Commvault Solution Guide

VIRTUAL PROTECTION LIKE NO OTHER

Commvault® software enables you to protect hundreds of virtual machines in minutes, and rapidly scale to protect thousands of VMs across the enterprise. This unified data protection and information management solution features deep virtual platform integration with VMware and Hyper-V.

• Automate the burden of discovery, classification, filtering and policy assignment for virtual machine protection with Commvault® software
• Enable end-user self-service creation and management of VM’s across the entire VM Lifecycle
• Normalize VM management across multiple VM and cloud platforms (VMware, Hyper-V, AWS)

Read about the five common costs that can remain hidden until after a virtualization backup system has been fully deployed in the Hidden Cost Of Virtualization Backup Solutions.
<table>
<thead>
<tr>
<th>FEATURE</th>
<th>BENEFIT</th>
<th>COMMVAULT</th>
<th>VEEAM</th>
<th>VMWARE VDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agentless Backup</td>
<td>Reduced complexity and easier deployment for simple workloads. Leverage VADP and Change Block Tracking (CBT).</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Application Awareness</td>
<td>Manage end to end process of ensuring app consistent protection copies, including app quiescing and log truncation/post processing across wide range of applications.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Ability to Convert VMs</td>
<td>Ability to convert VMware VM’s to Hyper-V, or Azure or Hyper-V VM’s to VMware.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>“Live” VM Recovery Options</td>
<td>Enable almost immediate use of the virtual machine without waiting for the full VM to be recovered first or perform granular file and folder level recovery without collecting metadata.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Array-Based Snapshots for Scalable Protection</td>
<td>Leverage a variety of hardware array snapshot technologies to automatically protect large VM environments quickly for VMware and Hyper-V.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Custom Auto-Protection and Filtering</td>
<td>Automatically discover, classify, filter, and protect VM’s using multiple discovery options (Host, datastore and regular expression based).</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>VM Lifecycle Management</td>
<td>From provisioning and monitoring, to backup and replication to VM archiving and retirement. Manage the life cycle of the VM’s in the environment.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Cloud and VM Management</td>
<td>Enable end users to manage VMs across multiple VM and cloud platforms (VMware, Hyper-V, and AWS) through a simple, wizard driven, web-based interface to “normalize” operations for provisioning VMs.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Multi-Tenant &amp; Self Service</td>
<td>Web console based self-service and role based access for users and tenant admins.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Load Balancing &amp; Resiliency</td>
<td>No single point of failure and automatic load-balancing &amp; failover server and storage.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Integrated Global Operations Reporting</td>
<td>Robust, global reporting including capacity management and planning, SLAs, operational and instrumentation level views of environment. Visual reporting of trends, health check and operations summaries to enable proactive management and increase operational efficiency.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>Multiple Cloud Providers</td>
<td>Ability to select from multiple cloud providers for services.</td>
<td></td>
<td>⬜</td>
<td>⬜</td>
</tr>
</tbody>
</table>

See how powerful simplicity can be. Learn more at commvault.com/vm-backup-and-recovery.
SUBSTANTIATION (AS OF 1/19/2016)

1. AGENTLESS BACKUP
   Reduced complexity and easier deployment for simple workloads. Leverage VADP and Change Block Tracking (CBT)
   • It should be noted that Veeam utilizes a non-persistent agent which is injected into the runtime processes during backup and removed on
     completion. In a Windows environment, they recommend using a Guest Interaction Proxy in order to maintain the Backup Server performance and
     execute application aware processing tasks.

2. APPLICATION AWARENESS
   Manage end to end process of ensuring app consistent protection copies, including app quiescing and log truncation/post processing across wide
   range of applications
   • Veeam is limited to protecting Microsoft applications; Exchange, SQL and SharePoint only. (Veeam Backup & Replication Version 9.0, User Guide,
     VMware vSphere Environments, January 2016)

3. ABILITY TO CONVERT VM’S
   Ability to convert VMware VM’s to Hyper-V
   • Veeam does not provide the capability to convert VMs. (Veeam Backup & Replication Version 9.0, User Guide, VMware vSphere Environments,
     January 2016)

4. “LIVE” VM RECOVERY OPTIONS
   Enable almost immediate use of the virtual machine without waiting for the full VM to be recovered first or perform granular file and folder level
   recovery without collecting metadata.
   • Although not specifically called out as a VMware VDP feature, the underlying software for VDP, Avamar Virtual Edition, can provide Instant Access
     when used with Data Domain as a target storage (EMC® Avamar® 7.2 for VMware, User Guide, 302-001-811, REV 01, pg. 70)

5. ARRAY-BASED SNAPSHOTS FOR SCALABLE PROTECTION
   Leverage hardware snapshot technology to automatically protect large VM environments quickly for VMware and Hyper-V.
   • Veeam provides a snapshot capability for HP, EMC VNX and NetApp arrays only. (Veeam Backup & Replication Version 9.0, User Guide,
     VMware vSphere Environments, January 2016, pg. 385)
   • VMware VDP is limited to software snapshots on VI data stores and to Avamar or Data Domain. (vSphere Data Protection 6.1 Administration Guide)

6. CUSTOM AUTO-PROTECTION AND FILTERING
   Automatically discover, classify, filter, and protect VM’s using multiple discovery options (Host Based, datastore based and regular expression based).
   • Veeam provides protection to new VM’s added to a vCenter and backup those VM’s with a backup job. There is no capability to classify or filter VMs
     to assign a specific policy (Veeam Backup & Replication Version 9.0, User Guide, VMware vSphere Environments, January 2016, pg. 552)
   • VMware VDP provides protection to new VM’s added to a vCenter and backup those VM’s with a standard policy. There is no capability to classify or
     filter VMs to assign a specific policy. (vSphere Data Protection 6.1 Administration Guide, pg. 112)

7. VM LIFECYCLE MANAGEMENT
   From provisioning and monitoring, to backup and replication to VM archiving. Automatically archive stale VMs based on policies, to recover space in
   data stores
   • Veeam does not provide the ability to provision VMs. They can archive backup data sets to tape, but not specific VM’s. (Veeam Backup & Replication,
     Version 9.0, User Guide for VMware vSphere Environments, pg. 291)
   • VMware VDP does not provide the ability to provision VMs, and to retire or archive VMs for long-term retention is a manual process (vSphere Data
     Protection 6.1 Administration Guide)

8. CLOUD AND VM MANAGEMENT
   Enable end users to manage VMs across multiple VM and cloud platforms (VMware, Hyper-V, and AWS) through a simple, wizard driven web-based
   interface to “normalize” operations for provisioning VMs.
   • Veeam does not provide the ability to provision VMs or cloud instances. (Veeam Backup & Replication, Version 9.0, User Guide for VMware vSphere,
     Environments)
   • VMware VDP does not provide the ability to provision VMs or cloud instances (vSphere Data Protection 6.1 Administration Guide)

9. MULTI-TENANT & SELF SERVICE
   Web console based self-service and role based access for users and tenant admins
   • Veeam does not provide built-in multi-tenant infrastructure or tools, such as setting up User Groups or limit permissions on objects within the
     environment. Veeam ONE supports multi-user access to its monitoring and reporting capabilities. Authorized users can concurrently access the
     same instance of Veeam ONE to monitor the health state of the virtual infrastructure, view dashboards and run reports. (Veeam ONE version 9.0
     Multi-Tenant Monitoring and Reporting User Guide) End-user restore is limited to specific personnel. With Veeam, you can delegate secure guest
     file and VM recovery to help desk personnel and business unit owners. (Compare editions: Standard, Enterprise and Enterprise Plus). This is only
     supported in the Enterprise Plus edition.
   • VMware VDP cannot provide Multi-tenant or self service capabilities. (vSphere Data Protection 6.1 Administration Guide)

10. LOAD BALANCING AND RESILIENCY
    No single point of failure and automatic load-balancing & failover server and storage
    • Veeam can leverage its distributed deployment option to provide manual load balancing. For failover, Veeam does not provide automated server
        and storage failover. (Veeam Backup & Replication Version 9.0, User Guide, VMware vSphere Environments, January 2016, pg 491)
    • VMware VDP can replicate to another VDP appliance in case of disaster but cannot provide load balancing and automatic failover to the replicated
        appliance. (vSphere Data Protection 6.1 Administration Guide)

11. INTEGRATED GLOBAL OPERATIONAL REPORTING
    Robust, global reporting including capacity management and planning, SLAs, operational and instrumentation level views of environment. Visual
        reporting of trends, health check and operations summaries to enable proactive management and increase operational efficiency.
    • Veeam allows viewing real time statistics on a performed job and generating reports with statistics on a job or a separate job session. Veeam B&R
        can integrate with Veeam ONE to provide additional reporting and capacity planning, but requires the purchase of the Veeam Availability Suite.
    • VMware VDP has limited job level reporting information (vSphere Data Protection 6.1 Administration Guide)

12. MULTIPLE CLOUD PROVIDERS
    Ability to select from multiple cloud providers for services
    • To leverage cloud storage with Veeam Backup & Replication, Veeam Backup & Replication does not offer its own cloud for storing VM data. Instead,
        it uses Service providers computing, storage and network resources to configure Veeam Cloud Connect Backup and Veeam Cloud Connect
        Replication infrastructure components. (Veeam Cloud Connect Administrator Guide)
    • VMware VDP has no public cloud connection capabilities. (vSphere Data Protection 6.1 Administration Guide)