

# HOW HYPER- CONVERGED INFRASTRUCTURES ARE ENABLING NEXT GENERATION IT

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With hyper-converged infrastructures, businesses can unify core IT capabilities and better leverage the Cloud and other emerging technologies. In this report, we'll look at how organizations with hyper-converged infrastructures are building a foundation that allows them to get the most out of IT.

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**If one looks at the hardware and software that has been running business infrastructures for years, it's hard to find a lot of interaction going on.**

Servers and applications do their thing, and storage has its whole own ecosystem. And while everyone runs on the network, it's managed and operated separately from everything else. This is just the way things have been done in data centers and in IT. But that doesn't mean it's the only way.

In recent years, a new technology trend has arisen that leverages advances in virtualization and software-defined data centers. Called hyper-converged infrastructure (see sidebar), it uses these technologies to create a software-defined entity where servers, storage, and networking can work together seamlessly — as if they were one well-oiled machine.

With a hyper-converged infrastructure, organizations can more effectively utilize Cloud, gain deeper insight into activity in their environments, and become a more agile and flexible business with a competitive edge.

**How Traditional IT is Challenged**

For businesses today, managing a data center (which can now be virtual or physical) is a tough task that involves dealing with lots of complexities and new technologies. Organizations need to be agile and flexible to stay competitive and boost productivity and revenue. Unfortunately, they often lack the resources to deal with these pressures. On top of this, some firms have been trying to overcome these issues while relying on older IT infrastructures. These systems were not built to manage current software-defined, automated and always-changing technologies. Because of this, these businesses are facing more hurdles when it comes to upgrading and improving their infrastructures.

**Hyper-converged infrastructure:** A hyper-converged infrastructure is a software-defined IT infrastructure where servers, storage and networking, along with other data center elements, are fully virtualized. By being implemented virtually in software (instead of physically) a hyper-converged infrastructure is more easily managed and deployed within organizations.

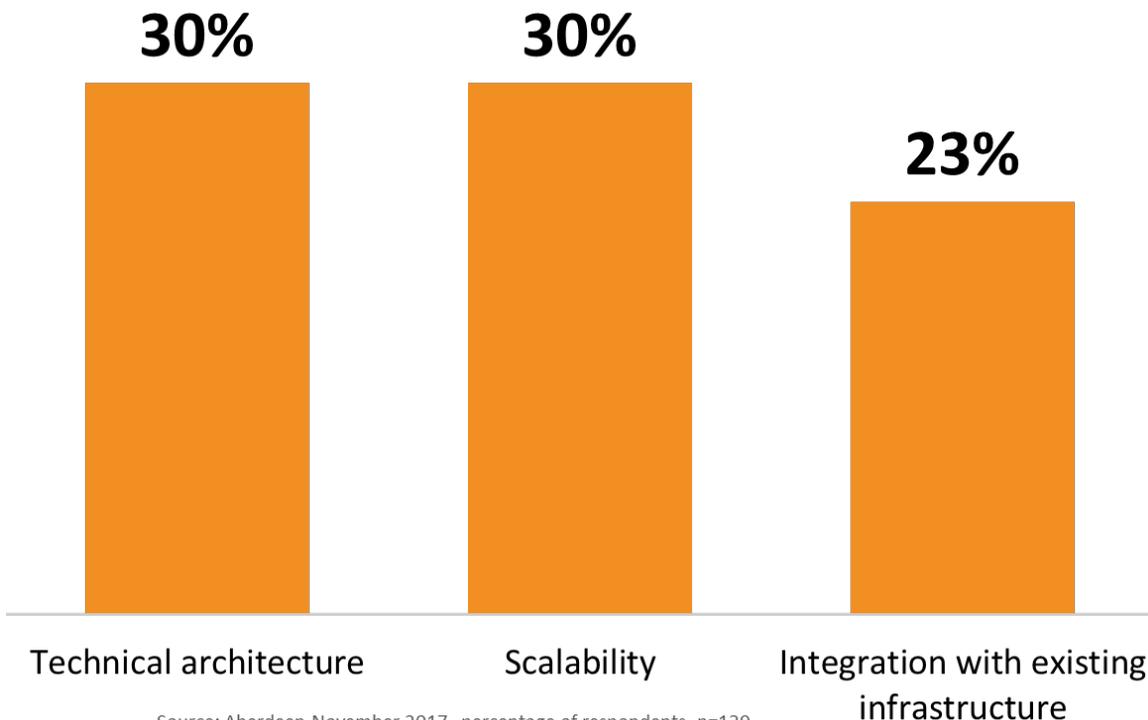
Findings from Aberdeen’s recent survey into data center transformations identified the main pressures that drove organizations to utilize hyper-converged infrastructures. The top three were:

- ▶ a need for improved integration between Cloud, storage, servers, and networks: 33%
- ▶ the necessity to maximize ROI of IT investments: 33%
- ▶ to gain a competitive advantage: 27%

The number one pressure — integration between Cloud, storage, and networks — shows the vital importance that organizations place on having effective infrastructure interoperability. This makes it possible for these infrastructures to work together, making each other better. And given the costs and demands of modern IT investments, it’s not a surprise that maximizing ROI comes in at number two.

With these challenges in mind, it becomes increasingly clear why organizations are turning to a hyper-converged approach. With hyper-converged infrastructures, businesses reduce complications and gain efficiencies, all while leveraging technologies that are specifically built to deal with modern complexities. So, if a hyper-converged infrastructure is the solution to the challenges of a modern IT infrastructure, we set out to determine what made it special. We asked, “What are the identifying characteristics and criteria that businesses are keying on when they evaluate these solutions?” The answers are in Figure 1.

Figure 1: Top Criteria when Choosing Hyper-Converged Infrastructures



Source: Aberdeen November 2017 percentage of respondents, n=139

As outlined in Figure 1, we looked at the top criteria organizations focused on when evaluating hyper-converged infrastructures to improve their IT environments. Overall, the data also shows the businesses place a high priority on making sure that the products they are deploying are well-designed to meet or exceed their IT requirements, with “technical architecture” tying “scalability” for the top spot in our selection criteria. Coming in at number three is the need for integration (noted on page 3 as the number one pressure businesses face).

One thing that jumps out as being conspicuous by its absence is the high cost of these solutions. (This didn’t even make the top three criteria.) While many people would expect the expense to be the main consideration, we see instead that organizations are focusing on the quality of a solution and how it will help a business grow.

Now that we’ve reviewed the top criteria, several questions arise — such as: Can the solution scale to meet the increasing demands that IT infrastructures are now experiencing? Will a hyper-converged solution be able to easily integrate and work with existing systems?

We’ll address these next.

### **How Hyper-Converged Infrastructures Help Businesses Succeed**

You know a technology is still on the cutting edge when people are constantly trying to figure out just what it is. This is also true with hyper-converged infrastructures (just do a quick search and you’ll see).

When a technology is this new, it can have its share of doubters. And while these skeptics may show some interest in the new technology, they may not believe that it can deliver true benefits.

However, Aberdeen’s research has shown that these concerns are clearly misplaced. Businesses that are deploying hyper-converged infrastructures are seeing many key benefits, as shown in Table 1. As illustrated below, organizations deploying a hyper-converged infrastructure are much more likely than their competitors to see improved security. With its tight integration, and by leveraging software-defined technologies for increased agility, visibility and agility; hyper-converged infrastructures have much fewer attack points than a loosely cobbled together data center.

Table 1: Hyper-converged IT Beats Out the Competition

Organizations with a hyper-converged infrastructure are:

<b>60%</b>	More likely to see increased security in their IT infrastructure
<b>2.5x</b>	More likely to reduce the costs of their storage environments
<b>33%</b>	More likely to see a reduction in their IT costs
<b>40%</b>	More likely to reduce the number of servers needed for IT
<b>15%</b>	More likely to deploy applications and services faster

We also find that more than a third of hyper-converged businesses are more likely to see a reduction in IT costs. This makes a lot of sense, since they can remove many IT siloes and other cost areas that can easily eat up IT resources. Tied to these cost savings is these businesses' ability to reduce their hardware needs and cut down on costs associated with their traditional storage environments.

In addition, we can see that these savvy organizations are able to deploy applications and services more quickly than their competitors. With an infrastructure deployed from the ground up for today's virtualized, cloud-based and microservice environments, a hyper-converged infrastructure gives these businesses the agility to meet today's rapid demands.

### Summary

As we've seen, businesses that are leveraging a hyper-converged infrastructure are gaining several important benefits. But to build a hyper-converged infrastructure and get the most out of this cutting-edge technology, they need to follow some key recommendations:

- ▶ **Do the research to understand IT infrastructure requirements.** Implementing a hyper-converged infrastructure isn't simply a matter of dropping one into their environment and hitting "start." Leaders in IT infrastructure know that doing the initial leg work, through efforts to understand the process, will pay off in a more effective hyper-converged infrastructure.
- ▶ **Build for current technology needs.** Organizations can't grow and improve an infrastructure when current operations are beyond their visibility. For organizations to get the most out of a hyper-converged infrastructure, they need to have full visibility into their needs and what is currently happening in their environments.
- ▶ **Get ready for tomorrow's technologies and trends.** Organizations need to anticipate the continual emergence of new technologies that bring new opportunities and increased IT complexities. With an agile and flexible hyper-converged infrastructure, businesses can reduce the intricacies of the new technologies while increasing their usage to gain competitive advantages.

**As we've shown, this new technology is paying off in a substantial way today for those who have adopted it.**

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