

CASE STUDY:

Modernizing Retail Infrastructure with Azure Local

Company Overview

Industry: Multi-State Retail & Travel Center Operations

The client is a large, multi-state retail and travel-center operator known for running some of the highest-volume convenience and fueling locations in the country. Each site combines retail, food service, fueling operations, and large-scale customer amenities under one roof, creating a uniquely demanding operational environment.

The organization operates dozens of locations across multiple states. Each facility serves a continuous flow of travelers, commuters, and long-distance drivers. These locations are significantly larger than typical convenience stores, often employing hundreds of team members per site and managing high-frequency transactions across retail, food service, and fuel.

The company is recognized for:

- Exceptionally high operational standards
- Large-format retail footprints
- High customer volume and rapid turnover
- Consistency in cleanliness and service
- A culture focused on efficiency and reliability

Given the scale and complexity of operations, technology systems must perform without interruption. Downtime directly impacts revenue, customer experience, and brand trust.

Business Challenge

The client operated on a VMware + SAN architecture that had supported growth for years. However, the environment began to present two escalating pressures:

1. Rising license and renewal exposure
2. Architectural constraints limiting resiliency and scalability

VMware licensing—including vSphere, vSAN, and associated support—represented a growing operational expense. Renewal cycles introduced financial unpredictability. At the same time, the traditional SAN-based design created potential single points of failure and limited flexibility.

Leadership established clear modernization objectives:

- Transition to a cloud-aligned licensing model
- Reduce long-term infrastructure costs
- Increase redundancy for mission-critical workloads
- Preserve low-latency, on-premises compute
- Scale infrastructure without increasing complexity

For an organization operating high-throughput retail environments under constant load, infrastructure instability was not acceptable. Systems supporting point-of-sale, fuel management, food service operations, analytics, and site-level applications had to remain highly available.

The decision was not about replacing technology. It was about reducing risk, increasing resilience, and establishing a sustainable cost structure.

Solutions Implemented

VMware Migration to Azure Local

The organization migrated its VMware environment to Azure Local, aligning its on-premises infrastructure with Microsoft's hybrid cloud ecosystem while retaining local compute control. The approach focused on continuity, risk reduction, and measurable operational improvement.

Cloud-Aligned Licensing

Azure Local introduced a simplified licensing model at \$10 per physical core per month. Through Azure Hybrid Benefit, existing Windows Server Datacenter licenses could significantly reduce that cost. This eliminated VMware renewal exposure and provided a predictable, cloud-aligned cost structure. Financial risk decreased. Budget planning improved.

Hyperconverged Infrastructure

Azure Local consolidated compute and storage into a unified architecture using:

- Storage Spaces Direct
- NVMe-backed storage
- Higher core-density processors

This enabled 2:1 to 4:1 infrastructure consolidation compared to legacy VMware + SAN environments. The result was a reduced hardware footprint and improved performance density. Fewer systems. Lower facilities overhead. Higher throughput capacity.

Built-In Resilience

Azure Local incorporates fault domain awareness across nodes, chassis, and racks. Synchronous storage replication removes traditional SAN single points of failure.

Native integration with Azure Site Recovery, Azure Backup and Azure Monitor centralizes disaster recovery, monitoring, and compliance visibility within a single control plane. For a high-volume retail operator, resilience is not theoretical. It protects revenue and brand experience in real time.

Hybrid Extensibility

The solution preserved on-premises compute for latency-sensitive workloads while enabling Azure integration through Azure Arc. This provided cloud governance and extensibility without sacrificing local performance. The migration prioritized continuity. Core systems remained stable during transition. Operational disruption was minimized.



*"Our business runs at constant volume. We needed to modernize without increasing operational risk. Azure Local allowed us to reduce licensing exposure, strengthen resiliency, and simplify management while maintaining the performance our sites demand."**

— Director of Infrastructure



Results Achieved

The migration delivered measurable impact across financial, operational, and performance dimensions.

Licensing Cost Control

Organizations moving from VMware to Azure Local commonly realize:

- 40-60% lower annual platform licensing costs compared to VMware Cloud Foundation-based stacks
- Elimination of VMware renewal exposure
- Reduced per-core licensing costs when leveraging Azure Hybrid Benefit

This improved cost predictability and reduced long-term financial exposure.

Infrastructure Consolidation

Modern Azure Local deployments typically achieve:

- 2:1 to 4:1 consolidation versus legacy VMware + SAN architectures
- Up to 50% reduction in physical server footprint
- 20-35% reduction in power consumption
- Proportional cooling cost reductions

At multi-site scale, these efficiencies produce meaningful facilities and energy savings.

Resilience & Availability

Azure Local improves uptime by design:

- Fault domain awareness increases workload survivability
- Synchronous replication removes SAN single points of failure
- Recovery Time Objectives (RTO) reduced by 30-50% with Azure Site Recovery
- Availability improvements from ~99.5% to 99.9%+ for Tier 1 workloads

For high-throughput retail operations, incremental uptime improvements translate directly into revenue protection and operational continuity.



Total Cost of Ownership

Enterprise benchmarks indicate approximately: **30% reduction in five-year total cost of ownership.**

Savings are driven by:

- Eliminated VMware renewals
- Azure Hybrid Benefit
- Hardware consolidation
- Reduced operational overhead
- Lower energy and facilities costs

Performance & Operational Efficiency

Storage Spaces Direct with NVMe routinely delivers:

- Hundreds of thousands to millions of IOPS
- Sub-millisecond latency
- 20-40% improvement in application response times compared to legacy VMware + SAN stacks

Centralized management through Azure Portal and Arc reduces infrastructure management effort by 25-40%. Provisioning timelines are reduced from days or weeks to hours using validated OEM solutions.

Strategic Outcome

By modernizing its infrastructure, the organization was able to enhance its systems without ever sacrificing stability. In the process, they cut down on licensing risks, boosted resiliency, brought their hardware together, improved system availability, and gained better control over costs. Thanks to the Azure Local platform, they're now able to keep expanding into more states—all while maintaining low-latency performance and consistent operations. Ultimately, this approach delivers a clear, practical path to modernization—one that prioritizes business continuity, minimizes risk, and delivers measurable results.



Built for Scale. Engineered for Continuity.

Modern retail and travel centers need stable systems that operate continuously. Your technology should handle busy periods, costs should stay manageable, and expansion shouldn't create new problems.

By moving to Azure Local, the organization now has a strong, reliable base that meets its future needs. Software costs went down. Backup systems improved. Managing everything is easier. Speed got better.

Modernization was not treated as a technology refresh. It was executed as a risk-reduction strategy and a cost-discipline initiative—designed to protect revenue, support expansion, and maintain brand standards across every location.

If your infrastructure is constrained by legacy licensing, resiliency limitations, or rising complexity, now is the time to consider a structured modernization path.

Start with a brief assessment of your current environment. Schedule a consultation to pinpoint opportunities to reduce risk, eliminate redundancy, and increase the value of your Microsoft investment.