



PROTECTING YOUR COMPANY'S
GREATEST ASSETS WITH INTELLIGENT
DATA PROTECTION

Stratecast

F R O S T  S U L L I V A N

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INTRODUCTION

If your business is like most, you're betting a large part of your future on data. You may be focused on market and customer behavioral data, to help shape products and service; supply chain data, to drive efficiencies and agility; or productivity data, to reduce costs. Perhaps you are starting to invest in data-centric next-gen technologies, such as Internet of Things (IoT) and artificial intelligence, to transform the way you do business and give your business a competitive edge.

Unfortunately, many organizations struggle to manage the torrent of data required to implement their strategies. In a 2018 Frost & Sullivan survey of IT decision-makers, the top IT challenge was "growth of data," cited by 31% of respondents.

The problem isn't simply dealing with increasing volumes, but protecting and managing the data. Businesses need to ensure the integrity, availability, and security of the critical data they collect. They need to manage replication and copy functions to accommodate greater use of data—while limiting costly "copy sprawl." And they need to leverage intelligence and automation technologies, to ensure cost and labor efficiencies.

In this report, we present an approach to data protection and copy data management that can transform your business: Intelligent Data Protection.

THE NEW DATA ENVIRONMENT

In the digital era, protecting data is increasingly complex for businesses. The complexity is attributed to:

- **More formats:** Businesses that once dealt primarily with structured data (e.g., data sorted into defined fields in a database) are finding that their fastest-growing data types are now unstructured (for example, video, images, and charts) and semi-structured (e.g., email, word processing).
- **More sources:** Ingested data may come from public sources as well as company databases, deployed in multiple cloud and private repositories.
- **More access points:** Rather than each database mapped to a finite number of applications, data lakes may be made available to analytics or artificial intelligence (AI) functions across a range of applications. Users—as likely to be non-technical employees as data scientists—may access the data locally or remotely, via any number of devices.
- **Longer lifespan:** Businesses are learning that their older data can still yield valuable insights. To produce trend reports or apply predictive analytics, businesses may frequently need to activate older data that once was relegated to difficult-to-access "cold storage" or archives.
- **Greater need for data availability and integrity:** In these days of always-on business, businesses will suffer if they take critical applications off-line for overnight backups. Furthermore, many data-intensive applications—such as patient monitoring, fire-sensing, or financial transactions—can't afford to miss or lose any data, even during backup or recovery.

- **More performance-sensitive apps:** Driven by higher user expectations and application requirements, businesses must ensure minimal latency and high throughput for many applications. Such performance-sensitive applications include those involving user transactions (e.g., retail, customer service) and analytics-enabled processes (e.g., location-based marketing, media asset management).
- **Greater data privacy/compliance requirements:** Stringent data protection laws such as the European Union’s General Data Protection Regulation govern not only the primary data source for sensitive data, but all backup and recovery environments. Businesses must also address growing security threats—such as ransomware—by ensuring their applications have immediate access to a “clean” replicated copy of data.

RETIRING THE DATA PROTECTION MYTHS

While the way they use data is evolving, businesses may struggle to evolve their data protection and copy management processes. Even businesses that are actively engaged in digital transformation—adopting a wide range of technology and process updates to maintain a competitive edge—tend to overlook data protection. Instead, they continue to fall back on old-school thinking, such as:

- **Trying to keep data volumes under control with traditional data compression and deduplication technologies** – Older technologies generally do not work for unstructured data formats, like video or images. By using only older technologies to manage data volumes, businesses face higher volumes and storage costs.
- **Maintaining multiple copies of critical datasets, in an effort to ensure data integrity** – Creating and maintaining too many copies is costly, creates data sprawl, increases vulnerability to data breaches or ransomware, and doesn’t actually improve data quality.
- **Using backup data only in case of emergency** – There’s no need to leave backup datasets idle. If your backup isn’t working for you, you’re wasting money and resources.
- **Pointing all applications to primary data store** – For transactional or other latency-sensitive applications, application performance may be hindered when data is accessed from a single location that may be far removed from critical users or applications.
- **Assigning low value to older data** – Static tiering policies that place older data in low-cost storage media that is costly and time-consuming to restore can cause you to miss out on value.
- **Assuming backup media/deployment options should mimic primary infrastructure** – Many storage administrators hold to the notion that on-premises storage must be backed up to a storage appliance in another data center; and cloud storage needs to be backed up in the cloud. Such thinking limits flexibility, increases costs, and works against your hybrid strategy.
- **Managing data stores as a series of point-solutions** – Looking at each data store in a vacuum, rather than creating a holistic data protection and copy data management strategy, increases costs and maintenance burden, and limits ability to leverage the value of the data.

- **Assuming data protection is simple** – You may assume your storage and database administrators can continue to handle your data protection needs manually. But the escalating complexity and urgency will drive up costs and the management burden.

Impact on Digital Transformation

The problem with trying to use yesterday's data protection processes to support tomorrow's business goals is that it just doesn't work. As data plays an increasingly strategic role in business growth plans, IT leaders are finding that inadequate data protection and management can hinder their ability to achieve their goals. Asked about their top challenges in supporting their companies' digital transformation,

- 51% of IT leaders in the Frost & Sullivan survey said they struggle to ensure that security profiles are maintained across cloud and on-premises storage
- 48% said they struggle to integrate data center and cloud environments
- 47% said they are not confident their backup and recovery processes are sufficient for their hybrid environment
- 46% said their governance processes are inadequate.

Adding to the complexity is that IT leaders are increasingly adopting hybrid IT environments, as a means to introduce flexibility and agility into IT infrastructure. According to the 2018 Frost & Sullivan survey, 33% of businesses have implemented a hybrid IT environment, comprising a range of deployment options for applications and data (e.g., public cloud Infrastructure as a Service, Software as a Service, co-location, on-premises private cloud, physical servers, and more). By 2020, that percentage will more than double, as 68% of businesses adopt hybrid IT.

As part of their hybrid strategies, businesses are deploying hybrid workloads (defined as a workload that is deployed over two or more IT environments). Top hybrid workload configurations include:

- Public cloud-based application accesses on-premises proprietary database (cited by 54% of IT decision-makers)
- Cloud-based application leverages multiple data sources from the on-premises data center and cloud (cited by 47%)
- On-premises storage is replicated or archived in public cloud (cited by 38%)
- Edge-based workload collects and analyzes data, then transmits to cloud (cited by 20%)

For each of these and any other hybrid workloads, IT leaders assume an added burden in protecting and managing data. They must ensure that the hybrid IT environment delivers hybrid data protection, with consistency in data availability, security, accessibility, and integrity across all environments.

THE NEED FOR INTELLIGENT DATA PROTECTION

What businesses need is not just a place to store their valuable data, but a way to protect and manage it, consistently and cost-effectively. They need an intelligent data protection solution.

Intelligent data protection is a comprehensive approach to data protection and copy data management that focuses on how the business protects and uses its data (now and in the future). The right solution will integrate the latest data protection and copy data management technologies with an automated data protection platform and seamless connectivity to the cloud.

Why Intelligent Data Protection?

The right intelligent data protection solution ensures that your critical data is protected, compliant, and available to meet your needs. It delivers key benefits to the business, including:

- **Eliminates the complexity** of protecting your data – A simple user interface delivers maximum protection and minimal human error.
- **Automatically moves data** to the optimal environment – Policy-driven data migration gives you control, without the burden of manual intervention.
- **Enforces optimal backup policy per data store** – Automated, policy-based backup avoids the two pitfalls of too few copies (data vulnerability), or too many copies (waste of resources).
- **Puts your backup to work** – The right solution facilitates the use of backup and archive data copies, ensuring the appropriate cost and time to reactivate, based on your needs.
- **Protects more data, faster, and at lower cost** – Data protection is efficient and non-disruptive.
- **Leverages predictive analytics** - Mitigates threats and optimizes backup and recovery using next-generation intelligent analytics.
- **Ensures data recoverability** – Protects your business from growing threats such as ransomware, by allowing fast, accurate data recovery.
- **Minimizes costs and maximizes investment** - Advanced storage functionality (e.g., deduplication and snapshots) can be applied per data store, allowing you to choose the optimal level of protection per workload.
- **Aligns costs with usage** – Budget-friendly, flexible usage-based pricing options ensure you pay for value.
- **Flexible deployment options** – Optimizes your storage, production applications, and/or backup applications in the infrastructure environment that best meets your needs.

CHECKLIST: WHAT TO LOOK FOR IN AN INTELLIGENT DATA PROTECTION SOLUTION

Not all data protection solutions are alike. To ensure that the data protection solution you select will meet your business needs—today and into the future—look for the following features and capabilities:

- **Sophisticated, “self-managing” platform** that automates data protection infrastructure management: The platform must be future-proof and simple to use, leveraging policy-based lifecycle data management and Application Programming Interfaces (APIs).
- **Delivers on backup and recovery needs:** The platform should be architected to predictably and efficiently deliver the Recovery Time Objective (RTO) and Recovery Point Objective (RPO) you need on a per-application basis. Look for tight data source integration, direct data paths, and intelligent source-side deduplication.
- **Cloud-scale infrastructure:** The platform should enable you to manage data growth, with scale-out capability and intelligent deduplication.
- **Threat mitigation:** Highly available, scalable storage ensures data availability and recoverability; secure backup and fast restores mitigates ransomware threats.
- **Optimizes use of backup copies:** Look for a single-solution for data protection and copy data management; one that enables you to use copies for both data restore and cloning (for example, for test/dev, reporting, or analytics workloads).
- **Optimizes cloud investment:** Ensure that the solution copies only unique data to the cloud, thus minimizing your cloud costs.
- **Secures cloud backup and recovery:** To protect your data, look for a solution that provides encrypted self-describing backup data.
- **Flexible, market leading backup and recovery:** Backup and recovery are at the heart of your data protection platform. Look for a solution that offers a range of RTO/RPO options that fit all your application needs.
- **Choice of deployment models and pricing:** The platform should be deployable in either a physical or software defined environment, and offer a flexible, “as a service” consumption-based pricing option.
- **Support for hybrid environment:** Look for a platform that offers native connectivity to cloud, rather than via gateways, which can add latency. In addition, look for integration with leading backup solutions, enterprise applications, and cloud storage.

CHOOSING THE RIGHT PROVIDER FOR YOUR INTELLIGENT DATA PROTECTION SOLUTION

It's not just the technology you need to explore, but also the provider behind the technology. Whether you are looking for a single “throat to choke” or a partner to integrate with other storage solutions you already have in place, your choice of provider can make a big difference. Look for:

- **A market leader with breadth of experience in storage, cloud, security, and analytics:** Those disciplines must all come together in your optimal data protection strategy. If your provider does

not have in-house expertise across critical knowledge areas, the platform may lack the functionality and agility to meet your needs into the future.

- **Integration with market leading solutions:** Storage isn't a standalone use case; you'll need to ensure that your partner is committed to seamless integration with other software providers.
- **One-stop cloud shopping:** Your hybrid storage strategy will likely include public cloud storage—for example, in Microsoft Azure. But a new vendor adds a layer of complexity to the “seamless” integration of cloud and premises storage. The best option is to choose a provider from whom you can also procure cloud services. That way, your solution can backup or failover into the cloud without waiting for a technician to perform a separate transaction to procure adequate cloud capacity.
- **Flexible, consumption-based pricing option:** As data volume grows, so do storage costs. Choose a provider that offers budget-friendly options, such as consumption-based pricing for primary and backup storage on premises, with capacity that scales with your needs.
- **Managed and professional services options:** Resource-strapped IT organizations are increasingly turning to third party experts for assistance. According to the Frost & Sullivan survey, 51% of businesses currently use some sort of Disaster Recovery as a Service (DRaaS) or Backup as a Service (BaaS); with another 26% planning to add such services in the next two years. For maximum flexibility in data protection, choose a partner that offers BaaS or DRaaS not only for your cloud workloads, but also for your on-premises data and applications.

THE LAST WORD

In the digital era, companies are just beginning to discover the value hidden in their company data. As they increasingly seek, ingest, integrate, and analyze content—whether from traditional databases or new file types and sources such as video and social media—they require an efficient, effective way to protect and manage the volume and range data. This is where an Intelligent Data Protection solution comes in. The right solution meets your business needs by supporting:

- Automated and self-managing functionality, ensuring data is optimized without overburdening IT resources.
- Protection from the latest security threats, such as ransomware.
- Flexible backup and recovery options, applied on a per-workload basis, and enabling utilization of backup copies.
- Hybrid environments, including cloud integration and choice of infrastructure deployment options.
- Budget-friendly, usage-based pricing options.

Whether your business is looking to disrupt your industry, or simply to outpace competitors in delighting customers, data is at the nexus of your strategy. Be sure to protect and manage your data with the right intelligent data protection solution.

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