ESG SHOWCASE

Protecting SQL 2019 Data with Solutions from Dell Technologies

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ABSTRACT: Through the years, Microsoft SQL Server database technology has evolved in ways that are now compelling organizations to reconsider their data protection strategies for the pervasive, mission-critical application. Fortunately, the Intel®-powered Dell Technologies data protection portfolio provides solutions to help IT organizations achieve their protection-related mandates and objectives for SQL data.

Market Landscape

IT is in constant evolution, which means IT groups are facing new challenges every day. ESG research highlights the high bar being set for them by the rest of the business, and the goals they hope technology vendors can assist them with. Those goals include making the business more secure, making workers more productive, delighting customers, and transforming the business for growth and efficiency.[1]

At the heart of all those expectations is data, which is now the lifeblood of business. As a proof-point, improving data analytics for real-time business intelligence and customer insight was among the top-three most cited corporate initiatives that organizations surveyed by ESG believed would drive their spending in 2020 and among organizations' top-three most cited IT focus areas for 2020. However, respondents' top-cited reason why their IT environments have become more complex is *higher data volumes*. Data provides great insights that translate to profits. But the onus is on IT to manage and protect all of that information.

ESG has found that this year, improving backup and recovery is the most-often mentioned area of data center modernization in which organizations expect to make the most significant investments over the next 12 to 18 months (see Figure 1). The ESG research also shows data protection has become a popular cloud use case.

At the juncture of the increase in IT complexity, the heightened focus on analytics, and the emphasis on investing to protect mission-critical transactional database environments is Microsoft SQL Server—specifically, its latest edition, SQL 2019.

Microsoft SQL Server, first launched 31 years ago, requires no introduction. The relational database is pervasive within IT environments around the world. It is powering mission-critical applications in every industry sector. SQL Server 2019 builds on many previous releases to serve now as a platform that gives users more choice in terms of development languages, data types, on-premises or cloud deployment options, and even operating systems. It also comes with new capabilities
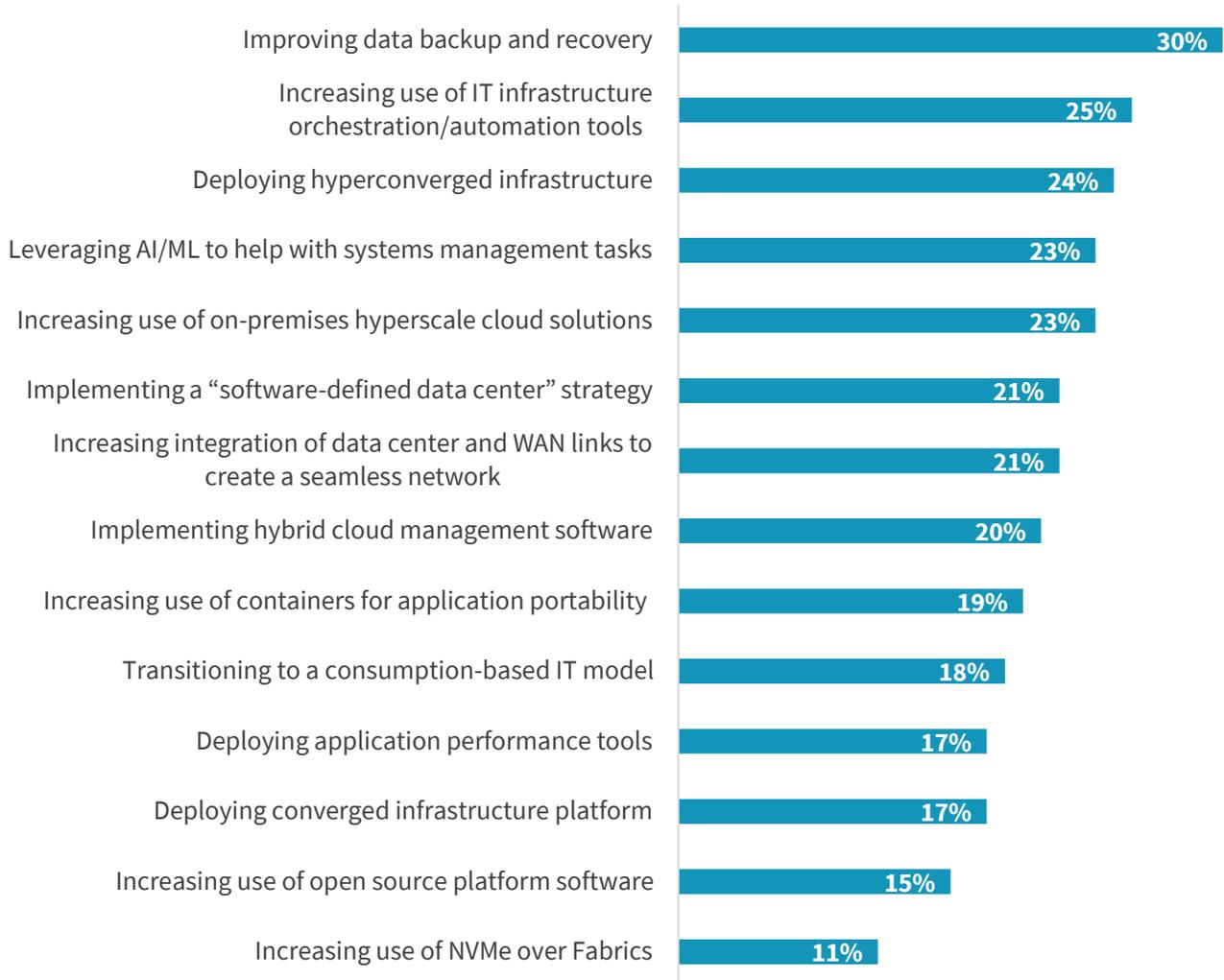
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[1] Source: ESG Master Survey Results, *2020 Technology Spending Intentions Survey*, January 2020. All ESG research references and charts in this showcase have been taken from this master survey results set, unless otherwise indicated.

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pertaining to analytics and is essentially morphing from database to into full-fledged *data intelligence solution—* democratizing big data in many ways.

Figure 1. Backup/Recovery Is the Top-mentioned 2020 Data Center Modernization Investment Priority

In which of the following areas of data center modernization will your organization make the most significant investments over the next 12-18 months? (Percent of respondents, N=658, five responses accepted)

Improving data backup and recovery	30%
Increasing use of IT infrastructure orchestration/automation tools	25%
Deploying hyperconverged infrastructure	24%
Leveraging AI/ML to help with systems management tasks	23%
Increasing use of on-premises hyperscale cloud solutions	23%
Implementing a "software-defined data center" strategy	21%
Increasing integration of data center and WAN links to create a seamless network	21%
Implementing hybrid cloud management software	20%
Increasing use of containers for application portability	19%
Transitioning to a consumption-based IT model	18%
Deploying application performance tools	17%
Deploying converged infrastructure platform	17%
Increasing use of open source platform software	15%
Increasing use of NVMe over Fabrics	11%

Source: Enterprise Strategy Group

The Need for Robust Backup and Recovery

The mission-critical applications that SQL supports deserve the highest levels of protection and availability. As ESG has found, people have practically no tolerance for downtime anymore.

It's not easy for IT to eliminate downtime against a backdrop of higher data volumes and stringent data protection requirements in hybrid onsite/offsite environments, but they can mitigate the risks associated with introducing solutions such as SQL 2019 into their environments. It is possible to increase overall business resiliency against data/application unavailability. Here are some of the key attributes of a robust solution:

- The data protection mechanisms can be **sized according to need**. In the case of SQL, scalability and efficiency matter.

- **Granular recovery** is an important capability. Turning back the clock is of prime importance in a transactional environment.

- **Deduplication** can reduce the costs associated with protection storage by reducing hardware capacity demand. Dedupe also helps to maintain satisfactory performance levels, even in environments experiencing high data growth.

- **Native application integration** allows data owners to perform backup and recovery from their SQL native application and client-side deduplication.

- **Compliance and data governance** capabilities are now very important as well. It is necessary for backup to support compliance with multiple regulations, including newer ones such as GDPR. During an audit, it is also often necessary to be able to demonstrate recoverability.

- **Support for multi-cloud workloads** is now vital because providing an extensive cloud protection ecosystem reduces risk and cost. Organizations should strive to extend SQL data backups to the public cloud for long-term retention and cost-effective disaster recovery.

- The ability to **protect more than just SQL 2019** is going to be absolutely essential. Many organizations are maintaining a variety of legacy SQL database workloads; unification of backup should be the goal.

- **Ransomware mitigation** features allow SQL database(s) to be restored to a safe point in time.

The Dell Technologies Data Protection Portfolio Is Suited for SQL Environments

- **PowerProtect DD Series Appliances** boast an architecture built on Intel processing and Dell PowerEdge servers. They are a good option for protecting SQL data because they raise the bar for efficiency in data management—from edge, to core, to the cloud. PowerProtect DD Series Appliances deliver great performance and efficiency, and they are capable of multi-cloud data protection. Partnered with Dell EMC PowerProtect Data Manager, Application Direct is enabled with DD Boost for SQL, which enables more backups to be created with existing resources natively; according to Dell, this means 20-40% less impact to the server, and 80-98% less LAN bandwidth consumed.

- **PowerProtect DP Series Appliances** are integrated, turnkey solutions designed to reduce the complexity of managing multiple data silos, point solutions, and vendor relationships. DP Series is a converged solution that offers complete backup, replication, recovery, deduplication, instant access and restore, search and analytics, tight VMware integration, disaster recovery, and long-term retention to the cloud in a single appliance.

- **Dell EMC PowerProtect Data Manager**: This next-generation data management platform with a sleek UI greatly simplifies the protection of critical SQL workloads.

- **RecoverPoint for Virtual Machines**: If organizations are encapsulating SQL workloads within VMs, they will be able to accomplish point-in-time recoveries. Recover Point for VMs can roll back to a single transaction, almost like rewinding a tape, to any point in time.

Leveraging the Power of Intel Technology

Dell Technologies hardware solutions, including the new PowerProtect DD Series, leverage the powerful Intel QAT card. The Intel capabilities enable intelligent hardware-assisted compression and CPU offloading. Additionally, according to Dell

and Intel, by leveraging the GZFast compression option in the Dell appliance, it is possible to achieve 30% more logical capacity along with performance improvements.

The Bigger Truth

The market is experiencing the rise of data centricity. Digital information is now crucial to business success, so it is more important than ever to protect the many mission-critical databases that reside on SQL.

But it must be done right. An effective approach has to be able to:

- Scale.
- Perform granular recoveries.
- Accommodate data deduplication.
- Support compliance and data governance efforts.
- Support multi-cloud SQL workloads.
- Protect legacy SQL workloads.
- Mitigate ransomware attacks.

Those keys to success can be found within the Dell Technologies portfolio, powered by Intel.

Clearly, organizations will benefit from any effort to modernize a production environment by deploying SQL 2019—as well as modernizing the data protection processes that naturally accompany it. The result of such efforts will manifest itself in improved operational efficiency, improved resilience, and much more.

The biggest benefit will be that the business will be better able to capitalize on its data. The evolution toward more data intelligence—being able to do more with data—has arrived. It absolutely must include top-notch data protection solutions designed for recovery.

Learn more about Dell Technologies Data Protection solutions for Microsoft SQL: http://DellTechnologies.com/Data-Protection-for-SQL

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