Whitepaper

Partner opportunity:

Building a practice with Microsoft Azure Stack HCI and Intel for healthcare

Microsoft Azure

intel.

Contents

Introduction

Today's enterprises are facing enormous pressure to evolve and adapt at a rapid pace, which requires a modern, digital foundation that is flexible, resilient, performant, and secure. However, for healthcare organizations facing increasingly complex compliance regulations and mounting data security threats, modernization comes with its own unique set of challenges. Ensuring data availability and low latency for real-time analytics and decision making, while staying compliant with strict standards for how data must be stored, protected, and handled, leaves healthcare organizations looking for a robust hybrid solution that enables better patient care, greater efficiency, and improved security.

In this whitepaper, we'll examine how Microsoft Azure Stack HCI (Hyperconverged Infrastructure) and Intel technologies can address critical healthcare infrastructure needs and help systems integrator (SI) partners understand the business opportunity in selling Azure Stack HCI for healthcare. Partners will gain the guidance and resources needed to help establish a successful practice and enable future business growth, along with valuable insights for engaging customers in the healthcare vertical.

Healthcare trends and challenges

Healthcare is evolving rapidly, with numerous disruptors driving an unprecedented "perfect storm" that organizations must navigate to remain competitive and deliver the level of care patients expect today. In a data-driven world, the healthcare industry is not only the most vulnerable to cyberattacks, but lags in the ability to effectively leverage the enormous volumes of data it generates. It accounts for 30 percent of the world's data, yet only 3 percent is being utilized.[1] Demand on the industry has also never been higher, with an aging population and one in three adults having chronic diseases[2] that are increasingly more costly to treat—healthcare costs in the US amounted to 17.3 percent of the Gross Domestic Product (GDP) as of 2022 and continues to grow.[3] Industry strain is amplified by growing clinician burnout driving a global health worker shortage, which is expected to surge by 29 percent in the next decade to reach an estimated deficit of 10 million personnel by 2030.[4] The disparity between patient volumes and staffing resources makes it increasingly difficult for clinics and hospitals to adequately monitor and secure their facilities and ensure the safety of both staff and patients. Healthcare organizations are challenged with offsetting these conflating demands with adoption of technologies that can help them do more with less while driving efficiency and security across their people, spaces, systems, and data.

- **People:** Modernize and optimize processes to maximize staff efficiency and improve patient care delivery
- **Spaces:** Leverage AI-assisted technology and deep analytics to better monitor and secure facilities and improve safety of staff and patients
- **Systems:** Digitize equipment and innovate with data to improve patient monitoring and diagnosis with real-time analytics and AI at the edge
- **Data:** Improve data availability while better securing sensitive health records and strengthening compliance

There is also a strong sense of urgency across the healthcare industry to accomplish various business objectives, including:

- Delivering a connected patient experience
- Improving patient and operational outcomes with greater efficiency
- Harnessing vast data and emerging technology like artificial intelligence (AI) to enable innovation
- Strengthening data security and improving compliance to reduce risk

- Mitigating clinician burnout to improve retention of full-time staff and reduce the need for expensive contract resources
- Improving energy consumption and reducing waste to drive sustainability goals and reduce costs

Supporting these initiatives requires a modern digital platform—something many healthcare organizations are still working toward as their legacy infrastructures fail to handle today's demands and technical advancements. More than 94 percent of healthcare leaders report needing to modernize their infrastructure this year, with over 50 percent reporting they'll need to modernize *significantly*.[5] In fact, nearly every healthcare organization intends to be in some stage of digital transformation by 2026-2027.[6] In the meantime, maintaining these aging infrastructures not only incurs excess costs and effort, but prohibits modernization of critical applications and the ability to harness data for its full potential. These outdated systems often result in redundancies, inefficiencies, and infrastructure complexity that further inhibit data collection and use, inflate technical debt, and create security vulnerabilities. Reducing infrastructure complexity—like optimizing the virtual desktop infrastructure (VDI) across hundreds or thousands of users and PCs in a healthcare system—is paramount to driving staff and operational efficiency.

Being on-prem incumbent with heavy data (multiple petabytes) spanning decades, however, healthcare organizations find it extremely difficult to move records and patient data into the cloud. It requires a long migration journey with months of planning and revisiting compliances, while enabling critical data to remain on premises for faster accessibility and real-time decision-making—from telehealth to the operating room. As healthcare leaders embark on the road to modernization, they are looking to flexible, hybrid cloud infrastructures that facilitate secure data availability at the edge while avoiding the potential latency and regulatory concerns of traditional cloud computing.

While increased digitization brings a multitude of benefits, it also magnifies critical risks around privacy, data integrity, and cybersecurity like never before in healthcare. The more applications are scaled across diverse environments, the broader the attack surface and the greater the potential for security risks. As applications become more secure, attackers increasingly target other layers of the infrastructure, driving a need for deep, multi-layer security. Despite digital transformation efforts, healthcare companies lose an estimated $6.2 billion per year due to data breaches.[7] **In 2023, healthcare organizations saw record numbers of cyberattacks, collectively resulting in:**

- The most ever reported number of data breaches

- The largest ever total volume of breached records, exposing more than 133 million protected health information (PHI) records.[8]

Healthcare-targeted ransomware attacks are also on the rise and driving increased concern across the industry. A recent attack on Change Healthcare leading to the payout of a $22 million ransom has not only crippled the company, but further emboldens hackers to continue targeting the healthcare industry.[9] Unlike breaches in other industries, attacks on healthcare systems can disrupt critical medical services and have devastating life-or-death consequences, making it particularly urgent to proactively defend against cyberattacks. Compliance standards like HIPAA (Health Insurance Portability and Accountability Act) aim to hold organizations accountable and keep such breaches from happening, placing stringent mandates on how data must be stored, protected, and handled. However, this can also prohibit certain data types from being stored in the cloud. This leaves healthcare organizations looking for secure hybrid and distributed solutions that can help them to still innovate and run analytics with the power of the cloud, while meeting data-residency requirements and strengthening the protection of sensitive health data.

Accommodating the new standards of digital care also means embracing and innovating with emerging technologies like artificial intelligence (AI) and Internet of Things (IoT). From predictive maintenance and anomaly detection with IoT sensors for monitoring critical patients, to accelerated treatment with AI-assisted imaging diagnostics, these technologies have the potential to transform the industry and deliver enormous impact in care delivery. AI can also help healthcare organizations improve staff efficiency and drive significant operational impact, enabling real-time clinical workflow processing at the edge to aid in tasks like scheduling, capturing patient visit details, medication and treatment analysis, and more. However, leveraging these innovations requires a robust and secure platform that can handle heavy compute power while extending cloud-built AI models to run locally at the edge to meet compliance.

For healthcare organizations to address all of these challenges and realities, they need an agile and flexible infrastructure across software and hardware that gives them a digital advantage and enables them to:

- Digitize and make use of new technologies like AI and IoT for increased performance, improved efficiency, predictive maintenance, and innovation

- Improve security and data protection while maintaining compliance with evolving regulatory requirements

- Extend cloud capabilities to the edge to transform data into real-time insights and patient care innovations

- Reduce infrastructure complexity, simplify management across environments, and optimize compute power to reduce costs

- Quickly develop and deliver products, applications, and services to provide an improved patient experience

How the Microsoft adaptive cloud approach with Intel supports critical healthcare needs

 The Microsoft adaptive cloud approach provides a comprehensive and curated distributed hybrid infrastructure (DHI) stack that empowers healthcare organizations to move from reactive to proactive evolution and unlock new scenarios that were not previously possible. Central to this approach, Azure Stack HCI—powered by Intel technologies—presents an ideal solution to help healthcare organizations modernize applications and infrastructure in a secure and compliant way while accommodating their on-premises dependencies. Extended Security Updates allow them to run legacy Windows Server and SQL workloads (2012 and later) free of cost, while taking the time they need to modernize. Azure Stack HCI helps clinics and hospitals better connect, collect, and leverage their data at the edge with low latency while enabling secure cloud innovation to improve patient care and drive efficiency.

Magic Quadrant
Figure 1: *Magic Quadrant for Distributed Hybrid Infrastructure*


Figure 1: Magic Quadrant for Distributed Hybrid Infrastructure

As a leader in Gartner's Magic Quadrant for Distributed Hybrid Infrastructure (DHI),[10] Microsoft offers Azure Stack HCI to deliver streamlined hybrid deployment, management, and optimization, while leveraging the broader end-to-end Azure platform for a more comprehensive breadth of capabilities versus competitive solutions. Gartner asserts that *"Microsoft DHI customers can tap into a robust global ecosystem that encompasses direct sales partners, OEMs (original equipment manufacturers) and the pervasive presence of Azure Cloud. This dynamic setup yields significant advantages to meet diverse requirements effectively."* Combined with Azure technologies such as Azure Kubernetes Service, SQL managed instance, PostgreSQL, Azure AI and Machine Learning, Data and App Services, and more—all managed through Azure Arc—Azure Stack HCI enables

cloud-to-edge computing that brings cloud-native capabilities right to the hospital and clinic floor for real-time impact and action. This integrated set of technologies provides the increased agility, data processing power, and seamless innovation capabilities needed to develop and deploy new technologies, drive efficiency, and deliver connected patient care experiences.

Azure Virtual Desktop for Azure Stack HCI streamlines delivery of best-in-class VDI with edge-local access to a wide range of devices across the healthcare landscape—from physician tablets, portals, or mobile devices to administrative staff desktops—leveraging near-linear scalability as user volumes grow. Azure Stack HCI provides a flexible, secure, compliant, and cost-effective way to modernize existing VDI workloads for high-performance and low-latency cloud capabilities that can handle the demanding healthcare compute requirements while maintaining compliance.
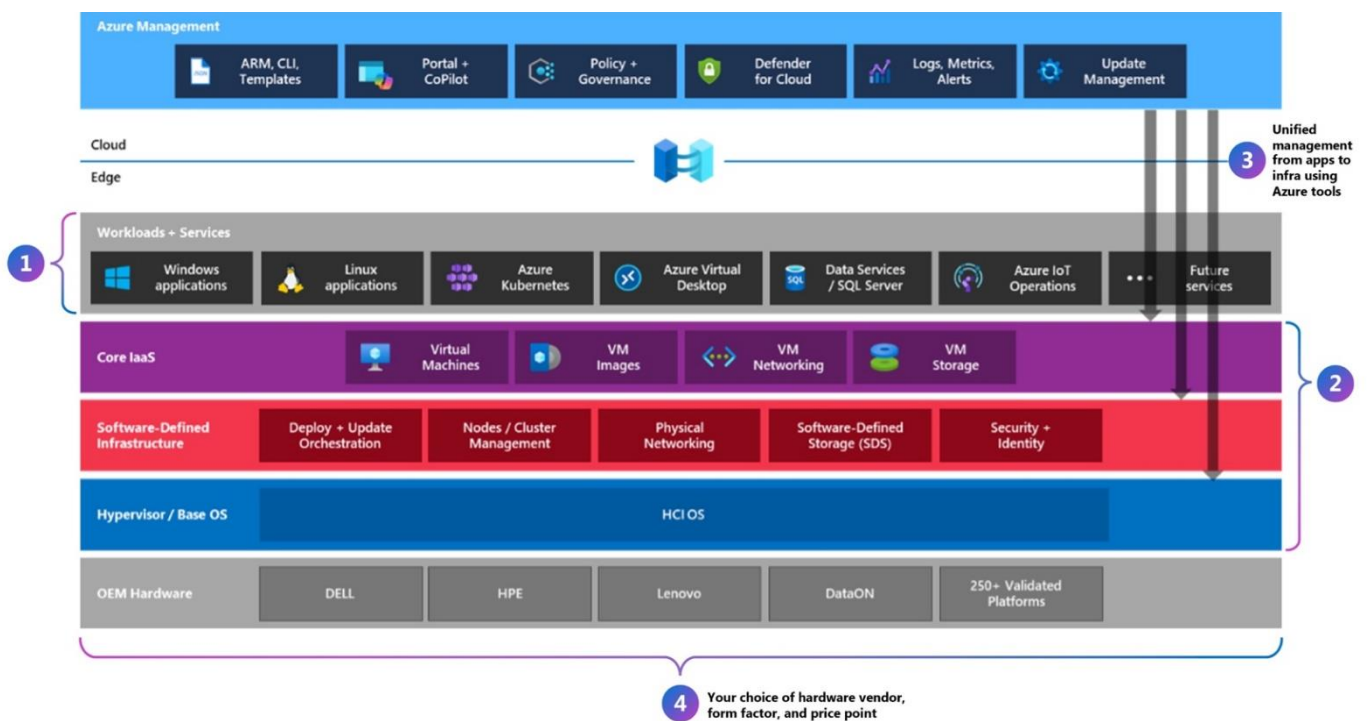
Microsoft further empowers healthcare organizations through its acquisition of Nuance, which provides leading conversational AI and cloud-based ambient clinical intelligence tools built on Azure, currently leveraged by 77 percent of hospitals in the US.[11] Nuance solutions work seamlessly with core healthcare systems, including Electronic Health Records (EHRs), to alleviate the burden of clinical documentation and empower providers to deliver better patient experiences. Combined with Microsoft's cloud-based intelligence solutions and Azure AI capabilities, healthcare organizations can query their data and build intelligent solutions and workflows in the cloud, extending models to run securely and compliantly at the edge with Azure Stack HCI. Additionally, Azure AI Health Insights provides a suite of pre-built AI models and services that healthcare organizations can leverage to improve clinical and operational outcomes, generating inferences that can be leveraged to facilitate vital patient care scenarios.

Azure Stack HCI is underpinned by the latest Intel® Xeon® Scalable processors, increasing the density of users that can be supported in Azure Stack HCI clusters and enhancing virtualization for seamless migration between different generations of processors and cloud environments. Built-in accelerators in the processor—including Intel® Advanced Matrix Extensions (AMX) to accelerate AI workloads and Intel® Quick Assist Technology (QAT) to accelerate compression and encryption—help to address challenges with the most prevalent healthcare workloads by boosting performance and power efficiency, freeing-up CPU cores, increasing data throughput, lowering latency, and increasing server utilization. Intel collaborates with Microsoft on solutions for Azure Stack HCI that deliver recommended hardware and software configurations and benchmarks across common workloads to enable high performance, cost efficiency, and security capabilities. Azure Stack HCI and Intel help optimize compute power and energy consumption to support healthcare organizations' sustainability goals and reduce costs.

Supporting healthcare modernization and transformation at the edge

- **Modernize** and consolidate on-premises infrastructure with Azure services and Intel-based servers
- **Deliver** cloud-native applications and services from the edge, powered by Intel
- **Transform** data into insights and value with Azure AI and analytics, accelerated by Intel
- **Accelerate** application development and deployment with DevOps tools
- **Secure** hybrid cloud environments with Intel Crypto Acceleration, Total Memory Encryption, and Secured-core server
- **Govern** and manage apps and environments seamlessly with Azure Policy

Azure Stack HCI leverages Intel® Total Memory Encryption to encrypt a computer's entire memory system; Intel® Crypto Acceleration to speed encryption of stored data without trading-off performance; and Secured-core server to simplify security enablement while providing advanced data protection across multiple layers of hardware, firmware, and operating system. Together, Azure Stack HCI and Intel empower healthcare organizations with a comprehensive approach to security and governance across the entire IT and data estate, leveraging Intel's silicon-level hardening and the industry-leading, multi-layer security benefits of Azure (delivered through Azure Arc), including:

- **Hardened security posture** and advanced threat detection to protect workloads, networks, and sensitive patient health data
- **End-to-end infrastructure** and application monitoring to proactively detect, diagnose, and resolve issues from cloud to edge
- **Zero-trust data encryption**, policy enforcement, and security controls to ensure compliance with industry regulations

Azure Stack HCI and Intel simplify infrastructure management and reduce complexity, providing consistency across both hardware and software for greater agility to deploy, run, and optimize container-based applications and virtualized workloads from anywhere. Delivering a consistent Azure experience across environments, Azure Stack HCI helps to reduce operating expenses (OpEx) and drive efficiency. Flexible deployment options allow organizations to reuse existing hardware that matches validated node requirements, while familiar management tools (like Windows Server Admin Center, Azure portal, PowerShell, etc.) mean health organizations can leverage the same personnel and skills they've already invested in.
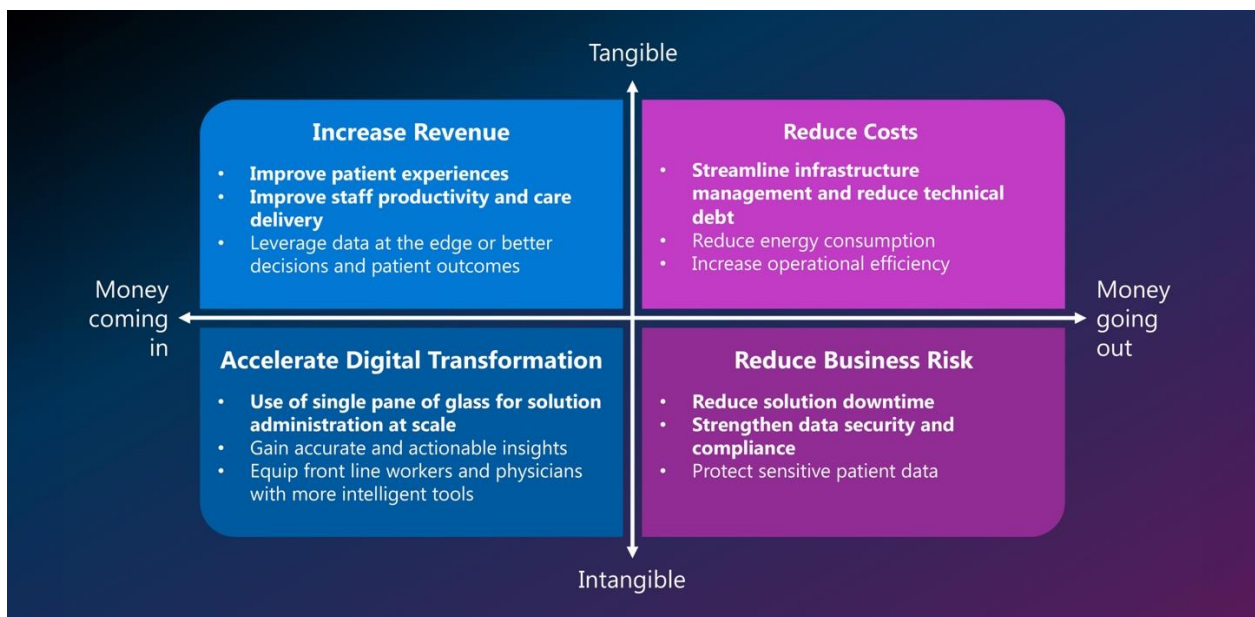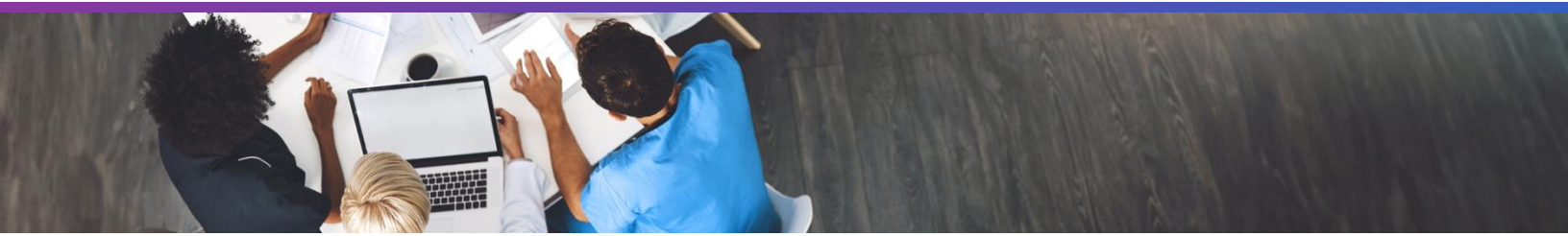
The business opportunity for partners

While modernizing legacy systems is crucial to supporting the new, digital age of modern healthcare and the innovations necessary to deliver connected care, it requires significant investment, technical expertise, and seamless integration with existing workflows. According to Deloitte, large healthcare organizations are typically slow to evolve their technology stacks, but know they will have to do so eventually, which provides a considerable opportunity for Microsoft partners looking to tackle parts of that overall value chain.[12]

"Selling Azure Stack HCI is really about helping customers transform and move to a modern, end-to-end hybrid platform that can support their business needs," says Christophe Le Roux, Microsoft's Hybrid Service Sales Director for EMEA. The healthcare industry, particularly, presents a prime market opportunity for Microsoft and SI partners to help these organizations modernize while addressing their unique infrastructure challenges with Microsoft's adaptive cloud approach and Azure Stack HCI.

Empowering Partners with Microsoft Azure Stack HCI

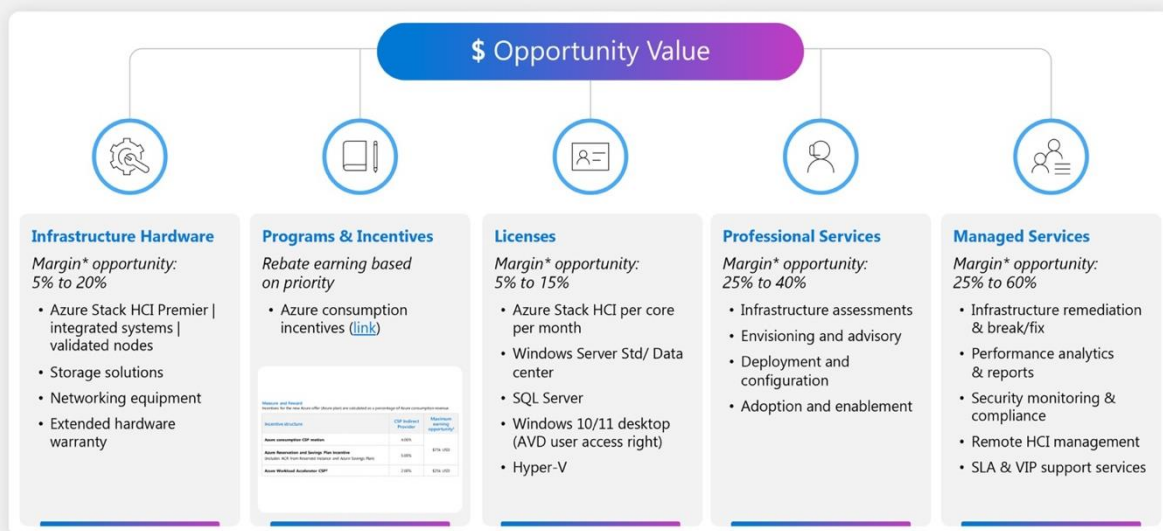|	
Market Opportunities	The best option for customers looking for VMware alternatives post acquisition. Bridge to (and from) the cloud to enable healthcare workloads and operations while maintaining compliance. Deliver on the demand for edge capabilities. CSP-enabled.
Business Relevance	Deliver advanced solutions to solve healthcare challenges in the simplest way possible (for the customer), Address modernization and transformation strategies.
Revenue Opportunity	High revenue and margins on Azure Stack solutions. Capture additional revenue with add-on products and services tied to Azure Stack HCI solutions and healthcare use cases. Leverage flexibility to size to any customer requirement.

Ninety-four percent of healthcare leaders report their intent to modernize their data stacks this year, and a clear majority—84 percent—of those believe they will need a "moderate" to "large"

amount of external support to help them do so.[5] "Healthcare customers know *why* they need to migrate, but they need help with the *how*," says Le Roux. "There's a real opportunity here for partners to move from simply being a technology supplier in selling Azure Stack HCI, to a more advisory role—acting as a complete transformation partner that can help them navigate the transition, manage their data, and create a long-term relationship of value." While revenue margins are already high for Azure Stack HCI, partners can open the door to additional revenue and a larger business opportunity by offering assessments, complete transformation planning, scoping and configurating Intel-based servers, ongoing infrastructure management, or other value-added services that complement the initial Azure Stack HCI solution sale.

Microsoft partners and OEMs have proven success selling into the healthcare vertical. One partner helped a large healthcare provider modernize its legacy storage area network (SAN) to Azure Stack HCI. The organization has benefitted from a simplified infrastructure, streamlined management tools, and increased performance that has exceeded its own internal goals. The partner provided the insight, services, and support that enabled a better, more resilient deployment, while layering in its own monitoring and management solution to drive supplemental revenue. The healthcare organization intends to further engage the partner for additional initiatives, including building an off-premises disaster recovery center in the near future, which delivers an ongoing relationship and revenue stream for the partner.

"What we've seen is that customers are looking for an integration partner that can help them deploy at scale, regardless of the hardware providers they are using, and can help them from an engineering perspective to handle the underlying complexities across their providers and devices in a more long-term engagement," notes Samantha Doherty, Director of Edge Infrastructure and Devices at Microsoft.

Partner profitability with Azure Stack HCI

$ Opportunity Value

Infrastructure Hardware	Programs & Incentives	Licenses	Professional Services	Managed Services
Margin* opportunity: 5% to 20%	Rebate earning based on priority	*Margin* opportunity:* 5% to 15%	*Margin* opportunity:* 25% to 40%	*Margin* opportunity:* 25% to 60%
• Azure Stack HCI Premier | integrated systems | validated nodes	• Azure consumption incentives (link)	• Azure Stack HCI per core per month	• Infrastructure assessments	• Infrastructure remediation & break/fix
• Storage solutions		• Windows Server Std/ Data center	• Envisioning and advisory	• Performance analytics & reports
• Networking equipment		• SQL Server	• Deployment and configuration	• Security monitoring & compliance
• Extended hardware warranty		• Windows 10/11 desktop (AVD user access right)	• Adoption and enablement	• Remote HCI management
		• Hyper-V		• SLA & VIP support services

* estimated margin

Best practices for building an Azure Stack HCI practice for healthcare

Gaining internal alignment

Once executive commitment is established, it is crucial for partners to focus on cultivating internal alignment across hardware and software teams to approach hybrid cloud as a unified business motion. "Partners who have successfully unified these teams and work together are doing really well in this space, while those who have teams competing internally are not," remarks Keerthi Nemallapudi, Microsoft's Hybrid Cloud Business Lead, ANZ. Because Azure Stack HCI involves complexities across both hardware and software, business units can find themselves siloed within their organizations, often with a naturally competitive environment. To help break down organizational silos and support a cohesive business strategy, partners can leverage Microsoft's extensive enablement resources to cross-train teams and drive alignment. "When you have hardware teams skill-up on the Azure components, it opens up the world of cloud to a strictly on-prem team. And vice-versa for cloud software teams to get a feel for what hardware looks like and how it functions. This takes away the ambiguity and internal competition to really bring the teams together in support of the unified business motion for hybrid cloud," says Nemallapudi.

Technical enablement and upskilling

Azure Stack HCI is a robust solution that can deliver the right business value, but implementing and running it at its optimum level requires skilled knowledge of not just the product itself, but the greater Azure platform. Partners looking to build an Azure Stack HCI practice for healthcare should start by investing in training and upskilling to build their knowledge base. "Partners should work with their own Azure Stack instance, to really get in there and break it, fix it, and learn it inside and out," says Le Roux. "It's also essential to have a strong understanding of the greater Azure ecosystem, services, and integrations, as this is the true differentiating aspect behind Azure Stack HCI." Microsoft provides extensive enablement and training resources that can help partners get started with building a knowledge base, which can be found in the *Get Started* section below.

Beyond upskilling on Azure Stack HCI, partners should also invest time in understanding the unique needs and challenges of the healthcare industry to help drive initial conversations and establish strategic relevance with customers, while also helping to identify use cases and opportunities for delivering value-added services or solutions.

Positioning Azure Stack HCI

Selling Azure Stack HCI is not about selling a datacenter; it's about positioning it as a critical enabler within the larger, end-to-end Azure ecosystem—which is the key differentiator. "It means leading with the completeness of the Azure components and platform, and then positioning Azure Stack HCI as the essential hybrid component within that," explains Le Roux. Virtual desktop has been a particularly critical use case for healthcare organizations, given the vast number of users—from physicians to administrators—across dispersed locations and facilities. This need was addressed with the launch of Azure Virtual Desktop for Azure Stack HCI in February 2024. "Most Azure Stack HCI conversations we have with healthcare organizations start around how to simplify all of that," Le Roux adds.

Determining value-added services

Partners should consider their business strengths and where they can bring additional value to customers through add-on services that can drive additional revenue, such as:

- Assessments
- Transformation planning
- Ongoing infrastructure management
- OEM hardware procurement
- License management
- And more

The most successful partners deliver curated services and solutions that not only help them become a strategic transformation partner and trusted advisor but position themselves as central to customers' success through holistic service offerings. Partners should consider the existing certified systems for healthcare (from OEMs like Dell, HP, etc.) where they can identify opportunities to build a complete package around. "Where we see partners have the greatest strength is in providing an end-to-end service, from procuring and providing the hardware, to delivering consultation services, and providing the licensing. This gives customers a single,

complete source of support, versus having to go to OEMs or Microsoft directly for help," notes Nemallapudi.

SI partners can also consider bringing in independent software vendors (ISVs) who can help strengthen the deal and provide additional solution offerings to address specific needs (e.g., a healthcare imagery solution), or consider developing a unique value-add solution and becoming an ISV themselves. Get more information on becoming a Microsoft ISV, here.

Identifying opportunities

Use case: Infrastructure modernization

- Customers looking for alternatives to VMware following the acquisition by Broadcom

- Quick wins that require less initial commitment but potential for longer-term, progressive transformation—including Extended Security Updates (ESU) for SQL Server and Windows Server workloads that are at end of life—for which Azure Stack HCI offers an elegant and cost-effective solution

Use case: Desktop virtualization

- Healthcare organizations with demanding workloads that can't be executed in the cloud and that need to simplify VDI for hundreds (or even thousands) of users and devices across their distributed healthcare landscape to save on costs and ensure compliance

Use case: Cost optimization

- Private health organizations that need to optimize to do more with less and improve detection and treatment for broader business impact

Use case: Security

- Healthcare organizations that have recently experienced a data breach or compliance violation that are seeking to strengthen security and/or re-establish compliance

Use case: Security

- Healthcare organizations with a need to run specialized AI implementations to assist practicians (e.g., imagery analysis)

Engaging customers

When engaging a new healthcare customer for Azure Stack HCI, partners should focus on the following key steps:

1. Gain a deep understanding of the customer's unique business needs and challenges

2. Discover and even help the customer formulate its immediate and long-term goals

3. Translate customer priorities into a technical strategy that can be mapped to Azure Stack HCI (and broader Azure) capabilities and benefits

4. Tie the technical strategy back to the critical business needs of the health system

As partners do this, they should consider the different business personas in the healthcare organization that they'll be engaging, identify what they care about, and tailor conversations around addressing those needs and pain points.

- **Business Decision-Makers (BDMs)**

  - **Roles:** Chief Experience Officer (CXO), Chief Executive Officer (CEO)

  - **What to talk about:** questions aimed at understanding the key business needs and priorities; demonstrating how the strategy with Azure Stack HCI can improve not just the IT infrastructure but deliver on core business outcomes

  - **What they care about:** adhering to industry compliance, eliminating data breaches and risks, streamlining operations and operational costs, increasing internal productivity, improving patient care and experiences, enabling innovation with new technologies like AI

- **Technical Decision-Makers (TDMs)**

  - **Roles:** Chief Technology Officer (CTO), Chief Information Officer (CIO), Director of Infrastructure

  - **What to talk about**: technical features, capabilities, and pricing

  - **What they care about**: streamlining infrastructure management and efficiency, reducing complexity, strengthening security posture and compliance, improving access to data

Get started with partner enablement resources

Microsoft adaptive cloud with Azure Stack HCI and Intel can help healthcare organizations realize the vision for cloud-to-edge computing and support a future that is secure, patient-centric, efficient, and compliant—all while presenting a vast opportunity for Microsoft partners to grow their business and ignite new revenue streams. Through extensive training and enablement resources, Microsoft provides partners what they need and the necessary support to launch a successful distributed hybrid solution practice with Azure Stack HCI in the healthcare market.

Visit the [Azure Partner Resource Gallery](#) to download the [Azure Stack HCI Partner Resources Guide](#), which contains valuable links to relevant training, marketing materials and more—all in one place.

Learn more about the Intel solutions for Azure Stack HCI:

[Deep Dive Intel Azure Stack HCI](#)

[Unify Operations Across Hybrid and Multi-cloud Environments](#)

[Secure Your Microsoft Azure Arc-enabled Environment with Microsoft and Intel](#)

[Accelerate AI Inferencing Workloads and Boost Security on Azure Stack HCI with Intel AMX and Intel TME](#)

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