

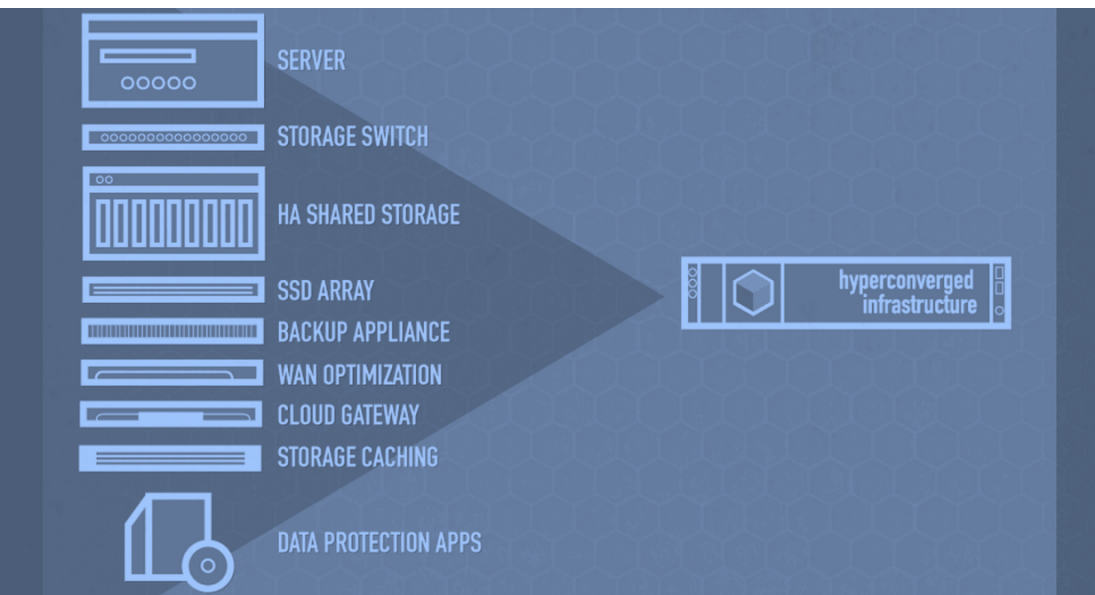
Industry Trends

2016 State of Hyperconverged Infrastructure

APJ Insights | May 2016

HYPERCONVERGED INFRASTRUCTURE

Hyperconverged infrastructure is 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 in the stack, such as data protection, 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.

EXECUTIVE SUMMARY & RESEARCH OBJECTIVES

Executive Summary

Hyperconverged infrastructure is gaining major traction and attention in both midmarket companies as well as the enterprise. For our 2016 APJ Insights into this growing market, we learned the following:

- Adoption of hyperconverged infrastructure in some form is above 46% in APJ;
- Financial metrics – acquisition cost and operational improvements – remain key decision criteria as it pertains to hyperconverged infrastructure adoption;
- More important than improving financials, the other side of the hyperconvergence-driven operational efficiency story means that organizations can redeploy IT staff to revenue-generating activities;
- While those investigating hyperconverged infrastructure don't rank data reduction in their top five criteria, those that have deployed a solution ranked data reduction as their second most important requirement.

Research Objectives

For the second year, ActualTech Media and SimpliVity have partnered to research the hyperconverged infrastructure market to determine current state and to identify trends.

Specifically, with this project, we are attempting to:

- Determine the current penetration of hyperconverged infrastructure in organizations of different sizes;
- Identify any surprises that adopters of hyperconvergence may have encountered along their journey;
- Understand the key use cases and workloads that those implementing hyperconverged infrastructure are intending to support;
- Discover any outlier metrics that may reveal a portion of the market moving in an unexpected direction.

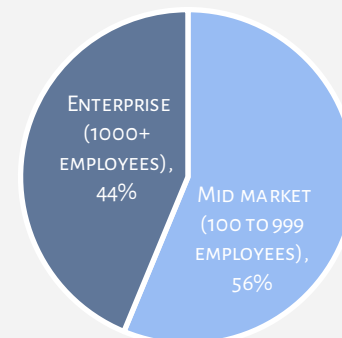
INTRODUCTION

ActualTech Media surveyed over 1,000 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, with 160 qualified respondents from companies based in APJ.

ActualTech Media also sought to understand how well expectations are meeting reality when it comes to hyperconverged infrastructure. The survey results represent midmarket (100 to 999 employees) and enterprise (1000 employees or more) companies. This report focuses on the subset of respondents whose company headquarters reside in the Asia Pacific region, and Japan (APJ).

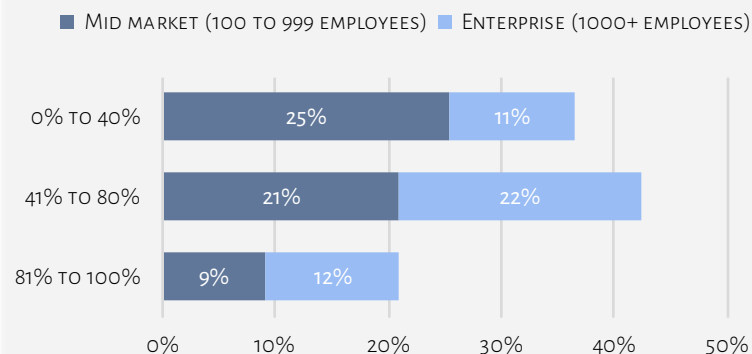
How many total employees does your organization have worldwide?

(APJ, N=160)



Percent of x86 Systems Virtualized by Company Size

(APJ, N=153)



HYPERCONVERGENCE ADOPTION

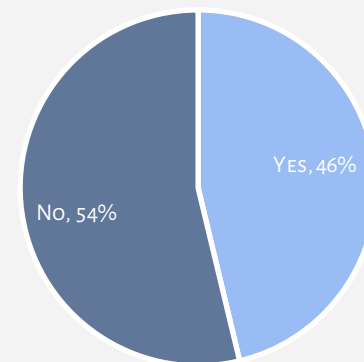
Since our 2015 report, hyperconverged infrastructure adoption has gone through an aggressive growth period. In APJ, 46% of respondents indicate that they have adopted hyperconverged infrastructure in some way.

In our assessment, we do not believe that this figure equates to full enterprise adoption. Rather, we believe that respondents are considering software-defined storage services provided by hypervisor vendors and hyperconverged software licenses that may ship with server hardware in their estimates. We also believe that converged systems may be included in these results. Further, we believe that many organizations may be testing hyperconverged infrastructure and, as a result, consider themselves as having adopted the technology.

The lower pie chart to the right provides a look at the same question, but from the full worldwide data set. For the world, hyperconverged adoption comes in at 37%, but with the same caveats.

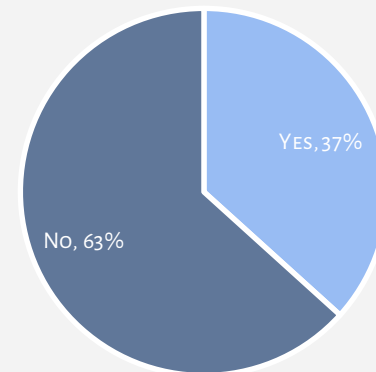
ASIA PACIFIC

Based on the definition provided, have you already adopted hyperconverged infrastructure?
(APJ, N=160)



WORLDWIDE

Based on the definition provided, have you already adopted hyperconverged infrastructure?
(worldwide, N=938)



TOP FIVE IT PRIORITIES

Topping the 2016 IT priorities list are activities intended to better manage IT resources and to reduce the cost and complexity of the data center. It appears as if organizations based in APJ are seeking to truly streamline their IT functions.

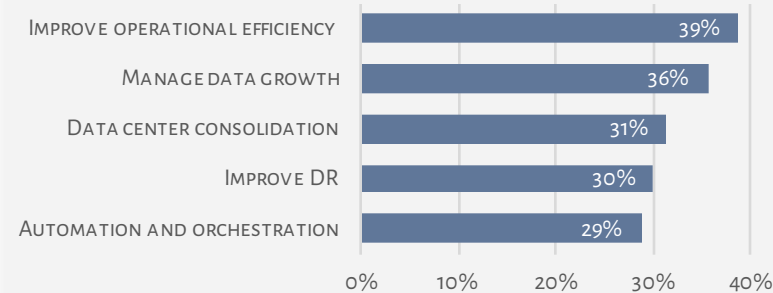
These priorities are all items that can be easily solved with the right hyperconverged infrastructure solution:

- Hyperconverged infrastructure is intended to simplify data center operations (35%), thereby improving operational efficiency.
- Data growth is an ongoing problem (34%), requiring ways to quickly and easily add capacity, but also requiring comprehensive data reduction capabilities to help keep data growth in check. Hyperconverged infrastructure can help to address this challenge.
- Improving backup and recovery capability (31%) is a key outcome desired by many respondents and is also a well-supported use case for hyperconverged infrastructure.

ASIA PACIFIC

Which of the following would you consider to be your organization's most important IT priorities over the next 12 to 18 months?

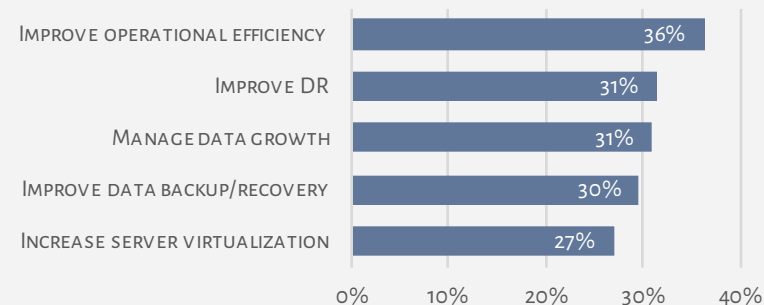
(APJ, multiple responses allowed, N=160)



WORLDWIDE INCLUDING APJ

Which of the following would you consider to be your organization's most important IT priorities over the next 12 to 18 months?

(Worldwide, multiple responses allowed, N=938)



TOP FIVE DEPLOYMENT DRIVERS

For those that are seeking to deploy hyperconverged infrastructure and for those that have *already deployed* hyperconverged infrastructure, the number one driver behind the initiative is to save money. Cost reduction (21%) was cited as the *primary* driver for those seeking to deploy hyperconverged infrastructure. For those that have already deployed the technology, cost reduction (32%) was also identified as one of the key drivers behind the decision.

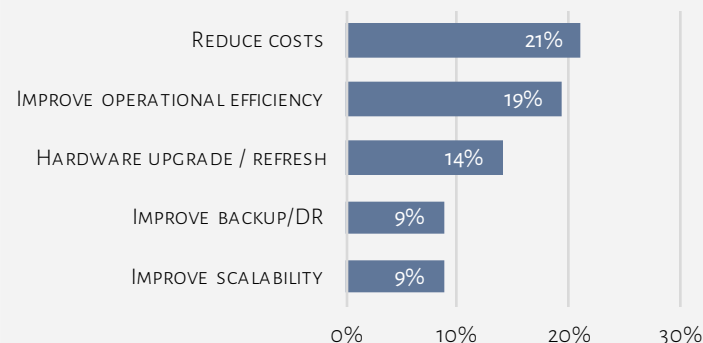
Further, for those that are considering adoption, improving operational efficiency ranks second at 19%. Operational efficiency can be considered a form of indirect cost reduction, but, more importantly, can also be considered a strategic investment enabling IT to pivot its support toward more revenue-driving functions as it turns away from constant infrastructure support.

It's also important to note that backup and disaster recovery needs remain critically important to both adopters and non-adopters, further driving potential value from a solution.

NON-ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which of the following is the primary driver for your interest in hyperconverged infrastructure?

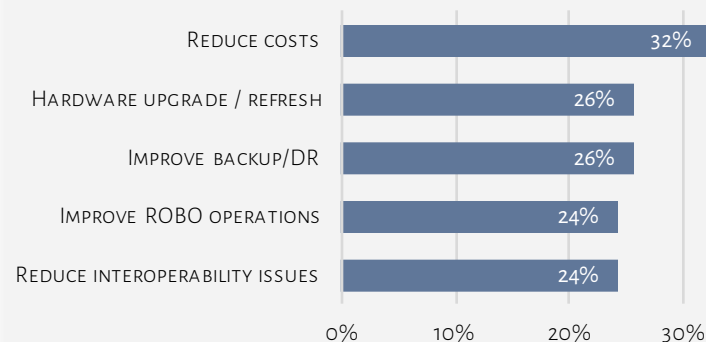
(APJ, non-adopter interested in HCI, N=57)



ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which of the following were the original primary drivers for adopting/deploying hyperconverged infrastructure?

(APJ, HCI adopters, multiple responses allowed, N=74)



WHO IS ADOPTING HYPERCONVERGENCE?

Organizations with Remote and Branch Offices

The question that comes to mind is simple: who is adopting hyperconverged infrastructure? Our data reveals that there are a number of different factors at play, with some being not so obvious.

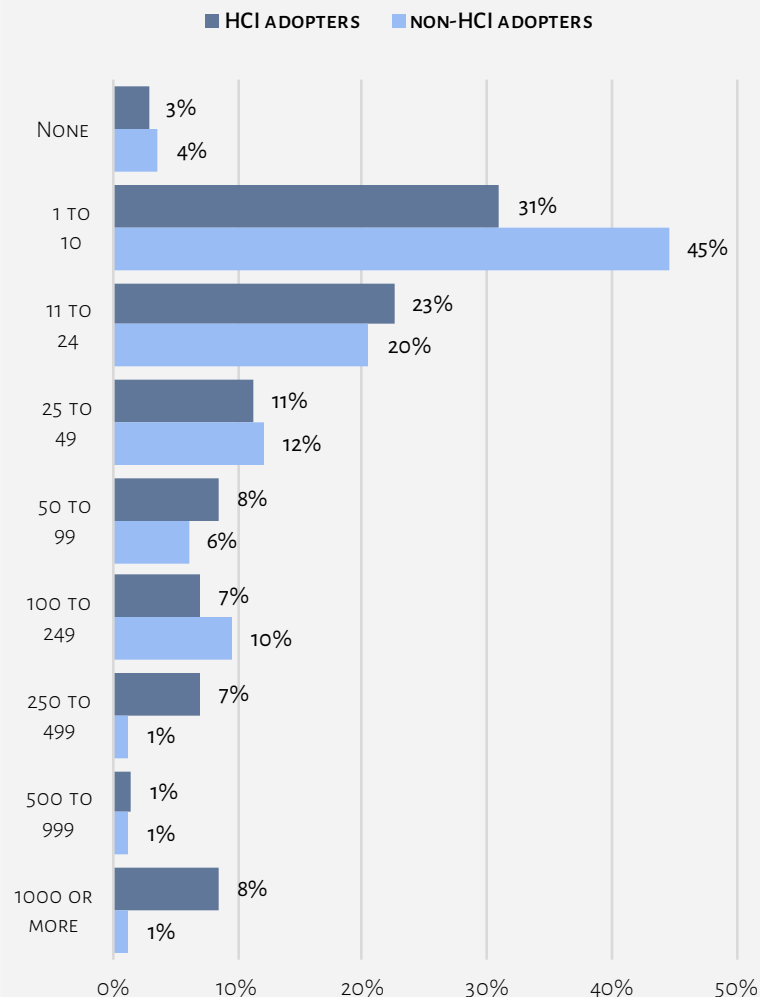
As you will learn later in this eBook, Remote Office/Branch Office (ROBO) is among the lowest direct use cases for adoption. However, when we looked at the responses, we discovered that those with large numbers of branch offices were far more likely to have deployed the technology.

As you can see in the chart to the right, of those respondents that have deployed hyperconvergence, 16% have 250 or more branch offices, compared with only 3% that have not.

We surmise that people may be deploying small hyperconverged solutions in remote and branch offices – an ideal use case – but are not equating this with the ROBO use case as defined in our survey.

How many remote or branch offices does your organization operate worldwide?

(N=154)



WHO IS ADOPTING HYPERCONVERGENCE?

Organizations with a Lot of Servers

Those organizations in the APJ region operating with more than 5,000 servers were far more likely to be operating hyperconverged infrastructure environments.

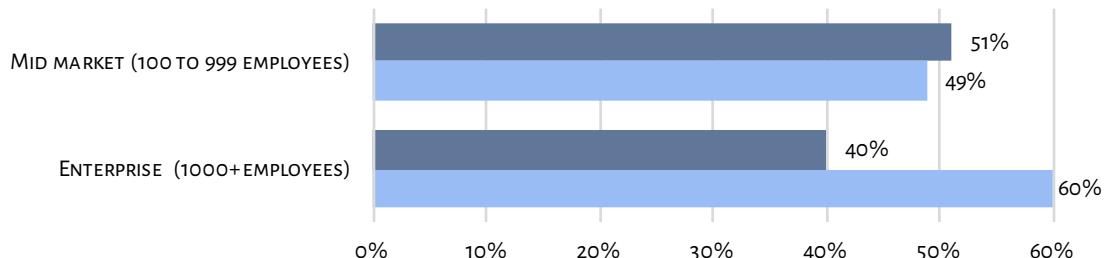
The Role of Company Size

It may seem that very large organizations are leading the hyperconverged charge, but that also does not appear to be the case, as you can see in the figure below. Smaller companies – those in the midmarket, are quite a lot more likely to have undertaken deployments.

Based on the above definition, have you already adopted hyperconverged infrastructure?

(N=160)

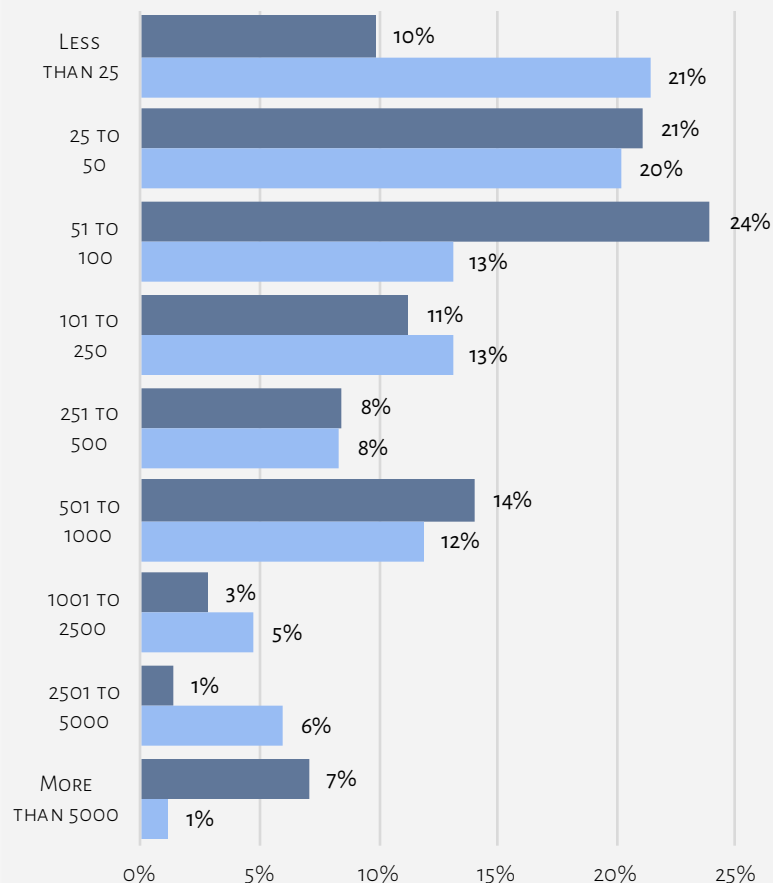
■ HCI ADOPTERS ■ NON-HCI ADOPTERS



Approximately how many production servers (physical or virtual) are supported worldwide by your IT organization?

(APJ, N=231)

■ HCI ADOPTERS ■ NON-HCI ADOPTERS



WHO IS ADOPTING HYPERCONVERGENCE?

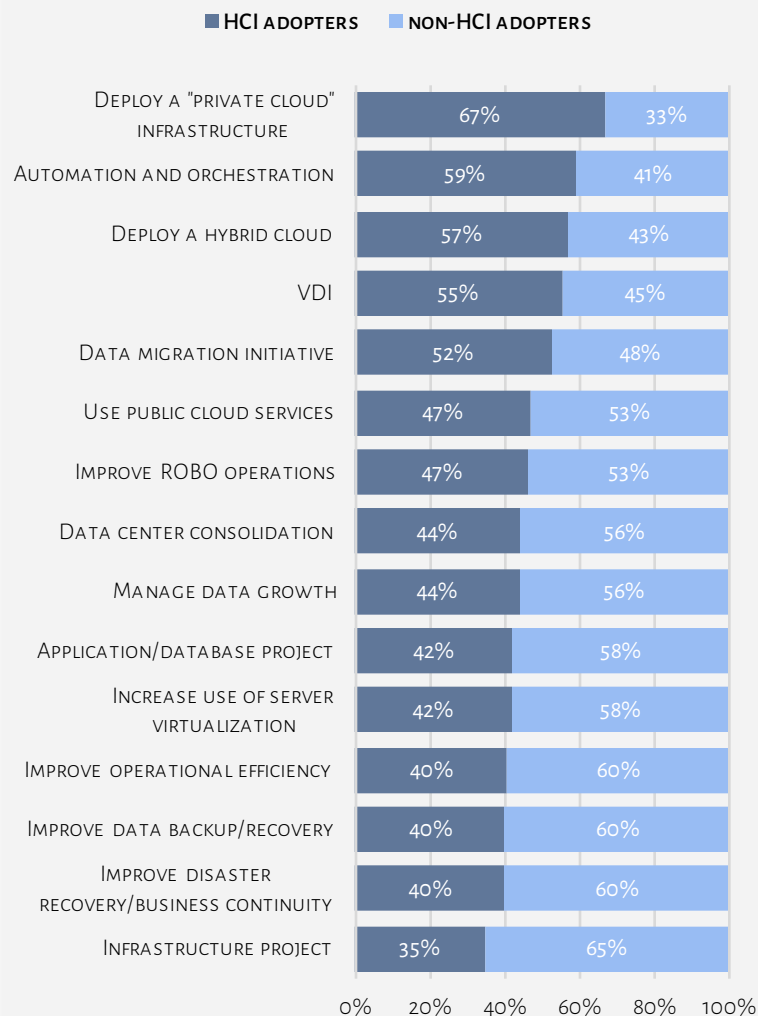
Those Deploying Cloud and VDI

We also wanted to see if there was any correlation between respondents' IT priorities and whether or not they were adopters of hyperconverged infrastructure. As you can see in the figure, those respondents indicating that they were working on private or hybrid cloud deployments were among the most likely to have also deployed hyperconverged infrastructure.

Further, those that have deployed VDI and that are seeking to implement data center automation and orchestration processes were also much more likely to have deployed.

All of these are strengths for hyperconverged infrastructure solutions, so it's not a surprise that companies undertaking these efforts are working on maximizing the return on investment of their hyperconverged infrastructure solutions.

Analysis of IT priorities broken down by adopters and non-adopters of hyperconverged infrastructure



TOP FIVE PURCHASE CRITERIA

Believe it or not, for those that have deployed hyperconverged infrastructure, the cost of the solution was not the primary deciding factor. Rather, adopters of the technology sought solutions that would enable them to support the business in the best possible way by enabling high availability. For those currently investigating adoption, cost is, by far, the key consideration.

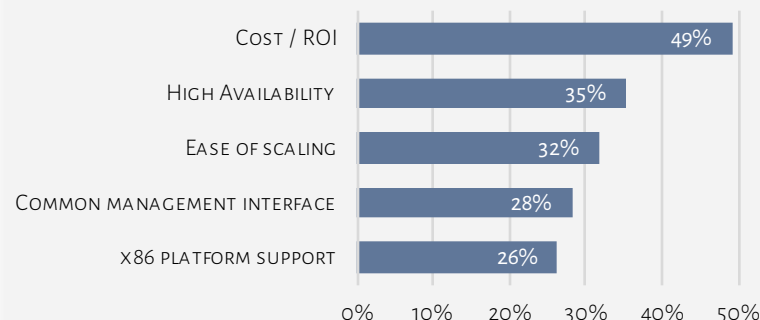
As these people become adopters, though, they also cite the importance of data reduction and integrated replication, two technologies that help companies save money on storage and ensure that their business can stay in business even when disaster strikes.

Adopters also cite global management as a key item of consideration while those considering adoption are looking for a common management interface. Global management is the ability to apply policies at a global level. A common management interface is another way of saying administer the system via native tools / single interface.

NON-ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

For hyperconverged infrastructure supporting your mission-critical applications, which criteria are most important in evaluating a solution?

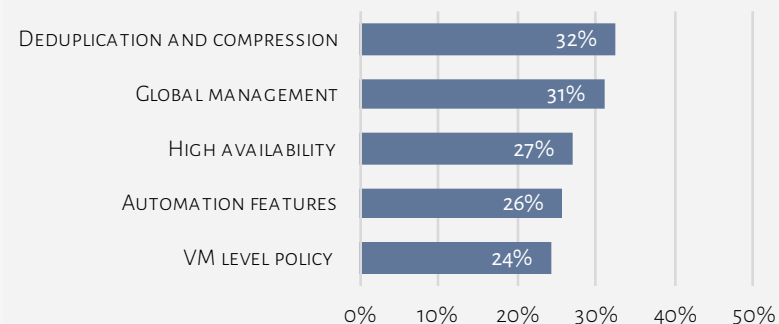
(APJ, non-adopters, N=57)



ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

For your hyperconverged infrastructure vendor/solution, which criteria were most important in the selection process?

(APJ, adopters, N=74)



WORKLOADS

Hyperconverged infrastructure has the potential to help organizations rethink how they support their workloads. In the charts on this page, you can see that there are a number of differences in what kinds of workloads are running in hyperconverged infrastructure environments and those considering adopting the technology.

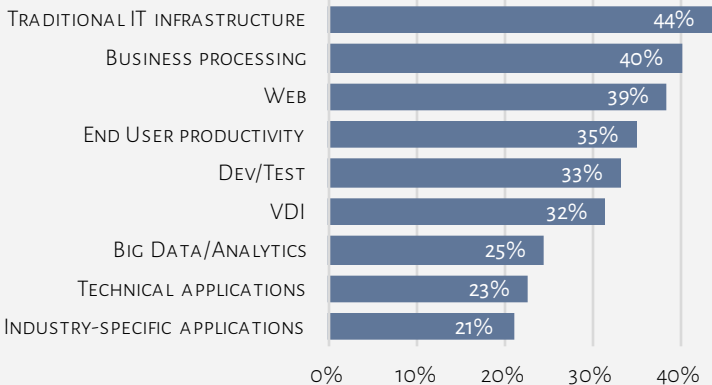
For example, those running hyperconverged identified big data and analytics as their most supported workload, while those simply considering the technology want to support their traditional IT infrastructure.

While the order of the workload support options may change a bit between adopters and those considering adoption, there isn't major variation in the percentages, leading us to believe that people are, in general, getting what they want and expect from their hyperconverged infrastructure solution.

NON-ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which workloads are you most interested in supporting with hyperconvergence?

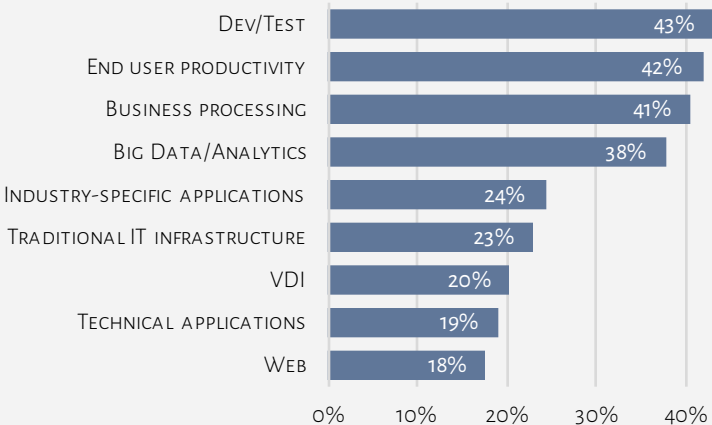
(APJ, non-adopters, multiple responses allowed, N=57)



ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which workloads are you supporting with hyperconverged infrastructure?

(APJ, adopters, multiple responses allowed, N=74)



USE CASES

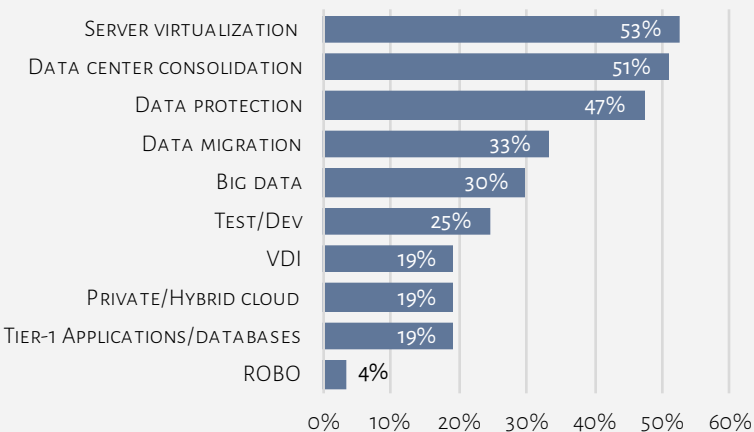
For those considering hyperconverged infrastructure, it's no surprise to see support for the server virtualization use case at the top of the list. Since hyperconvergence requires the use of virtualized workloads, it makes sense to see it at or near the top of the use case support list with 53% of non-adopters of hyperconverged infrastructure supporting it.

However, among APJ adopters, just 28% of respondents identify server virtualization as a supported use case. Big data (35%), data center consolidation projects (34%), and data protection (34%) beat server virtualization. This doesn't mean that server virtualization isn't important or isn't living up to the promise. What it means is that hyperconvergence is definitely going mainstream. Early hyperconverged infrastructure marketing efforts revolved around VDI. Today, VDI accounts for just 15% of people's hyperconverged support portfolio. As organizations have become more comfortable with the technology, hyperconverged infrastructure is being extended to all corners of the application support world.

NON-ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which use cases are you most interested in supporting with hyperconverged infrastructure?

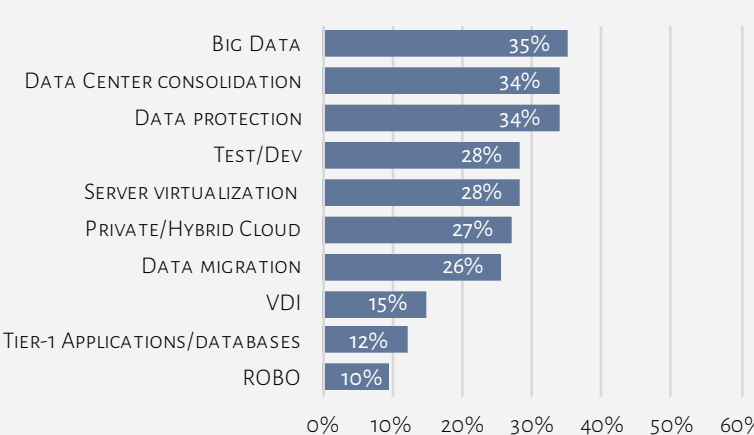
(APJ, non-adopters, multiple responses allowed, N=57)



ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which use cases are you supporting with hyperconverged infrastructure?

(APJ, adopters, multiple responses allowed, N=74)



HYPERCONVERGED INFRASTRUCTURE BENEFITS

Cost savings—including improving operational efficiency (49%)—is *the* key benefit that respondents are seeking as they journey down the hyperconverged infrastructure path. The real question is this: do cost savings actually emerge after a hyperconverged infrastructure deployment?

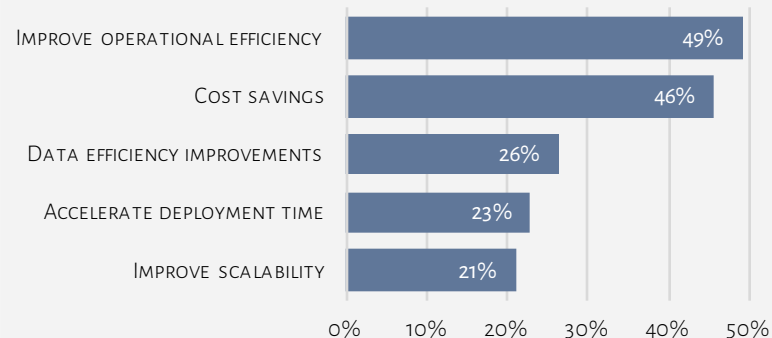
For those that have actually deployed the technology, a full 38%—the top ranked experienced benefit—say that they have, in fact, reduced costs.

However, while 49% of those considering a solution are seeking improved operational efficiency, only 26% of those that have deployed acknowledge that goal as achieved. But looking at the list a bit more reveals the fact that 26% also identified the ability to strategically redeploy IT staff to business-facing projects as a realized benefit. Operational efficiency is often 1) cost savings and 2) staff time savings. Here, respondents were very intentional in identifying that both outcomes were achieved.

NON-ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which are the most important benefits you expect to realize by deploying hyperconverged infrastructure?

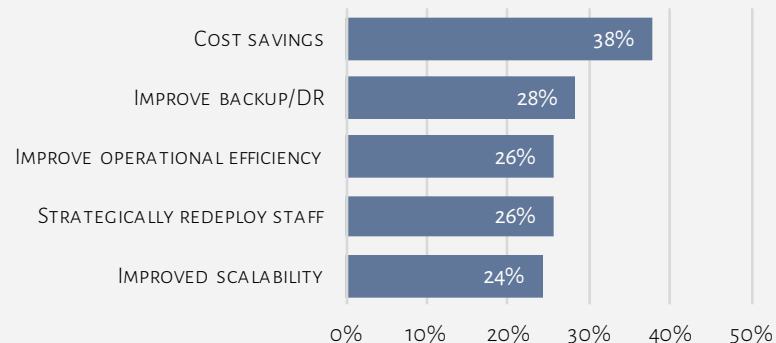
(APJ, non-adopters, multiple responses allowed, N=57)



ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

Which of the following are the top benefits you realized by deploying hyperconverged infrastructure?

(APJ, adopters, multiple responses allowed, N=74)



NECESSARY OUTCOMES

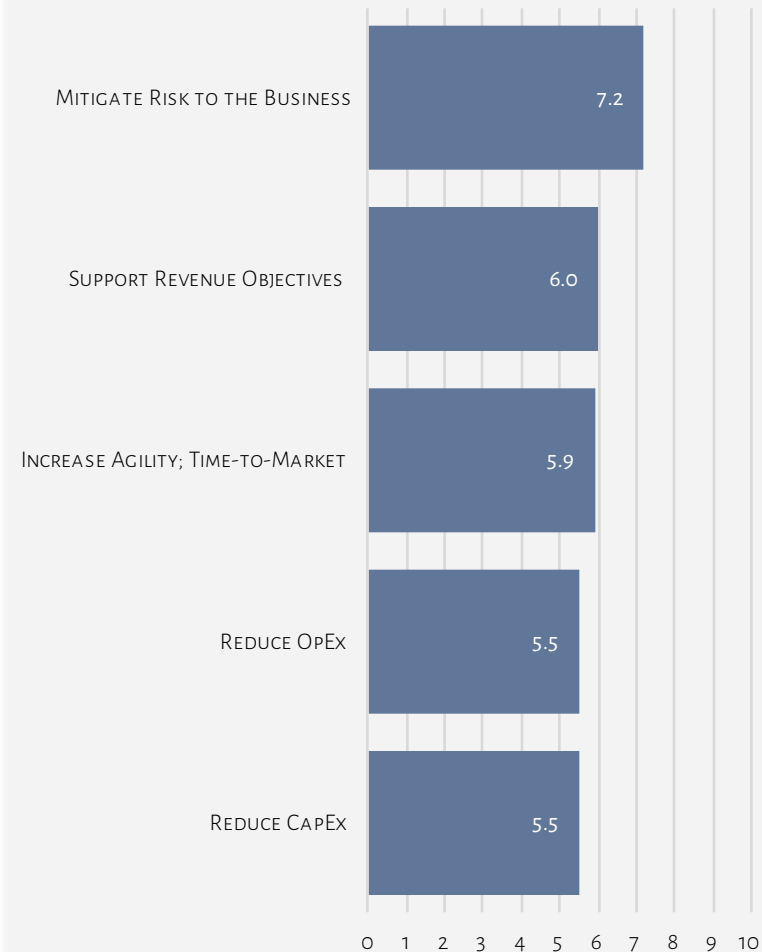
We asked respondents to share with us their goals in IT. Respondents, by a large margin, are looking for ways to mitigate the risk to the business (7.2 out of 10). The second most important outcome is to use IT to support the business' revenue objectives followed by increasing agility and time to market. Somewhat surprisingly, cost savings were ranked lowest.

These data points support other elements we saw in our results. Namely, hyperconverged infrastructure is going mainstream and businesses are deploying more and larger critical workloads to it. As they do so, they gain new levels of availability and increased efficiencies.

These increased efficiencies enable IT to better support revenue objectives, which can mean finding ways to increase agility, which hyperconvergence also supports. Finally, with high availability inherent in hyperconverged solutions, it's perfectly suited to helping mitigate business risk.

For the following business outcomes that can be achieved through IT, rank them in the order of importance to your organization

(APJ, N=160)



NON-ADOPTERS: LACK OF INTEREST

In 2016, there remains a percentage of respondents that have no interest in considering adoption of hyperconverged infrastructure. For a variety of reasons, this technology is not a fit for their organization.

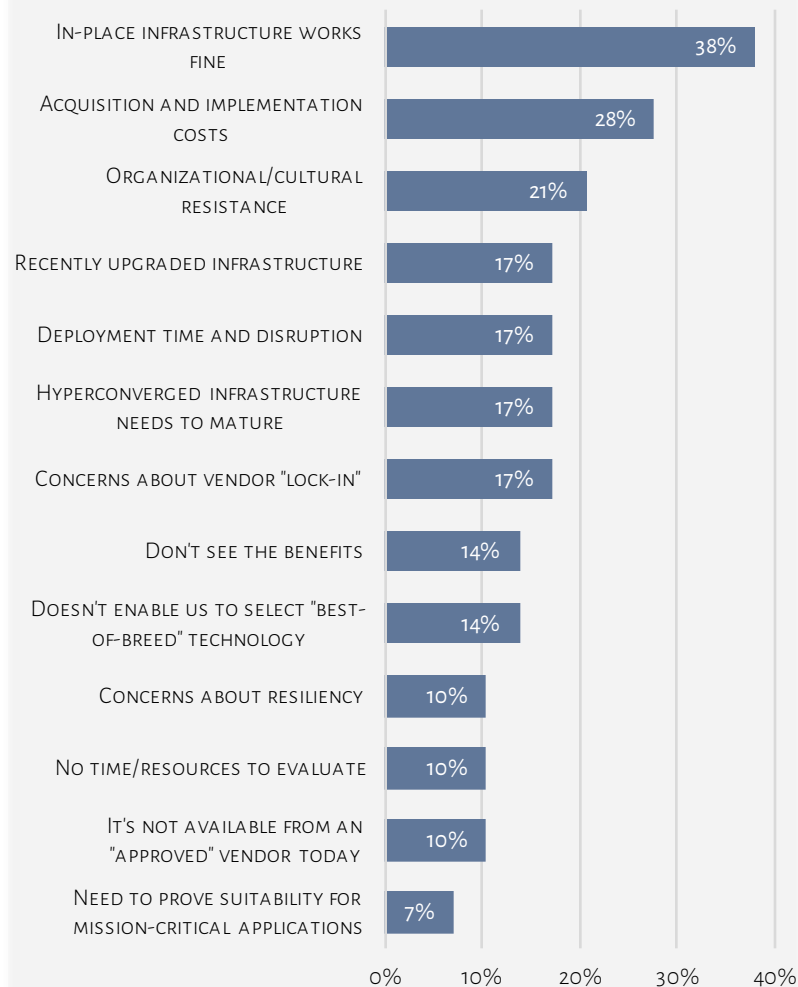
By a significant margin, the most commonly cited reason (38%) is that the in-place infrastructure works just fine. An additional 17% of respondents say that they have recently upgraded their infrastructure and do not need hyperconvergence at present.

There are also some people that have concerns around the perceived costs associated with hyperconverged infrastructure. We would urge these respondents to consider the full cost of current systems before discounting hyperconvergence as too expensive.

Finally, there are others that work in companies that are just set in their ways and that won't make such a major change anytime soon.

Which are the primary reason you have no interest in deploying hyperconverged infrastructure in the near term?

(APJ, N=29)



THE HYPERVISOR QUESTION

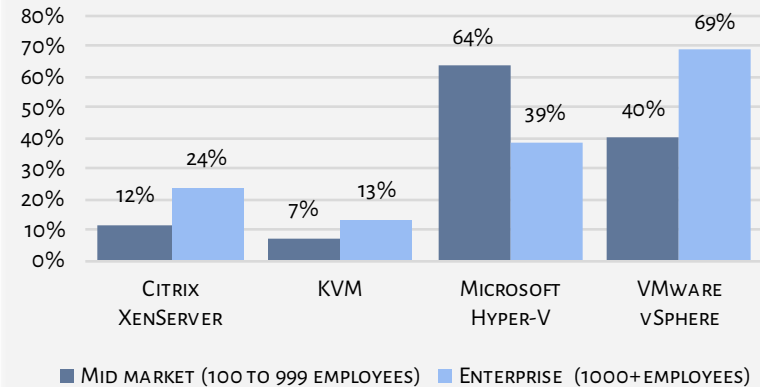
Microsoft Hyper-V is gaining ground on VMware's vSphere. This has been a trend in the works for years and has been eroding VMware's hypervisor market share from the bottom. While seemingly more pronounced in APJ, this is a worldwide trend, the results of which are shown in the figures to the right. Here, you can see that midmarket organizations in APJ are using Hyper-V far more than vSphere. In enterprises, however, vSphere still holds the top spot.

In what is good news for VMware, they may get a little bit of their market share back. Currently, 69% of enterprise respondents say they're using vSphere. In 12 to 18 months, that number is expected to rise to 73% of enterprises. However, in the midmarket, vSphere looks as if it will hold steady and Hyper-V will continue to grow.

Citrix and KVM usage will ebb and flow during this time as well, but their market penetration isn't expected to get anywhere close to the big players.

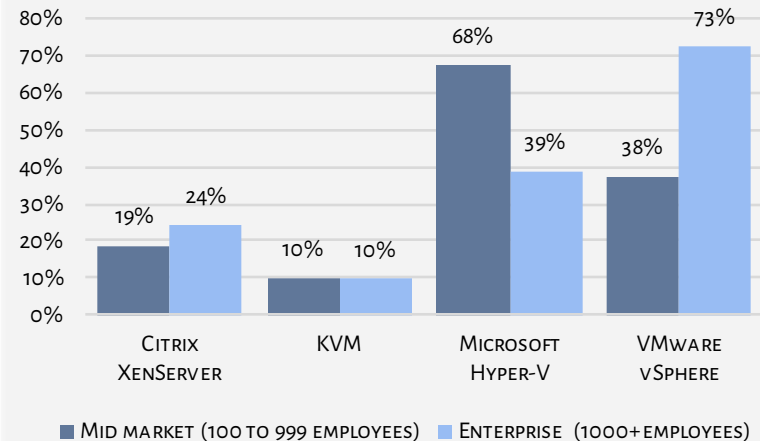
Which hypervisor(s) is currently in use?

(APJ, multiple responses allowed, N=158)



Which hypervisor(s) will you be running in 12 to 18 months?

(APJ, multiple responses allowed, N=142)



KEY TAKEAWAYS

- Hyperconverged infrastructure is going mainstream in multiple ways. First, we are seeing many more organizations actually adopt hyperconvergence in some way. However, what is equally important is the fact that the technology is now being used to support far more general business workloads than ever before.
- Those with significant Remote Office and Branch Office needs seem to be deploying hyperconverged at a faster rate than less distributed organizations. This is likely due to the fact that hyperconvergence provides a very manageable and scalable environment at branch offices, where there is often not a large IT presence.
- While cost of a solution is a top concern for those considering hyperconverged infrastructure, for those that have actually deployed, they indicated that they were far more focused on workload support than cost and identified high availability and data reduction were more important criteria than cost.
- Inertia is a powerful force. Among those that indicate a lack of interest in hyperconverged infrastructure, the most cited reason is that the existing environment works just fine.
- 28% of non adopters also have concerns around the deployment cost of hyperconverged infrastructure.
- Respondents that are prioritizing some kind of private or hybrid cloud initiative are far more likely to have also deployed hyperconverged infrastructure, a fact that makes a lot of sense when considering the full breadth of capability in these scenarios.
- Respondents in the APJ region are *far* more likely to have deployed hyperconverged infrastructure when compared with respondents from other regions.

NEXT STEPS & DEMOGRAPHICS

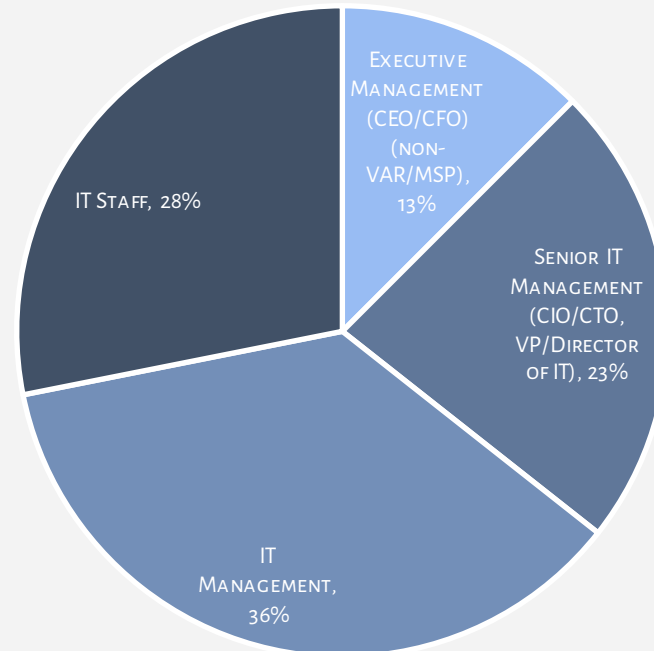
For those considering hyperconverged infrastructure, 44% plan to do so within the next 12 months, 51% in the next 1 to 2 years, and 5% more than 2 years out. For those companies deploying in the next year, the time is now to begin planning on how you intend to accomplish a migration and to begin studying the potential positive impact that the migration will have on IT.

Start to consider vendor options and seek vendors that have products that align to your needs and goals. And, make sure to really look at the market! Don't just surge forward with "name brand A" because you know it. You may end up leaving a great option behind.

If you're seeking even more information about the current state of hyperconverged infrastructure, stay tuned to www.hyperconverged.org as ActualTech Media releases EMEA-focused results as well as a full, in-depth worldwide report.

Which best describes your current role?

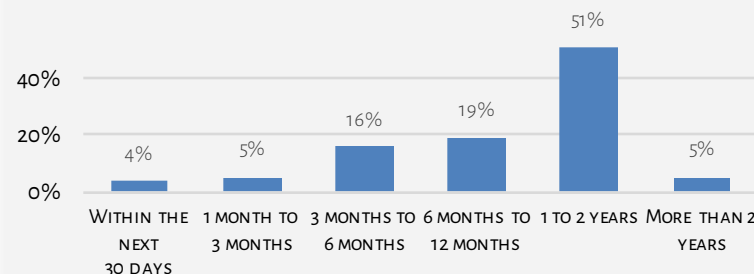
(APJ, N=160)



NON-ADOPTERS OF HYPERCONVERGED INFRASTRUCTURE

In what timeframe are you interested in adopting hyperconverged infrastructure?

(APJ, non-adopters, N=57)



SURVEY METHODOLOGY AND CRITERIA

Survey Methodology

ActualTech Media collaborated with SimpliVity to craft survey questions that we felt would reveal interesting aspects of the burgeoning hyperconverged infrastructure market. Through a combination of direct email campaigns and the creation of formal survey panels, we gathered survey responses from over 1,000 individuals around the globe.

Although we did not actively deny survey participation to those in organizations with fewer than 100 employees, responses from those very small organizations have been filtered out in the final analysis.

For company size segments, we have grouped company sizes into categories representing the midmarket (fewer than 1000 employees) and enterprise (1000 or more employees).

Qualification Criteria

In order to qualify for this survey, respondents were required to have knowledge of their organization's IT strategy. Further, there were two "pathways" in the survey: one for end users and one for VARs and service providers. Each respondent set had individual questions.

ABOUT SIMPLIvITY & ACTUALTECH MEDIA

SimpliVity

SimpliVity hyperconverged infrastructure delivers the enterprise-class performance and availability today's IT leaders require, with the cloud economics businesses demand. No other company has taken on the mega task of assimilating all IT elements below the hypervisor (8 to 12 discrete components or services) into an x86 building block to create a single, scalable resource pool. SimpliVity's unique data architecture improves performance and data efficiency, and enables native data protection and global unified management from a single console. SimpliVity's hyperconverged infrastructure simplifies IT; accelerates deployment; and improves recovery objectives—delivering a 3x TCO savings.

Learn more about SimpliVity

www.SimpliVity.com

ActualTech Media

ActualTech Media is comprised of well-known 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 hyperconverged.org.

ActualTech Media and 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 strategy.

Learn more about ActualTech Media:

www.ActualTechMedia.com

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