

Dell Technologies Storage Advancements Accelerate AI and Generative AI Strategies

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News summary

- Dell PowerScale systems deliver up to a 200% performance improvement for streaming reads and writes to help customers more quickly access data for AI workloads
- Dell PowerScale OneFS software updates improve AI modeling capabilities for data preparation, training, fine-tuning and inferencing
- Dell PowerScale is expected to be the first ethernet storage solution validated on NVIDIA DGX SuperPOD, which will give customers increased flexibility, speed and ease for AI storage
- Dell APEX File Storage for Microsoft Azure delivers enterprise class file performance and capabilities to support demanding AI and ML workloads

Full story

Dell Technologies (NYSE: DELL) is helping customers achieve faster AI and generative AI (GenAI) performance with new enterprise data storage advancements and validation with the [NVIDIA DGX SuperPOD](#) AI infrastructure.

"Storage performance is a critical factor for successful AI and generative AI outcomes," said Arthur Lewis, president, Infrastructure Solutions Group, Dell Technologies. "Customers are relying on us to continually push the boundaries of storage innovation, including removing data access bottlenecks that limit the throughput and scalability of compute-intensive applications. We are addressing these needs by delivering fast, efficient and secure access to data and turning it into a proverbial goldmine of AI and GenAI possibilities."

Addressing the need for high performance and efficiency for AI storage

New advancements from Dell PowerScale, the world's most flexible,¹ secure² and efficient³ scale-out file storage system, address increasing customer demands for higher AI and GenAI performance.

Now, with PowerScale OneFS software enhancements, companies can prepare, train, fine-tune and inference AI models more quickly. With new PowerScale all-flash storage systems, based on latest generation Dell PowerEdge servers, customers will see up to a 2X performance increase for streaming reads and writes.⁴

"We make an engineering change every 17 minutes, a speed unachievable without a powerful IT infrastructure that underpins all of our processes," said Dan Keyworth, director of business technology, McLaren Racing. "Thanks to Dell PowerScale, we're equipped to leverage cutting-edge AI applications, combining high-performance storage with computing capabilities to create a winning formula for success."

PowerScale will offer a new smart scale-out capability to improve single compute node performance for enhanced GPU utilization, leading to faster storage throughput for AI training, checkpointing and inferencing.

"Dell continues to design its file and object storage solutions with the customer in mind, allowing them to modernize their infrastructure with an AI-ready foundation to support the most intensive workloads, such as generative AI," said Scott Sinclair, practice director, Enterprise Strategy Group. "With PowerScale's latest performance advances, customers can improve AI model training and fine-tuning to make better business decisions based on their data wherever it resides with increased speed and accuracy."

Dell PowerScale undergoes validation for NVIDIA DGX SuperPOD

Through Dell's collaboration with NVIDIA, customers will be able to take advantage of a validated combination of NVIDIA DGX systems, Dell PowerScale storage and NVIDIA Quantum-2 InfiniBand and Spectrum Ethernet networking to achieve faster and more efficient AI storage. Dell's solution is expected to be the first ethernet storage solution validated on NVIDIA DGX SuperPOD.

With Dell PowerScale becoming validated for NVIDIA DGX SuperPOD, NVIDIA's turnkey data center AI infrastructure solution, customers will be able to confidently accelerate their AI and GenAI initiatives with Dell's industry-leading network-attached storage.⁵ NVIDIA DGX SuperPOD includes the [NVIDIA AI Enterprise](#) software platform to provide a full-stack, secure and stable AI supercomputing solution.

Bringing AI to data wherever it resides

With nearly 87% of companies embracing multicloud strategies,⁶ Dell is giving customers the freedom to process data wherever it makes the most sense for them – on premises, at the edge or in public clouds.

Dell APEX File Storage for Microsoft Azure, the latest addition to the Dell APEX Storage for Public Cloud portfolio, delivers enterprise-class file

performance and management capabilities in Microsoft Azure. Customers will be able to easily meet the needs of performance-intensive AI and machine learning applications like Azure OpenAI Service and Azure AI Vision.

Dell APEX File Storage in AWS and Azure allows customers to take advantage of cloud-native AI and GenAI workflows on data in public clouds or on premises with improved data access and movement. For example, through Dell's expanding Databricks collaboration, customers can choose from a variety of large language models (LLMs) and use libraries from Databricks MosaicML to retrain a foundational model with their proprietary data stored in Dell APEX File Storage, offering flexibility across multicloud environments.

The Databricks collaboration builds on Dell's data management ecosystem partnerships to help customers accelerate AI and analytics efforts. Additionally, with Dell's planned open, [modern data lakehouse](#), customers can extract insights from data wherever it resides with the integration of Starburst's analytics software with Dell PowerEdge servers and Dell PowerScale, Dell ECS and Dell ObjectScale file and object storage systems.

Availability

- The Dell PowerScale OneFS software enhancements will be globally available this month.
- Next-generation all-flash Dell PowerScale systems and new smart scale-out feature will be globally available in the first half of 2024.
- Dell PowerScale is being validated with NVIDIA DGX SuperPOD, with expected completion in the first quarter of 2024.
- Dell APEX for File Storage for Microsoft Azure will be globally available in the first half of 2024.
- Dell APEX for File Storage integration with Databricks and MosaicML is available in AWS today and in Microsoft Azure in the first half of 2024.
- The Dell open, modern data lakehouse solution will be globally available in the first half of 2024.

Additional Resources

- [Learn more](#) about the Dell AI-Ready Platform
- [Learn more](#) about Dell PowerScale
- [Learn more](#) about Dell Data Management
- Blog: [Dell Named File and Object Storage Market Leader](#)
- Blog: [AI Anywhere on Data Everywhere](#)
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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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¹ Based on Dell analysis, February 2023.

² Based on Dell analysis comparing cyber-security software capabilities offered for Dell PowerScale vs. competitive products, October 2023.

³ Based on Dell analysis comparing efficiency-related features: data reduction, storage capacity, data protection, hardware, space, lifecycle management efficiency and ENERGY STAR certified configurations, June 2023.

⁴ Based on Dell preliminary testing. Oct 2023. Compares the latest generation PowerScale all-flash nodes with OneFS 9.7 vs. the previous generation PowerScale all-flash nodes with OneFS 9.4. Actual results may vary.

⁵ Dell is ranked #1 globally in NAS solutions for external OEM storage in IDC WW Quarterly Enterprise Storage Systems Tracker, 2023 Q2 historical release, September 7, 2023.

⁶ Flexera, 2023 State of the Cloud Report.

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