

PeerPaper Report

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FlexPod and Enterprise IT:

# USER REFLECTIONS ON A MULTICLOUD-ENABLED INFRASTRUCTURE

BASED ON REAL USER REVIEWS



# ABSTRACT

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The forces of digital transformation have led IT managers to seek new infrastructure. Organizations routinely expect IT to handle diverse enterprise workloads along with new, resource-intensive data analytics. The converged architecture of FlexPod offers a solution. To bring real FlexPod user experiences to life, this paper draws on reviews from IT Central Station. It delves into users' points of view on FlexPod's performance as well as its ability to continue to deliver innovation through flexibility. It explores the cost savings and ROI aspects of the solution along with operational and management factors. An example of a FlexPod upgrade is also provided. Reviewers further discuss the role of trust in selecting a converged infrastructure solution that can support a multicloud experience.

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# INTRODUCTION

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Major shifts in IT, such as the move to digital transformation and the need to meet demanding requirements of enterprise application workloads, are putting pressure on IT managers to seek new infrastructure solutions. IT is regularly expected to support diverse workloads along with new, resource-intensive data analytics. FlexPod, with its converged architecture model and validated designs, offers a solution.

This paper seeks to bring the FlexPod experience to life, drawing on real user reviews from IT Central Station.

It explores users' points of view on FlexPod's performance as well as its ability to deliver innovation through flexibility. It looks at the cost savings and ROI of the solution along with operational and management factors. Focus areas include scalability, workload diversity, analytics, IT operations, High Availability and more. An example of a FlexPod upgrade is provided. Reviewers further discuss the role of trust in selecting a converged infrastructure solution to support deployment in the cloud.

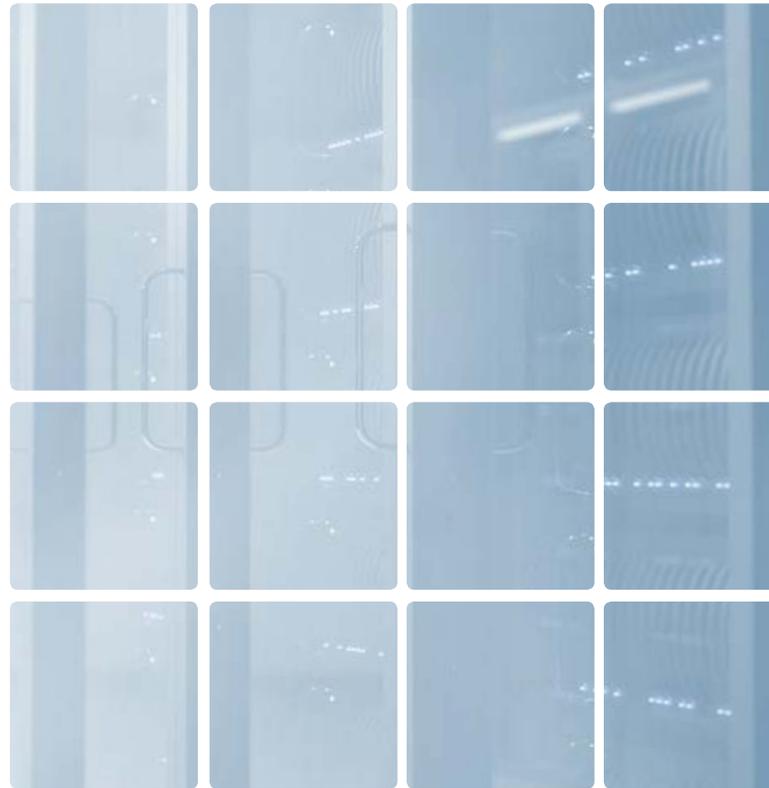
# FlexPod:

## Solution and Partnership Overview

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FlexPod is a Converged Infrastructure (CI) data center platform developed by Cisco and NetApp, working in partnership. Figure 1 illustrates a reference architecture. The platform comprises the compute, networking and storage elements required for a data center. NetApp and Cisco realized the FlexPod solution by doing extensive testing and validation of real applications on FlexPod compute (Cisco UCS servers), network (Cisco Nexus switches) and storage (NetApp storage arrays). It's been tested and validated across all enterprise datacenter workloads. These include multiple hypervisors and operating systems from Citrix, VMware, Red Hat and Microsoft.

Once the testing concludes, the partners document end-to-end guidance in a Cisco Validated Design (CVD) or NetApp Validated Architecture (NVA). CVDs and NVAs are an "IT cookbook" or blueprint that reduces risk, increases security and delivers end-to-end availability. The CVDs and NVAs ensure that workloads can get up and running without concerns about infrastructure setup.



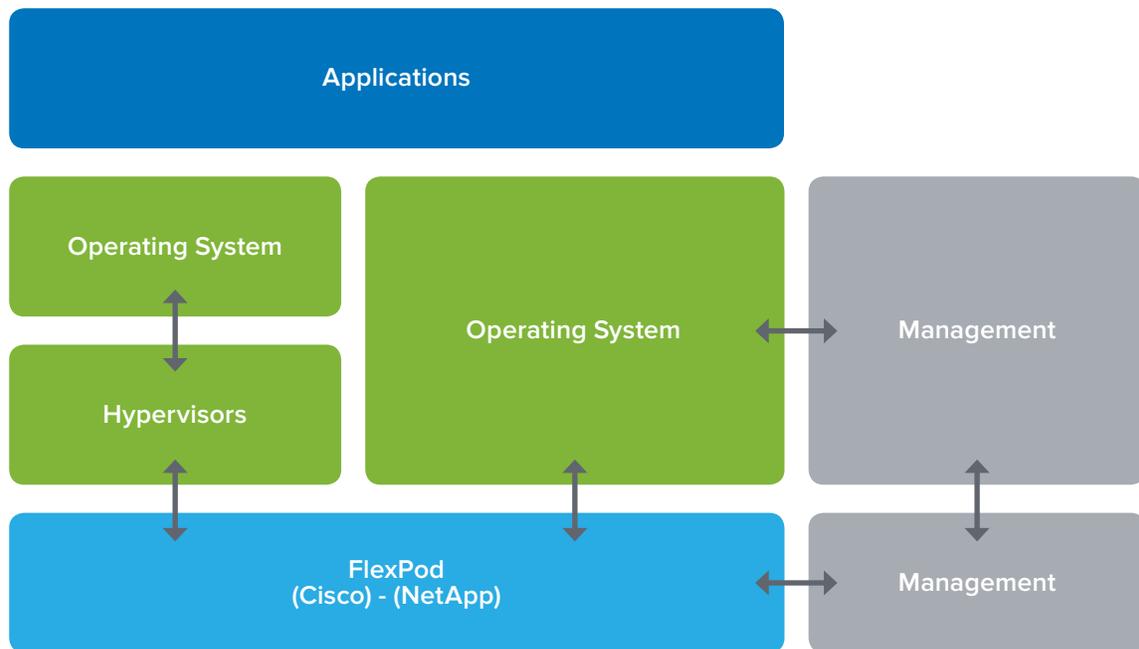


Figure 1 - FlexPod Integrated Solution

“ We can provision things very quickly and they can get to work on making money.

FlexPod is a technology solution, but users also view it in business terms:

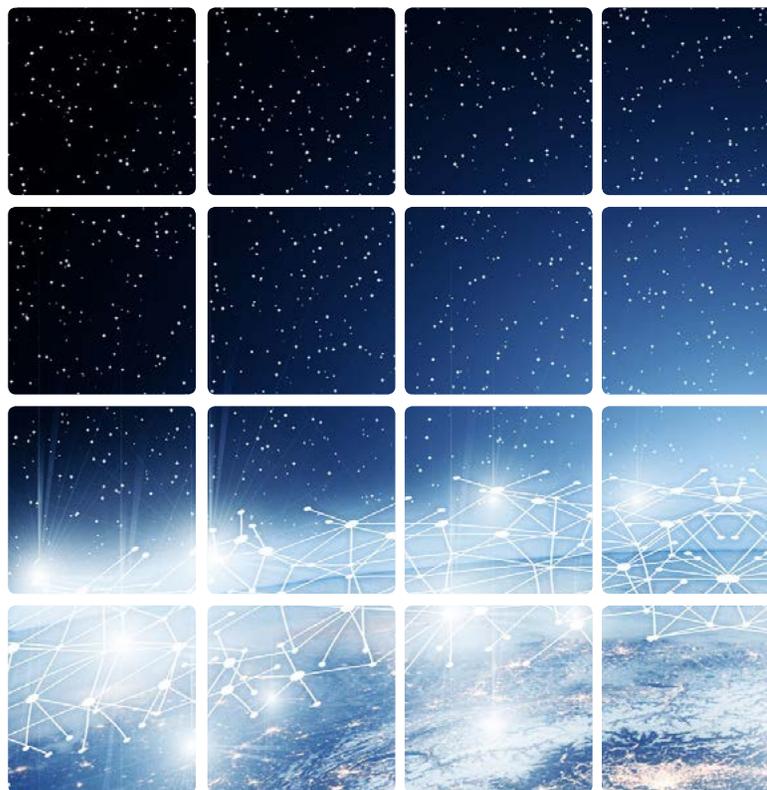
- “Most of what we do runs on it. [Our business runs on it.](#)” - System Analyst at an energy/ utilities company with over 1,000 employees.
- “[It cuts down on the time needed to provision anything.](#) So if a business unit says, ‘Hey, I need this, because I need to do analysis on this portfolio that I’m going to buy,’ or ‘Are these customers going to pay’ We can provision things very quickly and they can get to work on making money.” - Storage Engineer at a financial services firm.
- “[It’s very quick. It’s very fast.](#) Because it’s so highly-scalable and redundant, it’s easy to buy new products and scale up quickly onto business demands and needs.” - Senior Cloud Systems Engineer.

# Benefiting From a Platform That Scales to the Cloud

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Building for the cloud, and future cloud scenarios, are popular use cases for IT Central Station members who use FlexPod:

- [“We use it for virtualizing infrastructure](#) and also for the virtual cloud system.” - Director Of Engineering
- [“Our use case is for a life sciences cloud offering.”](#) - Senior Network Engineer at a mid-sized consultancy
- “[FlexPod] makes it easier to manage a large number of environments for a company. This makes it a bit more streamlined on management, deployment, and orchestration. [The solution works great for multicloud environments because you can segment the platform.](#)” - Systems Engineer at a tech services company with more than 500 employees



Others echoed this sentiment. A Senior IT Manager at a mid-sized tech services company uses FlexPod “for our internal cloud infrastructure.” He then said, “Hybrid cloud is where it is at, and I don’t believe everybody can go into public cloud or multicloud entirely. [I am looking forward to connecting hybrid cloud to my FlexPod environment.](#)”

An Enterprise Solutions Architect at a small tech services company shared his thoughts on the solution regarding private, hybrid and multicloud environments. He believes hybrid is the future, for which having a flexible infrastructure is essential. This is why he likes FlexPod. [It gives him layers of flexibility for moving workloads up to and back from the cloud.](#)

According to a Practice Director at a tech services company with more than 500 employees, FlexPod’s utility emerged from conversations with clients about cloud strategy. As he observed, “We will go in and talk to a client about all things that they are trying to do, from cloud on. A significant percentage come to the conclusion

that [they want to run their most important stuff on FlexPod architecture.](#)”

The Practice Director found that FlexPod provided a way for organizations to come together on a cloud strategy. He said, “Initially, five to six years ago, a lot of companies were organized differently. They had a networking team, a server team, and a storage team, which didn’t even agree. We had to help them understand the value of coming together. As people start going in and start thinking, ‘Okay, I need service-like delivery. I need to compete with cloud, if I’m going to deliver an application in my company. How are other people are doing it?’”

Things were simpler for a Storage Engineer Manager at a small tech services company. He said, “For our implementation, our customers are just private cloud. They are not going to public or hybrid now, but customers know that they are able to do it. [We use FlexPod with VMware vCloud. It is great.](#) We use the plugins in VMware and all the validated solutions, which is awesome.”

# User Perspectives

IT Central Station members who use FlexPod weighed in on why they selected the solution. They also offered insights into why they moved forward with additions and upgrades to their FlexPod implementations. In some reviews, their reasoning emerged in a competitive context:

- [“We went with FlexPod \[over Dell VxBlock\] because I think NetApp is a better product for the back-end storage.”](#) - Systems Manager at a tech services company with over 1,000 employees
- [“We did look at VxBlock for about ten seconds til we got the price,](#) and frankly we knew they weren’t going to work anyway. Not just the price, but it didn’t fit us.” - Senior Engineer at an organization with over 1,000 employees
- [“It’s still a much more scalable architecture compared to some of the competing solutions that are out there, like HPE Synergy.”](#) - Service Delivery Architect at a small tech services company
- [“The advantage of FlexPod over the competition is ease of use.”](#) - An Architect at a small tech services company



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## FlexPod and Analytics

Some IT Central Station members preferred FlexPod due to its suitability for data analytics workloads. According to an [Information Technology Architect and Business Consultant](#), “The customer added the FlexPod-based solution to a real-time system to improve their overall system with a new analytics environment.” This comment alludes to the challenges IT departments are facing as they build systems that must be able to handle a new generation of highly data-intensive analytics workloads.

According to reviewers, the nature of the FlexPod partnership is one of the contributing factors to the platform’s success in data analytics. A Business Technical Consultant at a tech services company with over 5,000 employees put it this way: “At the end of the day, AI is not AI without the application that we write into it. With collaboration between Microsoft - utilizing it to build in a manner that is compatible to the FlexPod architecture - we’re able to provide specific intelligence that supports our objectives, whatever it is at a given time.”

**“ We’ve experienced about 28 to 30% improvement in application performance and in our industry that’s actually a very significant improvement.**

He then added, “Whether it’s data aggregation, learning, pouring out the analytics, the intelligence helps specific applications respond to requirements within a business structure. That’s what FlexPod enables us to do.” In his case, the benefits were quantifiable. As he said, “That agility reduces the number of hours that it takes to construct a data center, whether it is physical or virtual, by enabling applications to support AI objectives. [We’ve experienced about 28 to 30%](#)

[improvement in application performance](#) and in our industry that’s actually a very significant improvement.”

## Scalability

Scalability is one reason IT Central Station members are putting FlexPod to work as cloud infrastructure. A Solution Architect, compared FlexPod favorably to a comparable solution by stating, “We can expand any single component of the solution without having to expand the entire solution. So if we want to add disk or add blades, compute nodes, we don’t have to add everything at once. [Incremental expansion is less costly.](#)”

A TSE at a tech services company with over 5,000 employees noted, “It is definitely scalable. [This is a great platform that you can build from.](#) If you need to think about scalability in the future, this is the solution because you can stay small and build it out as you go, as you grow, and stay ahead of the market.”

People are relying on FlexPod’s scalability for a range of data-oriented processes. A Director of Integration Services at a tech consulting company with over 1,000 employees shared that FlexPod has worked as a service platform for data. In terms of scalability, he said, “FlexPods have been able to grow, build, and change how they [his customers] look at data analytics by setting up the system and enabling them to grow as they need. [We can add them to additional NetApp domains allowing them to scale quite large](#) and collect as much information on their data plane as they need.”

## Running Diverse Enterprise Workloads

Beyond AI and analytics, FlexPod users are finding many diverse workloads for the platform.

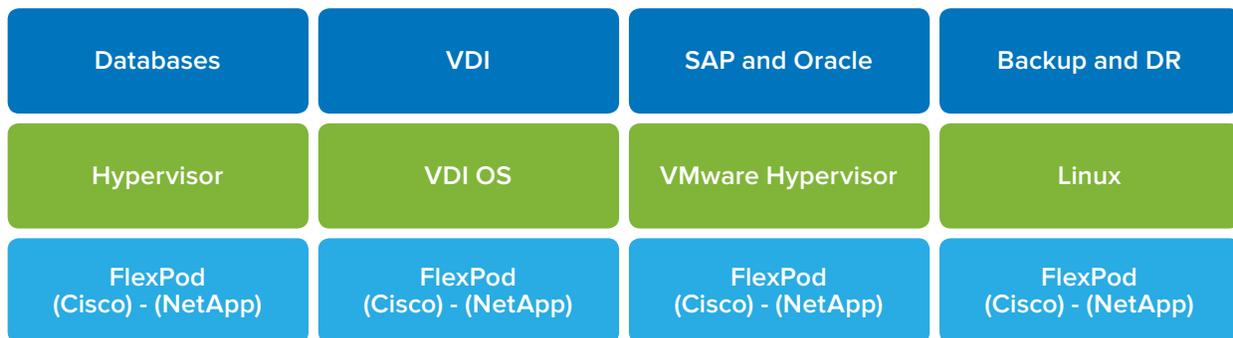


Figure 2 - Example of workload diversity on FlexPod

Figure 2 shows a representative example. In this regard, a Capacity Manager at an energy/utilities company with over 1,000 employees noted, [“Our primary use case is a mixture of workloads. We have VMware, Citrix, Oracle and SAP, which are all running within the FlexPod stack.”](#)

Alternatively, a PMO Manager at a small tech services company “used the solution as disaster recovery (DR) for backing up the IBM Power series infrastructure.” He revealed, [“The primary site is running our core application](#), which is based on Java and Oracle databases installed on a SUSE Linux environment.”

Other insights into FlexPod’s capacity for diverse workloads in IT Central Station reviews include:

- [“This solution allows us to have a highly diverse environment.](#) It is scalable.” - Network Administrator at a tech services company with over 10,000 employees
- “The focus is data center workload as well as VDI workload. And once they’ve already got it, why not use it for file storage as well as other things to replace Windows file servers. [It’s easier to deal with a NetApp - which is typically more secure](#) - than a Windows Server that you’re going to have to patch constantly.” - Tech services Service Delivery Architect

- [“I would trust FlexPod to the point that I would put a lot of different things on it.”](#) - IT Engineer at a large tech consulting company
- [“The solution brings us a scale of broad application support](#) that helps us meet the needs of diverse workloads.” - Network Engineer at a major tech services company

Industry-specific applications include financial services, where FlexPod is “uniquely valuable for a company in the financial services industry,” according to a Director Of IT Infrastructure at a firm in that sector. He further noted, [“It is critical for us to use the latest and greatest in technology](#) to have that edge against competitors in our marketplace.”

## Delivering Performance at Scale

Performance emerged as a driver of preference for FlexPod in IT Central Station reviews. The Solution Architect wrote, [“It’s very easy to expand the solution for performance and capacity growth.”](#) A Principal Analyst at a hospitality company noted, [“As our casinos grow, it has helped us expand and add the storage](#) and everything which we need. It has given us the

performance and stability that we need for applications, and it has allowed us to expand our Disaster Recovery (DR) and backup strategies.”

IT Central Station members weighed in with further comments about performance:

- [“The benefit is the speed, it’s the performance.](#) That’s what it comes down to is the performance of the solution.” - Senior IT Analyst at an energy/utilities company
- “We have had two FlexPods for five years now. We’re currently purchasing a third one. [We have never had any problems with them](#) in that time. We are using it for hosting COREmanager and Unity Connection. So far, so good. Its performance is great.” - A Network Systems Specialist at a healthcare company with over 1,000 employees
- “FlexPod is exactly what we’re looking for as far as performance is concerned. For our use cases, this is more than ample. [It has all the flexibility and the performance capabilities that we’re looking for right now.](#)” - Infrastructure Engineer at a large financial services firm

## Flexibility and Innovation

Users praised FlexPod’s flexibility and innovative design for infrastructure. In this context, an AGM at a tech services company with over 10,000 employees commented, [“FlexPod has helped us reduce our time of deployment](#) because we are really only missing integration with different applications.”

The Information Technology Architect and Business Consultant shared, [“So two levels of flexibility per DR were activated:](#) one based on profiles and one based on the hypervisor.” An Operations Engineer at a pharma/biotech company with over 10,000 employees remarked,

[“It is innovative when it comes to compute, storage, and networking,](#) because there are a lot of the storage efficiencies which allow us to keep a smaller footprint.”

For a Team Leader at a tech services company with more than 500 employees, [FlexPod’s advantage comes from its compartmental design.](#) He praised the platform because he could build a FlexPod for a small installation or a big one. He liked that it could grow as needs dictated. A Manager Infrastructure Services at a small financial services firm echoed this sentiment, saying, “We spoke to NetApp, because one of our biggest concerns that we had was cloning our environments. We had to have identical replicas of our production environments in Dev and UAT, and [the flexible solution was the best option for us at that point.](#)”

## Costs/ROI Factors

Cost is a major factor in the decision to invest in FlexPod. An Advisory Engineer at a large transportation company spoke to this issue by noting, [“We invested in this solution because we were trying to lower our costs and improve the time to implement and upgrade.”](#) A Storage Administrator at a consultancy with over 1,000 employees simply said, [“Our footprint is lower than it used to be,”](#) while a Sr Network Solution Engineer at a tech services company with over 200 employees commented, [“Our data center costs have been reduced](#) by means of less power, cooling, and space.”

Other remarks on this topic included:

- [“The reduction in data center costs is the obvious return on investment.”](#) - Practice Lead at a small tech services company
- [“It has improved my organization through cost savings.](#) I belong to a cost center. I need to try

and find ways to optimize solutions by actually reducing costs as opposed to running up the bill.” - Enterprise Architecture at a Consumer Goods company

- [“On top of the infrastructure we used Oracle Hypervisor \(OVM\); the VMs were based on Oracle Linux. On top the virtual machines we hosted Oracle Database \(pinned, to reduce license costs\) or applications.”](#) - Information Technology Architect and Business Consultant
- [“\[FlexPod\] enabled us to jump into private cloud infrastructure, instead of public, and cut costs.”](#) - Information Security Engineer at a major aerospace/defense firm

How does FlexPod save money? One way is to reduce the need for physical hardware. As a Senior Infrastructure Engineer at a financial services firm with over 1,000 employees explained, [“It has reduced costs](#) because we are not buying a lot of infrastructure or physical servers. Also, deployment and confirmation times have reduced significantly with our use of this solution. We can speed up VMs at the rate of ten to 15 minutes, then give it to our customers.”

FlexPod shrinks the data center footprint. As a Data Center Manager at a consultancy with over 5,000 employees observed, [“The most valuable features \[of FlexPod\] in a data center, or parts of it, are footprint and power consumption.](#) The flash side is the first time that Moore’s Law breaks. It gets smaller, and also takes less power.” An Executive Director Of IT at a university had a similar experience. He said that [FlexPod “condensed our data center footprint significantly,](#) and virtualization gives us redundancy on all our boxes.”

## IT Operations, High Availability and Stability

According to reviewers, FlexPod’s stability leads IT managers to rely on it for High Availability (HA). This quality also contributes to simplified IT operations. According to the Sr. Network Solution Engineer at the tech services company, “This resiliency of this solution helps. [There is high availability, fault tolerance, disaster recovery, and it is easy to deploy.](#)” A Network Engineer at a government agency shared, [“The most valuable](#)

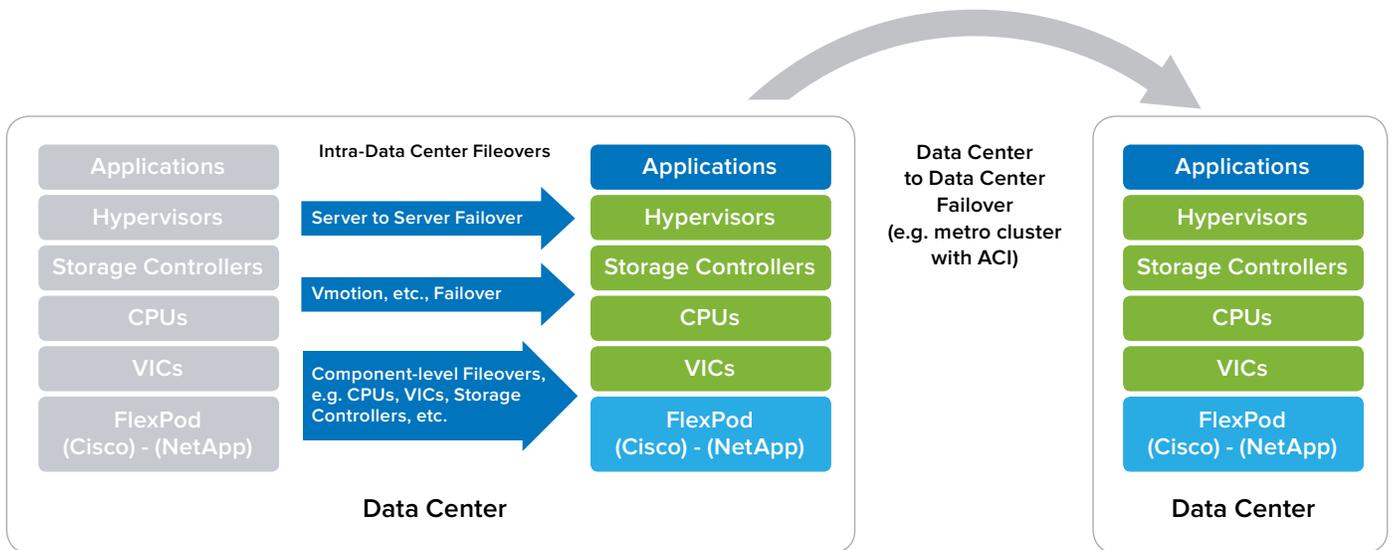


Figure 3 - Failover with FlexPod can accommodate virtually any failure scenario, including component-level failover (e.g. CPUs, VICs) as well as server-to-server or even data center to data center failovers

[features of FlexPod are high availability and scalability.](#)” Figure 3 shows a simple example of how FlexPod enables HA with failover across many different elements of its architecture.

IT Central Station called out FlexPod’s stability specifically in reviews. The Team Leader storage at the tech services company wrote, “[It’s great. Very stable.](#) Nothing to complain about, so that’s good.” The Principal Analyst at the hospitality company felt that FlexPod was “Extremely stable.” He said, “[We haven’t had a single problem. It has never gone down.](#) Our upgrades are within an hour, so our uptime is incredible.” The Senior Cloud Systems Engineer also shared, “[It is stable. Everything is built with redundancy in mind.](#) Everything is built with doubles and has double paths, so it’s highly redundant, constantly. It’s one of the main reasons we picked it, to be honest.”

## Streamlined IT Admin and Support

IT administration and support become more streamlined with FlexPod, according to IT Central Station members. This was the case for a Senior IT Planner Integrator at a government agency, who said, “[FlexPod does help streamline our IT admin,](#)” and for an AGM at a large tech services company, who had a comparable insight.

Additional remarks on IT admin:

- “[It allows me to focus on other things.](#) Backing up databases. More efficient.” - Senior Engineer
- “[I can deploy a new UCS server within minutes.](#) The valuable features of the product used to be the memory footprint, but technology has come up. Now it’s being able to build the profiles so you can move around your firmware, bios revs, your worldwide name, and your Mac addresses

from physical planes.” - Systems Manager at the tech services company

- “I have multiple models. You can start out with one or two platforms, then scale it up. [They have some great management tools](#) that you can use to orchestrate the whole environment.” - Systems Engineer at the tech services company
- “For anyone who needs the flexibility of moving around profiles from physical device to physical device, it really adds an additional layer of virtualization, much like you move a guest from a VMware host to a VMware host. Now, you can move that VMware host from physical box to physical box. [It gives you all that flexibility, if your company demands that. It’s priceless.](#)” - Admin at a transportation company with over 1,000 employees

From the perspective of support, FlexPod got high marks from IT Central Station members. A Senior Systems Engineer at a manufacturing company with over 1,000 employees said, “[FlexPod also simplifies our support experience.](#) With every site being on the same standard, we support it the same way everywhere, so it’s easy to train new folks or offshore staff. In addition, it streamlines our IT administration.” A Technical Consultant at a small tech services company found that [FlexPod, “enables our customers to combine and streamline compute and storage.”](#)

## The FlexPod Upgrade Experience

A number of FlexPod users on IT Central Station are now upgrading their existing FlexPod deployments. They shared their experiences and insights on the site. For instance, a Storage Operator at a small energy/utilities company felt that the most valuable feature of FlexPod was,

[“It’s making sure that you only have one upgrade path when various patches are released.”](#)

Another user, a Cloud Infrastructure Engineer at a small financial services firm described his upgrade experience for FlexPod in virtual desktop infrastructure (VDI) and virtual server storage use cases. He observed, “Employees are much happier working remotely in our VDI (Virtual Desktop Infrastructure). [The most valuable asset of the product is the use of all-flash storage](#), low latency I/O (quicker Input / Output).”

## The Trust Factor

The basic vendor relationship also counts in setting a preference for FlexPod. Trust emerges as a critical requirement, as a Senior Lecturer at a university noted. He said [the most important criteria when selecting a vendor is the “Trust relationship.”](#) He said, “either knowing somebody that actually knows them and has had a good experience, and if I find that then I’m not too worried.” The Systems Engineer at the tech services company resonated with this feeling. She said, [“The solution is trustworthy, and it has](#)

[proven itself too.](#) You get what you pay for. It’s the oldest hyperconverged platform in our industry. There’s something to be said for that.”

In the government sector, a Senior Systems Engineer at a state agency spoke to the trust issue by saying, “With FlexPod, I can contact NetApp. I can contact our rep and I can get the building materials from him which includes all of my switching, servers, and storage in one place. [It saves me a lot of time](#) when I have to go out and send out a bid, especially the bids for larger dollar amounts and longer terms. The more efficiently I can get those bids out and processed, the better it is, and the faster I can deliver solutions to our customers (our users).”

Some customers found they trusted the designs provided by FlexPod. A Senior Systems Engineer at a manufacturing company with over 10,000 employees commented, [“I like the validated designs because we don’t have to do more research on it.](#) Research has already been done by trustworthy companies, like Cisco, NetApp, and VMware. They have provided us with the properly designed ones, which is less headache for us.”

# CONCLUSION

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IT Central Station reviewers explained that FlexPod is succeeding with infrastructure teams that need solutions that will work for private cloud and future cloud strategies. The converged approach works for diverse workloads. IT Central Station members selected FlexPod for these endeavors due partly to its performance, though other factors also affected user opinions about the stack. FlexPod's ability to handle data

analytics as well as its flexibility matters, as did cost and IT admin and support issues. For some, it was about trust. FlexPod engendered a high level of trust among users through its vendor partnership and thought-through validated designs. Infrastructure challenges are certainly not getting any simpler. FlexPod, with its innovation and versatility, offers a workable solution for many different use cases.

# ABOUT IT CENTRAL STATION

**User reviews, candid discussions, and more for enterprise technology professionals.**

The Internet has completely changed the way we make buying decisions. We now use ratings and review sites to see what other real users think before we buy electronics, book a hotel, visit a doctor or choose a restaurant. However, in the world of enterprise technology, most of the information online and in your inbox comes from vendors when what you really want is objective information from other users. IT Central Station provides technology professionals with a community platform to share information about enterprise solutions.

IT Central Station is committed to offering user-contributed information that is valuable, objective and relevant. We validate all reviewers with a triple authentication process, and protect your privacy by providing an environment where you can post anonymously and freely express your views. As a result, the community becomes a valuable resource, ensuring you get access to the right information and connect to the right people, whenever you need it.

[www.itcentralstation.com](http://www.itcentralstation.com)

*IT Central Station does not endorse or recommend any products or services. The views and opinions of reviewers quoted in this document, IT Central Station websites, and IT Central Station materials do not reflect the opinions of IT Central Station.*

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## ABOUT FLEXPOD

FlexPod is a portfolio of prevalidated, converged infrastructure solutions that combine the Cisco Unified Computing System integrated infrastructure, Cisco networking, and NetApp All Flash data management components. FlexPod simplifies and modernizes IT with continuous innovation, delivering unmatched application performance, broad support for any cloud strategy, and improved operational efficiency to accelerate data center transformation and business evolution. The portfolio is validated with leading hypervisors, operating systems, systems management tools, and cloud management platforms.

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Cisco (NASDAQ: CSCO) is the worldwide technology leader that has been making the internet work since 1984. Our people, products, and partners help society securely connect and seize tomorrow's digital opportunity today. Discover more at [newsroom.cisco.com](http://newsroom.cisco.com) and follow us on Twitter at @Cisco.

### **About NetApp**

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organizations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation and optimize their operations. For more information, visit [www.netapp.com](http://www.netapp.com). #DataDriven