TECHNOLOGY SPOTLIGHT

Redefining Your Data Protection Strategy: Focus on Recovery

Sponsored by: Dell

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IDC OPINION

User expectations of technology have been changing rapidly over the past few years, as consumer technologies and services have raised the bar for service availability, user friendliness, and device independence. IT managers have become very aware of this change, and a recent IDC survey shows that "improving services to end users" is the top priority this year. Access to information and data is at the core of this trend, with users wanting to access their data anytime, anywhere, and from any device. In response to increasing user expectations on access to and availability of data, IT infrastructure needs to evolve, particularly for data protection. Most IT managers struggle to fulfill the stronger demands on recoverability and find that when it really matters their current data protection products do not live up to expectations. To improve this, IT managers are increasingly turning to purpose-built backup appliances (PBBAs), which enable IT managers to respond to end-user needs and improve both backup and restore times while reducing the data footprint to a more manageable level.

IN THIS TECHNOLOGY SPOTLIGHT

This IDC Technology Spotlight discusses the increasing user requirements for "always on" data protection, the need to recover data quickly, and resume services before the user notices the disruption. It shows how purpose-built backup appliances can be part of an optimized data protection architecture. It also discusses the benefits and challenges of an appliance-based data protection approach, as well as emerging best practices for recovery-focused data protection.

SITUATION OVERVIEW: DATA PROTECTION TODAY

Data protection processes and technologies are rapidly evolving in response to a seismic change in user-driven data consumption. This is being led through the adoption of cloud services and the ubiquity of mobile applications on any device. IDC calls this transformation the 3rd Platform for IT innovation and growth. This is made up of four major pillars — cloud, mobility, Big Data, and social business. Cloud and mobility are currently the most mature areas, followed by Big Data.

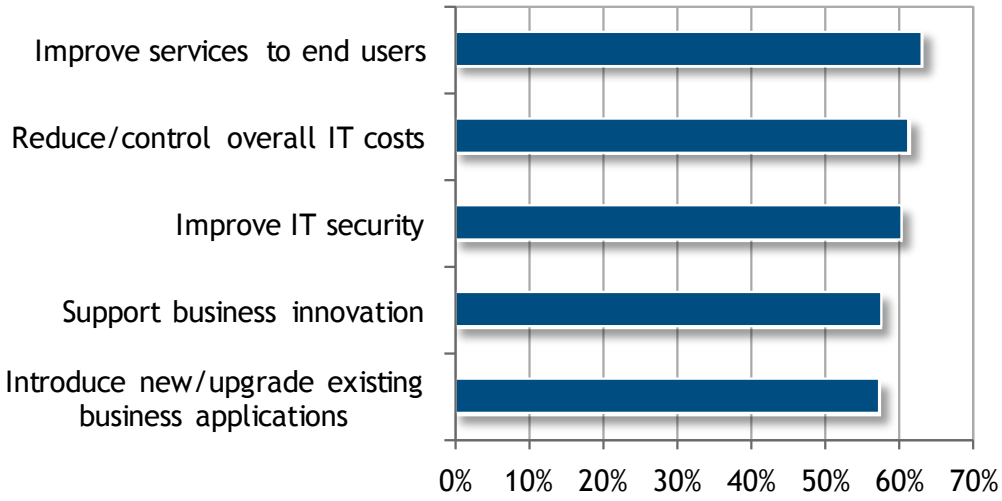
Data is the lifeblood of the 3rd Platform. Users expect to access data from any device, wherever they are, and at any time of day — giving rise to heightened, and often unanticipated, service level expectations that most IT infrastructures have not been built to deliver. These requirements stem from our collective experience as consumers, where usability and availability of data is a given.

However, the mainstream IT department has not traditionally been in a position to respond to these rapidly changing requirements in a timely fashion due to the often fragmented way that IT budgets, infrastructure, and processes have evolved.

This is leading to immense pressure on IT departments to adapt. Users are clearly setting the agenda and have a growing expectation that their services and associated data are treated like a utility. IT managers are acutely aware of this challenge, as shown in Figure 1. 63% of European IT managers see "improving services to end users" as their top priority in 2014, while at the same time containing IT cost as much as possible. In response to growing end-user requirements, IT departments are being driven split into two distinct areas. The first is for end-user or customer-facing front-end IT to provide agile IT services, and the second is around back-end IT infrastructure to run business-critical IT systems reliably.

FIGURE 1

Top IT Priorities for European IT Organizations



Note: n = 1,306

Source: IDC, 2014

A challenge on the end-user side of IT is increasing end-user expectation that they should be able to retrieve lost, corrupt, or deleted data in minutes instead of hours or days, wherever they may be, whatever the time of day. This is a tough challenge for many IT departments that don't have the technology in place to provide the speed of recovery that is expected by the business let alone the ability for users to manage their data through a self-service approach rather than having to go through a helpdesk and cumbersome manual process.

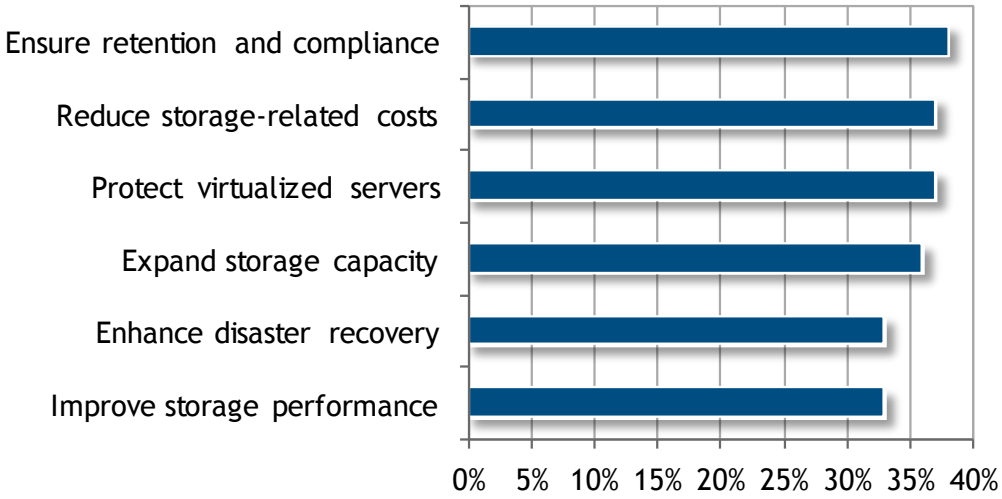
Looking to the back-end IT infrastructure, a key driver for IT transformation is the changing regulatory landscape in Europe. With the new, more stringent EU data protection regulation soon to be ratified, regulatory compliance concerning data availability and management has climbed to the top of the agenda for European IT managers. Meanwhile, the everyday task of managing the ever-growing volumes of data effectively to meet user requirements and ensure retention and regulatory compliance while keeping costs down remains a challenge for many IT departments.

CHALLENGES WITH THE CURRENT APPROACH TO DATA PROTECTION

As companies become ever more digitized and dependent on data for day-to-day operations, European IT organizations have adjusted their storage priorities to accommodate the need to better manage and serve data to their users and to address their most common storage-related challenges. Figure 2 shows the top storage priorities for European organizations.

FIGURE 2

European Storage Priorities



Source: IDC, 2014

Retention and regulatory compliance tops the list of priorities for the first time since IDC started conducting this survey. Increasing industry regulation, combined with the pending ratification of the European data protection regulation, has raised awareness of compliance issues in many mainstream European organizations. Reducing storage-related costs is an ongoing challenge for European organizations, as storage makes up an ever larger part of the IT budget. Protection of virtual servers is another focus point, as private cloud adoption accelerates and deploying applications to a virtual environment becomes the de facto standard.

The digital transformation is also exacerbating two major trends that continue to be a challenge for IT managers: the need for more storage capacity and the need for more storage performance. With data and information growing relentlessly and few organizations routinely cleansing and deleting data from their active storage or archives, the need for capacity is only increasing. Modern data protection technologies, such as compression and data deduplication, can help with this problem but they then create additional challenges in accessing the data in order to restore files.

What this comes down to is that most IT organizations today face a challenge to serve their users' needs with their existing data protection setup. There are a number of reasons behind this:

- **Fragmented mix of multiple standalone solutions.** Data protection architectures have evolved over time, and are typically a mix of several products and technologies that lack standard management or integration. Many IT organizations have invested in independent

point products to solve an immediate need. This approach drives operational complexity and inefficiency and adds additional time and cost to any backup or recovery operations.

- **Staying on an old version of a product for too long.** "Never touch a running system" is a common rule of thumb in the data protection realm, as it has tended to be quite complex to set up the products and processes. Changing data protection routines is perceived to introduce unnecessary risk into an environment where operational stability has been viewed as key. However, by not keeping up with innovation in data protection products, IT organizations find themselves hanging on to an approach that is a poor compromise for protecting their business-critical data and does not enable them to meet their users' growing expectations.
- **Impact of transformation to the 3rd Platform.** The trend toward the digitization of business and the move toward the 3rd Platform for IT innovation and business growth exacerbate the problem of data management and protection. As we generate more data from business processes and external data sources, as we analyze this information for actionable insights, and as we generate and consume more data on a variety of mobile devices, it is becoming increasingly clear that investing in a modern, integrated, and self-service data protection solution is an imperative.

IDC recommends that IT organizations evaluate their current data protection setup end to end to identify both technology and processes that are good candidates for transformation and to remove individual islands of data management and protection wherever possible.

BEST PRACTICES FOR INNOVATIVE DATA PROTECTION

European organizations should regularly evaluate and update their data protection processes and technologies to take advantage of the newest features and keep pace with changing business and end-user requirements. IDC suggests the following best practices:

- **Map your workloads and their requirements.** Not all workloads have the same data protection requirements as they are not handling the same type of data. Getting an overview of the various applications or services that an organization uses, and classifying them by business criticality and sensitivity of data handled, is a good starting point for an innovative data protection strategy that meets the new 3rd Platform requirements.
- **Consolidate, standardize, and automate where possible.** With ever-growing amounts of data sources and information to manage, the need to consolidate, standardize, and automate has never been more pressing than now. Only with automation will IT managers be able to achieve the response times that their users require and manage the growing amounts of data with the same staff.
- **Test your ability to restore and recover.** Backups are made for the sole purpose of ensuring a company's ability to recover information or systems as and when needed. Many organizations, however, don't have an easy means to test their ability to recover and tend to be overly confident that they can recover just because they are making backups — and are left exposed when required to recover for real.
- **Evaluate purpose-built backup appliances.** Purpose-built backup appliances are designed to solve the challenges of storage performance and capacity. They have a number of benefits that enable IT managers to live up their users' expectations and run their data protection processes much more efficiently, as they are designed for ease of deployment, recovery speed, and efficient operation, as well as providing integrated best practice.

BENEFITS OF AN INNOVATIVE DATA PROTECTION APPROACH WITH PURPOSE-BUILT BACKUP APPLIANCES

Purpose-built backup appliances provide the following benefits to help IT managers meet their data protection objectives and user requirements, and address many of their most pressing storage priorities:

- **Reduced data footprint.** Purpose-built backup appliances use hardware acceleration to speed up the data deduplication process, during both backup and restore. This enables IT managers to process larger amounts of data in the same time more reliably and with the same – or even reduced – number of staff. This speeds up both backup and recovery without needing investment in more headcount.
- **Easier disaster recovery replication.** Disaster recovery is one of the areas where many organizations are struggling to cope. It is hard to set up and even harder to test if disaster recovery works as needed. Consequently, many organizations only test their ability to recover once a year – not enough to ensure a smooth and reliable recovery when disaster strikes and the pressure is at its highest.
- **Lower media costs and improved restore reliability.** Using a data protection appliance helps organizations to eliminate media cost for tape as well as tape handling problems, while at the same time increasing the reliability of recovery compared to tape-based data protection systems. It also reduces the need to have many different types of media and cuts down on the management cost associated with distributing tape-based backups to multiple secure storage facilities.

DELL PURPOSE-BUILT BACKUP APPLIANCE OVERVIEW

Dell has a broad data protection portfolio that is focused on matching the right data protection products to a company's business requirements. Dell has a strong roadmap for its entire data protection portfolio, including its DR series of appliances.

Dell's data protection vision is to provide the right level of data protection across physical, virtual, and cloud environments by identifying the best tool to match the requirements that the business is putting forward for any given application. The DR series of purpose-built backup appliances supports this vision by providing cost-effective data deduplication and compression appliances that scale from SMB to enterprise.

Dell's DR series provides customers with a reduction in data footprint by a ratio of 15:1 and can drive down the cost per GB of backup storage to €0.14 ($0.17). This enables European organizations to address two of their major concerns – reducing storage cost and containing storage capacity needs. Customers can choose if they prefer target-based deduplication or source-based deduplication for any given application. Source-based deduplication is typically used before replicating data to another site, for example from a branch office to a central datacenter, to reduce the data traffic that crosses the network and achieve faster replication speeds. Target-based deduplication is typically used in the datacenter to process global deduplication across large sets of data.

Dell has also developed a comprehensive commercial model around the DR series, with all inclusive license pricing including performance accelerators and replication options. Purpose-built backup appliances play a key role in a disaster recovery architecture, as they compress the data

before it gets replicated and can therefore achieve much faster replication and restore than can be achieved with raw, uncompressed data. Dell's DR series offers many-to-one replication capabilities, enabling many branch offices to replicate data into one central datacenter and still achieve global data deduplication at scale at the central site.

The DR series can be a target for all the major data protection software products and integrates seamlessly into an existing data protection architecture through its non-disruptive deployment feature. To simplify the management process, Dell has made it particularly easy for customers to integrate with the Dell NetVault data protection solution using its Rapid Data Access (RDA) technology, which increases the data ingest performance and allows the NetVault Backup software product to control the data path and monitor backup jobs while the DR series appliance takes care of data handling and placement. This enables customers to shrink their backup windows significantly and ensure speedy restores when needed. In combination with NetVault, Dell customers can automate the complete backup process from disk to disk through to tape.

Purpose-built backup appliances are an increasingly popular technology in Europe, as they are easy to deploy, reduce the data footprint dramatically, and increase the performance of restore processes. Dell DR series appliances fulfill these requirements while also offering deep integration with the broader Dell portfolio of data protection solutions.

CHALLENGES AND OPPORTUNITIES FOR DELL IN DATA PROTECTION

Dell is a relatively new entrant to the data protection market, with the DR series of appliances shipping since 2012, but it has already sold the product to 1,800 customers globally. The total capacity shipped to date is 52PB, distributed across 2,600 systems. However, as it is a relatively new entrant in the European data protection market, Dell still needs to provide customer evidence of success in deployments and increase awareness of its products and services in this space in Europe.

The opportunity in Europe for Dell is to enable European organizations to address their storage priorities, provide the ease of use, cost efficiency, and recovery speed that are required, and to take advantage of the popularity of purpose-built backup appliances.

CONCLUSION

IT managers must contend with growing expectations from their end users and need to evaluate innovative new backup approaches to meet these needs.

Purpose-built backup appliances are an increasingly popular storage technology that enables IT managers to meet their needs for a cost-efficient, easy to deploy and use data protection solution that reduces the data footprint and enables faster and more reliable recovery.

IDC encourages European IT managers to evaluate purpose-built backup appliances when updating or rearchitecting their backup and recovery solutions and capabilities.

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