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WHITE PAPER

Building a Data-resilient Infrastructure With Commvault Cloud and Oracle Cloud Infrastructure

A Partnership to Create a Modern Cloud Strategy

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Market Overview

Data Is at the Heart of Digital Transformation

Digital transformation initiatives have significantly accelerated in recent years, and they are placing data at the heart of the business. Research by TechTarget's Enterprise Strategy Group shows that 30% of organizations reported data is their core business, while another 16% of organizations offer both physical and digital products. Among financial services industry respondents, 48% said data is their business, while 23% of healthcare industry respondents reported the same. Overall, 54% of the respondents confirmed that data is helping to support their business.[1]

The verdict is clear. Businesses recognize the fundamental value of data, which is likely, in part, why 70% of organizations expect to develop new data-centric products going forward.[2] Data has clearly become a key business asset, and data reuse is now vitally important.

It is important to note, however, that organizations undergoing digital transformation are making transformational changes to their infrastructures. As a result, they may find themselves faced with new operational challenges, constrained resources, and risks associated with sophisticated cyber attacks.

Data Protection Is Complicated

In particular, IT skills gaps can make protecting and securing data more challenging, both on premises and in the cloud. Resource-constrained organizations don't have the luxury of maintaining dedicated staffs with "PhDs in backup." Instead, many rely on IT generalists to handle everything—from backup and recovery management to sophisticated cybersecurity defense.

Downtime is more costly than ever while at the same time data protection is also becoming more complex. Enterprise Strategy Group research shows that organizations are heavily concerned with the impact of downtime, especially for mission-critical workloads on-premises and in the cloud.[3]

Data recovery operations can also be quite complex. Only 11% of surveyed organizations reported being able to recover 100% of the data that they needed to recover, regardless of whether that data was located on premises or in the cloud. Among financial services industry respondents, only 10% were able to recover 100% of their data, while 13% of healthcare industry respondents reported being able to do the same.[4]

Clearly, many organizations still have work to do. Considering these results, significant data-loss risk—and therefore business risk—exists across the board.

The Data Deluge

It's evident that organizations today are dealing with an enormous amount of data. Most of them now have spread that data across on-premises and cloud environments, with production data under management averaging approximately 10PB and secondary data averaging around 6PB.[5] Therefore, cloud-based backup and recovery solutions must be capable of scaling up to accommodate these large data volumes.

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[1] Source: Enterprise Strategy Group Complete Survey Results, *Data Platforms: The Path to Achieving Data-driven Empowerment*, May 2023.
[2] Source: Enterprise Strategy Group Research Report, *From Backup Data to Data Intelligence*, January 2022.
[3] Source: Enterprise Strategy Group Research Report, *Real-world SLAs and Availability Requirements*, October 2020.
[4] Source: Enterprise Strategy Group Research Report, *Cloud Data Protection Strategies at a Crossroads*, July 2023.
[5] Ibid.

Cloud-based Data Protection Is the Norm

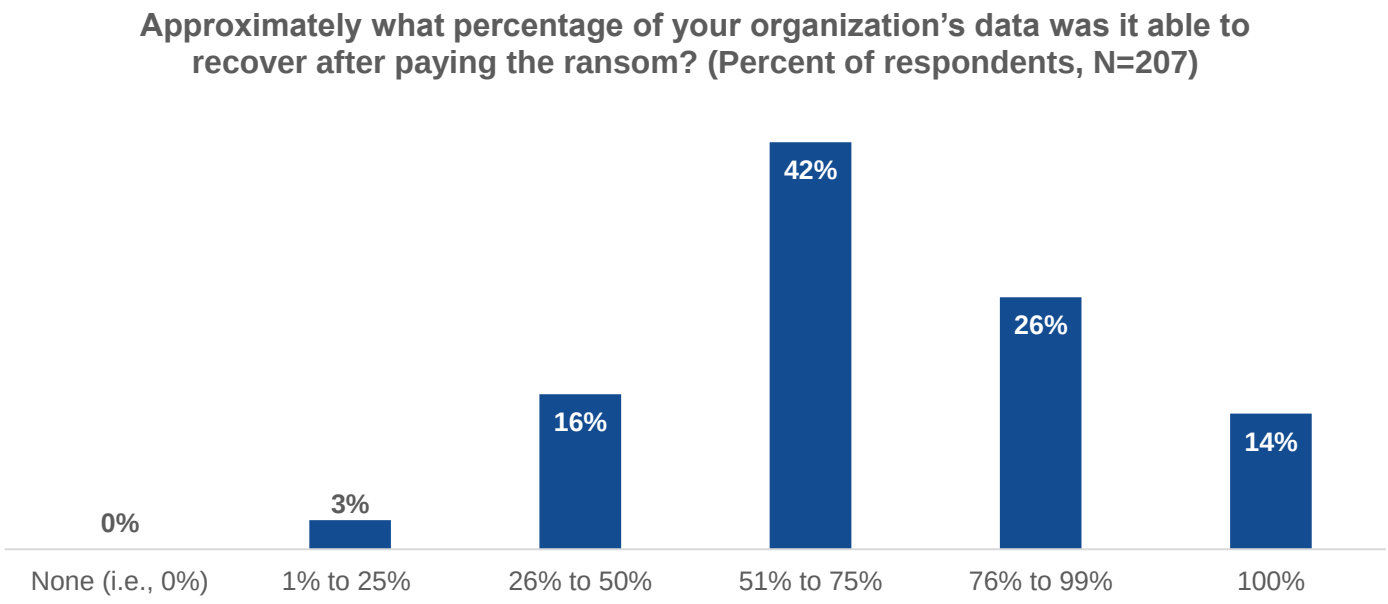
Many organizations use public cloud-based data protection services in different topologies and modes of consumption, with the traditional cloud target approach remaining the most popular, with 65% of organizations currently using it.[6] As organizations increasingly rely on as-a-service options for their production applications, they are following the same trend with backup and recovery: The vast majority of organizations are currently using or are planning to use backup-as-a-service solutions (92%) and/or disaster recovery-as-a-service solutions (90%). It's also common for organizations to utilize multiple cloud infrastructure providers.[7]

Using the cloud significantly impacts data protection strategies and tools, but it's crucial to safeguard data and applications regardless of their location, especially those workloads that are considered essential for operations.

Ransomware Is Everywhere

Enterprise Strategy Group research reveals that an overwhelming 79% of organizations fell prey to at least one ransomware attack in the past year. Unfortunately, only a paltry 14% of those organizations managed to fully restore their data after an attack (see Figure 1).[8]

Figure 1. Paying the Ransom Doesn't Guarantee Data Recovery



Source: Enterprise Strategy Group, a division of TechTarget, Inc.

More than half (56%) of targeted organizations have paid a ransom demand,[9] and today, such expenditures have become the cost of doing business. But again, paying a ransom doesn't guarantee data recovery. That fact greatly concerns senior leadership. In fact, 53% of executive teams and boards call ransomware preparedness one of their top-five business priorities, with another 26% of them ranking it the most important business priority of all. Among

[6] Ibid.
[7] Ibid.
[8] Source: Enterprise Strategy Group Research Report, *The Long Road Ahead to Ransomware Preparedness*, June 2022.
[9] Ibid.

financial services industry respondents, 36% called ransomware preparedness their top priority, while 21% of healthcare industry respondents reported the same.[10]

Adding to the concern, cybercriminals have now begun to target backups. This alarming development has caused 87% of respondents to be somewhat or very concerned that a ransomware attack will hit their backup copies.[11] In light of this trend, it is imperative for many organizations to establish an offline and/or air-gapped copy of that secondary data.

But as of now, only 30% of organizations leverage air-gapping, while another 22% are engaged in the process of planning and testing this type of solution.[12]

The Top Requirements for Modern Cloud-based Data Protection

Modern cloud-based data protection offers a broad range of capabilities that can significantly benefit organizations in tackling risks and complexities. The bar for these capabilities is high, according to end users surveyed by Enterprise Strategy Group. Based on recent research on the topic, we believe the following represent the key requirements that organizations expect today from vendors:[13]

- Multi-cloud support.
- A tiered storage approach.
- An ability to co-exist with native hyperscaler capabilities.
- Container environment support.
- Native hyperscaler application services.
- Granular restoration capabilities.
- Integration with geographic zones for redundancy.
- Air-gapping capabilities.
- Support for hybrid applications and workloads
- Massive scalability.
- Advanced cyber-resilience options.

It is not surprising that many of these desired features align with current market trends. Nevertheless, delivering such extensive capabilities as-a-service demands technology and expertise that only a select few vendors can consistently provide in a cost-efficient, operationally efficient manner.

This is why the Commvault and Oracle Cloud Infrastructure (OCI) partnership has the potential to provide so much value. It delivers a truly complete solution that meets the high bar for Oracle environments and beyond, at scale.

The Commvault and Oracle Partnership

The partnership between Commvault and Oracle started more than 25 years ago with many integrations, thousands of joint customers, and exabytes of data protected since then.

[10] Ibid.
[11] Ibid.
[12] Ibid.
[13] Source: Enterprise Strategy Group Research Report, *Cloud Data Protection Strategies at a Crossroads*, July 2023.

Today, the companies are offering Commvault Cloud Data Protection as a Service, a comprehensive backup and recovery solution for enterprises that is available as a service. Its primary purpose is to safeguard data from threats such as corruption, deletion, and ransomware. The service is compatible with on-premises, cloud, hybrid, and SaaS environments. As a versatile solution, Commvault Cloud provides extensive data protection across diverse workloads.

Operating on OCI, Commvault Cloud delivers a comprehensive range of cloud services that enable IT organizations to create and manage multiple applications and services in a dependable, hosted environment. OCI empowers its users with high-performance computing resources, physical and virtual hardware instances, and flexible storage capacity within a secure virtual network that can be accessed from the organization's on-premises network. The interface is simple, enabling all data assets to be protected and secured in hybrid and multi-cloud environments through a single web-based console.

Proximity is crucial for various service, technical, and compliance-related reasons, which is why OCI offers more than 40 regions to meet data-residency needs optimally. Architecturally, the infrastructure is designed not to oversubscribe the network, delivering equal or even faster speeds than on-premises deployments. Any type of application can be run on OCI. The service also leverages ML/AI processes to auto-patch and improve operational efficiency for end users. Oracle put great thought into designing OCI to fit in a modern hybrid and multi-cloud world in which the ability to easily move workloads is essential.

In combination, OCI and Commvault Cloud support enterprise data management, threat protection, and recovery. Oracle users have the option to safeguard important workloads on premises or in the cloud (i.e., either IT-managed storage or SaaS-delivered data protection of managed cloud storage).

Commvault protects Oracle Database Cloud Service and Oracle Exadata Database Service on OCI and OCI Object Storage. Support for these workloads complements existing support for Oracle, Oracle RAC, Oracle Container Engine for Kubernetes, and OCI VMs. Air-gapped, immutable protection is also available on Commvault Cloud Air Gap Protect on OCI. Notably, beyond Oracle solutions, many other workloads are also supported by Commvault Cloud.

Deployment Options and Ransomware Preparedness

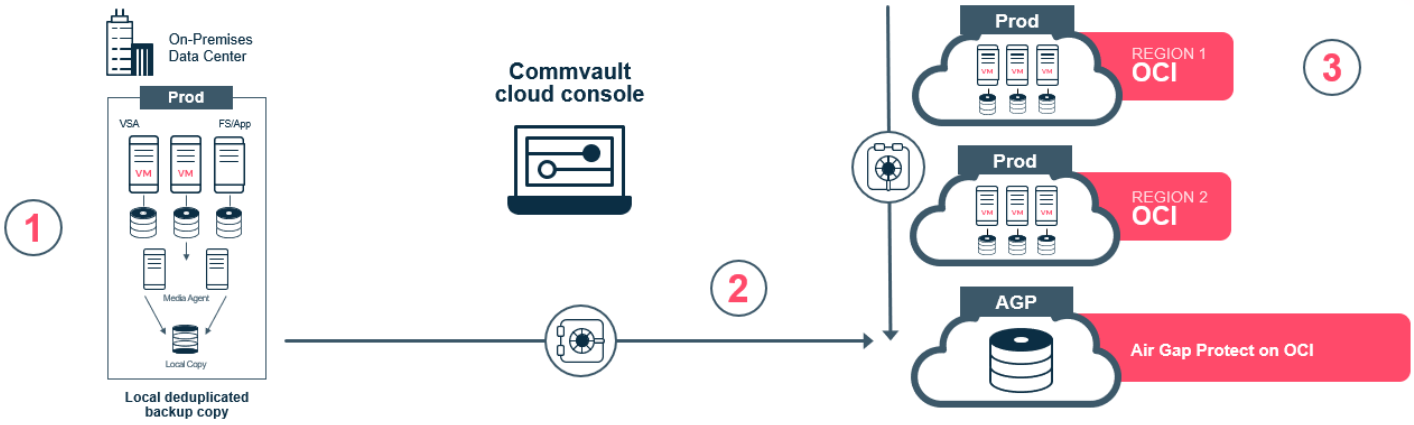
Data Protection and Compliance Deployment Use Cases

OCI and Commvault customers can leverage three deployment use cases to satisfy a variety of business- and infrastructure-related needs (see Figure 2):

1. Backup and restoration on premises with a second copy sent to Commvault Cloud Air Gap Protect on OCI (only available on Commvault Cloud), which enables organizations to benefit from modern cloud-based data protection with Commvault, improve on their backup and ransomware preparedness, and optimize TCO.
2. Long-term retention to OCI to support compliance and governance mandates and deliver secure archiving that is protected from ransomware and malware.
3. Backup and restoration from OCI to OCI, a deployment use case that appeals to organizations that are engaged in digital transformation and that are looking to establish secure migration capabilities at an optimal cost.

The high-performance design of the infrastructure can be fully leveraged by Commvault to deliver on stringent recovery point objectives and recovery time objectives. In general, these three use cases offer a lot of flexibility for end users—in particular, by giving them the ability to adjust their data protection strategy and compliance needs as their business requirements evolve.

Figure 2. Three OCI and Commvault Cloud Deployment Use Cases



Source: Commvault

Fending Off Cyber Attackers With Commvault Cloud Air Gap Protect on OCI

Air GapProtect is a solution for organizations looking for secure cloud storage for their backups. It is compatible with Commvault Cloud SaaS hybrid cloud offerings, and it simplifies cloud data management with its pre-configured networking and storage.

The deduplication capabilities reduce costs, while the secure, air-gapped cloud data protection protects against ransomware attacks. The service offers two storage tiers, standard and infrequent, which provide flexibility for organizations that need these cloud storage options. The standard “hot” tier is perfect for businesses requiring a primary backup copy repository, while the infrequent “cool” tier is ideal for those that need a secondary storage option for longer retention. Both storage tiers may be used together to establish a complete end-to-end strategy.

Air Gap Protect is a key tool to have in one’s arsenal to fend off cyber attackers and improve cyber resilience overall.

Conclusion

With respect to key current market trends and requirements, the combined Commvault/Oracle solution checks all the boxes—not just for financial services and healthcare companies, but for all organizations. The ability to leverage a single pane of glass to manage the whole data estate—in on-premises, hybrid, and multi-cloud infrastructure—is key to establishing and meeting service level agreements for uptime and data protection. But it is also a source of operational efficiency and a strong asset when it comes to strengthening the organization's ransomware preparedness.

Additionally, this solution meets extended retention policies for governance and compliance and delivers flexible storage options to improve RTO and RPO with granular restore capabilities that are vital during data loss or cyber attack recovery situations. The air-gapped infrastructure it delivers is a must-have for any organization. Finally, organizations can further improve their operational efficiency through the machine learning and artificial intelligence technologies that Commvault Cloud and OCI use "under the covers" to deliver management and performance at scale.

The long partnership between Commvault and Oracle is a strength that every organization trying to modernize data protection and digitally transform should evaluate. The combination is more than the sum of the parts: Commvault Cloud truly enhances and extends OCI capabilities.

About Enterprise Strategy Group
TechTarget's Enterprise Strategy Group provides focused and actionable market intelligence, demand-side research, analyst advisory services, GTM strategy guidance, solution validations, and custom content supporting enterprise technology buying and selling.

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