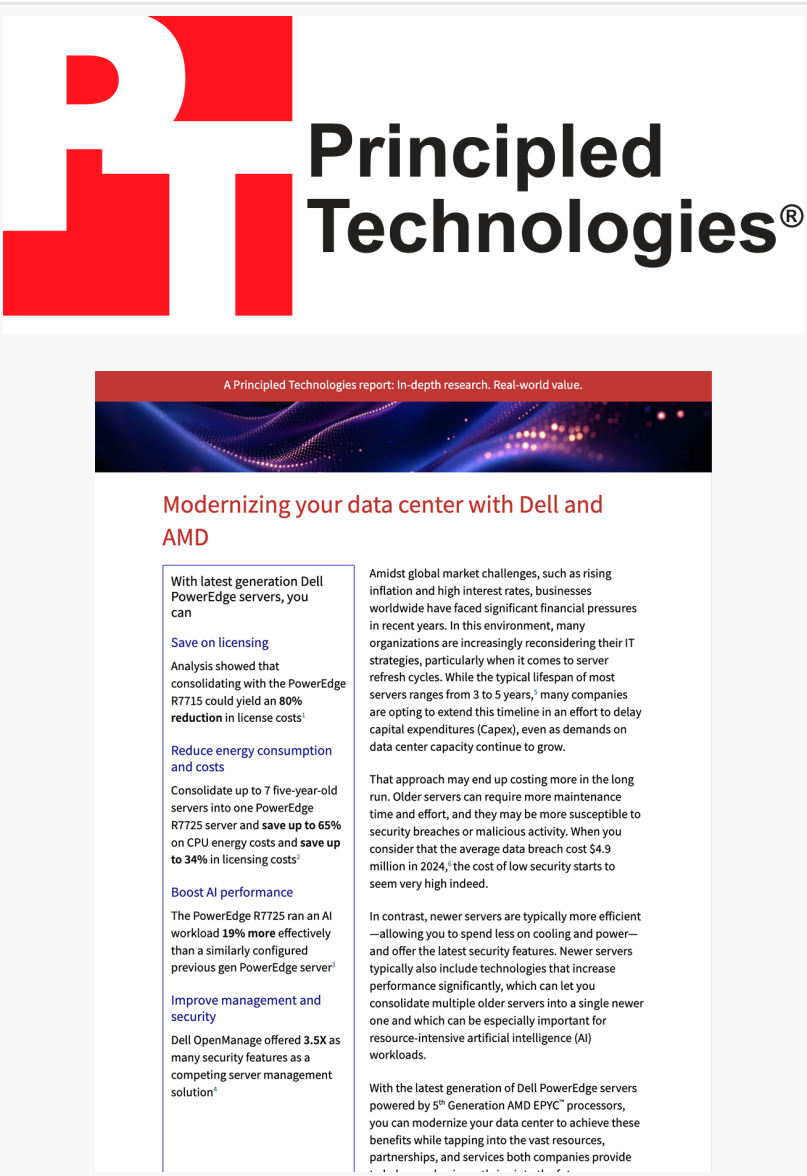
New Principled Technologies study reveals how modernizing data centers with Dell PowerEdge servers can help save money

Dell PowerEdge servers with 5th Gen AMD EPYC Processors can deliver benefits in license and power cost savings, performance, security, and energy efficiency



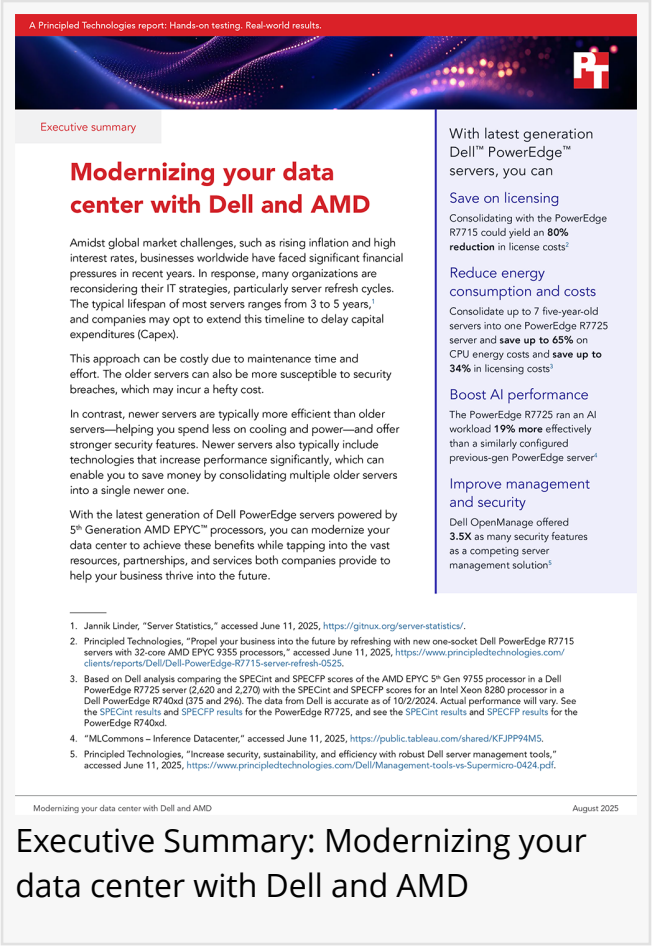
Report: Modernizing your data center with Dell and AMD

ROUND ROCK, TX, UNITED STATES, August 15, 2025 /EINPresswire.com/ -- Principled Technologies (PT) released a research report highlighting the benefits of upgrading data center infrastructure with the latest generation of Dell PowerEdge servers equipped with 5th Generation AMD EPYC processors. The report draws on hands-on testing conducted by PT in previous studies, as well as other published test results. Their findings demonstrate how organizations can achieve significant cost savings, enhanced performance, improved security, and greater energy efficiency through server modernization and workload consolidation.

In light of rising financial pressures from global economic challenges, many businesses have delayed server refresh cycles, risking higher maintenance costs and increased vulnerability to cyber threats. PT research reveals that investing in latest-gen Dell PowerEdge servers not only potentially reduces licensing expenses—with savings of up to 80 percent with the PowerEdge R7715—but also can boost AI and transactional database performance by up to

19 percent and 63 percent, respectively. Consolidation potential is substantial; for example, one PowerEdge R7725 server can replace up to 13 older servers while cutting VMware vSphere license costs by nearly 40 percent.

The report also highlights advanced cooling innovations such as Dell Smart Flow air cooling and direct liquid cooling options, which improve thermal efficiency and can reduce power consumption by over 60 percent compared to legacy systems. These features support sustainability goals while maintaining high reliability under demanding workloads. Security is another cornerstone, with Dell Cyber Resilient Architecture and AMD Infinity Guard delivering multilayered protection aligned with NIST frameworks, ensuring robust defense against modern cyber threats.


A Principled Technologies report: Hands-on testing. Real-world results.

Executive summary

Modernizing your data center with Dell and AMD

Amidst global market challenges, such as rising inflation and high interest rates, businesses worldwide have faced significant financial pressures in recent years. In response, many organizations are reconsidering their IT strategies, particularly server refresh cycles. The typical lifespan of most servers ranges from 3 to 5 years,[1] and companies may opt to extend this timeline to delay capital expenditures (Capex).

This approach can be costly due to maintenance time and effort. The older servers can also be more susceptible to security breaches, which may incur a hefty cost.

In contrast, newer servers are typically more efficient than older servers—helping you spend less on cooling and power—and offer stronger security features. Newer servers also typically include technologies that increase performance significantly, which can enable you to save money by consolidating multiple older servers into a single newer one.

With the latest generation of Dell PowerEdge servers powered by 5th Generation AMD EPYC™ processors, you can modernize your data center to achieve these benefits while tapping into the vast resources, partnerships, and services both companies provide to help your business thrive into the future.

With latest generation Dell™ PowerEdge™ servers, you can

Save on licensing

Consolidating with the PowerEdge R7715 could yield an **80% reduction** in license costs[2]

Reduce energy consumption and costs

Consolidate up to 7 five-year-old servers into one PowerEdge R7725 server and **save up to 65%** on CPU energy costs and **save up to 34%** in licensing costs[3]

Boost AI performance

The PowerEdge R7725 ran an AI workload **19% more** effectively than a similarly configured previous-gen PowerEdge server[4]

Improve management and security

Dell OpenManage offered **3.5X** as many security features as a competing server management solution[5]

1. Jannik Linder, "Server Statistics," accessed June 11, 2025, https://gitnux.org/server-statistics/.
2. Principled Technologies, "Propel your business into the future by refreshing with new one-socket Dell PowerEdge R7715 servers with 32-core AMD EPYC 9355 processors," accessed June 11, 2025, https://www.principledtechnologies.com/clients/reports/Dell/Dell-PowerEdge-R7715-server-refresh-0525.
3. Based on Dell analysis comparing the SPECint and SPECFP scores of the AMD EPYC 5th Gen 9755 processor in a Dell PowerEdge R7725 server (2,620 and 2,270) with the SPECint and SPECFP scores for an Intel Xeon 8280 processor in a Dell PowerEdge R740xd (375 and 296). The data from Dell is accurate as of 10/2/2024. Actual performance will vary. See the SPECint results and SPECFP results for the PowerEdge R7725, and see the SPECint results and SPECFP results for the PowerEdge R740xd.
4. "MLCommons – Inference Datacenter," accessed June 11, 2025, https://public.tableau.com/shared/KFJPP94M5.
5. Principled Technologies, "Increase security, sustainability, and efficiency with robust Dell server management tools," accessed June 11, 2025, https://www.principledtechnologies.com/Dell/Management-tools-vs-Supermicro-0424.pdf.

Modernizing your data center with Dell and AMD August 2025

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Small and medium-sized businesses also stand to benefit from scalable performance, simplified management via Dell OpenManage, and reduced operational costs. As data volumes surge globally, these servers can provide the capacity and flexibility needed to handle growing analytics, virtualization, and AI workloads efficiently.

To learn more, read the in-depth research report at https://facts.pt/Q4j42yY or the executive summary at https://facts.pt/rR2LQUy.

About Principled Technologies, Inc.
Principled Technologies, Inc. is the leading provider of technology marketing and learning & development services.

Principled Technologies, Inc. is located in Durham, North Carolina, USA. For more information, please visit www.principledtechnologies.com.

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