Time for change: The four top benefits of infrastructure modernization

With the latest advances in server and processor technology, IT leaders can explore emerging opportunities like AI, edge computing, and virtualization—while reducing cost and improving overall performance.

In this evolution, your role as an IT decision maker is crucial. By embracing infrastructure modernization and adding the latest technologies to your IT stack, you can provide the performance, scalability, and flexibility needed to drive positive change.

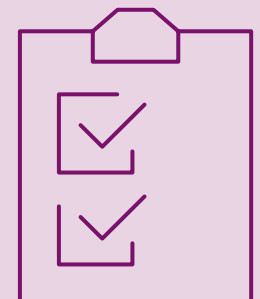## IT modernization is a key enterprise goal

By modernizing your IT you can improve your infrastructure in four key areas:

- **Performance**
- **Security and reliability**
- **Manageability**
- **Energy efficiency**

Let's explore how...

Questions to ask when defining your IT goals:

- ☐ Where are our current servers not keeping up with performance requirements?
- ☐ What new technologies would we like to integrate?
- ☐ How secure is our data?
- ☐ How much time does our IT team spend "fighting fires"?
- ☐ Can we advance our sustainability goals?
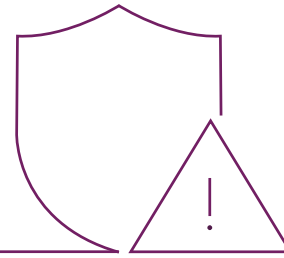
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#1. More performance, smaller footprint

Providing simple, centralized resource management by upgrading to a modern infrastructure that is powerful, flexible, and energy efficient, you can meet today's demanding workloads head on. And having that performance in servers that occupy a smaller footprint means you can easily reduce rack space or expand your capacity.

Lenovo and AMD = Performance

- Lenovo and AMD hold over 120 current world-record server and processor benchmarks.[1]
- Lenovo servers with AMD processors offer an improvement of up to 98% in memory streaming bandwidth for Lenovo V3 AMD servers using DDR5 over Lenovo first generation AMD servers using DDR4.[2]
- Lenovo V3 servers with AMD processors offer up to 123% performance improvement over the previous generation.[3]

#2. A secure, reliable modern infrastructure

As servers age, vulnerabilities can start to show in your infrastructure – from components that can fail to a greater risk of security breaches.

The costs associated with security incidents grew almost 50% in 2022, totaling $10.3 billion – FBI[4]

With both security and reliability concerns constantly threatening uptime, upgrading to a well-supported modern infrastructure is vital to helping ensure your operations run smoothly.

We implement strict protocols and security solutions at every stage of design, development, and deployment, which is why our ThinkSystem and ThinkAgile solutions have achieved...

- **#1 in reliability for 9 years[5]**
- **#1 in security for 4 years[6]**

This means you can have confidence in your technology, ensure uptime, drive growth, and reduce the financial and reputational risks of failing to meet security requirements.

#3. Simple management and maintenance

The cost and complexity of maintenance is one of the biggest drawbacks of an outdated infrastructure.

Upgrading offers the perfect opportunity to simplify your mixed-processor environment, and we have a variety of systems and tools in place to make your migration and ongoing management as simple as possible including:

- **Lenovo TruScale:** Lenovo TruScale is an as-a-Service delivery model designed to take the complexity out of provisioning, upgrading, and managing your infrastructure with some of the most powerful, reliable, and secure servers and processors on the market.
- **Automated migration:** The VMware Architecture Migration Tool allows you to migrate virtual machines between servers with minimal disruption.
- **Lenovo XClarity Administrator:** This centralized resource management platform enables you to monitor performance, push updates, manage data storage and more.

Lenovo | AMD

#4. A boost for your sustainability initiatives

Sustainability is high on the agenda for everyone—and a modern, more energy efficient infrastructure can help.

Lenovo and AMD are pioneers of energy efficient products, features and initiatives:

- Lenovo's 5th generation Neptune Liquid Cooling captures up to 100% of the heat* generated by servers.[7]

- Our Titanium Power Supplies are up to 94% efficient; combined with Neptune Liquid Cooling, you can increase your power efficiency by up to 40%.[8]

- Lenovo's hardware-agnostic asset buyback program responsibly recycles retired servers.

*depending on specific environment

➔ Ready to get started?

Let's talk about your modernization journey

[1] https://www.amd.com/en/processors/epyc-world-records as of October 19, 2023
[2] Based on Lenovo internal testing comparing the memory bandwidth of Lenovo ThinkSystem V3 servers with AMD Genoa (12 channels of DDR5 @ 4800) to Lenovo ThinkSystem servers with AMD Milan (8 channels of DDR4 @ 3200).
[3] Lenovo SR675 V3 with two 2.55 GHz AMD EPYC 9684X processors achieved a SPECrate®2017_fp_base score of 1570 compared to 702 for the Lenovo ThinkSystem SR665 with two 2.20 GHz AMD EPYC 7773X processors. See https://www.spec.org/cpu2017/results/res2023q3/cpu2017-20230828-38895.html and https://www.spec.org/cpu2017/results/res2022q3/cpu2017-20220704-32171.html for complete details. Results are current as of Oct 18, 2023. See http://www.spec.org for additional information. SPEC®, SPEC ACCEL®, SPEC CPU®, SPEC MPI®, SPEC OMP®, SPEC VIRT_SC®, SPEC VIRT®, SPEChpc™, SPECjbb®, and SPECpower_ssj® are trademarks of the Standard Performance Evaluation Corporation (SPEC).
[4] https://www.ic3.gov/Media/PDF/AnnualReport/2022_IC3Report.pdf
[5] Among all x86 servers. https://lenovopress.lenovo.com/lp1117-itic-reliability-study
[6] Among all x86 servers. https://www.lenovo.com/us/en/resources/data-center-solutions/analyst-reports/itic-global-server-hardware-security-survey-2022/
[7] https://lenovopress.lenovo.com/lp1612-lenovo-thinksystem-sd665-v3-server
[8] https://lenovopress.lenovo.com/lp1612-lenovo-thinksystem-sd665-v3-server