we simulated the destruction of four Windows Server computers containing a total of 300 GB in a small data center. One of these computers ran SQL Server 2005, one ran Internet Information Server (IIS), one ran an OLTP business application and the fourth was the backup server. In our tests, both CA ARCserve and Backup Exec took snapshots every fifteen minutes and transferred backup material to a remote location. Four computers at the remote location stood by, waiting to go to work in case of a disaster. We measured the minutes needed to recover data and resume operations.

Using CA ARCserve image-based backup in one test and Backup Exec 2012 in another test, one administrator at the remote location restored the transferred data onto the

waiting secondary servers. The test concluded when the administrator had restored all servers and had brought the OLTP application back online.

The administrator needed just 47 minutes to restore data to the servers and resume the OLTP application using CA ARCserve. With Backup Exec 2012, the administrator needed one hour and nine minutes (69 minutes) to accomplish the same thing – 22 minutes longer. If time is money in your data center, CA ARCserve is clearly the tool of choice when disaster strikes.

Working with disk images is easy and painless with CA ARCserve's Web 2.0 based management console. Backup Exec 2012's user interface for dealing with disk images is cumbersome and tedious in comparison. Similarly, CA ARCserve's Central Reporting component produces much more useful and informative reports regarding disk image recovery points than does Backup Exec 2012's Central Administration Server. Both products integrate with Windows Explorer to show the contents of an image file as a mountable drive letter.

Backup Exec 2012 has a few other limitations we found annoying. When recovering a Backup Exec server, the Recover This Computer Wizard cannot restore data from a local deduplication storage device. And SDR cannot recover a deduplication storage folder.

If you use SDR to recover a Backup Exec server that contains a deduplication storage folder:

- Any existing backup sets that were sent to the deduplication storage folder after it was backed up cannot be restored
- The deduplication storage folder may not be in an operational state after the recovery

Crucially, backups from previous versions of Backup Exec cannot be restored using SDR.

In the next chart, we take a detailed look at basic, fundamental CA ARCserve and Backup Exec 2012 file-based backup and restore capabilities.

File-based Backup

A file-based backup contains copies of applications and data files you designate, file by file and directory by directory. The backup process automatically and regularly creates the latest backup copy onto whatever media you specify – tape, disk, USB memory or other device. You can archive older backup copies offsite, for safekeeping. Restoring the data copies it back to the source machine or other computer that typically already

has an operating system installed on it. However, most file-based backup products also offer some type of bare metal restore (BMR) for system recovery.

File-based Backup Features Comparison Table

(Scoring from 0 to 5, with 5 the highest)

Feature	Symantec Backup Exec 2012	CA ARCserve r16
Tape device support	5	5
Application support	5	5
Tape integration	4	5
Tape archiving, retention and versioning	5	5
Virtual machine protection	4	5
Support for application-specific granular recovery	5	5
SRM reporting	2	5
Basic backup reporting	3	5
Infrastructure visualization	1	5
Central management	3	4
Deduplication	4	4
Public and private cloud support	3	4
File archiving	5	5
Integration with image-based backups	5	5
Synthetic full backups	5	5
File-based backup features aggregate ranking	3.9	4.8

File-based Backup Notes

CA ARCserve r16 and Backup Exec 2012 have similar file-based backup features. They both support the same operating systems, applications and backup devices. CA ARCserve has advantages over Backup Exec 2012, however, in its reporting, its infrastructure visualization, its central management console and its sophisticated backup job scheduling. CA ARCserve was also faster than Backup Exec 2012 in our tests, and its data deduplication was more efficient. Figures 3 and 4 graph the relative performance of the two products.

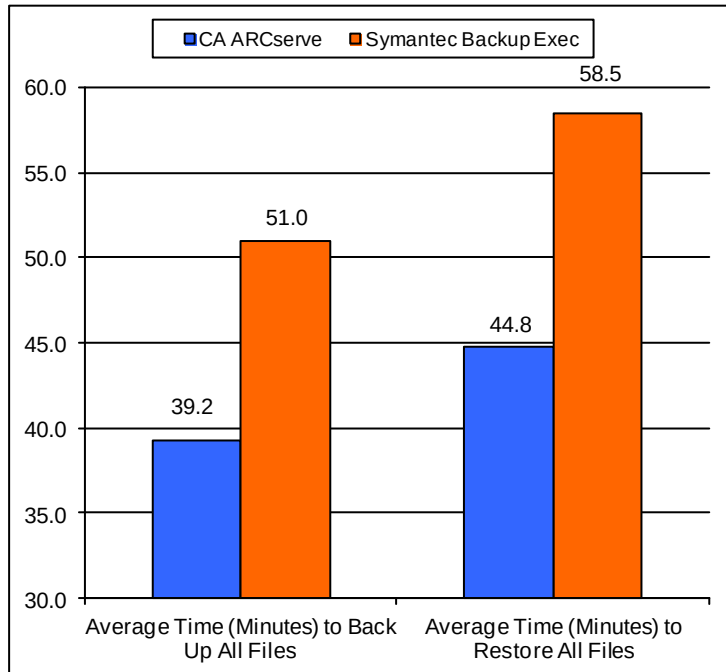


Figure 3.

CA ARCserve vs. Backup Exec 2012 backup/restore performance

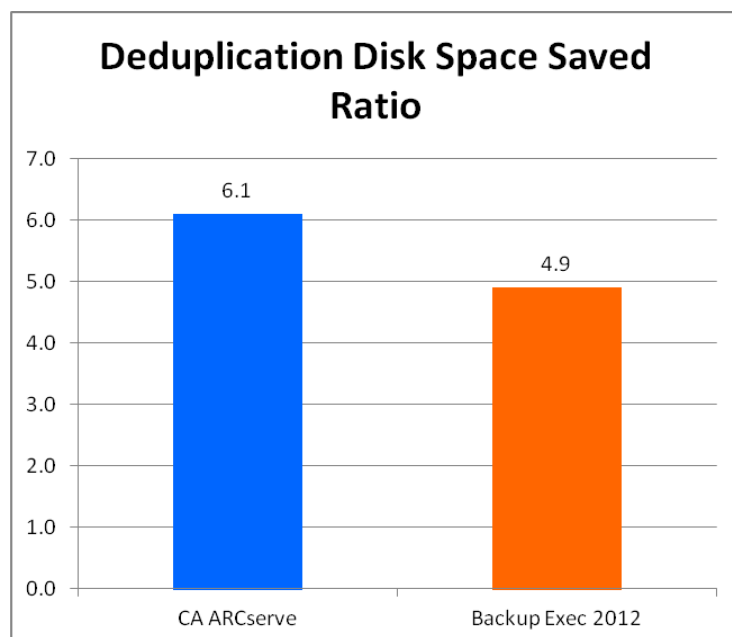


Figure 4.

CA ARCserve vs. Backup Exec 2012 data deduplication ratios (higher is better)

CA ARCserve and Backup Exec 2012 both have native D2T and D2D2T support, but Backup Exec 2012 offers only rudimentary scheduling options. For example a Backup Exec 2012 customer cannot schedule tiered jobs over time. CA ARCserve offers advanced tape management options.

CA ARCserve's SRM reporting is revealing, comprehensive and helpful. A person can monitor the status of any and all backup operations, identify long-running backup operations, locate backed up data, discover whether data is encrypted, know the company's disaster recovery status and track volume, disk and memory usage on each server. Unfortunately, Backup Exec 2012's unremarkable SRM reporting is lackluster and little-changed from the previous version.

Backup Exec 2012's basic reporting capabilities are the same as Backup Exec 2010's, with very minor changes (color highlighting of titles, larger fonts, a few new data columns and output in either HTML or PDF format). In contrast, CA ARCserve Central Reporting provides global views, administration and reporting on all devices, settings and policies (running on-premise and off-premise) protected by CA ARCserve. It gives both detailed reports and a summary Dashboard report view that clearly show the overall status as well as individual details for any and all backup operations.

While Backup Exec 2012 has virtually no infrastructure visualization capability, CA ARCserve's topology map clearly and intuitively displays a customer's infrastructure. By node, virtual machine or device, CA ARCserve graphically presents a hierarchical picture of data backup sets.

Backup Exec 2012 can perform data deduplication at either the server or the client, while CA ARCserve's deduplication is server-only. On the other hand, Backup Exec 2012's deduplication feature is an extra-charge option. CA ARCserve includes deduplication at no extra charge.

Backup Exec 2012's job scheduling is far less sophisticated than CA ARCserve's. For example, suppose a user needs to set up the following backup schedule:

- Daily incremental backups, Monday through Thursday, at 6 PM
- Weekly full backups on Friday at 6 PM
- Monthly full backups on the last Friday of the month at 6 PM

In this example, the user wants to schedule duplicate-to-tape jobs on Monday at 6 AM following the last full backup. (The user doesn't want to have D2D and D2T jobs competing for I/O and thus prolonging the backup jobs). Backup Exec 2012's new server-centric user interface has no facility for scheduling the duplicate jobs to run on the Monday following the last full backup.

Regrettably, Symantec has dropped support in Backup Exec 2012 for:

- Earlier versions of Windows
- One Button Disaster Recovery
- Symantec Online Storage for Backup Exec (SOSBE)
- Replication Exec
- Backup Exec Continuous Protection Server
- Agent for SAP
- A variety of reports
- Macintosh OS 10.4
- Some user interface features (barcode, media labeling and copying jobs to other media servers), which are now available only via the command line interface

In the last features table, let's examine the huge differences between CA ARCserve and Backup Exec 2012 in the areas of replication and high availability.

Replication and High Availability

Replication continuously copies changes made to one (master) computer's files to a secondary (replica) computer. The replica computer is always an exact copy of the master. High Availability manages the relationship between the master and replica computers in a way that makes the replica computer almost instantly assume the role of master if the master computer suffers a problem.

Multiple master and replica computers are possible. The result is a file, application or database server that's virtually always available.

Replication and High Availability Features Comparison Table

(Scoring from 0 to 5, with 5 the highest)

Feature	Symantec Backup Exec 2012	CA ARCserve r16
Replication	0 (Not available in or integrated with the Symantec Backup Exec 2012 product family)	5
True high availability (hot failover)	0	5
Physical and virtual server support	0	5
Operating System and application support	0	5
RTO/RPO (for disaster recovery)	0	5
Cloud Integration	0	4
Continuous Data Protection (CDP)	0	5
Offline synchronization	0	5
Replication and HA recovery testing	0	5
Network optimization	0	5
Replication and backup integration	0	5
Assessment mode utility	0	5
Application aware replication	0	5
Replication and high availability features aggregate ranking	0	4.9

Replication and High Availability Notes

Backup Exec 2012 completely lacks replication or high availability and thus scores zero for this entire category.

CA ARCserve's replication component may be used in a scheduled manner to migrate backups offsite and may be used in a real-time, continuous manner for continuous data protection (CDP). For companies needing maximum system uptime and availability, a high availability component is available.

CA ARCserve's replication component performs asynchronous replication and supports Windows, Linux and UNIX environments. It may be deployed onsite, offsite and linked to Amazon (AWS/EC2) cloud.

CA ARCserve's high availability component includes all the functions of the replication component and adds the ability to monitor one or more background services running on a server. If a service fails, CA ARCserve will attempt to restart it. If the restart fails, the system can be set to automatically fail over to the replica (or failover) server. Alternately, the administrator can set the system to not automatically failover, thus allowing the administrator to investigate the problem. The administrator can then choose to use push-button failover.

CA ARCserve can monitor a single server, group of servers, server farm or specific applications, such as Microsoft Exchange, SQL Server, SharePoint, IIS and Dynamics CRM, thus ensuring maximum availability. When a hardware or application failure occurs, CA ARCserve activates the replica server(s). It gives the replica servers IP addresses and host names during activation to make failover transparent to end users, many of whom will never even know it happened.

CA ARCserve's replication and high availability components complement (and integrate with) its file-based backup when you need maximum data protection, server uptime and availability. For example, CA ARCserve's replication and high availability components capture every change made to files and databases in real time. If any data is lost or damaged, an administrator can use a wizard-based tool to rewind back to a known good point in time, restoring specific files or even a complete database.

CA ARCserve is perfect for distributed applications like Microsoft SharePoint and Dynamics CRM, which typically have a multi-tier architecture consisting of separate Web, application and database servers. CA ARCserve replicates, monitors and fails over all the servers, not just the database server. And with group management, all component servers can be failed over even if only one fails. This is especially useful when the replica servers are kept at a distant remote location. CA ARCserve offers push-button failover and failback for the highest possible level of availability.

CA ARCserve replication and high availability components protect both physical and virtual servers. They offer host-level and VM-level protection for Hyper-V and offer VM-level protection for VMware and XenServer. Furthermore, it can replicate between physical and virtual servers (P2P, P2V, V2V and V2P) and even between virtual server platforms.

CA ARCserve comes with many pre-built replication and high availability scenarios. Furthermore, it provides application-aware replication and failover for Exchange, SQL Server, SharePoint, and IIS, as well as Oracle and Blackberry. In other words, CA ARCserve already knows what specific directories and files to replicate and when – you just indicate which applications to protect. Moreover, CA ARCserve supports DAS, NAS and SAN, and it can replicate data in a variety of ways – one-to-one, one-to-many and many-to-one.

When we measured RTO/RPO by performing the same disaster recovery test with CA ARCserve's high availability feature that we'd done with CA ARCserve's image-based feature (*see RTO/RPO section above under Image-based Backup), **CA ARCserve needed just six seconds to automatically restart the OLTP application** at the remote backup site. Backup Exec 2012 has no high availability feature and thus forfeited the test.

CA ARCserve also includes an easy-to-use assessment mode tool for performing “what if” dry runs to assure you have adequate bandwidth for replication. It also offers an automated recovery testing feature called CA ARCserve® Assured Recovery® you can use to perform scheduled or ad-hoc recovery testing at the application level on the replica server, without affecting the production server or impacting the continuous data protection and monitoring.

CA ARCserve can perform cloud-based data replication or cloud-based full system replication. Fully integrated with Amazon's AWS EC/2 for disaster recovery, CA ARCserve can use the cloud for storage and then, upon failover, “stand up” a virtual machine with current data and the current system state.

Ease of Use and Pricing

CA ARCserve is easier to navigate and far more intuitive. To add data to a CA ARCserve backup set, for example, you simply point and click to tell it which files or directories to back up and how long to retain them.

With Backup Exec 2012's server-centric focus, you have to manipulate one or more server backup jobs to add data to a backup set. Backup Exec 2012's server-centric interface is difficult and time-consuming to use.

CA ARCserve's well-formatted and configurable dashboard reveals, at a glance, the current status of your backups. With Backup Exec, visualizing backup status requires several more navigations steps. If you have multiple site backups, both CA ARCserve and Backup Exec consolidate and centralize backup status information from all sites.

Data visibility is crucial to data backup reliability. With a single click, CA ARCserve displays a clear and highly descriptive graphical view of backup sets and backed up data. In contrast, navigating Backup Exec's server-centric job backup reports is time-consuming, requiring myriads of clicks, and rather uninformative.

Unlike Backup Exec, CA ARCserve has a Web 2.0 interface that provides real-time access to the latest documentation updates, invaluable technical data, helpful tips and online user communities. Impressively, CA ARCserve's Web 2.0 interface even gives customers virtually direct access to the CA ARCserve development staff – and they actually listen to customer suggestions and ideas.

CA ARCserve's Web 2.0 interface gave us the ability to remotely access all our protected servers, change configuration settings, check the status of our backups and restores, initiate backup jobs and launch remote recoveries – all via the Internet.

We're not the only ones disappointed by Backup Exec 2012's new server-centric user interface. This report's Appendix contains several actual Backup Exec 2012 customer comments regarding its usability.

Symantec's pricing for Backup Exec 2012 is higher than that of CA ARCserve, as shown in the following tables (one year maintenance included for both):

Backup Exec 2012	MSRP
Backup Exec 2012 Server	\$1,162.66/server
Symantec System Recovery 2011	\$1,280
Backup Exec Small Business Edition	\$1,162.66 – for 3 servers
Backup Exec Agent for Windows – Small Business Edition	\$928.96/server
Backup Exec Agent for Applications and databases	\$1,162.66/server
Backup Exec agent for VMware and Hyper-V	\$1,863.76
Backup Exec Capacity Edition	\$10,160.11 / Tera Byte
Deduplication Option	\$1,746.91
Enterprise Server Option (contains ADBO)	\$3,499.66
Backup Exec V-Ray Edition - 2 TO 6 CPU cores	\$1,887.13
Backup Exec V-Ray Edition - 8 Plus CPU cores	\$3,382.81
Backup Exec 3600 Appliance	\$15,995 to \$25,995
Backup Exec.cloud - hosted sub annual bill - 10GB	\$69.96

CA ARCserve r16 vs. Symantec Backup Exec 2012

Product Review

CA ARCserve r16	MSRP
CA ARCserve Backup for Windows	\$818.40/server
CA ARCserve D2D for Windows Server Standard Edition	\$732.00/server
CA ARCserve Replication for Windows Standard OS with Assured Recovery	\$1,600.50/server
CA ARCserve High Availability for Windows Standard OS with Assured Recovery	\$3,250.50/server
CA ARCserve Backup for Windows Essentials File Server Module with D2D and Replication	\$2,005.20/server
CA ARCserve Backup for Windows Standard Database Module with D2D and Replication	\$2,610.00/server
CA ARCserve Backup Advanced Email Module with D2D and Replication	\$2,730.00/server
CA ARCserve Backup for Windows Enterprise Application Module with D2D and Replication	\$3,228.00/server
RPO Managed Capacity: Recover your data in minutes CA ARCserve Backup + CA ARCserve D2D Advanced Server + Central Applications + file-only CA ARCserve Replication	\$9,540/Terabyte
RTO Managed Capacity: Recover applications in seconds CA ARCserve Backup + CA ARCserve D2D + Central Applications + CA ARCserve Replication + CA ARCserve High Availability	\$16,740/Terabyte
<i>Virtual Environment</i> RPO Per Socket Solution: Recover your data in minutes CA ARCserve Backup + CA ARCserve D2D Advanced Server + Central Applications + file-only CA ARCserve Replication	\$795/socket (unlimited cores)
<i>Virtual Environment</i> RPO-RTO Per Socket Solution: Recover applications in seconds CA ARCserve Backup + CA ARCserve D2D + Central Applications + CA ARCserve Replication + CA ARCserve High Availability	\$1,995/socket (unlimited cores)

* All CA ARCserve pricing includes 1 year of Enterprise support/maintenance

Note that CA ARCserve includes deduplication, archiving, Active Directory granular restore and synthetic full backup in its basic product, at no extra charge.

Rankings Summary

	Backup Exec 2012	CA ARCserve r16
Image-based backup	3.9	4.8
File-based backup	3.9	4.8
Replication, High Availability	0	4.9
Usability	2.5	4.5
Total score	2.6	4.8



Conclusion

CA ARCserve is an integrated, reliable, easy-to-use and scalable answer when disaster happens. It works with more operating systems, more virtual environments, more cloud vendors and more applications. CA ARCserve is less expensive, and, as you've seen, is far more feature-complete.

We recommend CA ARCserve without reservation. In fact, we use it in our own shop.

Vendor Contacts

CA 800-225-5224	www.arcserve.com
Symantec 800-721-3934	www.symantec.com

Testbed and Methodology

Virtually all our testing took place across 512 kb/s frame relay, T1 and T3 WAN links. The testbed network consisted of six Fast Ethernet subnet domains routed by Cisco routers. Our lab's 150 clients consisted of computing platforms that included Windows 2000/2003/XP/Vista/Win7, Macintosh 10.x and Red Hat Linux (both server and workstation editions).

The relational databases on the network were Oracle, IBM DB2 Universal Database, Sybase Adaptive Server 12.5 and both Microsoft SQL Server 2008 and 2012. The network also contained two Web servers (Microsoft IIS and Apache), three e-mail servers (Exchange, Notes and Sendmail) and several file servers (Windows 2003 and Windows 2008 servers).

Our virtual computing environments consisted of VMware, XenServer and Microsoft Hyper-V.

A group of four Compaq Proliant ML570 computers, each with four 900 Mhz CPUs, 2G bytes RAM and 1.3 T bytes hard disks and running Windows 2003 Server, Windows 2008 Server and Red Hat Enterprise Linux, was our test platform for all the products' server components. A second group of four computers simulated our backup site for disaster recovery.

Appendix

Here is a sampling of actual Backup Exec 2012 customer comments from
<http://www.symantec.com/connect/forums/impressions-backupexec-2012> :

"Menus are now hidden behind other menus, and everything has a completely counter-intuitive feel ... It really feels like I am clicking more times than I have ever clicked in my life. The transition from 2010 R3 to 2012 has been nothing short of nightmarish."

"Removal of the Job Monitor was the single dumbest thing you did, though no doubt you feel very clever about it. It was succinct, allowed a single glance view of both running status and history, and now this info is spread all over the place."

"Server Centric ... what's the point? Backup Exec 2012 reminds me of the horrid mess that Acronis puts you through to manage servers. This server centric approach creates so much extra work."

"It's a complete nightmare at my company. I spent weekends and nights trying to make it all working again and I'm still unable to have all my backup working. It has so many bugs that hurts my eyes. You can't even order the Backup sets window by date ... or anything. I keep pressing the live update button waiting for this nightmare to end with some kind of update."

My backup needs in terms of space have doubled due to the server centric stupid idea."

"Wow, I just created more work for myself, because BE 2012 is less intuitive. Whats the best way to rollback to 2010? And what's the best alternative backup product?"

So, instead of having 3 jobs to run, I now have 36 to separately manage. The grouping of servers prior to creating new jobs really doesn't help much, as you cannot fine-tune the selection lists until you back out and edit each job separately!

"This forum thread stands as a testament to the fact that the reaction to BE 2012 is overwhelmingly negative, despite the impressions that Symantec staff still seem to hold. The people who have taken the time to post comments are your core demographic, not some kind of frustrated niche group that will 'get over it.' "

"All I want is one backup job. One. Why is that so hard? I used to have that. Do I seriously have to downgrade my client to BE 2010 and start shopping for another solution that will let me do something this simple?"

"You might as well shop around for a new product ... an Enterprise product that offers more features, performance, and support. Almost EVERY product I work with is faster and more consistent than Backup Exec in a shoot-out."

What we cannot afford to do is use 2012 and waste valuable hours trying using the CLI to write scripts for something that should be as easy as a click of the mouse in a properly designed GUI."

About the Author

Barry Nance is a networking expert, magazine columnist, book author and application architect. He has more than 29 years experience with IT technologies, methodologies and products. Over the past dozen years, working on behalf of Network Testing Labs, he has evaluated thousands of hardware and software products for ComputerWorld, BYTE Magazine, Government Computer News, PC Magazine, Network Computing, Network World and many other publications. He's authored thousands of magazine articles as well as popular books such as *Introduction to Networking (4th Edition)*, *Network Programming in C* and *Client/Server LAN Programming*.

He's also designed successful e-commerce Web-based applications, created database and network benchmark tools, written a variety of network diagnostic software utilities and developed a number of special-purpose networking protocols.

You can e-mail him at barryn@erols.com.

About Network Testing Labs

Network Testing Labs performs independent technology research and product evaluations. Its network laboratory connects myriads of types of computers and virtually every kind of network device in an ever-changing variety of ways. Its authors are networking experts who write clearly and plainly about complex technologies and products.

Network Testing Labs' experts have written hardware and software product reviews, state-of-the-art analyses, feature articles, in-depth technology workshops, cover stories, buyer's guides and in-depth technology outlooks. Our experts have spoken on a number of topics at Comdex, PC Expo and other venues. In addition, they've created industry standard network benchmark software, database benchmark software and network diagnostic utilities.