

CSU College of Business modernizes and simplifies IT, builds digital future with Azure Stack HCI and DataON



With a 150-year legacy, a national reputation as a top public research university, more than 24,000 students, and over 1,800 faculty members, Colorado State University (CSU) understands the value of keeping things efficient to achieve results. To manage its multiple IT environments, the College of Business at CSU had been using a HCI cloud platform with Hyper-V. That configuration worked, but it added a layer of unnecessary complexity—which the university’s small IT team had been eager to simplify. In addition, the college struggled to find reliable support for Hyper-V.

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James Mikolajek: IT Client Services Administrator
Colorado State University College of Business

The bottom line was that the CSU College of Business IT team needed to shift to infrastructure that would deliver the performance and flexibility to support its operations both now and in the future as

its needs evolve. It needed to find a way to modernize and streamline its enterprise infrastructure while keeping efficiency, performance, and scalability a top priority. As the current system reached end of life, they decided to migrate many of the school's on-premises environments to a simplified, end-to-end HCI platform that could support workloads from storage to virtualization.

As CSU had already built most of its infrastructure on Microsoft solutions, moving to [Azure Stack HCI](#)—an Azure Arc-enabled operating system delivered as an Azure service—represented an opportunity to consolidate the entire infrastructure into a single ecosystem. Employees at the College of Business had experience with Microsoft Azure cloud services thanks to its existing investment in [Hyper-V](#), [Azure Files](#), [Azure Backup](#), [Azure DevTest Labs](#), [Azure Lab Services](#), and [Azure SQL](#). In developing the strategy for the move to HCI, the College of Business identified four primary objectives. Its new solution needed to provide:

- **A cost-effective, simplified infrastructure** offering streamlined maintenance and administration, easy-to-use management tools, and a low learning curve
- **More robust application performance** for multiple SQL servers, remote desktop services, file servers, and printing systems.
- **Scalable infrastructure** to support both virtual machines (VMs) and standalone servers, with the ability to adapt as needs evolve in the future.
- **Flexibility to easily add features** and expand functionality as demand increases

Down the road, the College of Business is hoping to implement additional Azure services, including Azure File Sync for DR, Azure analytics, and [Azure Virtual Desktop](#). After evaluating its current needs along with its Azure-based plans for the future, the IT team chose to adopt Azure Stack HCI.

Low complexity, high performance

To design and deploy its new Azure Stack HCI solution, the College of Business drew on the expertise of DataON, a hybrid cloud computing company, member of the Microsoft Partner Network with Gold competencies, and an Azure Stack HCI validated hardware partner and solution builder. Based in Anaheim, California, DataON exclusively specializes in IT modernization with Microsoft applications, hybrid cloud workloads, and Hyper-V virtualization. The company is a well-aligned partner for Microsoft and its customers, as they are a leading provider of Integrated Systems and validated nodes for Azure Stack HCI, deployed as a complete, turnkey experience that delivers on the Microsoft hybrid cloud promise.

The CSU College of Business uses Azure Stack HCI to deliver an end-to-end Microsoft stack, offering best-in-class security and robust application performance for its on-premises, cloud, and hybrid environments. As it progresses in its cloud journey, the college hopes to gain further efficiencies through Azure Stack HCI with future implementations of the [Azure portal](#) and Azure Stack HCI to manage and administer its on-premises, hybrid, and multicloud environments as a single infrastructure.

As the college's existing remote desktop services platform (currently hosting the student e-lab) is fast approaching its end of life, James Mikolajek, IT Client Services Administrator at the Colorado State University College of Business, says they will soon be looking to move to Azure Virtual Desktop for a hybrid cloud-based virtual desktop infrastructure (VDI). Through Azure Stack HCI, it will be easy and convenient for the College of Business to deploy and support its VDI farm on-premises with Azure Virtual Desktop—opening the door to a lot of options with new hybrid services as well.

DataON moved the College of Business to an Integrated System for Azure Stack HCI that includes a hybrid cloud infrastructure with Azure services and a three-node cluster running 60 VMs. The school also uses Veeam data protection software to support backup, restore, and replication of virtual machine workloads running on Azure Stack HCI. As data protected by Veeam is not tangled in multiple point solutions, CSU can put protected data to work when and where needed—across every workload that it manages in Azure Stack HCI.

The college's IT team particularly appreciates the simplified operations with Windows Admin Center for Azure Stack HCI. By integrating Azure Stack HCI with existing and familiar tools, third-party software, processes, and skill sets,—along with options available from the [enhanced independent software vendors \(ISV\) ecosystem](#)—Mikolajek's team can use its existing skillsets to support Windows and Linux VMs running in datacenters or at the edge.

“We're a small team, and our time is valuable, so the low complexity of Azure Stack HCI and the support of so many third-party tools is essential for us,” says Mikolajek. “We manage everything with only two of us in the department, and we like the fact that Azure Stack HCI gives us the capacity and the flexibility to easily move more things to the cloud down the road.”

Robust performance

By switching to Azure Stack HCI, CSU's College of Business has improved the performance of its SQL and file servers, printing systems, and remote desktop services and significantly reduced the volume of support tickets generated by users.

Mikolajek states, “With Azure Stack HCI and DataON, we were able to migrate from our old hardware to the new hardware pretty seamlessly, without any disruption. Today, I know our infrastructure is performing well when we aren't inundated with system alerts. Azure Stack HCI has definitely made my job a lot easier, which I really appreciate.”



Streamlined administration

Mikolajek also found that the move to Azure Stack HCI greatly reduced his team's infrastructure management time and overhead. "We manage Azure Stack HCI with Windows Admin Center and DataON MUST Pro for Windows Admin Center, and we've used the automated updates to eliminate disruption and downtime for our faculty, staff, and students," he says. "With just one click, MUST Pro makes sure our servers all have the same OS version, drivers, firmware, BIOS, and BMC, and it also checks the drivers and firmware for network cards, host bus adapters, and SSD and HDD drives. We trust Windows Admin Center to alert us whenever something needs our attention, and it always does. And now that we're no longer on the hook to constantly monitor and micromanage the system ourselves, we've got more time for strategic projects."

Expanded functionality

Although the College of Business manages the system primarily using [Microsoft Windows Admin Center](#), it already had existing investments in [Microsoft PowerShell](#) and [Microsoft System Center](#). These serve to supplement management functionality, enabling CSU to easily configure lists of connections and extensions on multiple servers with PowerShell, and drill down into a specific server to manage or troubleshoot it with more granular Windows Admin Center tools.

Azure Stack HCI offers flexibility for the College of Business to take advantage of additional functionality, hosting Windows VMs and Linux VMs to run [SQL Server](#), [Azure Site Recovery](#) for business continuity and disaster recovery, and support for workloads through [virtualization-based security](#).

The IT team appreciates the compatibility with familiar tools, capabilities with other technologies like open-source software and products from third-party independent software vendors, and the lack of a steep learning curve. They also found that the improvements in performance, plus the hybrid capabilities of Azure Stack HCI have given them a more efficient system that can easily scale up and down as business requirements change.

A scalable, flexible system built for the future

After migrating to Azure Stack HCI, the College of Business has realized improvements in system performance, ease of management, and scalability. It's also positioned the college to seamlessly scale its infrastructure and adapt as its needs change in the coming years.

In the future, this move to Azure Stack HCI will enable the College of Business to provide high availability and resilient storage for apps with remote or branch office (ROBO) and edge; it will also be poised to utilize Virtual Desktop infrastructure (VDI) to implement remote desktop virtualization on a large scale. When used to host SQL Server, Azure Stack HCI will enable a single vendor to manage the hypervisor, host operating system, and database server for code and performance optimization; and enterprise virtualization will enable the school to create a highly secure infrastructure for its apps and workloads. The College of Business will also have to option to use Azure Kubernetes Service to automate running containerized applications on clusters.

Says Mikolajek, "We've used Azure Stack HCI to modernize our infrastructure and simplify management while positioning CSU's College of Business to fully support our cloud strategies, and our students, in the future."

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Customer

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Partner

[DataON](#)

Products and Services

[Azure](#)

[Azure Backup](#)

[Azure DevTest Labs](#)

[Azure Files](#)

[Azure Lab Services](#)

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Industry

[Higher Education](#)

Organization Size

[Large \(1,000 - 9,999 employees\)](#)

Country

[United States](#)

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