PeerPaper Report

# HOW HCI ENABLES A MULTI-CLOUD STRATEGY

Based on Real User Reviews of NetApp HCI

2020

IT Central Station
Unbiased reviews from the tech community

NETWORKWORLD
FROM IDG

# ABSTRACT

Organizations are pursuing multi-cloud strategies that blend on-premise, private cloud, and public cloud instances. A challenge arises, however, in deploying infrastructure that's flexible and simple enough to support multi-cloud and generate consistent performance. Hyper-Converged Infrastructure (HCI) offers a solution, with flexibility and scalability enabling a multi-cloud strategy. HCI also supports containers, considered a key factor in multi-cloud success. This paper explores how HCI enables multi-cloud, based on reviews of NetApp HCI published by real users on IT Central Station.

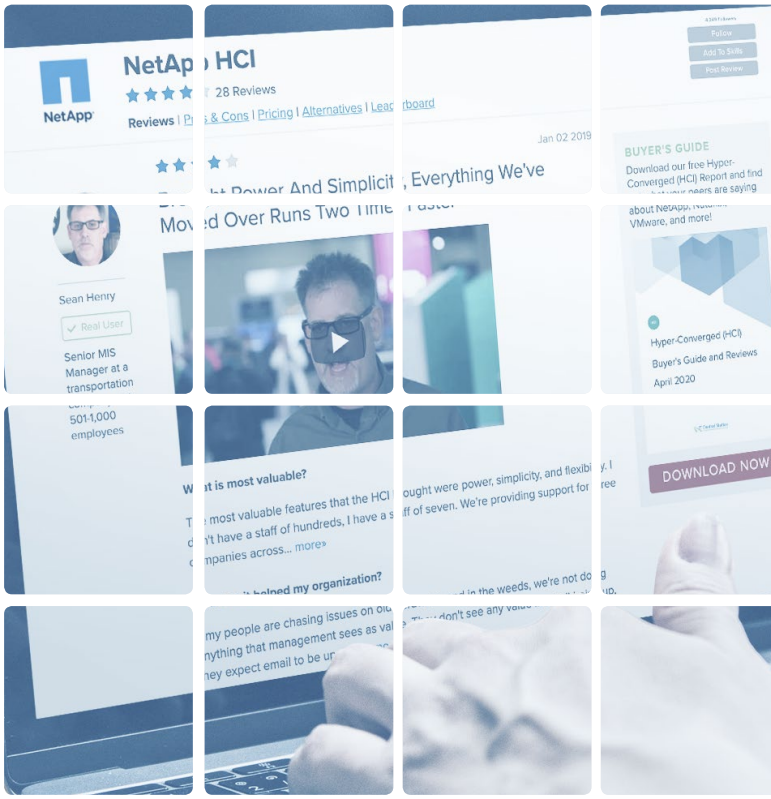
# CONTENTS

# INTRODUCTION

Businesses are embracing the cloud, but the high costs of public cloud, coupled with the availability of cloud services on-premises have triggered strong interest in hybrid and multi-cloud cloud alternatives. IT organizations are thus pursuing multi-cloud strategies that blend on-premise, private cloud, and public cloud instances. The challenge, however, involves deploying infrastructure that's simple to manage and flexible enough to support multi-cloud that generates consistent performance. Container support is also critical for multi-cloud success. Hyper-Converged Infrastructure (HCI) has emerged as a solution, working well with containers and offering flexibility and scalability. This paper explores how HCI enables multi-cloud, based on reviews of NetApp HCI published by real users on IT Central Station.

# Benefits of Multi-Cloud and Enablement

IT organizations tend to like the flexibility of the public cloud. That said, they often balk at the unexpectedly high costs of large-scale, long-lasting public cloud instances. Security, compliance, and performance concerns further deter all-encompassing moves to the public cloud. And, some legacy systems will simply never migrate to the cloud. There will always be at least some on-premise connectivity required for enterprise clouds.




Multi-cloud emerges as an attractive solution. A multi-cloud approach combines on-premises private cloud with more than one public cloud provider. For the strategy to work, however, the on-premises infrastructure must be truly multi-cloud enabled. HCI is well-suited to playing this role. As a Storage Engineer at a university with over 5,000 employees put it, "HCI has provided us with efficiencies and mobilities similar to that of the public cloud. It gives us some flexibility for the future if we do decide to go into the public cloud." In his case, "We are actually considering Microsoft Azure for a lot of stuff going forward. It [NetApp HCI] is kind of like an injection point into the cloud as well."

A Vice President at a small tech services company put the issue into context, noting that "For the customers that we talk to, their primary use case is normally to build their own version of the cloud with a quality of service where they can move workloads to the [NetApp] HCI solution while taking advantage of the cloud and doing it in a more cost-effective way. The administration

> **"HCI has provided us with efficiencies and mobilities similar to that of the public cloud.**

costs are lower and it is a simpler solution to run."

A Storage Engineer at a healthcare company with over 10,000 employees described his organization's path to using NetApp HCI to support cloud efforts. He said, "We were previously using IBM but it felt like they were lacking functionality moving into the cloud. It felt like they moved very old school. They like to do things very 1980s and it was time for us to move on. We were definitely looking into a lot of automation cloud [solutions, and] other HCI

> **The administration costs are lower and it is a simpler solution to run.**

platforms, but I think we were sold on NetApp a lot because of their data fabric transformation, their hybrid cloud kind of story. That's exactly what we were looking for." A System Consultant at a small tech services company related that "NetApp provides efficiencies and mobility similar to that of the public cloud. NetApp is doing a good job with that, ONTAP can move data across the cloud very easily."

HCI also offers benefits to storage managers who are pursuing multi-cloud. An IT Specialist at a small tech vendor shared, "We only have the private cloud right now. We don't have the hybrid, but that is one of the things that we are looking at for the future. The private cloud has helped us with storage persistence. It is there all the time. It's extremely reliable and has been a lifesaver." Other notable comments about HCI's storage benefits for the cloud included:

- "HCI has helped reduce our company's data footprint in the cloud, as well as our company's cloud costs." - System Engineer at a tech services company with over 500 employees
- "HCI has helped with storage persistence across private and hybrid clouds for the last year. It's faster and more reliable with minimal downtime, as it doesn't require any maintenance." - Manager at a pharma/biotech company with over 5,000 employees
- "It has a lot of solutions because you can do replication with legacy storage nodes with NetApp and to the cloud." - System Engineer

# HCI and Multi-Cloud Use Case Examples

IT Central Station members are using NetApp HCI in a variety of multi-cloud scenarios. For example, a Manager at a pharma/biotech company with over 5,000 employees uses NetApp HCI to help leverage microservices from AWS, such as EC2 instances, "where we create some bucket links and move a tiering from on-premise to the cloud migration." His team tries to host applications on cloud when appropriate.

"In terms of helping us with storage persistence across private and hybrid clouds, we do store data internally and in Azure," said a Senior MIS Manager at a transportation company with over 500 employees. He added that "It has allowed us to consolidate a number of workloads, across our old NetApp [hardware] into a single unit and have that unit also working with Azure." The tech services Vice President similarly noted: "Depending on how the solution is architected to the customer, the deployment model can be on-premises, in a public cloud, or private-cloud based. Our team goes in and delivers against that architecture. When it is a public cloud deployment, Microsoft Azure is our preference."

A Director at an ISV that supplies infrastructural services to customers commented: "We allow them [our customers] to utilize NetApp in the cloud with Cloud Volumes in Azure, AWS, and Google Cloud. We use HCI and standard media technologies in our own data center, as well as supplying and setting it up for customers. We supply all versions of this solution and we run a combination of public and private cloud on our own servers." His team values NetApp SnapMirror and object storage tools, as well as Cloud Sync for customers wanting to integrate between the cloud and local.

> **"We allow our customers to utilize NetApp in the cloud with Cloud Volumes in Azure, AWS, and Google Cloud**

# How HCI Enables a Multi-Cloud Strategy

NetApp HCI enables multi-cloud through its distinctive capabilities. These include simplicity, flexibility, and scalability. NetApp HCI's ability to support containers is critical for success in private, hybrid, and multi-clouds. Users also cite NetApp HCI's automated, centralized management as a factor in building multi-cloud architectures.

## Container support

Containers, such as Docker, offer software developers unique flexibility. Combining software with its dependencies into a self-contained unit, a container is easy to move and adapt to different hosting environments — ideal for multi-cloud deployments. Given that many, if not most IT organizations are building public/private cloud hybrids and utilizing multiple public cloud providers, a container-based architecture makes a great deal of sense. The challenge is to find an effective, efficient way to host containers on-premises. NetApp HCI has proven itself to be effective at accomplishing this goal.

For example, a Storage Operations Manager at a media company with more than 1,000 employees uses NetApp HCI primarily for container storage. He revealed that "we use all of the deployment models. That's the good part about HCI, you can choose whichever you want. Our cloud providers

> **We use all of the deployment models. That's the good part about HCI, you can choose whichever you want.**

are Amazon and Azure." The tech services System Consultant shared that his container use case involved his demo center, saying, "We load different kinds of workloads like Docker, Citrix VDI, F5 Load Balancers, Virtualizers, all the

virtual platforms, and virtual appliances." Figure 1 shows a multi-cloud environment with containers spanning multiple instances.

## Simplicity, efficiency and flexibility

IT Central Station members find NetApp HCI to be simple and flexible, qualities that are required for a workable multi-cloud strategy. A System Engineer put it like this: "The relentless pace of business change means you need maximum flexibility to adapt to any workload." To him, NetApp HCI offered a highly configurable design that enables cloud-native application development and agile operations for virtualized environments.

The Senior MIS Manager said, "It's simple, flexible, powerful. We've been able to move most of our workload to it. We've seen increased performance across the board." A System Engineer echoed this sentiment, saying, "A common goal of IT organizations is to automate all routine tasks, eliminating the risk of user errors associated with manual operations. NetApp HCI streamlines installation so that it takes minutes instead of hours, and simple, centralized management with VMware lets you control NetApp HCI through tools you already use."

Efficiency was what mattered to the healthcare Storage Engineer. He said, "HCI provides efficiencies and mobility similar to that of the public cloud. We chose it a lot because we're still trying to do the private into the public cloud, that whole hybrid cloud transformation."

> "It's simple, flexible, powerful. We've been able to move most of our workload to it.

Simple setup is also part of this story, as a Senior Project Consultant at a tech services company with over 500 employees explained. He said, "I'm pretty new to NetApp but the setup was really simple as far as what I could tell. The simplicity of

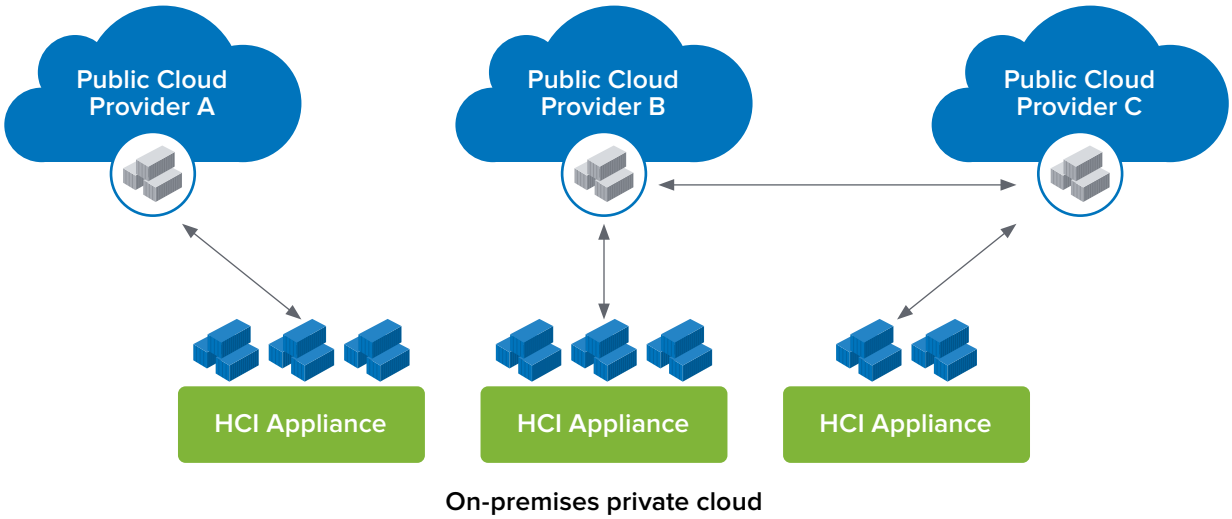



*Figure 1 - Containers are essential for success in a multi-cloud environment because they enable developers and architects to move application functionality around between on-premises and cloud instances, with relative ease.*

getting it set up and running is what was nice for the customer that I did the setup for." The Senior MIS Manager noted that "the most valuable features that the HCI brought were power, simplicity, and flexibility."

## Consistent performance

Users of multi-cloud architectures generally don't know they're using software running on multiple instances. And, they neither care nor need to know, as long as performance remains consistent. HCI solutions with consistent performance are therefore suitable to support multi-cloud. The System Engineer was pleased with NetApp in this context. He said, "Each node guaranteed performance, around 50K IOPS per node." An Engineer at an insurance company with more than 1,000 employees remarked: "The stability is rock solid. We have been through two upgrades and it didn't affect anything. We have had no downtime."

## Scalability

The scalability of NetApp HCI is a significant enabling factor for multi-cloud. As the healthcare Storage Engineer noted, "HCI definitely improved how flexibly we scale, and our entrance into the cloud. It's helped us flexibly move and shift our workloads around, back and forth." For him, "NetApp HCI is a scalable, on-premises hybrid cloud infrastructure that transforms your private cloud into a deployable region of your multi-cloud. Bring your public cloud on-premises and develop anywhere, on any cloud, with one experience." Figure 2 shows how flexible NetApp HCI storage scaling helps deal with workloads that feature evolving storage requirements across cloud and on-premises infrastructure.

> "It's helped us flexibly move and shift our workloads around, back and forth.

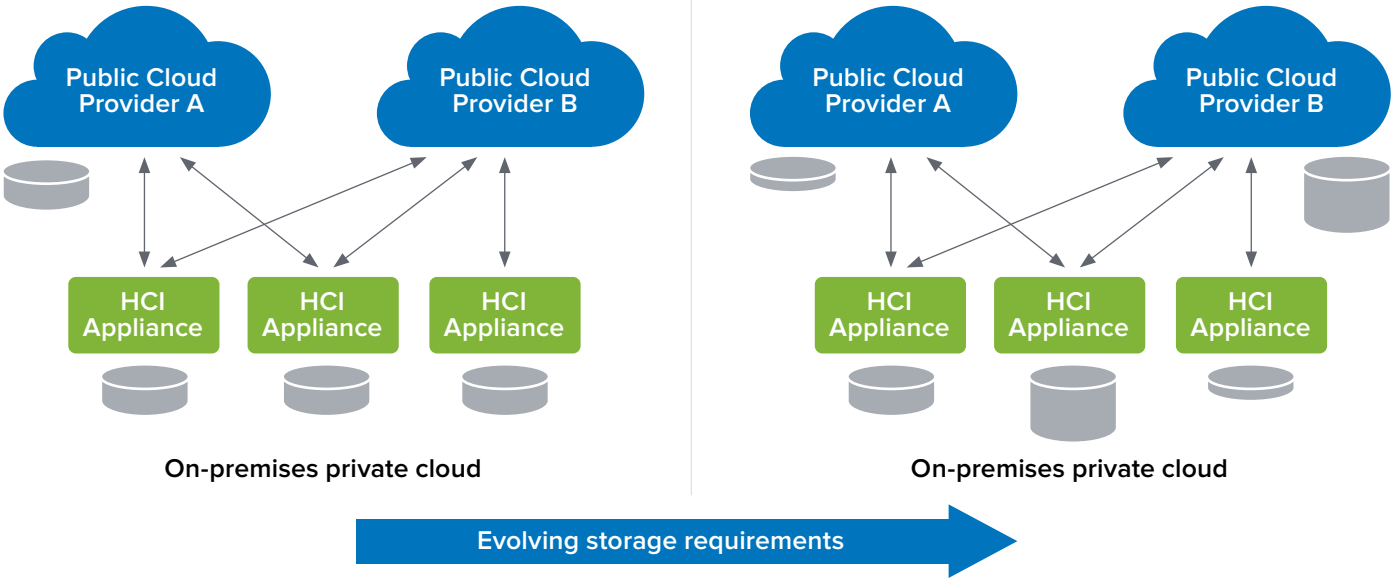



*Figure 2 - HCI that supports flexible scaling of storage enables multi-cloud, with its evolving storage requirements across cloud and on-premises infrastructure.*

The Senior Project Consultant similarly noted that "Its ability to scale on-demand affects provisioning in [the customer's] organization because now dev can do extra nodes and grow their environment. It's pretty simple." An Infrastructure Engineer at a tech vendor with more than 1,000 employees shared that "The ability of this solution to scale on-demand is great. It is easy to do. If you need another compute and another storage node, they're really easy to put into play and add into the original cluster that you have."

## Automated, efficient management and fast deployment

Running a multi-cloud architecture can be challenging, so NetApp HCI's automated, efficient management capabilities are seen as positive drivers of multi-cloud adoption. A System Engineer at a tech services company with over 500 employees explained that "The initial setup was straightforward. It was easy and fast to deploy. We used NetApp Cloud Manager to get up and running with Cloud [Volumes] ONTAP. It is amazing. I liked it. It's easy to use. It's simple and it basically did everything." A Systems Platform Engineer at an insurance company with more than 1,000 employees related that "since implementing this solution, we have to do less work. This solution's ability to scale on-demand affects provisioning because it auto-provisions itself."

The Senior MIS Manager selected NetApp HCI over solutions from Nutanix and Cisco because, as he said, "The unit was built from the ground up to work as a single unit. It wasn't things that were developed separately that happened to work together very well, they were actually designed to work as a single unit."

The tech services Vice President highlighted the cost impact of singular management — also an issue in multi-cloud. He said, "As far as maintenance costs go, I would think NetApp absolutely reduces them because you're able to migrate multiple things to a singular platform. You don't have as many footprints of support." The media company Storage Operations Manager uses NetApp HCI's cloud data services. He said, "It affects the management of the infrastructure by making it one single pane of glass to provision and a single pane of glass to monitor. It makes my use easier."

> "It is amazing. I liked it. It's easy to use. It's simple and it basically did everything.

# CONCLUSION

Businesses want the flexibility of the cloud, but are concerned about the high costs of prolonged, in-depth use of the public cloud. As a result, they are assessing and implementing hybrid and multi-cloud strategies. HCI offers an infrastructure that's flexible enough to support multi-cloud. It offers consistent performance and simple management, along with critical container support. As IT Central Station members shared in their reviews of the NetApp HCI solution, HCI offers the scalability, flexibility, and management features they need to make a success of multi-cloud in their organizations.

# **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

*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.*

# **ABOUT** NETAPP

NetApp is the leader in cloud data services, empowering global organizations to change their world with data. Together with our partners, we are the only ones who can help you build your unique data fabric. Simplify hybrid multi-cloud and securely deliver the right data, services and applications to the right people at the right time. Learn more at www.netapp.com.

To learn more about NetApp's HYBRID CLOUD INFRASTRUCTURE go to Netapp.com