



White Paper

The Business Value of High-Availability Storage Environments from Hewlett Packard Enterprise and Veeam Software

Sponsored by: HPE and Veeam

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EXECUTIVE SUMMARY

IDC spoke with organizations that had on average 8,000 employees and that are using Hewlett Packard Enterprise (HPE) solutions as a primary and/or secondary storage solution supported by Veeam software – HPE and Veeam. IDC's analysis shows that study participants will realize strong value with HPE and Veeam supporting their data protection and recovery operations and will achieve benefits worth an average of \$1.39 million per organization (\$25,550 per 100 users) per year, which would result in a five-year ROI of 262%.

For study participants, like all organizations, data protection and availability are absolute necessities. Yet few organizations attempt to derive a comparative market advantage through their data protection and availability scheme. Instead, most focus on cost minimization with a vague goal of reducing downtime. IDC research for this white paper has found that a well-crafted data protection infrastructure can indeed benefit the organization with competitiveness-enhancing results. This includes better data availability, streamlined IT operations that open opportunities to take on strategic work, reduced risk of data loss, and significant financial and competitive benefits.

Study participants reported that their HPE and Veeam deployments have enabled more efficient and cost-effective data storage operations and have significantly reduced data loss risk and costs associated with data protection and recovery efforts by:

- Enabling faster and more frequent execution of data backup and recovery activities
- Increasing the availability of data and applications and reducing the impact of data-related or virtual machine (VM) outages on users and the business
- Supporting more efficient data protection and recovery efforts for IT staff
- Delivering a dependable cost-effective data protection and recovery solution

Business Value Highlights

- 262% five-year ROI
- 78% lower cost of unplanned downtime
- 28% more efficient backup staff
- 93% faster data recovery windows
- 83% shorter backup windows
- 89% more frequent backups
- 38% lower hardware costs

SITUATION OVERVIEW

Everyone is familiar with the axiom that time is money. Businesses are increasingly understanding how that applies to data availability as well. IDC research conducted for this white paper found that for the companies interviewed, the median downtime cost was \$150,000 per hour. Of course, cost avoidance is not the only benefit that can be derived. Aggressive companies can leverage data availability to generate revenue, and improving data protection operations can not only lower operational cost but also free up more time for IT staff to attack new strategic technology initiatives, including such things as digital transformation (DX) and becoming a data-centric organization.

IDC research has also found that more than 70% of IT organizations have embarked on some effort toward digital transformation. New application deployments are predominantly cloud first and often involve the internet of things (IoT) devices not even imagined just a few years ago and operating environments only recently released. In addition, 70% of IT organizations have some development projects involving nontraditional data types, such as NoSQL or Hadoop, and half of those organizations expect to deploy those applications into production within the next 24 months.

This pace of technical change, combined with the business requirement of always-on data availability, challenges IT organizations to deploy data protection and availability schemes that can deliver concrete, measurable benefits. These organizations, with manpower stretched to the limit, do not have the time to integrate their own data protection hardware and software. Instead, they look to trusted partners and proven solutions that can be deployed quickly, simply, and with predictable good results. The solution must include all the necessary componentry of hardware and software in a tested and verified package. No data protection sales proposal would be complete without the perfunctory claims of "better TCO, lower costs, and less downtime." However, those vendors that can prove these benefits empirically will have an advantage over those that merely make the claim; IT leaders will want technology partners that can help deliver a measurable strategic market advantage. As demonstrated in this study, IDC calculates that organizations that have deployed the HPE and Veeam solution to support data protection and recovery operations will achieve a five-year return of 262% on their investment.

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HPE AND VEEAM AVAILABILITY SOLUTION

HPE and Veeam have teamed up to offer an integrated data protection solution based on hardware from HPE and software from Veeam. The core of Veeam's solution is made up of Veeam Backup and Replication, but the solution also includes Veeam Availability Platform, Veeam Availability Suite, and numerous agents for specific physical and cloud environments. For its part, HPE offers not only a full-breadth line of primary storage systems such as HPE 3PAR StoreServ and Nimble Storage but also the HPE StoreOnce secondary storage data protection solution. The combinations of these products allow everyone from small organizations up to large-scale enterprises to craft a solution suited to their specific environment.

IDC research shows that more than 70% of applications are currently run on x86 virtual infrastructure. The Veeam and HPE solution is designed specifically for these environments, including both VMware ESXi and Microsoft Hyper-V. Recovering these environments effectively means recovering both the

data and the virtual machine. The HPE and Veeam solution is designed to recover VMs in a matter of minutes.

The HPE StoreOnce family of products is a range of purpose-built backup appliances (PBBAs). The appliances range from virtual appliances deployed as a VM to multinode, high-capacity systems with the ability to store petabytes of data. Purpose-built backup appliances are designed to reduce the backup window, speed recovery (i.e., lower RTO), improve backup reliability, and reduce storage costs through deduplication and compression. By integrating a PBBA like StoreOnce with Veeam software, users can both simplify data protection implementation and lower their data retention cost. The combined products leverage storage snapshots to improve RPO and RTO, which is the goal of any data protection project.

The cost of outages for these organization is high; they reported that each hour of unplanned downtime carries a cost of \$381,000 (\$150,000 median).

One study participant stated the advantage it perceives in the combined HPE and Veeam solution: "The combination of HPE and Veeam creates value because when we have an issue, the relationship between HPE and Veeam helps ensure that resolution goes very well."

THE BUSINESS VALUE OF HPE AND VEEAM AVAILABILITY SOLUTION

Study Demographics

IDC interviewed seven organizations that have deployed HPE hardware and Veeam software to run and support their data protection and recovery operations. Study participants represented diverse experiences by size, geography, and vertical, as shown in Table 1. On average, these organizations have 7,964 employees and use 350 business applications, demonstrating the significant scope of operations supported by their data protection and recovery operations.

TABLE 1

Demographics of Interviewed Organizations

	Average	Median
Number of employees	7,964	1,300
Number of IT staff	459	25
Number of business applications	350	225
Countries	United States (three organizations), Canada, India, Malaysia, and New Zealand	
Industries	Education, entertainment, legal, manufacturing, retail, and software	

n = 7

Source: IDC, 2017

Study participants are backing up, protecting, and storing a significant volume of data with their HPE and Veeam environments (6 HPE storage systems, 1,006TB data, and 62 physical servers). The HPE storage systems being used by interviewed organizations included a mix of HPE 3PAR, HPE StoreOnce, and HPE StoreVirtual.

These organizations reported supporting a variety of workloads with HPE and Veeam, including VDI, HR, ecommerce, database, financial, and customer-facing services. The cost of outages for these organizations is high; they reported that each hour of unplanned downtime carries a cost of \$381,000 (\$150,000 median). For the most part, these organizations did not deploy their HPE hardware and Veeam software at the same time, which has helped them better understand the value of the combined HPE and Veeam environments (see Table 2). One study participant stated the advantage it perceives in the combined HPE and Veeam solution: *"The combination of HPE and Veeam creates value because, when we have an issue, the relationship between HPE and Veeam helps ensure that resolution goes very well."*

TABLE 2

Environments Supported by HPE and Veeam

	Average	Median
Number of datacenters	3	2
Number of sites/branches	17	19
Number of users of applications	5,425	1,300
Number of HPE storage systems	6	4
Number of terabytes — HPE storage systems	1,006	500
Number of servers	62	16

n = 7

Source: IDC, 2017

Business Value Analysis

Interviewed organizations reported deploying HPE hardware and Veeam software to create a high-availability, cost-effective, and efficient environment for storing, protecting, and recovering data and VMs. The HPE and Veeam solution enables them to reduce operational and business costs in terms of running these environments, minimize the impact of outages related to data availability, and reduce organizational risk. IDC projects that study participants will realize value through deployment of HPE and Veeam worth an annual average of \$1.39 million per organization (\$25,550 per 100 users) in the following areas:

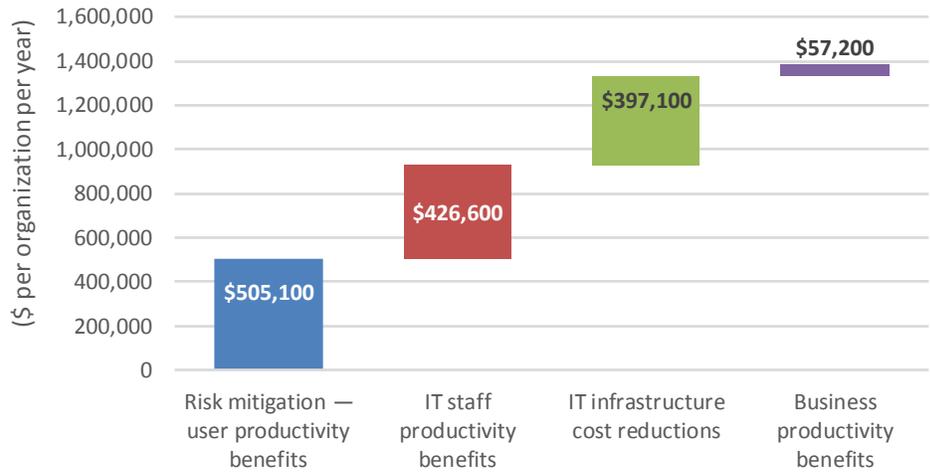
- **Risk mitigation – user productivity benefits: \$505,100 per organization per year (\$9,311 per 100 users).** HPE and Veeam help study participants reduce the impact of outages and data loss on their users and businesses by ensuring higher application and data availability. In addition, they enable these organizations to reduce data-related risk by carrying out backup and recovery activities more frequently and in less time. One study participant commented: *"HPE and Veeam have added tremendous value to our availability environment. I'll give you an example: our recovery time objective has been decreased by 88%. Activities that used to take eight hours now take one hour."*
- **IT staff productivity benefits: \$426,600 per organization per year (\$7,865 per 100 users).** HPE and Veeam enable teams responsible for data protection and recovery operations, as well as incident management, to be more efficient. The teams benefit from improved performance and automated backup and recovery. This means that less staff time is needed and frees up time to focus on other activities. According to one HPE and Veeam customer: *"We've used the native technologies and APIs between HPE and Veeam to improve our ability to manage them. It reduces our operational overhead, and we can use a lot of scripting to get the same outcome."*
- **IT infrastructure cost reductions: \$397,100 per organization per year (\$7,320 per 100 users).** HPE and Veeam provide a cost-effective storage environment. Study participants benefit from longer hardware life spans and capture operational efficiencies in terms of power and space from more efficient infrastructure. According to one study participant: *"While our data is expanding dramatically, the hardware capabilities of HPE StoreOnce have kept the number of TBs down – probably 20% as much as we would otherwise need."*
- **Business productivity benefits: \$57,200 per organization per year (\$1,054 per 100 users).** HPE and Veeam instill increased confidence in business operations by reducing risk. As a result, several study participants attributed revenue gains to having the confidence to pursue new business opportunities. One study participant said: *"Our employees now have more time with HPE and Veeam that they can spend selling and helping customers. That's a hard number to quantify, but our customer service levels are way higher now."*

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Figure 1 reflects the annual average value that IDC projects surveyed organizations will achieve through their use of HPE and Veeam in the areas discussed previously.

FIGURE 1

Average Annual Benefits



Annual average benefits per organization: \$1.39 million

Source: IDC, 2017

Delivering High Availability and Reducing Risk

Interviewed organizations reported that they are using HPE hardware with Veeam software to minimize risk associated with data, particularly for their data protection and recovery environments. HPE and Veeam are helping study participants carry out these data-related operations more efficiently and effectively and reducing the potential for these operations to exert a financial cost. Study participants cited a number of ways in which their HPE and Veeam environments improve the availability of data and reduce data-related risk:

- **Faster resolution of issues, contributing to 78% less unplanned downtime on average.** One organization commented: *"Before the Veeam and HPE solution, it took us maybe up to 8-10 hours to recover from downtime. After we implemented Veeam, the time to resolve incidents was reduced a lot – it takes less than 15 minutes ... we don't have revenue loss for the 15-minute incidents, while about 50% of incidents used to create lost revenue."*
- **Shorter data recovery windows, 93% shorter on average.** One organization said: *"With HPE and Veeam, we've restored an entire server in 10 minutes. Before, it took a day if we were lucky, but the problem was that the backup times were taking so long in the past that even if we could restore it, how good was the data going to be."*
- **Faster and more frequent data backups, 89% more backups taking 83% less time on average.** According to one study participant: *"We've reduced our backup windows from hours to 15 minutes with HPE and Veeam. That's important because you're exposed the entire time it takes the backup to complete ... it's just that we've lowered the risk by doing this and our exposure level."*
- **Keeping more data on-premise for longer, five times longer on average.** On average, study participants are able to keep data on-premise for significantly longer with their HPE and Veeam environments because they have the capacity and functionality to back up more data, reducing risk related to moving this data to secondary or other storage locations. According to one study participant: *"Before HPE and Veeam, we were keeping – if we were really lucky – a week's worth of retention, and that was only backing up a few servers, whereas now we're retaining data for 60-90 days, and that's almost every server."*

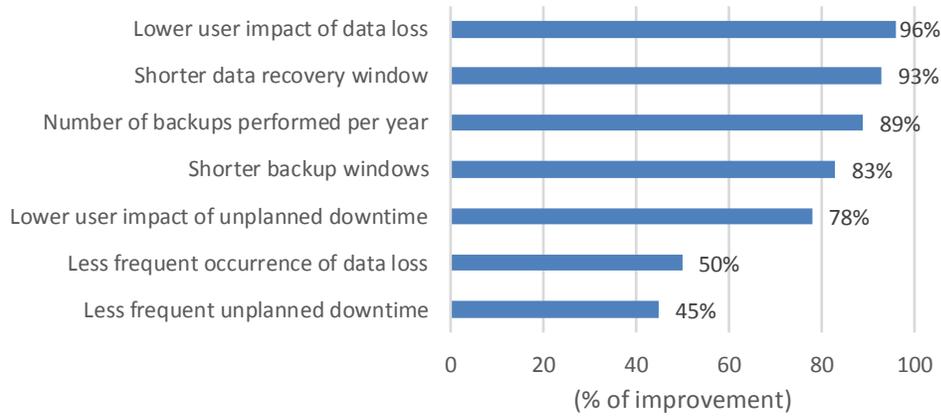
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As shown in Figure 2, the impact of using HPE and Veeam is significant across these types of data risk-related metrics. Overall, the metrics reflect these organizations' ability to lower risk related to outages, backup operations, and speed and time to recover. This puts the organizations in a better position to extract as much value as possible from their data environments rather than worrying about incurring operational and reputational costs that can be associated with outages, data losses, and malware breaches.

FIGURE 2

Key Availability Metrics



Source: IDC, 2017

Study participants explained that they have leveraged these types of operational improvements with HPE and Veeam to reduce the frequency with which user-impacting incidents occur and diminish the amount of time it takes to resolve these issues. This means that HPE and Veeam are helping these organizations substantially reduce the impact of such application outages and periods of data unavailability on their employees, thereby helping them increase their productivity levels, which results in hundreds of thousands of dollars per year in reduced downtime impact. As shown in Table 3, IDC calculates that these organizations will save 78% of productive employee time lost to unplanned outages and 96% of time lost to data losses.

Table 3 provides an overview of HPE and Veeam's impact on unplanned outages and instances of data loss affecting surveyed organizations.

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TABLE 3

Impact of Unplanned Downtime and Data Loss on User Productivity

	Before HPE and Veeam	With HPE and Veeam	Difference	Benefit (%)
Unplanned downtime				
Frequency per organization per year	2.4	1.3	1.1	45
MTTR (hours)	5.1	1.2	3.9	77
FTE impact per organization per year	8.3	1.8	6.5	78
Value of lost productivity per year — unplanned downtime	\$582,500	\$125,400	\$457,100	78
Data loss				
Frequency per organization per year	6.0	3.0	3.0	50
MTTR (hours)	18.2	0.2	18	99
FTE impact per organization per year	0.5	0	0.5	96
Value of lost productivity per year — data loss	\$34,400	\$1,300	\$33,100	96

Source: IDC, 2017

Making IT Staff Responsible for Data Protection and Recovery Efforts More Efficient

Interviewed organizations also reported that their HPE and Veeam solutions have benefited their IT teams, especially staff responsible for managing, maintaining, and supporting their data protection and recovery environments. One study participant cited the integration of Veeam software with HPE hardware capabilities as especially impactful on the management of its environment: *"The most significant benefit of using HPE and Veeam is easily the integration between the two products. Basically, we've leveraged the integration between the Veeam product and our HPE 3PAR systems."* Another organization commented: *"If we didn't have HPE hardware, we would need more people, and if we didn't have Veeam, we'd need at least another two people ... Veeam helps with managing servers because the guys that work on the backup stuff have to manage the servers as well. Before, they were spending half their time on the backups. Now they are getting at least 30% back now."* On average, these teams are 28% more efficient with HPE and Veeam, reflecting their ability to carry out related activities faster and more effectively (see Table 4).

"The most significant benefit of using HPE and Veeam is easily the integration between the two products. Basically, we've leveraged the integration between the Veeam product and our HPE 3PAR systems."

Study participants cited various drivers of these efficiencies, including:

- Greater automation and scripting with HPE and Veeam that reduces the amount of staff time needed to carry out day-to-day activities
- Fewer issues related to backups that require staff time to identify and resolve
- Faster responses during hardware failures mean less staff time spent on investigations and remediation
- More efficient hardware means less staff time on management and maintenance

TABLE 4

IT Staff Impact, Data Protection, and Recovery

	Before HPE and Veeam	With HPE and Veeam	Difference	Benefit (%)
FTEs per organization, ongoing operations	7.2	5.2	2.0	28
Hours of staff time per 100 users per year	251	180	71	28
Value of staff time per organization per year	\$724,300	\$519,000	\$205,300	28

Source: IDC, 2017

Reducing Data Protection and Recovery Infrastructure Costs

Interviewed organizations also reported that they have lowered costs related to their data protection and recovery environments with HPE and Veeam. In particular, they are able to make more efficient use of hardware, meaning that they require fewer storage systems and lesser storage capacity to accomplish better results with HPE and Veeam. Several organizations cited capabilities of their HPE and Veeam environments, including deduplication and data compression, minimizing their storage requirements by up to two-thirds. According to one study participant: *"HPE StoreOnce has been great. It uses dedupe, which has saved on storage costs ... if you have deduplication capabilities, then you don't need to buy as much storage."*

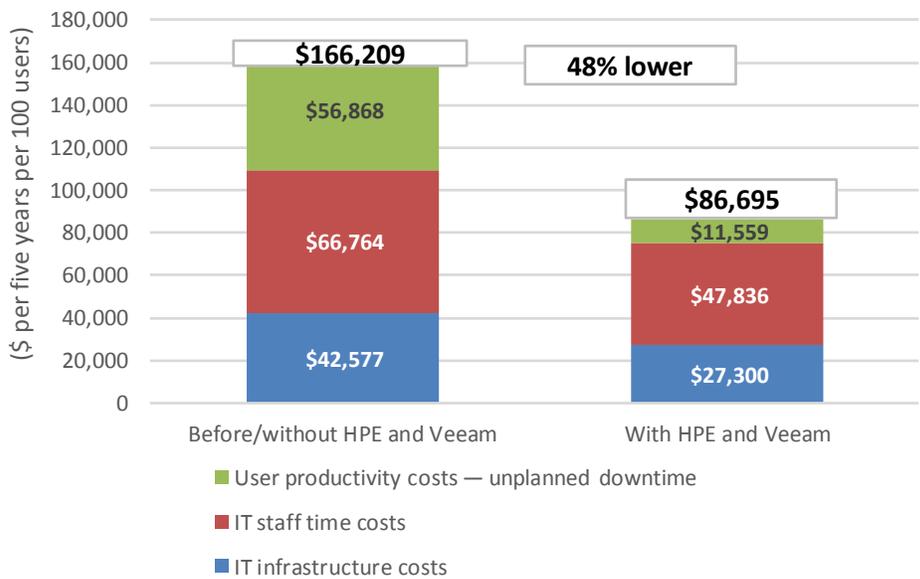
Meanwhile, on the server and storage hardware side, study participants attributed cost benefits to the operational efficiency of their HPE and Veeam environments. On average, study participants reported that they require 48% less storage capacity with their HPE and Veeam environments than they otherwise would, helping them spend 36% less on average for HPE and Veeam solution, maintenance, and ongoing operational costs (power/facilities).

These infrastructure efficiencies contribute to study participants being able to maintain significantly more cost-effective data protection and recovery environments. When combined with staff efficiencies in managing these environments and reduced productivity impact on employees from unplanned outages and data loss, IDC projects that they will be able to run their HPE and Veeam environments at a 48% lower cost over five years, as shown in Figure 3.

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FIGURE 3

Five-Year Cost of Operations



Source: IDC, 2017

Supporting the Business with Confidence

Interviewed organizations also noted that reducing risk with HPE and Veeam leads to increased business confidence. This in turn can help these organizations better address business opportunities, resulting in improved business results in the form of higher revenue for several interviewed HPE and Veeam customers (see Table 5). One interviewed organization that must run business-critical

applications round the clock noted: *"There are times that I can think of that without HPE and Veeam, we would have been in a bad situation."*

TABLE 5

Business Operations Impact and Revenue

	Per Organization	Per 100 Users
Business impact — revenue impact from better addressing business opportunities		
Total additional revenue per year	\$381,041	\$7,024
Total recognized revenue per year*	\$57,156	\$1,054
Business impact — reduced impact of unplanned downtime		
Total additional revenue per year	\$98,898	\$1,823
Total recognized revenue per year*	\$14,835	\$273

* IDC applies a 15% operating margin assumption on total revenue to arrive at total recognized revenue for purposes of calculating financial value discussed in this study.

Source: IDC, 2017

ROI Analysis

Table 6 presents IDC's analysis of the benefits and costs of using the combined HPE and Veeam solution for study participants. IDC projects that these organizations will spend a discounted average of \$1.34 million per organization (\$24,729 per 100 users) over five years on HPE and Veeam. IDC calculates that in return these organizations will realize benefits worth a discounted average of \$4.85 million per organization (\$89,416 per 100 users) over five years. For study participants, this would result in an average five-year ROI of 262% on their investment in HPE and Veeam, with breakeven on their investment occurring in just 12 months. For details about IDC's methodology, see the Appendix.

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TABLE 6**Five-Year ROI Analysis**

	Per Organization	Per 100 Users
Benefit (discounted)	\$4.85 million	\$89,416
Investment (discounted)	\$1.34 million	\$24,729
Net present value (NPV)	\$3.51 million	\$64,686
Return on investment (ROI)	262%	262%
Payback period	12 months	12 months
Discount rate	12%	12%

Source: IDC, 2017

CHALLENGES AND OPPORTUNITIES

The diversity of application deployment models brought about by the rise of 3rd Platform technologies and cloud inherently increases the complexity of enterprise data protection and availability schemes. Because of this diversity, there is no single solution that can meet the requirements of all applications. Thus IDC recommends that IT leaders look for best-in-class solutions for the most important applications. This scenario does not challenge just IT organizations, however. Vendors, including HPE and Veeam, must continue to stay in the forefront of emerging data protection requirements while addressing ever more stringent service-level requirements for existing applications.

It also must be recognized that HPE and Veeam are independent organizations with their own development and market priorities. While their solutions may be highly complementary today, there is no assurance that either company will continue to prioritize coordination with the other company. Moreover, in an industry known for mergers and acquisitions, there can be no assurance that either company will continue as an independent entity with current product directions and plans.

Although this study uses rigorous analytical methods, every organization's specific situation and environment will be different and thus specific results will also vary. IT organizations are advised to quantify business results for themselves when evaluating or implementing any data protection and availability solution.

CONCLUSION

Organizations can no longer hope for the best regarding data protection and availability. Protecting their data and ensuring the availability of applications relying on growing volumes of data have become business and operational necessities. This is especially the case as organizations continue

digital transformation efforts that require the creation of affirmative value with data rather than just trying to minimize possible negative outcomes from maintaining and using data. Nonetheless, too few organizations view their efforts to ensure data protection and availability as a potential competitive advantage, which it can be given the high potential costs associated with unplanned outages or data loss and the resources required to carry out data protection operations.

This study demonstrates the substantial value that organizations can achieve with an integrated, well-architected data protection and availability solution. Survey participants, those that are using HPE solutions as a primary and/or secondary storage solution supported by Veeam software, reported that their data protection and recovery operations have become more effective and efficient and less costly, even as they have significantly reduced data-related risk. For these HPE and Veeam customers, the value of their investment is clear: faster and more effective data protection and recovery operations, higher user productivity, reduced costs, and even higher revenue, in some cases. These benefits deliver value to the interviewed organizations that IDC calculates will result in a 262% ROI for their use of HPE and Veeam over five years.

APPENDIX

Methodology

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from organizations currently using the combined HPE and Veeam availability solution as the foundation for the model.

Based on interviews with the study participants, IDC has calculated the benefits and costs to these organizations of using HPE hardware and Veeam software. IDC used the following three-step method for conducting the ROI analysis:

1. **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of HPE hardware and Veeam software.** In this study, the benefits included staff time savings and productivity benefits, revenue gains, and IT-related cost reductions.
2. **Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using HPE hardware and Veeam software and can include additional costs related to migrations, planning, consulting, and staff or user training.
3. **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of the HPE and Veeam solution over a five-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

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 \$100,000 per year salary 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 asked 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.

About IDC

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