

PeerPaper Report

Selecting an All-Flash HCI Solution

Based on Real User Reviews of the
StarWind HyperConverged Appliance

2020



ABSTRACT

Prospective buyers of Hyper Converged Infrastructure (HCI) solutions have a wide range of choices. It can be confusing trying to figure out the right fit for one's particular set of requirements. This paper addresses these concerns, sharing what drives the selection of an HCI solution. Based on reviews of the StarWind all-flash HyperConverged Appliance (HCA) on IT Central Station, it explores the importance of factors like support, scalability, hardware footprint, performance, reliability, and cost.

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INTRODUCTION

The Hyper Converged Infrastructure (HCI) category is mature enough that prospective buyers have a wide range of choices. This is good, though potentially confusing. Buyers' questions tend to touch on topics like "How much hardware do I really need?", "Can we afford all-flash" and "How hard will it be

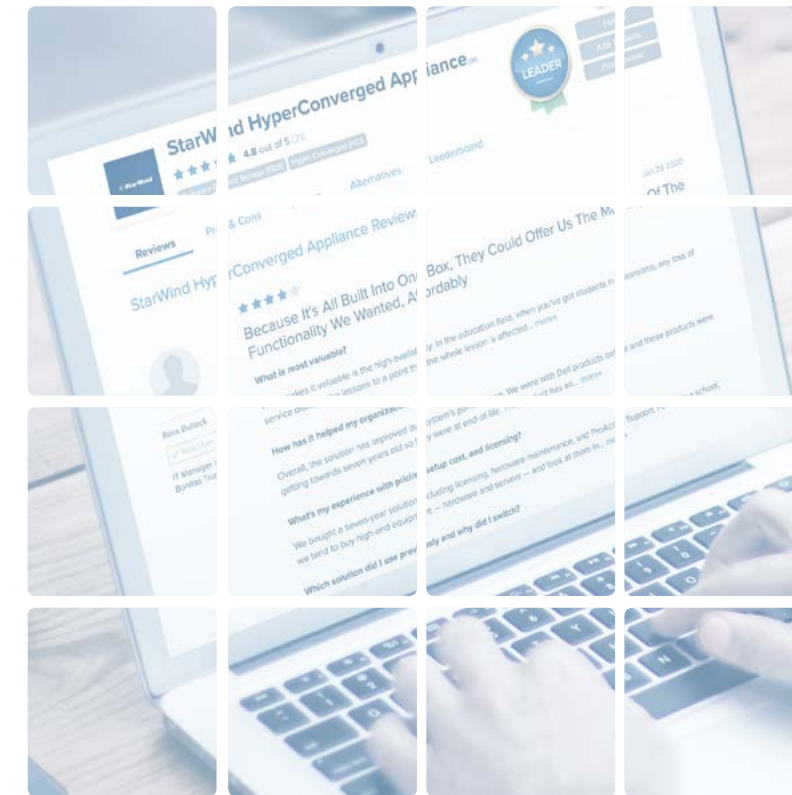
to expand if we need to?" This paper addresses these concerns, and others, based on reviews of the StarWind all-flash HyperConverged Appliance (HCA) published on IT Central Station. It explores the importance of factors like support, scalability, hardware footprint, performance, reliability, and cost.

HCA Use Cases

IT Central Station members are putting HCAs to work in a variety of use cases. These include a Civil Engineer at CrossRoad Engineers, a construction company that was looking for a reliable and cost-effective solution to ensure [maximum uptime](#). He said, “We went from a single server to a virtualized hyper-converged infrastructure to allow routine maintenance at our convenience and have peace of mind that a failover system was in place.”

A Systems Administrator at Hospice of the Western Reserve, a healthcare company with over 1,000 employees, explained that they are using their HCAs [to run various virtual machines](#) in a Hyper-V cluster. This includes running services like Microsoft SQL Server, a Skype for Business phone system, financial applications, domain services, and Microsoft SharePoint servers. They use StarWind’s HCA in one server room and plan on upgrading more legacy equipment at another location next year.

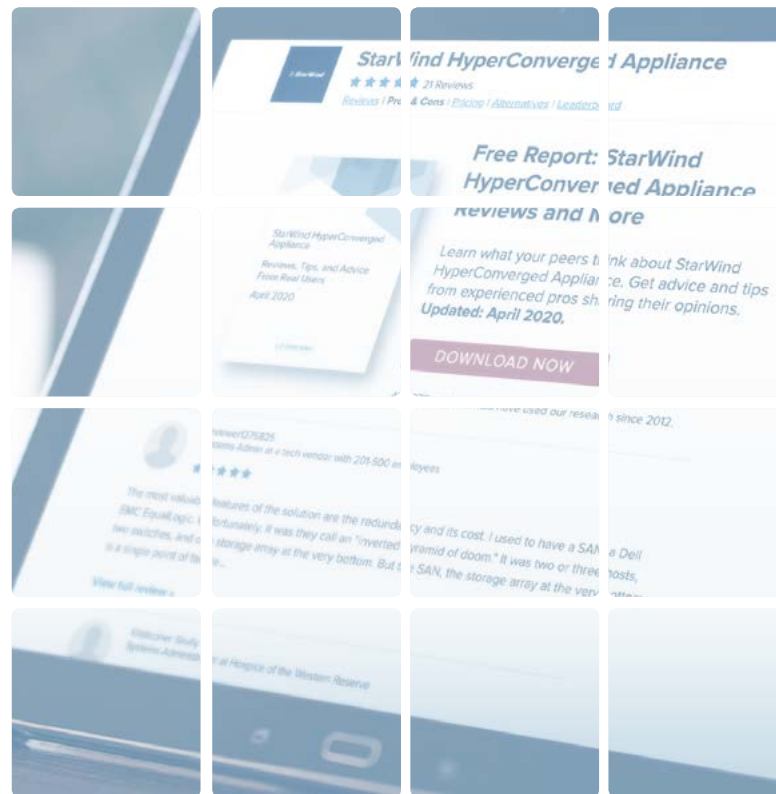
One StarWind user said, “We had to [replace](#)



an aging and complex infrastructure.” Another mentioned, “We had non-virtualized and old infrastructure that needed to be [upgraded](#). We use HCA for all of our servers.” For an IT Operations Manager at a school, the use case involved replacing an eight-year-old HP system (two HP DL360 G7s and an HP StorageWorks X1600) with a [two-node HCA cluster](#). A StarWind user at a non-profit with more than 500 employees required a solution that would enable them [to build a highly available \(HA\)](#) and fault-tolerant (FT) IT environment on an affordable Remote Office/Branch Office (ROBO) budget.

Selection Factors for an All-Flash HCA

What makes for a good all-flash HCA? IT Central Station members shared that their preferences are driven by issues like the quality of the software and quality of support. The physical hardware “footprint” is important, too, given that data center space is usually at a premium. Other selection factors include reliability, performance, and scalability. Budget is always relevant as well.



Quality of Appliance Software

An HCA comprises both hardware and software. The quality of the software emerges as a selection factor for many buyers. For example, the non-profit StarWind user said, “Being a 100% [software-defined](#) Hyper Converged platform, StarWind HCA leveled the possibility of hardware or software issues in the case of the Hyper-V host failing.” All of their critical VMs had been migrated to StarWind HCA. The software ensured that if a failure of a Hyper-V host occurred, there would be an automatic failover of VMs to the other node without any service interruptions.

“The [software](#) is great. It’s very easy to understand,” said an IT Infrastructure Analyst

at a retailer with over 200 employees. Further to this point, an IT Manager at Projects Inc., a transportation company, remarked “On a [software level](#), it works really well. I’ve never had any issues with the hosts communicating with each other. The failover works perfectly. They set

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up everything on a software level and I’ve been very happy with it. They can monitor the software remotely and make sure everything’s working with our Hyper-V cluster.”

Some users were pleased that the software was [preinstalled](#). As the Systems Administrator at Hospice of the Western Reserve put it, “Altogether, there was about an hour or so of pre-call stuff, and then maybe a little more than an hour on the phone. The software and the operating system came [pre-installed](#).”

Minimalistic Hardware Footprint

Users of HCI systems like hardware that doesn't take up too much space. Given the expense involved in building and running data centers, even a space savings of 1U can be significant. As a result, an HCI solution that offers a minimalistic [hardware footprint](#) is considered preferable to one that takes up more room. The Systems Administrator at Hospice of the Western Reserve commented, “The solution's hardware footprint is great. We have three 1U servers, a total of 3U, and that's replacing a full rack of equipment.”

“The hardware [footprint is perfect](#),” said the IT Manager at Projects Inc. She added, “It fits in our rack perfectly and we were able to condense a lot of physical servers we had. It has greatly

eliminated the excess stuff in our server rack.” The CEO/CIO at Store & Haul Inc, a transportation company, echoed this sentiment, saying, “The hardware footprint [size is good](#).”

A Systems Admin at a tech vendor with over 200 employees offered an in-depth explanation of StarWind's footprint. He noted that StarWind “provides us with cost-effective redundancy and a significantly [smaller footprint](#).” For him, StarWind HCA compared favorably with a full-

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blown SAN, which usually contains one or two 2U storage arrays, two 1U switches and two or three 2U hosts. He said, “We were able to shrink it all down to two hosts that contain all the storage, the switches or all the storage networking, and the host or the compute/CPU power. In total, the HCA is just two hosts and they're both 2U. So our footprint was reduced to just 4U.” Figure 1 depicts this space savings.

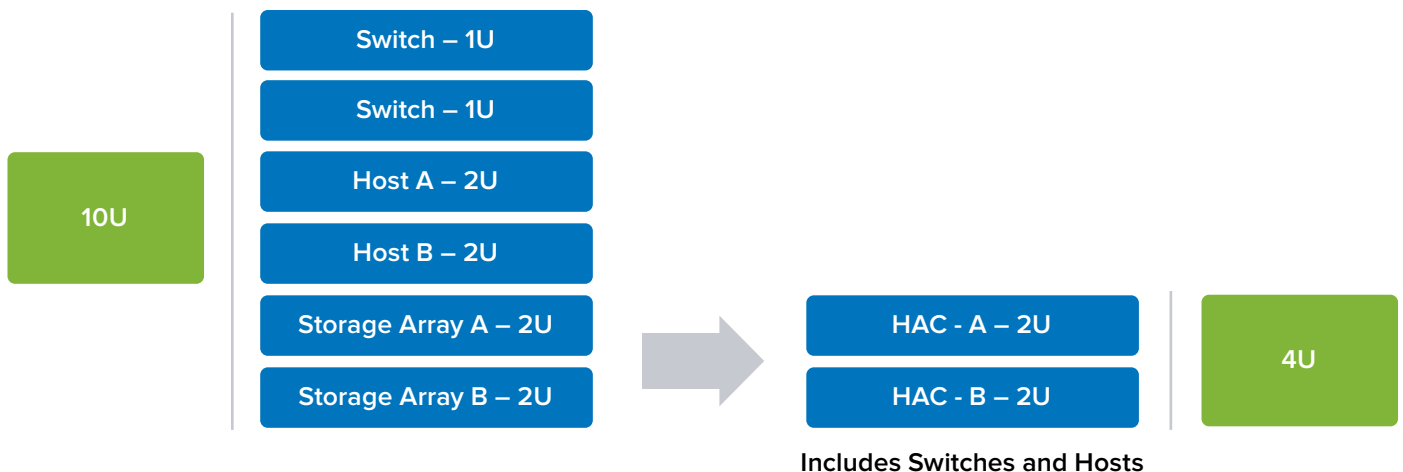


Figure 1 - How HCAs drive hardware footprint reduction by combining storage, hosts, and switches

Potential to Scale

HCI solutions have to be able to scale. This point came through in numerous user reviews. As the CTO at Royal Koopmans, a food company, put it, “StarWind is almost [infinitely scalable](#). It depends on the use case. You can scale it on-premise or you can scale it towards the cloud. And then

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you get the disaster-recovery option included because you can easily move the machines from on-premise to a StarWind solution in the cloud.” The retail IT Infrastructure Analyst similarly noted, “It would be fairly [easy to add to it](#). We could add a third node with another card.” For an IT Manager at a transportation company, the advantage came from being able to deploy with as few as two nodes — but [scale](#) as needed.

IT Costs

Saving money is important for HCI buyers, assuming the cost reductions don't come at the expense of other qualities like performance and reliability. An IT Manager at Bonitas Trust, a K-12 school with over 200 employees, put the matter into perspective, commenting, “We still got the same level of resilience that we had before, but we got improved performance and improved capacity at a much cheaper price. The biggest eye opener for me is that there are solutions out there that [don't have to cost a lot](#) of money for a very robust and resilient solution.”

Other notable comments on HCI and IT costs included:

- “We managed to build a fault-tolerant and highly available IT environment with a reliable and [cost-effective](#) solution.” - User at a non-profit with more than 500 employees
- “Streamlining our infrastructure at a good price has helped to keep costs down.” – StarWind user
- “Compared to other solutions out there, StarWind was cost-effective. For example, we would have had to buy at minimum as much as these HCAs cost us going forward, if not more.” - Network Manager at Riverston Schools, a K-12 school

Quality of Support

IT Central Station members emphasized quality of support in selecting an HCI solution. Support is almost always a consideration in IT purchasing, but with the nuances of a relatively new technology like all-flash HCAs, support is absolutely critical. The school IT Operations Manager brought up this point by stating, “Updates are much less painful, and the [proactive support](#) is fantastic. It's incredible. We spend less time troubleshooting and more time on other important tasks.”

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The non-profit StarWind user also enjoyed a positive experience with StarWind ProActive Support. He related that “support administrators [kept continuous track](#) of the system's status and informed about critical issues. So, with StarWind HCA we managed to achieve uninterrupted

IT infrastructure work and peace of mind.” A StarWind user simply said, “The [support](#) provided by StarWind is among the best we’ve ever gotten for any solution.” He explained that their implementation process had accidentally rendered storage on a cluster unavailable. The cluster itself then automatically notified StarWind, which contacted them and provided a fix to avoid the issue in the future.

“The Proactive Premium Support has helped to [free up an employee](#),” said a Network Manager at a K-12 educational company. Store & Haul’s CEO revealed that StarWind “always [responds very quickly](#) when I send an email. They have support that monitors the boxes. If I’m doing something where I take a box down, they’re proactively emailing me: ‘Oh, do you know your box just went down?’” For the IT Manager at Projects Inc., the value of ProActive support came from its ability to [reduce their monitoring efforts](#).

Performance

Businesses and public sector organizations like HCI all-flash storage partly because it delivers strong performance. Such performance is not guaranteed with HCI, however, so demonstrable performance characteristics are a key selection factor for prospective buyers. The school IT Operations Manager characterized this need

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when he said, “Our two goals were to improve [performance](#) and add fault tolerance.” In his selection process, the StarWind team analyzed his current workload to determine which HCA would be appropriate. He concluded, “This allowed us to make a decision based on data rather than instinct.”

Alternatively, the school IT Operations Manager, who had been using an HP Storage solution, switched due to [performance issues](#) — particularly related to slow backups. The result was to increase fault tolerance since they had only been using a single shared storage device previously. A StarWind user had a comparable experience. His organization successfully migrated to a virtualized environment, which led to increased [storage performance](#) as well as the establishment of a redundant, failure-tolerant infrastructure.

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Other IT Central Station members weighed in on the importance of performance:

- “I’ve found its flexibility and [performance](#) to be the most valuable.” - Technical Consultant at GMA, a software R&D company
- “In terms of overall [systems performance](#), the latency has been reduced. Instead of having to go through two iSCSI connections, the way we had things layered before, everything is direct. We have noticed a substantial performance improvement with our database applications, compared to our previous storage.” - Systems Administrator at Hospice of the Western Reserve
- “I have seen improvement in my [system’s performance](#). Our Exchange servers are behaving a lot better. Our system is a lot quicker. We were having delays before, where emails were taking two to three minutes. That is a lot longer than you would expect. Now, sitting on its own allocated HCA, it is almost instant.” - Network Manager at Riverston Schools

Reliability

HCI users expect reliable operation and high availability. This idea emerged from reviews such as one from the IT Manager at Projects Inc., who said, “We used to have a lot of issues with our database servers. At one point, we had a database front-end that required five different servers to run, literally five physical servers.” As she explained, if just one of those computers went down, it would effectively halt the whole database. She shared, “Bringing in these [StarWind] units really helped us condense our infrastructure and make things [more reliable](#) and redundant.”

“Having a two-node, [fully redundant](#) host appliance solution that has been 100% reliable

makes it easier to sleep at night,” observed an IT Support Manager at Chippewa Valley Eye Clinic, a healthcare company. He characterized StarWind as a [highly available](#) and reliable solution with helpful technical support. The non-profit StarWind

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user just stated, “What is most valuable? The ability to achieve [high availability](#).” Figure 2 shows how StarWind provides high availability by failover between nodes.

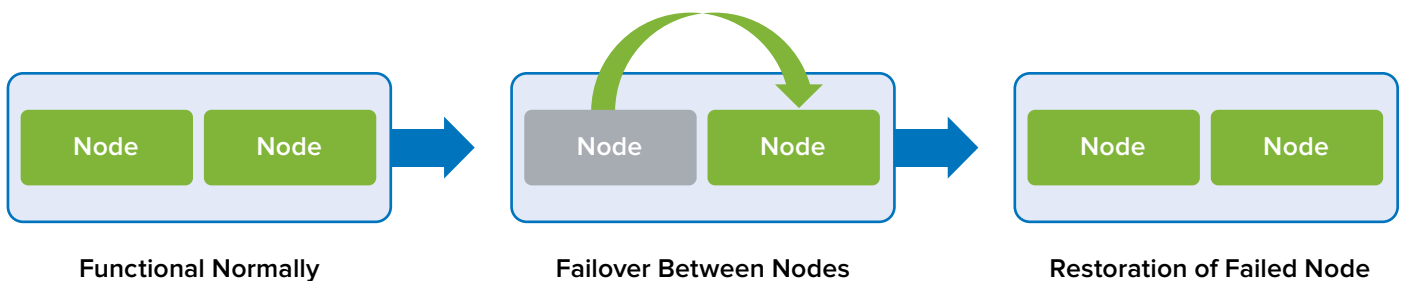


Figure 2 - How StarWind's 2-node architecture enables high availability through instant failover between nodes

CONCLUSION

Selecting an all-flash storage HCA ideally means reviewing the totality of the offering. Many factors have to be considered at once, both individually and as elements of a synergistic whole. Though HCA is ostensibly about hardware, the software it runs on is of singular importance. Difficulties with software installation are considered unnecessary obstacles to a positive HCA experience. Thus, pre-installed software offers an advantage. Reliance and performance deserve attention, as does quality of support. The solution should take up a small data center footprint, with attendant cost savings and overall improvements in IT budgeting. Scalability matters, too, because infrastructure managers want and need the ability to expand flexibly as their requirements change over time.

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. But in the world of enterprise technology, most of the information online and in your inbox comes from vendors. 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.

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ABOUT STARWIND

StarWind is a virtualization pioneer that has been offering hyper-converged solutions since 2003. The company's main focus is to enable price- and performance-sensitive businesses with powerful yet cost-efficient IT infrastructures.

StarWind offers both software-defined storage (SDS) and hyper-converged infrastructure (HCI) solutions. StarWind is known for its no-nonsense and transparent approach. All products are devoid of feature paywalls and vendor lock-in. What matters the most is the customer experience, which is facilitated by rapid and professional support. With StarWind, it's always a win-win: HA and fault tolerant environment, lowered TCO, and increased ROI.