Lenovo Express Solutions with Microsoft 365 Customer Relationship Management (CRM) on ThinkAgile MX650 V4

Solution Brief

Deploy your Microsoft 365 Customer Relationship Management (CRM) system on-premises on Azure Local while integrating seamlessly with a hybrid cloud infrastructure

In today's business environment, organizations face mounting challenges in managing customer relationships while maintaining data control and cost efficiency. Choosing the right CRM solution increasingly involves exploring hybrid business application models - blending on-premises capabilities with cloud scalability to achieve the best of both worlds.
Hybrid deployments allow organizations to store sensitive customer data locally to meet strict regulatory and data sovereignty requirements while leveraging cloud services for analytics, automation, and remote collaboration. This approach ensures compliance without sacrificing innovation or global accessibility.
Moreover, hybrid architecture offers a strategic response to rising cloud costs. By running core operations on local infrastructure and extending capacity through the cloud when needed, organizations can optimize costs, maintain predictable budgeting, and scale resources dynamically.

The Lenovo ThinkAgile MX650 V4 is the ideal platform to run Microsoft business applications hosted on Azure local - it is a high-performance, dual-socket 2U rack server designed specifically for hybrid Azure cloud deployments.

This technical brief highlights the MX650 V4's integration with Azure Local, enabling organizations to run services directly within their on-premises infrastructure. The server is configured with 6th Generation Intel® Xeon® Scalable processors (up to 86 cores and 172 threads), DDR5 6400 MT/s (1 DIMM per channel) or 5200 MT/s (2 DIMMs per channel) memory, and high-performance NVMe drives among a variety of storage options, including support for the PCIe 5.0 standard devices for I/O. These new processors from Intel also offer support for MRDIMMs and CXL 2.0 memory.

The Lenovo ThinkAgile MX650 V4 server is a storage-dense solution, supporting up to 40x 2.5-inch NVMe drives (including 24 front-accessible, 8 mid-bay, and 8 rear-accessible bays), 32x E3.S 1T NVMe drives, or 16x 3.5-inch bays for high-capacity HDD storage. The server also supports M.2 drives, which can be used for operating system boot or data storage. These drives can be internally mounted or installed as hot-swap drives at the front or rear of the server. Optional RAID-0 or RAID-1 configurations are supported.

Accelerate Business Applications with Azure Local for Faster Time-to-Value

Lenovo ThinkAgile MX650 V4 systems are rigorously tested and optimized to eliminate months of configuration, setup, and tuning, enabling organizations to accelerate deployment and achieve faster time-to-value. These servers deliver enterprise-grade reliability and performance enhancements designed for modern workloads. Key advantages include:

- The new Intel Xeon 6 processors introduce architectural improvements that deliver higher performance compared to previous generations while reducing operational costs
- By leveraging high-priority and low-priority cores, the platform optimizes power consumption during peak and off-peak hours for greater efficiency
- To support demanding Business or CRM applications, Lenovo ThinkAgile MX650 V4 systems feature DDR5 memory operating at speeds up to 6400 MHz, ensuring strong throughput and responsiveness.
- Enhanced system design allows hosting more virtual machines and services per host, maximizing resource utilization and reducing physical footprint

Azure Local

Azure Local on Lenovo ThinkAgile MX650 V4 is a hybrid solution designed for organizations that require an on-premises environment to achieve low latency, data sovereignty, and regulatory compliance, while still benefiting from centralized management through the Azure Portal and optional on-premises administration.

Lenovo ThinkAgile MX Appliances and Certified Nodes deliver a highly available, scalable hyper-converged infrastructure (HCI) and software-defined storage (SDS) optimized for multiple workloads. A key advantage of this architecture is its flexibility: deployments can start with a single node to minimize initial investment and complexity, and additional nodes can be added later to increase capacity and performance as business needs grow. This modular approach ensures organizations can scale seamlessly without disrupting existing workloads, making it ideal for environments that anticipate future expansion

Beyond virtualization, Azure Local provides a broad set of services and capabilities, including:

- Validated hardware from Lenovo.
- Azure Stack HCI OS.
- Hyper-V hypervisor based computational resources or Virtual Machines (VMs).
- Storage Spaces Direct-based virtualized storage.
- Windows and Linux virtual machines as Arc-enabled servers.
- Azure Virtual Desktop (AVD).
- Azure Kubernetes Service (AKS) enabled by Azure Arc.
- AI and machine learning workload deployment.
- Azure services including monitoring, backup, site recovery, and more.
- Azure portal, Azure Resource Manager and Bicep templates, Azure CLI and tools.

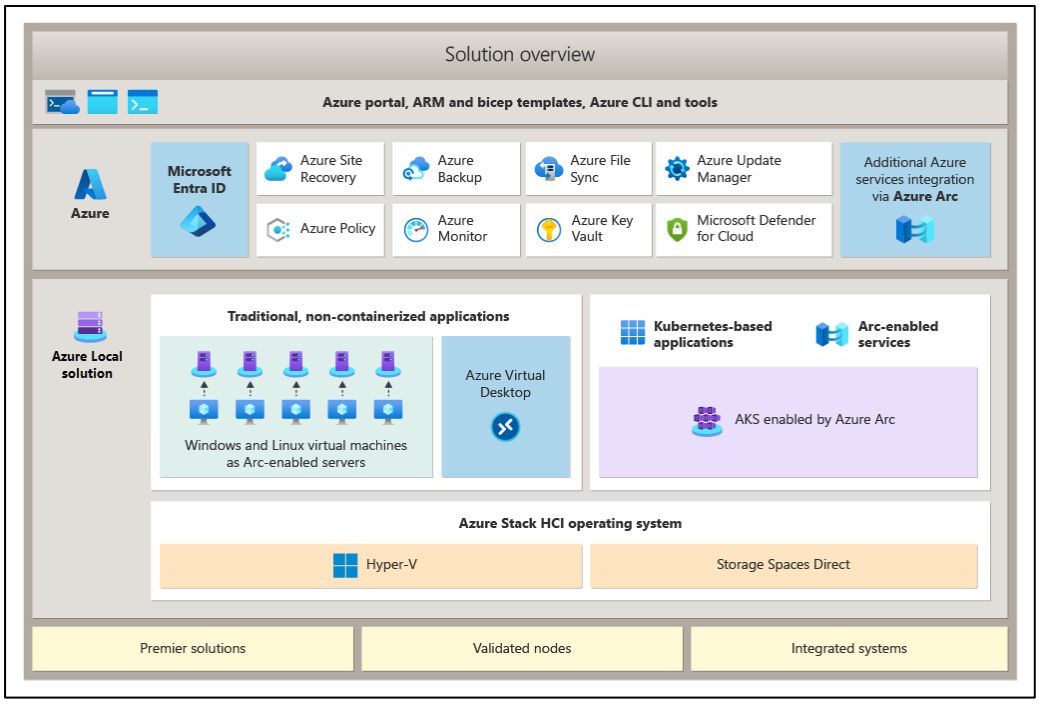

Figure 1 Azure local solution overview

Lenovo Express Solutions

After provisioning the Azure Local instance, the next step is deploying Dynamics 365 on-premises. In this implementation, the latest version of Dynamics 365 was installed on a virtual machine running Windows Server 2025, while a separate VM hosted Windows Server 2025 with SQL Server 2022 for database services. This architecture ensures separation of application and database workloads, improving performance and maintainability.

When planning a deployment, it is important to size resources correctly based on expected user load and transaction volume, and to ensure high availability for production environments. Organizations should also review existing systems and integration points to avoid compatibility issues and backup and disaster recovery strategies should be in place.

Virtual machines for Dynamics 365 and SQL Server can be created either through the Azure Portal or via Windows Admin Center (WAC) running on-premises. Both methods provide flexibility: the Azure Portal offers centralized management and integration with Azure services, while Windows Admin Center is ideal for administrators who prefer local control.

Once the VMs are deployed, they can be accessed over the local network using Remote Desktop Protocol (RDP), and installation proceeds as with any standard Windows-based software.

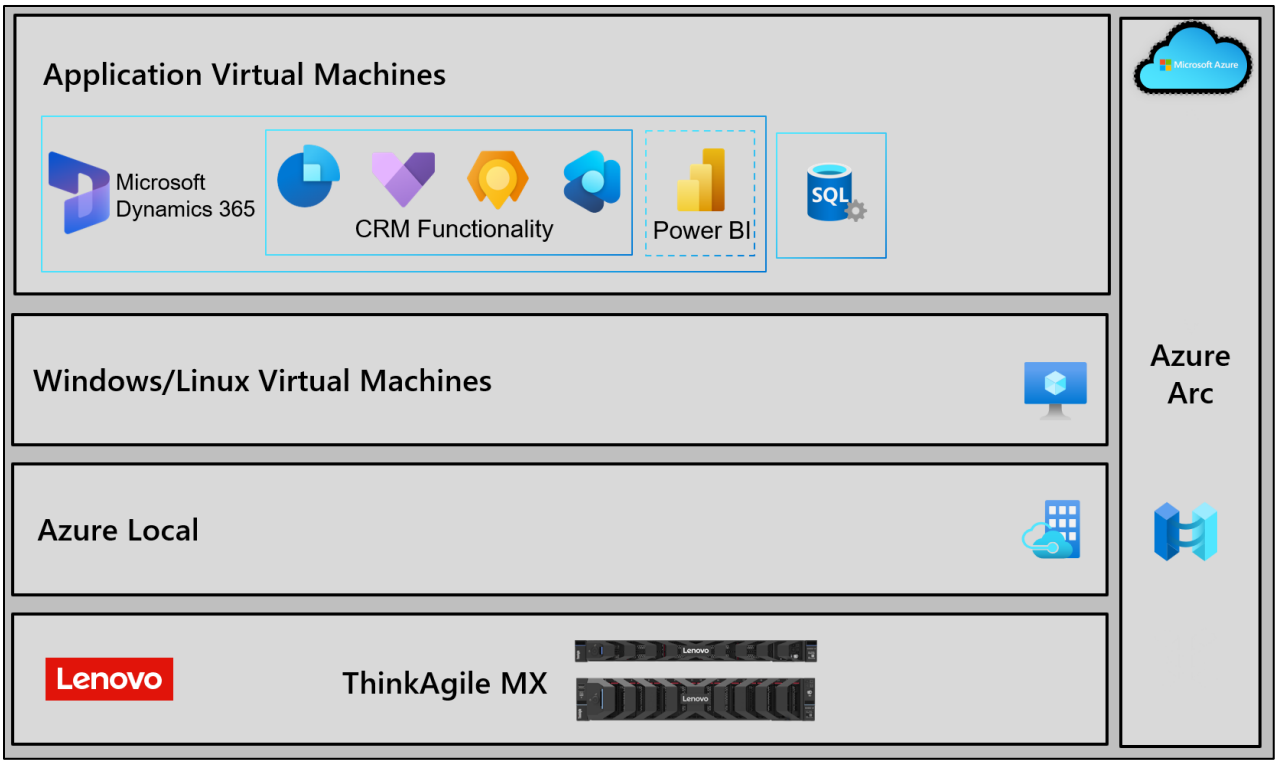

Figure 2 Graphical overview of the Lenovo Express Solution

For more information about the on-premises requirements for Dynamics 365 the following link can be used:

https://learn.microsoft.com/en-us/dynamics365/fin-ops-core/dev-itpro/deployment/on-premises-deployment-landing-page

Azure Virtual Desktop (AVD)

AVD is a Microsoft service that delivers a secure, scalable, and fully managed virtual desktop infrastructure (VDI) hosted on Azure. It allows users to access Windows desktops and applications from virtually any device, providing a consistent experience whether they are working remotely or on-premises.

Azure Virtual Desktop (AVD) is an excellent fit for hybrid environments because it combines the flexibility of cloud-based management with the control and compliance of on-premises infrastructure. When deployed on Azure Local, AVD ensures data sovereignty by keeping sensitive information within local boundaries while still enabling centralized administration through the Azure portal. It also provides a secure, streamlined method for accessing on-premises resources without the complexity of maintaining a VPN, while leveraging Azure security features and delivering a consistent user experience across devices.

In our testing environment, we enabled Azure Virtual Desktop (AVD) on the Azure Local instance and published Dynamics 365 as a RemoteApp. This required deploying a Windows 11 multi-session virtual machine from the Azure Marketplace, which hosts user sessions for the RemoteApp. Multi-session capability allows multiple users to share the same VM, reducing infrastructure costs and simplifying management.

At the end of the deployment users just need to access the remote apps either from the web interface or from the locally installed Remote Desktop client. After logging in they will be able to access Dynamics 365 just by selecting the appropriate app.

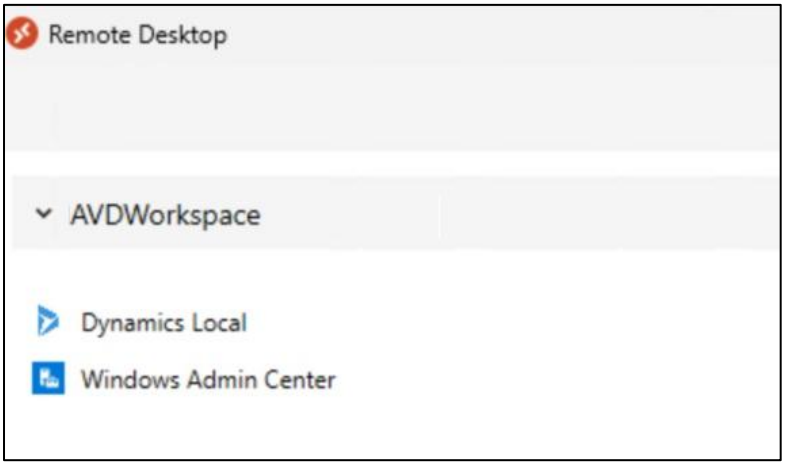

Figure 3 Remote Apps

More details regarding the AVD deployment can be found in the following article:

https://learn.microsoft.com/en-us/azure/virtual-desktop/azure-local-overview

Management

When designing an IT solution, one of the key considerations is how it will be managed and integrated with existing tools. Lenovo Express Solutions provides flexibility by supporting both cloud-based and on-premises management approaches. The Azure Local instance can be administered through the Azure Portal for centralized control or via WAC installed locally for administrators who prefer direct, on-premises management. Command-line interfaces are also available in both environments, offering advanced configuration options for experienced IT teams.

Virtual machines hosting Dynamics 365 and SQL Server 2022 can be added to WAC for management or accessed directly through RDP for traditional administration. The AVD infrastructure is tightly integrated with Azure services and therefore managed exclusively through the Azure Portal, ensuring consistency and security for remote desktop environments.

This hybrid management model allows organizations to choose the approach that best aligns with their operational strategy, whether maintaining an on-premises focus for compliance and control or transitioning toward cloud-based management for scalability and automation.

ThinkAgile MX650 V4 configuration

For this testing we`ve configured one ThinkAgile MX650 V4 server with Azure Local. The configuration used is the following:

- **Server:** Lenovo ThinkSystem MX650 V4
- **Processor:** 2 x 6th Intel® Xeon® 6737P Processor up to 4Ghz (2.9 Ghz base) with 32 cores and 64 threads each
- **Memory:** 1024GB of DDR5 6400 MT/s memory
- **Storage pool:** 6x ThinkSystem 7500 PRO NVMe drives 3.8TB NVMe SSDs PCIe 4.0

- **OS Storage:** 2x 960GB M.2 NVMe SSDs PCIe 4.0 for the operating system (RAID 1)
- **OS:** Azure stack HCI 24H2

Figure 4. Lenovo ThinkAgile MX650 V4

The Lenovo ThinkAgile MX650 V4 is designed for Microsoft Azure Local, it enables organizations to run a wide range of hybrid cloud services on-premises while maintaining seamless integration with Azure for backup, disaster recovery, and cloud-based management.

With flexible configuration options and simplified deployment, the MX650 V4 is ideal for small businesses and large enterprises alike, offering validated hardware, integrated firmware, and single-point support for both hardware and software.

Conclusion

Lenovo Express Solutions with Azure Local enables organizations to deploy Dynamics 365 on-premises while using Azure Virtual Desktop (AVD) for secure, remote access. This hybrid approach combines local control for data sovereignty and compliance with Azure's centralized management and scalability. Dynamics 365 runs on optimized VMs within Azure Local, while AVD delivers a consistent user experience across devices without VPN complexity. Together, they provide a cost-efficient, flexible, and robust solution that accelerates deployment and modernizes CRM workloads without compromising security.

Bill of Materials

Part Number	Product Description	Qty
7DFHCTO1WW	Server : ThinkAgile MX650 V4	1
C8HB	MX650 V4 IS 24x2.5" Chassis	1
C5QX	Intel Xeon 6737P 32C 270W 2.9GHz Processor	2
C3QR	ThinkAgile 2U V4 Performance Heatsink	2
C0TQ	ThinkAgile 64GB TruDDR5 6400MHz (2Rx4) RDIMM	16
C46P	ThinkAgile 2U V4 8x2.5" NVMe Backplane	1
C2BS	ThinkAgile 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	6
C26V	ThinkAgile M.2 RAID B545i-2i SATA/NVMe Adapter	1
BKSR	ThinkAgile M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2

BE4T	ThinkAgile Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-port PCIe Ethernet Adapter	2
C0U3	ThinkAgile 2000W 230V Titanium CRPS Premium Hot-Swap Power Supply	2
C3RD	ThinkAgile 2U 6056 20K Performance Fan Module	6
C2DH	ThinkAgile Toolless Slide Rail Kit V4	1
C3RM	ThinkAgile 2U Air duct Filler for 1P	2
5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
C1XN	3Yr Premier 24x7 4Hr Resp MX650 V4	1

Table 1. Bill of Materials

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For More Information

To learn more about Lenovo MX solution contact your Lenovo Business Partner or visit:
https://www.lenovo.com/au/en/servers-storage/sdi/thinkagile-mx-series/

References:

Azure Virtual Desktop on Azure Local
https://lenovopress.lenovo.com/lp2131.pdf

Lenovo ThinkSystem MX650 V4:
https://lenovopress.lenovo.com/lp2137-lenovo-thinkagile-mx650-v4-hyperconverged-system

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