

The Streamlined Way to Run an Azure Hybrid and Multicloud Environment

Your Infrastructure.
Your Way.



The Multicloud Opportunity

A technology model that combines on-premises infrastructure with the cloud is the standard for today's enterprise. So where do you get your competitive advantage?

Hybrid Cloud is a given

Among enterprises, the momentum towards the cloud shows no sign of stopping. The disruption caused by the pandemic and the rapid, transformational shift to remote working exposed two things: the need for flexibility and to access resources from anywhere, driving further adoption of the cloud.

Nonetheless, on-premises infrastructure is as important as ever. Large organizations depend on the cost, control and security benefits of their own infrastructure — whether in a traditional three-tiered model of server, storage and network, or using hyperconverged technology. But many are choosing to pay for it using models that look more like the as-a-Service ones used by public cloud vendors like Microsoft.

A common direction of travel



growth in Microsoft Azure revenue in the 12 months to June 2022¹



of application workloads will need to stay in-house over the next five years²



of enterprises plan to aggressively shift to paying for infrastructure on a consumption basis³

¹ <https://news.microsoft.com/2022/07/26/microsoft-cloud-strength-drives-fourth-quarter-results-4/>

² <https://www.dell.com/en-us/dt/solutions/microsoft/index.htm#tab0=1&pdf-overlay=//www.delltechnologies.com/asset/en-us/products/storage/industry-market/esg-technical-review-dtc-powerscale-for-azure.pdf>

³ <https://www.dell.com/en-uk/dt/apex/cloud-services/data-storage-services.htm#video-overlay=6250890718001>

Set up for success

With data flowing in all directions — between the edge, the core and the cloud — enterprises are seeking trusted solutions that give them the right level of control and security while keeping overheads low and allowing for cloud-speed innovation.

The promise of hybrid and multicloud is the options it offers to the enterprise, having the right infrastructure in the right place with the right cost model. Delivering that simply, cost-effectively and securely can be a challenge.

An enterprise needs an environment that:



Is as easy to manage in the cloud as it is on premises.



Automates key functions so that time is spent on the highest value work.



Allows the organization to innovate quickly and create value.



Your Hybrid solution in action

For some organizations, a hybrid cloud really means two different infrastructures that require different skills to manage, different ways of thinking, and different operating models — but it needn't be this way.

In this guide, we explore three scenarios where enterprises are using hybrid-by-design technologies to streamline their experience, bringing management, security, and DevOps under one roof.



Management



Security



DevOps

Read on to discover how technology from Dell Technologies and Microsoft Azure works together to provide a consistent, scalable platform that's open to your needs and easy to manage.

⁴ <https://www.gartner.com/smarterwithgartner/what-edge-computing-means-for-infrastructure-and-operations-leaders>
⁵ <https://www.esg-global.com/research/esg-master-survey-results-2020-technology-spending-intentions-survey>
⁶ <https://www.cybertalk.org/2021/10/20/key-cloud-security-statistics-that-will-reshape-your-cloud-perspectives/>

Risk or opportunity?



of enterprise-generated data will be processed outside a traditional data center or cloud by 2025⁴



say their cloud environment is more complex than four years ago⁵



of data breaches target external cloud assets⁶

Your Infrastructure. Your Way.

Looking for how you can celebrate having complete control of your infrastructure on your terms with a common platform for all on-and-off premises Azure workloads that's simple and cost effective.

How does it work?

Together, Dell Technologies and Microsoft Azure can deliver the capability enterprises need to streamline multicloud management, modernize business operations and deploy cloud-native applications wherever it makes sense — all in a controlled and more secure way.

Our vision of an Azure multicloud for today's enterprise is built around two key technologies: **Dell Integrated System** with **Azure Stack HCI** that is Azure Arc enabled infrastructure.

Dell Integrated System for Microsoft Azure Stack HCI is a purpose-built hyperconverged system combining compute, storage and networking, and available in configurations to suit a wide range of needs. Hybrid by design, it natively integrates with Azure to simplify and streamline any Azure multicloud ecosystem.

Azure Stack HCI is an host operating system for hyperconverged infrastructure delivered as an Azure Services and Arc enabled by design. It allows organizations to extend their data center to the cloud and manage Azure Stack HCI hosts, virtual machines (VMs), and Azure resources from the Azure portal.



An integrated solution

The Dell Integrated System for Azure Stack HCI has been in collaboration with Microsoft to provide a seamless Azure multicloud experience. Both companies have been involved in the design, configuration and testing. You can deploy this solution confident not only that it will deliver enterprise-grade performance and scale, but that you have enterprise-grade support, too.

One of many routes

The vision of a Hybrid solution in this eBook is based around the latest HCI technology, but most enterprises still have significant estates of traditional three-tiered infrastructure.

To help you realize the potential of a hybrid environment, we have an industry-leading portfolio of technologies and services, including **ProConsult**, **ProDeploy** and **ProSupport**. These help enterprises adopt new technology quickly, derive business value from it as soon as it's deployed, and keep it running cost-efficiently.

The partnership to get you there

Dell Technologies and Microsoft have been working together for 35 years, and that partnership is only getting stronger in the cloud era.

49% of all Azure nodes are Dell Technologies, making it the No.1 Azure Stack⁷

#1 Dell Technologies is the No.1 Global Microsoft FastTrack partner⁷

109% growth for Dell Technologies in Azure revenue⁷

⁷ Dell Technologies and Microsoft

Why is it unique?

We recommend this combination because it's proven to work. As an integrated system, the solution provides a smooth day-one experience so teams can deploy quickly across the cloud and data center and lower time to value.

What's more, it is backed by Microsoft and Dell Technologies — two leading technology companies on the planet in public and private cloud, respectively. Dell Technologies is the industry leader for HCI⁸, and Microsoft Azure is a cloud platform trusted by 95% of the Fortune 500 backed by \$1 billion in cybersecurity investment.⁹

Your Hybrid by design solution in action

In reality, a hybrid environment will be made up of hundreds of components from many different providers. Every deployment will be unique and ever-changing. And the benefits it brings will change along with your business.

Rather than focus on the individual technologies, we want to show enterprises the outcomes that they can expect from our integrated system. On the following pages, we explore three scenarios where this can act as a differentiator for the enterprise.

“Dell was our launch day partner when we introduced Azure Stack HCI back in December 2020... Our joint success is founded in a commitment to innovation and making hybrid cloud simple and consumable for customers.”

Talal Alqinawi

Senior Director, Product Marketing – Microsoft Azure

⁸ <https://www.dell.com/en-uk/dt/hyperconverged-infrastructure/microsoft-azure-stack/index.htm>
⁹ <https://azure.microsoft.com/en-gb/resources/cloud-computing-dictionary/what-is-azure/>

Three Ways to Find a Competitive Edge

On the following pages, we outline three scenarios where the combined Dell Technologies and Microsoft Azure Arc enabled infrastructure excels for the enterprise.



A seamless Azure experience

- Manage your distributed infrastructure from Azure
- Place workloads where it makes most sense
- Streamline IT operations

Perfect for

- Remote office/branch office deployments
- Emerging workloads (AI, machine learning)
- Customers with existing Azure investment



Simpler Azure on-premises

- Ensure predictability across the cloud stack
- Gain resilience with built-in security and up-to-date software
- Run environments using familiar tools

Perfect for

- Rationalizing cloud/edge management
- Teams with Windows skills
- Lowering operating costs



Accelerated innovation

- Develop using cloud services
- Deploy anywhere
- Support services globally

Perfect for

- Adopting DevOps
- Enterprises that want to keep data on premises
- Multinational organizations

SCENARIO 1

A Seamless Azure Experience

A multicloud isn't a collection of walled gardens. The idea of cloud services only being off premises is no longer accurate, and organisations can now deploy wherever it makes most sense. New tools help them do this as simply and seamlessly as possible.

“We weren't looking to just upgrade; we also wanted to take advantage of all the technology advancements that Dell Technologies and Microsoft have driven in recent years, like hyperconverged infrastructure.”

Greg Altman

IT Infrastructure Manager, Swiff-Train Company



A Seamless Azure Experience

Sprawling Hybrid Solutions are hard to manage and mitigate many of the benefits of having such an operating model in the first place. Customers consistently tell us that they want to make their environments simpler and more streamlined.

These are the major benefits of the integrations between Dell and Microsoft technologies. Not only does the Dell Integrated System work with Azure Stack HCI, familiar management tools like Dell OpenManage have been updated to work with Windows Admin Center. This allows teams to control Azure Stack HCI deployments from a single central console in Azure Portal due to the native integration with Azure Arc.

Capabilities include:

- Health monitoring
- On-premises cluster creation and expansion
- Enforcing consistent compliance policies across locations
- Remediating policy drift in the event of non-compliance

The integration with Azure Arc also brings on-demand cloud services to data center and edge locations in a seamless and consistent way. Azure Kubernetes Service (AKS), SQL Managed Instances (SQL MI), Artificial Intelligence (AI), Machine Learning (ML), and Azure Virtual Desktop (AVD) are all available across multicloud and hybrid cloud environments.

A consistent control plane for the entire stack enables teams to meet their compliance and security goals more easily and without incurring excessive costs. They can enforce policies, control access, and optimize workload placement according to the needs of the business.

Flooring firm lays down a solid base for its future

With its data center servers nearly a decade old, IT teams at US-based flooring wholesaler Swiff-Train Company were working at full stretch to keep them working as long as possible. The time had come to invest in new infrastructure for today's operations and tomorrow's growth.

The company deployed an Azure Stack HCI solution, which cut rack space by 50 percent and uses 70 percent less energy than the company's previous clusters. But most significantly, it allows IT managers simpler oversight of vital business infrastructure. The company chooses to keep mission-critical resources on-premises while seamlessly managing non-critical ones in the Microsoft Azure cloud.

"We used to spend 4–5 hours a week doing server maintenance, including a 2 hour maintenance window on Saturdays," says IT infrastructure manager Greg Altman. "But now my Saturday maintenance takes just 30 minutes, given all the automation and visibility that I can utilize from the OpenManage integration with Windows Admin Center, so I have more time with my family."

[Read the full story](#)

SCENARIO 2

Simpler Azure On Premises

If one element of a multicloud is harder to manage than the rest, it can compromise the entire idea of a single seamless environment. New custom integrations between familiar cloud and on-premises management tools means true freedom for workloads and the teams that run them.

“Building stable system infrastructure used to require months of investigation and testing. Dell Technologies has an extensive lineup of validated Azure Stack HCI systems, listens to our challenges, and proactively suggests flawless solutions.”

Toshiki Ota,

Fellow, Senior Executive IT Specialist, IT Business Process Planning Dept.,
The Dai-ichi Life Insurance Company, Limited, Dai-ichi Life Holdings, Inc.

Simpler Azure On Premises

Assembling, deploying, and managing the on-premises components of a Hybrid solution is often a stumbling block to success. Many workloads need to remain in the data center for cost, control, security or compliance needs, but teams should be able to manage these assets as efficiently as possible — just as they can for their public cloud components.

For enterprises looking to modernize their IT operations beyond the traditional three-tier model, a combination of hyperconverged infrastructure (HCI) and the Azure cloud offers a compelling alternative.

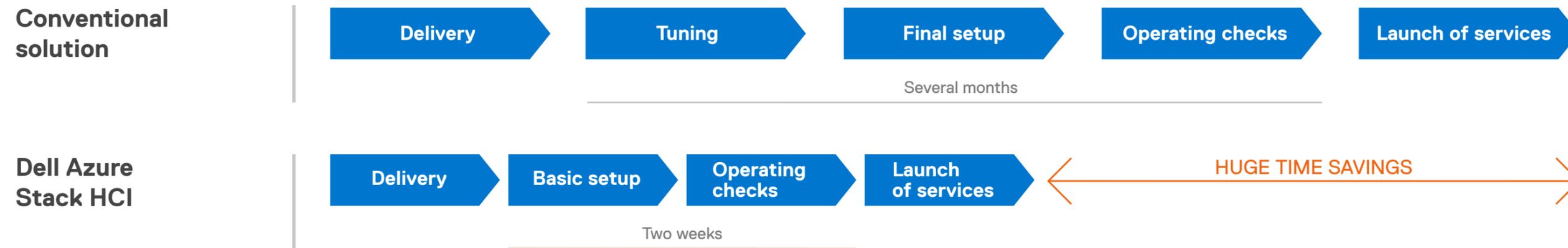
The Dell Integrated System for Azure Stack HCI ensures a predictable operational experience with seamless Azure integration and built-in automations for easier lifecycle management. Dell OpenManage software works with Windows Admin Center so teams can use the tooling they know to manage a more comprehensive set of assets and capabilities across a larger, more versatile estate. The result is greater control, simpler oversight, and lower management overheads. IT teams can focus on adding value rather than keeping the lights on.

Insurer brings cloud-like agility to the data center

The Dai-ichi Life Insurance Company, Limited, based in Japan, was looking to modernize its infrastructure, standardize how teams operate, and improve scalability. The company needed a new, swiftly deployable framework so it could bring its on-premises provisioning speeds in line with its cloud benchmarks.

By opting for an integrated, preconfigured Azure Stack HCI solution, Dai-ichi Life Insurance could cut lead times for provisioning infrastructure from several months to just two weeks. It achieved this by eliminating time-consuming validation work. Infrastructure for new workloads — or capacity to scale existing workloads up or out — can come online quickly, so the business can meet its targets for innovation and growth.

Deployment results: Reduced deployment times



SCENARIO 3

Accelerated Innovation

Digital transformation promises faster, more agile organisations with easy access to the resources they need to innovate. Achieving this across different IT operating models and geographical locations has been a challenge for many, but new solutions are emerging to help bridge the gaps.

“[Infrastructure and operations] leaders must invest in skills that support iterative, customer-focused frameworks and ways of working, such as DevOps, product management and agile.”¹⁰

Gartner

10 Gartner Top Priorities for IT: Leadership Vision 2021, 2020.

Accelerated Innovation

Developers at enterprises and startups alike have embraced the cloud for its on-demand capacity and the native services. These services make it easier to integrate the capabilities their applications need, including database, analytics, machine learning, AI, container orchestration and more, because they eliminate much of the complex setup and maintenance required.

But when it comes to deploying and running these apps, many enterprises prefer to keep their data and apps on premises to take advantage of the predictable cost and control. This is now easier with the Integrated System for Azure Stack HCI, as Dell has validated a range of developer-friendly Azure services to run in the data center on hyperconverged infrastructure, including:

- Azure AI
- Azure Kubernetes Service
- Azure Machine Learning
- Azure SQL Managed Instances
- Azure Virtual Desktop

Right-sizing your infrastructure

To run these workloads, customers can choose from a range of hardware nodes in the Dell Integrated System for Azure Stack HCI portfolio. These include 1U and 2U options, as well as a broad selection of processors from Intel and AMD, and various configurations to optimize memory and GPU.

Servicing success

We know that enterprises have complex support needs. Helping them meet those needs has long been a core part of our business, and our ProSupport network operates across the globe to ensure rapid resolutions and predictable service levels for your customers. To accelerate time to value for new deployments, ProDeploy also provides services to help you plan, manage, and execute your rollout flawlessly.



Key Components

Microsoft Azure Stack HCI

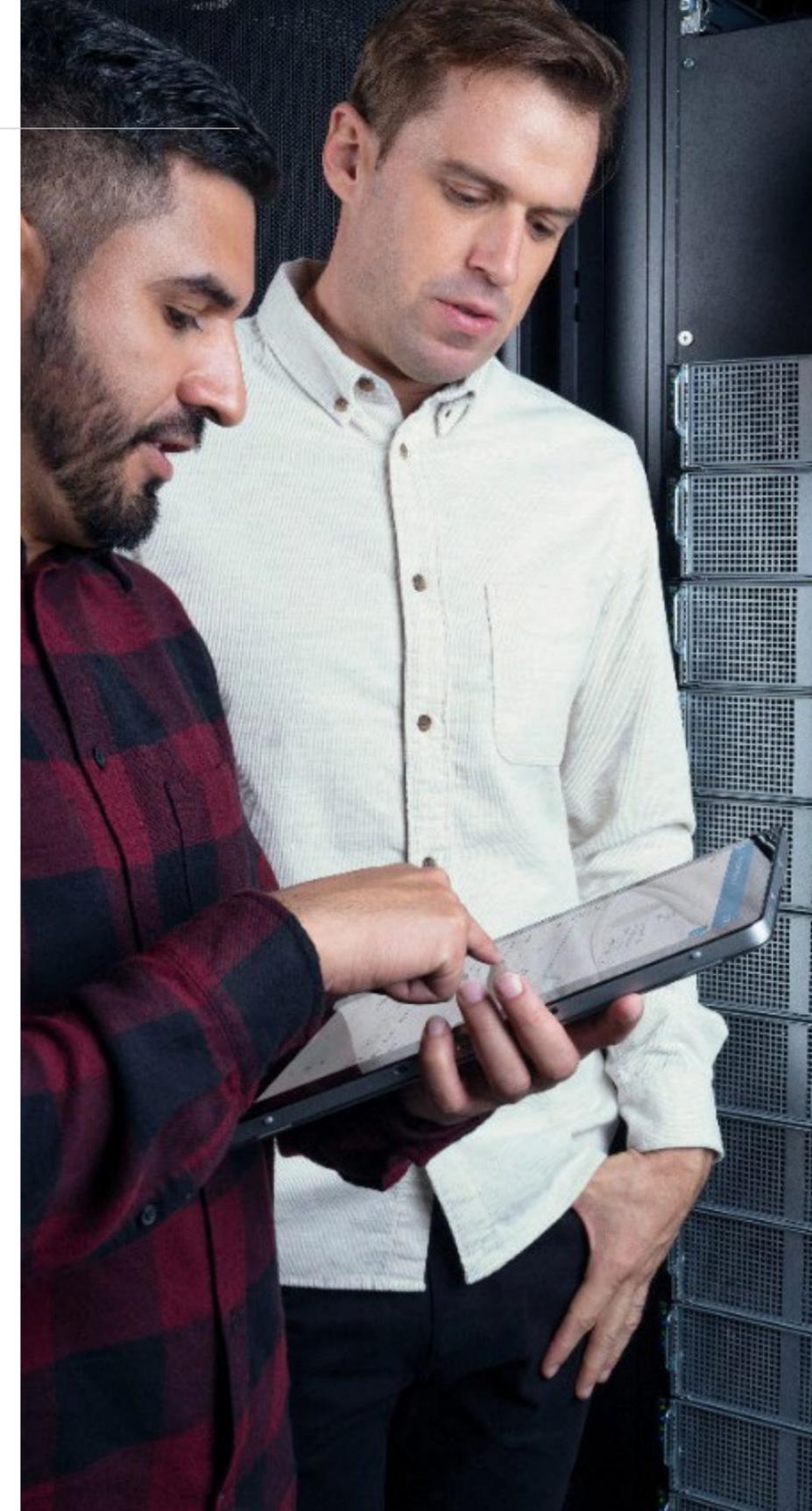
This operating host system for hyperconverged infrastructure (HCI) allows organizations to extend their data center to the cloud. Delivered as an Azure service and Arc enabled natively, the software remains up-to-date and integrates with a broad range of other Azure solutions to accelerate innovation.

Teams can manage their Azure Stack HCI nodes from the same portal that they manage their other Azure assets. Its integrations with familiar management tools from Dell Technologies allows a seamless experience from edge to core to cloud.

Dell Integrated System for Azure Stack HCI

Designed specifically to work in a multicloud with Azure Stack HCI, the Dell Integrated System simplifies and streamlines an enterprise's Azure experience. Its automations for IT operations and lifecycle management lead to greater control, more predictable outcomes and lower overheads.

The offering range provides HCI nodes in various configurations to suit enterprises' broad application requirements. The nodes can be deployed anywhere a business requires and managed in a consistent way, regardless of location or configuration.



Key Components (cont.)



Dell ProSupport

Enterprise-grade support options with one point of accountability for your hybrid multi-cloud. Dell ProSupport offers tiers of service across your infrastructure with proactive, predictive interventions that take the “break” out of “break-fix”.



Your workloads

The most important components of your Hybrid solution are the workloads you run. Our solutions give you the flexibility to run next-generation and legacy workloads based on Windows and Linux — in virtual, containerized or cloud environments.

What's Next?

We hope this guide has allowed you to consider how your enterprise can benefit from a multicloud built on Azure Stack HCI. With such a vast array of options, what happens next is up to you.

1.

Gauge your company's appetite for the cloud

Looking to modernize your aging infrastructure, use Hyper V, and want Azure cloud flexibility but need to keep legacy apps running and Microsoft Azure or are planning to move in that direction. To get the most from an Azure Arc enabled Hybrid solution, you might have to ask some probing questions, including:

- Are we comfortable with our data and infrastructure off-premises?
- Do we have the right culture for the cloud?
- Can we manage hyperconverged and traditional infrastructure at the same time?



2.

Assess where your current workloads should sit

The value of a Hybrid solution built on Dell Azure Stack HCI is its simplicity and control. It may be the case that you find new ways to host existing workloads that offer performance, management, cost, or security benefits that would not be achievable using other solutions.



3.

Plan your strategy

Depending on the current state of your infrastructure, you are likely to see some instant benefits from the Integrated System for Azure Stack HCI. Other use cases may take time as you migrate, consolidate or retire old systems. A strategy and execution plan are the next steps in realizing the value of a multicloud, and both Dell and Microsoft can offer a range of services and tools to assist you in this capacity.

About Dell Technologies

Dell (NYSE:DELL) helps organizations and individuals build their digital future and transform how they work, live and play. The company provides customers with the industry's broadest and most innovative technology and services portfolio for the data era.

About Microsoft

Microsoft (Nasdaq "MSFT" @microsoft) enables digital transformation for the era of an intelligent cloud and an intelligent edge. Its mission is to empower every person and every organization on the planet to achieve more.



Your Infrastructure. Your Way.

If you are interested in working with a partnership that can ensure the success of your Azure Arc Enabled Infrastructure solution, then get in touch with your local Dell representative.

Contact your Dell account team on xxxxx.