

Enhancing energy efficiency in the era of AI

Lenovo | AMD



How to scale and evolve your AI operations while optimizing energy efficiency, performance, and cost

AI workloads require more power

46%

of total datacenter budgets are spent on electricity.¹

AI will only drive greater datacenter capacity, power consumption and emissions.²

Does that mean you should abandon your AI initiatives now – along with the cutting-edge innovation, customer satisfaction and competitive advantage?

No. There is another way.

Optimize for efficiency

Advance your cost and sustainability goals with ultra-efficient infrastructure from Lenovo and AMD.



Energy-efficient servers



Modern cooling systems



Predictive management tools



Fewer servers



Enjoy leadership performance per watt...

Lenovo servers, powered by AMD EPYC™ processors, are among the world's most energy-efficient servers.

94%

Lenovo V3 servers with AMD processors offer 80 PLUS Platinum or Titanium certified power supplies – up to 94% efficient.³

Double your speeds...

123%

Up to 123% increased performance improvement vs. previous generation with Lenovo V3 servers with AMD processors.⁴

And lower your data center footprint...

3:1

Up to 3:1 server consolidation vs. older servers with Lenovo V3 servers running on AMD EPYC processors.⁵

Take the heat off your costs

Combined Air and Lenovo Neptune® Liquid Cooling

Reduce power consumption while enabling GPU-optimized AI solutions with Lenovo's innovative liquid-to-air and direct water-cooling options for AI installations.

Up to **100%** heat captured ⁶

40% reduced power consumption ⁷

3.5x thermal efficiencies vs. air-cooling ⁸

Available on ThinkSystem SR675 V3, ThinkSystem SD665 V3, ThinkSystem SD665-N V3, ThinkSystem SR645 V3, ThinkSystem SR665 V3, ThinkSystem SR685a V3

Lenovo servers with AMD EPYC processors helped a leading managed service provider in France maintain high performance while reducing energy consumption at its new data centers.

30% lower power consumption

30% reduced in heat emissions

40% increase in application performance

[Read case study >](#)

Improve the efficiency with automation and support

Automate AI management

Lower energy consumption further while freeing up time and resources with self-healing, self-optimizing infrastructure.

XClarity One powered by AIOps

- Industry first⁹ AI-powered hybrid cloud-based unified Management-as-a-Service
- Provides autonomous hardware operations & workload optimization

Optimize datacenter performance

Ensure you're getting maximum power and efficiency from your infrastructure with help from advanced technicians with Lenovo Premier Support for Datacenters.



Single point of contact



Rapid diagnosis



End-to-end problem resolution



Third-party collaborative software support & assistance

Meet changing business needs with Lenovo TruScale for HPC

Access on-prem and hybrid cloud HPC options on-demand. Manage costs and emissions by only using what you need, when you need it – with help from HPC schedulers.

Discover how Lenovo and AMD can help optimize your AI operations efficiently and effectively.

[Learn More](#)



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¹ IDC, "IDC Report Reveals AI-Driven Growth in Datacenter Energy Consumption, Predicts Surge in Datacenter Facility Spending Amid Rising Electricity Costs," September 2024
² IDC, "IDC Report Reveals AI-Driven Growth in Datacenter Energy Consumption, Predicts Surge in Datacenter Facility Spending Amid Rising Electricity Costs," September 2024
³ CLEARResult, "What does Bronze, Silver, Gold, Platinum, and Titanium PSU (power supply units) rating mean?" 2024
⁴ Claim: "Lenovo V3 servers with AMD processors offer up to 123% performance improvement over the previous generation"
VMmark 3.1x results, as of 10/20/23. Two Lenovo ThinkSystem SR665 V3 servers, each with two AMD EPYC 9654 processors, scored 40.66 @ 42 tiles. See <https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2024-05-15/Lenovo-ThinkSystem-SR665V3.pdf> for further details. Two HPE servers, each with two AMD EPYC 7702 processors, scored 12.78 @ 14 tiles. See <https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2019-08-07-HPE-ProLiant-DL385Gen10.pdf> for further details. To find out more about VMmark, visit <https://www.vmware.com/products/vmmark.html>. VMware® and VMmark® are trademarks or registered trademarks of VMware, Inc. VMware VMmark is a product of VMware, Inc. Actual consolidation results will vary based on many factors.
⁵ Claim: "Lenovo V3 servers with 4th generation AMD EPYC™ processors offer up to 3:1 server consolidation over older servers."
...or "Achieve 3:1 server consolidation" or "ThinkSystem V3 servers with 4th generation AMD EPYC processors make 3:1 server consolidation possible for virtualized workloads when compared with second-generation AMD EPYC processors."
⁶ <https://news.lenovo.com/pressroom/press-releases/wins-seal-sustainability-environmental-achievement-and-leadership/>
⁷ <https://news.lenovo.com/pressroom/press-releases/lenovo-delivers-next-gen-of-intel-based-infrastructure-solutions-to-simplify-ai-journey>
⁸ <https://news.lenovo.com/pressroom/press-releases/lenovo-delivers-next-gen-of-intel-based-infrastructure-solutions-to-simplify-ai-journey>
⁹ <https://news.lenovo.com/pressroom/press-releases/lenovo-delivers-next-gen-of-intel-based-infrastructure-solutions-to-simplify-ai-journey>