

Manufacturing Company Sees 50% Performance Boost with Microsoft & DataON Integrated System

MISUMI impressed with Azure Stack HCI performance & reliability, DataON support



The Challenge



- Replace and modernize legacy HCI system
- Increase SQL server performance
- Find a cost-effective solution to deploy in remote locations
- Deploy an on-premises solution that can connect tightly with Azure

Sometimes when you make a change, you expect it will at least have a minor impact. And sometimes, when everything goes right, that impact turns out to be major. That's a pretty good description of what happened when MISUMI decided to update its hyper-converged infrastructure.

Tim Starkenburg, Senior System Administrator, MISUMI, went in search of a solution that could provide better performance and tighter integration with Microsoft Azure. He ended up getting all that and more: an Azure Stack HCI solution from DataON that delivered significant cost reductions, 50% performance boosts and customer support so effective it makes him sound like a DataON influencer to talk about it.

The Customer: MISUMI

MISUMI is a manufacturer and distributor of fixed and configurable components. The North American subsidiary of the Japan-based corporation has roughly over 350 employees with plans to grow its team to meet customer needs. As MISUMI continues to expand, Starkenburg was concerned that the company's growth would soon overstretch both the IT budget and his staff's bandwidth.



The Challenge: Handle Growth

The MISUMI team had been running a proprietary hyper-converged cluster with a leading hypervisor solution that was nearing end-of-life. The system was running its SQL servers and internal customers weren't particularly happy with the performance.

The team was also looking for a cluster solution it could roll out to remote locations and newly automated warehouses – something that would be not only fast but cost-effective. In addition, MISUMI was starting to use Microsoft Azure so it wanted an on-premises solution that could connect tightly with Azure.

Starkenburg went in search of new approaches.

He recalls meeting the DataON team at Microsoft Ignite 2018. "I did some research and found that DataON was the leading company doing Storage Spaces Direct (S2D) deployments. We started looking to roll out some infrastructure to our remote locations and warehouses. We wanted a cluster environment but most cluster solutions were expensive and we just couldn't justify the cost. When I saw the DataON with Microsoft solutions, they were extremely affordable and they worked closely together in developing them. It seemed like something I wanted to try."



"We were impressed with how fast it was and how easy it was to manage and how we didn't have to pay for all the VMware licenses in order to use advanced features like live migration."

Tim Starkenburg
Senior System Administrator
MISUMI

The Solution



- DataON AZS-6224 Integrated System for Azure Stack HCI
- 3rd Gen Intel® Xeon® Scalable Processor
- Solidigm P5510 NVMe SSDs (formerly Intel)
- NVIDIA/Mellanox ConnectX 25GbE RDMA networking
- Microsoft Windows Admin Center
- DataON MUST Pro

Starkenburg bought a two-node DataON S2D-5224 and remembers being so impressed with it, he started thinking about how to expand the relationship with DataON almost immediately.

MISUMI was in the midst of building its first fully automated warehouse in Dayton, OH. Within six months, the company bought another S2D-5224 cluster and essentially started a template for how it would build warehouses all over the country. “It met all of our needs so easily,” Starkenburg recalls. “In fact, we started using it so much that we actually went back and put more memory into the servers because we wanted to keep using the power that was there and we kept throwing more and more servers on. That handled it so well.”

Nearing the end of its current contract, Starkenburg and his team expedited the timeline in making the switch from using Windows Server 2019 Storage Spaces Direct to the new Azure Stack HCI. MISUMI’s original S2D-5224 clusters were also running Windows Server 2019, but he also wanted to update them to Azure Stack HCI to take advantage of the tight integration with Azure.

MISUMI vetted a few vendors offering integrated systems for Azure Stack HCI – Lenovo, Dell and DataON – and narrowed it down to two from there. “It quickly came down to DataON or Dell. But Dell’s ability to respond quickly and understand the scenarios we were trying to solve just wasn’t there. And it didn’t seem like they had a good support setup.”

Starkenburg had also inquired with Dell about getting the new 3rd Gen Intel® Xeon® Scalable processors and was told they were not yet available. “That was when I went back to DataON and they were like, ‘Oh yeah, we can do that right now.’ It impressed us how fast they were able to adapt to the newer technology that was coming.”

Starkenburg says he was eager to have the fully integrated experience of a DataON Integrated System for Azure Stack HCI. It provided a complete turnkey experience, with everything included: software, hardware, monitoring & management, cluster aware updating, Azure services, and service & support from both Microsoft and DataON.

The switch was officially on.

Smooth Migration, Instant Results

Starkenburg says his team had allowed a couple of months for the transition to its new Azure Stack HCI cluster, but it ended up taking just two weeks. The impact was almost immediate. “Instantly, we had users telling us that they saw noticeable changes in performance,” he recalls. “The problems they had experienced were now gone.”

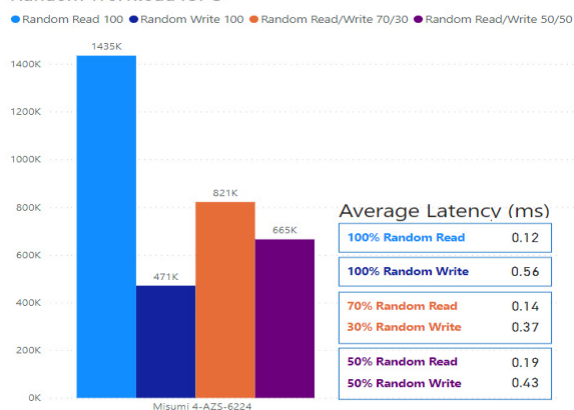
So how significant was the performance gain moving from the VMware cluster to the new Azure Stack HCI cluster? About 50%, according to Starkenburg. “It’s just incredible how much faster it is,” he marvels. The new cluster now reaches over 1.4M IOPS.

The Result



- 50% performance gain vs. legacy cluster, reaching over 1.4M IOPS
- Simple, easy storage scalability
- Easy management of clusters

Random Workload IOPS



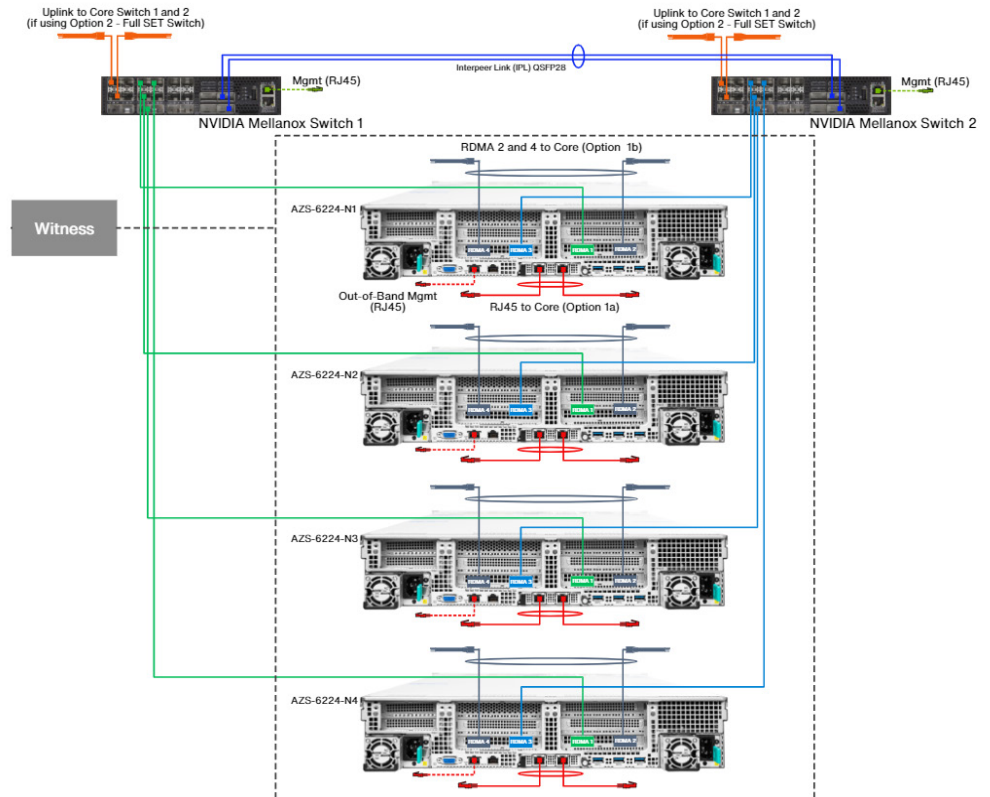
Workloads running on Azure Stack HCI

- SQL Server
- Active Directory
- File Servers

“Since we moved over to the Azure Stack HCI cluster, we haven’t had a single complaint that it was running slow or that data uploads were failing, anything like that. That has made my life so much better.”

Starkenburg notes that another old issue for his team – scalability – was also solved by the change. “If we need to add another server, that’s something we can easily do down the road. With the old system, if we wanted to add storage it almost ended up being like a forklift upgrade and the cost was astronomical.” Proposed capacity changes that used to be prohibitively expensive are now well within reach with DataON, he says.

One other notable cost reduction: Starkenburg says MISUMI has been able to eliminate a sizable monthly expenditure for on-call service. “We can easily manage it ourselves now,” he says, “and the amount of time it takes is extremely low.”



DataON AZS-6224 Integrated System for Azure Stack HCI powered by 3rd Gen Intel® Xeon® Scalable processors and Solidigm NVMe SSDs



“I look at where we are now versus a year or two ago and how many more projects we’ve been able to conquer because we’re not spending so much time babysitting these servers anymore.”

Tim Starkenburg
Senior System Administrator
MISUMI

All Support is not Created Equal

Given his past experiences, Starkenburg was stunned at how much care the DataON support team took with MISUMI. “They bent over backwards to really help us with things that a lot of companies would have said, ‘That’s outside of the realm of support’ or ‘You have to pay for another engagement.’ That didn’t happen with DataON. It was more like, ‘We can help you with that – let us. We want to make sure that this system works well for you. We’re going to do whatever it takes.’”

When a couple minor bugs came up, Starkenburg says, issues were handled quickly and smoothly. “Using integrated support between both DataON and Microsoft to deal with the network switch or with the actual Azure Stack HCI OS, we were able to get tickets opened with Mellanox and Microsoft right away. It was so neat to see the way the case was transferred over to them and how they took over. You could work with support personnel from all three companies at the same time.”

Tips

- Don't hesitate to make the switch to Azure Stack HCI and DataON. DataON gives you all of the scripts to set up your systems.



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Accountability, Starkenburg says, isn't always a given when it comes to support, but DataON has always been there when he needed them. **"I've been in this industry for 25 years and, previously, if you had a problem with VMs you'd call VMware and they'd say, 'It's probably a hardware problem.' Then you'd call the hardware company, and they'd say, 'No problem with your switch – call the manufacturer.' You'd just keep getting tossed around. Nobody wanted to take ownership of it."**

With DataON Integrated Systems for Azure Stack HCI, he says, that didn't happen at all. "It was, 'Let's open a case. Let's get all the parties working on it together and let's get you a solution right away.' That was one of the neatest things that I've ever seen in the IT industry – multiple companies working together to get you a solution."

Personal Impact

When we assess the business impact of a new technology, it's understandable to miss the human side of things. Beyond those all-important budget and performance considerations, there are actual people whose mental health and happiness can sometimes hinge on whether their critical systems are up or down.

Starkenburg, who's now been with MISUMI for four years, says he's not sure he would have lasted in the job if they hadn't switched to Azure Stack HCI when he did. The infrastructure has grown 2.5x since he arrived and he's still maintaining it with the same-sized team: he was simply too stretched. "If we didn't have a system like this – with this level of support – I probably would have left the company a while ago because it would have been too much to handle."

Starkenburg says he's glad to be done with years of critical infrastructure support cases that would get passed from one company to another like a hot potato. "It's been great getting to an integrated system where you know you can get all the players involved at the same time to really work together so that nobody's passing the buck," he says. **"I know now that we have the highest level of support I've ever seen from any company."**

Closing Advice

Asked if he has tips for other companies considering a switch to Azure Stack HCI and DataON, Starkenburg doesn't hesitate. Just do it, he says. Make the move. "It wasn't nearly the big step that we thought it was going to be. It was well thought-out, well deployed and – with the scripts DataON gives you to set up these systems – it was so much easier than I thought it would be."

Starkenburg says he's begun plotting his next move, educating himself about Azure Arc as a possible expansion. And he says he will be sharing his Azure Stack HCI experience with his MISUMI colleagues across the globe.

Cost matters. Performance matters. The level of personal care and expertise you receive from a vendor really matters. The very definition of a win-win is when a company is able to provide those things to a customer and make them both more successful.

About DataON

DataON is a hybrid cloud computing company focused on delivering Microsoft Azure Stack HCI, on-premises compute and storage systems, intelligent edge AI/ML appliances and Microsoft Azure hybrid cloud services. Our company is helping enterprises and customers who have made the "Microsoft choice" to modernize their IT with Microsoft applications, hybrid cloud workloads, Hyper-V virtualization, and data protection. DataON has deployed over 850 HCI clusters and 150PB of storage. Our enterprise-level solutions, delivered as a complete, turnkey experience, are designed to provide the highest level of performance, manageability, and security offered. DataON is a Microsoft Gold Partner, Microsoft Cloud Service Provider (CSP), and an Intel Platinum Partner.