Reduce Storage Complexity To Improve IT Agility

Data Is At The Heart Of Any Organization's Ability To Meet Its Mission; Focus On Storing That Data Effectively

September 2012

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Executive Summary

Organizations of all sizes and in all geographies depend on data for business value creation, and data growth has exploded over the past several years. Regulations governing data protection and availability have increased, and many organizations risk their reputations as well as significant penalties for any glitches in data stewardship. Customer and business expectations have driven many firms to make data and applications accessible all the time — eliminating the luxury of planned outages and scheduled downtime. In the midst of these mounting challenges, budgets for storage administration teams have typically remained flat or declined, forcing organizations to take on more tasks and responsibility without more resources. This has put tremendous focus and pressure on the storage management role, which seems to get more complex every year.

In May 2012, Dell commissioned Forrester Consulting to evaluate thought processes and pain points related to storage management, both within the storage team and from external storage stakeholders. Forrester tested the hypothesis that confusing and inefficient storage management processes prevent timely responses to organizational needs.

IT pros responsible for storage put in hours of time and effort that may go unnoticed unless mistakes are made or problems occur. More efficient storage systems could free up staff time to benefit the business in other ways, decrease costs, and speed the response to requests for new capabilities. Forrester conducted a global online survey of 839 senior IT decision-makers, storage administrators, and users and found that a majority of storage admins spend too much time on daily operations maintenance and mundane tasks, and that companies are seeking simpler storage technologies with more automation to lower costs and improve results.

Key Findings
Forrester's study yielded six key findings:

- **Many systems for storing and managing data are complex and expensive to manage.** This is a simple finding, but a major problem for most respondents. Respondents have a hard time quantifying the strategic impact of storage, but what they do know is that storage is complex, hard to manage, and expensive.

- **IT management feels that today's storage is a drag on innovation.** Provisioning times, cost-effectiveness, accuracy of provisioning, and responsiveness to business needs are the top four concerns that senior management has about their storage environments. Clearly something is wrong that has to be fixed — storage should enable, not inhibit, the process of meeting organizational goals.

- **Storage admins would use free time to work on higher-level IT or business strategy to better support their business.** Many organizations appear to be treading water when it comes to storage management. They can keep the lights on and accomplish the basic tasks, but when it comes to more proactive optimization, there just isn't the time. Freeing up administrator time through simplification and automation could help accomplish this goal.

- **Organizations are willing to pay more for systems that reduce management complexity.** While the majority of respondents rank the cost of their storage systems as a lower priority than things like performance and reliability, cost does come up as a factor in purchases. As storage systems offer better capabilities at lower cost, Forrester expects to see more focus on streamlining management tasks.

- **There is value in buying storage and other data center technologies and services from one vendor.** The vendor trend over the last few years has been to make acquisitions that provide broader solution sets in storage and across broader data center infrastructure categories. Respondents indicate that getting more categories of

products from one vendor is desirable. A deeper relationship with a smaller number of vendors can build trust, provide technology synergies that ease management, and streamline support relationships, making it easier to manage the big picture.

- **Innovative solutions can make a big difference.** Those surveyed indicate a willingness to try new solutions, including software features, licensing models, and innovative vendors, if they can deliver better long-term results. Quantification of the precise total cost of purchasing and managing storage remains limited, but interest has grown in managing soft costs such as organizational agility, application performance, and business continuity in addition to upfront acquisition costs. Innovative storage management approaches are seen as a way to improve the bottom line.

Storage Has Unique Challenges And Change Has Been Slow

In many ways, storage generally is behind other data center disciplines in terms of adopting new approaches to improve process simplicity, technology evolution, automation, and overall efficiency. While the broad adoption of hypervisor-based virtualization has revolutionized server technology in the past 10 years, older, established storage systems are still prevalent. These older designs continue to use mainframe-era technology, resulting in low efficiency, reliability, and overall management success in many environments. Some of the big areas of challenge include the following:

- **It's difficult to hire storage experts.** Storage technology management has evolved to include many specialized skill sets that are distinct from server and network realms. However, there are very limited avenues for professionals to acquire this knowledge outside of vendor training and learning on the job. As a result, organizations with growing storage environments struggle to find or fund qualified people to manage this critical part of their data center infrastructure.

- **Entrenched vendors have been slow to change.** While the world of server management has grown by leaps and bounds with the wide adoption of virtualization technologies, storage management has, for the most part, not improved as quickly. The interfaces may have been refreshed, but underneath them, the world of storage management remains mired in manual, repetitive tasks that are extremely time-consuming for everyday tasks like provisioning, optimization, and troubleshooting.

- **Data growth compounds the above concerns.** Most organizations today report high rates of capacity growth spurred by the digitization of processes, increased application capabilities generating more data, copies of data used to support data warehousing, business intelligence, business continuity and disaster recovery, and other factors. Management approaches that work in a relatively small environment are much harder and more costly when the environment grows over time.

Today's Data Storage Technology Is Complex

Simply put, data storage technology is too complicated. In order to deliver low-latency access to application data, quickly respond to business needs, and ensure that data is always available and never lost, IT staff must have specialized knowledge in networking, computing, storage technologies, and vendor-specific interfaces. As data grows, and the number of systems multiplies, this problem is likely to become more pronounced unless firms pay significant attention to consolidation and simplification. Key findings of our study related to storage environment complexity include:

- 74% of IT leaders — purchasing decision-makers and the supervisors of administrators that keep storage environments running — believe that storing and managing data with the solutions available today is generally complex. This belief is likely born of the frustration felt when IT leaders realize that storage systems are impinging on their ability to deliver new capabilities in a timely manner, all while consuming a disproportionately large amount of resources.

- 66% of storage administrators believe that storing and managing data with the solutions available today is generally complex. It's no surprise that fewer admins than managers find storage management complex, given that admins are usually the most knowledgeable individuals in the organization in hands-on storage technology management. What is surprising is that even most of those professionals whose job revolves around understanding this technology still find it to be complex.

- 85% of IT leaders and 87% of storage admins believe that their storage environment could benefit from easier-to-use technology and enhanced automation. Thus, an overwhelming majority of qualified professionals agree that there is a need for improvement in this arena.

- When asked about their top challenges in managing their storage environments, administrators ranked managing data with cloud environments, microcode upgrades, and chargebacks as their most challenging tasks. Core tasks such as backup, archiving and provisioning were described as least challenging (see Figure 1).

Figure 1

Challenging Storage Management Tasks

"Which storage management tasks are the most challenging?"

■ Doing so without problems ■ Getting it done, but could improve ■ Struggling to complete ■ Don't do this task

Task	Doing so without problems	Getting it done, but could improve	Struggling to complete	Don't do this task
Backing up data	61%	33%	5%	1%
Archiving data	52%	38%	6%	3%
Provisioning storage	48%	40%	6%	6%
Reporting on storage	45%	42%	7%	6%
Managing storage capacity	47%	39%	9%	5%
Optimizing performance	42%	44%	8%	5%
Migrating data for system refresh/replacement	39%	46%	9%	6%
Integrating with virtual environments	40%	44%	8%	8%
Optimizing/reclaiming capacity	39%	44%	9%	8%
Consolidating storage	42%	41%	9%	8%
Taking snapshots	45%	37%	7%	12%
Tiering storage	41%	40%	7%	12%
United management (block and file)	37%	44%	8%	11%
Managing heterogeneous architectures	33%	47%	7%	14%
Storage service catalog	39%	40%	6%	14%
Storage chargeback or memoback	36%	41%	8%	15%
Upgrading microcode	35%	41%	9%	15%
Managing data with cloud environments	35%	40%	10%	15%

Base: 513 global IT storage administrators

(percentages may not total 100 because of rounding)

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

There Is A Strong Desire For Better Results

Organizations have been struggling with the complexity of their storage environments for years, but certain changes have brought more urgency to the situation. Improvement in consumer technologies increased the expectations of internal customers in an enterprise setting, as evidenced by interest in and adoption of bring-your-own-device programs, increased access for mobile devices, and individual usage of cloud storage systems. Awareness of cloud technologies has also served to reduce willingness to accept restrictions or delays on storage. These factors, as well as a simple desire for better results and fewer headaches, are driving storage decision-makers to prioritize simplicity and automation in their storage evaluation criteria.

- 94% of IT leaders would like to see easier to use and highly automated storage features in their next storage solution purchase. 40% stated that it would make a "huge difference" and would be prioritized for their next storage purchase (see Figure 2).

- 85% of storage admins and IT leaders said they would consider buying a storage solution that costs more than a competitive solution but saves staff considerable work time. This is a compelling number in a category historically characterized by close attention to per-gigabyte costs and discount percentages. It points to a greater recognition of the longer-term total cost of ownership of the storage environment, as well as a greater awareness of the importance of manageability in delivering acceptable levels of service (see Figure 3).

- 86% of storage admins expect that application administrators will be able to leverage automation and self-service tools to accomplish storage management tasks in their environment within five years, helping to free up time for IT staff to work on projects with more strategic business value. As software stacks take on more control of infrastructure, it becomes more viable to manage storage directly from the application consoles themselves, allowing for greater connections between business process and technology underpinnings. 71% of application administrators, developers, and internal customers of storage services believed this would be possible; 69% of IT leaders agreed.

- Storage administrators ranked support for virtualized server environments, system automation, ease of use, and storage management interfaces as the tools that contribute the most to an efficient storage environment. Each of these tools revolves around streamlining management and moving toward simplification (see Figure 4).

- Storage administrators point to some more technical tools as having the least impact on overall environment efficiency. Thin provisioning, continuous snapshots, and object storage architectures were lowest in the list in terms of positive impact. Interestingly, Forrester has talked with many users of each of these tool sets who have had positive results, so we attribute the low numbers here to the fact that many organizations are not using these tools, or are using them with limited scope or impact (see Figure 4).

- Storage admins asked to rate the effectiveness of their firm's shared storage environment, rated cost effectiveness the lowest among all areas, while overall environment reliability, availability, and uptime rated highest, with backup and recovery effectiveness coming second. This matches Forrester's experience, where organizations tend to focus on keeping the systems running over optimization, and the fact that very few environments today have a good sense of the TCO.

- IT leaders asked to rate the effectiveness of their firm's shared storage environment, rated timeliness of provisioning and cost-effectiveness the lowest, while overall environment performance and overall environment reliability, availability, and uptime rated the highest. This is fairly similar to the responses from storage administrators, but reflects higher pressure from internal customers around timeliness of provisioning. Forrester sees provisioning time as a key driver of customer satisfaction or dissatisfaction and overprovisioning of storage, leading to a lack of agility, slow response to organizational needs, and the inability to roll out new initiatives in a timely manner (see Figure 5).

Figure 2

Effectiveness Of Increased Automation And Ease Of Use

"How valuable would storage systems with increased automation and ease of use be to your company's effectiveness?"
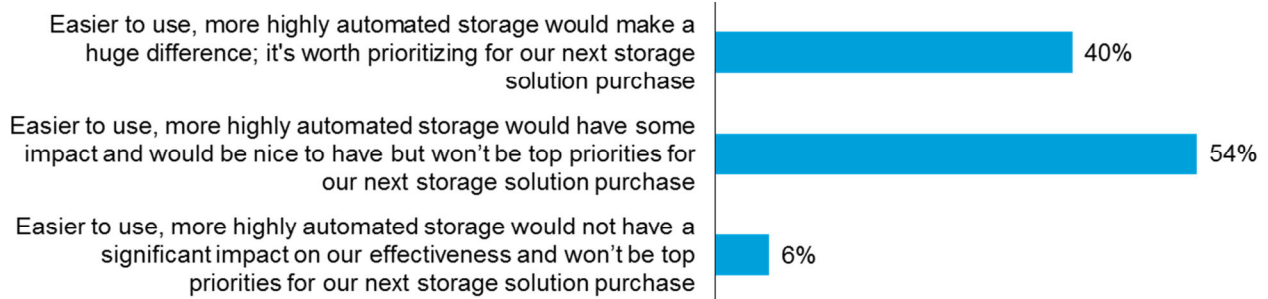
Easier to use, more highly automated storage would make a huge difference; it's worth prioritizing for our next storage solution purchase — 40%

Easier to use, more highly automated storage would have some impact and would be nice to have but won't be top priorities for our next storage solution purchase — 54%

Easier to use, more highly automated storage would not have a significant impact on our effectiveness and won't be top priorities for our next storage solution purchase — 6%

Base: 284 global CIOs, IT managers, and directors

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

Figure 3

Time Is More Important Than Cost

"If you were in a position to make a purchase for your organization, would you consider buying a storage solution that costs more than a competitive product but saves you considerable work time?"

Yes — 85%
No — 15%

"If you were in the position to make a purchase for your organization, would you consider buying a storage solution that costs more than a competitive product but saves your staff considerable work time?"*

Yes — 84.5%
No — 15.5%
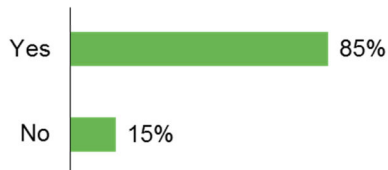
Base: 513 global IT storage administrators
*Base: 284 global CIOs, IT managers, and directors

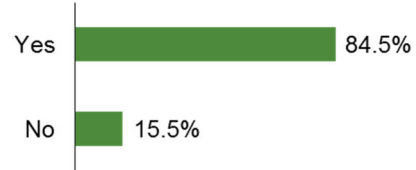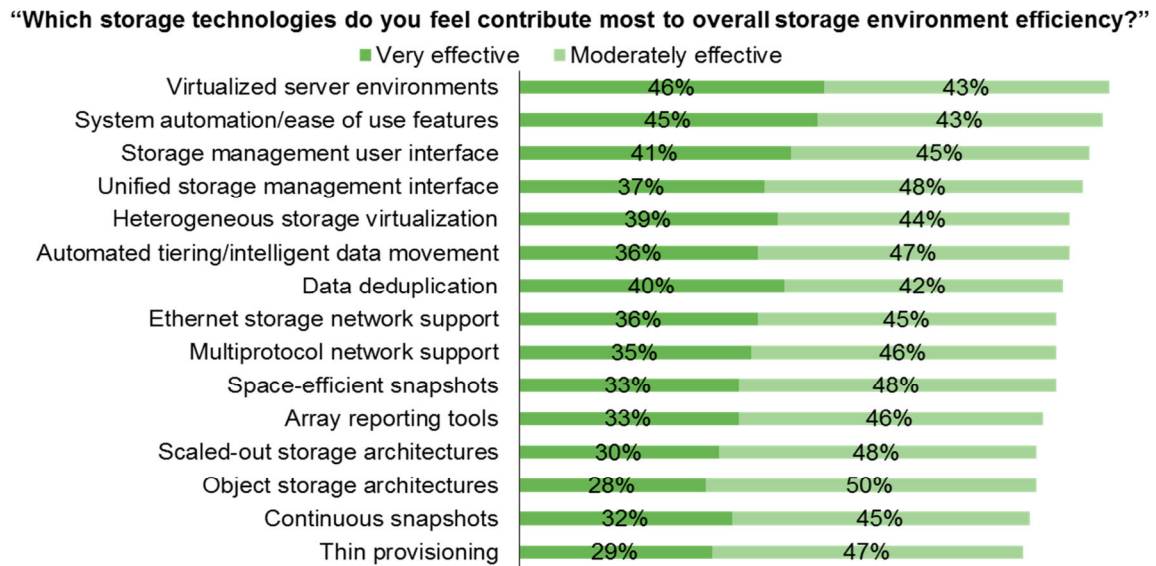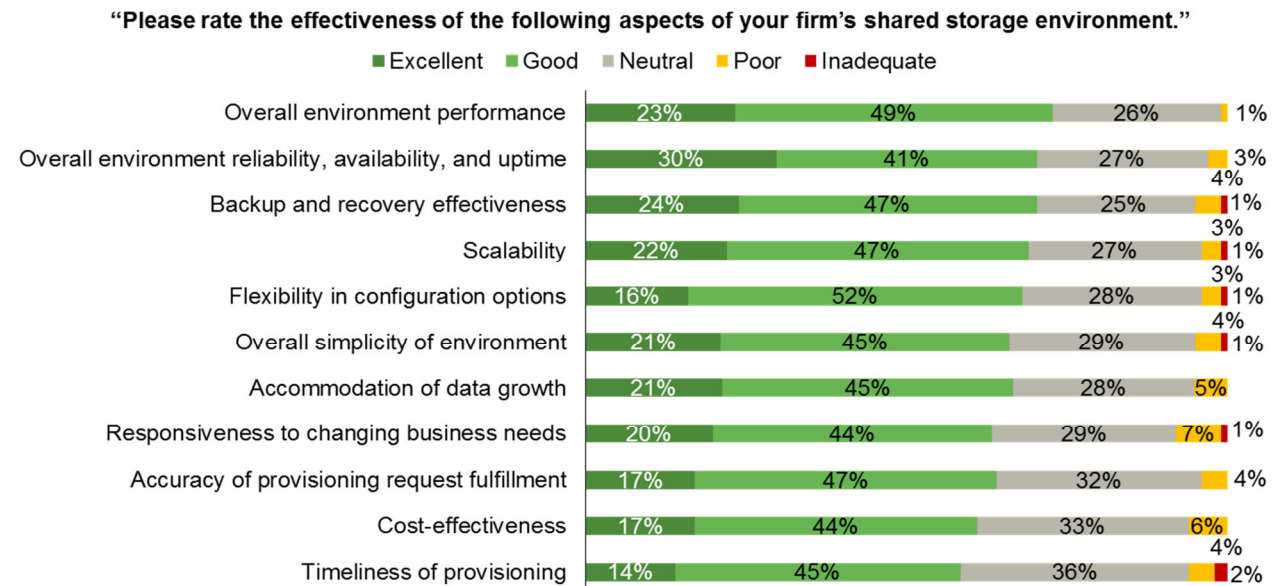Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

Figure 4

Contributing Storage Technologies

"Which storage technologies do you feel contribute most to overall storage environment efficiency?"

■ Very effective　■ Moderately effective

	Very effective	Moderately effective
Virtualized server environments	46%	43%
System automation/ease of use features	45%	43%
Storage management user interface	41%	45%
Unified storage management interface	37%	48%
Heterogeneous storage virtualization	39%	44%
Automated tiering/intelligent data movement	36%	47%
Data deduplication	40%	42%
Ethernet storage network support	36%	45%
Multiprotocol network support	35%	46%
Space-efficient snapshots	33%	48%
Array reporting tools	33%	46%
Scaled-out storage architectures	30%	48%
Object storage architectures	28%	50%
Continuous snapshots	32%	45%
Thin provisioning	29%	47%

Base: 513 global IT storage administrators

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

Figure 5

Timely Storage Provisioning Ranks As The Least Effective Aspect Of Today's Storage Environments

"Please rate the effectiveness of the following aspects of your firm's shared storage environment."

■ Excellent　■ Good　■ Neutral　■ Poor　■ Inadequate

	Excellent	Good	Neutral	Poor	Inadequate
Overall environment performance	23%	49%	26%	1%	
Overall environment reliability, availability, and uptime	30%	41%	27%	3%	4%
Backup and recovery effectiveness	24%	47%	25%	1%	3%
Scalability	22%	47%	27%	1%	3%
Flexibility in configuration options	16%	52%	28%	1%	4%
Overall simplicity of environment	21%	45%	29%	1%	
Accommodation of data growth	21%	45%	28%	5%	
Responsiveness to changing business needs	20%	44%	29%	7%	1%
Accuracy of provisioning request fulfillment	17%	47%	32%	4%	
Cost-effectiveness	17%	44%	33%	6%	4%
Timeliness of provisioning	14%	45%	36%		2%

Base: 284 global CIOs, IT managers, and directors
(percentages may not total 100 because of rounding)

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

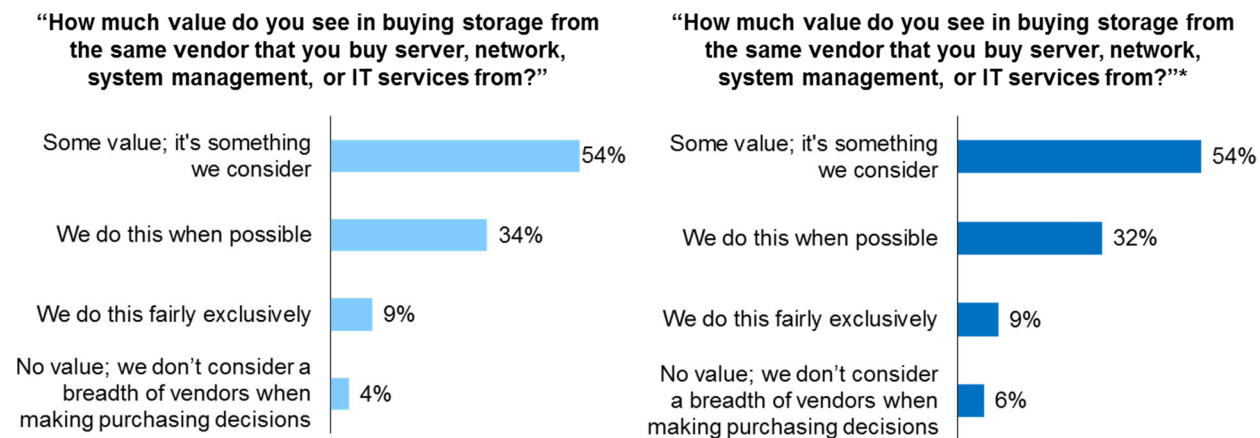## Organizations See Value In A Single Vendor For Storage And IT In General

A critical area where storage management fails is in the complexity of heterogeneity. Building out business technology solutions with bits and pieces from many different vendors creates a huge challenges: interoperability, complex troubleshooting, and inconsistent support. Many of the respondents to this survey indicated that, where possible, they would like to get storage and other elements of the total IT solution from a single vendor.

- 95% of both IT leaders and storage admins indicated that they see value in buying storage from the same vendor from which they buy server, networking, system management, or IT services. One major current trend is that infrastructure vendors — especially those that sell storage — are acquiring companies to improve their offerings and broaden their portfolios. This appears to fit with the strong majority of buyers and users that see value in buying more from the same supplier (see Figure 6).

- 42% of IT leaders and storage administrators indicated that they buy multiple IT solutions from the same vendor fairly exclusively or whenever possible. While the number of respondents that do this exclusively is lower than the number that simply see value in a single-vendor policy, it's still high given the wide range of choices and the tight competition in the IT space.

In terms of the reasons for vendor concentration or exclusivity, ease of integration, technology synergies between server, storage, and/or network products, and ease of purchase rank as top responses.

Figure 6

Storage Admins And IT Leadership See Value In Consolidating Server/Network And Storage Vendors

"How much value do you see in buying storage from the same vendor that you buy server, network, system management, or IT services from?"

Some value; it's something we consider	54%
We do this when possible	34%
We do this fairly exclusively	9%
No value; we don't consider a breadth of vendors when making purchasing decisions	4%

"How much value do you see in buying storage from the same vendor that you buy server, network, system management, or IT services from?"*

Some value; it's something we consider	54%
We do this when possible	32%
We do this fairly exclusively	9%
No value; we don't consider a breadth of vendors when making purchasing decisions	6%

Base: 513 global IT storage administrators

*Base: 284 global CIOs, IT managers, and directors

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

Innovative Storage Software Licenses Can Reduce TCO

The value of storage solutions is shifting as vendors have introduced new and improved software features. For most vendors, hardware is relatively commoditized; x86 chipsets predominate and vendors generally choose from the same few suppliers of standard media options. Software is a significant area of differentiation; innovation in storage systems today, along with significant improvements in manageability, performance, and efficiency, can be achieved by deploying better storage software. This software is not cheap, though — and many vendors charge separately for individual storage software components. What's more, many vendors make customers repurchase software every time they refresh their storage hardware. A few storage vendors have adopted a model where the software is owned perpetually. We asked respondents about their take on the potential value from this model:

- 82% of IT leaders believe that a perpetual license structure for storage software, which allows users to transfer software from old equipment to new equipment and receive updates at no additional charge, could reduce their storage total cost of ownership. This shows strong interest in this model and recognition that the traditional model can lead to high costs.

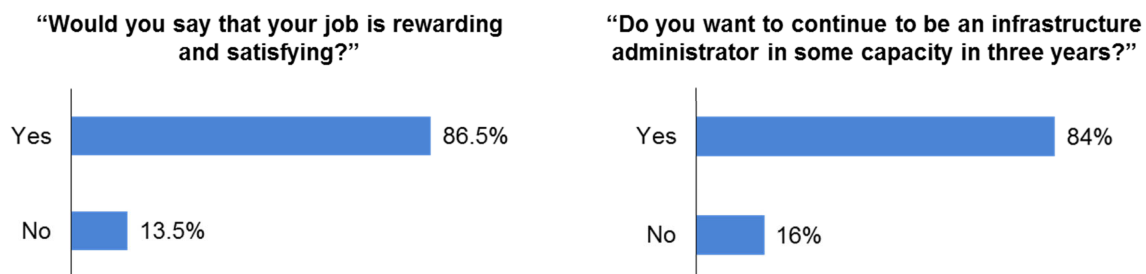## Perceptions Of The Storage Administrator Role

Storage administrators are proud professionals who take the stewardship of data seriously. It's a unique world that is little understood outside the ranks of those actually doing the work. In the political spectrum of IT, storage often ranks below other disciplines in spite of its criticality. Expectations of constant availability, zero data loss, and fast provisioning often create a culture of finger-pointing and blame, which is challenging for storage administrators to deal with productively. In spite of this, most administrators indicated that they like their jobs and want to continue working in the capacity. Managers and internal customers may be frustrated sometimes, but many realize that they depend on storage professionals to keep the business running. Key insights we collected on perceptions of this role include:

- 87% of storage admins say their job is rewarding and satisfying (see Figure 7). This is a high number given the stress and potential for blame when things go badly, but it's good to know that storage administrators are up to the challenge. 84% of storage admins want to continue to be an infrastructure admin in some capacity three years down the road. This is further proof of the fortitude of these professionals — most want to keep doing their job.

- 70% of storage admins work more than 40 hours in an average week (see Figure 8). Storage administrators take their jobs seriously and do what they have to do to keep the environment running. Anecdotally, Forrester sees many examples of long hours during migration, refresh, or troubleshooting crises, with administrators unquestioningly committed to get the job done effectively.

- The majority of storage admins (57%) spend between 26% and 75% of their day on tasks they feel are focused more on maintaining daily operations than on adding strategic value (see Figure 9). With high rates of data growth generally not accompanied by increases in storage management staff, most administrators are pressed for time. Keeping the lights on generally takes precedence over more proactive optimization, which is unfortunate. Given the time, most admins could improve the efficiency and performance of their environment, but instead they face the need to focus their energy on fairly mundane efforts.

- If their firm adopted storage technology that was easier to manage and freed up some of their time:

    o 48% of system admins said they work on higher-level IT or business strategy.

    o 57% said they would work on more IT-related nonstrategic tasks.

    o 44% said they would work on proactive optimization of their storage environment.

    o 19% said they would enjoy more personal time outside of work.

Figure 7

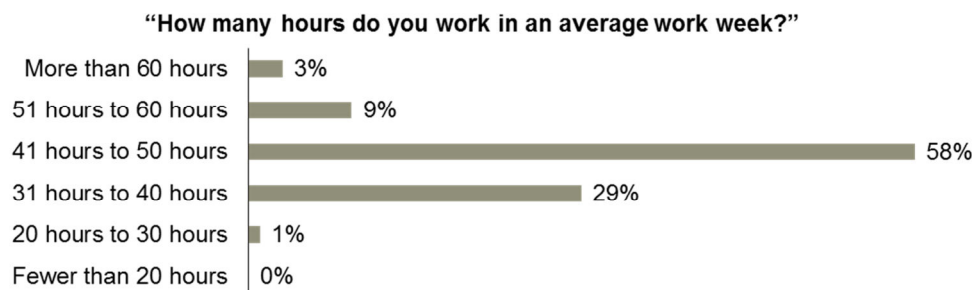Most Storage Admins Are Satisfied With Their Jobs

"Would you say that your job is rewarding and satisfying?"

Yes	86.5%
No	13.5%

"Do you want to continue to be an infrastructure administrator in some capacity in three years?"

Yes	84%
No	16%

Base: 513 global IT storage administrators

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

Figure 8

Most Storage Admins Work More Than 40 Hours A Week

"How many hours do you work in an average work week?"

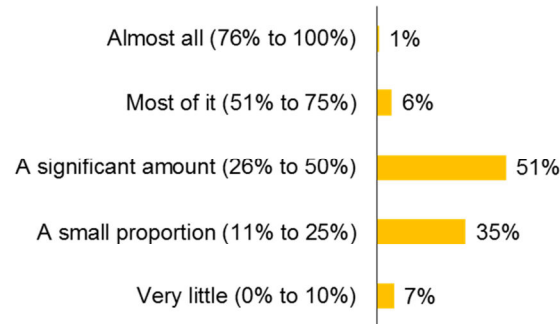|	
More than 60 hours	3%
51 hours to 60 hours	9%
41 hours to 50 hours	58%
31 hours to 40 hours	29%
20 hours to 30 hours	1%
Fewer than 20 hours	0%

Base: 513 global IT storage administrators

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012
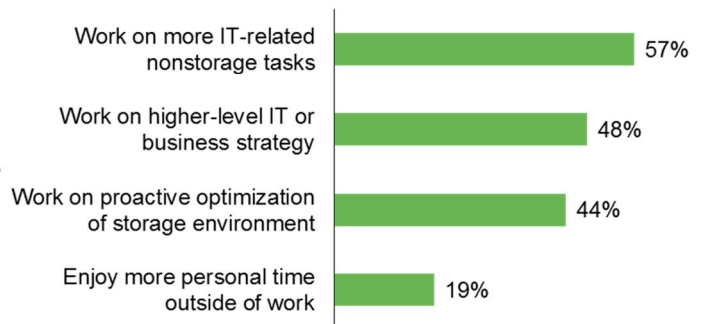
Figure 9

Time Allocation

"How much of your daily work time is spent on tasks that you feel are focused more on maintaining daily operations, rather than strategic value-add?"

Almost all (76% to 100%)	1%
Most of it (51% to 75%)	6%
A significant amount (26% to 50%)	51%
A small proportion (11% to 25%)	35%
Very little (0% to 10%)	7%

"If your firm adopted storage technology that was easier to manage and freed up some of your time, what would you do with the time you got back?"

Work on more IT-related nonstorage tasks	57%
Work on higher-level IT or business strategy	48%
Work on proactive optimization of storage environment	44%
Enjoy more personal time outside of work	19%

Base: 513 global IT storage administrators

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

KEY RECOMMENDATIONS

Data is the most valuable asset of any organization; it's often a catalyst to achieving organizational goals such as better customer results, lower inventory costs, or improved customer relations. As a result, organizations of all sizes in all geographies are realizing just how critical effective storage management is to their technology and overall business success. That said, most firms have not increased their budgets to keep pace with data growth, so effective storage management amidst scarcity is the name of the game. To achieve this objective and increase overall organizational agility through improved data management, consider focusing on the following goals:

- **Consider the strategic impact of storage.** It's easy to get seduced by a flashy new technology that offers a point improvement, but the ability to roll out a new core capability that supports organizational goals in a timely, efficient manner is the key. Before adopting a new approach or vendor, estimate the impact of that decision over a long time horizon. Compare the approach with several alternative scenarios and choose the option with the best impact to effective, agile operations. Don't forget to include risk in the analysis as there's always a possibility that things won't turn out as you hope. Weighting decisions with the likelihood of success can help account for this risk.

- **Build a trusted relationship with your vendors.** Storage is hard to get right; like it or not, you need vendors to get the job done. Sure you can benefit from a few extra points of discount, but getting the right product with the right support arrangement is a bigger concern. Consider the financial and operational risks of vendors, and consider how many vendors you need or want to have to build out the overall solution.

- **Recognize the value of your admin staff and support their efforts with ease of use and automation.** It's hard to hire effective storage administrators, but your solution will only be as good as they are. Consider the ease of use and automation factors inherent in the products you buy and get admins' feedback on how effective they think these tools are. Prioritizing the team's potential for success is probably the best thing you can do to enable long-term data effectiveness.

- **Consider data migration cost as a key factor in storage product selection.** Many organizations think of storage investments as fixed capital expenditures, but equipment has a limited lifespan regardless of whether you lease it or buy it. The process of moving data from old systems to new when your investments reach the end of their usable life has been likened to changing the tires on a bus while it's running. Because the business can't tolerate significant downtime, it becomes tremendously difficult. Newer storage products have technology and licensing improvements that make it easier to get this done with less downtime and lower cost.

- **Use advanced features and architectures to grow simply at the right time.** A high rate of data growth is a reality for most every organization in the world, so prioritizing features that make it easy to expand over time is the best strategy. Technologies like scale-out architectures, cross-generational support for nondisruptive upgrades, converged architectures that allow you to use a common platform for more workloads, and close integration with those workloads will make growing over time easier and more effective.

- **Consider data protection as a part of deploying storage for applications.** In many storage environments, data protection is an afterthought and takes the form of complex processes that get added on at the end. Modern storage architectures support advanced features that allow you to simply configure many points of recovery and design high availability directly into your primary configurations. Continuous and unlimited automated snapshots, easy setup of replication relationships, and improved monitoring tools all help organizations get better results with less effort when it comes to protecting the data they store.

- **Use automated tiering to store data when and where you need it, most cost-effectively.** Many organizations buy storage that's capable of more performance than they can ever consume because they aren't confident in their ability to measure and configure precise real-time demand for performance. For many organizations, this is like driving a Formula 1 racecar at the speed limit on the highway — they can't go any faster. Storage systems with automated tiering allow users to let the system determine the optimal media for data workloads; over time, it will allow data to gravitate toward the media choice that best fits its actual needs.
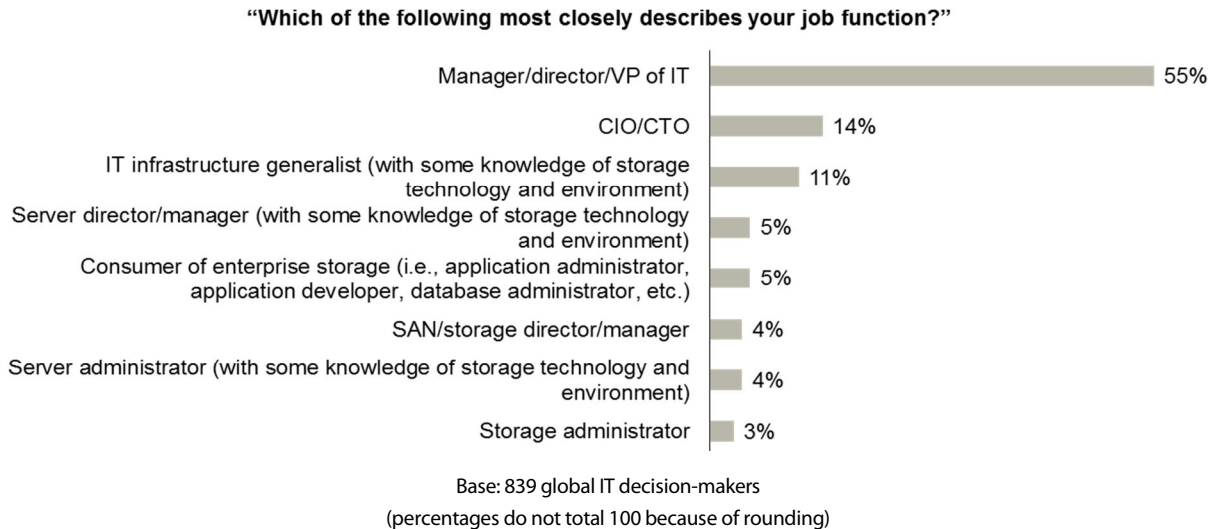
Appendix A: Methodology

In this study, Forrester conducted an online survey of 839 organizations in the US, the UK, France, Germany, and the Benelux countries to evaluate the thought processes and pain points related to storage. Survey participants included decision-makers in IT leadership, like CIOs, VPs, directors, and managers; full- and part-time storage administrators; and application administrators, developers, and storage customers. We asked participants about the current state of storing and managing data, how storage professionals spend their time, and what barriers or challenges to they face today. The study began in April 2012 and was completed in August 2012.
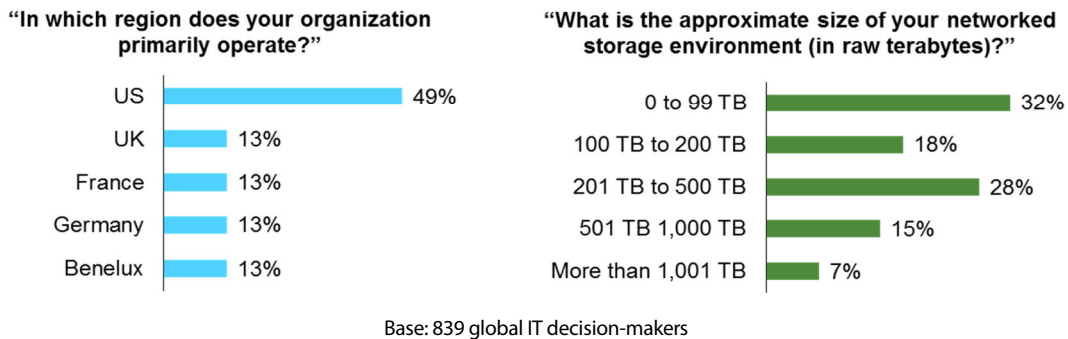
Appendix B: Demographics/Data

Figure B1

Role And Function

"Which of the following most closely describes your job function?"

Manager/director/VP of IT	55%
CIO/CTO	14%
IT infrastructure generalist (with some knowledge of storage technology and environment)	11%
Server director/manager (with some knowledge of storage technology and environment)	5%
Consumer of enterprise storage (i.e., application administrator, application developer, database administrator, etc.)	5%
SAN/storage director/manager	4%
Server administrator (with some knowledge of storage technology and environment)	4%
Storage administrator	3%

Base: 839 global IT decision-makers

(percentages do not total 100 because of rounding)

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012

Figure B2

Geographies And Storage Needs

"In which region does your organization primarily operate?"

US	49%
UK	13%
France	13%
Germany	13%
Benelux	13%

"What is the approximate size of your networked storage environment (in raw terabytes)?"

0 to 99 TB	32%
100 TB to 200 TB	18%
201 TB to 500 TB	28%
501 TB 1,000 TB	15%
More than 1,001 TB	7%

Base: 839 global IT decision-makers

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell, May 2012