



▶ Virtual Server Protection: A Buyer's Checklist

When looking to maximize the value of your virtual infrastructure investment you need to achieve scalable virtual machine (VM) protection, automated VM lifecycle management and the ability to leverage any type of infrastructure for the most cost effective disaster recovery. To achieve these benefits while also supporting your future moves to the private and public cloud, follow this buyer's checklist to virtual server protection. It outlines the key features you need in a virtual server protection solution so that you can protect your valuable corporate data, regardless of the infrastructure it resides in.



▶ You shouldn't have to worry about integration, efficiency or scalability features with your VM Backup and Recovery solution. Find out how Commvault can reduce costs and complexity after completing this solution checklist.

▶ THE BASICS

Consider these the “must have features.” If your VM Backup and Recovery solution can’t support these capabilities, then you may be trading off some important integration, efficiency or scalability features that may not seem important now, but could quickly result in performance, manageability or other challenges down the road. This may ultimately lead to unnecessary extra costs and extra complexity.

○ VADP 5.X INTEGRATION

Support for VADP will make the protection and recovery of VMware environments more efficient and easier to manage with Change Block Tracking and fast restores directly into vCenter. This native support reduces risk, improved overall backup job performance and increases the speed and flexibility of recovery processes.

○ SUPPORT FOR WINDOWS 2012 SERVER

By selecting a solution that supports Hyper-V in Windows Server 2012 you will be able to support disk sizes up to 64TB with the new VHDX format. This format also helps to protect from corruption due to power failures by logging updates to the VHDX metadata structures and it prevents performance degradation on large-sector physical disks by optimizing structure alignment. If needed, be sure that your selected solution also supports VMs residing on SMB 3 shares without requiring specialized storage networking hardware.

○ LIVE MIGRATION SUPPORT

With live migration support, you are able to move virtual machines in a failover cluster from one host to another for live migrations. The virtual machines should be tracked, regardless of their host, while still maintaining the incremental backup cycle. This will protect your larger Hyper-V clusters with minimal administrative intervention.

○ AN AGENTLESS APPROACH

The days of treating VMs as if they are physical machines are long gone. And that includes agents! For VMware, Microsoft Hyper-V on Windows Server platforms or any other VM platform you may choose to deploy, an agentless approach will simplify your life dramatically. The agentless approach will improve overall system performance, lessen management overhead and reduce backup windows and restore times. In addition, an agentless approach doesn’t mean you have to trade off any functionality in terms of granular restores or application support.

○ APPLICATION CONSISTENT PROTECTION

Be sure that the data protection solution you select can ensure applications are protected in a consistent and rapidly recoverable state, including post- processing tasks like log truncation. This is particularly important for virtualized SQL and Exchange applications where rapid, granular recoveries are a necessity.

○ VM AUTO-DISCOVERY AND RULE-BASED PROTECTION

Select a solution that will automatically discover VMs every time a protection job runs. Working to automatically assign VMs to the appropriate protection policy, automatic discovery features reduce the effort required to automatically include or exclude VMs from backup. Rule-based discovery also reduces administrative effort by automatically assigning VMs to the appropriate protection policy as they are deployed. Be sure that your solution supports datacenter, cluster, ESX, folder, datastore, datastore cluster, naming and guest OS affinity.

○ GLOBAL, SOURCE-SIDE DEDUPLICATION

Data protection products that offer global source (or client side) deduplication enable the maximum efficiency of your VM backups. They ensure that only unique data is backed up which is critical in VM environments where VM metadata is redundant across many VMs. The best solutions also ensure deduplication is done across backup policies and jobs, not just jobs.

○ INCREMENTAL FOREVER BACKUPS WITH DASH FULL

Often competing incremental backup tools can impact the speed of restores or secondary copy operations. To solve this, select a VM protection solution that offers both deduplication and DASH Full technology so that secondary copies are fast and you can run an incremental forever approach without the need to ever run another synthetic full backup again.

○ GRANULAR FILE-LEVEL RECOVERY

When performing a granular recovery from hardware snapshots or the backup copy, be sure that your data protection solution has the ability to mount and “crack open” the vmdk via a vApp so that it can extract the desired files. This will reduce recovery time required for file/folder level restores.

3 Signs Your Virtualization Strategy is Stuck in Neutral

The biggest challenge you may be facing is that your virtualization strategy may be stuck in neutral. So how do you know if your company is at risk?

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▶ ADVANCED RESTORE OPTIONS

When evaluating restore options, select a solution that offers extensive options including file, volume and VM-level restores and enables restores directly into existing production virtual environments or to a different environment – even if it’s in a separate location. This gives you the flexibility to overwrite existing VMs, change VM names, automatically provision new VM resources and power on VMs as needed. Load Balancing and Failover. Your selected solution should load balance backups for VMs across all VSA proxy servers. If a VSA proxy fails, the workload should automatically be redistributed to the remaining proxy servers making the most efficient use of resources and enabling faster completion of operations.

○ VM LIFECYCLE MANAGEMENT AND VM ARCHIVING

To automatically reclaim and free unused ESX resources, select a solution that offers complete VM lifecycle management. This should include VM archiving so that you can automatically move VMs that are powered off into secondary tier datastores via Storage vMotion and then archive them off to disk or tape. Your selected solution should also automatically decommission a VM after it reaches an administrator defined age or control VM power management based on resource usage.

○ ADVANCED HARDWARE SNAPSHOT MANAGEMENT

A sophisticated solution that offers advanced hardware snapshot management will help to deliver rapid and advanced PRO and RTO service levels with minimal performance impact to the virtual infrastructure. It will also offer a scalable approach to protect large cloud infrastructure and cloud-based applications. Select a solution that supports a wide range of hardware arrays, giving you hardware freedom while helping you to protect many hundreds of virtual machines in minutes.

○ vADMIN SELF SERVICE WITH vCENTER PLUG-IN

If you like to work from the vCenter management console, select a solution that will let you browse backups of VMs and data and perform restores without ever leaving vCenter. Be sure that the plug-in functionality allows security and user access controls to flow directly from the data protection solution to vCenter so that your VMware administrators only see and can restore VMs and data for which they have defined permissions.

○ ADMIN SELF SERVICE WITH WEB CONSOLE RESTORES

Interested in having simplified administration and management with self-service access for VM administrators to perform restores? Select a solution that supports restores via web console for secure, single sign-on views into protection schedules and access data.

○ SUPPORT FOR MULTI-TENANT ENVIRONMENTS

To achieve multi-tenancy, the data protection solution should help you implement Role Based Access Controls (RBAC) with flexibility to integration into existing RBAC systems like Active Directory or LDAP. Security, encryption, data access and management permissions should all tie back to defined users and roles to enable granular customization of tenant access and management rights and leverage ease of use functionality like single sign-on.

○ ONE-TOUCH VM IMAGE CREATION (FOR VMWARE AND HYPER-V)

Solutions that can automate the process of creating a new, virtual machine complete with restored OS, applications and data will dramatically accelerate and automate the process of restoring applications and data. Select a data protection solution that can support this “one-touch” process for both VMware and Hyper-V so that regardless of the virtual infrastructure you’re running you can convert physical servers into VMs quickly, with less administrative intervention.

○ VM-LEVEL AND CHARGEBACK REPORTING

For easier classification for billing and chargebacks, select a solution that offers granular VM reporting. Details in the backup job summary should include backup sizes for each VM and the data size change for the VSA. It should also offer details for each VM including guest space and thin and thick provisioning and should offer flexible customer report creation for billing charge back for multi-tenant environments.

If you find each of these features to be important, consider evaluating Commvault® software. It enables the enhanced use of virtual infrastructure, including private and public clouds across VMware and Microsoft Hyper-V environments. It will also help you to maximize the value of your virtual infrastructure investment with scalable VM protection, automated VM lifecycle management and the ability to leverage any type of infrastructure for the most cost effective disaster recovery.

▶ To learn more about how Commvault software can help achieve optimal virtual server protection, please visit commvault.com/virtualization.

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