Modernize your Infrastructure for the new era of IT

Lenovo

Organizations of all sizes realize the growing, and necessary, expense to run an IT infrastructure. Reliant on the data management it provides, they cannot afford unplanned downtime due to equipment failure, security breaches, complexity, or inefficient operations.

Today, IT decision-makers require an open architecture with simple management providing the flexibility, performance, and security they need to pursue a hybrid multi-cloud strategy. They also need support and technical expertise to navigate technology trends, diverse workloads, changes in deployment models, applications, use cases, and internal business requirements. There is also the overarching requirement to do more with less while staying ahead of the competition.

Infrastructure Modernization is one of the top three Enterprise IT goals (IDG, 2022) and IDC data shows that 71% of organizations view application modernization as a top priority today. That goal is expected to surge to 84% over the next three years. But IT modernization is fraught with unknowns. What's the business cost? What's the risk? What will break and how badly? Providing answers is vital. That's why Lenovo helps customers modernize their infrastructures for the new era of hybrid multi-cloud IT with **High Performance, Secure and Reliable** solutions, **Simplified Management**, and a focus on **Sustainability**.

This "new era of IT" encompasses many of the same requirements IT decision-makers have had for years, but with data growing at an exponentially fast pace, those requirements have become much more pressing, making the transition to a modern infrastructure an immediate priority.

To create a smooth migration into a new-era IT infrastructure, organizations need reliable solutions from a trusted partner who takes accountability seriously and understands their needs. They need a proven partner who offers innovative, edge-to-cloud solutions using open standards that help ensure equipment compatibility across various hardware and software offerings. Lenovo's innovative edge-to-cloud portfolio provides an open architecture model ensuring our clients can easily integrate our solutions with an existing infrastructure. Our experts work with you to find the right solution for your unique set of requirements. We couple our expertise and our innovation with a broad array of worldwide consulting, system design, and services to help clients, no matter where they are in the infrastructure modernization process.

Improve Performance to support demanding workloads

When running new-era IT applications like AI, virtualized environments, and cloud-native workloads, IT infrastructures must deliver high performance and faster time-to-insights to match their full potential. When implemented correctly, these types of applications help organizations drive better outcomes for their internal and external customers. Lenovo's new ThinkSystem and ThinkAgile V3 portfolio of servers brings the improvement in performance needed to easily manage new-era IT applications.

ThinkSystem and ThinkAgile V3 Performance Improvements:

100% more Virtual Machines	DDR5 Memory with 50% more bandwidth to support faster time to insight	Increased performance with the latest processors from Intel® and AMD	PCIe Gen 5 with 2x I/O bandwidth for virtualization and AI

Improved performance helps an organization realize benefits beyond solely managing new-era workloads. Modern IT infrastructures can also improve the overall total cost of ownership by consolidating workloads, extending the life of a data center, improving performance per watt of energy, and increasing IT staff productivity.

Lenovo's ThinkSystem V3 Servers help balance TCO:

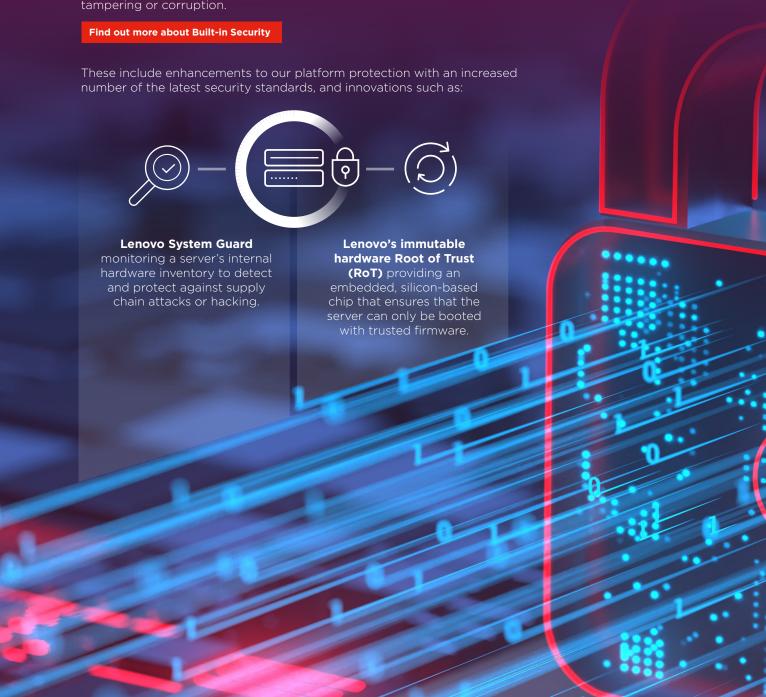| **3-to-1** system/rack consolidation	**53%** better performance per watt	**68%** lower acquisition cost	**35%** less total system power

Lenovo's 30 years of innovation enables us to deliver unique, high-performance solutions to our customers. Our ThinkSystem and ThinkAgile V3 is a performance-optimized portfolio created using Lenovo's expertise, deep product innovation, and partnership with industry leaders like AMD, Intel®, NVIDIA and others.

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Build in Security and Reliability for a worry-free infrastructure

Cyberthreats are constantly growing, and modern IT infrastructure must be fortified to resist them. In March 2023, the release of the annual FBI Internet Crime Report 2022 revealed that while the total number of complaints logged by the FBI in 2022 leveled off at just over 800,000, the monetary consequences increased dramatically, rising from an estimated $6.9 billion in 2021 to $10.3 billion in 2022. At Lenovo, we recognize that security is one of the most critical requirements that organizations have today, and we include it in our products from design to decommission.

Lenovo gives customers confidence by providing secure and reliable smart infrastructure solutions, as illustrated below:

- **Recognized leader in Security and Reliability:** According to ITIC, Lenovo is the leader in reliability and security among all x86 platforms. Our leadership in reliability has continued for nine years, and our leadership in security for four years. Lenovo ISG's product security program begins with our award-winning secure supply chain. It continues with secure business processes throughout the development life cycle, resulting in products that have security built-in, helping our customers protect their infrastructures from cyberattacks.

- **Built-in Security:** We take every measure throughout our design, development, and shipping process to give our customers peace of mind that their IT infrastructures are secure. Our ThinkSystem and ThinkAgile V3 offerings incorporate significant new capabilities to protect against attacks, detect attacks if they occur, and recover from attacks quickly in the unlikely event of tampering or corruption.

Find out more about Built-in Security

These include enhancements to our platform protection with an increased number of the latest security standards, and innovations such as:

Lenovo System Guard monitoring a server's internal hardware inventory to detect and protect against supply chain attacks or hacking.

Lenovo's immutable hardware Root of Trust (RoT) providing an embedded, silicon-based chip that ensures that the server can only be booted with trusted firmware.

Manage infrastructure and data from Edge to Cloud

Modern IT infrastructure is moving increasingly from data-center-focused to encompassing complete edge-to-cloud solutions. Migrating to an edge-to-cloud model can be challenging, requiring seamless management and effective use of hybrid cloud solutions to succeed. Hybrid clouds allow for the optimization of workload placement and appropriate data placement for governance and security compliance.

Lenovo provides a comprehensive portfolio of hardware, software, services, and expert consulting to help IT leaders plan, architect, and execute hybrid cloud strategies built on the latest technology. Our solutions help customers develop and deploy optimized edge-to-cloud infrastructures, delivering better manageability and transparency.

Lenovo innovations help organizations optimize resource utilization, monitor consumption, and track data workflow.

✓ Simplified Management Experience

Lenovo XClarity Management Software provides an easy, one-stop management platform across the entire Lenovo data center and edge devices. Customers no longer must work in separate applications and screens to ensure their edge devices are online, up-to-date, operating efficiently, and delivering the data they need to make important business decisions, fast. Customers get device management capabilities with minimal footprint and scalable architecture, whether on-prem or in the cloud. And Lenovo Open Cloud Automation (LOC-A) allows customers to enjoy speedier ROI and insights by saving time and money—and reducing their carbon footprint—by automating all the manual tasks required to get an entire edge infrastructure up and running, allowing it to happen at any scale in hours, not days or weeks as would have been required previously.

Find out more

✓ ThinkAgile Software-Defined solutions

From the simplest hyperconverged building blocks of a software-defined data center to more complex cloud solutions, Lenovo offers a variety of approaches tailored for the needs of any organization. Lenovo ThinkAgile products are engineered to simplify the user experience with software-defined infrastructure, designed to adapt to changing IT needs while reducing complexity and cost created by silos in traditional IT. Pre-integrated, prebuilt and pre-tested offerings accelerate application deployment and add robust capabilities to your data center faster.

Find out more

✓ Flexible Data Management Solutions

Today, data management solutions need to be economical, reliable, secure, and scalable. The ability to distribute, protect, analyze, and manage data is vital to an organization's business and customer success strategy. Lenovo is helping customers across a variety of high-growth industries to modernize their data management infrastructure with solutions that flexibly scale across hybrid multi-cloud environments, enable quick deployment of new services, and efficiently process growing amounts of data.

Find out more

✓ Lenovo TruScale Infrastructure as a Service

For organizations who do not want the complexity of managing, upgrading, and provisioning their infrastructure, Lenovo offers TruScale Infrastructure Services to give you all the power and strategic advantage of the latest data center hardware through a pay-as-you-go business model. This allows you to easily scale without incremental capital investments and focus on your bigger picture thanks to included 24/7 proactive monitoring, management, and services. With TruScale, your IT is right-sized, easily scalable, secure and up to date with the latest Lenovo hardware and faster refresh cycles.

Find out more

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Reach your Sustainability goals by partnering with Lenovo

Research from International Data Corporation (IDC) shows that environmental, social, and governance (ESG) issues have become a CEO-level topic for organizations worldwide. The World Economic Forum has stated that "Embedding sustainability in strategy is essential to meet evolving investor pressure, consumer demand, and regulatory requirements." Furthermore, sustainability reduces costs and can affect operating profits by up to 60%, according to McKinsey & Company.

Lenovo has been recognized as one of the world's 100 most sustainable companies by Corporate Knights, and we share our expertise and technology to help our customers on their sustainability journeys. We can help you as well:

• **Lenovo Sustainability** Solutions equip and empower customers to pursue their sustainability goals with smarter solutions from manufacturing through decommissioning – through sustainable technology, energy efficiency, and smarter climate action. We put our experience, insight, and global partnerships to work, helping you embed sustainability in your organization, rethink and measure sustainable performance, and access the right solutions to turn ambition into action.

• **Balancing performance with efficiency**, our patented **Lenovo Neptune**™ direct water-cooling provides effective data center cooling for every component inside the system producing heat – utilizing liquid-cooling technologies, ensuring no performance trade-offs, and reducing data center energy costs by up to 40%.

40% Lower Power Consumption	**95%** Heat Removal Efficiency	**12.3%** Power Saving
Up to 40% reduction in power costs resulting from a 3.5x improvement in thermal efficiencies vs. air cooled.	Optimized CPU heatsink designs lead to quicker heat removal and lower CPU power.	Open Loop delivers an additional 12.3% power saving per server in a datacenter.

Find out more

• **Lenovo TruScale Infrastructure** as a Service provides customers with accurate utilization technology, eliminating over-provisioning and optimizing energy consumption. Lenovo's TruScale Metering Services provide transparent data to budget, plan, and manage your IT infrastructure more efficiently. It also helps monitor power consumption, utilization, and temperature in the data center and gives you visibility into your infrastructure's health.

• **Reduce, reuse, recycle** – Our rack integration in manufacturing and our new server packaging solutions reduce cardboard and plastic waste along with carbon emissions while utilizing 100% recyclable packaging materials. Lenovo helps you focus on circularity with device end-of-life strategies. Lenovo Asset Recovery Services helps mitigate security concerns and maximize asset value, keeping resources circulating wherever possible and recycling in an environmentally conscious way. Hardware-agnostic buybacks also help fund future IT investments.

Factory integrated racks save 3.5 million pounds of cardboard and 1.8 million pounds of plastic over 5 years.[1]

The value of modernization

Lenovo believes that for organizations to run new-era IT applications efficiently and effectively, they need to adopt a modern IT infrastructure. They need to adopt a hybrid cloud model which spans their infrastructure from edge-to-cloud - keeping up with today's demands, requirements, and expectations. Legacy systems present many challenges in today's IT, and customers need to modernize to gain business value, remain competitive, and mitigate inefficiencies. An effective infrastructure needs to safeguard data, meet compliance regulations, be globally accessible, and scale as the business grows.

Let's talk

Lenovo can help you modernize your infrastructure to improve your performance, reliability and security, edge to cloud manageability, and make progress toward your sustainability goals. And our professional services can help you assess your current infrastructure, your organization and your business imperatives and map a way forward to help you with your infrastructure modernization journey. Contact us today to get started!

Contact Lenovo

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