

The Kinetica Advantage

Kinetica is built on five pillars of success.

Unparalleled Speed

Dramatically accelerate analysis with advanced parallel computing

- In-memory GPU architecture with advanced GPU abstraction technology
- SQL queries to process and analyze billions of rows in microseconds
- Simpler data preparation through distributed ingestion and extraction without the need to index

Streaming Data Analysis

Ingest and process data at the same time to get instant results

- Run SQL queries on streaming and geospatial data
- Continuously collect, analyze, and integrate streaming data with historical data
- All-in-one solution to ingest, compute, visualize, and egress data

Visual Foresight

Instantly translate temporal, geospatial, and streaming data into visuals that reveal patterns and opportunities

- In-memory, distributed image processing and rendering
- Interactive visual discovery optimized for temporal and geospatial analysis
- Integrated visual dashboard

Streamlined Machine Learning

Train models faster and predict more accurately with integrated machine learning workflows

- Seamlessly integrate pre-existing code with highly scalable solution
- Simultaneously process & manage BI and AI workloads
- Integrate workflows with open source machine learning libraries

Best-in-Class Innovation Ecosystem

Kinetica partners with leaders in every category to deliver continuous cutting-edge innovation

- Innovate with leaders in GPUs, hardware, cloud, machine learning, and visualization
- Integrate into most data infrastructures
- Deploy on industry-standard hardware and scale linearly

Dell EMC OEM Solutions and Kinetica seamlessly work together to power business in motion for the Extreme Data Economy

Dell EMC provides technology that transforms with you so you can transform your business.

The Dell EMC PowerEdge R740 platform can easily be configured as a reliable, general-purpose server for real-time, business-critical applications, with scale-out storage, auto-mated management and high-availability features, such as:

- Redundant power supply units (PSUs)
- Hot-plug and swappable PSUs, HDDs and fans
- Dual SD card option for failsafe hypervisors

Kinetica is certified to run on Dell EMC PowerEdge servers, giving you exceptional performance and versatility for dynamic workloads as you quickly go from raw data to actionable insights and competitive advantages. Featuring greater expandability, more storage, and enhanced compute density, the R740 can handle nearly any workload configuration and can run intensive, mission-critical applications for both large and small enterprise environments. As an example of lightning-fast actionable insights, Dell EMC and Kinetica can work together to analyze 3.8 billion records of text and tweets from social media, filtered by location, in real time. This capability is ideal for many real-time use cases such as retail inventory management and logistics.

Exceptional performance and versatility for dynamic workloads



The NVIDIA GPU Advantage

NVIDIA GPUs enable Kinetica to perform brute-force queries on large datasets by leveraging the parallel processing nature of GPUs with their thousands of cores per device, versus 18 to 32 cores on a typical CPU. The outcome is remarkable performance increases, and tangible savings on hardware. On internal benchmarks, NVIDIA GPUs help Kinetica to deliver 100x faster analytic performance than other CPU-based in-memory databases.

Recommended Hardware

The PowerEdge R740 platform boasts a two-socket 2U rack server with impressive processor performance, a large memory footprint, extensive I/O options and a choice of dense, high-performance storage or low-cost, high-capacity storage.



	GOLD CONFIGURATION	SILVER CONFIGURATION	BRONZE CONFIGURATION
Storage	Kinetica storage: 4 times RAM usable RAID 10 OS (8x raw storage), 2 - >512 GB striped OS drives		
RAM	up to 3.0TB DDR4 2666MT/s	1TB DDR4 up to 2666MT/s	512GB DDR4 up to 2666MT/s
CPUs	2-Intel® Xeon® Gold 6154 3.0G,18C/36T,10.4GT/s,z25M Cache,Turbo,HT (200W) DDR4-2666	Intel® Xeon® Gold 6126 2.6G,12C/24T,10.4GT/s, 19.25M Cache,Turbo,HT (125W) DDR4-2666	Intel® Xeon® Gold 6126 2.6G,12C/24T,10.4GT/s, 19.25M Cache,Turbo,HT (125W) DDR4-2666
CPU/GPU Link	PCI Express		
GPUs	2 NVIDIA V100 or P100s	2 NVIDIA P or V 100s	2 NVIDIA P or V100s

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For more information on Kinetica and its insight engine, visit kinetica.com

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