

PeerPaper Report

WHAT IT TAKES TO TRANSFORM INTO A DATA-DRIVEN ORGANIZATION

Based on Real User Reviews of the NetApp Portfolio

2020



ABSTRACT

The relentless push for IT transformation and the quest to become a data-driven organization often run into a difficult reality: Transformation and the use of data as a critical enterprise asset require modern, flexible infrastructure and dynamic storage capabilities. A hybrid cloud approach is one of the best ways to realize these goals, as potentially enabled by the NetApp portfolio of products. Comprising cloud services, converged and hyper-converged infrastructure, and tiered storage, the NetApp portfolio can provide the basis for IT transformation and high-performing, data-driven critical workloads. Based on reviews on IT Central Station, this paper looks at how real users have leveraged the NetApp portfolio to build hybrid clouds and other infrastructures that meet business needs.

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INTRODUCTION

IT departments seek to transform the businesses they serve, helping them to become data-driven organizations. Obstacles arise, however, with traditional infrastructure. It's not flexible, nor does it have storage that's dynamic enough to make data into a critical enterprise asset. To get beyond traditional limitations, some companies are taking a hybrid cloud approach.

The NetApp portfolio of products can play a role in building this type of cloud architecture. It consists of Cloud

Volumes ONTAP, Netapp All Flash FAS (AFF), a scale-out platform built for virtualized environments, NetApp StorageGrid, NetApp HCI, Azure NetApp Files and more. The portfolio comprises cloud services, converged and hyper-converged infrastructure, and tiered storage. It provides the means to run high-performing, data-driven critical workloads. This paper looks at how IT Central Station members have used NetApp portfolio to build hybrid clouds and other infrastructures that meet business needs.

The Goals vs. The Obstacles

Becoming a data-driven organization is partly about culture, skillsets, and software. The rest of it is a matter of infrastructure. Being data-driven means having mastery over the storage and processing of data. In the days when corporate data sets were finite, or at least growing at reliable rates, this requirement was not a big problem. Today, however, with data coming from multiple sources and in unpredictable volumes—and in a variety of locations—legacy infrastructure and storage can have trouble keeping up. There may not be enough capacity in the right place, such as at the edge. Performance may lag to the point where data-oriented application workloads suffer. Figure 1 shows some of the factors that make traditional infrastructure sub-optimal for the data-driven organization.

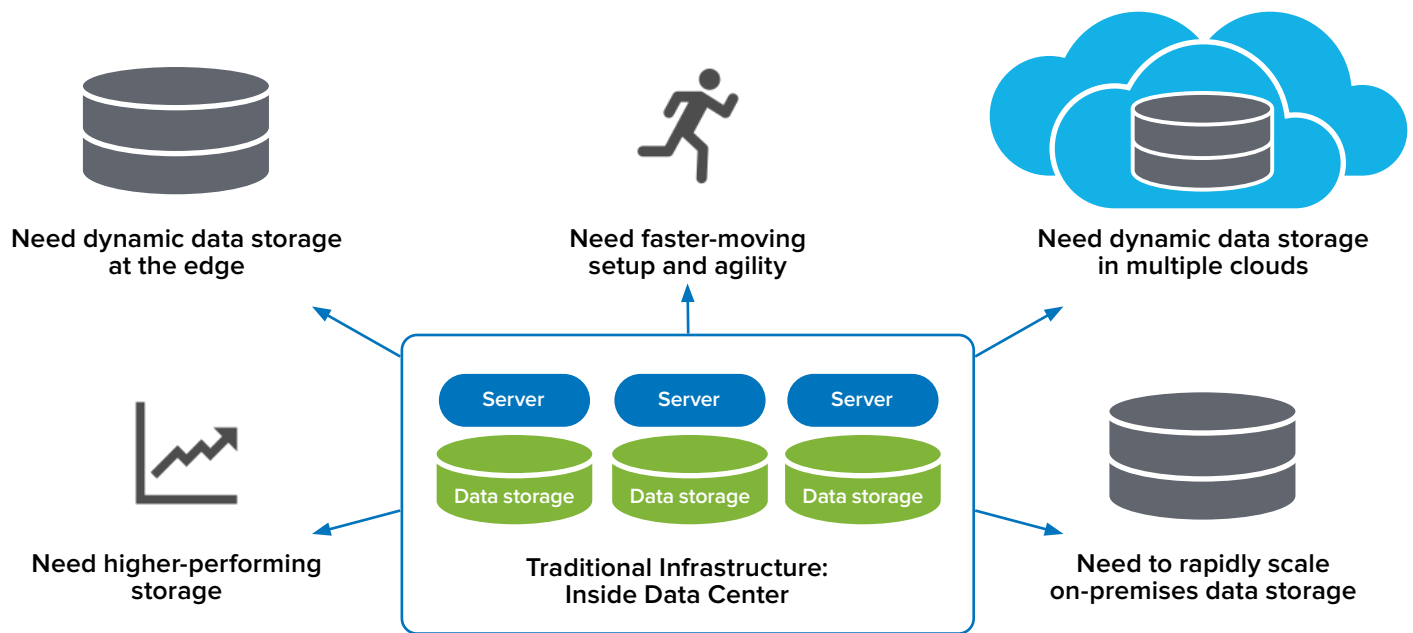


Figure 1 - Factors that make traditional infrastructure sub-optimal for the data-driven organization

The Hybrid Cloud Solution

IT Central Station members are employing the NetApp portfolio of products to build hybrid clouds that can support a data-driven organization. Each use case is slightly different, but in general, users are leveraging the portfolio's performance and flexibility for maximum advantage. For example, a Principal Engineer who uses NetApp AFF at a retailer with over 5,000 employees explained how he values NetApp AFF's [fabric pool](#). As he said, "We are taking our cold data and pumping it straight into an estuary bucket." A Storage Engineer who uses NetApp AFF remarked, "NetApp helps us to [unify data services](#) across SAN and NAS environments."

“**It provides us with a cold-hot tiering solution that we haven't experienced before.**”



"We have this solution deployed both on Microsoft Azure and on-premises," said a Solutions Architect who uses Azure NetApp Files at a small tech services company. His primary use case, however, is [unstructured data](#). A Senior Network Solution Engineer who uses FlexPod at a tech services company commented, "We use this solution in our data center. We use a [hybrid environment](#). It connects our on-premise system with the cloud." Alternatively, a Systems Engineer uses NetApp AFF and ONTAP in combination with StorageGRID for a [full data fabric](#) at a small tech services company. He shared, "It provides us with a cold-hot tiering solution that we haven't experienced before."

How the NetApp Portfolio Can Drive IT Transformation

The NetApp portfolio is proving essential for IT transformation. For a Senior System Engineer at a tech vendor with over 5,000 employees, the issue was moving disaster recovery (DR) to the cloud. They opted to use NetApp Cloud Volumes ONTAP. He shared that “moving to the cloud version was something that was different for us, but it was a fairly easy transition. Once we got comfortable with it, now it’s [second nature](#).”

A Senior MIS Manager at a transportation company with over 500 employees sought a solution for a long-term performance deficit in one of his key systems. As he put it, “We had a long-running project that didn’t have the horsepower behind it that it needed, and the vendor couldn’t spec the horsepower that it did need. Rather than continuing to chase performance, I took a chance on a [quantum leap](#) and put the HCI box in to provide the flexibility, but also the power, that it needed, and it has worked out.”

In general, users are having a positive experience with the NetApp portfolio in IT transformation



because they find the products to be simple and agile. They benefit from the products’ cloud integration along with their stability and predictability. Performance efficiency and security also factor into the IT transformation story, as does the ability to handle enterprise applications.

Simple, Easy and Agile

Ease of use and agility are essential for IT transformation and the development of a data-driven organization. This should make intuitive sense. If new systems add complexity and increase the management burden, then they’re

taking the organization in the wrong direction. NetApp users praised the product portfolio in this regard. A Senior IT Planner Integrator who uses FlexPod at a government agency said, “There’s a lot [less overhead management](#). It’s a lot easier for developers, in particular, to get the compute and storage they need. They don’t have to go through a bunch of change requests. They just do it on demand.” A CTO who uses Cloud Volumes ONTAP at a healthcare company simply said, “The most valuable features are that it’s [easy to manage](#) and it’s reliable.”

Cloud Integration

Having the option to store data in the cloud is a key element of becoming a data-driven organization. Users want a unified data experience, with the ability to work with data on-premises and across the world’s biggest clouds. A Storage Specialist at a comms service provider with over 1,000 employees felt that [replication to the cloud](#) was Cloud Volumes ONTAP’s most valuable feature. He commented, “We are in the process of adopting the cloud. We are going to AWS and we are trying to do a safety technician call out with integration to the cloud. NetApp allows us to move some of the volumes to the cloud, at the same time that we continue providing the cloud services that we have on-premises.”

A Principal Architect at an aerospace/defense firm with over 1,000 employees had a comparable view for Cloud Volumes ONTAP. He said, “The most important factors that lead us to use OTC versus a native cloud storage solution were having enough fast capabilities and [social capabilities](#). It is extremely important that our storage enables us to render and integrate on-premise systems with cloud services. Cloud integration is also very important for us in our selection of a future on-premise storage system.”

Organizations also like to tier storage, based on required performance and budgets. For the tech services Systems Engineer, for example, [adding hot and cold tiering](#) with StorageGRID has reduced their TCO, and allowed them to better leverage the fastest NVMe solid state drive. Figure 2 highlights how tiered storage works.

Stability and Predictability

Making an organization data-driven is potentially disruptive. As a result, infrastructure managers value stability and predictability in their data storage solutions. For an IT Manager at a tech services company with over 500 employees, this was about NetApp AFF being “really [stable and trustworthy](#).” As he put it, “The equipment is reliable. It doesn’t break, so I can sleep at night. We don’t have to worry that there is a problem with our equipment every week.”



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A Service Delivery Architect at a small tech services company had a similar comment about FlexPod: “It is an [incredibly stable solution](#). Back when I was a customer still, we were previously an all-HPE shop that switched to UCS. Stability with UCS was unparalleled, and it’s the same thing with NetApp. I have never seen a more resilient HA product out there than NetApp’s solution. If I want to know that I’m putting my workload on a solution, from a storage perspective, that is going to be up 100% of the time, I’m going to choose NetApp.”

Other notable comments about the NetApp portfolio’s stability and predictability included:

- “NetApp HCI [solves predictability challenges](#) with industry-leading performance capabilities that allow the granular control of every application.” - System Engineer at a company with over 200 employees
- “The solution has [decreased the unplanned downtime](#) incidents in our organization. We have almost eliminated downtime (by 90 percent) since using FlexPod.” - Senior IT Infrastructure Specialist at a financial services firm with over 200 employees
- “Once the product is up and running with the build configured correctly, the product [will run itself](#). It is highly stable.” - Pre-Sales Solution Architect who uses NetApp HCI at a tech services company with over 1,000 employees
- “It’s very stable. It’s [always there](#) when we need it. With the Dual Controller, if one drops out,

the other one comes right online.” - Network Professional who uses NetApp AFF at a transportation company with more than 5,000 employees

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If I want to know that I’m putting my workload on a solution, from a storage perspective, that is going to be up 100% of the time, I’m going to choose NetApp.

- “I have no issues with the utility at all. It’s a very stable platform. The solution has decreased unplanned downtime incidents in our organization [by 15 percent](#).” - Systems Administrator who uses FlexPod at a healthcare company with over 1,000 employees

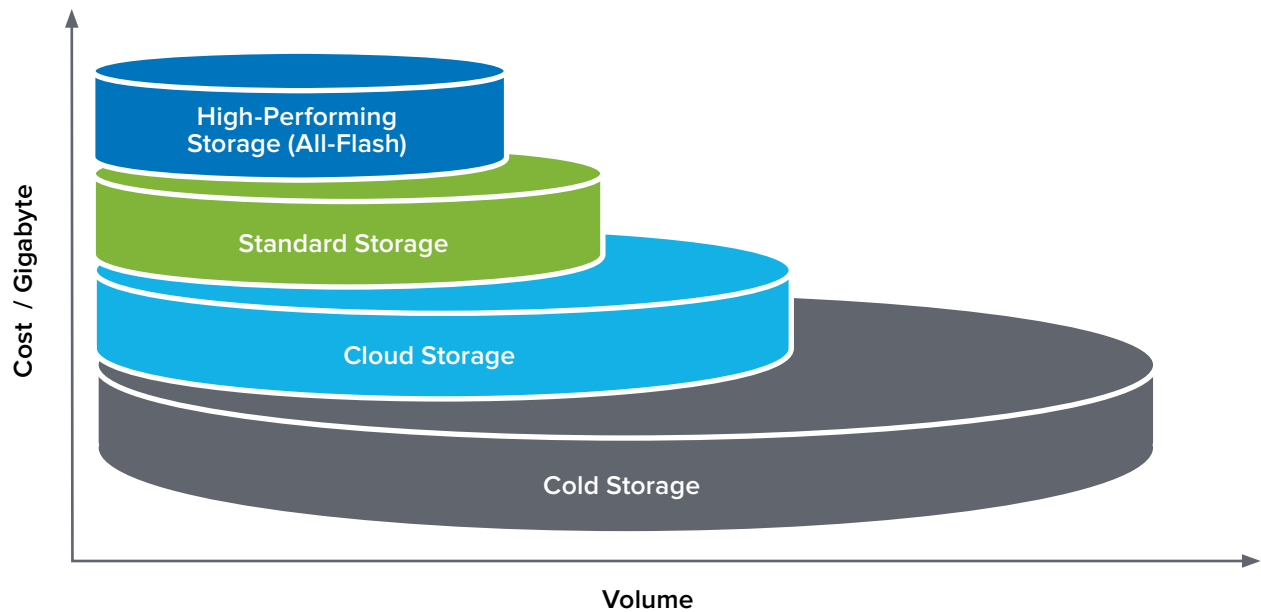


Figure 2 - Tiered storage allows the data-driven organization to place data in cost tiers based on criticality and need for performance.

Performance

IT Central Station members also value the performance capabilities of the NetApp portfolio. The transportation company Senior MIS Manager shared, “This [NetApp HCI] solution has brought power and simplicity. Everything we’ve moved over [runs two times faster](#) and in some cases, a lot faster, far more than twice, which our users noticed. That’s an immediate productivity boost. We’ve been able to bring a dead project up like a phoenix to start moving again.”

“It has improved performance for our enterprise applications, [data analytics](#), and VMs,” said an IT Manager who uses NetApp AFF at a comms service provider with more than 10,000 employees. He added, “These improvements are a result of all-flash, throughput, reliability, compression, etc.” A Senior Manager of Product and Services who uses NetApp AFF at a tech services company with over 1,000 employees echoed this sentiment, saying, “It helps improve performance for enterprise applications, data analytics, and VMs. With the power of flash, we moved from a traditional [hybrid storage to all-flash](#).”

Efficiency

NetApp users found the portfolio contributed to efficiency in terms of operations and storage. A Lead Infrastructure Engineer at a financial services firm with more than 10,000 employees shared that StorageGRID “has improved our [operational efficiency](#) through time consumption and logistics by 40 to 50 percent. Everything that had to do with our legacy tape solution has been improved and is now more efficient.” An Enterprise Storage Manager who uses StorageGRID at a university with over 1,000 employees similarly found, “It has improved our operational efficiency because we [do not have to keep track of 20 servers](#). Instead, we have to keep track of two arrays.”

Storage efficiency stood out as a point of value for a Technical Director who uses NetApp AFF at a small tech services company. He said, “We found AFF systems very competitive in terms of performance, [storage efficiency](#), feature richness, and scalability.” It was the same for an IT Operations

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Manager who uses NetApp AFF at an insurance company. He related “because of the cloning and snapshots that we do, we are getting a [high data efficiency ratio](#) out of our production array.”

Security

A data-driven organization can expand its cyber attack surface area by moving data into infrastructure areas and public cloud spaces that are outside the reach of traditional security countermeasures. NetApp users are keenly aware of the risks, so they appreciate the portfolio’s security capabilities. For instance, a Storage Engineer at a retailer with more than 10,000 employees praised Azure NetApp Files because “it doesn’t take a long time to create shares and [go through the security team](#) to get approvals, open firewall ports, etc. So, it improves the delivery time a lot, it’s very fast to deliver, and it is very easy to deploy.”

“We like the [high security](#), self-encrypting drives, and the NVMe,” said a Payload Integration specialist who uses NetApp AFF at a tech services company with more than 10,000 employees. A CIO who uses NetApp AFF at a manufacturing company felt NetApp had “done a great job with [cybersecurity](#).” SnapMirror’s inline

encryption impressed a Solution Architect who uses Cloud Volumes ONTAP at a tech services company with over 200 employees. He shared that the feature “has helped us to address concerns over [data security](#) in the cloud. Our enterprise data is private and is protected, but it is still available for our business.”



We like the high security, self-encrypting drives, and the NVMe.

A Storage Architect who uses Cloud Volumes ONTAP at a consultancy with more than 10,000 employees also liked [inline encryption](#) with SnapMirror.” He remarked, “We did get Geoaudits and things like that. In other words, everything put together is a security. It’s not like just storage talking to the cloud, it’s everything else, too: network, PCs, clients, etc. It’s a cumulative effort to secure. That’s where we are trying to make sure there are no vulnerabilities. Any vulnerabilities are addressed right away and fixed.”

Ability to Handle Enterprise Apps and Modern Workloads

Enterprise applications are a mandatory part of the data-driven organization. After all, the “driven” in “data-driven” refers at least in part to an ability to make data work for the business. This occurs in applications and modern workloads like data analytics and virtualization. For this reason, IT Central Station members want to see

modern storage solutions and hyper-converged infrastructure support enterprise apps. This was the case for a Cloud Service Engineer who uses FlexPod at a small tech services company. He shared, “All-flash has helped the company a lot, especially for [business critical applications](#).”

The insurance company IT Operations Manager found that NetApp AFF “has helped us improve the performance for our enterprise applications, data analytics and VMs across the board. [Batch times](#) went from approximately seven hours down to about two and a half. Functionality during the day, such as taking or removing snapshots and cloning instances, is higher than it has ever been.” In his case, they recently upgraded from a FAS3250 platform to the AFF A300 all-flash array. A Storage Engineer at a tech services company with more than 10,000 employees praised NetApp AFF because “setting up and provisioning [enterprise applications](#) take minutes. It’s just not difficult. We only have to use the GUI, curate the spaces, and go. I’ve set up entire NetApp systems in a morning.”

Being able to move workloads to the cloud further bolsters an organization’s potential to become data-driven. A Solutions Architect who uses FlexPod at a tech services company with over 500 employees spoke to this issue, saying, “It allows our customers to be able to [move workloads](#) in and out of the cloud. This allows for the hybrid model. It gives on-premise security, but if they have workloads that require cloud-based applications or containerized applications, then they can have the capability of moving their workloads into the cloud.”

Choosing NetApp

IT Central Station members also reflected on the process that led to the selection of NetApp over competing solutions on the market. API quality was what mattered to an Engineering Team leader at a financial services firm with over 10,000 employees. He remarked, “We went for NetApp [HCI] because of the API functionality that they really built into it. They’re [all-API first](#), and then they put everything on a wrapper around their API. Anything that can be done is done via API.”

Buyers of NetApp AFF cited a range of factors that affected their ultimate decisions. The retail Principal Engineer, for instance, commented, “We also considered Dell EMC and Pure Storage. The biggest reason we picked NetApp was the [ease of actually getting the data](#) to the next iteration.” In his case, the fact that NetApp AFF supported a rich variety of protocols and functioned as a “one stop shop” also mattered, because, as he noted, “I didn’t really want to have to manage another box and a storage device at the same time.”

Clusters were the determining feature that affected the choice of a Senior CI Engineer who



uses NetApp AFF at a financial services firm with over 1,000 employees. He related that “NetApp AFF has improved our organization through the

“**The biggest reason we picked NetApp was the ease of actually getting the data to the next iteration.**

[use of clusters](#). Previously we had migrated from Dell EMC and we had a lot of difficulties moving data around. Now, if we need to move it to any slower storage, we can move it with just a vault move within the cluster.”

CONCLUSION

IT Central Station members have found the NetApp portfolio useful in IT transformation and the creation of a data-driven organization. The products make it possible to run critical enterprise applications and workloads in a high-performing mode. With hybrid cloud capabilities, they are flexible enough to adapt to the unpredictable storage requirements of a data-driven organization. Workloads are predictable, even if data volumes are not. The solution also makes it possible to move workloads to the cloud, as well. Storage efficiency increases along with IT operational efficiency. Security is built in. Each IT department faces its own distinct challenges in building a data-driven organization. The NetApp portfolio offers an adaptable toolset that enables the department to achieve the data-driven goal.

ABOUT IT CENTRAL STATION

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