

Kyndryl Distributed Cloud for Microsoft Azure Stack HCI with Azure Arc

Customer challenges

Demand continues to grow for distributed cloud deployments as IT professionals and business leaders look to address remote or location-based use cases that are key for strategic growth. This is further complicated by the need to address compliance and performance requirements for critical applications. As a result, organizations are seeking to reap the benefits that accrue from centralized management and increased automation.

- Reduce operational complexity
- Consolidate cloud skills and tools
- Gain granular control of their infrastructure and data
- Enable or support the deployment of remote or edge environments
- Refocus the organization on innovation
- Deploy IT resources more quickly to accelerate time to value

Solution highlights

Kyndryl™ Distributed Cloud for Microsoft Azure Stack HCI with Azure® Arc is a fully integrated system with Lenovo hyperconverged infrastructure (HCI) and Azure cloud software. The solution was purpose-built with full-stack lifecycle management and native Azure integration. Azure Arc is a bridge that extends the Azure platform, enabling the development and management of applications and workloads across a distributed environment—whether that be public or private clouds, on- or off-premises locations, or remote or branch offices. Kyndryl helps assess, architect, migrate existing workloads, and manage the new environment as a distributed cloud.

Two configurations of the solution are offered:

1. Small – 1–3 integrated nodes per cluster, ideal for use cases such as localized IT resources at remote or branch offices, 5G edge locations, retail storefronts, clinics, factories, exploration sites, or satellite campuses.

2. Scalable – 4–16 integrated nodes per cluster, mainly suited for modernizing existing data center infrastructure with an integrated connection to Microsoft Azure, as well as other public cloud providers. Organizations gain access to a single pane of glass, an OpEx business model, improved scalability, and increased automation.

Customer benefits

In addition to the technical components, Kyndryl provides a variety of IT services and solutions to increase business value across the entire modernization journey. The benefits include:

- An industry-leading delivery team
- Design, plan, build, migrate, and management services
- Management of on-premises, multicloud, hybrid, remote-office, and edge deployments
- Implementation of incremental Azure Stack features or workload types, such as Azure Backup, Azure Kubernetes Service, Azure Virtual Desktop, Azure SQL Database, and Azure Arc Resource Bridge for VMware® vSphere® support. Other compatible services can be integrated via Azure Marketplace
- The ability to add incremental Kyndryl managed services, such as digital workplace, network and edge, data and AI, or public cloud

A distributed cloud model is centrally managed from a public cloud provider to orchestrate multiple clouds for compliance, data residency/sovereignty, and performance needs in support of data center modernization and edge computing.

Focus on industries

The Distributed Cloud for Microsoft Azure Stack HCI with Azure Arc solution from Kyndryl is a multidisciplinary offering. Several industries share relevant use cases for either the small or scalable configurations. A few examples follow:

Telecommunications – Small clusters are ideal for on-site support of 5G infrastructure by monitoring air traffic, gathering IoT data for predictive maintenance, running security devices, or aiding with real-time repairs. These smaller clusters can also be deployed at retail storefronts to deliver point-of-sale (PoS), inventory management, or digital signage software.

Banking and financial services – Small clusters are key for modernizing bank branch offices with new smart-branch technologies such as interactive teller machines, video conferencing, banker tablets, and service terminals. Larger clusters can be used for providing virtual desktop infrastructure (VDI) for remote employees. In addition, many organizations are bringing customer-facing applications and databases back on-premises to mitigate the risk associated with federal compliance laws.

Manufacturing – Small clusters are used to enable augmented reality maintenance and repair (ARMAR) for real-time issue resolution with reduced errors. Manufacturers are also using these clusters to ingest IoT data for predictive maintenance or to run industry-specific software.

Energy and utilities – Smaller clusters can be used to digitize remote locations such as oil rigs or natural gas exploration sites. These systems are used to gather IoT data for predictive maintenance, hazard, and safety management. Scalable clusters can be used to deliver virtual desktop environments for graphic-intensive use cases such as the visualization of exploration data.

Healthcare – Smaller clusters support hospitals and clinics to ingest medical images for real-time use by doctors or nurses. The system then serves as a gateway and transfers the data to Azure cloud to address compliance mandates for data retention. Larger clusters deliver VDI support for clinic or hospital staff and can be used to provide centralized management for satellite campuses.

Retail – Smaller clusters provide storefronts with resources to run inventory, merchandising, PoS, digital signage, and security software. Larger clusters are used to modernize application development environments with microservices that connect development and test environments in Azure with production environments on-premises.

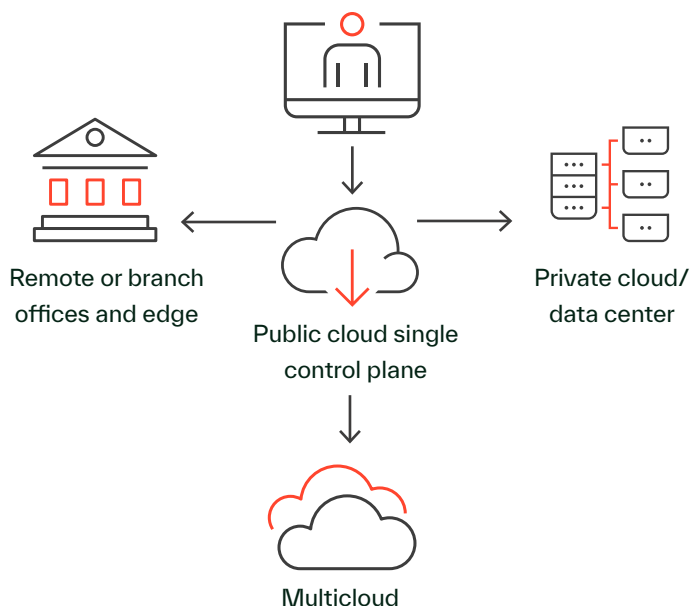


Simplify and streamline Azure multicloud ecosystem

Lenovo ThinkAgile® MX is a fully engineered, Microsoft-validated, integrated solution that allows customers to extend Azure services to any Azure Arc-enabled infrastructure, from hybrid multicloud environments to the data center and at the edge.

Combined with Kyndryl managed services, distributed cloud can help companies modernize their IT environments by removing data silos, unlocking the value of data throughout the enterprise, including the edge.

Distributed cloud



Why Kyndryl?

Kyndryl has deep expertise in designing, running, and managing the most modern, efficient, and reliable technology infrastructure that the world depends on every day. We are deeply committed to advancing the critical infrastructure that powers human progress. We're building on our foundation of excellence by creating systems in new ways: bringing in the right partners, investing in our business, and working side by side with our customers to unlock potential.

For more information

Partner with Kyndryl, a trusted service provider for the design, build, and management of Azure Stack HCI clusters with Azure Arc.

Learn more, [request a consultation](#) with a Kyndryl expert, or visit kyndryl.com.



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