

## A County Government Looks to Microsoft for Cutting Edge Infrastructure for Public Services

Snohomish County expands its robust Microsoft software-defined infrastructure with Azure Stack HCI



### The Challenge



- Replace multiple legacy SAN infrastructures with a Microsoft software-defined solution
- Find a solution that can meet the exploding demands for storage from digital records
- Find a solution that can handle the increasing demand for VMs, storage and applications
- Expand its backup infrastructure with additional storage

### The Solution



- Primary production server – DataON solution for Azure Stack HCI with an eight-node DataON HCI-212 cluster, with three-tiered hybrid storage
- Backup solution – DataON solution for Azure Stack HCI with two DataON HCI-208 with DataON DNS-4524 JBODs, and Veeam Backup & Replication
- Mellanox Spectrum 18-port 10/25GbE and 4-port 100GbE switches
- DataON MUST monitoring and management tool with Windows Admin Center

### Organization Overview

Snohomish County is the third largest county in the State of Washington and includes the northern part of the Seattle metropolitan area. The Snohomish County Department of Information Technology provides services for twenty-eight county departments, including the Assessor, Paine Field Airport, Auditors, Superior and District Courts, Finance and Sheriff's departments. Its experienced IT team also provides services for some cities and interlocal agencies within the county.

### IT Challenge: Replace its SAN infrastructure and expand its Microsoft software-defined infrastructure with new primary production and backup solutions

The Snohomish County Department of Information Technology is in the process of moving away from its aging SAN infrastructures, which provided poor performance, limited scalability, and required expensive service contracts. Its IT team wanted a more cost-effective solution with greater performance and capacity.

Snohomish County needed a solution that could meet the exploding demands for storage from digital records and evidence from the Sherriff's Office. In addition, it needed to be able to handle the increasing demand for storage and applications like SQL Server and eDiscovery.

During this refresh project, it also wanted to explore ROBO/edge, video capture and disaster recovery (DR) site solutions.

### The Solution: DataON hybrid cloud solution for Microsoft Azure Stack HCI for primary, bulk and backup storage

As a Microsoft shop, Snohomish County was looking to deploy an Azure Stack HCI solution to replace its legacy storage. Azure Stack HCI is powered by Microsoft Storage Spaces Direct, which uses industry-standard servers with locally-attached drives to create highly available, highly scalable software-defined storage at a fraction of the cost of traditional SAN or NAS arrays. Its hyper-converged architecture simplifies setup and deployment. Snohomish County didn't need to pay extra for Storage Spaces Direct because it's already included in the Windows Server Datacenter licenses they have for Hyper-V.

An Azure Stack HCI solution would allow Snohomish County to have a hybrid cloud infrastructure. There were some departments that needed IT resources on-premises while others needed to utilize the cloud. An Azure Stack HCI would allow it to run virtualized workloads on-premises while also connecting to Microsoft Azure services for cloud-based backup, and site recovery.

Snohomish County had been a DataON customer for since 2012, initially deploying converged JBOD and cluster-in-a-box (CiB) solutions with Microsoft Storage Spaces. It knew it could count on DataON for expert knowledge of Microsoft technology as well as outstanding support.

Snohomish County initially purchased a four-node DataON HCI-212 solution and a then added four additional nodes. Optimized for IOPS and capacity, the HCI-212 features three-tiered hybrid storage with Intel® Optane™ SSD cache, Intel SATA SSDs, and Western Digital HDDs.

For its backup solution, Snohomish County chose to build two Veeam repositories using two DataON S2D-5208 servers with all-NVMe flash cache and attached DataON DNS-4524 JBODs.

## The Result



- Increased performance with a highly scalable Microsoft software-defined infrastructure
- Satisfied demand from internal customers for storage, VMs and application data
- Can quickly configure and deliver VMs for internal customers
- Can easily and inexpensively expand storage capacity
- Reduced costs from maintaining multiple legacy

**Snohomish County**



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Russ Leatherman  
Systems Engineer  
Snohomish County  
Information Technology



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Using Veeam Backup & Recovery with DataON storage solutions is a robust solution for Snohomish County and simplifies its complete backup, recovery and replication processes. DataON’s Veeam Ready solutions have achieved the highest level of qualifications and testing with Veeam backup and restore software. From a unified console, customers can get fast, flexible and reliable backup, recovery and replication of all their applications and data, whether on-premises or in the cloud.

## The Results

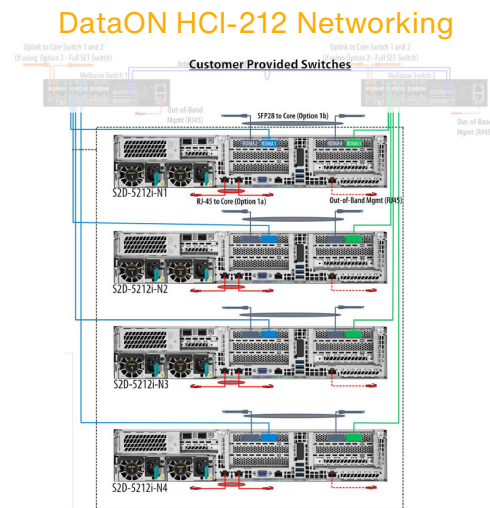
With DataON solutions for Azure Stack HCI, Snohomish County now has increased performance and more than enough storage to support the county’s needs. Russ Leatherman, Systems Engineer, Snohomish County Department of Information Technology, said, “Our departments have been pleased with the increase in performance. It’s nice to have so much overhead that our internal customers don’t have to worry about resources.”

“Over the past few years we’ve been working to increase capacity and improve connectivity. I finally feel that we’re ahead of the curve and we now have adequate resources for VMs. We have much greater storage capacity now as well and its so much easier to expand than before,” said Leatherman.

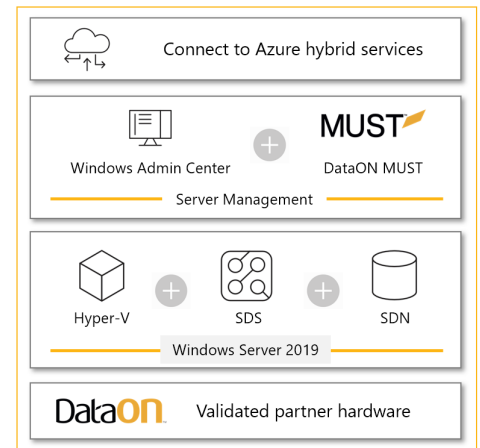
The team is currently in the process of replacing one of its CiBs with a DataON Kepler two-node (K2N) switchless solution for a remote site and deploying a one-node DataON DCS-5212 for a video capture server.

In the future, Snohomish County plans to eliminate its remaining SANs and replace them with additional DataON scale-out storage solutions. In addition, it is in the planning stages of building an offsite disaster recovery (DR) infrastructure using Microsoft Azure Stack HCI as well as replacing its SQL clusters.

“We have a fantastic relationship with DataON,” said Leatherman. “The deployment scripts that they provided were very well done and DataON is extremely responsive with support issues. It’s a luxury to get almost instantaneous support and they are extraordinary at it. There’s not always a lot of good information available about Hyper-V and Storage Spaces Direct, but we can always count on DataON to answer our questions.”



## 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.