

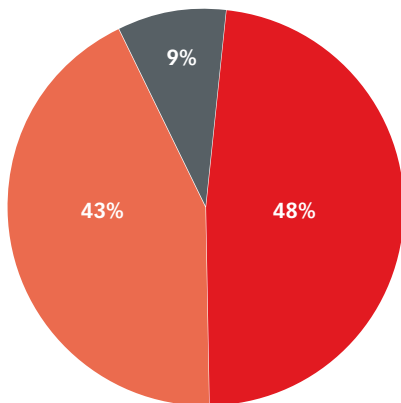


Converged Infrastructure: Reaching Maturity, Meeting Business Demands

IDG STUDY SUGGESTS ORGANIZATIONS ARE USING CI TO SUPPORT ADVANCED CLOUD STRATEGIES LIKE IT-AS-A-SERVICE.

Whether Converged Infrastructure Deployment is Part of a Larger Cloud Strategy

■ Don't know ■ YES, converged infrastructure deployment is part of a larger cloud strategy ■ Remain the same



Source: IDG Research Services

Converged infrastructure (CI) is a growing part of the IT infrastructure, especially as companies migrate key IT functions to the cloud. The term “converged infrastructure” refers to a pre-validated or integrated infrastructure solution that includes the server, networking, storage, and sometimes the business application. Whether or not these consolidated solutions consist of components from multiple vendors, they are optimized to work together and be managed as a whole.

In a recent survey by IDG Research Services, a full 90 percent of respondents have either already implemented CI or plan to do so in the near future. Nearly half are leveraging CI as a key part of their cloud strategy in general, and they are also leveraging CI to support an IT-as-a-service (ITaaS) operating model. This white paper discusses insights from the IDG survey—from the IT and business imperatives driving the CI shift, to how organizations are evaluating their CI options, and what benefits they hope to achieve by deploying CI.



Insight 1: Adoption of CI is growing, often as part of a broader cloud strategy

Although the concept of CI has been around for several years, it has only recently become mainstream. Gartner published its first report on what it calls “integrated systems” in June 2014, estimating that the market was growing 50 percent annually and would top \$6 billion by the end of 2014. The following month, Zenoss, an IT monitoring and management provider, released a survey in which two out of three companies expected to have a fully deployed converged infrastructure by 2015.

The IDG Research survey shows that this rapid growth is not only continuing, but also accelerating: 90 percent of respondents say they have already implemented at least some CI or plan to do so in the next 18 to 24 months. In fact, an average of one-third of the respondents’ total IT equipment is currently based on converged infrastructure, and they expect this to grow 10 percent in the next 18 to 24 months. What’s more, CI adoption seems to drive more CI adoption. Among respondents whose organizations already have some CI in place, more than 25 percent say it already makes up at least half of their total infrastructure, and they expect an additional 14 percent increase in the next 18 to 24 months.

The growth in CI parallels the growth in the private cloud market, which Technology Business Research predicts will grow from \$41 billion in 2014 to \$69 billion in 2018. This may explain why nearly half of the organizations responding to the IDG Research survey say they are using CI as part of a larger cloud strategy. As IT works to reduce silos within the organization, the CIO’s role has become that of a service broker coordinating service delivery. Transforming the data center by deploying a private or hybrid cloud is key to breaking down those silos. Using CI to centralize, consolidate, and distribute these services gives IT more precise control over available resources while leveraging economies of scale to simplify operations, improve IT responsiveness, and manage costs.

However, more than half of companies are still identifying IT operations that could move to the cloud, according to the 2014 IDG Enterprise Cloud Computing Survey. This is reflected in the IDG Research survey, in which 43 percent of respondents are pursuing CI as a standalone initiative. It’s likely that they assume finalizing and executing their cloud strategy will be easier if CI is already in place. In the interim, they will undoubtedly find uses for it.

As for the remaining 9 percent who say they don’t know whether CI is part of their broader cloud strategy, CI is

clearly seen as a foundational stage of developing a broader cloud strategy, and these respondents have yet to consider how CI fits into it.

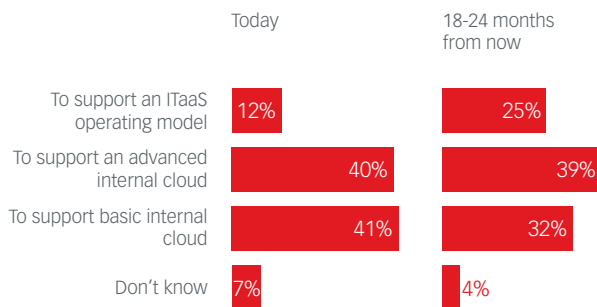
Insight 2: Deploying CI is about meeting business needs

ITaaS is an IT operating model that requires the internal IT department to think of itself as a service provider, offering and orchestrating both internal and third-party IT services to meet business needs. Roughly one in eight (12 percent) survey respondents is currently leveraging CI to support ITaaS, a figure expected to more than double to 25 percent in the next 18 to 24 months. This may seem like dramatic growth in a short time frame given that the concept of ITaaS has existed since the mid-2000s. However, this does not come as a surprise to Adam Fore, director of solutions marketing for NetApp.

“The sophisticated technologies necessary to make ITaaS happen—software-defined storage and data center architecture combined with predesigned, pre-validated infrastructure—are now much more mature than they were even a few years ago,” he says. “And with CI, it’s already designed for you and ready to be deployed.”

It makes sense that respondents deploying CI as part of a larger cloud strategy were more than twice as likely to say they will also use CI to support ITaaS. Businesses clearly understand that ITaaS depends on a strong cloud foundation, and they are most likely taking a “walk before you can run” approach to ensure their CI is ready before they commit to ITaaS implementation. Notably, companies with more than 10,000 employees

How organization is leveraging converged systems ...



Source: IDG Research Services

Best in Class for the Best CI



To stay at the front of the innovation curve, the enterprise data center needs components that deliver the best results. That means choosing the optimal elements in a validated CI design, regardless of vendor, with the flexibility to add innovative technologies as they reach the market and as the company's IT needs change.

One such solution is FlexPod®, a CI solution from Cisco and NetApp that combines a platform for delivering cloud-type services with validated management tools that simplify management both within the data center and throughout the enterprise. FlexPod delivers flexibility and efficiency in a converged system that minimizes the risk of migrating to CI, allowing companies to transform their data center in weeks instead of months or years.

FlexPod functionality aligns to the benefits that survey respondents expect from adopting CI: ease of management, economies of scale, faster IT response, greater flexibility, and reduced costs. However, it also provides other benefits like centralized management and the ability to accommodate many types of environments and application workloads.

Most importantly, NetApp, Cisco, and their ecosystem of partners solve the biggest challenge of the best-in-class approach to CI—the need to deal with different vendors—through a cooperative support model designed to ensure that all of its partners work together as one entity to resolve problems with a single point of contact. “Whichever partner you call first owns the call and must keep the trouble ticket open until everything is resolved, even if the problem is isolated to another partner's component,” says Adam Fore, director of solutions marketing for NetApp. “It's a way of avoiding vendor finger-pointing and ensuring our support is as optimized as our design.”

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were twice as likely as smaller companies to say they are already leveraging CI for ITaaS, which indicates that larger companies are further along in their overall cloud strategy.

As companies like Amazon set the bar higher for the ability to provision IT resources on the fly as needed, they are placing increasing pressure on their own IT departments to be equally responsive to shifting demands. The survey results reflect this. The top three drivers for deploying CI—IT service-level improvement, data center transformation, and private/hybrid cloud deployment, in that order—are three different ways of expressing the same desire to meet business needs. Unsurprisingly, respondents deploying CI as part of their larger cloud strategy were more likely to call cloud deployment their primary driver. Essentially, IT service levels improve as a result of transforming the data center by deploying a private/hybrid cloud.

Similarly, while more than half of respondents say IT drives decisions about deploying CI, one third call it a joint IT/business decision. Companies are more likely to report business involvement when CI is part of a larger cloud strategy—presumably because of that pressure from business to make IT a strategic partner.

“Many of the workloads that run on top of CI are driven by line-of-business needs,” says Andy Sayare, senior manager of solutions marketing for NetApp. “Business may not specify what the underlying platform needs to be, but business is specifying service levels that require CI to deliver.”

It follows, then, that the most-cited challenge in deploying CI is achieving agreement on a purchase from all the groups or functions affected. However, companies for which CI is part of a broader cloud strategy were more likely to cite a lack of IT skills and no single point of contact for product support. This strongly suggests that companies deploying CI as part of their cloud strategy have progressed beyond the buy-in stage and are now actively planning their purchases and seeking out resources for successful deployment.

Insight 3: Companies are looking to CI to deliver greater agility in a fast-moving market

Nearly two-thirds of respondents cite ease of management as their top expected benefit from adopting CI. This is followed closely by centralization to create more efficient economies of scale, faster IT response, increased flexibility, and reduced costs. These responses correspond with IDG's State of the CIO 2015 survey

results indicating that CIOs' top priorities are aligning IT initiatives with business goals, improving IT operations and systems performance, and implementing new systems and architectures.

Although CI looks complicated to adopt because it combines compute, network, and storage resources into a single platform, it actually simplifies IT so companies can become more responsive, nimble, and efficient, says Fore. "The CI vendor takes on the design and implementation risk," he explains. "New innovations can be rolled into the architecture quickly so customers have a platform for the latest technologies on the market without needing in-house expertise to put it together."

Insight 4: Considerations for a successful CI migration strategy

As companies turn to CI to transform their data center, however, they need to know what they're looking for. They need to trust their chosen solution and its path to deployment. Accordingly, survey respondents say their top concerns in evaluating CI solutions are ease of integration—both within the components making up the CI solution and between the CI solution and existing infrastructure—followed by ease of management and availability of support. A significant majority of

respondents call these concerns "very important" or "critical," suggesting a need for a solution that is predesigned and prevalidated for optimal functionality.

At the same time, respondents are also twice as likely to prefer a multivendor, best-in-class approach to CI to a single-vendor approach. This enables them to avoid vendor lock-in, a significant concern, given that no single vendor offers leading technology across the board, and a company's needs may change with market conditions. Survey respondents were also most likely to prefer a best-in-class solution from a provider that validates and certifies that all the component products from multiple vendors will nonetheless work seamlessly together for a variety of workloads.

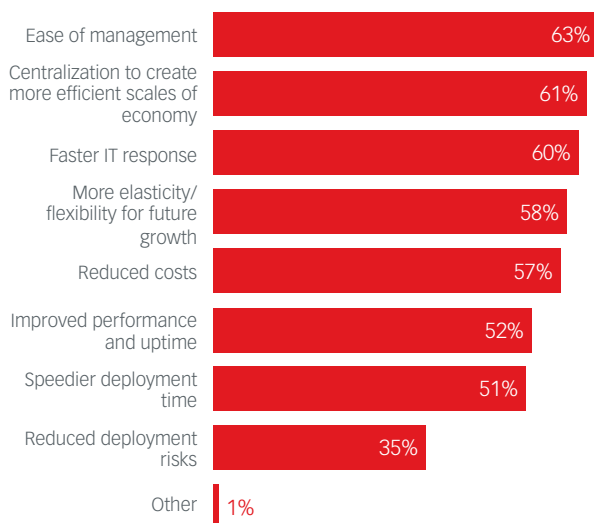
Finally, while ease of management is the top benefit respondents hope to leverage by choosing CI over traditional deployment, it only barely edges out centralization for more efficient economies of scale. Faster IT response, greater flexibility, reduced costs, and improved performance/uptime are also high on the list of desired benefits of CI.

"We're taking the best-of-breed approach in an attempt to make everything as software-defined as possible," says John Becker, chief governance officer for Palm Harbor, Florida-based Phenix Energy Group, which designs, builds, and manages oil pipelines. "If our pipeline goes down, it costs us a minimum of \$18,000 a minute and takes a minimum of nine hours to bring it back up. And since we're in the oil industry, which is a target for hackers of all kinds, we have a very high need for security and uptime. So we're trying to do the best we can to take the daily process work out of the hands of human beings to minimize errors and abuse."

Bottom Line

As converged infrastructure technologies reach maturity, IT is more willing to adopt them as a way to deliver the flexibility and agility business users demand. Companies are quickly realizing that CI lowers the risk of deployment for sophisticated cloud-based strategies like ITaaS—both by simplifying and consolidating the infrastructure itself and by making data center transformation faster and easier to manage. As CI itself continues to evolve, taking a multivendor approach ensures that organizations can realize the benefits of CI in less time while leaving ample room for their cloud strategy to evolve.

Reasons for Choosing Converged Infrastructure



Source: IDG Research Services