Dell EMC XC Series Creating Value as a Scalable, Efficient Hyperconverged Platform

Sponsored by:
Dell EMC

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Business Value Highlights

49% five-year ROI

61% lower cost of operations

51% less staff time to manage and support

74% less time to deploy new storage

90% less staff time to deploy per VM

99% less unplanned downtime

EXECUTIVE SUMMARY

All companies, small and large, grapple with infrastructure growth and IT modernization. For many companies, datacenter infrastructure has become an essential part of a hybrid cloud environment that allows users to consume internal and external resources seamlessly. This, in turn, is helping modernize today's datacenters and drive new levels of agility, productivity, and scale.

A common attribute of modern datacenter infrastructure is solutions that provide all compute and data services as a single system that can be managed holistically at a rack scale. IDC refers to such solutions as converged infrastructure.

The convergence of datacenter infrastructure is becoming a necessity to speed the deployment of IT and reduce the time spent managing datacenter assets. The fastest-growing segment of the converged infrastructure market is known as hyperconverged infrastructure (HCI). Hyperconverged infrastructure is distinguished from traditional converged systems in that it natively collapses core storage, compute, and storage networking functions into a single software solution or appliance.

In addition to integrating storage and compute functions into a single node (or a cluster of nodes, each offering compute and storage functions), hyperconverged infrastructure employs a distributed file system or object store for data organization and access — an abstraction mechanism for pooling hardware resources and providing a substrate for workload adjacency. Today's well-designed, commercially available hyperconverged solutions are based on web-scale architectures and share attributes of a distributed everything architecture, scale-out design, and analytics but don't require businesses to develop their own new technology stack. Hyperconverged architectures are being used as a platform of choice when building out public and private cloud infrastructure.

Hyperconverged infrastructure is proving to be an excellent fit for today's datacenter challenges and is increasingly looked to as a platform for the on-premise internal component of the hybrid cloud ecosystem. IDC believes HCI solutions provide users with a new level of simplification, scalability, and agility that is becoming an absolute requirement within the rapidly evolving hybrid cloud datacenter.

IDC interviewed organizations about their experiences using Dell EMC XC Series powered by Nutanix solutions to run enterprise workloads. These interviewees told IDC that their organizations are realizing meaningful value by utilizing an agile, scalable, reliable, and cost-effective hyperconverged platform. IDC calculates that the participating organizations will attain an average annual benefit of $4.64 million per organization ($1.14 million per 100 virtual machines [VMs]*), which would lead to a five-year return on investment (ROI) of 498%. This is because Dell EMC XC Series:

- Offers a highly agile and scalable platform
- Provides a high-performing solution that organizations can rely upon
- Requires less IT staff time to deploy, manage, and support, which enables strategic value
- Serves as a cost-effective IT platform

** IDC provides financial results in two ways in IDC Business Value white papers — first, on a per-organization basis, and second, on a normalized basis based on surveyed organizations' use cases. For this study, IDC has normalized per-organization results for potential scaling to other environments on a per–100 virtual machine (VM) basis (i.e., the per-organization value divided by the average number of VMs running on Dell EMC XC Series appliances for study participants multiplied by 100). These normalized metrics are useful, but when interpreting results from this study, one should remember that the results are based on surveyed organizations' use cases and firmographic attributes and thus reflect the organizational makeups of only study participants.*

SITUATION OVERVIEW

Innovations within the converged systems market are driving rapid changes to the types of solutions that technology suppliers are able to bring to market. One important area of innovation has been within the integration of compute and data services so that they run adjacent to each other on the same physical hardware. The ability for compute, storage, and network software to be decoupled from the underlying infrastructure and run on industry-standard x86 servers has ushered in the era of software-defined infrastructure. With more workloads hosted on virtual infrastructure, the running of compute and storage functions on a common set of physical resources has brought us to a natural outcome in the evolution of converged systems: hyperconvergence.

Hyperconverged systems found early success within midsize environments and targeted workloads. Increased awareness of the benefits these solutions bring to the table (agility, flexibility, scale, web-scale economics, and ease of use) has driven rapid market adoption. Indeed, the HCI market has expanded considerably from its early days. In contrast to the early years of deployments, HCI solutions in use today are more frequently running mission-critical workloads, are larger in scale, and are used by a wide range of companies. The most common types of workloads

running on HCI solutions are now critical business applications (e.g., ERM, CRM, supply chain management, financial management, and payroll/accounting). This considerable growth of new hyperconverged deployments and the expansion of workloads running on these systems have helped drive triple-digit growth in global sales of hyperconverged solutions (including hardware and software). IDC expects the worldwide hyperconverged market to generate more than $3.8 billion in sales by the end of 2017.

DELL EMC XC SERIES HYPERCONVERGED APPLIANCES

Dell EMC's portfolio of converged solutions goes back to the very early days of the converged systems market. The company had shown a prescient understanding of a growing need to improve operational simplicity related to datacenter infrastructure. Dell's early move within the converged systems market, combined with Dell's status as a trusted global supplier of datacenter infrastructure, has given the company a leadership position within a market that is now worth more than $13 billion annually.

Dell EMC's current portfolio of converged systems offers a broad set of solutions able to support a diverse set of datacenter environments. An important part of the portfolio of the company is its XC Series HCI appliances. The Dell EMC XC Series family of hyperconverged appliances integrates the company's proven PowerEdge x86 server platform and Nutanix's full suite of HCI software into purpose-built enterprise-class solutions for virtualized environments. Backed by Dell EMC's Global Service and Support organization, these 1U and 2U appliances consolidate compute, storage, and virtualization into a turnkey platform, enabling application and virtualization teams to quickly and simply deploy new workloads. Leveraging Nutanix's software gives the XC Series HCI appliances seamless application mobility, a distributed storage fabric, and a hypervisor (all part of Nutanix Acropolis) as well as robust system management software (Nutanix Prism). Dell EMC XC Series represents one of three software-defined HCI solutions offered by Dell EMC. An important difference between XC Series and Dell EMC's other HCI offerings can be found within the number of hypervisors supported. XC Series supports VMware ESXi, Microsoft Hyper-V, and Nutanix AHV (a KVM-based hypervisor). With XC Series, Dell EMC has brought to market an HCI solution that combines a complete and proven software-defined HCI stack with Dell EMC's 13th- and 14th-generation PowerEdge servers to provide customers with the benefits of truly next-generation technology. Leveraging Dell EMC's PowerEdge as the platform for XC Series also brings the following benefits:

- Integration with Dell EMC's suite of data protection products (Avamar VE and Data Domain) to support additional layers of application and data resiliency

- World-class support and vast global supply chain that help ensure Dell EMC will be a true partner with XC Series customers and is able to rapidly deliver FRUs around the world
- Robust server road maps that ensure cutting-edge performance and hardware reliance through rapid incorporation of next-generation hardware technology
- Incorporation of Dell EMC's "Integrated Dell Remote Access Controller" (iDRAC), which provides an out-of-band management platform for PowerEdge servers and appliances that can automate important life-cycle tasks such as provisioning, deployment, servicing, patching, and updating
- Incorporation of Dell EMC's SupportAssist, which provides proactive, predictive, and automated support technology in conjunction with iDRAC to help reduce downtime by remotely monitoring system health, providing alerts related to potential issues, and automatically creating support cases for proactive Dell EMC support

THE BUSINESS VALUE OF DELL EMC XC SERIES

Study Demographics

IDC interviewed IT managers and organizational decision makers from eight organizations. IDC asked interviewees a variety of qualitative and quantitative questions about the impact of the use of Dell EMC XC Series on their organizations' IT operations, costs to run various workloads and applications, business operations, and business results.

For the eight organizations, the average number of employees was 26,344 and the average number of IT staff was 552, with the average number of business applications was 498. Geographically, these organizations were based in the United States and India, and they represented the following industries: government, healthcare, higher education, IT services, and translation services. Table 1 provides detailed information on the organizations' firmographic attributes.

TABLE 1 Demographics of Interviewed Organizations

	Average	Median
Number of employees	26,344	29,750
Number of IT staff	552	550
Number of IT users	24,697	26,088
Number of business applications	498	300
Countries	United States and India	
Industries	Government (2), healthcare (2), higher education (2) IT services, and translation services	

n = 8

Source: IDC, 2017

Study Participants' Use of Dell EMC XC Series

The organizations that participated had deployed an average of 51 Dell EMC XC Series nodes with an average storage capacity of 476TB to run 59 business applications at the time of the interview. Dell EMC XC Series nodes help support a sizable portion of IT infrastructures of the participants, with organizations running an average of one-eighth of their business applications used by more than 40% of their employees. Table 2 shows detailed information on the organizations' use of Dell EMC XC Series.

Study participants cited a variety of reasons for choosing to migrate workloads from primarily more traditional three-tiered infrastructure to Dell EMC XC Series hyperconverged infrastructure. Several organizations cited consolidation, more efficient management, and increased scalability as factors driving their decision to go with Dell EMC XC Series. One interviewed organization explained how it viewed Dell EMC XC Series as an opportunity to take a bold step to modernize its IT operations and ensure that its IT operations could support its business: *"I think the challenge for us was how do we get ahead of the curve? We had an opportunity to take a chance with Dell EMC XC Series. We knew the trend is going to hybrid cloud, and Dell EMC XC was our opportunity to build a hyperconverged infrastructure that will allow us to stitch together an enterprise cloud solution with public cloud solutions."*

TABLE 2 Dell EMC XC Series Use by Interviewed Organizations

	Average	Median
Number of sites	3	2
Number of Dell EMC XC Series nodes	51	30
Number of virtual servers	405	213
Number of terabytes (TB) — Dell EMC XC Series environment	476	175
Number of business applications	59	23
Number of users*	11,103	2,419

n = 8

** Employees at interviewed organizations who are using applications or workloads running on Dell EMC XC Series*

Source: IDC, 2017

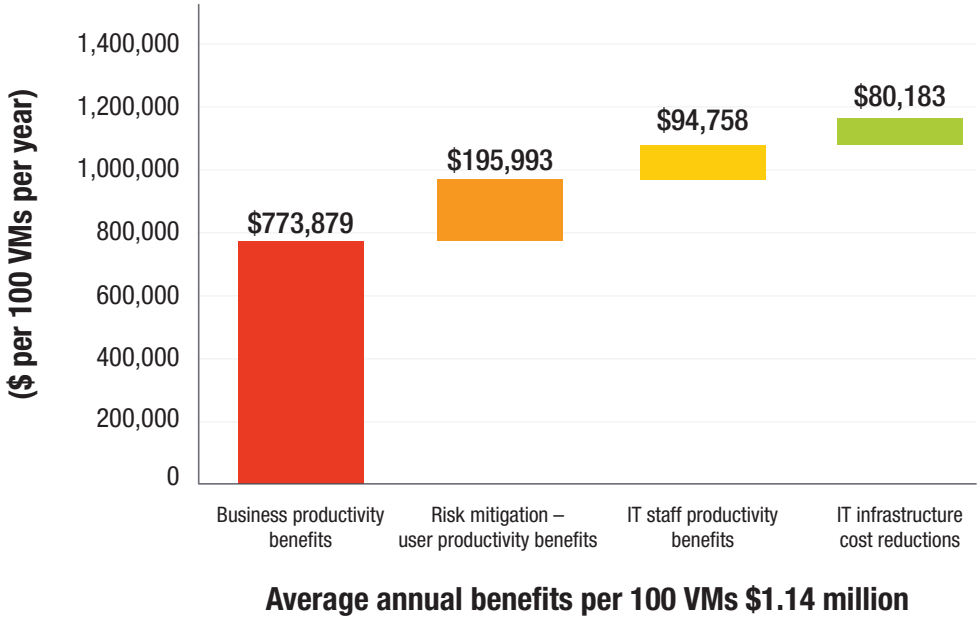
Quantifying the Business Value of Dell EMC XC Series

The consensus among participating organizations was that they saw Dell EMC XC Series as a reliable, high-performing, and agile hyperconverged infrastructure platform that is enabling their IT organizations to scale up quickly to meet business demand. These participants recognized the value of going with the XC Series hyperconverged solution compared with a traditional infrastructure in terms of allowing them to

address customers' demands quicker and more cost effectively. IDC projects that these organizations will achieve an average of $4.64 million per year per organization ($1.14 million per 100 VMs) in value over five years (see Figure 1) in the following areas:

- Business productivity benefits: Interviewed organizations explained that the agility, scalability, and reliability of Dell EMC XC Series have improved user productivity and increased revenue because they can bring applications and services to market quicker. IDC calculates that the organizations will see annual benefits worth $3.1 million per organization ($773,879 per 100 VMs) from productivity and revenue gains.
- Risk mitigation — user productivity benefits: Study participants cited the reliability of Dell EMC XC Series as a strong point because they have had much less user-impacting downtime. Disaster recovery was seen as much stronger with Dell EMC XC Series than with their previous IT infrastructures. IDC forecasts that these organizations will realize an annual average of $793,500 per organization ($195,993 per 100 VMs) in user productivity benefits related to minimizing business operational risk.
- IT staff productivity benefits: Interviewees cited efficiencies associated with deploying, managing, and supporting Dell EMC XC Series environments and spoke of the ease of adding more capacity when they need it. This makes their IT and application development operations more efficient and helps them respond to customers and users much more quickly. IDC predicts these organizations will see an annual average value of $383,600 per organization ($94,758 per 100 VMs) from increased IT staff and developer productivity.
- IT infrastructure cost reductions: Dell EMC XC Series has enabled these organizations to retire more distributed legacy infrastructure, reduce maintenance costs, and reduce costs related to licensing, power, and facilities space. IDC projects that the Dell EMC XC Series environments of these study participants will cost an average of 29% less over five years in terms of hardware and associated costs than their legacy environments or alternative solutions considered. IDC projects an average annual savings of $324,600 per organization ($80,183 per 100 VMs) in terms of IT infrastructure costs compared with the legacy environments of the organizations.

FIGURE 1 Average Annual Benefits per 100 VMs



Source: IDC, 2017

Agile and High-Performing Hyperconverged Infrastructure Platform

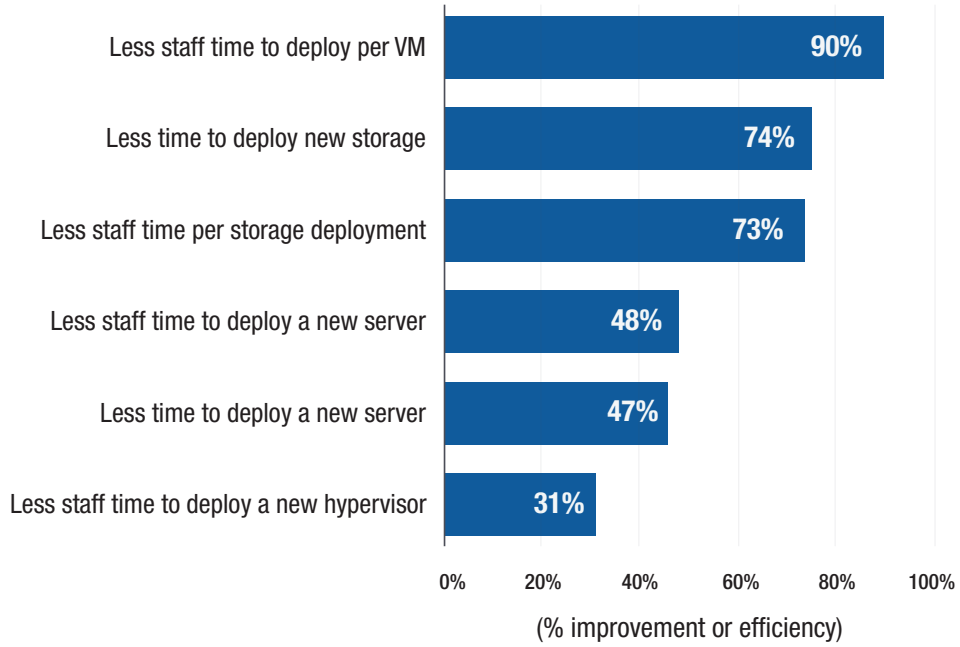
Interviewed organizations consistently reported that deploying Dell EMC XC Series made their IT operations more agile. Increased agility through features of Dell EMC XC Series such as common pools of storage and compute resources and software-driven automation allows them to provision compute and storage resources in much less time. The results are staff time savings and reduced friction from IT operations on business and development operations. This enhanced agility helps study participants get needed services and business applications up and running more quickly and means that their IT teams better support business requirements.

Figure 2 demonstrates the impact of Dell EMC XC Series in terms of delivering compute and storage resources. With Dell EMC XC Series, study participants require 90% less staff time to deploy per VM, 73% less staff time per storage deployment, and 48% less staff time to deploy a new (physical) server. Interviewed organizations detailed how they are leveraging the agility and flexibility to better address business opportunities and support their lines of business:

- **Ease of management and scalability:** *"When we need to scale with Dell EMC XC Series, we just get a new device, put it in the rack, and it's ready to go ... . Taking less time for the setup is important because of the nature of our business. If we get increased volume, we just need 10–15 minutes to put the node in a cluster, giving us a time-to-market benefit."*

- **Stability and scalability:** *"We wanted a stable, scalable private cloud, and with Dell EMC XC Series, we're getting there. We can scale out quickly if we need to for certain applications. We did that when we were doing one of our datacenter migrations and our capacity wasn't going to be enough. We easily added more nodes and kept moving along, and that saved us time."*
- **Nimble distributed operations:** *"Getting compute and storage resources up faster with Dell EMC XC Series means that we are more nimble and agile and can respond to the needs of our development staff across worldwide offices.*

FIGURE 2 Impact of Dell EMC XC Series on IT and Business Agility and Performance



Source: IDC, 2017

Meanwhile, study participants also reported that Dell EMC XC Series provides them with the levels of performance required by various enterprise-level workloads. With distributed workforces relying on a variety of business applications to do their jobs and customer satisfaction dependent on user experience, strong performance is a must for these organizations. One Dell EMC customer explained: *"Dell EMC XC Series has positioned us to provide better services. Any loss of business productivity due to poor performance or capacity issues with our legacy platform has been negated. As soon as our applications are ready to go live, they have an immediate impact when they are run on Dell EMC XC Series. This really is the platform for us for modernization, which is an enormous benefit."*

Risk Mitigation — User Productivity Benefits

Several interviewed organizations noted that the need for a more reliable and robust infrastructure platform was a major decision point in selecting Dell EMC XC Series. Study participants said that Dell EMC XC Series has given them needed levels of availability and reliability and that they have greatly reduced the impact of unplanned downtime on their business operations. In fact, most interviewed organizations reported that they have experienced no user-impacting outages since deploying Dell EMC XC Series, thereby nearly eliminating impactful outages (99% reduced impact of unplanned downtime on user productivity) (see Table 3).

Several participants tied reduced downtime to the strong disaster recovery capabilities of Dell EMC XC Series. One customer said it was concerned about how quickly it could recover its data on its previous setup: *"With Dell EMC XC Series, if a site goes down, we can spin it up on another site. The recovery time would probably be 10–15 minutes, whereas before, it would be weeks, minimum two weeks."* Another customer mentioned that Dell EMC XC Series *"[enables us] to replicate all of our data between our headquarters and our international offices and run the company from our international office, which we could not do at all before because we did not have the infrastructure to do it."*

TABLE 3 Impact of Dell EMC XC Series on Unplanned Downtime

	Before/Without Dell EMC XC Series	With Dell EMC XC Series	Difference	Benefit (%)
Frequency per year	4.9	1.1	3.8	77
Lost productivity per user per year (minutes)	113	1	112	99
FTE productivity impact per year	11.2	0.1	11.1	99

Source: IDC, 2017

Business and Operational Impact

Study participants explained how the benefits of Dell EMC XC Series, such as greater agility, scalability, and reliability, positively impact their business operations. They reported that Dell EMC XC Series has enabled them to become more productive, which has notable strategic and business benefits:

- New services and applications get to users and customers quicker
- Greater scalability helps address business opportunities in a more timely way
- Improved system performance and increased reliability improve user productivity

Dell EMC XC Series has allowed study participants to capture more revenue and increase operational efficiency through higher employee productivity levels. Improved performance and faster time to market for applications, services, and features help better meet customer demand and can generate higher revenue. One study participant explained how Dell EMC XC Series reduces time to market for a core service and noted that it would win fewer new customers without this time-to-market advantage, which means millions in additional revenue per year. Study participants reported seeing an average of $12.19 million in additional revenue per year ($3.01 million per 100 VMs) that they attributed to Dell EMC XC Series.

Interviewed organizations are also benefiting from operational efficiencies with Dell EMC XC Series in the form of higher user productivity levels. They attributed these efficiencies to reliability and performance. For example, one customer told IDC: *"Our users are more productive because, for them, the applications are always available, so they are around 20–30% more productive."* The impact is widespread across these organizations, with higher productivity for an average of 2,707 employees per organization generating significant value. Table 4 presents the full extent of the business productivity benefits organizations are obtaining with Dell EMC XC Series.

TABLE 4 Business Productivity Benefits of Dell EMC XC Series

	Per Organization	Per 100 VMs
Revenue impact — better addressing business opportunities		
Additional revenue per year	$12.19 million	$3.01 million
Recognized revenue per year — IDC model*	$1.83 million	$451,452
Revenue impact — unplanned downtime impact		
Additional revenue per year	$44,500	$11,002
Recognized revenue per year — IDC model*	$6,682	$1,650
User productivity impact		
Number of users impacted	2,707	669
Equivalent FTE gain	18.7	4.6

** IDC applies a 15% operating margin assumption to calculate the revenue impact recognized for purposes of the ROI analysis.*

Source: IDC, 2017

IT Staff Efficiencies

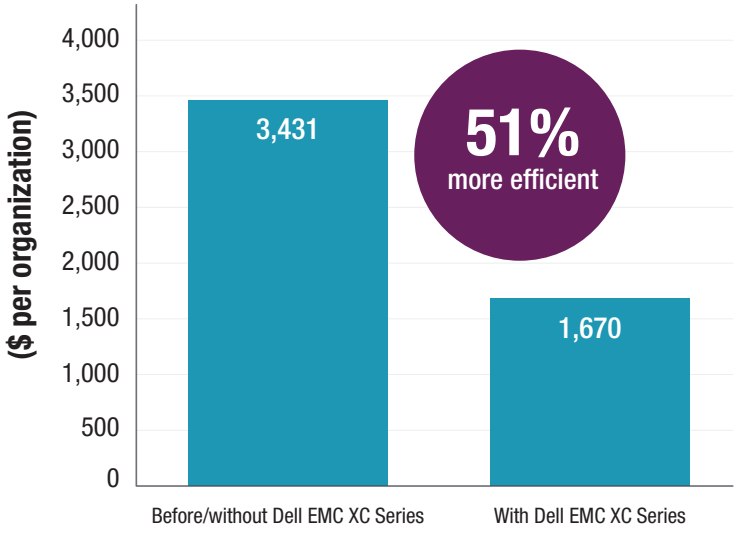
Surveyed organizations reported that running a variety of workloads on Dell EMC XC Series hyperconverged infrastructure made their IT operations more efficient and thus more valuable to their businesses. For IT infrastructure staff, these efficiencies stem from the hyperconverged nature of Dell EMC XC Series as well as deeper automation of day-to-day operations. Simplicity of management and the ability to run the IT

infrastructure more efficiently were drivers of choosing Dell EMC XC Series for several organizations. As one interviewee put it: *"As a relatively understaffed IT department, we needed to reduce infrastructure complexity. By implementing the Dell EMC XC hyperconverged solution, we're essentially getting rid of the Fibre Channel and the SAN network, which really reduces our workload and frees up our time for other things."* These types of efficiencies have enabled these organizations to reduce the amount of time their staffs must spend "keeping the lights on" by 37%, offering organizations the opportunity to reallocate staff time. Further, the efficient nature of their Dell EMC XC Series environments allows them to grow workloads without a commensurate increase in staffing. The result is that core IT infrastructure management and support activities require 51% less time with Dell EMC XC Series for study participants.

These efficiencies make the organizations' IT teams more valuable (see Figure 3). Interviewees noted many ways that time savings are being reinvested to support their businesses, including:

- *"We're putting that time into new initiatives, like pursuing our cloud initiatives."*
- *"We're using time saved to continue our complex migration off of our mainframe platform with associated benefits in terms of costs and agility."*

FIGURE 3 IT Infrastructure Team Staff Efficiencies



Source: IDC, 2017

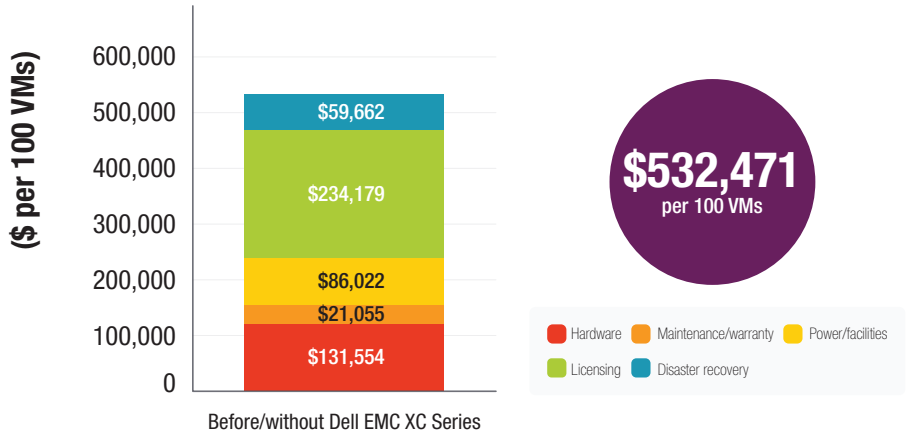
Cost-Effective Hyperconverged Infrastructure Platform

Interviewed organizations reported that the cost of building out their Dell EMC XC Series environments is lower than the cost of a legacy environment or an alternative approach and that they are running the Dell EMC XC Series environments at a substantially lower

cost. Importantly, they are achieving these cost efficiencies even as they dramatically increased the amount of flash storage in their environments (increasing from 1TB to 152TB with Dell EMC XC Series on average). For study participants, cost efficiencies begin with the hyperconverged Dell EMC XC Series solution in terms of the server, storage, and network hardware required. According to one organization: *"The price point of Dell EMC XC Series allowed us to save a few million dollars. It allowed us to invest in other technologies and to strategically align with our service delivery model."* These organizations reported that Dell EMC XC Series costs an average of 24% less than a legacy environment or an alternative approach.

Study participants are also realizing significant ongoing cost efficiencies with Dell EMC XC Series. Having a consolidated and efficient hyperconverged infrastructure means 31% lower spend on power and 57% lower spend on datacenter space on average over five years. Meanwhile, interviewed organizations are also making more efficient use of application and hypervisor licenses with Dell EMC XC Series, saving an average of $234,179 per 100 VMs on licensing costs over five years. IDC calculates that in total, the organizations' Dell EMC XC Series environments will cost an average of 29% less over five years in terms of hardware, maintenance, power, and datacenter space (see Figure 4).

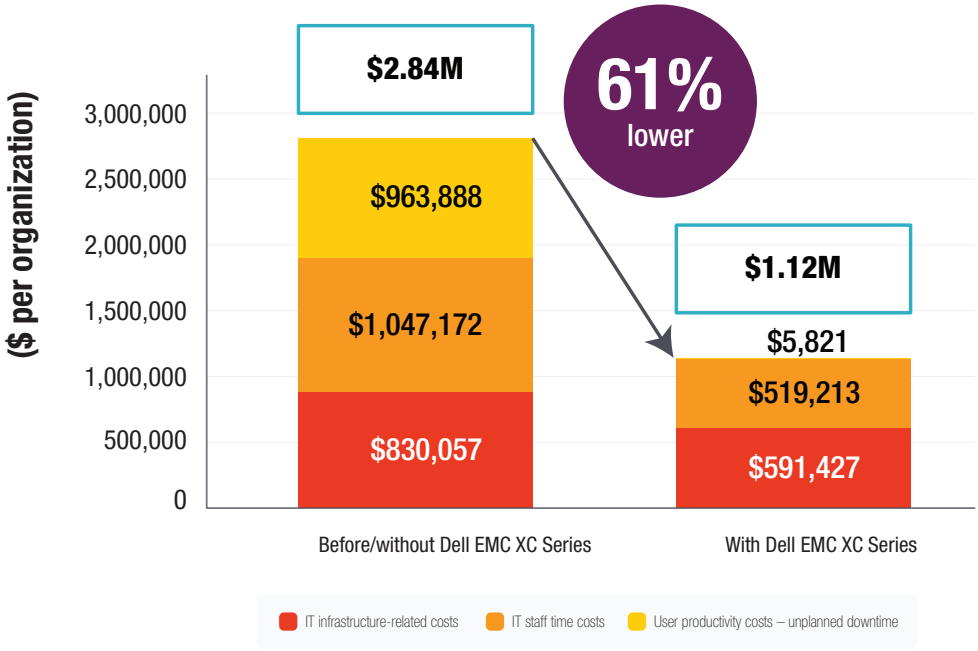
FIGURE 4 IT Infrastructure Savings per 100 VMs over Five Years



Source: IDC, 2017

These IT infrastructure cost efficiencies, alongside IT staff efficiencies and much lower user productivity losses because of unplanned outages, contribute to a substantially lower cost of operating Dell EMC XC Series (61% on average over five years) (see Figure 5).

FIGURE 5 Five-Year Cost of Operations



Source: IDC, 2017

ROI Analysis

Based on interviews with organizations using Dell EMC XC Series to run and support various enterprise-level workloads, IDC conducted an ROI analysis using the following three-step method:

1. **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of Dell EMC XC Series:** In this study, the benefits included staff time savings and productivity benefits, IT-related cost reductions, and higher revenue.

2. **Created a complete investment (five-year total cost analysis) profile based on the interviews:** Investments go beyond the initial and annual costs of deploying Dell EMC XC Series and can include additional costs related to migrations, planning, consulting, configuration or maintenance, and staff or user training.

3. C**alculated the ROI and payback period:** IDC conducted a depreciated cash flow analysis of the benefits and investments for study participants' use of Dell EMC XC Series 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 5 presents IDC's analysis of the benefits and costs related to participating organizations' experience with using Dell EMC XC Series. IDC projects that over a five-year period, these organizations will realize discounted benefits worth an average of $16.57 million per organization, or $4.09 million per 100 VMs, after making a discounted investment of $2.77 million per organization, or $0.68 million per 100 VMs. This will lead these organizations to see a five-year ROI of 498% and a breakeven on their Dell EMC XC Series investment in eight months.

TABLE 5 Five-Year ROI Analysis

	Five-Year Average per Organization	Five-Year Average per 100 VMs
Benefit (discounted)	$16.57 million	$4.09 million
Investment (discounted)	$2.77 million	$0.68 million
Net present value (NPV)	$13.79 million	$3.41 million
Return on investment (ROI)	498%	498%
Payback period	8 months	8 months
Discount rate	12%	12%

Source: IDC, 2017

CHALLENGES AND OPPORTUNITIES

Users will experience the largest positive business value impacts when their hyperconverged deployments are coupled with fundamental changes related to managing datacenter infrastructure. Thus, deploying hyperconverged infrastructure should not simply be about choosing among a specific set of solutions. IT departments must rethink team structures and processes to maximize the impact of their investments. This will require a thoughtful leader who understands the need to move from silos of infrastructure experts toward teams of multidisciplined IT staff. It will also require a technology supplier that can demonstrate a long-term commitment to hyperconverged solutions and provide the support required to transform a datacenter. The market is moving very quickly from disparate systems that require internal staff with independent areas of expertise to a world of hyperconverged systems and cross-functional skill sets. This move will take time but will ultimately drive new levels of datacenter agility, productivity, scalability, and resiliency.

SUMMARY AND CONCLUSION

Enterprises around the world have turned to converged systems to improve long-standing datacenter metrics such as utilization rates, time to deployment, operational costs, and levels of risk. Early iterations of these solutions provided real benefits through tight integration of autonomous datacenter resources.

Hyperconverged systems represent a new phase of datacenter convergence that is fundamentally different from these early iterations and drives new levels of business value benefits.

Broadly speaking, hyperconverged infrastructure deployments can help drive lower capital costs, increased operational efficiency, reduced risk, and reduced datacenter facilities costs. With the adoption of hyperconverged systems, IT departments are also able to begin the journey of organizational transformation that helps drive increased datacenter agility and better alignment of skills with the wider business needs.

This IDC study shows how eight organizations are using Dell EMC XC Series as a hyperconverged solution to modernize their IT operations and make them more cost effective and efficient while better supporting their business operations. Study participants have benefited from the agility and scalability that Dell EMC XC Series brings to their IT environments, which enables them to address business demand in a more timely and fluid — but still cost-effective — way. In addition, they are generating value through the strong performance of applications and services running on Dell EMC XC Series, which returns higher revenue for customer-facing services and operational efficiencies for employees. The move to hyperconverged with Dell EMC XC Series is delivering strong value for study participants, as explained in this study — an average of $4.64 million in benefits per organization per year ($1.14 million per 100 VMs), which projects to a five-year ROI of 498% for their use of Dell EMC XC Series.

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 XC Series hyperconverged appliances as the foundation for the model. Based on interviews with organizations using Dell EMC XC Series, IDC performed a three-step process to calculate the ROI and payback period:

- Measure the benefits from the use of Dell EMC XC Series in terms of IT infrastructure cost savings and avoidances, IT staff time savings and productivity gains, user productivity gains, and revenue attributed to the use of Dell EMC XC Series
- Benefits quantified are based on an average aggregated basis across the sample. This means that the scale of particular results can be impacted by the customers interviewed, including their industry vertical, the scope of their use of Dell EMC XC Series, and their business and IT objectives
- Ascertain the investment made in deploying Dell EMC XC Series and associated migration, training, and support costs
- 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 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 per year for other employees, with an assumption of 1,880 hours worked per year
- 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 monthly and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding, and conclusions in this study reflect the experiences of the Dell EMC customers interviewed.

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