Vendor Landscape: Virtual Backup Software

Evaluate virtual backup software to end the arguing between virtual and backup admins.
Server virtualization is now being used for production workloads and traditional backup vendors are adding features to support this. On the other hand, solutions designed specifically for VM backup offer some key advantages over this approach. But, add image-based backup solutions to the mix, that do a bit of both, and things get very complicated.

Introduction

This Research Is Designed For:

✓ Enterprises seeking to select a solution to backup their virtual infrastructure.

✓ Their virtual backup use case may include:
  • Those with traditional backup solutions look at what a virtual only solution might offer.
  • Those with virtual only solutions looking to understand the advantages of a traditional approach.
  • Organizations wanting a general survey of capabilities of new and traditional backup vendors in virtual backup.

This Research Will Help You:

✓ Understand what’s new in the virtual backup market.

✓ Evaluate virtual backup vendors and products for your enterprise needs.

✓ Determine which products are most appropriate for particular use-cases and scenarios.
Executive Summary

Info-Tech evaluated 14 competitors in the Virtual Machine Backup market, including the following notable performers:

Champions
• Symantec’s strong developer base and broad global channel and support ecosystem help it quickly deliver on features and respond to customer feedback.
• CommVault’s forward-looking hardware integration and OEM strategy, and ability to deliver on must-have virtual backup features make it a great solution for virtual backup.

Value Award
• Symantec Backup Exec V-Ray edition is a cost effective solution considering the capabilities, commitment, and support framework that Symantec provides.

Trend Setter Award
• Veeam was named a Trend Setter for doing things in backup not possible with traditional solutions, such as running deduped and compressed VMs from backups, and for its comprehensive techniques for efficient network utilization.

Info-Tech Insight

1. How virtualized are you?
Organizations are getting more invested in virtualization. This makes it important to select a solution that best meets recovery needs for VMs. As organizations provision more and more VMs, it only gets more challenging to effectively backup everything.

2. Consider the cost/complexity trade-off
Point solutions for VM backup are inexpensive relative to traditional solutions that handle physical and virtual backup and are easier to use. However, most organizations are not 100% virtualized meaning that companies often manage two solutions: one for virtual, one for physical.

3. Don’t forget about tape
Many more recent additions to the backup market do not provide the capability to backup to tape for longer term retention. If you currently use tape, or plan to, this should be a consideration.
Market Overview

How it got here

• **Virtualization is production ready.** With advances in server capacity (memory, multi-core processing), and increases in vCPU, RAM, and IOPS capacity limitations, the majority of servers can now be virtualized. In 2012, more than half of server workloads (58%) are virtualized.

• **Legacy agent-based backup approaches are no longer good enough.** With server virtualization, the density of workloads on servers has increased, and installing agents on multiple guest operating systems supported by a host server is not tenable.

• **Enter virtualization-focused backup solutions.** Point solutions designed for virtual backup introduced agentless backups that reduced impact of backup and recovery on production workloads. Designed for virtual backup, they are easier to use and more cost effective.

• **Backup and virtual admins started butting heads.** As more production apps get virtualized, virtual admins that had purchased point solutions and backup admins using traditional backup products are overlapping in responsibility.

Where it’s going

• **Organizations want one solution not two.** Currently more than 35% of organizations manage two or more backup solutions. However, most organizations are not 100% virtualized and more than half (52%) are still using tape (source: Info-Tech Research Group).

• **Traditional and virtual backup solution distinctions are blurring.** Traditional backup solutions have found ways to conduct agentless backups, with VMware largely through exposure of APIs, and virtual backup solutions have begun to add support for physical servers and app awareness for app consistent backups. Pushing buyers to focus on specific requirements, in terms of backup media support (e.g. tape), and characteristics that ease implementation and management of virtual infrastructure.

• **Cloud will be the next differentiator.** As backup solutions mature, and standards become more open, capabilities to integrate with public or private cloud will enable more flexibility in archiving and disaster recovery of their virtual infrastructure.

As the market evolves, capabilities that were once cutting edge become default and new functionality becomes differentiating. Support for VMware APIs for Data Protection has become a Table Stakes capability and should no longer be used to differentiate solutions. Instead, focus on ease-of-use and how the solution fits with your current backup architecture to get the best fit for your requirements.
Virtual Backup Software Vendor selection / knock-out criteria: market share, mind share, and platform coverage

- Organizations are using either traditional backup, image-based backup, or virtual backup targeted solutions to backup their virtual infrastructure. For this Vendor Landscape, Info-Tech focused on those vendors that offer virtual backup for any of VMware ESX/ESXi, Microsoft Hyper-V, Citrix Xen Server, or other hypervisors.
- Solutions that have a strong market presence and/or reputational presence among large to mid-sized enterprises were included.

### Included in this Vendor Landscape:

- **CA Technologies.** With roots in systems management, CA ARCserve offers ease-of-use and standout reporting.
- **CommVault.** A strong backup solution offering physical and virtual backup with great hardware integration capabilities.
- **Dell AppAssure.** A recent Dell acquisition, AppAssure is easy to use and has seen steady recent growth and popularity.
- **Dell Quest vRanger.** A virtual backup pioneer, vRanger is known for ease-of-use and performance in virtual backup.
- **EMC.** Market share leader in storage and disk backup, EMC’s Avamar offers standout deduplication capabilities.
- **FalconStor.** With roots in OEM of VTLs, FalconStor has recently shifted to the buy side with Continuous Data Protector.
- **HP.** Traditionally known for cost effectiveness with Data Protector, HP offers strong integration with HP hardware.
- **IBM.** Second in market share, Tivoli Storage Manager is highly scalable and fast following in VM backup features.
- **Microsoft.** With the recent release of System Center 2012, Data Protection Manager has become much more scalable.
- **NetApp Syncsort.** A great all-in-one hardware and software implementation that leverages NetApp hardware.
- **PHD Virtual.** A standout virtual backup solution that makes data recovery fast, flexible, and cost effective.
- **Symantec.** Market share leader, Symantec's Backup Exec and NetBackup have strong developer support behind them, which has enabled it to respond quickly to demands of virtual backup.
- **Unitrends.** An image-based backup solution, it offers flexible backup approaches and near continuous data protection.
- **Veeam.** Offers easy to use virtual backup, with unique backup verification, and recovery direct from backups.
Virtual machine backup criteria & weighting factors

<table>
<thead>
<tr>
<th>Product Evaluation Criteria</th>
<th>Features</th>
<th>Usability</th>
<th>Affordability</th>
<th>Architecture</th>
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<tr>
<td>Features</td>
<td>The solution provides basic and advanced feature/functionality.</td>
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<td>The solution has flexible deployment options and supports multiple hypervisors.</td>
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<td>Usability</td>
<td>The solution’s dashboard and management tools are intuitive and easy to use.</td>
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<td>Affordability</td>
<td>The three year TCO of the solution is economical.</td>
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<th>Channel</th>
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<tr>
<td>Viability</td>
<td>Vendor is profitable, knowledgeable, and will be around for the long-term.</td>
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<td>Strategy</td>
<td>Vendor is committed to the space and has a future product and portfolio roadmap.</td>
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<td>Reach</td>
<td>Vendor offers global coverage and is able to sell and provide post-sales support.</td>
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<td>Channel</td>
<td>Vendor channel strategy is appropriate and the channels themselves are strong.</td>
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Criteria Weighting:

- Features: 30%
- Usability: 30%
- Architecture: 20%
- Affordability: 20%
- Product: 50%
- Vendor: 50%
- Channel: 20%
- Strategy: 25%
- Reach: 15%
- Viability: 30%
The Info-Tech virtual machine backup vendor landscape

**Zones of the Landscape**

**Champions** receive high scores for most evaluation criteria and offer excellent value. They have a strong market presence and are usually the trend setters for the industry.

**Market Pillars** are established players with very strong vendor credentials, but with more average product scores.

**Innovators** have demonstrated innovative product strengths that act as their competitive advantage in appealing to niche segments of the market.

**Emerging Players** are newer vendors that are starting to gain a foothold in the marketplace. They balance product and vendor attributes, though score lower relative to market Champions.

For an explanation of how the Info-Tech Vendor Landscape is created, see [Information Presentation – Vendor Landscape](#) in the Appendix.
Balance individual strengths to find the best fit for your enterprise

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Legend:  = Exemplary,  = Good,  = Adequate,  = Inadequate,  = Poor

1 The vendor declined to provide pricing, and publicly available pricing could not be found.

For an explanation of how the Info-Tech Harvey Balls are calculated, see Information Presentation – Criteria Scores (Harvey Balls) in the Appendix.
Balance individual strengths to find the best fit for your enterprise

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For an explanation of how the Info-Tech Harvey Balls are calculated, see Information Presentation – Criteria Scores (Harvey Balls) in the Appendix.
**What is a Value Score?**

The Value Score indexes each vendor’s product offering and business strength relative to its price point. It **does not** indicate vendor ranking.

Vendors that score high offer more **bang-for-the-buck** (e.g. features, usability, stability, etc.) than the average vendor, while the inverse is true for those that score lower.

Price-conscious enterprises may wish to give the Value Score more consideration than those who are more focused on specific vendor/product attributes.

*The vendor declined to provide pricing, and publicly available pricing could not be found.*

For an explanation of how Price is determined, see **Information Presentation – Price Evaluation** in the Appendix.

For an explanation of how the Info-Tech Value Index is calculated, see **Information Presentation – Value Index** in the Appendix.
Table Stakes represent the minimum standard; without these, a product doesn’t even get reviewed

**The Table Stakes**

<table>
<thead>
<tr>
<th>Feature</th>
<th>What it is:</th>
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<tbody>
<tr>
<td>Deduplication</td>
<td>Duplicate blocks of data are eliminated locally before being sent across the network</td>
</tr>
<tr>
<td>“Sandbox” Restore Testing</td>
<td>Create a sometimes temporary, dedicated data store and network for testing data recoverability</td>
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<tr>
<td>Monitoring and Reporting</td>
<td>Ability to monitor active processes and status of virtual machines with default and custom reports</td>
</tr>
<tr>
<td>Script Automation</td>
<td>Support for command line utilities for custom scripting to automate complex activities</td>
</tr>
<tr>
<td>Microsoft SQL and Exchange</td>
<td>Application awareness for application consistent backups, including log truncation</td>
</tr>
</tbody>
</table>

**What Does This Mean?**

The products assessed in this Vendor Landscape™ meet, at the very least, the requirements outlined as Table Stakes.

Many of the vendors go above and beyond the outlined Table Stakes, some even do so in multiple categories. This section aims to highlight the products’ capabilities in excess of the criteria listed here.

If Table Stakes are all you need from your virtual backup solution, the only true differentiator for the organization is price. Otherwise, dig deeper to find the best price to value for your needs.
Advanced features are the capabilities that allow for granular market differentiation

### Scoring Methodology
Info-Tech scored each vendor’s features, offering as a summation of their individual scores across the listed advanced features. Vendors were given 1 point for each feature the product inherently provided. Some categories were scored on a more granular scale with vendors receiving half points.

### Advanced Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>What we looked for:</th>
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<tbody>
<tr>
<td>Agentless Backups</td>
<td>Conduct backups without requirement of agent on guest machine operating systems</td>
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<tr>
<td>Run VMs from Backups</td>
<td>Run VMs from backup copies, whether synthetic or otherwise on backup media</td>
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<tr>
<td>VM replication</td>
<td>Replicate production VMs to a secondary data store</td>
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<tr>
<td>Backup Replication</td>
<td>Replicate backup copies of VMs for disaster recovery</td>
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<td>Direct Backup to Tape</td>
<td>Ability to send backup copies to tape without intervention from a third-party solution</td>
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<tr>
<td>Bandwidth Throttling</td>
<td>Controlling download and upload speeds to manage bandwidth usage</td>
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<tr>
<td>Hypervisor Client Integration</td>
<td>Integration with hypervisor client such that backups and policies can be partially managed</td>
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<tr>
<td>Self-Service/ RBAC</td>
<td>Role-based Access Control to allow helpdesk admins or users conduct recoveries on their own</td>
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<tr>
<td>Auto-Restore Testing</td>
<td>Automatically verify recoverability of VMs that have been backed up</td>
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<tr>
<td>Data Encryption</td>
<td>Capability of the solution to encrypt data before sending across the WAN</td>
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</tbody>
</table>

For an explanation of how Advanced Features are determined, see [Information Presentation – Feature Ranks (Stop Lights)](##) in the Appendix.
Each vendor offers a different feature set; concentrate on what your organization needs

<table>
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<th>Evaluated Features</th>
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<th>VM Replication</th>
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For an explanation of how Advanced Features are determined, see Information Presentation – Feature Ranks (Stop Lights) in the Appendix.
Select the solution that supports the hypervisors that you need it to; many products let you manage more than one.

Over 50% of organizations are managing more than one hypervisor* in their virtual environment, making it critical to understand what vendors support.

* Source: Info-Tech Research Group; N = 88

**Why Scenarios?**

In reviewing the products included in each Vendor Landscape™, certain use-cases come to the forefront. Whether those use-cases are defined by applicability in certain locations, relevance for certain industries, or as strengths in delivering a specific capability, Info-Tech recognizes those use-cases as Scenarios, and calls attention to them where they exist.

For an explanation of how Scenarios are determined, see Information Presentation – Scenarios in the Appendix.
Select the solution that matches your situation; some products are designed specifically for virtual backup.

Twenty three percent of organizations use separate products for virtual and physical backup, while 60% use one to do both.*

* Source: Info-Tech Research Group; N = 52

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For an explanation of how Scenarios are determined, see Information Presentation – Scenarios in the Appendix.
Market share leader, Symantec has great vCenter integration with many deployment options

**Champion**

- **Products:** Backup Exec 2012
  NetBackup 7.5
- **Employees:** 17,000
- **Headquarters:** Mountain View, CA
- **Website:** symantec.com
- **Founded:** 1982
- **Presence:** NASDAQ: SYMC
- **FY12 Revenue:** $6.73B

**Overview**

- Symantec is the largest provider of security software worldwide and market share leader in the backup software market. It offers Backup Exec for Windows-centric SMBs and NetBackup for large companies supporting many OSs.

**Strengths**

- Backup Exec and NetBackup are available as stand alone software for physical or virtual machines, or as a pre-integrated appliance, simplifying implementation.
- Backup Exec V-Ray edition for highly virtualized environments can be installed on a physical or virtual server, and includes dedupe, backup to disk and tape, as well as granular file, data and folder recovery, and the ability to back itself up.
- Symantec revamped its Backup Exec user interface in March 2012 to simplify management.
- Backup Exec and NetBackup integrate with vCenter, enabling backup monitoring and drill-down capabilities for VM admins.
- Widely supported storage integration with OpenStorage APIs.

**Challenges**

- Some Backup Exec customers were challenged by transition from a job-focused backup structure (in 2010) to a server-focused structure (in 2012). While this continues to be addressed, many of the requested changes were implemented in Symantec’s updated Backup Exec 2012 R2 interface.

**3 year TCO for this solution falls into pricing tier 5, between $25,000 and $50,000**

Pricing provided by vendor.
Symantec has been quick to add key virtual backup features to make data protection of VMs faster and easier to manage.

100
1st out of 14

Info-Tech Recommends:
For the most part, Symantec should be a consideration for most, as it tends to lead or quickly follow in key features and functionality with its large developer base.
Vendor Landscape Methodology:
Information Presentation – Feature Ranks (Stop Lights)

Info-Tech’s Feature Ranks are visual representations of the presence/availability of individual features that collectively comprise the Features’ criterion. The visual representation used is Stop Lights.

Stop Lights are determined as follows:

1. A single point is assigned to each evaluated feature that is regarded as being fully present, a half point to each feature that is partially present or pending in an upcoming release, and zero points to features that are deemed to be fully absent.
   - Fully present means all aspects and capabilities of the feature as described are in evidence.
   - Fully absent means all aspects and capabilities of the feature as described are in evidence.
   - Partially present means some, but not all, aspects and capabilities of the feature as described are in evidence, OR all aspects and capabilities of the feature as described are in evidence, but only for some models in a line.
   - Pending means all aspects and capabilities of the feature, as described, are anticipated to be in evidence in a future revision of the product and that revision is to be released within the next 12 months.

2. Feature scores are converted to Stop Lights as follows:
   - Full points become a Green light.
   - Half points become a Yellow light.
   - Zero points become a Red light.

3. Stop Lights are plotted by solution in a chart where rows represent individual solutions and columns represent individual features. Solutions are ordered in the chart alphabetically by vendor name.

For example, a set of applications is being reviewed and a feature of “Integration with Mobile Devices” that is defined as “availability of dedicated mobile device applications for iOS, Android, and BlackBerry devices” is specified. Solution A provides such apps for all listed platforms and scores “Green”, solution B provides apps for iOS and Android only and scores “Yellow”, while solution C provides mobile device functionality through browser extensions, has no dedicated apps, and so scores “Red”.

<table>
<thead>
<tr>
<th>Stop Lights</th>
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<td>Green means a feature is fully present; Red, fully absent.</td>
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Yellow shows partial availability (such as in some models in a line).
Vendor Landscape Methodology: Information Presentation – Value Index

Info-Tech’s Value Index is an indexed ranking of solution value per dollar as determined by the Raw scores assigned to each criteria (for information on how Raw scores are determined, see Vendor Landscape Methodology: Scoring, above).

Value scores are calculated as follows:

1. The Affordability criterion is removed from the overall Product score and the remaining Product score criteria (Features, Usability, Architecture) are reweighted so as to retain the same weightings relative to one another, while still summing to 100%. For example, if all four Product criteria were assigned base weightings of 25%, for the determination of the Value score, Features, Usability, and Architecture would be reweighted to 33.3% each to retain the same relative weightings while still summing to 100%.

2. A sum-product of the weighted Vendor criteria scores and of the reweighted Product criteria scores is calculated to yield an overall Vendor score and a reweighted overall Product score.

3. The overall Vendor score and the reweighted overall Product score are then summed, and this sum is multiplied by the Affordability Raw score to yield an interim Value score for each solution.

4. All interim Value scores are then indexed to the highest performing solution by dividing each interim Value score by the highest interim Value score. This results in a Value score of 100 for the top solution and an indexed Value score relative to the 100 for each alternate solution.

5. Solutions are plotted according to Value score, with the highest score plotted first, and all remaining scores plotted in descending numerical order.

Where pricing is not provided by the vendor and public sources of information cannot be found, an Affordability Raw score of zero is assigned. Since multiplication by zero results in a product of zero, those solutions for which pricing cannot be determined receive a Value score of zero. Since Info-Tech assigns a score of zero where pricing is not available, it is always in the vendor’s best interest to provide accurate and up to date pricing.