

## DCIG Solution Profile

## Small Enterprise VMware vSphere Backup Solutions

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**SOLUTION**  
**Metallic****COMPANY**

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**DISTINGUISHING VMWARE VSPHERE BACKUP FEATURES OF METALLIC**

- Connects to cloud storage, on-premises storage, or both
- Segregates and protects each client's backup data in the cloud
- Supports Live Recovery of VMware vSphere VMs

**DISTINGUISHING VMWARE VSPHERE BACKUP FEATURES OF SMALL ENTERPRISE SOLUTIONS**

- Optimized for the backup and recovery of vSphere environments with up to 1,000 VMs
- Focus on protection of Microsoft Windows guest operating systems (OSes)
- Integrate with and create application-consistent backups for leading Microsoft applications
- Support for replication
- Provide multiple restore options for VM file data and images
- Same day and online support

**BACKUP SOLUTION FEATURES EVALUATED**

- Backup administration
- Backup capabilities
- Configuration, licensing, and pricing
- Recovery and restore
- Service and support

**VMware vSphere Leads in Enterprise Server Virtualization**

Analyst reports that track server virtualization software indicate this market will continue to grow for the foreseeable future. One recent report puts the total value of the overall server virtualization market at nearly \$10B by 2026.<sup>1</sup>

The increasing value of the server virtualization market stems from the benefits small enterprises realize when adopting it. Server virtualization in general, and VMware vSphere specifically, transform how small enterprises may manage their physical infrastructure. Used to host multiple applications on one or more physical machines, vSphere simultaneously lowers costs while increasing operational efficiency.

Small enterprises have more server virtualization offerings than ever from which to choose. Even with all these choices, VMware vSphere maintains its lead as the server virtualization platform of choice.<sup>2</sup>

VMware also makes multiple software tools available to complement vSphere to assist small enterprises in deploying and managing it. Of VMware's available software tools, small enterprises may deploy vCenter server to centralize management of their vSphere virtual machines (VMs).

vCenter Server and other software tools from VMware position small enterprises to create stable, high performing virtual infrastructures. However, they must still protect the applications, data, and workloads they host on their VMware vSphere VMs. This necessitates they acquire backup software tuned for this task.

**Backing up and Recovering VMware vSphere VMs**

VMware offers APIs that backup software may use to integrate with vCenter to centralize and administer data protection. Backup providers may also leverage separate VMware vSphere Storage APIs—Data Protection (VADP) and Storage vMotion features. These accelerate and simplify the backup software's deployment and the ongoing VM backup and recovery management.

However, backup solutions that target small enterprises (those with 50 – 1,000 VMs) vary significantly in their utilization of these APIs. Nearly 40 percent of these solutions solely rely upon agents that small enterprises must install on VMs they wish to backup.

Whether they utilize these native VMware vSphere APIs serves as a major differentiator between the solutions DCIG evaluated. Those that achieved a TOP 5 ranking largely supported these features. In cases where a solution did not, it offered other sufficiently differentiated features that justified its TOP 5 ranking.

Their use of native VMware APIs typically appears in the following three ways:

- **Backup and recovery management within VMware vCenter.** Only 44 percent of small enterprise VMware vSphere backup solutions directly integrate with VMware vCenter. Through this integration, administrators may manage backup within the vCenter console without separately logging into the backup software. Some solutions that support this feature make all their functionality available through vCenter. Others offer just a subset of their functionality through vCenter. These may include scheduling and viewing backup jobs or performing recoveries.
- **Agentless VM backups.** 61 percent of small enterprise backup solutions leverage the Change Block Tracking (CBT) feature within VMware VADP to perform agentless VM backups. This feature minimizes the need to put a backup agent on VMs. Using CBT, the backup software tracks changed blocks in each VM. It then only backs up the blocks that have changed since the last backup. This facilitates the ability to perform agentless backups and back up more frequently since backups incur less overhead.
- **Instant VM restores.** A VM or VMs may go down due to user error or perhaps a ransomware attack. In those circumstances, enterprises need to recover the VM quickly. To accelerate recoveries, 72 percent of these solutions offer an instant recovery feature.

While implementation nuances exist between backup solutions, most initiate the VM recovery while the data still resides on backup storage. This permits the VM to resume production operations, though probably with degraded performance. Once restarted, the backup solution uses Storage vMotion or another technique to copy the VM's data back onto production storage. This restoration may occur in the background even as the VM continues to run.

1. <https://www.idc.com/getdoc.jsp?containerId=prUS47921221>; <https://www.marketresearchfuture.com/reports/server-virtualization-market-3981>. Referenced 12/8/2021.  
2. <https://www.smartprofile.io/analytics-papers/vmware-further-expands-market-share-server-virtualization/>. Referenced 12/8/2021.

## Distinguishing Features of Small Enterprise VMware vSphere Backup Solutions

DCIG identified over 30 solutions suitable for protecting applications, data, and workloads on VMware vSphere. Of these, eighteen met DCIG's definition of a small enterprise VMware vSphere backup solution. Attributes that help distinguish small enterprise backup solutions from those that target midsize and large enterprises include:

- 1. Optimized for the backup and recovery of vSphere environments with up to 1,000 VMs.** Some of the solutions covered can back up vSphere environments with more than 1,000 VMs. However, DCIG finds these solutions and their feature sets most appropriate for vSphere environments with 50 to 1,000 VMs.
- 2. Focus on protection of Microsoft Windows guest operating systems (OSes).** Small enterprises largely host their applications, data, and workloads on Microsoft Windows platforms. All these backup solutions protect recent versions of Microsoft Windows Server (2012, 2016, & 2019) as well as Microsoft Windows 10.
- 3. Integrate with and create application-consistent backups for leading Microsoft applications.** Nearly 90 percent of these solutions integrate with and can create application consistent backups of the Microsoft Exchange and SQL Server.
- 4. Support for replication.** More small enterprises want to copy and store backup data to another on-premises location or off-site for disaster recovery (DR) purposes. Of these solutions, nearly 90 percent support replication of backup data.
- 5. Provide multiple restore options for VM file data and images.** Using almost any of these solutions, small enterprises may perform multiple types of restores. Nearly 90 percent support granular file and folder restores. About 80 percent support VM image restores to the same vSphere host, a different vSphere host, or restoring the VM with a different name.
- 6. Same day and online support.** About 80 percent of these solutions provide small enterprises with access to support the same day they initiate a call. The same percentage also provide an online knowledgebase they may use to freely research issues they may encounter.

## Small Enterprise VMware vSphere Backup Solution Profile

### Metallic, A Commvault Venture

Metallic represents the only pure-play data management-as-a-service (DMaaS) backup solution to rank as a TOP 5 solution in this report.

Delivered solely as a DMaaS solution, it mitigates the need to install, configure, and manage the Metallic software on-premises. Small enterprises subscribe to Metallic through its cloud-based interface from which they configure and manage backup tasks. However, to protect on-premises VMware vSphere servers, Metallic does require the installation of a backup gateway.

Metallic delivers the following features that help differentiate it from the other TOP 5 offerings.

- **Connects to cloud storage, on-premises storage, or both.** Small enterprises often want multiple storage options for their backup data. More want to store their backup data in cloud storage such as Microsoft Azure Blob. However, they may also want to keep backup data on-premises for faster backups and restores.  
While a DMaaS offering, Metallic supports storing backup data both locally and in the cloud. Metallic supports direct backup to cloud storage with no additional configuration if backing up VMware VMs in the Azure cloud.<sup>3</sup>  
Small enterprises backing up VMware vSphere VMs on-premises or in other clouds utilize the Metallic Backup Gateway.<sup>4</sup> Installed on a physical or virtual machine, it connects to cloud storage, on-premises storage, or both. Once installed and configured, Metallic discovers it and use it to manage backup data placement.
- **Segregates and protects each client's backup data in the cloud.** Metallic alleviates any small enterprise concerns about how it stores their backup data in the cloud. Configured as a multi-tenant solution, Metallic segregates all backup data stored in the cloud by tenant. Metallic isolates each organization's data from other organizations by storing the data in separate locations. It also encrypts the data from each organization and only permits access to the data through Metallic.<sup>5</sup>
- **Supports Live Recovery of VMware vSphere VMs.** Using Metallic's Live Recovery for VMware, small enterprises may recover and power on a VM from a backup. This occurs without the need to wait for a full restore of a VM.

The Metallic restore operation uses the backup gateway that was used to perform the VM backup. Metallic exposes the backup data path to the destination VMware vSphere server which will host the recovered VM. It presents the backup data in a format that permits writes to occur. Once presented in this format, the VM may register with the VMware vSphere server and power on. After the VM is powered on, Metallic initiates storage vMotion in the background to migrate the recovered VM's data to the destination datastore. ■

3. [https://docs.metallic.io/metallic/143837\\_guided\\_setup\\_for\\_vmware.html](https://docs.metallic.io/metallic/143837_guided_setup_for_vmware.html). Referenced 12/7/2021.

4. [https://docs.metallic.io/metallic/141766\\_on\\_premises\\_deployment\\_of\\_metallic\\_backup\\_gateway.html](https://docs.metallic.io/metallic/141766_on_premises_deployment_of_metallic_backup_gateway.html). Referenced 12/7/2021.

5. Metallic SaaS Backup Security Overview. Link. Referenced 12/7/2021.

### About DCIG

The Data Center Intelligence Group (DCIG) empowers the IT industry with actionable analysis. DCIG analysts provide informed third-party analysis of various cloud, data protection, and data storage technologies. DCIG independently develops licensed content in the form of TOP 5 Reports and Solution Profiles. More information is available at [www.dcig.com](http://www.dcig.com).