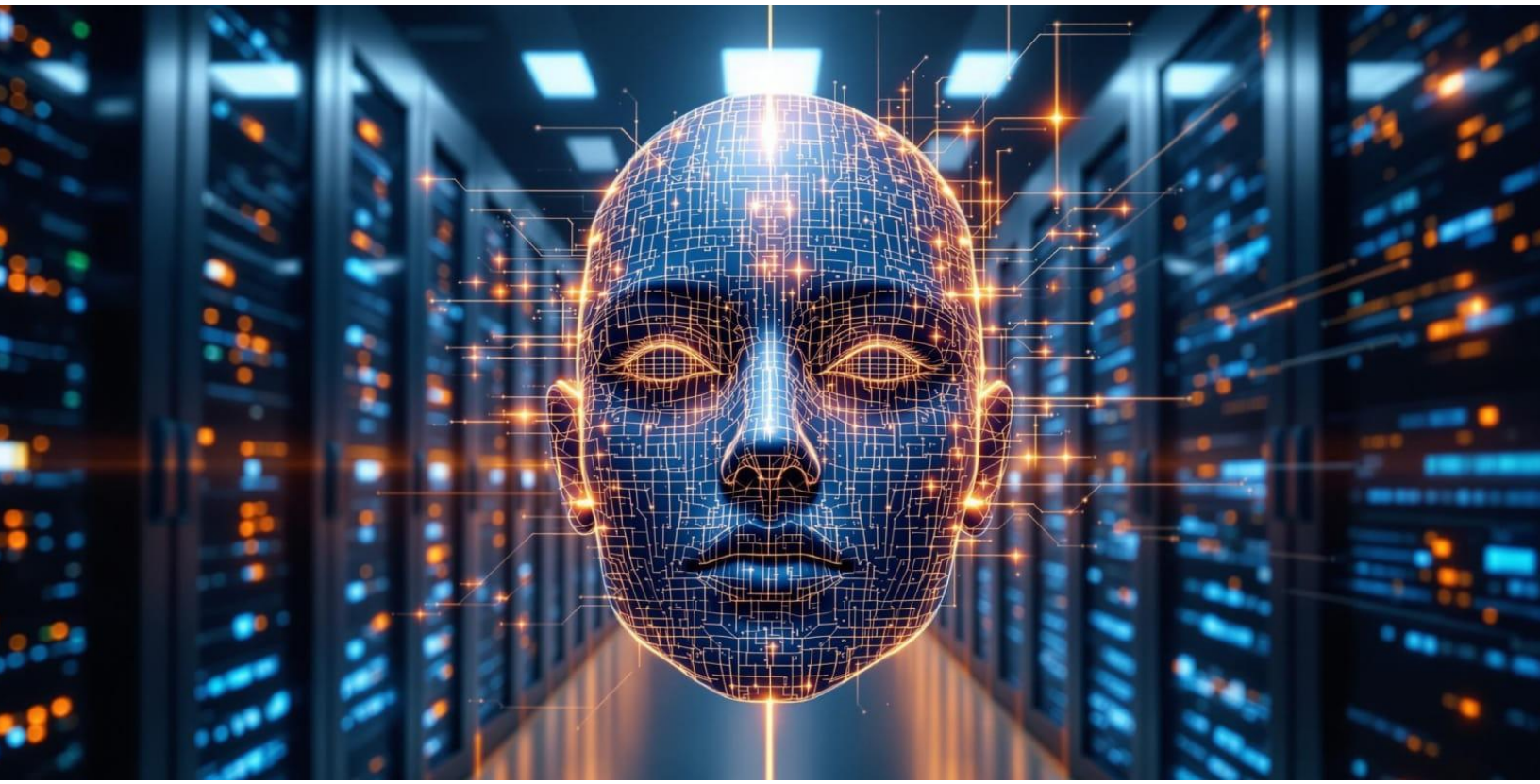
VIRTUALZ
COMPUTING™

AI and Application Modernization in 2026

The Architecture Shift
That Makes Core Enterprise Data Migration-Ready



THOUGHT LEADERSHIP PAPER

Executive Summary

Application migration is accelerating — but data architecture is lagging behind. In 2026, enterprises are modernizing applications faster than ever, driven by AI-assisted refactoring, hybrid cloud strategies, and the need to reduce operational risk.

Yet the biggest constraint on modernization is not application code. It is access to core enterprise data.

Modernized applications fail when they cannot safely, instantly, and governably access the systems of record that run the business. Traditional integration methods — ETL pipelines, replication frameworks, and batch synchronization — introduce latency, cost, fragility, and compliance risk.

This paper examines the emerging architecture that enables application migration without data disruption — and the technologies that allow enterprises to modernize at AI speed while preserving operational stability.

The 2026 Landscape: Application Migration Is No Longer Optional

CIOs are under pressure to modernize faster than traditional migration models allow.

Key drivers include:

- AI-assisted development tools accelerating code refactoring
- Cloud-native deployment models replacing monolithic architectures
- Hybrid execution environments becoming the default
- Rising cost and risk of maintaining brittle integration layers

- Demand for real-time analytics and operational intelligence

Enterprises are not abandoning core systems. They are redesigning how modern applications interact with them. Migration success now depends on **data accessibility**, not just application portability.

The New Migration Model: Coexistence Over Replacement

The most successful modernization strategies in 2026 follow a simple principle: Modernize applications. Preserve trusted data platforms.

Rather than forcing large-scale system replacement, leading organizations adopt coexistence models:

- Some workloads modernized
- Some workloads retained
- Ahared core data accessed across both

This reduces risk, preserves stability, and accelerates delivery. But coexistence only works if data can be accessed seamlessly.

The Primary Constraint: Core Enterprise Data Access

Despite advances in modernization tooling, most application migration projects encounter the same bottleneck: **Core enterprise data is harder to migrate than applications.**

Traditional approaches rely on:

- ETL pipelines
- Change data capture
- Batch replication
- Custom middleware

These introduce:

- Latency
- Operational fragility
- Governance risk
- High maintenance cost
- Performance overhead

Migration slows. AI projects stall. Complexity grows.

The barrier is not technology maturity. It is architecture.

The Emerging Architecture: Access Without Migration

Leading enterprises are shifting from data migration to **data access architecture**. Instead of moving core data repeatedly, they are building universal access layers that allow modern applications to interact with trusted data where it already resides.

This architecture requires four capabilities:

1. Structured data delivery
2. High-speed file movement

3. Real-time shared data access
4. Elastic storage modernization

VirtualZ provides technology aligned to this architecture.

PropelZ™ — Structured Data Delivery for Modernized Applications

PropelZ™ enables secure, governed delivery of structured core enterprise data into modern platforms without fragile pipelines.

It supports:

- Analytics and reporting modernization
- AI model pipelines
- Cloud data platforms
- Report migration
- Tape-to-cloud initiatives
- Governance frameworks

PropelZ replaces brittle integration layers with an out-of-the-box structured data delivery architecture.

"PropelZ is a very straightforward install... ready to go in just a couple of hours." — Jerry Edgington, Pellera

FlowZ™ — File Movement for Hybrid Migration Workflows

Application modernization increasingly depends on file-based workflows: archives, batch outputs, backups, and training datasets.

FlowZ™ enables high-speed sharing of enterprise files across hybrid environments without disk or tape emulation complexity.

Use cases include:

- Archive modernization
- Tape replacement
- Hybrid DevOps pipelines
- Migration staging workflows
- AI training data pipelines

FlowZ connects traditional batch systems to modern application ecosystems.

Lozen™ — Real-Time Shared Data for Hybrid Execution

Lozen™ allows modernized applications to read and write live core enterprise data without copying or replicating it. This enables:

- Incremental modernization
- Hybrid application coexistence
- Live AI training pipelines

- Elimination of stale replicas
- Governance preservation
- Lozen enables shared execution — not just integration.

"Lozen integrated smoothly, ensuring secure, real-time data access."
— Gilberto Biondo Junior, AWS

Zaac™ — Storage Modernization Without Application Risk

Zaac™ virtualizes disk and tape storage so cloud or SAN resources behave like native enterprise devices. It allows enterprises to modernize storage infrastructure without disrupting applications.

Use cases include:

- Instant capacity expansion
- Archive modernization
- Disaster recovery
- Cloud-backed DASD and tape
- AI-scale storage growth

Zaac transforms storage into an architectural layer rather than a hardware constraint.

"Zaac brings flexible storage options... without compromising security or reliability." — Dale Vile, Freeform Dynamics

Industry Validation

This architectural model is gaining enterprise recognition:

- Named one of **CRN's 50 Coolest Storage Vendors**
- Recognized by **ISG Provider Lens®** for modernization leadership
- Highlighted by **Freeform Dynamics** for redefining enterprise storage architecture

The market is shifting from integration tooling to architecture platforms.

Strategic Outcomes for Enterprises

Organizations adopting this architecture achieve:

- Faster application migration
- Reduced modernization risk
- Incremental delivery models
- Unified governance
- Lower integration cost
- Elastic scalability
- Protection of mission-critical systems

They modernize without disruption. They migrate without data risk. They operate at AI speed.

Conclusion

Application modernization in 2026 is no longer constrained by code. It is constrained by data architecture.

The organizations that lead will not replace their core systems — they will extend them.

The future is not about replacing what works. **It is about turning it into AI-powered advantage.**

VirtualZ Computing

Your AI Needs Data.
We Deliver All of It. Instantly.