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ANALYZE THE FUTURE

Sponsored by:
Veeam

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Business Value Highlights

286% five-year ROI

89% lower cost of unplanned downtime

56% more efficient backup staff

85% faster data recovery windows

28% shorter backup windows

36% lower hardware costs

The Business Value of Using Veeam and NetApp to Reduce Data-Related Risks

EXECUTIVE SUMMARY

Data is increasingly at the core of any business or organization and is fueling new digital transformation (DX) initiatives. Data runs nearly every aspect of a company, from customer and employee engagement to product and service development to operations. Reflecting the strategic importance of data, an IDC global study of 800 organizations revealed that 47% of enterprises have a chief data officer today. The growing importance of data to remain competitive in today's disruptive business climate requires organizations to break down data silos and provide data services to achieve faster insights, business value, and oversight — especially as data becomes more distributed, dynamic, and diverse. With data at the center of business operations, data availability has never been more essential. Data availability is one of several elements in an effective and holistic data management strategy.

IDC interviewed organizations supporting data backup and recovery environments with Veeam software and NetApp storage hardware to understand the value of the combined approach. These organizations reported making data backup and recovery operations substantially more effective, thereby limiting the operational and business risk associated with data-related incidents. Further, they explained that they are leveraging Veeam and NetApp to make these environments more cost-effective to deploy and operate, with several organizations taking advantage of the integration to support operations such as development not traditionally associated with backup and recovery environments. The result is a strong value from their investment in Veeam software and NetApp storage hardware, which IDC projects will be valued at $31,642 per 100 users per year ($2.32 million per organization) over five years and would result in a five-year ROI of 286%, by:

- **Enabling more effective and timely data backup and recovery efforts** to reduce risk and costs associated with these activities

- **Reducing the cost of data-related outages** in terms of lost user productivity and revenue

- **Minimizing the staff time required to manage and support** data backup and recovery environments

- **Optimizing the cost of storage hardware** through longer life spans and improved data deduplication and compression capabilities

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SITUATION OVERVIEW

The Rise of Digital Transformation

In 2017, businesses spent $1.1 trillion trying to transform into connected, intelligent, and technology-driven organizations. In 2018, businesses are expected to spend an additional $1.3 trillion. By 2021, businesses worldwide will spend $2.1 trillion just trying to transform. IDC projects that in that same time frame, 70% of CIOs will have developed a cloud-first strategy to support the infrastructure agility required by transformation. DX is the path forward in a hyperconnected world. To transform, companies must find innovation and agility and be prepared to go to market rapidly, at scale, with new products and services while developing key insights necessary to reach core audiences and open new markets.

IDC asserts that to achieve this transformation, organizations will leverage an intelligent core platform, which turns business activity insight into actionable intelligence in a streamlined, continuous process. IDC describes this as the DX platform; at its center, the platform relies on diverse, distributed, and dynamic data to drive the opportunity. Without data at the center, the DX model fails. In this model, data is critical to business survival and, in turn, makes data integrity and accessibility sacrosanct.

However, the attributes and location of data relevant to a DX platform continue to change. Data has become increasingly diverse, spanning not only structured systems but also unstructured data such as time series data, machine-generated data, and stream data. Data is also increasingly more dynamic; it not only is based on batch runs but also is real time in nature as telemetry data is generated from a growing number of sensors and devices. Further, data is increasingly distributed, located not only in core datacenters but also in edge locations, on devices, and in cloud services. Data being diverse, dynamic, and distributed further exacerbates the ability to employ a centralized and holistic data services framework.

There are significant benefits to holistic data services across the enterprise, including shortening time to value, lowering costs, and creating an environment that encourages innovation, but failing to move in concert can have a negative effect on potential benefit. Moving to a cloud-first strategy, for instance, may be the right plan for your business, but if each business unit is able to use its own providers, services, SaaS, and so forth, the business could duplicate effort and spend or miss out on the economies of scale that may be gained by leveraging a single provider. This creates a significant challenge: How do businesses journey through digital transformation in a concerted way?

The same challenge exists when examining data use. Individual business units may have the need for specific data at specific times. Other business units may have the need for the same data or for data that has been manipulated in a slightly different way. In some organizations, that data may be duplicated time and again for use by different business units. In other businesses, lines of business may not have a full understanding of the types of data available to them at all. Increasingly, the value derived from data is not looking at data sources independently but combining data sets from historically disparate data silos. How is a holistic effort around data management applied across these disparate and increasingly distributed and diverse data sources? How do you encourage innovation and provide everyone with the right level of data access to support their efforts?

In today's regulatory environment, the right level of access may even be paramount to inspiring innovation. The strict rules and potential 4% of revenue fines associated with the General Data Protection Regulation (GDPR) are well documented, but even companies that don't do business with the European Union cannot afford to skimp on data protection mechanisms. About 40% of the world's nations already have privacy laws of some type in place and, given the worldwide coverage of Cambridge Analytica's use of Facebook data, it is entirely likely that additional regulations will continue to emerge.

As a result, businesses are being forced to maintain a delicate data balance. They must encourage innovation, but they cannot innovate without guardrails that establish ways of consistently operationalizing data without exposing data that could generate a regulatory issue against a backdrop of a more complex data use landscape. At the same time, businesses must be able to provide a comprehensive view of their data sources not only to ensure compliance with data controls but also to maximize the value of an increasingly important asset — their data capital.

VEEAM AND NETAPP

NetApp and Veeam have a strategic partnership to deliver Intelligent Data Management for the Hyper-Available Enterprise. The Veeam Availability Suite provides enterprise scalability for backup and replication of mission-critical workloads for applications and data running on NetApp FAS, FlexPod, SolidFire, and E-Series systems. Customers can create image-based backups with little to no impact on production for all applications and data in vSphere and Hyper-V environments.

THE BUSINESS VALUE OF VEEAM SOFTWARE WITH NETAPP STORAGE

Study Demographics

IDC interviewed eight organizations for this study, asking them a variety of quantitative and qualitative questions about the impact of deploying the integrated Veeam and NetApp solution on their IT operations, businesses, and costs. Table 1 characterizes the attributes of these organizations. As shown in the table, substantial company size is evident with the average number of employees across all organizations at 14,200 and average annual revenue of $4.94 billion. The sample of companies involved in the study represented a spectrum of geographies and vertical industries. Six companies were based in the United States, one company was based in Belgium, and one company was based in the Netherlands. There was a good level of diversity among vertical industries, which included the biotechnology, education, finance, government (2), healthcare, and manufacturing (2) sectors.

TABLE 1 Demographics of Interviewed Organizations

	Average	Median
Number of employees	14,200	10,500
Number of IT staff	938	193
Number of business applications	696	350
Revenue per year	$4.94 billion	$2.9 billion
Countries	United States (6), Belgium, and the Netherlands	
Industries	Biotechnology, education, finance, government (2), healthcare, and manufacturing (2)	

n = 8

Source: IDC, 2018

At the organizations surveyed, the interviewed IT managers described various reasons for choosing the Veeam and NetApp solution set over alternative approaches. Overall, they cited the advantages of having a combined solution that leveraged the value of NetApp storage hardware and its capabilities while providing additional value from specially designed Veeam software. They also pointed to a number of key selection criteria, including:

- Synergies from a combined solution

- Better data protection and integration

- Enhanced storage performance

- Increased configuration speed

Regarding the value derived from the combined Veeam and NetApp solution, one customer stated: *"The additional value from the combination was significant enough to choose NetApp over another competing product. I'd say there's something like 20% more value by having both. It was the deciding factor for us."* On the topic of improved data protection, another customer and study participant said: *"Veeam and NetApp provide better data protection and better integration. Whether our data is in our datacenter or in the cloud, Veeam plus NetApp provides integrated data protection."*

As shown in Table 2, these organizations are using Veeam and NetApp to run and support significant data backup and recovery environments with an average of more than 1.4PB (1,424TB) of data. They are using the Veeam and NetApp solution to support a variety of applications, including:

- Customer-facing websites/portals

- Database workloads

- ERP workloads

- VDI apps

Overall, there was a mix of NetApp storage appliance models deployed, and configurations included Clustered ONTAP, MetroCluster, and a mix of hybrid and all-flash arrays. Table 2 provides additional metrics on the use of the Veeam and NetApp solution by interviewed organizations.

TABLE 2 Environments Supported by Veeam and NetApp

|	Average	Median
Number of datacenters	3	3
Number of sites/branches	8	5
Number of users of applications	7,320	3,000
Number of TB	1,424	600

n = 8

Source: IDC, 2018

Business Value Analysis

Study participants reported that using Veeam software with NetApp storage hardware is enabling them to reduce risk associated with data backup and recovery activities. They are accomplishing this by speeding up recovery times and compressing backup windows as well as reducing the frequency and duration of impactful data-related interruptions to business operations. Further, the Veeam and NetApp combination is proving cost effective, both from the perspective of maximizing the value of their

investments in storage hardware and in terms of staff time required to support and manage their extensive and often growing data environments. IDC's analysis shows that these benefits translate into significant value for interviewed organizations (see Figure 1), which IDC quantifies at an average of $31,642 per 100 users per year ($2.32 million per organization) over five years in the following areas:

- **Risk mitigation — user productivity benefits.** Reducing the frequency of outages and performance degradation related to data backup and recovery activities means higher employee productivity and less revenue loss. IDC puts the value of higher productivity and revenue at an annual average of $19,565 per 100 users ($1.43 million per organization).

- **IT staff productivity benefits.** Enabling faster and more robust data backups and recovery efforts frees up time for these teams, while the combined Veeam and NetApp solution requires less time to manage and support. IDC quantifies the value of these staff efficiencies at an average of $7,420 per 100 users per year ($543,100 per organization).

- **IT infrastructure cost reductions.** Extending life spans of organizations' data backup and recovery hardware through more efficient use reduces costs associated with building and running these environments. IDC calculates these savings at an average of $4,146 per 100 users per year ($303,500 per organization).

- **Business productivity benefits.** Increased confidence in the stability of their backup and recovery environments is enabling organizations to better focus on addressing business opportunities, resulting in additional revenue that IDC projects will have an average value of $511 per year per 100 users ($37,400 per organization).

FIGURE 1 Average Annual Benefits per 100 Users
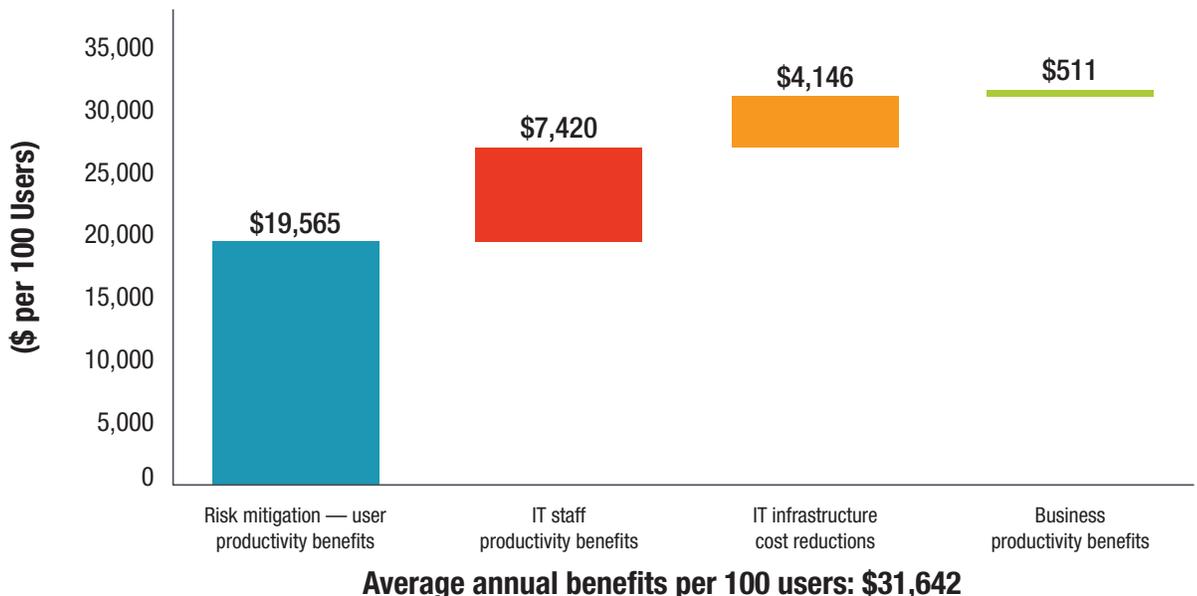
Source: IDC, 2018

Enhancing Ability to Maintain and Use Data

Study participants spoke about how the Veeam and NetApp solution has made their core processes for data backup and recovery more efficient. By running their data backup and recovery operations on Veeam and NetApp, they perform these operations in less time, more effectively, and with more agility. This not only limits risk related to these activities but also helps ensure business continuity and reduces operational costs associated with backing up and recovering data.

Study participants cited features and capabilities of their Veeam and NetApp environments that are enabling them to achieve efficiencies in the following areas:
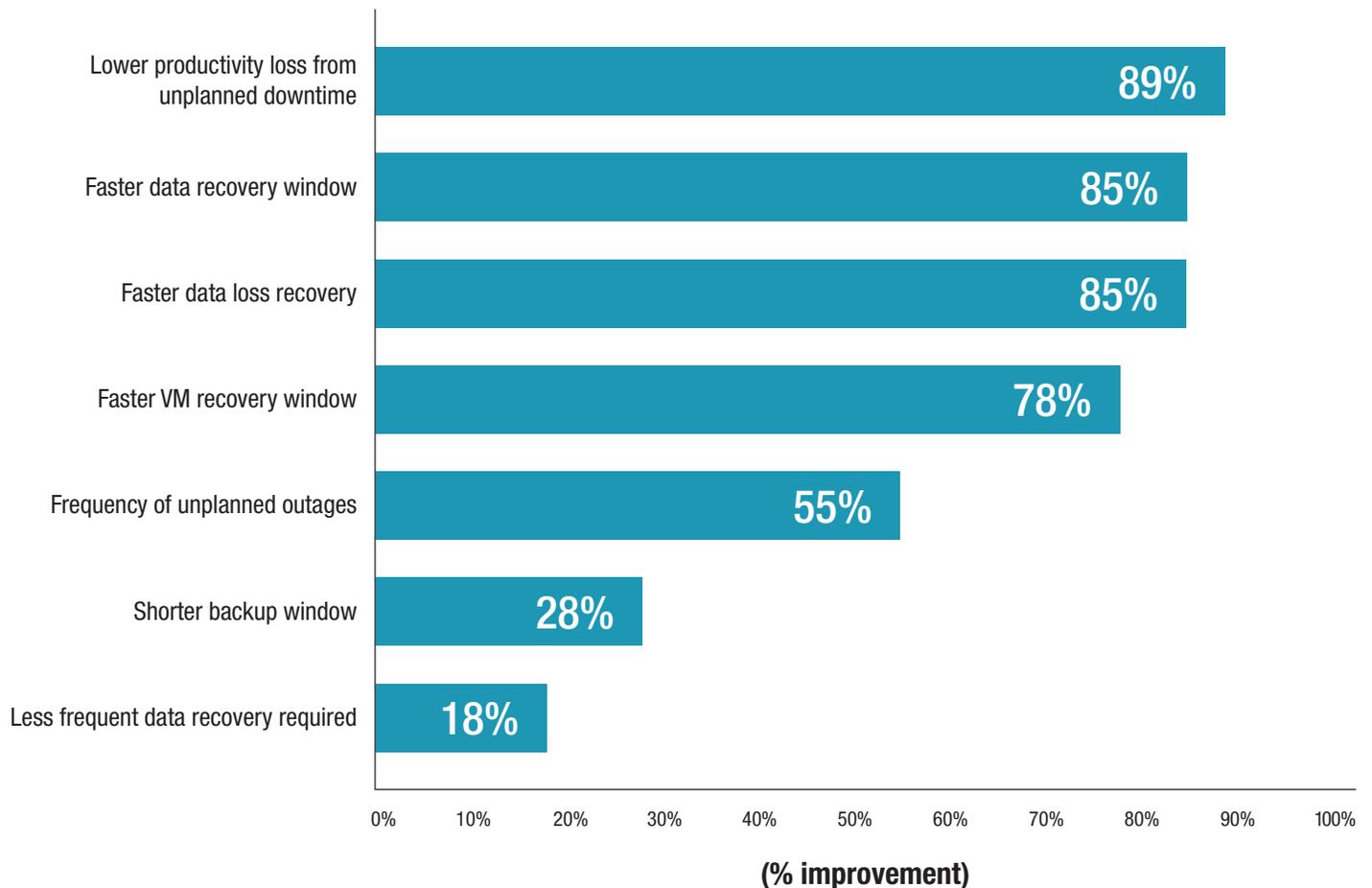
- **Data backups.** Customers cited the benefits of having a greater number of restore points, which enables access to previous data states as needed. In addition, snapshot functionality allows for more frequent and regularly scheduled backups.

- **Data loss and recovery.** Study participants described recovering data and VMs much faster than with previous approaches when problems did occur. The ability of the Veeam and NetApp solution to automatically add VMs to backup was cited as a factor in smoothing and optimizing the recovery process. Further, the "live restore" capability has largely obviated the need for organizations to take systems offline during recovery efforts.

Interviewed organizations provided specific examples of efficiencies they are achieving in the following areas with the Veeam and NetApp solution:

- **Streamlined data recovery:** *"Data recovery used to take 1–2 hours, and now it's down to 3–5 minutes. That huge improvement is the reason we went with Veeam."*

- **Fewer and more efficient recovery efforts:** *"We've gone from a couple of data recovery requests per month before Veeam and NetApp to once every month or two. They used to take 4–8 hours to carry out. Now it's done within the hour with live restores, typically in 5–10 minutes."*

- **Faster restores:** *"Before Veeam and NetApp, a failure and restore could take 10 hours because the only option was to restore it from a backup repository, depending on what kind of data was involved. But with the Veeam and NetApp integration, the size of the VM doesn't really matter. We can restore the same thing in 5 minutes now because of snapshot integration."*

Figure 2 provides granular data on the key benefit metrics derived from IDC's analysis of customer data. Notably, customers are shortening their data recovery windows by an average of 85% and their VM recovery windows by 78% while bringing down the frequency of recovery efforts by an average of 18%. Meanwhile, they are completing backups faster (28% shorter backup window on average), helping them ensure that backup windows do not bleed into normal business hours.

FIGURE 2 Key Benefit Metrics

Benefit	% improvement
Lower productivity loss from unplanned downtime	89%
Faster data recovery window	85%
Faster data loss recovery	85%
Faster VM recovery window	78%
Frequency of unplanned outages	55%
Shorter backup window	28%
Less frequent data recovery required	18%

(% improvement)

Source: IDC, 2018

Reducing the Business Cost of Data-Related Risk

Study participants almost uniformly spoke about how the Veeam and NetApp solution has helped them reduce risk related to the use of data. The key dynamic is that having more robust and effective backup environments reduces the chances of data-related outages and events, and recovery is faster and more effective when problems do occur. Risk reduction can be traced to best practices in data protection enabled by the solution set, including:

- More frequent and regular backups using snapshot functionality

- Faster recovery of data and VMs when problems occur

- The creation and availability of more restore points

- The ability to add VMs automatically to backup

Addressing the benefit of reducing impactful downtime, one customer noted:

"With Veeam supporting both NetApp snapshots and VMware vSphere snapshots, there's no downtime on running systems. It's like instant snapshotting on your virtual machines. In reality, they do not go offline, and it's all going on behind the scenes. Hourly backups go on during the day, and nobody notices them happening."

With respect to the ability to keep applications online, another customer observed:

"With Veeam and NetApp, we can do live migrations, live restores, and even live backups. We don't have to tell the user that downtime is needed."

Table 3 illustrates the operational impact of the solution set in terms of user productivity losses that occur as a result of unplanned outages. Fewer unplanned outages, less degradation of application performance, and faster resolution combine to lower the overall cost of data-related employee productivity losses by a significant 89% on average.

TABLE 3 Impact of Unplanned Downtime on User Productivity

	Before Veeam and NetApp	With Veeam and NetApp	Difference	Benefit (%)
Frequency per organization per year	24.9	11.1	13.8	55
MTTR (hours)	3.5	0.9	2.6	73
FTE impact per organization per year	7.2	0.8	6.4	89
Value of lost productivity per organization per year	$504,900	$55,200	$449,700	89

Source: IDC, 2018

Meanwhile, application and service outages related to data backup and recovery efforts can take a significant toll on businesses in terms of revenue. Outages can mean that customers are not served, orders are not processed, and new deals are not won. This is reflected in a significant average cost per hour of unplanned downtime of over $200,000 for interviewed organizations (see Table 4). However, with the Veeam and NetApp solution, study participants have made substantial strides in minimizing the business impact of unplanned outages related to their data environments, reducing revenue losses associated with unplanned outages by an average of $6.55 million per year.

TABLE 4 Impact of Unplanned Downtime on Revenue

	Per Organization	Per 100 Users
Average cost per hour of unplanned downtime	$205,620	$2,809
Revenue lost per year per organization	$6.55 million	$89,477
Recognized revenue* lost per year per organization	$982,500	$13,422

*IDC applies a 15% operating margin assumption to all revenue benefits for purposes of quantifying revenue for the model.

Source: IDC, 2018

Enabling More Efficient Data Backup and Recovery Efforts

Study participants stressed the importance of making storage and disaster recovery teams more effective by enabling more efficient data backup and recovery processes with their Veeam and NetApp storage environments. They traced these benefits to:

- Consistent backups that are easy to manage and troubleshoot

- The availability and use of automation and synchronization

- The benefit of an optimized user interface

- Process simplification and platform stability

Study participants provided specifics of how Veeam and NetApp have positively affected staff responsible for data backups and recovery efforts:

- **Less time on backups.** *"Our team spends most of its time managing and doing data backups. They're saving time because of Veeam and NetApp — probably 60% of all of the time they spend on these activities. Backups that used to take an hour now take 10 minutes."*

- **Streamlined recovery.** *"The speed of recovery is completely different with Veeam and NetApp. We've gone from a week to maybe a day or two at the most depending on the extent of the outage."*

- **Seamless onboarding of new VMs.** *"The Veeam and NetApp environment is much more automated and much more secure. We went from having a very complicated setup every time we added a new client to not having to do anything because the system actually discovers the new VM created."*

With these efficiencies, study participants have freed significant time for their data backup and recovery teams to improve the quality of their efforts and take on other responsibilities. IDC calculates that overall, these teams are an average of 56% more efficient with Veeam and NetApp (see Table 5).

TABLE 5 Impact on Data Backup and Recovery Teams

	Before Veeam and NetApp	With Veeam and NetApp	Difference	Benefit (%)
FTEs per organization (ongoing operations)	5.6	2.5	3.1	56
Hours of staff time per 100 users per year	144	63	80	56
Value of IT staff time per organization per year	$558,600	$246,800	$311,800	56

Source: IDC, 2018

Reducing the Cost of Backing Up and Protecting Data

Study participants also noted that they have been able to create cost-effective data backup and recovery environments with Veeam and NetApp. This is true both in terms of operational expenses, as described previously, and in terms of hardware requirements. According to study participants, hardware costs associated with using Veeam and NetApp are 36% lower than those of alternative solutions they considered. These cost efficiencies can be linked to several factors identified by study participants:

- Over the life span of the system, the solution set allows for more cost-effective growth.

- Flash extends life span because performance levels are extended over time.

- Lower use rates that result from higher performance and improved deduplication capabilities allow for more efficient use of capacity.

Regarding lower storage costs, one customer said: *"If we did backups using a more traditional solution, we'd be using another 2–3PB, so we're easily avoiding 1–2PB with Veeam and NetApp, which would cost hundreds of thousands if not a million dollars."* The same customer addressed the benefit of a more consolidated environment: *"With Veeam and NetApp, we're able to condense our landscape a lot. We've reduced about 300–400 servers."*

Figure 3 presents the overall cost of operating these backup and recovery environments over five years with the Veeam and NetApp solution compared with previous and alternative environments. The net financial benefit was a 58% lower cost of operations over five years, resulting from:

- Hardware cost efficiencies

- Efficiencies in managing environments

- Reduced impacts from outages affecting user productivity

FIGURE 3 Five-Year Cost of Operations
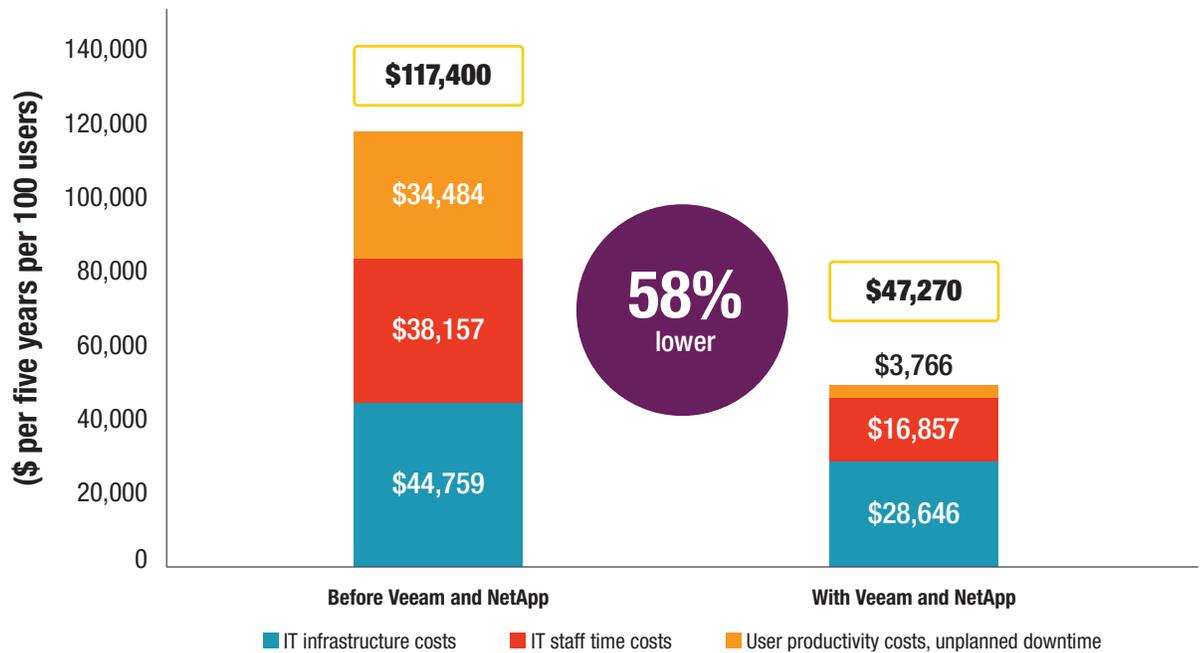
Source: IDC, 2018

Enabling the Business Through Agility and Confidence

In addition to the operational efficiencies cited previously, customers also spoke about forward-looking business opportunities of having a Veeam and NetApp data backup and recovery environment, including potential opportunities related to the development of applications and features. More broadly, the business-focused impact these organizations mentioned centered on aggregate increased levels of confidence, agility, and purpose as the result of risk reduction across a number of specific areas. For example, one organization described the ability to clone VMs and workloads more easily as making it *"super agile,"* thereby opening up the possibility of business units to better serve customers and win additional business. In addition, greater operational efficiency when performance is higher and combined with fewer outages translates to increased revenue opportunities.

Case Study: Intelligent Data Management and Impact on Application Development for Apex Tool Group

As organizations increasingly face an imperative to generate value through data, their data backup and recovery environments, which house and handle significant volumes of key operational data, will increasingly be called upon to enable data use at an organizational level. A key area of focus for many organizations is their development teams, which require consistent and timely access to data as well as compute and storage resources for testing activities.

One interviewed organization, Apex Tool Group, has deployed Veeam and NetApp in a way that provides its development team of several hundred with easier and less expensive access to the storage required to carry out testing activities. An IT manager at Apex explained that by leveraging Veeam's intelligent data management capabilities through the company's integration with ONTAP, the development team now has access to needed storage capacity in significantly less time to perform testing. He commented: *"With Veeam and NetApp, we can clone storage and provide it for use in testing without really using it. It's really a major benefit because it saves each developer days per year of time that they otherwise would have spent identifying and waiting for this storage capacity."*

The IT manager reported that this flexibility has provided a significant boost to Apex Tool Group's development efforts. He noted that it helps his company avoid the need to scope out development-related work and buy IT resources ahead of time, and it allows the IT team to prepare the entire environment needed for a project in less than a day and have it operationally ready within a day.

The result has been more robust development efforts that align with real-time business demand and an improved ability to serve customers that indirectly results in higher revenue for the company.

ROI Analysis

Table 6 presents IDC's analysis of the benefits and costs associated with interviewed organizations' use of Veeam software and NetApp storage hardware for the organizations' data backup and recovery operations. IDC projects that study participants will realize discounted benefits worth an average of $112,738 per 100 users ($8.25 million per organization) over five years based on a discounted investment cost of $29,199 per 100 users ($6.11 million per organization). This would result in a five-year ROI of 286%, with these organizations seeing a positive return on their investment in the combined Veeam and NetApp storage environments in an average of nine months.

TABLE 6 Five-Year ROI Analysis

	Per Organization	Per 100 Users
Benefit (discounted)	$8.25 million	$112,738
Investment (discounted)	$2.14 million	$29,199
Net present value (NPV)	$6.11 million	$83,539
Return on investment (ROI)	286%	286%
Payback period	9 months	9 months
Discount rate	12%	12%

Source: IDC, 2018

CHALLENGES AND OPPORTUNITIES

As data becomes more diverse, dynamic, and distributed, it can stymie an effective and holistic data management strategy. A holistic data management strategy is one that spans a myriad of related data services, including data protection, data security, data integration and orchestration, and data location optimization. However, to employ such a solution requires coordination and collaboration among data-related stakeholders. An effective data management strategy is broad in scope and stakeholders, bringing together different constituents. Key stakeholders include not only security, operations, engineering, legal, and risk professionals but also data owners and line-of-business executives. This requires collaboration and planning across organizations with different priorities and depth of knowledge. This organizational dynamic is a challenge commonly seen in larger organizations but can be addressed through C-level strategic planning and priority setting.

CONCLUSION

Data is the lifeblood of any organization. In today's competitive and disruptive business climate, organizations must continue to innovate by leveraging data in strategic ways. This imperative requires organizations to break down data silos and provide holistic data services to achieve faster insights, business value, and oversight — especially as data becomes more distributed, dynamic, and diverse. With data at the center of business operations, data availability has never been more essential.

Data availability is one of several elements in an effective and holistic data management strategy. Together, Veeam and NetApp are providing such a solution.

APPENDIX

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from organizations currently using Veeam software with NetApp storage hardware as the foundation for the model. Based on interviews with study participants, IDC performs a three-step process to calculate the ROI and payback period:

- Measure the savings associated with using Veeam software and NetApp storage hardware in terms of reduced IT costs (staff, hardware, software, maintenance, and IT support), increased user productivity, and business impact measured by revenue over the term of the deployment compared with their previous environments.

- Ascertain the investment made in using Veeam and NetApp.

- Project the costs and savings over a five-year period and calculate the ROI and payback for the deployed solution.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and productivity savings. For purposes of this analysis, based on the geographic locations of the interviewed organizations, IDC has used assumptions of an average fully loaded salary of $100,000 per year for IT staff members and an average fully loaded salary of $70,000 for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).

- Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.

- The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.

- Lost productivity is a product of downtime multiplied by burdened salary.

- The net present value of the five-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

- Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our assessment, we ask each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.

Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

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