

E-Guide

VM backup checklist: 9 features and functions

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There's a lot to consider when choosing a backup solution for your virtual servers as VM backup implementations differ heavily in features and capabilities. This expert E-Guide was designed to help you through this process as it outlines 9 features and functions you should look for when evaluating a virtual server backup application. In the second part of this guide, learn how a leading storage vendor upgraded their virtual server backup software and added Hyper-V support.

Virtual machine backup software checklist

By Jacob Gsoedl, Contributor

What you will learn in this tip: Choosing the best solution for virtual machine backup isn't easy. With this checklist, learn how to determine what features and functions you need in virtual machine backup software.

Virtual machine backup implementations differ in features and capabilities, and depending on requirements, they may be more or less suitable for a given virtual server environment. Look for these features and capabilities when evaluating a virtual server backup application:

Deduplication. Operating system virtual machine images are very similar and ideal for deduplication, so dedupe is a must-have feature in virtual machine backup software. Deduplication at the source (hypervisor), as provided by Arkeia Software, EMC Avamar and PHP Virtual Backup, is preferable to deduplication on the backup target.

Restore granularity. Even though block-based virtual machine image backups take snapshots of virtual machine images, it's up to the backup application to provide sub-virtual machine object restore capabilities. The ability to restore sub-VM objects like files is a must-have feature for any virtual machine backup application you consider.

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Recovery options and flexibility. Recovery capabilities vary significantly among virtual server backup apps. For instance, Veeam Backup & Replication allows running a virtual machine directly from the backup file without having to restore virtual machines; the feature is called vPower and enables instant restores. Veeam's Virtual Lab is another notable restore feature. It supports starting virtual machines from virtual machine backup images as non-production instances in parallel to production virtual machines, sandboxing these non-production instances and enabling them to communicate with production virtual machines via network address translation (NAT).

Backup verification options. Not all backups succeed, so options that help verify backups without having to restore them are a tremendous boon in virtual machine backup software. Veeam Sure Backup provides for automated startup and testing of backups.

Deployment options. Virtual machine backup software products are available as software, hardware appliances and virtual appliances. Virtual appliances are preconfigured virtual machine images; examples are products from Arkeia, PHD Virtual Technologies and VMware.

Performance considerations. Hardware-based snapshots outperform software-based products for performance and scalability and should be considered for large virtual machine environments. All backup applications support software-based snapshots, but hardware-based snapshot support is sparser.

Backup target support. While all backup products can write to a disk target, not all can write to tape; virtual machine-only backup products are more likely to only support disk targets.

Hypervisor support. Many companies run more than a single hypervisor. Ideally, your backup application should support multiple hypervisors.

Virtual and physical server support. Almost all companies run a mix of physical and virtual servers. Therefore, your virtual machine backup software should be able to protect both physical and virtual servers.

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Veeam upgrades virtual server backup software, adds Hyper-V support

By Dave Raffo, Senior News Director

Veeam Software is preparing to enhance its virtual server backup software with increased scalability for enterprise use, support for Microsoft Hyper-V, one-click failover and file restores. Although Veeam Backup & Replication 6 won't ship until later this year, the vendor today disclosed details of the product.

Backup & Replication 6 will be the first version that goes beyond VMware hypervisor support. Veeam vice president of product strategy Doug Hazelman said he anticipates a lot more customers will be using Hyper-V either as their sole hypervisor or in a mixed environment with VMware. Veeam first announced it would support Hyper-V in May.

Veeam is also moving to a distributed architecture, offloading part of the backup and replication load with proxy servers instead of only using backup servers. Veeam claims that the new architecture will speed performance and enable the product to scale sufficiently for larger organizations.

"Before all the data had to flow through one server, and that server had to do reads and writes," Hazelman said. "Now when a backup job starts, the source and target talk directly to each other. The proxy will initiate the backup, grab incremental data, do the deduplication and compression and send one file over to the repository. The repository will put it into the incremental backup chain, and add or update a replica copy on the target host."

Veeam will also add what it calls "real failback," which lets customers fail back with one click. "It was always easy to failover, but not so easy to failback," Hazelman said. "Before, customers had to set up a replication job to replicate the other way. It was a manual process."

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Hazelman said restoring a single file from search previously required 10 steps. Now it can be done in one. Users can be given one-click restore permission based on specific file types.

Virtual server backup software no longer 'niche'

Veeam's improvements come as the traditional backup vendors move to beef up their virtual machine capabilities so their customers no longer have to use separate backup software for physical and virtual machines. Because the larger backup vendors did not sufficiently address virtual machines early on, customers turned to VM-backup software from vendors such as PHD Virtual, Quest Software and Veeam.

"Veeam is really riding that wave of increased virtualization," IDC analyst Robert Amatruda said. "In the data protection market, they're going up against some well-capitalized, well-entrenched, installed products out there. But the virtual backup guys are growing rapidly, certainly better than the overall market.

"The traditional software vendors are all looking at virtual protection applications or appliances. They have to."

Hazelman said Veeam can ride the virtualization wave into becoming the only backup tool a customer needs.

"They [traditional backup vendors] are beefing up their virtualization capabilities, but we have quite a lead from a technical standpoint because we've been virtualization-first from the beginning," he said.

"Customers have asked us to support physical servers. I'm not saying we'll never support physical servers, but we're in a position to take advantage of our leadership of virtualization. We can help drive the move off physical servers, so vendors who support the physical side will be niche, and vendors like Veeam will be mainstream."

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Hazelman said Veeam has more than 25,000 customers protecting more than 1.8 million virtual machines. (Quest claims 38,000 vRanger customers). He claims Veeam is adding nearly 1,500 new customers a month. Veeam is also being used more in larger organizations. Hazelman said Veeam has 4,000 customers who are protecting at least 100 VMs.

Mazda NA picks Veeam for virtualization project

Mazda NA infrastructure architect Barry Blakely said his organization added Veeam Backup & Replication virtual server backup software last year when it decided to begin virtualizing all of its servers. He said about 80% of its servers are now virtualized, and he hopes to be completely virtualized within a year.

Having multiple backup applications is obviously an administrative headache we would like to avoid.

Barry Blakely, Mazda NA infrastructure architect

“Moving forward, as we virtualize everything that we can, Veeam is our chosen backup solution,” Blakely said. “Our ultimate goal is to have one backup application, if it can be done. Having multiple backup applications is obviously an administrative headache we would like to avoid.”

As for the new version, Blakely said he’s happy about Veeam’s one-click capabilities.

“We would like [to be] as much push-button as possible,” Blakely said. “We wouldn’t use automatic failover and failback because we wouldn’t want a transient outage to cause a failover to occur, but we like a push-button failover and failback.”



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