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How Nutanix and AMD Change Infrastructure Economics

Unlocking more value from existing infrastructure constraints

Start here

Executive Summary

IT Modernization: An Economic Decision

As budgets, power, and infrastructure remain constrained, organizations are expected to run more workloads, move faster, and support AI, all without expanding their footprint. The challenge is no longer scale, but return.

Nutanix and **AMD** address this challenge by changing the economics inside those constraints. Together, they deliver a unified platform that improves efficiency, reduces OpEx, and maximizes long-term ROI, helping offset CapEx for new hardware through consolidation and operational simplicity.

Key Takeaways From This eBook

- **How dramatic server consolidation frees up power, space, and budget for higher-value priorities**
- **How Nutanix operationalizes efficiency through unified management and automation to deliver repeatable ROI**
- **How AI can scale from CPUs to GPUs without premature investment or platform change**

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Modernization Starts With Economics

The forces reshaping infrastructure ROI

IT modernization is no longer driven by technology cycles alone. It is shaped by economics. This includes rising operational costs, constrained power and space, and growing pressure to do more with existing infrastructure.

How are the Economics of Compute Shifting?

At the same time, improvements in efficiency and AI inference performance are changing how much value organizations can extract within fixed budget, power, and footprint limits.

The Power of the Force

Together, these forces are reshaping infrastructure strategy. Modernization today is less about expansion and more about optimizing for ROI, including prioritizing efficiency, performance per watt, and long-term operational sustainability.

So, where does ROI come from?

The Nutanix Advantage

Operational simplicity that cuts OpEx

At the center of modern infrastructure economics is operational simplicity. As environments grow more complex – spanning on-premises systems, hybrid deployments, and multiple workload types – cost and inefficiency often come not from hardware, but from how infrastructure is managed, operated, and scaled.

One Complete Stack

Nutanix addresses this challenge by unifying operations across infrastructure and clouds that reduces day-to-day operational overhead and helps organizations convert infrastructure efficiency into repeatable, long-term ROI:

- **Unified operations across environments**
- **Automated lifecycle management**
- **Policy-driven infrastructure control**

Operational Advantage

Nutanix simplifies how infrastructure is deployed, operated, and evolved. This allows IT teams to extract more value from their infrastructure and establish the operational advantage that results in consolidation, efficiency gains, and economic return across every workload the platform supports.

How do platforms amplify efficiency?

One Platform, Unified Outcomes

How Nutanix and AMD amplify value

Modern infrastructure value is maximized when hardware efficiency and operational simplicity work together. On their own, performance gains can be difficult to translate into meaningful ROI.

When paired with the right platform, those gains become measurable, repeatable, and scalable across the environment.

How Does This Amplify Value?

Nutanix and AMD deliver this alignment through a unified infrastructure approach. AMD EPYC™ processors provide high core density and performance-per-watt, while Nutanix applies consistent operations, automation, and lifecycle management across workloads and deployment models.

Together, they amplify the economic impact of each layer.

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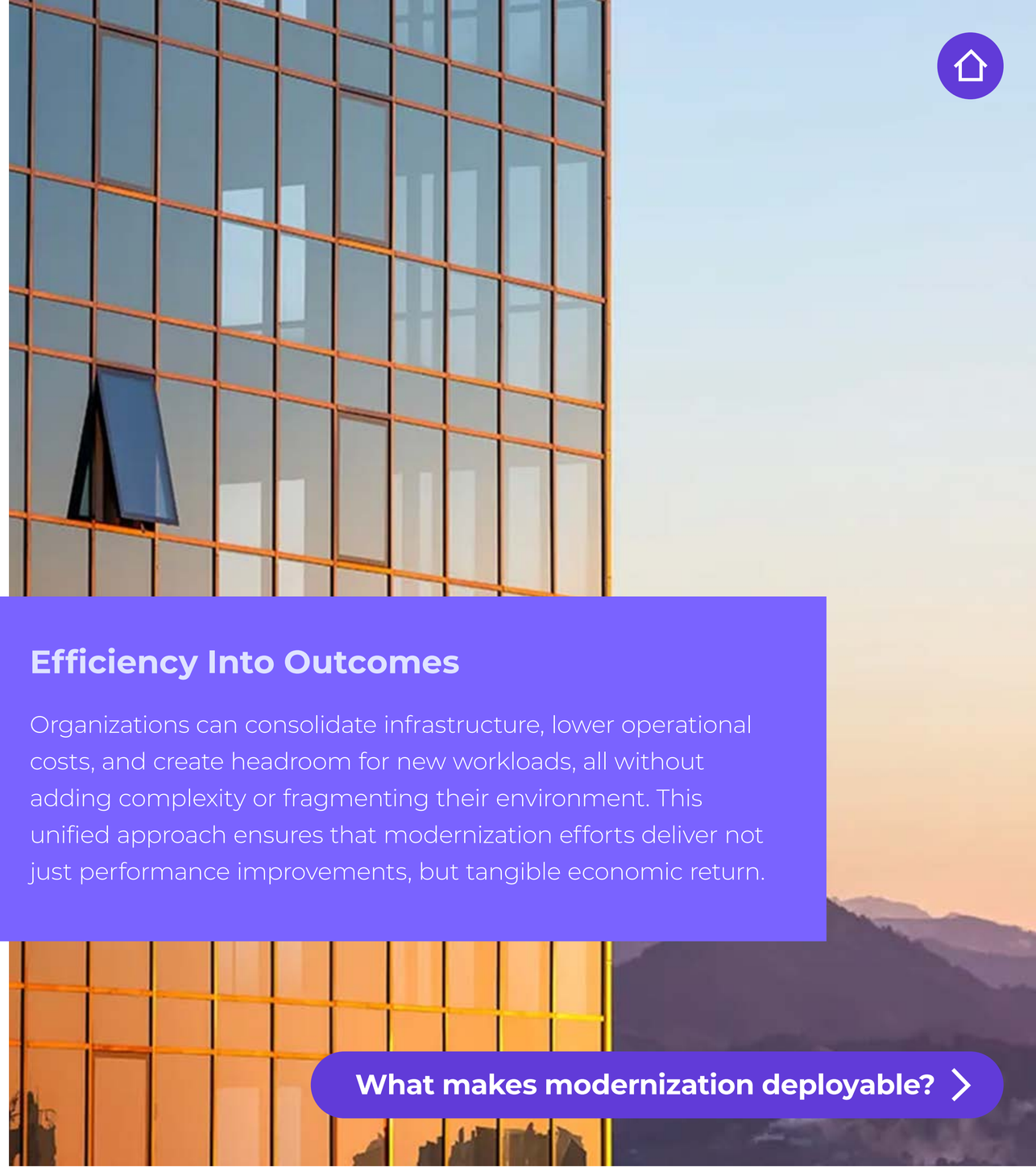


Efficiency Into Outcomes

Organizations can consolidate infrastructure, lower operational costs, and create headroom for new workloads, all without adding complexity or fragmenting their environment. This unified approach ensures that modernization efforts deliver not just performance improvements, but tangible economic return.

What makes modernization deployable? >

Certified OEM Solutions

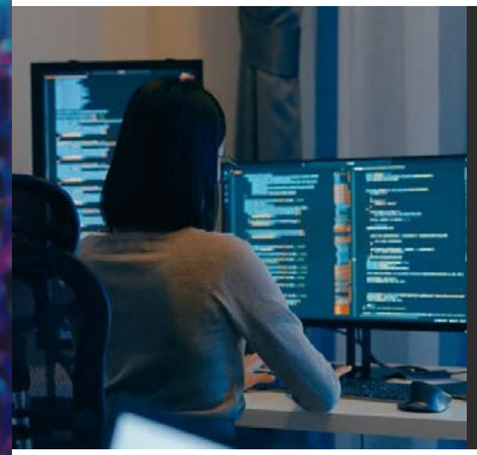
Choice, consistency, and deployment confidence

Modernization decisions don't happen in isolation. Enterprises expect flexibility in how and where infrastructure is deployed, along with confidence that platforms are validated, supported, and production-ready from day one. OEM choice plays a critical role in reducing risk and accelerating time-to-value.

Broad Ecosystem

Nutanix and AMD work together across a broad ecosystem of certified OEM solutions, including **Cisco**, **Dell**, **HPE**, **Lenovo**, and **Supermicro (NX)**, with the following benefits:

- **Excellent straight-out-of-the-box experience for customers**
- **Nutanix AOS optimized to take advantage of AMD chiplet architecture to provide better performance**
- **Consistent performance across hardware platforms**
- **Certified solutions reduce deployment risk**
- **Faster time to value with supported configurations**



Modernize on Your Terms

By combining platform consistency with OEM choice, **Nutanix** and **AMD** enable customers to deploy with confidence, scale predictably, and maintain operational continuity, whether modernizing existing infrastructure or building new environments optimized for efficiency and ROI.

Which workloads benefit first? ›

Accelerating Apps, Databases, and VDI

Modern workloads on a modern platform

Enterprise workloads continue to grow in volume and complexity, spanning:

- **Enterprise applications**
- **Databases**
- **Virtual desktop infrastructure**

These workloads must deliver consistent performance while operating within fixed infrastructure, power, and cost constraints. The challenge is not introducing new workloads, but supporting them efficiently over time.

Modern Workloads Demand Efficiency at Scale

Nutanix and **AMD** provide a strong foundation for these modern workloads. AMD EPYC processors deliver the core density and performance needed to run demanding applications at scale, while Nutanix simplifies how those workloads are deployed, managed, and scaled across environments.

This translates into improved performance without increasing complexity. Applications run faster, databases scale more predictably, and VDI environments support more users per host. IT teams can meet performance expectations while maintaining control over cost and operations.

What are workload-driven infrastructure choices?

Workload-Driven Infrastructure Choices

	ROBO/Edge Entry-level	VDI	Server Virtualization, Private Cloud	IT Apps, DB	Business Critical Applications	Files, Objects, Unstructured Data	Analytics, Big Data & AI/ML
User Needs	Cost-effective Small form-factor Simple to manage	Compute resources Rich media support	Compute / Storage density	Fast storage for hot data	Latency-sensitive applications	Cheap & deep storage	Compute, memory performance Large, low latency storage
Technical Needs	Entry-level Low user VM's GPU	Compute-density GPU	High core-counts All-NVMe	Storage capacity CPU performance	High core-counts Maximum memory GPU	Capacity for long term storage	Dense compute Large memory GPU

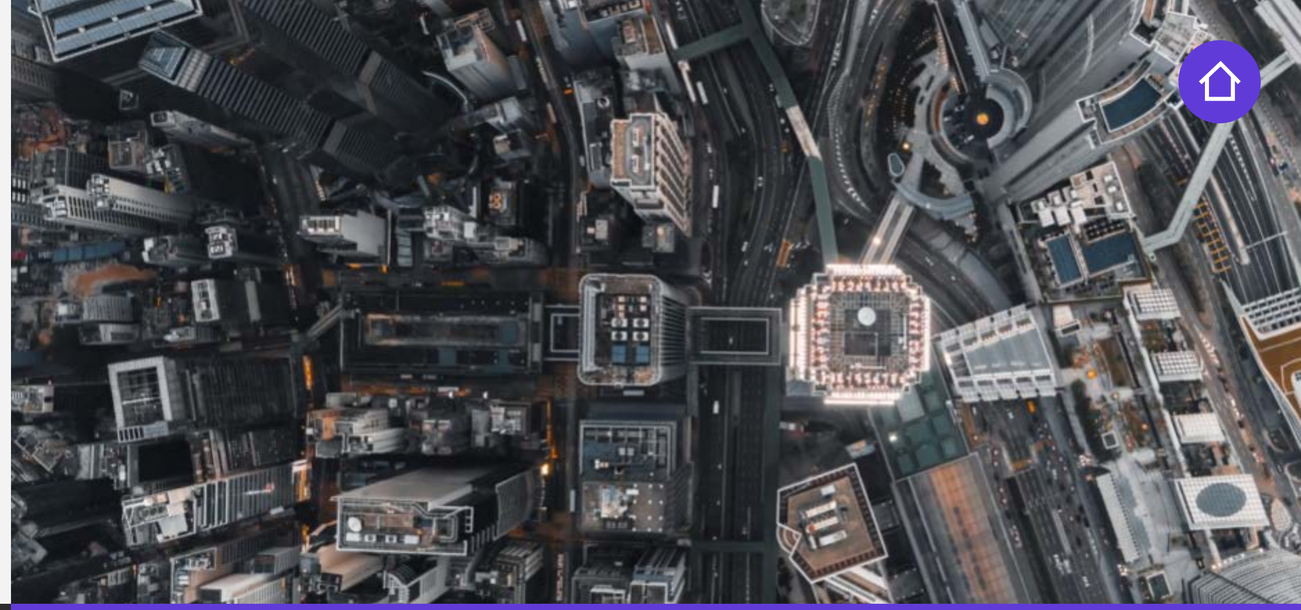
No matter your technical needs or requirements, **Nutanix** and **AMD** have certified solutions across many of these workloads and environments.

How should AI scale economically? >

The CPU-GPU Continuum

Start on CPUs. Scale to GPUs when ready.

AI adoption no longer requires an all-or-nothing infrastructure decision. Many inference and early production AI workloads run efficiently on CPUs, allowing organizations to begin delivering value without the cost, power, and operational overhead of GPU acceleration.



Scale AI When the Economics Justify It

AMD provides a unified CPU–GPU continuum that supports this progression, all without redesigning architectures or changing vendors.

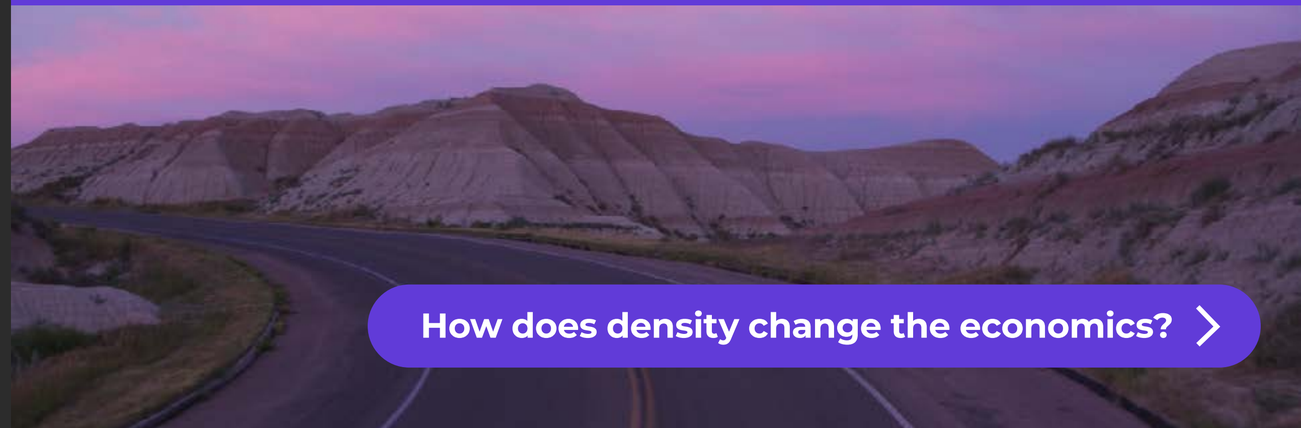
Start inference on **CPU**

Scale selectively to **GPU**

Avoid premature GPU investment

A Unified Path for AI Growth

Nutanix orchestrates this transition through a consistent operational model. Unified management, automation, and lifecycle controls ensure AI scales as part of the broader infrastructure strategy, keeping costs predictable and complexity contained. The result is AI growth that aligns with business economics, not experimentation-driven spend.



How does density change the economics? ›

Density That Drives ROI

More compute per rack, per watt, per dollar

Infrastructure economics improve when more work can be done inside the same physical and operational envelope. Higher core density and better performance per watt allow organizations to consolidate servers, reduce rack counts, and lower power and cooling demands. These directly impact total cost of ownership.

AMD EPYC Processors

AMD EPYC processors are designed for this kind of efficiency. With high core counts and better perf/core, organizations can run more applications, databases, and virtual desktops on fewer systems. This consolidation frees up capacity while reducing the infrastructure footprint required to support growing workloads.

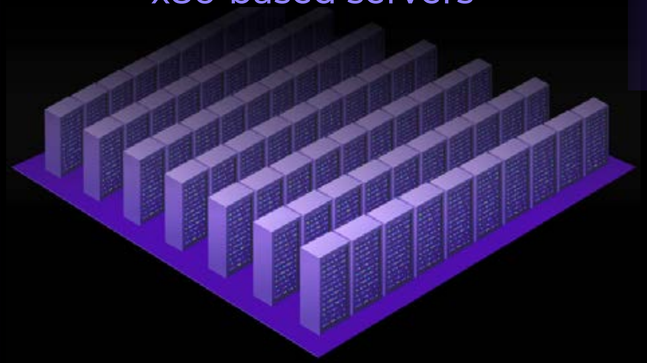
Turning Raw Compute Into Economic Advantage

Density only delivers ROI when it can be operationalized at scale. Nutanix's HCI platform is purpose-built to turn higher core density into practical consolidation.

This simplifies deployment, scales resources linearly, and reduces operational overhead as environments grow. This is why organizations consistently trust Nutanix to modernize infrastructure at scale, reflected in industry-leading customer satisfaction and long-term platform adoption.

1000
Legacy Servers

Dual-socket legacy x86-based servers



8 to 1
Consolidation

Easy to migrate to AMD

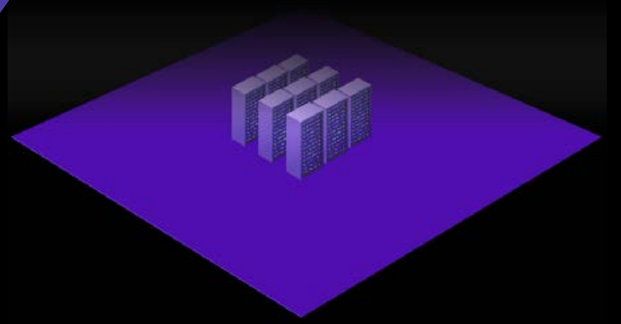
x86 Architecture

Mature Ecosystem

Robust Tools

127
Modern Servers

2P AMD EPYC™ 9965 servers



*Servers required to achieve a total of 39,100 SPECrate®2017_ int_base performance score. See endnotes 9xx5TCO-005

What proves the economics work? >

Proven Results, Measured Impact

Benchmarks that validate the economics

Infrastructure economics are proven in outcomes. Consolidation, efficiency, and performance gains only matter if they translate into lower cost, reduced power consumption, and improved utilization of existing infrastructure.

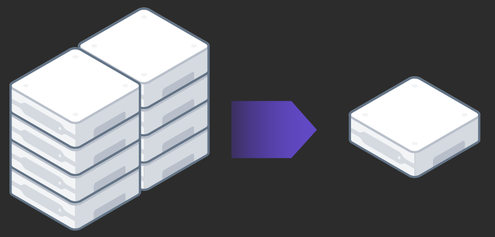
Benchmark results demonstrate:

- **Enterprise applications**
- **Databases**
- **Virtual desktop infrastructure**

These gains directly improve TCO while freeing capacity for additional workloads.

Repeatable, Sustainable Results

When paired with Nutanix, these efficiency improvements become repeatable and sustainable. Unified operations and lifecycle automation ensure that consolidation and cost savings persist over time, validating that modernization driven by economics delivers measurable ROI.



8:1 server consolidation yields:

Up to **69%** Less power

Up to **87%** Fewer servers

Up to **79%** Lower 5-yr TCO

*Based on bare metal servers when running Nutanix on AMD

What does confidence look like? >

Conclusion: Modernize With Confidence

A platform that pays for itself

Modernization succeeds when it delivers measurable return – not just new capabilities. By combining infrastructure efficiency of AMD with operational simplicity of Nutanix, organizations can reduce total cost of ownership, consolidate resources, and create headroom for what's next, including AI initiatives.

Together, **Nutanix and AMD** turn a unified, modern platform into a practical investment, one that pays off today through efficiency and over time through flexibility. With a consistent operating model and a scalable compute foundation, teams can modernize with confidence, knowing the economics work now and as demands evolve.

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Key Takeaways

- **Modernization is an economic decision**
- **Consolidation unlocks capacity**
- **Operational simplicity drives repeatable ROI**
- **AI can scale when the economics make sense**
- **One platform supports what's next**

Nutanix

Unified hybrid multicloud operations that simplify infrastructure and reduce OpEx.

AMD

High-density, performance-per-watt compute designed to improve efficiency and lower TCO.

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