

Dell AI Data Platform with NVIDIA

Maximizing AI Performance with Dell and NVIDIA Unified Innovation

Why Dell and NVIDIA

Open

Innovate without limits using an open architecture that lets you integrate the best tools and frameworks. Our platform supports open standards like Iceberg and Delta Lake, eliminating vendor lock-in.

Flexible

Scale your AI DataOps for any data type. A modular approach allows you to scale incrementally and adapt to new workloads without overhauling existing systems.

Secure

Fortify your data and build trust. Advanced features like multi-tier encryption, immutable snapshots, and ransomware protection ensure data integrity throughout the AI lifecycle.

- Up to **40x faster** vector search index builds¹
- Up to **200% performance improvement** for streaming reads and writes²
- **Accelerated time-to-value** for AI projects

The Power of Partnership: Unleashing AI with Dell and NVIDIA

Enterprises are generating massive volumes of unstructured and multi-modal data — PDFs, emails, images, videos, logs, contracts, and customer interactions. Yet, most generative AI solutions only tap a fraction of this information. DIY approaches or patchwork tools break down because of systemic barriers that Dell and NVIDIA uniquely solve:



Heterogeneity of Enterprise Data

Every file format demands a different parsing, embedding, and retrieval method. Without a unified platform, teams are left managing silos, fragmented pipelines, and inconsistent outputs.



Continuous Change, Not Static Workloads

Enterprise knowledge and data are always evolving — regulations, contracts, product specs, and customer data change daily. Traditional, static models and brittle indexing pipelines can't keep up without repeated re-engineering.



Governance and Compliance Challenges

Security requirements like encryption at rest and in motion, role-based access, masking, audit logging, data sovereignty, and Zero Trust are now foundational. DIY stacks often lack these enterprise-grade controls, putting projects at risk for compliance failures and reputational harm.

The Cost of Scale

Indexing billions of files and embeddings, and keeping them refreshed, demands massive compute and storage infrastructure. Without the platform-level optimization of Dell and NVIDIA, costs can escalate quickly.

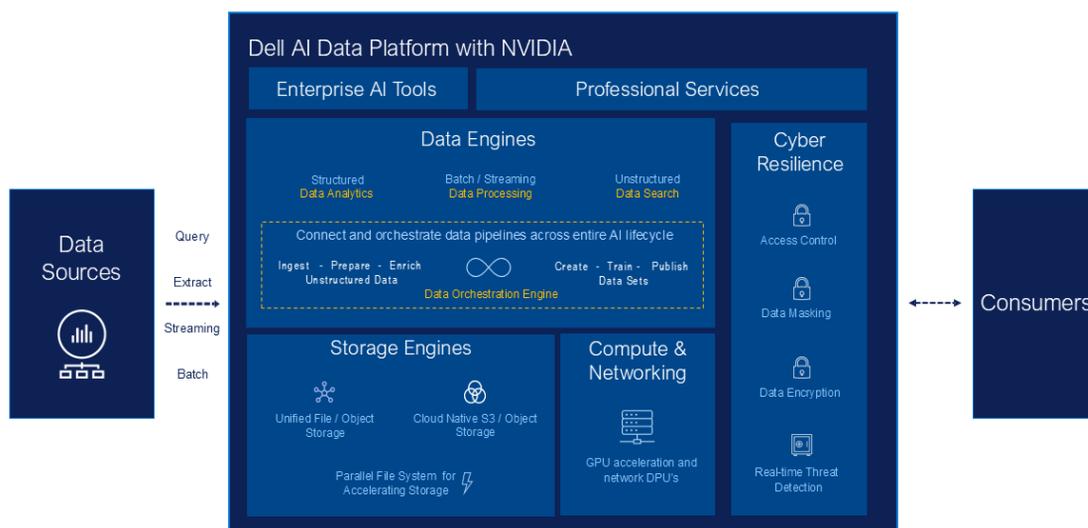
From raw data to AI insights, Dell and NVIDIA accelerate the journey with a purpose-built platform, letting you unlock the full value of your data — securely and on your terms for Agentic AI and beyond.

A Unified Platform for a New Era of AI

The Dell AI Data Platform with NVIDIA is a comprehensive reference architecture that unifies Dell's advanced infrastructure with NVIDIA's cutting-edge AI software. This modular, hybrid-ready solution simplifies the complexity of AI adoption by empowering both IT and data experts.

Empowering Teams with Accelerated Data Operations

- **AI-Optimized Data Processing:** Gain universal access to all enterprise data. Ingest, prepare, and curate information from any source, transforming scattered data into high-quality assets for analytics and AI. With NVIDIA RAPIDS, data processing pipelines are dramatically accelerated, running entirely on GPUs.
- **High-Performance Data Storage:** Achieve maximum efficiency for the most demanding AI workloads. The platform is optimized for every stage of the AI lifecycle, from data ingestion and model training to inferencing. Dell PowerScale storage delivers up to 200% performance improvement for streaming reads and writes, ensuring GPUs are fed data without bottlenecks.
- **End-to-End Data Protection:** Operate confidently with advanced security built-in. Features like multi-tier encryption, immutable snapshots, and air-gapped protection safeguard your mission-critical assets and ensure compliance throughout the AI lifecycle.



A Foundation Built for the Future

The Dell AI Data Platform with NVIDIA moves beyond the limitations of traditional, centralized architectures. By combining specialized engines for data, storage, and compute, it provides an open, flexible, and scalable foundation for AI success.

The Dell AI Data Platform with NVIDIA delivers a purpose-built, AI-optimized infrastructure that accelerates innovation and simplifies enterprise AI adoption. It brings together Dell's modular, scalable data engines and high-performance storage with NVIDIA's industry-leading GPU acceleration, providing unmatched performance, seamless integration, and enterprise-grade security.

Data Engines: The Brains of the Operation

Dell Data Engines, featuring technologies like Starburst and Spark, connect and organize your data. NVIDIA AI Enterprise integration, with tools like NVIDIA RAPIDS, accelerates these tasks, enabling up to 40x faster vector search to transform raw data into valuable insights.

Storage Engines: Performance and Efficiency at Scale

In AI, storage is crucial for performance. Dell PowerScale and ObjectScale are designed to manage all data types, ensuring your data is always secure and available for demanding workloads like Retrieval-Augmented Generation (RAG).

Accelerated Compute & Networking: The Powerhouse of AI

The platform runs on Dell PowerEdge servers equipped with NVIDIA RTX GPUs and BlueField DPUs. This pre-configured hardware frees up CPU resources and accelerates AI workloads from training to inference.

Fortified Data for Trusted Innovation

Security is built into the Dell AI Data Platform with NVIDIA. We offer comprehensive governance, including sensitive data masking, access controls, and multi-tier encryption. To protect against modern threats, the platform features advanced cyber-resilience with data isolation and air-gapped architecture, so you can innovate confidently.

Expert Guidance from Start to Scale

Dell Professional Services provides expertise to build a reliable, AI-ready data pipeline. We offer support across the entire lifecycle, from strategy to deployment. Our pre-validated Dell Blueprints, combining Dell and NVIDIA capabilities, streamline implementation and help you achieve business value faster.

Powering Innovation Across Industries

The Dell AI Data Platform with NVIDIA enables transformative use cases across sectors by turning enterprise data into a competitive advantage. Explore how this platform drives innovation in real-world scenarios:



[Video Search and Summarization](#)



[Biomedical Research Assistance](#)



[Predictive Maintenance](#)



[Cataloging Media Assets](#)

Move from Concept to Reality, Faster

Accelerate your AI success with a proven, integrated platform. Whether you need help aligning your data strategy, validating use cases, or deploying AI at scale, our experts are ready to help. Start your journey with an Accelerator Workshop or take advantage of our AI use case pilots to quickly demonstrate the value of your initiatives. With the combined power of Dell and NVIDIA, you gain the clarity, confidence, and momentum to achieve your AI goals.



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