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Delivering Efficient Business Expansion with Dell EMC VMware-Based HCI

Business Value Highlights

$4.89 million
additional gross revenue per organization per year from better addressing business opportunities and reducing downtime

$5.33 million
in annual benefits per organization

56% faster
to extend business operations

60%
more efficient IT infrastructure teams

489%
five-year ROI

52%
lower cost of operations

90%
less unplanned downtime

Executive Summary

Companies of all sizes are rethinking inefficient IT processes that impede business growth and make it difficult to compete in a rapidly changing digital world. The result is an increased use of highly automated, software-defined infrastructure that helps eliminate datacenter silos and support a more agile IT environment. One of the technologies supporting such datacenter goals is hyperconverged infrastructure (HCI), which consolidates separate silos of compute, network, and storage down to a single software-defined solution. Today, established enterprises around the world are leveraging highly automated, scale-out HCI solutions to create an environment that supports their need to transform and scale operations rapidly and efficiently.

IDC spoke with organizations running various workloads on Dell EMC software-defined hyperconverged appliances, including VxRail and VxRack SDDC (Dell EMC VMware-based HCI). Study participants reported that deployment of Dell EMC VMware-based HCI has provided a cost-effective and high-performing infrastructure foundation on which to run important business applications across their distributed business environments. IDC's analysis shows that through their investment in Dell EMC VMware-based HCI, these organizations are realizing significant value that IDC quantifies at a total average annual value of $5.33 million per organization ($370,700 per 100 users) by:

» Enabling employees through improved application performance and winning new business

» Making IT infrastructure and application development teams more efficient and productive with more reliable and agile IT infrastructures

» Reducing the impact of infrastructure-related outages on business operations

» Optimizing hardware and other costs associated with running applications across offices and branch locations

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Situation Overview

There is a paradigm shift currently taking place in the IT industry that is driving streamlined IT processes to allow IT teams to make decisions based on workloads rather than the infrastructure itself and to increase time spent within the datacenter on high-value projects. This important shift is occurring because CIOs are being asked to ensure IT drives business opportunity rather than simply supporting ongoing business operations. CIOs are rarely given additional budget to accomplish these newly expanded mandates. As such, infrastructure investments are increasingly going toward solutions that balance lower capital expenditures (capex) and increased operational efficiency without sacrificing application performance or introducing new risks that could bring an application offline.

In this new agile environment, provisioning and managing IT resources can no longer be done in a siloed manner. Today's hyperconverged solutions are able to break down these silos and achieve greater agility by collapsing traditional infrastructure silos (servers, SANs, and shared storage) down to scale-out clusters of x86 servers that provide fully virtualized pools of compute, memory, and storage resources. Further, today's hyperconverged solutions provide a high degree of automation and help consolidate management tools that tend to be specific to a single environment.

Today's hyperconverged solutions are able to break down these silos and achieve greater agility by collapsing traditional infrastructure silos (servers, SANs, and shared storage) down to scale-out clusters of x86 servers that provide fully virtualized pools of compute, memory, and storage resources.

Business Value of Dell EMC VMare-Based HCI Solutions

IDC's analysis shows that study participants are realizing significant value in their investment in Dell EMC VMware-based HCI solutions, including VxRail and VxRack SDDC, in both absolute and relative terms. Importantly, they are achieving significant benefits in terms of both business operations across their distributed locations and costs related to deploying, running, and supporting their IT environments.

Firmographics of Study Participants

IDC interviewed seven organizations to understand the impact of deploying VxRail and VxRack SDDC appliances on their IT costs and performance and business and operational results. Study participants were from both the enterprise and small to midmarket segments, with an average employee base of 21,736 and a median of 1,400 (see Table 1). Interviewed organizations have annual average and median revenue of over $1 billion and represented the operational experiences of a variety of industry verticals.

TABLE 1

Demographics of Interviewed Organizations

	Average	Median
Number of employees	21,736	1,400
Number of IT staff	205	150
Number of business applications	270	160
Revenue per year	$1.45 billion	$1.1 billion
Countries	United States (6) and Ireland	
Industries	Healthcare, higher education, hospitality, IT service management, manufacturing, payment solutions, and utilities	

n = 7
Source: IDC, 2018

Study participants chose VxRail and VxRack SDDC for reasons related to broader efforts to digitize and modernize their IT operations and for specific reasons related to performance, agility, and cost:

» One study participant described how Dell EMC VMware-based HCI fits into its IT transformation and modernization efforts: *"VxRail is a key component of our IT transformation efforts because it helps us control costs and also be able to deploy tools to people very quickly. VxRail is an important piece of our efforts to automate and orchestrate around virtualization."*

» Another study participant described how the scalability of Dell EMC VMware-based HCI enables cost-effective business expansion: *"The main reasons we chose VxRail were speed to deploy and density. We needed to leverage a more consolidated capital expense … filling up that capacity instead of having incremental expenses along the way. For the business, this scalable system is a better option."*

Interviewed Dell EMC customers have deployed an average of six VxRail appliances and VxRack SDDC systems to run specific workloads that require strong performance and scalability. Dell EMC VMware-based HCI runs applications used by an average of 1,437 employees (see Table 2), with several interviewed organizations also running customer-facing applications and services. Examples of workloads that study participants run on Dell EMC VMware-based HCI include:

> *"VxRail is a key component of our IT transformation efforts because it helps us control costs and also be able to deploy tools to people very quickly. VxRail is an important piece of our efforts to automate and orchestrate around virtualization."*

TABLE 2

Dell EMC VMware-Based HCI Solutions Use by Interviewed Organizations

	Average	Median
Number of Dell EMC VMware-based HCI appliances and systems	6	5
Number of VMs	688	105
Number of users of applications on Dell EMC VMware-based HCI	1,437	375
Number of terabytes in Dell EMC VMware-based HCI environment	415	160

n = 7
Source: IDC, 2018

Study participants explained that they have leveraged VxRail and VxRack SDDC appliances to provide a high-performing, agile, and cost-effective infrastructure foundation for important business applications.

Quantifying the Value of Dell EMC VMware-Based HCI Solutions

Study participants explained that they have leveraged VxRail and VxRack SDDC appliances to provide a high-performing, agile, and cost-effective infrastructure foundation for important business applications running across their distributed business operations. With Dell EMC VMware-based HCI, they can better extend their businesses to address opportunities, improve the performance of key applications, and require less staff time to manage and support IT operations. IDC's analysis shows that they will realize total benefits averaging $5.33 million per organization ($370,700 per 100 users) per year over five years in the following areas:

» **Business productivity benefits.** Greater agility and improved performance translate to addressing more business opportunities in a timely fashion and more productive employees. IDC calculates the value of higher revenue and productivity at an annual average of $2.13 million per organization ($148,400 per 100 users).

» **IT staff productivity benefits.** Having a more reliable, automated, and agile infrastructure foundation enables application development teams and eases time requirements for IT infrastructure teams. IDC puts the value of staff time savings and productivity gains at an average of $2.02 million per year per organization ($140,600 per 100 users).

» **Risk mitigation benefits.** Reducing the impact of unplanned outages related to server and storage infrastructure means fewer interruptions for employees and business operations. IDC quantifies the reduction in lost employee productivity and revenue at an average of $0.80 million per organization per year ($55,400 per 100 users).

» **IT infrastructure cost reductions.** Putting in place a more streamlined and efficient IT infrastructure means lower hardware costs and expenses associated with running workloads. IDC calculates that study participants will save $0.38 million per organization per year ($26,300 per 100 users; see Figure 1).

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FIGURE 1

Average Annual Benefits per 100 Users

Average annual benefits: **$370,700 per 100 users**

Source: IDC, 2018

Business Productivity Benefits: Enabling Distributed Businesses and Employees

Study participants reported leveraging their VxRail appliances and VxRack SDDC systems to achieve operational efficiencies in the form of employee enablement as well as to better address business opportunities as they arise. This is resulting in substantial value for interviewed Dell EMC customers in the form of having more productive employees and generating additional revenue (see Table 3).

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TABLE 3

Business Productivity Benefits	Per Organization	Per 100 Users
User productivity impact		
Number of users impacted	1,437	100
Equivalent FTE gain	19.1	1.3
Total recognized value of higher productivity	$1.34 million	$93,100
Revenue impact (better addressing business opportunities)		
Additional gross revenue per year	$3.59 million	$250,000
Recognized net revenue per year — IDC model*	$539,000	$37,500
Other benefits		
Other operational cost reductions per year	$255,800	$17,800

* IDC model assumes a 15% operating margin for all additional revenue.

Source: IDC, 2018

Generating Value Through Improved User Experience

Study participants have noted significant improvements in IT performance metrics with Dell EMC VMware-based HCI. The result is a much improved experience for users of business applications running on VxRail and VxRack SDDC. One organization cited having more flash storage as driving performance improvements: "It's been a two-fold performance increase in application speed with VxRail because we went from traditional spinning disk to flash. That alone increased performance exponentially." For users of applications, performance gains mean a better experience — application response times improve and users can better access applications across disparate locations and device form factors. The result is that they can do their jobs better and are more productive. This is especially the case when application performance is closely related to users' ability to leverage the application to do their jobs — for example, running workloads such as VDI, healthcare patient databases, and transaction processing on their Dell EMC VMware-based HCI. Refer back to Table 3 for the substantial value that these performance improvements create for employees at these organizations, reflecting operational efficiencies related to their use of VxRail and VxRack SDDC.

Driving the Business with Scalability and Agility

Interviewed Dell EMC customers also cited the importance of the agility and scalability offered by VxRail and VxRack SDDC in enabling them to generate and address new business opportunities. This has been especially impactful for these organizations in terms of extending IT services to new branches and locations in a time-efficient manner — 56% faster on average, or from 10.3 weeks to 4.5 weeks with Dell EMC VMware-based HCI. Study participants also benefit from faster development cycles for new applications, features, and services (refer to Table 5).

Study participants link these infrastructure-related benefits to winning and maintaining more business, which results in higher revenue — $3.59 million of additional gross revenue per year per organization (refer back to Table 3; $539,000 additional net revenue per year per organization). Interviewed Dell EMC customers provided examples of how they have used improved agility, scalability, and performance to their business advantage:

» **Facilitating business expansion:** *"We were building a new conference center and needed a system that could easily scale. We did not know how it would grow, and VxRail gave us the ability to meet growth, whereas our previous environment did not ... Business expansion was key for us because we were being held back by the previous environment. It is all guns blazing now with VxRail."*

» **Speed of expansion:** *"Before VxRail, it would take weeks to add the compute and storage to add a new branch, and the costs would be unpredictable. We now project it to be down to days with VxRail from weeks because it's a much simpler activity."*

» **Faster development life cycles:** *"We've acquired more business with VxRail due to our ability to turn over enhancements faster, which means more revenue. We're gaining millions of dollars in additional revenue per year."*

"Before VxRail, it would take weeks to add the compute and storage to add a new branch, and the costs would be unpredictable. We now project it to be down to days with VxRail from weeks because it's a much simpler activity."

"We've acquired more business with VxRail due to our ability to turn over enhancements faster, which means more revenue. We're gaining millions of dollars in additional revenue per year."

IT Staff Productivity: Generating Efficiencies with Agility and Performance

Study participants have made their IT operations more efficient and productive with VxRail and VxRack SDDC. Development teams provide more value to their businesses as they leverage IT agility to speed up delivery of new applications and features, while IT infrastructure teams must spend less time on day-to-day activities with consolidated, high-performing VxRail appliances and VxRack SDDC systems.

Enabling Development Teams with Performance and Agility

Application development teams require on-demand access to compute and storage resources to code, test, and deploy business applications and features. When they must preplan or wait on these IT resources, they often cannot support the business in a timely or robust fashion. Deploying Dell EMC VMware-based HCI has substantially reduced wait times for new compute (48% faster) and storage (54% faster) resources along with staff time required to procure and deliver these resources (see Table 4).

"With VxRail, we have much more ability to scale and deploy rapidly, and it also provides the ability to perform live migrations of workloads. ... We can now deploy a new VM in 20 minutes compared with probably a couple of hours with our legacy infrastructure."

One interviewed Dell EMC customer explained: *"With VxRail, we have much more ability to scale and deploy rapidly, and it also provides the ability to perform live migrations of workloads. ... We can now deploy a new VM in 20 minutes compared with probably a couple of hours with our legacy infrastructure."*

TABLE 4

IT Agility Impact

	Before/ Without Dell EMC VMware-Based HCI	With Dell EMC VMware-Based HCI	Difference	Benefit (%)
Storage deployment				
Time to deploy new storage (days)	0.6	0.3	0.3	48
Staff time per new storage deployment (hours)	5.3	1.3	4	77
Compute deployment				
Time to deploy new server (days)	7.8	3.6	4.2	54
Staff time per new server deployment (hours)	33	14	19	57

Source: IDC, 2018

Study participants' application development teams have turned this agility into higher value for their organizations in the form of speeding up delivery of new applications and features. In turn, this allows development teams to take on more work by offering more frequent releases and provides the bandwidth for them to take on requests for new features and entirely new applications demanded by employees and customers.

"Our ability to deliver new application features with VxRail has changed tremendously. The ability to deliver with IaaS and automation drives a lot of that. We're releasing 100–200 new features per year compared with half of that previously."

On average, study participants reported reducing development timelines for new applications by 19% and new features by 15%. One study participant described the impact on development efforts: *"Our ability to deliver new application features with VxRail has changed tremendously. The ability to deliver with IaaS and automation drives a lot of that. We're releasing 100–200 new features per year compared with half of that previously. The deployment life cycle depends on the application, but I would say a week with VxRail compared with a month previously."* In total, these benefits translate to 15% higher developer productivity on average, a significant value to study participants, given the scale of development efforts on Dell EMC VMware-based HCI (see Table 5).

TABLE 5

Application Development Impact

	Before/ Without Dell EMC VMware-Based HCI	With Dell EMC VMware-Based HCI	Difference	Benefit (%)
Application developer productivity				
Productivity level in terms of FTEs per organization	56.3	64.9	8.6	15
Equivalent value of application developers per organization per year ($M)	5.63	6.49	0.86	13
Application development metrics, new applications				
Number of new applications per year	4.6	5	0.4	8
Development life cycle, new applications (weeks)	13.4	10.8	2.6	19
Application feature development metrics, new applications				
Number of new application features per year	125	150	25	20
Development life cycle, new application features (weeks)	1.2	1	0.2	15

Source: IDC, 2018

Reducing the Burden on IT Infrastructure Teams

Interviewed Dell EMC customers explained that deploying VxRail and VxRack SDDC has substantially reduced the amount of staff time required to deploy, manage, and support their environments. They cited infrastructure consolidation with Dell EMC VMware-based HCI as driving these efficiencies along with reduced complexity, automated monitoring and processes, and improved performance. For example, one study participant noted: *"Patch management is much easier with VxRail. In the past, even with virtualization, the hardware was pretty problematic for patching — we had to move everything off and reboot the system."* IDC calculates that on average, study participants require 60% less staff time for management and 53% less staff time to handle problems related to their Dell EMC VMware-based HCI environments (see Table 6).

These IT staff efficiencies are especially important in the context of these organizations needing IT teams to drive and lead efforts to digitize and expand their businesses. When day-to-day management and support issues consume significant amounts of teams' time, it leaves less time for them to engage in business-focused initiatives and activities. Several Dell EMC customers laid out how moving business applications to VxRail and VxRack SDDC has provided their IT teams with the flexibility to better support business operations:

» *"Previously it was really hard for our teams to manage and maintain disparate systems and keep them stable. We resorted to really complex engineering, but still had issues and outages related to complexity. Hyperconverged with Dell EMC has really changed the game for us and allowed us to take a step back and create a strategy that focuses more on delivery of excellent applications."*

» *"We have converged three teams — networking, storage, and compute — into one with VxRail. Our support team was converged as well, merging the three talents into a single hierarchy. We have more time now to transform the business around orchestration and automation, and more time back for value-add activities that were lacking IT talent in the past."*

"Previously it was really hard for our teams to manage and maintain disparate systems and keep them stable. We resorted to really complex engineering, but still had issues and outages related to complexity. Hyperconverged with Dell EMC has really changed the game for us and allowed us to take a step back and create a strategy that focuses more on delivery of excellent applications."

TABLE 6

Impact on IT Teams Using Dell EMC VMware-Based HCI

	Before/ Without Dell EMC VMware- Based HCI	With Dell EMC VMware- Based HCI	Difference	Benefit (%)
Deployment efficiencies				
Initial time to deploy (months)	5.6	2.7	2.9	52
Staff time required to deploy (FTEs)	4.1	0.7	3.4	83
Ongoing efficiencies				
Productivity level in terms of FTEs per organization — IT infrastructure team	6.8	16.8	10.1	60
Productivity level in terms of FTEs per organization — IT support team	1.8	3.9	2.1	53

n = 7

Source: IDC, 2018

Risk Mitigation Benefits: Reducing the Costs of Application Downtime

Study participants are providing their businesses with a significantly more reliable and robust infrastructure platform with Dell EMC VMware-based HCI. With business models requiring 24 x 7 operations at high-performance levels, unplanned outages that affect business operations can and do lead to substantial-revenue losses for some organizations. Since deploying VxRail and VxRack SDDC, study participants have reduced both the frequency (88% fewer) and duration (59% shorter) of unplanned outages, thereby minimizing the disruption to employees (90% less impact) and business operations ($1.29 million gross revenue loss avoided per year per organization) caused by downtime (see Table 8).

One study participant commented: *"We haven't had any downtime yet with VxRail, especially now that we have two clusters. We can do failovers with RecoverPoint. If we lose a node or even a whole cluster, we can still operate. There is a lot more reliability and redundancy within the system now. We can sleep better at night."* Another explained how it has minimized the business cost of missed SLAs with Dell EMC: *"We track SLA payouts. Remembering that about half of our infrastructure is VxRail, we previously had about three or four payouts per month relating to external SLAs. In the past two years with VxRail, we have had only one payout due to SLA performance."*

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TABLE 7

Impact on Unplanned Downtime Using Dell EMC VMware-Based HCI

	Before/ Without Dell EMC VMware-Based HCI	With Dell EMC VMware-Based HCI	Difference	Benefit (%)
Unplanned outages per year per organization	17.9	2.2	15.7	88
MTTR (hours)	4	1.7	2.3	59
Value of lost productive time per year per organization (FTEs)	5.3	0.6	4.7	90
Value of lost productive time per year per organization	$367,800	$38,600	$329,200	90

* IDC model assumes a 15% operating margin for all additional revenue.

Source: IDC, 2018

n = 7

Source: IDC, 2018

TABLE 8

Impact of Unplanned Downtime on Lost Revenue

	Per Organization	Per 100 Users
Additional gross revenue per year	$1.29M	$89,900
Recognized net revenue per year — IDC model*	$193,900	$13,500

* IDC model assumes a 15% operating margin for all additional revenue.

Source: IDC, 2018

On average, Dell EMC customers told IDC that they deployed their VxRail and VxRack SDDC environments at a 21% lower initial cost than refreshing their legacy environment or taking an alternative, more traditional approach.

"We replaced a lot of servers when we deployed VxRail — hundreds. I would say that it cost about 30% less to deploy VxRail than it would have to refresh the legacy hardware. And if we had refreshed those servers, it wouldn't have been enough — we still would have had to add servers."

Establishing a More Cost-Effective IT Infrastructure

Interviewed organizations have deployed Dell EMC VMware-based HCI at a lower cost than a more traditional infrastructure approach and reduced operational costs associated with maintenance, power, and datacenter space. On average, Dell EMC customers told IDC that they deployed their VxRail and VxRack SDDC environments at a 21% lower initial cost than refreshing their legacy environment or taking an alternative, more traditional approach.

One study participant explained: *"We replaced a lot of servers when we deployed VxRail — hundreds. I would say that it cost about 30% less to deploy VxRail than it would have to refresh the legacy hardware. And if we had refreshed those servers, it wouldn't have been enough — we still would have had to add servers."* Another noted ongoing operational efficiencies: *"We have decreased our power and facilities costs tremendously with VxRack and VxRail SDDC based on the size of the datacenter. I'd say that we've probably cut down about a third of our entire datacenter and have consolidated about 50 racks."* In total, IDC calculates that these organizations will incur 25% lower infrastructure-related costs with Dell EMC VMware-based HCI over five years.

Delivering Improved Performance at Lower Cost

IDC's analysis shows that, based on the categories of cost discussed previously, Dell EMC customers will incur 52% lower costs over five years with VxRail and VxRack SDDC compared with refreshing their legacy environment or taking a more traditional approach. Figure 2 provides the details by cost category, including IT infrastructure-related costs, IT staff time costs for deployment and management, and the cost of lost productivity due to unplanned outages.

FIGURE 2

Five-Year Cost of Operations
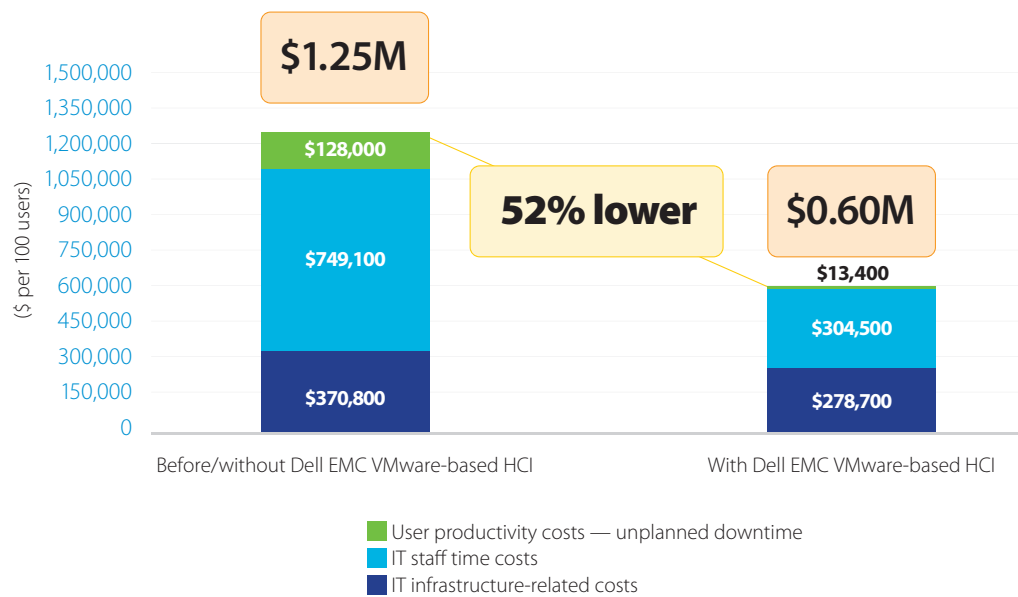
Source: IDC, 2018

ROI Analysis

IDC based its ROI analysis on interviews with organizations that are using Dell EMC VMware-based HCI solutions to run and support a variety of business applications. Based on these interviews, IDC has calculated the benefits and costs to these organizations for deploying and running Dell EMC VMware-based HCI solutions. 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 running applications on Dell EMC VMware-based HCI solutions,** including VxRail and VxRack SDDC. In this study, the benefits included revenue gains, operational efficiencies, staff time savings and productivity benefits, 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 VxRail/VxRack SDDC 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 Dell EMC VMware-based HCI solutions 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.

Table 9 presents IDC's analysis of the benefits and costs for study participants of using Dell EMC VMware-based HCI solutions. IDC projects that on average, these study participants will achieve five-year discounted benefits worth $18.99 million per organization ($1.32 million per 100 users) compared with total discounted investment costs of $3.22 million per organization ($0.22 million per 100 users). At this level of benefits and investment costs, IDC calculates that these organizations will realize a five-year ROI of 489% and break even on their investments in an average of eight months.

TABLE 9

ROI Analysis

	Five-Year Average per Organization	Five-Year Average per 100 Users
Benefit (discounted)	$18.99 million	$1.32 million
Investment (discounted)	$3.22 million	$0.22 million
Net present value (NPV)	$15.77 million	$1.10 million
Return on investment (ROI)	489%	489%
Payback period	8 months	8 months
Discount rate	12%	12%

n = 7
Source: IDC, 2018

Challenges/Opportunities for Dell EMC

Companies around the world have invested more than $50 billion on converged systems over six years. This includes the new generation of hyperconverged solutions that take datacenter convergence and transformation to a new level. Regardless of the architecture, the driving forces behind the adoption are universal. The demand for these solutions are rooted in the need to drive new levels of operational simplicity and agility without introducing new risks to the datacenter. Importantly, we now see a sharp increase in the use of converged and hyperconverged solutions as a platform for digital transformation and on-premise private clouds. These most recent sources of demand represent a new challenge for industry stakeholders. While digital transformation and private cloud implementations look set to drive the next wave of datacenter convergence, such projects are likely to be far more complex and challenging than past market drivers. Technology suppliers that want to help customers through this shift will need to show that they understand the changes driving the need for foundational transformation and intend to be a true partner throughout the journey.

Conclusion

IT organizations are increasingly expected to help the business create and respond to opportunities rather than just support ongoing operations. Because most organizations will not increase IT budgets to an extent commensurate to heightened expectations to accomplish these objectives, IT organizations must find ways to optimize their infrastructure investments in terms of cost, agility, and performance. Hyperconverged solutions have gained substantial traction in recent years by helping organizations break down IT silos while enabling greater IT agility by collapsing traditional infrastructure silos (servers, SANs, and shared storage) into scale-out clusters of x86 servers that provide fully virtualized pools of compute, memory, and storage resources. They also incorporate automation and management tools that help simplify and streamline the infrastructure foundation running important business applications.

This IDC study demonstrates the strong value that organizations can achieve with Dell EMC VMware-based HCI solutions, including VxRail and VxRack SDDC. Importantly, these organizations have deployed Dell EMC VMware-based HCI to support their businesses with a high-performing and agile infrastructure foundation. As a result, they can more easily extend their IT foundation to address new opportunities while both existing and new customers — as well as employees — benefit from strong performance of important business applications. In total, IDC calculates that Dell EMC customers interviewed for this study will achieve value worth an average of $5.33 million per organization ($370,700 per 100 users) per year over five years, which would result in a return on their investment of almost 6:1 (489% five-year ROI).

Appendix

Methodology

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of Dell EMC VMware-based HCI solutions, including VxRail and VxRack SDDC, as the foundation for the model. Based on interviews with seven organizations, IDC performed a three-step process to calculate the ROI and payback period:

1. Measure the benefits from the use of Dell EMC VMware-based HCI solutions in terms of IT infrastructure cost savings and avoidances, IT staff time savings and productivity gains, user productivity gains, and revenue gains.

2. Ascertain the investment made in deploying Dell EMC VMware-based HCI solutions and associated migration, training, and support costs.

3. 3Project the costs and savings over a five-year period and calculate the ROI and payback for Dell EMC VMware-based HCI solutions.

IDC bases the payback period and ROI calculations on assumptions that are summarized as follows:

» Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and productivity savings. IDC assumes a fully burdened salary of $100,000 per year for IT staff, including developers, and $70,000 for other employees, with an assumption of 1,880 hours worked per year per full-time equivalent (FTE) employee.

» 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.

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