Three New Evaluation Criteria for VMware vSphere Backup Software

In the last 20 years, VMware vSphere has expanded from a nascent technology to a staple of data centers worldwide. Right alongside it, backup software that protects applications and data hosted on vSphere virtual machines (VMs) has experienced similar growth. Now as vSphere backup software enters its third decade of existence, new criteria exist for evaluating and selecting these solutions.

Much Remains the Same

Many of the criteria that organizations considered when they first evaluated vSphere backup software remains the same. They should still prioritize solutions that integrate with the VMware vSphere Storage APIs – Data Protection. These APIs equip backup software to do change block tracking of VMs in vSphere. These APIs may also be used to perform file level backups in both Linux and Windows.

VMware vSphere backup software solutions also continue to differentiate themselves by the breadth of the features they offer. Some backup software more clearly targets small and midsized organizations. These products primarily protect Linux and Windows operating systems and many Microsoft applications (e.g., Exchange, OneDrive, SharePoint, and SQL Server.) Other backup software offerings offer more robust features to meet enterprise demands. These offerings support the many more operating systems and databases more likely found in enterprises.

Last, but not least, these solutions integrate with multiple VMware vSphere features to automate and manage VM backups.
Minimally, most integrate with VMware vCenter Server at some level to manage backup jobs. Many also integrate with or support features such as vSphere Fault Tolerance, High Availability, and Replication to deliver DR capabilities.

Three New Evaluation Criteria

These and other VMware vSphere backup software features developed over the last 20 years remain relevant. However, the rise of public and private clouds has prompted backup software to offer new features to account for them. In that vein, here are three new criteria by which organizations should evaluate VMware vSphere backup software:

Scale Out Architectures

Providers incorporate scale out architectures in backup software to account for the dynamic nature of cloud environments. The number of applications deployed, amount of data protected, or both, may scale up or down quickly. Using scale out architecture, show up in vSphere backup software solutions in a couple of ways.

- **Cloud-native.** Providers build cloud-native backup software by provisioning cloud resources in public cloud as they need them. Organizations typically subscribe to these services on a monthly or annual basis and then pay for the resources they consume. This is a good option for protecting VMs hosted in public clouds.

- **Hyperconverged.** VM backup software based upon hyperconverged infrastructures (HCI) also scale up more easily. Organizations typically must still dedicate compute and storage resources to the backup software solution. However, it is done more granularly on a node-by-node basis. This software is best suited for protecting VMs hosted on-premises or in private clouds.
Use S3 Storage as a Backup Target

Using cloud based S3 object storage has rapidly emerged as a leading use case for cloud storage. Multiple S3 compatible cloud solutions now exist from general-purpose cloud providers such as Amazon, Google, and Microsoft. Purpose-built cloud storage providers with S3-compliant storage such as Wasabi also exist. Storing backup data off-premises on economical storage has driven much of this adoption. However, ransomware’s rise has also given organizations new impetus to use S3 storage. Using S3 Object Lock to create immutable backup stores on cloud storage has piqued interest in this feature.

VAAI Block and NAS Primitives

Private clouds remain alive and well in many enterprise data centers with their vSphere backup needs continuing to evolve. Many of the VMware vSphere applications and data in enterprises reside on storage arrays. To expedite backups and recoveries in these environments, backup software may use the VMware vStorage APIs for Array Integration (VAII). It uses either the VAI block or NAS primitives, as appropriate, to perform clones or snapshots on the array.

DCIG TOP 5 Reports on VMware vSphere Backup Software Forthcoming

These features, and many others, DCIG will evaluate across nearly 40 backup software products that do VMware vSphere backup. Once DCIG completes this evaluation, it anticipates publishing at least two TOP 5 reports on VMware vSphere backup software in the third quarter of 2021.

To be notified when these reports become available, be sure to sign up for the DCIG newsletter. If you are a provider and want to be considered for evaluation or inclusion in these reports, contact DCIG here.