

Arkansas Telco Expands Cloud Infrastructure and Simplifies IT with Azure Stack HCI

Ritter Communications delivers improved cloud services to its rural customers



The Challenge



- Find an infrastructure that would allow it to expand its cloud services to rural customers
- Replace a disaggregate SAN infrastructure with a modern, centralized solution
- Find a cost-effective solution for its edge computing architecture

The Solution



- DataON K3N-216 switchless solutions for Azure Stack HCI with Intel® all-NVMe flash storage
- DataON HCI-224 solutions for Azure Stack HCI with Intel® all-NVMe flash storage
- DataON MUST for Windows Admin Center

Company

Ritter Communications is a leading regional broadband provider, providing internet, phone, networking, video and cloud services to business and residential customers. Headquartered in Jonesboro, Arkansas, Ritter Communications employs over 300 employees in 9 locations. It has over 48,000 customers across Arkansas, western Tennessee, and east Texas.

Challenge

Ritter Communications was looking to expand its private cloud services to better offer comprehensive infrastructure-as-a-service (IaaS), disaster recovery (DR), backup, and security services to its rural customer base. To support this initiative, it needed to modernize its data center from its current three-tiered storage area network (SAN).

Ritter Communications' cloud support team was also having challenges managing its existing blade server and SAN infrastructure. Having disaggregate components, each time BIOS and firmware needed to be updated, the team would have to do this at the storage, server, and switch levels. The team needed a simpler solution. It also wanted to implement an edge computing architecture to be physically closer to their rural customers for lower latency and a better user experience. SANs were impractical and cost prohibitive for this kind of application and they wanted to invest in new technologies.

Solution

Ritter Communications' cloud support team had been interested in Microsoft's hyper-converged offering, Storage Spaces Direct, since its introduction with Windows Server 2016. It really liked the simplicity of its architecture and the ability to easily grow and expand as needed. Since it was already using Microsoft Hyper-V and Windows Azure Pack for Windows Server, a Storage Spaces Direct environment would be familiar.

The IT team contacted DataON and several traditional OEM vendors in its search for a solution for Azure Stack HCI, Microsoft's new name for its hyper-converged infrastructure solution. It found DataON to be a partner with similar goals and values as its own, with one of the largest portfolios of Microsoft-validated solutions for Azure Stack HCI. Compared with other OEMs, DataON was able to respond very quickly to requests and questions, offer an outstanding price point, and faster to offer validated solutions that incorporate the latest technologies such as Intel® Optane SSDs and persistent memory. DataON's exclusive focus on solutions for Azure Stack HCI also helped make it stand out against other vendors who weren't similarly focused on Microsoft solutions.

Ritter Communications purchased and deployed two DataON Kepler three-node switchless solutions (K3N-216) with all Intel® NVMe flash storage for its edge infrastructure. Because the nodes are directly attached, there was no need to buy additional switches to connect the nodes.

After the successful deployment of the DataON Kepler solutions, the team turned its attention to replacing the SAN in its main data center. It purchased and deployed two four-node DataON HCI-224 solutions with all Intel® NVMe flash storage.

"We found DataON to have similar goals and values as our company. Plus, they are close partners with Microsoft and one of the first to have validated platforms that incorporate the newest technologies."

*Charles McDonald
Director of Cloud Services Product Development & Solutions Engineering
Ritter Communications*

The Result



- Expanded private cloud infrastructure
- Improved performance with modern HCI
- Reduced potential outage impacts and reduce latency to rural customers
- Consolidated IT infrastructure and simplify updates and management



“The DataON solution for Azure Stack HCI has completely taken performance concerns off the table and meets every storage need we can throw at it.”

Charles McDonald
Director of Cloud Services
Product Development &
Solutions Engineering
Ritter Communications

In addition to being Microsoft-validated for the Azure Stack HCI catalog, the DataON K3N-216 and HCI-224 solutions are also validated Intel Select Solutions for Azure Stack HCI that feature 2nd Generation Intel® Xeon® Scalable processors.

Results

With the Azure Stack HCI solution from DataON, Ritter Communications has seen considerable performance increases across all its cloud service workloads. It has also provided lower latency and higher resiliency for its customers, reducing the impact of outages in local regions.

“With an Azure Stack HCI solution, we got the simplicity we needed”, said Brandon Ferguson, Sr.Cloud Architect, Ritter Communications. “Because it’s a complete integrated system instead of disaggregate components, it provides more operational efficiencies, reduces complexities, easier to scale up and out, and easier to keep updated”.

Other Ritter Communications’ IT teams saw how powerful and efficient the three-node clusters were, so now they are looking to purchase additional Azure Stack HCI solutions from DataON. This will help its continued efforts to modernize, simplify, and centralize its IT and allow Ritter Communications to replicate their cloud services offerings to other regions.

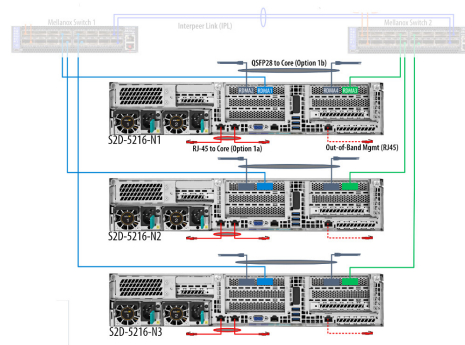
Deployment Tips

After two successful deployments, McDonald and Ferguson offered their thoughts for other IT administrators that are considering a hyper-converged infrastructure.

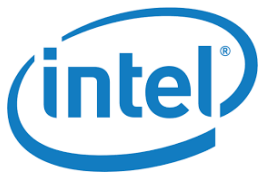
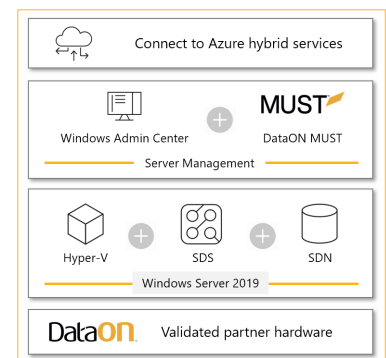
“Choose Azure Stack HCI for your hyper-converged infrastructure,” said McDonald. “It will make you more efficient because the stack, from top to bottom, is built on a single Windows Server technology. And it enables you to push to the edge in a way you couldn’t do before. I’m really excited to see where the ecosystem goes and I’m looking forward to utilizing its complete hybrid architecture.”

“You should also choose a validated Microsoft solution from a trusted Microsoft partner,” said Ferguson. “With a validated solution, you’ll save a lot of time and effort knowing that the complete solution, including the components, BIOS, and firmware, have already been tested together. You’ll get better performance without having to do a lot of trial and error tweaking.”

K3N-216 Network Connections



Azure Stack HCI



About DataON

DataON is a hybrid cloud computing company focused on delivering Microsoft Azure Stack HCI, on-premises storage systems, intelligent edge appliances, and cloud-based Microsoft Azure Services. Our company is helping enterprises and customers who have made the “Microsoft choice” to modernize their IT with Microsoft applications, virtualizations, and data protection through a complete and turnkey experience. With over 650 HCI clusters and 150PB of storage deployed, DataON enterprise-level solutions 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.

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