Validated Design for Generative AI Solution Brief

Deploy high-performance Generative AI solutions for the enterprise

Unlock the power of large language models for accelerated enterprise AI outcomes with PowerEdge, PowerScale, NVIDIA AI Enterprise with NVIDIA NeMo framework.

Accelerate business outcomes and increase productivity.

Move quickly with GenAI: Innovation, performance and comprehensive solutions enable faster decision making and insights from your proprietary data and operations.

Streamline deployments: Scale purpose-built, custom models, reduce enablement complexity and democratize business-wide with consistent architectures.

Drive trusted AI: Deploy secure, high-quality on-premise foundation, with data privacy, boosting trusted decision-making from your data.

Use cases for Generative AI are expanding as the potential emerges to automate more repetitive tasks for employees, driving up productivity:

- Digital Assistants including retail, business operations, sales, Legal, HR and hiring, call center.
- Developer. Code generation and code efficiency, UI/UX design.
- Creative, sales and marketing scripting, creative content generation.
- Healthcare, research sciences, medical.

With Project Helix, in collaboration with NVIDIA, enterprises small and large across every industry and geography can harness the potential of Generative AI on their proprietary data business-wide, to accelerate productivity and enhance their business transformation strategy.

This jointly engineered solution, now a Dell Validated Design, of leading, innovative Dell infrastructure and software, combined with NVIDIA acceleration innovation, NVIDIA AI Enterprise software which includes NeMo, a framework of resources designed specifically to streamline Generative AI workstreams, gives AI data scientists, developers and decision-makers the solution they need to deliver critical guidance, recommendations and insights from billions of data points.

Streamline AI adoption for business transformation

Businesses have already kicked off and scaled many of their traditional Al initiatives into production, though many still encounter roadblocks to success to getting there, including deriving real value and ensuring data quality for accurate outcomes, the perceived complexity of Al from project planning to production and lifecycle, and technology deployment complexity. With new Al approaches like Generative AI (GenAI), the potential opportunities to extract and produce value from existing business data, enabling faster decision making and increasing productivity are tremendous.

While generative AI has the power to revolutionize industries, businesses are looking to ensure their approaches, data strategies, privacy, security and infrastructure are appropriately aligned. The complexity of harnessing AI results from these systems traditionally has been a barrier to deploying AI in production, with IT teams spending more time on deployment and lifecycle management than actual model development and innovation.

The DVD for GenAI delivers a series of full-stack solutions with technical expertise and pre-built tools based on Dell and NVIDIA infrastructure and software, including a complete blueprint to help enterprises use their proprietary data and more easily deploy generative AI on-premises responsibly and accurately. These Validated solutions helps companies to move quickly and deploy customized Generative AI applications that drive trusted decisions from their own data to grow and scale their businesses.



Learn more

- See Design Guide
- Al InfoHub
- delltechnologies.com/ai
- <u>Dell Technologies and NVIDIA</u>

NVIDIA AI Enterprise is an end to end, cloud native suite that helps you start your AI journey - without the need for AI expertise – through supported containers, frameworks and workflows. It's certified to run on NVIDIA Certified Systems[™] from Dell Technologies, and includes AI development and deployment tools, infrastructure optimization software, and global enterprise support to keep AI projects on track.

NVIDIA and Large Language Models: Unlock the power of large language models for enterprise AI with the <u>NVIDIA</u>. <u>NeMo™ framework</u> running on the NVIDIA AI platform provides enterprises the fastest path to customizing and deploying LLMs on-premise, on private and public clouds or accessing them through the API service.

Boost productivity business-wide

The DVD for GenAI will support the complete generative AI lifecycle from infrastructure provisioning, modeling, training, fine-tuning, application development and deployment to deploying inference and streamlining results. The validated designs based on high quality, AI-accelerated foundation solutions help enterprises quickly build on-premises generative AI infrastructure for scale. Businesses can now deliver the applications, models and operations that drives more insights and faster decisions, more cost-effectively and boosting productivity.

Technical Specifications

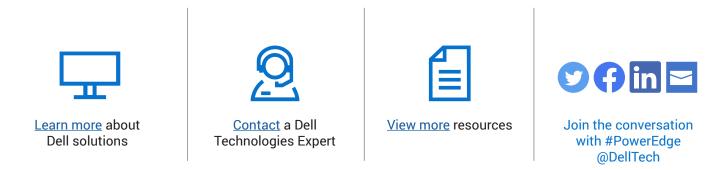
Configurations are based on the newest, Al-acceleration-optimized Dell <u>PowerEdge XE</u> and rack <u>servers</u>, leveraging the latest NVIDIA GPUs and the NVIDIA AI Enterprise with the NeMo framework to build, customize, and deploy generative AI models with billions of parameters. Fast, ample data lake storage for Generative AI and large language models is provided by <u>Dell PowerScale</u> all-flash or hybrid storage arrays.

Compute	Accelerators	Networking	Software	Storage
Compute Training: PowerEdge XE9680, XE8640, R760xa Inferencing: XE9680,	Accelerators Training: NVIDIA H100 Tensor Core GPUs with NVLink and NVSwitch. Inferencing:	Networking NVIDIA Networking, Dell PowerSwitch Z9432F	Software Dell OpenManage Enterprise, Power Manager, CloudIQ. NVIDIA AI Enterprise, Base Command	Storage Dell PowerScale F900, F600; Dell ECS Dell ObjectScale
XE8640, R760xa	NVIDIA H100,		and NeMo	
Management	A100, L40, L4		framework for	
and other. R660			LLMs	

As you seek to unlock the value of your proprietary business data into intelligent and smarter business outcomes, the DVD for GenAI delivers a strategic approach to adopt Generative AI validated foundations with PowerEdge, PowerScale and NVIDIA innovation which helps you simplify and speed LLM, GPT and NLP AI projects to production-AI results.

Dell Technologies and NVIDIA

Dell Technologies and NVIDIA work together to enable and accelerate Generative AI workloads, deliver engineering-validated hardware and software to accelerate AI, ML and DL workloads to meet customer needs across all businesses and verticals. With Dell Technologies and NVIDIA, you can deploy AI solutions to accelerate your digital transformation through real-time data that improves key decision-making, with solutions optimized for fastest time to value from your AI initiatives.



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