



## Next-Generation Dell PowerEdge Servers Dramatically Improve Performance for More Sustainable Data Centers

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*Enhanced compute with 4th Generation AMD EPYC processors supports more applications in less space and helps manage power consumption*

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### News summary

- Dell PowerEdge servers with 4<sup>th</sup> generation AMD EPYC™ processors can more than double performance of previous systems<sup>1</sup>
- Increased power efficiency designed to support more sustainable data centers with advanced cooling technology to help reduce power consumption
- Built-in cybersecurity operations helps protect customers' sensitive data

### Full story

Dell Technologies (NYSE:DELL) announces the next generation of Dell PowerEdge servers with 4th Generation AMD EPYC processors. With their highest application performance to date, these new systems are designed to help customers more effectively power today's demanding, compute-centric workloads such as data analytics.

Designed for efficiency and security in mind, the new PowerEdge Servers are equipped with Dell's Smart Cooling technology to help reduce [CO<sub>2</sub> emissions](#) and a built-in cyber resilient architecture to help reinforce customers' security efforts.

"Customers demand uncompromised compute performance delivered in the most sustainable manner possible. Our latest PowerEdge servers are purpose built to meet the needs of today's demanding workloads with efficiency and resiliency," said Rajesh Pohani, vice president of portfolio and product management for PowerEdge, HPC and Core Compute at Dell Technologies. "With up to double the performance of the previous generation, combined with the latest in power and cooling innovations, these servers are designed to meet the growing demands of our customers."

### More performance and storage options for the data center of the future

The next generation of Dell PowerEdge servers with 4<sup>th</sup> generation AMD EPYC processors provides performance and storage advancements while integrating into existing customer environments. The servers are well-suited for organizations with advanced workloads such as data analytics, AI, high performance computing (HPC) and virtualization.

Available in one- and two-socket configurations, with support for as much as 50% more processor cores compared to the previous generation, the latest systems offer the highest performance to date for AMD-powered PowerEdge servers.<sup>1</sup> Customers can expect up to a 121% performance improvement, up to 33% more front drive count for 2U servers and up to 60% higher front drive count for 1U servers.<sup>2</sup>

- **PowerEdge R7625** offers increased application performance and data storage. With the performance of dual 4<sup>th</sup> generation AMD EPYC processors, this server is designed to be the backbone of a data center. This 2-socket, 2U platform has proven to accelerate in-memory databases by over 72% surpassing all other 2- and 4-socket SAP Sales & Distributions submissions, achieving a new world record.<sup>3</sup>
- **PowerEdge R7615** is a one-socket, 2U server with a faster memory bandwidth than previous generations. Improved drive density is designed to complete multiple jobs faster with a smaller data center footprint. This platform accelerates AI workloads with maximum accelerated expansion capabilities, achieving an AI benchmark world record.<sup>4</sup>
- **PowerEdge R6625** is a two-socket, 1U server delivering the optimal balance in performance, flexibility and density. The system is suited for HPC workloads or running multiple virtual desktop infrastructure instances.
- **PowerEdge R6615** is a one-socket, 1U server that offers more virtual machine density than previous generations. The thin design offers increased compute power in a dense form factor, limiting data center footprint expansion without losing performance.

"AMD and Dell Technologies are committed to delivering leadership products that help organizations improve the performance and efficiency of their data centers while also working toward a more sustainable future," said Ram Peddibhotla, corporate vice president, EPYC product management, AMD. "With the launch of Dell PowerEdge servers, powered by 4th Gen AMD EPYC processors, we continue to break performance records while delivering on the most stringent environmental goals and business outcomes our joint customers demand."

### For sustainable data centers, less is more

Built with sustainability in mind, the servers offer advancements in Dell [Smart Cooling](#) technology that allow for more airflow through the systems than

previous generations, keeping them cool while performing at the highest levels for long periods of time.

With greater core density, organizations can replace older, less efficient servers with next generation PowerEdge servers designed to reduce heat generated, energy consumed and the burden on other resources required to power the systems. In particular, the PowerEdge R7625 delivers up to 55% greater processor performance efficiency compared to previous models.<sup>5</sup>

The new servers reinforce Dell's commitment to source recycled or renewable materials in more than half of Dell product content by 2030. In addition, when shipping multiple servers at once with Dell's multipack option, these servers are delivered more sustainably, reducing the number of boxes and materials it takes to ship the systems.

"Like many, we follow the CPU market carefully and look forward to seeing the next generation PowerEdge servers accelerate our potential," said Dr. Matthew Storey, head of Storage and Virtualization at Lancaster University. "The new servers help address our ever-growing needs for more innovative and powerful solutions and put us on the leading edge of our industry while delivering a state-of-the-art research environment to our users."

### **Building modern, scalable and more secure IT**

As cybersecurity threats evolve, so have the built-in security features in PowerEdge servers. Anchored with Dell's cyber resilient architecture, the servers include features like system lockdown, drift detection and multifactor authentication. The next-generation systems enable a more secure operation with end-to-end boot resilience, helping to establish a data center with safety at its core.

With a dedicated, fully integrated on-die security processor, the 4th generation AMD EPYC processors help enable innovative technologies like confidential computing. In addition, AMD's "Security by Design" approach includes an embedded security subsystem to help protect data and expand on the [AMD Infinity Guard](#) security feature set, continuing to add layers for both physical and virtual security.

Coupled with Dell iDRAC, these servers record details of the server hardware and firmware build at the time of manufacturing. Using Dell's Secured Component Verification (SCV) supply chain assurance, organizations can verify the PowerEdge server arrived as ordered and built from the factory.

"Continued innovation in server performance is critical to ensuring companies have the tools they need to address an increasingly data-centric and real-time world," said Kuba Stolarski, vice president within IDC's enterprise infrastructure practice. "With advanced security features designed directly into the platform, Dell's new PowerEdge servers can help organizations keep pace with data proliferation in a growing threat environment. The improvements in performance can enable customers to implement AI, HPC and other modern workloads to extract the most value from their data and IT investment."

### **Availability**

- The Dell PowerEdge R7625 server is available globally in limited configurations in November 2022. The next generation servers have planned full global availability in February 2023.

### **Additional resources**

- [Learn more](#) details about Dell PowerEdge
- Connect with Dell via [Twitter](#) and [LinkedIn](#)

### **About Dell Technologies**

[Dell Technologies](#) (NYSE: DELL) helps organizations and individuals build their digital future and transform how they work, live and play. The company provides customers with the industry's broadest and most innovative technology and services portfolio for the data era.

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<sup>1</sup> Based on Dell analysis of submitted SPECintRate score of 1410 achieved on a Dell PowerEdge R7625 with AMD EPYC 9654s compared to the previous high score of 636 on a Dell PowerEdge R7525 with AMD EPYC 7763 processors as of 11/3/2022. Actual performance will vary

<sup>2</sup> Based on Dell analysis of submitted SPECintRate score of 1410 achieved on a Dell PowerEdge R7625 with AMD EPYC 9654s compared to the previous high score of 636 on a Dell PowerEdge R7525 with AMD EPYC 7763 processors as of 11/3/2022. Actual performance will vary. Storage Capacity on Dell internal analysis of available front drive slots going from a maximum of 24 drives in prior generation configurations to 32 E3.S drives config option in the latest gen 2U platforms and 10 to 16 drives for 1U platforms. Available storage will depend on configuration and drives chosen.

<sup>3</sup> Based on Dell analysis of the submitted world record score of 148000 benchmark users on the Dell PowerEdge R7625 compared to the previous world record score of 86000 Benchmark for PowerEdge R7525 users recorded on the SAP-SD page as of 11/3/2022. Actual results will vary

<sup>4</sup> Based on Dell analysis of submitted TPCx-AI scores for scale factors 3 and 10 as of 11/10/2022. Actual performance might vary.

<sup>5</sup> Based on Dell internal calculations using SPECintRate score of 1410 achieved on a Dell PowerEdge R7625 and a processor cTDP of 400W with AMD EPYC 9654 (96 core) processors compared to a score of 636 and cTDP of 280W on a Dell PowerEdge R7525 with AMD EPYC 7763 (64 core) processors. Actual performance will vary

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