

# What to Look for in a Data Protection Solution for Virtual Environments



## Data Sheet: Backup and Disaster Recovery

Virtualization has been a game-changing technology for IT, providing efficiencies and capabilities that just aren't possible when constrained within a physical world. Efficient backup and quick recovery of virtual systems and the host systems they run on is essential to maintaining business productivity and cost savings that server virtualization delivers. This includes not only the guest virtual machines, but also the applications that have also been installed on those guest virtual machines such as Microsoft® Exchange, SQL Server®, SharePoint®, and Active Directory®. When searching for a backup and recovery solution for virtual environments, here are the top "must have" features to consider to ensure your backup and recovery solution provides the best data and system protection for any virtual environment.

### **1) Granular recovery**

Granular and application level recovery is paramount to any virtual backup strategy. If you can't restore what you need, when you need it, then your whole entire backup strategy is flawed from day one. Make sure your chosen solution provides all levels of recovery—full virtual machine, individual virtual disks, virtualized application, and database servers, along with standards like file, folder, and granular objects such as an individual email.

Symantec Backup Exec™ leverages Symantec's patented Granular Recovery Technology (GRT) to provide all the recovery methods mentioned above. The innovative GRT feature helps IT administrators save time and headaches by enabling them to restore individual files, folders, and granular objects within a guest virtual machine from a single-pass image backup. In addition, Backup Exec also provides the ability to recover an entire virtual machine or virtual disk, virtualized applications, and databases. Backup Exec even includes physical to virtual conversion technology, so you can accelerate your transition to virtual environments. Overall, Backup Exec provides one product and any recovery.

### **2) Application awareness**

Application awareness is an essential component of virtual machine backup. While most backup products provide "crash consistent" backups—meaning those applications use integration with technologies like Microsoft® Volume Shadow Copy Service (VSS), many backup products do not perform required post-process functions like log truncation, which ensure you are protecting the application completely. Many backup applications can't perform granular recovery of those virtualized applications either.

Many business-critical applications—like Exchange or SQL Server—will only do certain types of maintenance only when a successful backup occurs. Application-aware backup solutions ensure this maintenance can take place. Usually, this requires some sort of software (i.e. an agent, whether it's deployed beforehand or injected and uninstalled on demand) in the virtualized application server. The most capable backup applications such as Backup Exec are able to index, catalog, or otherwise capture important application metadata that is necessary for fast search and recovery of granular application items.

### **3) Data deduplication**

According to a recent ESG survey companies have about 16 virtual machines per physical host, with a plan to grow to 26 per host.<sup>1</sup> This number will continue to move upwards as hardware is built to accommodate this trend. It's no surprise that between all these guest machines there is significant duplication of data from both applications and operating systems.

To manage data growth and storage costs while improving network bandwidth optimization, data deduplication is a must. However, not all data deduplication solutions are equal. Look for a solution that offers source side deduplication. Why? By removing redundant data as close to the source as possible maximizes the benefits of deduplication. It will decrease network traffic, reduce the storage footprint, and lowers memory, thereby helping to beat backup windows and make backup strategies more successful.

Also, ensure your data deduplication solution works across everything you protect —across all virtual machines and any physical servers too—otherwise the storage savings from deduplication will be severely impacted. You want to be able to deduplicate your data effectively as possible and having multiple backup jobs containing the same data isn't very efficient. For example, if you are protecting 100 virtual machines and 50 physical servers running Windows®. True global data deduplication would reduce backup to just one instance of the operating system as opposed to 150.

Backup Exec enables customers to choose the deduplication method that best suits their environment. The Backup Exec Deduplication Option offers three methods for deduplicating data across the enterprise (across all backup jobs). These methods are client (or source) deduplication, media server deduplication, and appliance deduplication.

#### **4) Physical server and multi-hypervisor support**

More and more organizations are running multiple hypervisors within their environment, especially as alternatives to VMware® are gaining popularity—especially Microsoft Hyper-V®. Finding a single solution that supports all of your hypervisors will simplify backup complexity and licensing, streamline management, and reduce costs.

While some IT organizations have invested in multiple separate tools for backup— one for physical servers and virtual servers—customers have consistently asked for a single vendor to manage both environments. This is because a differing approach to backup leads to inconsistent data management, backup confusion, increased cost, and even conflict between various IT organizations. The solution is for IT to bring together the virtualization and backup teams, assign ownership, authority, and resources for backup of both physical and virtual machines.

With the release of Backup Exec 2012, now you can eliminate backup complexity and the need for specialized point products through a single solution that unifies virtual and physical, deduplication, and replication while offering the choice of on-premise software, appliance, or cloud delivery models. Unlike other solutions, Backup Exec is powered by Symantec™ V-Ray technology, which enables visibility across both virtual and physical environments for fast and efficient backup and recovery.

#### **Summary**

Overall, Backup Exec dramatically reduces the time to recover from disasters and data loss of any size, by protecting the entire host and all of its guest virtual machines together, while still allowing for granular recovery of files, folders, and granular application objects from inside of guest virtual machines. Unlike other solutions, for virtual machines hosting applications such as Exchange, SQL, SharePoint, and Active Directory, full application recovery, and granular application object recovery is possible without requiring a second pass backup of the application inside of the virtual machine. Backup Exec also provides multi-hypervisor support, centralized management, integrated data deduplication, and replication while offering the choice of on-premise software, appliance, or cloud delivery models. When you need a backup and recovery solution for virtual machines, choose Backup Exec—the gold standard in virtual machine backup and recovery.

1. ESG Research Report, Trends in Data Protection Modernization, August 2012.

## More Information

### *Visit our website*

<http://enterprise.symantec.com>

### *To speak with a Product Specialist in the U.S.*

Call toll-free 1 (800) 745 6054

### *To speak with a Product Specialist outside the U.S.*

For specific country offices and contact numbers, please visit our website.

## About Symantec

Symantec protects the world's information and is the global leader in security, backup, and availability solutions. Our innovative products and services protect people and information in any environment—from the smallest mobile device to the enterprise data center to cloud-based systems. Our industry-leading expertise in protecting data, identities, and interactions gives our customers confidence in a connected world. More information is available at [www.symantec.com](http://www.symantec.com) or by connecting with Symantec at [go.symantec.com/socialmedia](http://go.symantec.com/socialmedia).

### *Symantec World Headquarters*

350 Ellis St.

Mountain View, CA 94043 USA

+1 (650) 527 8000

1 (800) 721 3934

[www.symantec.com](http://www.symantec.com)