

White Paper

Data Protection for the Enterprise with Commvault and HPE

Delivering Enterprise-class Data Protection Service Levels

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December 2018

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The Enterprise Data Protection Landscape

The data protection market has never been more dynamic, with many challenges affecting end-users who will in turn review their backup and recovery architecture and strategy on a regular basis: 56% of end-users report that they review their backup architecture and strategy every two years or less, and 31% say that they do so every year.¹ This places pressures on vendors who understandably compete fiercely to gain a foothold in new accounts, or defend their position where they are the incumbent. In our recent research survey of the 2018 data protection market, ESG identified certain factors that were “hot buttons” or triggers that could drive organizations to seek new primary vendors. Cloud and reliability were the most-reported answers, pointing to the need to adapt the topology and leverage technology solutions that are proven in these areas.

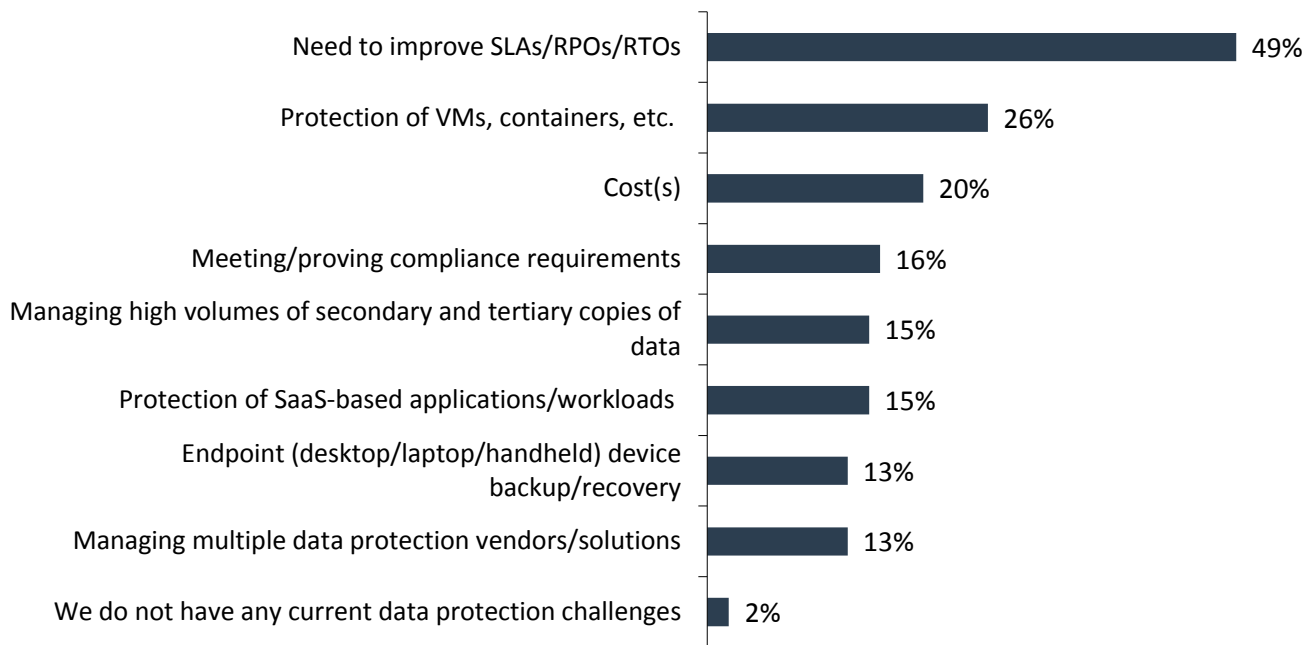
The situation facing IT leaders who manage data protection environments on a daily basis is no walk in the park. Improving service levels for backup and recovery (recovery point objective, or RPO, and recovery time objective, or RTO) was by far the most-often cited data protection challenge, in a list that also included in top positions cost management and the challenge of protecting virtual infrastructures (see Figure 1). The fundamental takeaway is that, in the enterprise market, it’s about the business, which translates into supporting the business and ensuring the uptime of its critical applications and data.

The enterprise has unique requirements, and simply claiming you are an enterprise-capable vendor is merely marketing rhetoric. In the enterprise it’s either “put up or shut up”—because if you can’t protect the whole landscape of digital assets, you are more of a problem than a solution.

In this evolving and challenging market, to succeed in the enterprise space, vendors need to deliver a strong set of features that will also integrate with the underlying infrastructure and deliver strong results.

Figure 1. Improving RPO and RTO Are Top of Mind

Top current data protection challenges. (Percent of respondents, N=320, three responses accepted)



Source: Enterprise Strategy Group

¹ Source: ESG Master Survey Results, [2018 Data Protection Landscape Survey](#), October 2018. All ESG research references and charts in this white paper have been taken from this master survey results set, unless otherwise indicated.

Enterprise Backup Requirements

Enterprise data protection requires enterprise tools that meet *all of the requirements* that help IT leadership drive efficiencies and meet service levels. It is worth remembering that when looking at what it takes to meet the stringent data protection requirements of the enterprise (and not fall for crafty and heavily promoted marketing buzz), what is most important are proven successful technology partnerships that work as advertised right now, not the promise of nirvana in the future. The stakes are simply too high to risk experimenting in a production world. In Table 1, ESG presents our perspective on key data protection requirements based on research and many years in the data protection space.

Table 1. Top 10 Data Protection Enterprise Requirements

Capability	Why It Matters
Broad enterprise application support	Enterprises rely heavily on mission-critical applications to support generating revenue. They seek to achieve the lowest possible downtime (low RTO) and minimal to no data loss (low RPO). The data protection infrastructure must be <i>deeply integrated</i> with most, if not all, of these applications to provide a coherent and consistent service level.
Advanced and broad storage snapshot support across arrays and hosts	Snapshot technology, whether on the host or storage system, offers the convenience of speed and performance, enables more frequent recovery points and lower bandwidth utilization, and is a key requirement in the enterprise. The data protection solution must support a <i>wide variety of storage systems and hosts</i> in order to deliver <i>consistent and complete capabilities</i> .
Advanced cloud support (storage and optimized recovery)	Cloud has become critical to the data protection infrastructure of most enterprises and offers great capabilities and challenges in terms of support. To qualify as an enterprise solution, vendors need to provide advanced tiered storage capabilities, multiple recovery or failover options, and economic/cost optimization. It is critical to offer a <i>broad array of cloud storage options and integrations</i> .
Broad OS and hypervisor support	An enterprise, unless it is a very “young” organization (less than 10 years in business), will likely have multiple server platforms (physical and virtual) and technology layers in its infrastructure, including “legacy” systems. An ideal solution for enterprises covers <i>all of these platforms or a large majority</i> . Multiplying specialized backup and recovery solutions can lead to more complexity, operational inefficiencies, and cost.
Source and target deduplication and replication	Data takes up space, and space (storage) is money! For backup and recovery in the enterprise, it is critical to optimize storage consumption with deduplication. Offering multiple deduplication options is necessary (source or target) since topologies may vary. The endgame is to build <i>proven data reduction efficiencies</i> into the workflow and optimize costs and performance.
Advanced orchestration, including AI and ML	Enterprises’ stringent RPOs and RTOs require a solution that can help support or create a disaster recovery “runbook,” orchestrating the recovery workflow of multiple systems and intertwined applications in an exact sequence. In addition, enterprises now expect more “intelligence” from their data protection solutions with artificial intelligence- and machine learning-based predictive actions or recommendations to better deliver RPOs and RTOs based on a variety of infrastructure conditions and historical patterns.

Capability	Why It Matters
Archiving capabilities	The ability to archive data is absolutely critical to ensure compliance with the many complex regulations enterprises face. This applies to all the data in the environment and implies advanced management capabilities to move data at the right time to the right tier of archive/storage (which may be in the cloud). Keeping track of archive data is also a key requirement.
Single console management	The advent of IT generalists across all market segments including the enterprise, combined with the lack of IT skills sets in data protection, have fostered the simplification of many solutions to the point where it is now imperative to manage data protection from one console. This means using modern ease of use and management consolidation capabilities (including ecosystem integrations).
Appliance delivery options	The appliance form factor—converging hardware, software, and networking—is often preferred in decentralized topologies for reasons associated with ease of purchase, use, and deployment, especially in large data centers. Enterprises expect scale-out capabilities and flexible offerings with delivery modality options ranging from reference architectures to virtual appliances and physical models.
Advanced tape support	Tape is not dead! It is still heavily used in many enterprise environments for backup and archiving. <i>Enterprise tape support means advanced automation and tape library capabilities, and not just format support.</i>

Commvault and HPE Partnership

Partnership Highlights

Both Commvault and HPE are well known leaders in the IT industry and have in combination hundreds of thousands of customers and partners around the world. Both organizations have the common goal of enabling customers to optimize business outcomes by leveraging their technologies, on-premises or in the cloud. The companies have enjoyed a long-standing partnership based on technology integration between server, storage, and software components. This relationship has recently evolved to extend to a reseller agreement. In early 2018, Commvault joined Hewlett Packard Enterprise (HPE) Complete, a worldwide reseller program that allows HPE to resell Commvault software on its global price list. Customers benefit from the convenience of one-stop shopping for tested and validated HPE and Commvault end-to-end solutions across HPE's storage portfolio, which reduces deployment risk. The program includes Commvault Complete Backup and Recovery software integration with HPE StoreOnce Systems, Commvault IntelliSnap technology integration with HPE storage arrays, and Commvault HyperScale Software validated reference designs for HPE ProLiant and Apollo systems.

In addition, Commvault and HPE collaborate on HPE GreenLake Backup, a backup as-a-service (BaaS) solution that combines the simplicity, agility, and economics of public cloud with the security and performance benefits of an on-premises backup environment. The partnership further extends to provide comprehensive backup, recovery, and data management for HPE ProLiant for Microsoft Azure Stack, including virtual machine (VM) protection using replication for disaster recovery, backup and recovery of Azure Stack blob store, and migration of VMs from external hypervisors to Azure Stack.

Technology Highlights

Enterprise customers should be excited about the Commvault-HPE partnership. The relationship brings features that go both wide and deep across the HPE portfolio to create a complete data protection ecosystem. Customers can now

leverage “better together” solutions that span across HPE’s servers, storage, appliances, and even tape technology. It should be noted that many of the following key capabilities set these solutions apart as being truly “enterprise-class,” meeting core requirements to deliver against mission-critical SLAs at scale, unlike many other vendor combinations.

Key capabilities include:

Comprehensive Workload Support

Protecting and managing data in the enterprise can be a challenging and daunting task. Effective solutions need to be able to handle a tremendous number of modern and traditional workloads. A Commvault and HPE combined solution supports a comprehensive list of workloads. These workloads include physical and virtual infrastructure, client and database agents, hypervisor-APIs, cloud APIs, storage and host snapshots, and application-aware snapshots. The breadth and depth of these solutions allow users to choose the right capabilities for the right workload. By comparison, some vendors offer much more limited native support across these categories, in particular for physical environments (which are often required for mission-critical workloads).

Efficient Data Reduction

With Commvault and HPE, there are *multiple options to efficiently reduce the amount of data* that needs to be managed to complete business-critical operations. Customers can leverage the built-in Commvault source and target deduplication capabilities and efficient storage snapshot management capabilities. Alternatively, customers can take advantage of the Commvault integration with HPE StoreOnce systems. HPE StoreOnce is a highly scalable disk-based deduplication solution that reduces the amount of storage needed for backups and delivers high-performance backup and recovery. Together, the solution combines storage snapshots, Commvault software, and the StoreOnce system. It includes native integration with StoreOnce Catalyst, including support for Catalyst Copy, Catalyst Clone, and Cloud Bank Storage functionality, ensuring the technologies work together so that they can be managed from a single console. Other industry players rely on third parties for advanced deduplication capabilities, with varying degrees of integration success and support.

Complete Orchestration

The Commvault console allows the entire data protection environment to be managed from a single pane of glass. This applies to not only Commvault software, but also any storage array capabilities that are being leveraged in the protection schema. This also includes Commvault's integrated snapshot management solution, IntelliSnap technology, that provides a layer of intelligence between storage and applications to ensure snapshot data integrity. IntelliSnap executes policies and schedules, automates array discovery, and indexes and catalogs snapshot data. HPE StoreOnce supports network-attached storage and virtual tape library modes for Commvault software to store backup copies. In addition, through its integration with HPE StoreOnce, Commvault supports the Catalyst replication capability, with multi-site and cascaded replication capabilities, including native support for HPE Cloud Bank Storage, which enables the seamless, secure, and cost-effective movement of backup data to public cloud, private cloud, hybrid cloud, or on-premises object storage environments.

Scale-out Infrastructure

HPE server technology has always been an industry-leading open-systems architecture platform for deploying DIY backup environments with Commvault software components. Now, as a supported platform for Commvault HyperScale Technology, the partnership takes the HPE server portfolio to the next level. Commvault HyperScale Technology is a unified, modern data protection platform that delivers cloud-like characteristics on-premises by building these services on a *scale-out infrastructure* and leveraging Commvault Complete Backup and Recovery capabilities. Key benefits of the combined solution include greater availability and resiliency; simplified operations including implementation, administration, and support; and predictable performance with no complex forklift upgrades. Many data protection

solutions fail to offer a scale-out infrastructure and the necessary features, which limits their relevance in enterprise environments.

Advanced Tape Support

Tape is still a reliable, high capacity, and cost-efficient medium for data storage. Most enterprise data protection customers still leverage tape for some part of their data protection schemas including long-term archive, offsite copies, and second tier onsite copies, to name a few. Because of this, vendors that historically avoided delivering tape capabilities have been forced to hastily create bolt-on tape capabilities for their solutions or partner with specialized tape technology vendors to compete in the enterprise. *Any vendor solution must support advanced tape to truly play in the enterprise space.* Mature tape capabilities are part of the Commvault backup and recovery DNA. These capabilities enable granular management of the data that customers choose to store on tape media. Paired with the HPE family of tape libraries, including StoreEver, T950 libraries, and HPE TFinity ExaScale, customers can rest assured that they can deploy a tape solution that meets any requirements.

The Bigger Truth

Commvault and HPE are proven and reliable players in the enterprise space in their respective domains. Combine their technologies together with savvy integration, and you get a set of combined solutions that drive higher IT operational efficiency, significantly lower RTOs and RPOs, and improve overall recovery readiness.

This combination of HPE and Commvault portfolios provides end-users with many benefits, such as:

- Technically validated, supported, and proven technical integration: less headache and more peace of mind versus a “do it yourself” approach, which can incur more risk than reward.
- Enterprise capabilities at every level of the architecture, including some highly scalable and differentiated integrated solutions.
- A path to the cloud with both HPE and Commvault, in the context of constant innovation and extended support.

It takes much more than crafty marketing buzz to deliver an effective and efficient technology solution to the market. In the end, end-users expect to derive benefits from combined solutions, and not just a list of SKUs. Further, enterprise customers require complete solutions that span the needs of their organizations—not point solutions that simply compound operational overhead and cloud problem resolution. In this evolving enterprise market, alliances that deliver strong solutions that integrate with the vast underlying infrastructure across the enterprise are well positioned to succeed. That’s why the deep HPE and Commvault partnership is different from others when it comes to delivering true enterprise-class data protection solutions.

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