

# 2015 State of Hyperconverged Infrastructure Market

# **EMEA Insights**

By Scott D. Lowe and David M. Davis Co-Founders, ActualTech Media June 2015

# **Table of Contents**

Table of Contents	2
List of Figures	
About ActualTech Media	
Executive Summary	
Introduction	
Research Findings	
Conclusions	
Appendix A – Hyperconverged Infrastructure Background	
Appendix B – Respondent Demographics	



ActualTech Media © 2015. All rights reserved.

Under no circumstances should this document be sold, copied, or reproduced in any way except with written permission.

Sourcing

All ActualTech Media research must be cited verbatim and commercial citation of research is prohibited without our express written permission. All citations must be limited in scope; full reproduction of ActualTech Media research is prohibited. Graphs can be briefly summarized when no corresponding text is available, within the appropriate context of and reflecting the spirit of the intended research.

All citations for this research must be attributed in the following manner: Source: *2015 State of Hyperconverged Infrastructure Market*, *EMEA Insights*, ActualTech Media, June 2015.

The information contained with the document is given in good faith and is believed to be accurate, appropriate, and reliable at the time it is given, but is provided without any warranty of accuracy, appropriateness or reliability.

The author does not accept any liability or responsibility for any loss suffered from the reader's use of the advice, recommendation, information, assistance or service, to the extent available by law.

All trademarks are the property of their respective owners.

# **List of Figures**

Figure 1 — IT Priorities at Respondents' Companies: EMEA vs. North America	9
Figure 2 — IT Priorities at EMEA Respondents' Companies by Company Size	
Figure 3 – IT Priorities at EMEA Respondents' Companies by Intention to Adopt Hyperconverged Infrastructure	12
Figure 4 – EMEA Hyperconverged Infrastructure Adoption	
Figure 5 — Hyperconverged Infrastructure Adoption: EMEA vs. North America	
Figure 6 — Hyperconverged Infrastructure Adoption in EMEA by Company Size	
Figure 7 – EMEA Respondents' Plans to Adopt Hyperconverged Infrastructure	
Figure 8 – EMEA Respondents' Plans to Adopt Hyperconverged Infrastructure by Company Size	
Figure 9 – Respondents' Plans to Adopt Hyperconverged Infrastructure: EMEA vs. North America	
Figure 10 — Respondents' Plans to Adopt Hyperconverged Infrastructure: EMEA vs. North America	
Figure 11 — EMEA Respondents' Plans to Adopt Hyperconverged Infrastructure by Company Size	
Figure 12 — Purchase Criteria for Hyperconverged Infrastructure: EMEA vs. North America	
Figure 14 — Benefits Expected by Planned Adopters: EMEA vs. North America	21
Figure 15 — Benefits Expected (Planned Adopters) vs. Benefits Realized (Current Adopters) by EMEA Respondents	
Figure 16 — Adopters' Benefits Realized with Hyperconverged Infrastructure: EMEA vs. North America	23
Figure 17 — Primary Reason for No Interest in Hyperconverged Infrastructure: EMEA vs. North America	
Figure 18 — EMEA Respondents' IT Priorities by Intention to Adopt Hyperconverged Infrastructure	
Figure 19 — Current Adopters' Primary Driver for Interest in Hyperconverged Infrastructure: EMEA vs. North America	
Figure 20 — Planned Adopters' Primary Driver for Interest in Hyperconverged Infrastructure: EMEA vs. North America	
Figure 21 — Respondent's Current Role: EMEA vs. North America	
Figure 22 — EMEA Respondent's Current Role by Company Size	
Figure 23 — Respondent's Functional Responsibility: EMEA vs. North America	
Figure 24 — EMEA Respondent's Functional Responsibility by Company Size	
Figure 25 — Respondent's Role in the Purchase Process by Region	
Figure 26 — EMEA Respondent's Company Size	
Figure 27 — Total Employees Worldwide at Respondent's Organization by Region	
Figure 28 — Respondent's Industry by Region	
Figure 29 — Total Worldwide Data Centers at EMEA Respondent's Organization by Company Size	
Figure 30 — Total Worldwide Data Centers at Respondent's Organization: EMEA vs. North America	
Figure 31 – Number of Production Servers at Respondent's Organization: EMEA vs. North America	43
Figure 32 — Percent of x86 Servers Virtualized at Respondent's Organization: EMEA vs. North America	
Figure 34 — Hypervisor in Use and Planned to Use at EMEA Respondents' Companies	45
Figure 35 — Hypervisor in Use and Planned to Use at North America Respondents' Companies	45

# About ActualTech Media

ActualTech Media is comprised of well-known VMware vExperts, authors, analysts, and speakers with considerable depth and breadth of technical and IT leadership expertise. The company produces custom content assets aimed at educating IT buyers. To that end, ActualTech Media developed <u>hyperconverged.org</u>. Hyperconverged.org's mission is to help IT professionals understand the world of hyperconvergence. From time to time, the company conducts surveys designed to gather information about IT priorities, purchase criteria for new data center architectures, such as hyperconverged infrastructure. Its reports can inform your data center modernization strategy.

# **Executive Summary**

ActualTech Media surveyed over 500 technology professionals and members of organizational management in order to gauge people's understanding of hyperconvergence, as well as how the market is adopting such solutions. We also sought to understand how well expectations are meeting reality when it comes to hyperconverged infrastructure. The survey results represent small (100 to 500 employees), midmarket (500 to 5,000 employees), and large enterprises (5,000 employees or more) mostly in North America and Europe. This report focuses on the subset of respondents whose company headquarters are in Europe, the Middle East, and Africa (EMEA).

Based on the data collected, Actual Tech Media concludes that:

# • Hyperconverged infrastructure is still in its infancy.

Those currently adopting hyperconverged infrastructure is a small percentage of the overall. The outlook shows that organizations will adopt such solutions over the next 24 to 36 months. EMEA respondents are somewhat ahead of the curve when it comes to both current and anticipated adoption of hyperconverged infrastructure.

• Virtual desktop infrastructure (VDI) remains a use case for hyperconvergence—albeit a small one.

VDI has traditionally been a driver for the adoption of hyperconverged infrastructure, possibly driven by the catalyst event of a Windows desktop upgrade a few years ago. Today, however, other workloads are just as important.

# • Companies are desperately seeking ways to simplify IT and reduce costs.

Despite an increase in IT spending this year, many organizations still strive to reduce spending—both in capital expenditures by investing in technology that provides a healthy ROI, and in operational expenditures. For EMEA respondents, improving operational efficiency and reducing costs are the top two drivers for planned adoption.

- Many IT professionals have not fully grasped the concept of hyperconvergence. About one-third of EMEA non-adopter respondents have no plans to deploy hyperconverged infrastructure. "Why would we go back to direct-attached storage?" is a common question of skeptics.
- Dissatisfaction with legacy storage infrastructure is not a huge driver for hyperconverged infrastructure for EMEA midsize and large organizations.

This is likely because organizations of these sizes have IT professionals' specialized skills for storage and storage area networking (SAN).

#### Rapid virtual machine provisioning is an important outcome. Larger and midsize companies, likely faced with a greater volume of workloads to provision and deploy, look to accelerate deployment. This is not at all a factor for small organizations.

### • Improving operational efficiency is key.

Overall, EMEA respondents ranked improving operational efficiency as a top IT priority, regardless of company size. It was also the number one benefit expected by planned adopters and realized by current adopters of hyperconverged infrastructure.

# • Data center consolidation is a significant priority for larger companies. Again, this is more than likely born from a desire to reduce costs and improve efficiencies in IT.

# Introduction

#### Hyperconverged Infrastructure

In this survey, *hyperconverged infrastructure* is defined as "a virtual computing infrastructure solution that seamlessly combines several data center services in an appliance form factor, which accelerates the speed and agility of deploying virtualized workloads, reduces complexity, improves operational efficiency, and lowers costs."

Hyperconverged infrastructure is characterized by:

- A software-centric design.
- Commodity x86 hardware components that combine hypervisor, compute, storage, and storage switching with other IT services (such as data protection) in the stack, effectively eliminating the need for discrete IT components.
- A single "building block" appliance that, when combined with additional building blocks, provides a single, scalable resource pool; and seamlessly scales in capacity and performance.
- A high degree of automation.
- The ability to manage aggregated resources as efficiently as possible within and across data centers as a single federated system and through a common toolset.
- Design, delivery and support by a single vendor.

For more information about hyperconverged infrastructure, see <u>Appendix A:</u> <u>Hyperconvergence Background</u>.

# **Report Objectives**

To assess the State of Hyperconverged Infrastructure, ActualTech Media surveyed over 500 IT professionals at companies with a minimum of 100 employees, who have knowledge of their company's IT environment and strategy, and whose organization has at least one data center and at least 25% of its x86 production servers virtualized.

ActualTech Media's goal is to understand the top challenges organizations face regarding IT infrastructure and service delivery, and how hyperconverged infrastructure addresses these challenges.

Specifically, this report focuses on answering the following questions:

- What are the respondents' top IT priorities for next 12 to18 months?
- What are the top "pain points" in running virtualized workloads using the respondents' current infrastructure?
- What is the general awareness of hyperconverged infrastructure?
- What is the interest level in hyperconverged infrastructure? Why is there or why is there no interest?
- For those interested in hyperconverged infrastructure, what is the timeframe for adopting/deploying it?
- What are the main drivers for deploying hyperconverged infrastructure?
- What criteria are used to evaluate hyperconverged infrastructure?
- What benefits can be expected from deploying hyperconverged infrastructure?

In addition to the various sizes of organizations, those taking part in the survey represent a wide sampling of industries. For more information on the demographics of the respondents, please see <u>Appendix B – Respondent Demographics</u>.

### Key Hyperconverged Infrastructure Market Drivers

The survey results underscore a few key market drivers for hyperconverged infrastructure:

1. Legacy infrastructure costs are too high.

This problem is identified in the reasons why organizations are considering hyperconverged infrastructure: to reduce costs.

- 2. **Respondent organizations are eager to improve IT operational efficiency**. As on-premises IT infrastructure increasingly has to compete with public cloud economics, organizations seek to reduce run-rate expenses.
- 3. Data protection is identified as the largest problem facing IT departments. This is likely a result of the complexity of IT infrastructure, the dynamic nature of the data center, and the sheer volume of data to protect.

#### 4. Organizations are seeking increased use of virtualization.

The operational, financial, and business benefits of virtualization have been proven at most companies, thus fueling a desire to expand virtualization for the server and desktop realms, as well as other areas of the data center, such as storage.

Despite these drivers, there appears to be a lack of understanding — or lack of belief — among survey respondents for the breadth of services that can be included in hyperconverged infrastructure solutions. This report will, in part, provide guidance to IT professionals regarding the adoption of hyperconverged infrastructure. In addition, this report will also provide guidance for infrastructure vendors.

# **Research Findings**

# **IT Priorities**

EMEA survey respondents focused on two key pain points in the top five IT priorities, and three infrastructure initiatives. As shown in Figure 1, 42% of EMEA respondents put improving data backup, disaster recovery and business continuity at the top of the list. This is likely a statement regarding the difficulties of maintaining on- and off-premises copies of data in today's dynamic, diverse and always-on data center. Today's modern data center is characterized by relentless data growth, an increase in virtualization and cloud deployments, remote/branch offices, business-critical applications with a low tolerance for downtime, and an increasingly mobile workforce, all of which introduce significant data protection challenges.

Improving operational efficiency ranks second for EMEA respondents at 41%. Operational efficiency is a measure of IT's ability to achieve its objectives with the minimum allocation of run-rate resources, including staff, budget, and time. Since this typically impacts the lion's share of IT's budget, IT organizations are motivated to simplify and automate to introduce productivity improvements.

Rounding out the top five IT priorities are: data center consolidation (37%), Virtualization Desktop Infrastructure (VDI) (34%), and deploying a private cloud infrastructure (33%). These priorities underscore the shift IT organizations are making to modernize and optimize infrastructure.

Interestingly, deploying hyperconverged infrastructure is in the second half of EMEA respondents' priority list. Hyperconverged infrastructure's priority ranking relative to the top five initiatives signals its nascence in the market, and the lack of awareness among IT professionals. Ironically, hyperconverged infrastructure has a direct impact on advancing all of the top-five priorities.

In comparing EMEA responses versus those from North America in Figure 1, the biggest disparities exist for Data Center Consolidation (EMEA 37% vs. North America 21%), Deploying a "Private Cloud" Infrastructure (EMEA 33% vs. North America 21%), and Deploying Hyperconverged Infrastructure (EMEA 26% vs. North America 16%). North American respondents also place a higher priority on Managing Data Growth (North America 30% vs. EMEA 21%),



# Most Important IT Priorities Over the Next 12 to 18 Months - By Region (Multiple Responses)

Figure 1 — IT Priorities at Respondents' Companies: EMEA vs. North America

When the results are compiled by company size (see Figure 2), the differences in IT priorities over the next 12 to 18 months are evident. For EMEA respondents at large enterprises, the top three IT priorities are Data Center Consolidation (53%), Increasing the Use of Server Virtualization (47%), and Deploying a "Private Cloud" Infrastructure (47%). For midsized EMEA companies, the top three IT priorities are Improving Data Backup/Recovery, Disaster Recovery, Business Continuity (48%), VDI (45%), and Improving Operational

Efficiency (41%). Small EMEA organizations also prioritize Improving Backup/Recovery, Disaster Recovery, Business Continuity (49%), Improving Operational Efficiency (49%), and Data Center Consolidation (37%).

With regards to hyperconverged infrastructure, its priority over the next 12 to 18 months is more important for small and midsized EMEA organizations. In fact, deploying hyperconverged infrastructure appears lower in the stack-ranked list regardless of EMEA company size.

The largest gaps in priorities between EMEA companies of different sizes include:

- VDI Midmarket companies are about one-third more likely to prioritize desktop virtualization versus smaller and larger companies. This signals that larger companies are likely passed this hurdle and VDI penetration at smaller companies is low.
- **Deploying a private cloud infrastructure** Larger enterprises are nearly three times as likely to prioritize deploying a private cloud versus midsize companies, and small companies are twice as likely to prioritize it over its midsize counterparts.
- **ROBO** Twice as many midmarket companies than larger enterprises prioritize improving remote/branch office IT/efficiency. This is likely because larger companies solved their remote/branch office challenges earlier in their company lifecycle.
- Increase use of server virtualization Twice as many midmarket companies and three times as many larger enterprises prioritize increasing the use of server virtualization than small organizations. This is aligned with the percent of production servers virtualized for EMEA respondents in Figure 32.





Figure 2 — IT Priorities at EMEA Respondents' Companies by Company Size

IT Priorities for EMEA respondents examined by respondents that intend to adopt hyperconverged infrastructure (see Figure 3) produces a top five list that includes: improving backup/recovery, disaster recovery (49%), improving operational efficiency (40%), data center consolidation (38%), deploy a "private cloud" infrastructure (36%), and VDI (34%).



# IT Priorities By Intention To Adopt Hyperconverged Infrastructure (EMEA, Multiple Responses)



According to Figure 4, 27% of EMEA survey respondents already have hyperconverged infrastructure in place. At first, that statistic may sound pretty good given that hyperconvergence is still relatively new in the market; however, respondents may have been predisposed to be positive regarding this topic when considering this survey's origins on ActualTech Media's hyperconverged.org site. In fact, the "real" number may be somewhat lower with a wider cross-section of IT professionals.

Hyperconverged infrastructure is a market that continues to be in need of comprehensive education and outreach efforts. It is a nascent market and technology, and there seems to be a constant stream of new vendor entrants in the space. Moreover, with each new vendor comes new approaches to solving infrastructure challenges. In reviewing various communities of IT professionals such as Spiceworks, and understanding the types of questions ActualTech Media has asked about hyperconverged infrastructure, it remains more than apparent that end users are in need of more content education to create a more informed buyer. This is one of the reasons that we developed <u>www.hyperconverged.org</u>, a site that is dedicated to educating the market about hyperconverged infrastructure.



# Hyperconverged infrastructure Adoption (EMEA, N=108)

Figure 4 — EMEA Hyperconverged Infrastructure Adoption

In comparing EMEA respondents' use of hyperconverged infrastructure with those in North America (Figure 5), we see that adoption is slightly higher in EMEA (27% vs. 23%).



#### Hyperconverged Infrastructure Adoption - By Region (Multiple Responses)



In examining adoption rates across organizations of different sizes in Figure 6, it's clear that there exists a slight variation between small, midmarket, and large enterprises that have already adopted. Small EMEA organizations are more likely to adopt hyperconverged infrastructure. In this case, they are twice as likely as midmarket organizations to have already deployed hyperconverged infrastructure.



#### Hyperconverged Infrastructure Adoption - By Company Size (EMEA, N=108)

Figure 6 — Hyperconverged Infrastructure Adoption in EMEA by Company Size

As would be expected, there are a number of EMEA respondents planning to adopt hyperconverged infrastructure. More than two-thirds (67%) of those who haven't already adopted, plan to deploy hyperconverged infrastructure in the next 24 to 36 months (see Figure 7).



#### Respondents' Plans To Adopt Hyperconverged Infrastructure Within the Next 24 to 36 Months (EMEA, N=79)



As shown in Figure 8, it becomes apparent that larger organizations are more intent on adopting hyperconverged infrastructure in the next 24 to 36 months.



#### Plans To Adopt Hyperconverged Infrastructure - By Company Size (EMEA, N=79)

In comparing EMEA organizations versus North American organizations planning to adopt hyperconverged infrastructure, nearly one-quarter more EMEA companies plan to deploy hyperconverged infrastructure within the next 24 to 36 months than North American companies (see Figure 9). Coupled with those organizations that have already adopted (see Figure 5), EMEA is on a faster track to hyperconvergence than North America.



Plans to Adopt Hyperconverged Infrastructure Within the Next 24 to 36 Months - By Region

Figure 9 — Respondents' Plans to Adopt Hyperconverged Infrastructure: EMEA vs. North America

Overall, hyperconverged infrastructure is a long-term plan. As shown in Figure 10, less than 15% of EMEA respondents plan to adopt it within the next six months. Nearly 80% of EMEA respondents plan to deploy hyperconverged infrastructure within the next one or two years. It's a rapidly growing space, but it's definitely still in its infancy even though VMware gave the entire space a huge push when it announced its hyperconverged infrastructure offering in late 2014.

If the survey results are any prediction of the future, however, late 2015 to early 2016 should see a major wave of adoption begin to take place. So, for those that are still learning about this technology, you're not alone.

As shown in Figure 10, there is a significant disparity for planned adopters between EMEA and North America. Over 90% of EMEA respondents plan to adopt hyperconverged infrastructure in the next two years, while only 70% of North American respondents expect to do so in the same timeframe.



Adoption Timeframe For Hyperconverged Infrastructure - By Region

Reviewing EMEA respondents' timeframe to adopt hyperconverged infrastructure by company size (see Figure 11), 16% of EMEA midmarket companies expect to adopt within the next year—with half of that taking place in the first six months. Fifteen percent of EMEA small companies also expect to adopt hyperconverged infrastructure in the next year; however, the largest portion of that 15% (13%) will be in the second six months. Curiously, large companies will be slower to adopt with 12% expecting to deploy within the next year—and mostly in the second half of the year.



Timeframe To Adopt Hyperconverged Infrastructure By Company Size (EMEA)

Figure 11 — EMEA Respondents' Plans to Adopt Hyperconverged Infrastructure by Company Size

In examining the purchase criteria for hyperconverged infrastructure among EMEA planned adopters (see Figure 12), the top five criteria provide insight into what is important to buyers: availability, cost, ease of scale, data efficiency, and recoverability via native data protection. These also tie into the three major themes uncovered in the survey:

- **Ensuring service delivery** IT's ability to set expectations for service quality, availability, and timeliness. High availability and data protection are integral for IT to set these expectations.
- Cost savings Reducing costs for both capital and operational expenses.
- **Simplicity** The ease of acquiring, deploying, and managing IT infrastructure, and deploying IT workloads.

Purchase Criteria for Hyperconverged Infrastructure - By Region (Multiple Responses)



Figure 12 — Purchase Criteria for Hyperconverged Infrastructure: EMEA vs. North America

When comparing the purchase criteria for hyperconverged infrastructure of EMEA respondents with North American respondents, the top three criteria remain consistent. In addition to data efficiency, EMEA respondents prioritize hypervisor supported, support for multiple hypervisors, policy management at the VM level, and public cloud integration more than their North American counterparts. Additionally, for North Americans, data efficiency slips to sixth place behind management capabilities.

Figure 13 compares EMEA respondents planning to implement hyperconverged infrastructure with EMEA respondents who have already implemented such solutions. There are slight differences in the top five purchase criteria. As shown in Figure 13, planned adopters value high availability, cost/ROI, ease of scaling capacity and performance, data efficiency, and recoverability via integrated backup and replication. Figure 13 shows that adopters also value high availability, ease of scaling capacity and performance, management through a common interface, data efficiency (tie), hypervisor supported (tie), and automation features (tie). Cost/ROI slips from second to seventh place, and recoverability via integrated backup and replication slips from fifth to eighth in the rank order.

Given the level of effort that some vendors have put into enabling support for multiple hypervisors, it's somewhat surprising to see this perceived need so low on the list (tied for ninth place out of 15 for EMEA planned adopters and thirteenth out of 15 for EMEA adopters). However, we see a couple of possible reasons for this:

- Almost all of the solutions in the market provide support for VMware vSphere, the current market leader in virtualization.
- The focus for such solutions is on the workloads and the outcomes and not as much on the inputs. People are willing to switch hypervisors if it makes sense to do so.
- There are solutions in the market targeting all of the major hypervisors. Since there is product choice, it's not as critical that a specific solution support everything.

We aren't that surprised to see EMEA adopter criteria results based on other data in this report. Perhaps the primary surprise is that, even though we see availability as a key driver, data protection falls lower in the list. Again, this could be the result of EMEA adopters not knowing that hyperconvergence—through simplification and consolidation—can address data protection challenges. It could also be that EMEA current adopters chose a vendor that does not have comprehensive data protection capabilities baked in.

The widest gap between perception (planned adopters) and reality (current adopters) is with cost. EMEA planned adopters prioritize cost/ROI for hyperconverged infrastructure higher than current adopters do. This might be the result of EMEA current adopters (so called "early adopters") de-emphasizing budget in their selection criteria in favor of gaining other, bigger benefits. In other words, the decision to introduce hyperconverged infrastructure was driven less by cost and more by the overall benefits of modernizing data center architecture.



# Purchase Criteria for Hyperconverged Infrastructure (Multiple Responses)



Figure 14 identifies the outcomes that EMEA planned adopters expect to see from a hyperconverged infrastructure solution versus North American planned adopters. The points of differentiation are that EMEA planned adopters believe they will benefit from a

reduction in time and resources required for infrastructure tasks and integration more than North American planned adopters. North American planned adopters believe that they will benefit from improving service and support over EMEA planned adopters.



Benefits Expected By Planned Adopters With Hyperconverged Infrastructure - By Region

Figure 14 — Benefits Expected by Planned Adopters: EMEA vs. North America

In Figure 15, current versus planned adopters' points of view are contrasted. It's no surprise to see some response alignment here, although there are some interesting variances. For example, the number one benefit of hyperconverged infrastructure for EMEA planned adopters is improving operational efficiency. However, the number one benefit *realized* by EMEA current adopters is actually improved time and resources required for infrastructure tasks and integration.

This is not to say that hyperconvergence fails to meet its promises. In fact, we believe that the information shown here indicates that hyperconverged infrastructure actually does a

reasonably good job of living up to the hype. Rather, this difference indicates that those who have chosen to deploy a solution are simply seeing slightly varied outcomes versus the expectations of those only considering a solution.

The largest of gaps between EMEA planned adopters and the reality EMEA current adopters experience is with the top benefit: to reduce costs. This data doesn't suggest that current adopters saw gaps in perceived versus actual benefits realized, but it does suggest that there is a higher perception among EMEA planned adopters that hyperconverged infrastructure will deliver greater cost reduction.



# Realized vs. Expected Benefits of Hyperconverged Infrastructure (EMEA, Multiple Responses)

Figure 15 — Benefits Expected (Planned Adopters) vs. Benefits Realized (Current Adopters) by EMEA Respondents

As shown in Figure 16, there are marked differences in benefits realized by adopters in EMEA versus North America. A larger percentage of EMEA adopters cite productivity savings in managing infrastructure (by nearly a 33% margin), improved scalability, improved operational efficiency (by a 25% margin), faster deployment time, improvements in data protection (by nearly a 33% margin), and greater agility of VM provisioning. One of the more glaring differences is with cost savings. One-quarter fewer EMEA adopters cite cost savings due to hyperconverged infrastructure adoption.







Not everyone is enamored with the potential for hyperconverged infrastructure or simply has no present need to re-examine data center operations. There are myriad reasons identified as challenges around hyperconverged infrastructure adoption.

There is a dramatic contrast between the top reasons that North American respondents and EMEA respondents are not considering the technology, as shown in Figure 17. The top two for North American respondents have nothing to do with the technology itself but rather have to do with the business cycle:

### • Current solution works just fine.

The adage "If it's not broke, why fix it?" holds true for many respondents. However, that won't always be true. Business priorities change on a dime, and understanding the delta benefits that may come from modernizing the data center with hyperconverged infrastructure solutions may be useful in the future.

# • Recently upgraded infrastructure.

For most hyperconverged infrastructure vendors, there is no need for a forklift. Many solutions can integrate with the existing environment although different solutions offer varying degrees of integration opportunities. Whether new applications are being deployed or there is a specific use case, such as VDI or ROBO, there may be an opportunity to introduce hyperconverged infrastructure into the environment.

The top two responses for EMEA respondents paint a different picture.

### • Hyperconverged infrastructure needs to mature.

This makes sense as a concern, given its relatively recent entry into the IT marketplace coupled with the fact that it's a rapidly changing space. EMEA respondents have lower confidence that hyperconverged infrastructure is ready for production workloads. Ranking this response so highly signals that EMEA respondents will take a wait-and-see approach before considering hyperconverged infrastructure to replace incumbent solutions.

# • Organizational/cultural resistance.

EMEA respondents believe that their current organization will not embrace hyperconverged infrastructure due to concerns about its impact on staff skills and functional responsibility. In this case, legacy infrastructure and an accompanying siloed functional organization are the likely culprits.

EMEA respondents were less concerned about hyperconverged infrastructure being available from an approved vendor, the availability of a reference architecture, deployment time and disruption, or resiliency.



# Primary Reason For No Interest In Deploying Hyperconverged Infrastructure -By Region

Figure 17 — Primary Reason for No Interest in Hyperconverged Infrastructure: EMEA vs. North America

There are other reasons that EMEA respondents are not considering hyperconverged infrastructure at this time. Some are related to the technology and others are not:

• No time or resources to evaluate.

Given that improving operational efficiency is one of the most expected outcomes from hyperconverged infrastructure, for organizations that are seriously strapped for time, the technology should be on the evaluation short list.

• Concerns around vendor lock-in.

Lock-in can be a serious concern, but companies do it every day. They "standardize" on platforms and software, thus locking themselves into solutions. If something is the right solution, lock-in is not necessarily a downside. In a virtual environment, it's rather simple to migrate workloads to something else using a tool such as VMware vMotion.

#### • Don't see benefits.

It is clear that more market education is necessary for many respondents to fully understand the full breadth and depth of outcomes that can be realized with hyperconverged infrastructure.

### • Acquisition/implementation costs.

There is validity in this concern, depending on the solution. This holds true especially for small and midsize organizations that may be strapped for financial resources. Regardless of the selected hyperconverged infrastructure solution, there is usually a need to start with a minimum of two or three nodes for full redundancy and availability. This can be a significant investment, but it is also an opportunity for lower cost hyperconverged infrastructure vendors to carve out a substantial market.

There is also the fact that vendors with longstanding reputations are finally dipping their toes into this space, which is becoming increasingly fragmented as more and more vendors jump in. These more established companies are well trusted and will lend validity to the entire concept behind the technology, and eventually help people become more comfortable with entrusting their mission-critical workloads to a new architectural paradigm. With that said, many of the early-to-market vendors offer the most innovation in their solutions. Therefore, while sticking with an incumbent vendor is safe, the organization may miss out on the innovation that delivers more fully on the expected benefits.

Conversely, the organizations with no interest in hyperconverged infrastructure identified overall IT challenges that can be addressed by hyperconverged infrastructure, as outlined throughout this report. Figure 18 contains a combination of IT priorities cross-analyzed with answers to the question regarding whether or not hyperconverged infrastructure adoption is of interest to the EMEA respondent.

We see some misalignment between potential hyperconverged infrastructure outcome expectations and IT priorities. For example:

• Backup, recovery, and disaster recovery (DR) ranks first for IT priorities, yet 42% of EMEA respondents prioritizing it have no plans to adopt hyperconverged infrastructure.

Depending on vendor, there can be a significant improvement with a hyperconverged infrastructure solution. Either vendors need to do more work to help customers see these benefits or customers are wary of what they're hearing from vendors.

• Improve operational efficiency ranks number two for IT priority, yet 46% of EMEA respondents prioritizing it have no plans to adopt hyperconverged infrastructure. Hyperconverged infrastructure solutions have the potential to transform operations and enable greater efficiency and productivity; however, the majority of EMEA respondents have no plans to leverage hyperconverged infrastructure to address the initiative.



# IT Priorities By Intention To Adopt Hyperconverged Infrastructure (Multiple Responses)

Figure 18 — EMEA Respondents' IT Priorities by Intention to Adopt Hyperconverged Infrastructure

Today's data centers are complex and difficult to manage. Over the years, IT leaders and staff have procured "point solutions" in attempts to correct challenges introduced by other services. For example, as new business needs began to overcome storage performance capabilities, companies bought flash-based caching systems. As disaster recovery needs became more critical, WAN accelerators were introduced in order to make replication solutions work. And the list goes on. Every time the cycle is repeated, the data center gets

increasingly complex. Moreover, each new service introduces new costs in the form of maintenance, as well as the need for staff skills.

Data centers are among the most costly physical assets owned and operated by organizations. The cost is not just in the equipment that is deployed, but also in the sheer effort that it takes to manage that equipment, keep it running, and keep it maintained year over year. To make matters worse, many companies have deployed bandage-like solutions to patch over problems that are introduced as the data center grows more complex or has challenges meeting emerging business needs.

To address these and other problems, companies are modernizing their data centers. As shown in Figure 19, nearly two-thirds (62%) of EMEA hyperconverged infrastructure adopters cite drivers related to cost savings as the catalyst for hyperconverged infrastructure adoption:

- 28% cite data center consolidation as a primary driver.
- 17% cite cost reduction as their primary driver for considering hyperconverged infrastructure.
- 17% cite improving operational efficiency as their primary driver.

In contrast with North American adopters, only 35% (about half as many EMEA adopters) cite similar cost savings drivers.



Primary Driver for Adopting Hyperconverged Infrastructure - By Region

Figure 19 – Current Adopters' Primary Driver for Interest in Hyperconverged Infrastructure: EMEA vs. North America

As shown in Figure 20, over half (53%) of EMEA planned adopters cite drivers related to cost savings as the catalyst for hyperconverged infrastructure adoption:

- 21% cite improving operational efficiency as their primary driver.
- 19% cite cost reduction as their primary driver.
- 13% cite data center consolidation as a primary driver.

This is in contrast to the 48% of North American planned adopters citing the same cost savings drivers.



#### Primary Driver for Interest in Hyperconverged Infrastructure - By Region

Figure 20 — Planned Adopters' Primary Driver for Interest in Hyperconverged Infrastructure: EMEA vs. North America

# Conclusions

The sections below identify area in which there are similarities and differences between EMEA and North American respondents and also draw some general conclusions.

# Similarities

There are a couple of important similarities between EMEA responses and those gathered in North America.

### Top Two IT Priorities Are Consistent Between EMEA and North America

The first priority — improving data backup, disaster recovery, and business continuity — as well as the second priority of improving operational efficiency are just as important to EMEA respondents as North American respondents. Even after decades of addressing backup issues, IT departments in both regions continue to look for ways to improve on these critical needs.

Gaps Between EMEA Current and Planned Adopters' Purchase Criteria Are Similar The top five purchase criteria provide insight into what is important to EMEA IT infrastructure buyers planning to adopt hyperconverged infrastructure: availability, cost, ease of scale, data efficiency, and recoverability via native data protection. When current versus planned adopters responses are compared, current adopters rank cost/ROI lower (seventh versus second place), and recoverability via integrated backup and replication lower (eighth versus fifth place). Given the level of effort that some vendors have put into enabling support for multiple hypervisors, it's also somewhat surprising to see multihypervisor support so low on the list (tied for ninth position out of 15 for EMEA planned adopters and 13 out of 15 for EMEA adopters). North American respondents had similar criteria for purchase criteria.

Education Could Overcome Respondents' Resistance to Hyperconverged Infrastructure With "hyperconverged infrastructure needs to mature" as a top response, EMEA respondents signal a lower confidence that hyperconverged infrastructure is ready for production workloads. In addition, concerns about organizational/cultural resistance by EMEA respondents reveals their belief that their current organization will not embrace hyperconverged infrastructure due to concerns about its impact on staff skills and functional responsibility. Of those EMEA respondents ranking improving backup, recovery, and disaster recovery as an IT priority and improving operational efficiency as an IT priority, 42% and 46% cite no interest in adopting hyperconverged infrastructure, respectively. Clearly, more education is needed in these areas to help respondent organizations better understand the potential backup and disaster recovery potential in hyperconverged solutions.

#### Differences

There are a number of differences between North America and EMEA as well, each of which is discussed in the following sections.

# Many Other IT Priorities Are Very Different Between EMEA and North America

There are larger discrepancies between regional respondents in a few areas. For example, EMEA respondents prioritize data center consolidation, deploying a private cloud infrastructure, and deploying hyperconverged infrastructure higher—each by a 10-point or greater margin—versus North America respondents.

#### EMEA Hyperconverged Infrastructure Adoption and Planned Adoption More Aggressive

EMEA respondents appear to be more aggressive in adopting hyperconverged infrastructure and expressing interest in adopting the technology than their North American counterparts. Actual adoption is slightly higher in EMEA (27% vs. 23%). Furthermore, over 90% of EMEA respondents plan to adopt hyperconverged infrastructure in the next two years, while only 70% of North American respondents expect to do so in the same timeframe.

#### Cost Savings Is More of an Important Driver for EMEA Than North America

Nearly two-thirds (62%) of EMEA hyperconverged infrastructure adopters cite drivers related to cost savings as the catalyst for hyperconverged infrastructure adoption, including data center consolidation (28%), cost reduction (17%) and improving operational efficiency (17%). In contrast, only around one-third (35%) of North American adopters rank similar cost savings drivers. This suggests that EMEA organizations seek expense-cutting IT initiatives rather than revenue drivers.

#### EMEA Planned Adopters Focus on Cost Benefits

The largest gap between EMEA planned adopters and EMEA current adopters is with the top benefit: reduce costs. The data suggests that there is a higher perception between EMEA planned adopters that hyperconverged infrastructure will deliver greater cost reduction.

#### EMEA Current Adopters vs. North American Current Adopters

In comparing EMEA vs. North America, a larger percentage of EMEA adopters cite productivity savings in managing infrastructure (by a nearly one-third margin), improved scalability, improved operational efficiency (by a 25% margin), faster deployment time, and improvements in data protection (by a nearly one-third margin) as top benefits. The truth is that EMEA adopters are achieving cost benefits via productivity savings, improved operational efficiency, and data protection improvements.

# Appendix A – Hyperconverged Infrastructure Background

IT is under ever increasing pressure to pay more attention to critical business needs. Over the years, these efforts have been met with mixed success, and in recent years, there has been evidence that businesses are currently dissatisfied with IT's progress in this regard. In early 2015, CIO magazine released the results of their annual survey in which they query both IT leaders and non-IT executives regarding overall satisfaction with technology services. In this particular survey, CIOs and other IT leaders will be disappointed to learn that their business counterparts are not in agreement as to the overall efficacy of IT.

There is good reason for this rift. Over the years, IT departments have managed to accrue all kinds of technology components intended to solve individual problems brought about by previous purchases. IT has implemented solid state disk caching systems to improve storage performance, WAN accelerators to move data more quickly across the Internet connection, deduplication in backup appliances, software to manage backup data growth, and much more. Each time a new component is added, new complexity is introduced, which increases costs and widens the rift between IT and the business.

Moreover, comprehensive data protection and disaster recovery also remain elusive goals for many IT organizations. These kinds of processes have often traditionally required dedicated equipment and software, which means that there is additional cost and complexity associated with these kinds of tools.

The past few years have seen major upheaval in the ranks of the information technology vendor market, particularly for those vendors that sell technology targeted at the data center. Nowhere is this market more in flux than in the converged infrastructure space and, specifically, the space that has become known as hyperconverged infrastructure.

Hyperconverged infrastructure is a rapidly growing space defined by systems that basically eliminate the need for traditional SAN devices and, in some cases, collapse even more devices. Obviously, that doesn't mean that storage is no longer a critical part of the data center. In fact, hyperconverged infrastructure solutions came into existence due to the significant challenges that organizations faced with their legacy SAN-based storage solutions. In recent years, business needs have begun to far outpace the ability of legacy storage solutions to keep up with growing performance needs.

It's common knowledge that emerging services such as virtual desktops and data analytics require significant levels of storage performance. However, even mainstream virtualization needs are driving this performance need as companies steadily extend their virtualization efforts to include large Tier-1 applications such as ERP, Microsoft Exchange, Microsoft SQL Server, Oracle, and more.

At the same time, CIOs and other business decision makers work hard to ensure that IT is meeting the needs of the business. Over the years, the data center has become an increasingly complex place requiring teams of staff members to make sure that systems remain operational. As the aforementioned performance challenges have appeared, IT staff have struggled to keep pace. The result has been the introduction of ever more complex systems requiring more upkeep, more maintenance dollars, and more staff.

Hyperconverged infrastructure was introduced to solve the performance, cost, and complexity challenges plaguing IT. These systems operate by returning to an IT environment that leverages direct-attached storage running on commodity hardware, but many solutions go far beyond this baseline. In these baseline systems, there are a multitude of hard drives and solid state disks installed in each of the x86-based server nodes that comprise the environment. Installed on each of these nodes is the traditional hypervisor, but, in addition, there is software made available by hyperconverged infrastructure vendors. There are vendors that collapse services such as deduplication, compression and WAN optimization; data protection; and cloud gateway technologies into their solution. At its most basic level, this software aggregates all of the storage from across all nodes of the environment and presents it back to the hypervisor for consumption by virtual machines. In essence, hyperconverged infrastructure leverages the concepts behind software-defined storage systems in order to modernize and simplify the data center environment.

Hyperconverged infrastructure is akin to the Swiss Army knife in that this single solution has the capability to meet numerous needs and solve numerous problems.

### Appendix B – Respondent Demographics

The vast majority of EMEA respondents represent the IT organization within their companies. As shown in Figure 21, over half (54%) of all EMEA respondents identified as IT staff with most of the rest (45%) of EMEA respondents working in IT management. A scant 2% of EMEA respondents identified as executive management. (*Please note that we have rounded figures to the nearest percent, hence the values here total to 101%*). This statistic should not be construed as proof that executive management has nothing to do with decisions around hyperconverged infrastructure. Instead, be aware that respondents were identified through lists comprised primarily of IT staff and management.



It's interesting to note that, in smaller organizations, IT management takes a larger role in these decisions (see Figure 22). In EMEA, small companies have 58% IT Management versus 39% IT Staff , midsize companies have 72% IT Staff, and large companies have 53% IT Staff.



#### Respondent's Current Role - By Company Size (EMEA)

Hyperconverged infrastructure enjoys attention from across the spectrum of job roles within the IT organization, but it is focused on by those with responsibility for architecture/planning (31%) and x86 server/virtualization (26%). Additionally, 15% of respondents identified as being in a management role. The remaining roughly one-quarter of EMEA respondents hail from the IT systems management, cloud computing, storage, end user computing, or the IT generalist ranks.

We were surprised to see that only 4% of respondents identified as being responsible for end user computing. Virtual Desktop Infrastructure (VDI) was one of the original targets for hyperconverged infrastructure in its early days. It's very obvious that hyperconverged infrastructure technology has moved beyond its roots.

In comparing EMEA versus North America (see Figure 23), the Architecture/Planning function and x86 Servers/Virtualization were significantly more represented in the survey— by more than one-third. IT Management was significantly under-represented—by more than one-third—and functions like security, backup and mainframe were not represented at all among EMEA respondents.



#### Respondent's Functional Responsibility in IT - By Region

Figure 23 — Respondent's Functional Responsibility: EMEA vs. North America

In examining EMEA respondents' functional responsibility by company size (see Figure 24), those citing Architecture/Planning are primarily (40%) from large enterprises, while x86 Servers/Virtualization respondents are predominantly from midsized organizations (38%). The largest group (31%) of respondents responsible for IT Management and Strategy are from companies with less than 500 employees.

#### **Respondent's Responsibility - By Company Size (EMEA)**

100 to 499 employees (N=36) 500 to 4,999 employees (N=29) More than 5,000 employees (N=45)



Figure 24 — EMEA Respondent's Functional Responsibility by Company Size

Figure 25 shows respondents' role in a typical purchase process. Most EMEA respondents (56%) identify themselves as influencers who play a behind-the-scenes advisory role at critical junctures (e.g., reviewing/evaluating technology). Eighteen percent of EMEA respondents identify themselves as implementers who deploy and maintain solutions and are consulted in the purchasing process. Another 13% are champions who lead the buying process and are a key sponsor for purchase. Executives or final decision makers comprise 6% of EMEA respondents, and users who directly interact with the hyperconverged infrastructure solution make up 4% of EMEA respondents. Only 1% of EMEA respondents are ratifiers who are responsible for professional purchasing, procurement, legal considerations and checkpoints of negotiation.



As far as company size goes for EMEA organizations, respondents work in organizations that run the gamut from as few as 100 employees to well beyond 20,000 employees. Note that the survey eliminated responses from respondents who work in organizations with fewer than 100 employees. Beyond that, there is surprising consistency in the number of respondents per size band, as shown in Figure 26. Please note that, for simplicity, we combined company size categories into small, medium, and large in order to more easily perform company size comparisons in this report.



#### Total Employees Worldwide at Respondent's Organization (EMEA, N=110)

Of the EMEA respondents (see Figure 27), larger enterprises are better represented at 41% versus 37% from North America. There are approximately one-third less EMEA respondents at mid-market organizations (26%) versus those from North America (41%). At smaller companies, EMEA respondents (33%) surpass North America respondents (23%) by about one-third.



Total Employees Worldwide at Respondent's Organization - By Region
North America (N=383)
EMEA (N=110)

As shown in Figure 28, industry representation among respondents was heavily skewed toward IT in EMEA, with this category making up one-third (33%) of the respondents. Also well represented were Financial Services (11%), Healthcare (9%), Telecommunications (8%), and Manufacturing (6%), which when combined, make up another one-third of respondents. It should be noted when analyzing this response, that it's possible that some respondents include themselves in the IT category even if they actually represent a different vertical.



#### Principal Industry of Respondent's Organization - By Region

Figure 28 — Respondent's Industry by Region

It's no surprise to see that, as an organization gets larger, its number of data centers also increases, as shown in Figure 29. For example, 2% of small companies of EMEA respondents have just a single data center. Just 1% of companies in this size range identified as having 20 or more data centers. The majority of EMEA respondents, regardless of number of employees in the company, have 2 to 5 data centers. With hyperconverged infrastructure,

this issue becomes critically important and having multiple data centers begins to open up far more opportunities for improving backup and recovery, business continuity, and more.



Total Data Centers at Respondent's Organization - By Company Size (EMEA, N=110)

In comparing EMEA versus North America in Figure 30, EMEA and North America were evenly distributed in all categories of data center sizes except for two. EMEA was represented less in the single data center category at 3% versus North America at 11%, and EMEA surpassed North America in the 2 to 5 data centers category (65% versus 56%).



Total Data Centers at Respondent's Organization - By Region

Figure 30 — Total Worldwide Data Centers at Respondent's Organization: EMEA vs. North America

As shown in Figure 31, aligned with the size of company in terms of number of employees and number of data centers, the number of production servers at EMEA respondents' organizations surpasses North America respondents in the "More than 5,000" range (15% vs. 10%).



Production Servers Supported Worldwide at Respondent's Organization -By Region

Figure 31— Number of Production Servers at Respondent's Organization: EMEA vs. North America

Overall, there is significant virtualization penetration (i.e., what percentage of the data center environment is virtualized) in all respondents' organizations. Figure 32 breaks down EMEA versus North America respondents' use of virtualization. It shows that 87% of EMEA respondents are more than 50% virtualized—neck and neck with North America at 84%. This is critically important as organizations consider hyperconverged infrastructure, for which virtualization is a prerequisite.



Percent of All x86 Servers Virtualized To Date - By Region

When analyzing virtualization penetration at EMEA organizations by size of company (see Figure 33), companies of all sizes surpassing 50% virtualization are evenly matched: smaller organizations (86%), mid-sized companies (89%) and large enterprises (86%). However, at 64%, smaller EMEA companies are best represented in the 75% to 100% virtualized category.



#### Percent of x86 Systems Virtualized - By Company Size (EMEA)

Figure 33 — Percent of x86 Servers Virtualized at EMEA Respondent's Company by Company Size



#### Hypervisor Currently in Use Versus Hypervisor Planned in the Next 12 to 18 Months (EMEA, N=110, Multiple Responses)

Figure 34 — Hypervisor in Use and Planned to Use at EMEA Respondents' Companies

As Microsoft Hyper-V and KVM become more popular as alternatives to VMware vSphere, it's always interesting to discover what is truly going on with regard to the hypervisor. It comes as no surprise that most respondents are using VMware as their hypervisor of choice, particularly given VMware's longevity and feature set (see Figure 34 for EMEA and Figure 35 for North America). Hyper-V, however, is coming up fast with almost one-third of EMEA respondent companies in production and 28% at North America respondents' companies with this hypervisor. Citrix XenServer enjoys 14% penetration among EMEA respondents and 20% at North America respondents, while KVM garnered 7% in EMEA and 6% in North America.



#### Hypervisor Currently in Use Versus Hypervisor Planned in the Next 12 to 18 Months (North America, N=379, Multiple Responses)

Figure 35 — Hypervisor in Use and Planned to Use at North America Respondents' Companies

For hyperconverged infrastructure vendors, the message is very clear. If you're supporting VMware only, you're doing just fine . . . for now. We expect to see Hyper-V usage continue to grow quickly in coming years, particularly due to the fact that a new version will ship with Windows Server 10. Even though XenServer is ahead of KVM today, we believe that KVM is a more strategic opportunity than XenServer in the long run. Many organizations focus their Xen efforts on virtual desktop scenarios whereas KVM is used for more general-purpose virtualization needs. As such, we see KVM as a more strategic part of hyperconvergence vendor roadmap efforts than XenServer, but neither is critical at this point and we don't believe that lack of support for either XenServer or KVM puts any hyperconverged infrastructure vendor at risk.