



GPU ACCELERATED ANALYTICS AI-ACCELERATED ANALYTICS AND INTERACTIVE VISUALIZATION

The Path from a Digital Business to an AI Enterprise

Unprecedented amounts of data are generated and collected every day. Some companies struggle to survive in data deluge while others thrive with an insatiable appetite for even more information. The more data you have, the more you learn. As enterprises prepare to take advantage of the benefits of deep learning and AI, better understanding of their data is an important first step. How can customers effectively analyze, visualize, and turn insights into AI-driven knowledge to transform their digital business into an AI enterprise?

GPU-accelerated analytics, visualization, and machine learning solutions—powered by NVIDIA® Tesla® GPUs, NVIDIA DGX™ Systems, and NVIDIA GPU accelerated cloud platform—provide deeper insights, enable dynamic correlation, and deliver predictive outcomes at superhuman speed, accuracy and scale.

Bring the power of AI to your company.

ANALYZE DATA FASTER

NVIDIA GPU-accelerated databases enable customers to stream, process, query, and analyze datasets in seconds to milliseconds, instead of hours to minutes. Either on-premise or the cloud, these databases help manage the ever increasing data demand. GPU-parallelized processing architecture enables linear scalability. It also reduces analytical processing times for multi-billion row data sets by more than 100X, compared to leading in-memory and analytical databases.

VISUALIZE MORE DATA

NVIDIA GPU-accelerated visualization platforms are 10-100X faster than existing systems. They allow users to do complex, multidimensional visual renderings in real-time, including easy drill-down and dynamic correlation analysis. Customers can now interact with millions of edges like never before and drive insights from 100X more data. Unexpected insights come from both historical data and unseen long tail, outlier data.

AI-ACCELERATE WITH MORE COMPUTE POWER

NVIDIA is focused on innovation at the intersection of visual processing, AI and high performance computing. From real-world data, GPU-accelerated software algorithms can learn to recognize patterns too complex, too massive or too subtle for manually coded software. GPU deep learning is the computing model companies will use to transform their digital business into an AI enterprise.

Advantages of a GPU-accelerated Data Center

> TURN DATA INTO KNOWLEDGE

Uncover patterns in large data sets to reveal new knowledge and insights in hours or minutes, instead of days or weeks.

> STAY AHEAD OF THE COMPETITION

Deliver the fastest solutions for your deep learning training and AI-accelerated analytics workloads.

> MAXIMIZE YOUR INVESTMENT

Improve ROI through increased productivity with compute power of equivalent of up to 800 CPUs, without the hidden cost of traditional systems.

Get Started with NVIDIA GPU Infrastructure

NVIDIA, the leader in accelerated computing, brings the power of GPU computing to analytics platforms. NVIDIA Tesla GPUs, NVIDIA DGX Systems, and NVIDIA GPU-accelerated cloud platform combine the power of deep learning and accelerated analytics, providing customers an end-to-end GPU-powered data center.

TESLA SERVERS IN EVERY SHAPE AND SIZE		DGX SYSTEMS AI TOOLS FOR INSTANT PRODUCTIVITY		CLOUD EVERYWHERE	
      		      			

NVIDIA Tesla GPUs

NVIDIA Tesla GPUs power the world's fastest compute systems with higher performance than hundreds of slower commodity systems and allow data centers to dramatically increase throughput and save money. One of our latest GPU, NVIDIA Tesla V100, is the world's most advanced data center GPU ever built to accelerate AI, analytics, and Graphics. Powered by the latest GPU architecture, NVIDIA Volta™, Tesla V100 offers the performance of 100 CPUs in a single GPU—enabling data scientists, researchers, and engineers to tackle challenges that were once impossible.

Learn more: <https://www.nvidia.com/tesla/>

NVIDIA DGX Systems

NVIDIA DGX Systems, the essential AI tools for Accelerated Analytics. The DGX portfolio now includes DGX-1 and DGX Station.

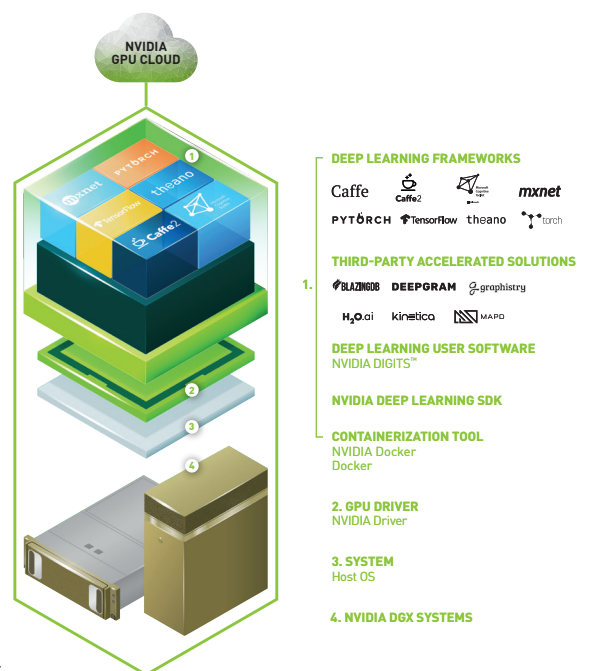
Learn more: <https://www.nvidia.com/dgx/>

NVIDIA DGX-1, the AI-supercomputer in a box, now offered with NVIDIA Tesla V100 GPU's, delivers up to 3X faster deep learning training, and packs the computing power of 800 CPUs in a single node.

NVIDIA DGX Station is designed for easy experimentation at the office, whisper quiet at 1/10th the noise of other workstations, delivering the power of 400 CPUs while consuming less than 1/20th the power. DGX Station, supports accelerated analytics, deep learning training, and inferencing, all within a single versatile platform.

Both systems feature NVIDIA-optimized software stacks for deep learning and accelerated analytics, combined with NVIDIA GPU libraries and drivers. These industry leading software applications are comprehensively tested and certified to ensure faster, more reliable, and fully predictable deployment.

NVIDIA DGX Software Stack



DGX Systems

NVIDIA DGX Systems Partner Applications

DGX Systems include industry leading accelerated analytics applications that are tested to ensure a fast, reliable, predictable deployment.

Learn more, visit www.nvidia.com/dgx-apps

Anaconda	Anaconda is the leading Open Data Science platform powered by Python, the fastest growing data science language. It is a free, high-performance Python & R distribution with 1000+ curated packages.
BlazingDB	BlazingDB is a high performance SQL data warehouse for petabyte scale needs. Through the use of a distributed and GPU architecture, BlazingDB offers a revolutionary new generation of SQL.
Graphistry	Graphistry's intelligent visual investigation platform, powered by NVIDIA GPUs, streamlines how analysts investigate events and entities and scale to millions of data points.
H2O.ai	H2O.ai brings AI to businesses through software. Its product, H2O, is the leading open source platform for financial services, insurance, and healthcare to deploy AI for complex problems.
Kinetica	Kinetica's GPU-accelerated, distributed, in-memory database visualizes streaming data for real-time intelligence 100X faster and 10X more cost-effectively than traditional databases.
MapD	MapD is a open source database and visual analytics layer that harnesses the power of NVIDIA GPUs to explore multi-billion row datasets in milliseconds.
Sqream	Sqream Technologies provides GPU powered, near real-time analytic solutions that deliver 10-100X performance and efficiency gains over traditional CPU-bound approaches at a fraction of the price.

NVIDIA GPU-accelerated cloud platforms

NVIDIA GPU-accelerated cloud platforms also allow customers to replace hundreds of non-accelerated nodes with powerful GPU-accelerated instances for accelerated analytics workloads. Customers can achieve faster results without massive capital expenditures and large data transfers while enjoying the 24/7 uptime and scalable performance they have come to expect from NVIDIA Tesla data center GPUs.

Learn more: <https://www.nvidia.com/cloud/>

NVIDIA TITAN Xp

NVIDIA TITAN Xp is the most advanced consumer grade GPU, delivering the highest performance for developers, creatives, researchers, and data scientists.

Learn more: <https://www.nvidia.com/en-us/geforce/products/10series/titan-xp/>

Industry Use Cases

Customers are using massively parallel graphics processors to provide significantly higher throughput for compute-intensive workloads, and achieving significant performance gains without the hidden cost of scale-out architecture. This results in dramatic cost savings across many industries.

Ad Tech <ul style="list-style-type: none">> Assess inventory availability> Optimize campaign management and conversion> Analyze campaign performance	Federal <ul style="list-style-type: none">> Process data streams like video, speech, image faster> Disrupt planned cyber and criminal activities> Leverage advanced sonar, object recognition technologies to locate threats faster, safer, and more accurately
Finance <ul style="list-style-type: none">> Correlate impact of economic trends and hedge funds related to portfolios> Campaign and conversion analysis> Analyze critical markets and evaluate credit worthiness	Healthcare <ul style="list-style-type: none">> Analyze clinical trials, cross-trials and drug compliance> Identify patient populations that could benefit from predictive outreach> Identify disease and risk satisfaction
Manufacturing <ul style="list-style-type: none">> Leverage live streaming analytics on component functionality to ensure safety, avoid failures and validate warranty claims.> Monitor real-time data feeds from laboratory and production-line machinery to identify catastrophic events and generate notification> Predict maintenance and monitor conditions	Oil and Gas <ul style="list-style-type: none">> Manage, visualize, and optimize exploration and production operations> Determine drilling and completion of wells> Predictive and reduce down-hole failures
Retail <ul style="list-style-type: none">> Analyze historical sales to determine geographic product demand for future inventory and store locations.> Manage real-time supply chain for replenishment and inventory management> Manage ad-tech, geospatial tagging and customer preference recommendations	Security <ul style="list-style-type: none">> Detect anomalous behavior in network traffic to identify vulnerabilities> Analyze data-in-motion and at rest can help find new associations or uncover patterns and facts> Analyze internet, smart devices, and social media data to prevent criminal threats
Telco <ul style="list-style-type: none">> Correlate call records with server performance data to spot problems in real time and build ad targeting profiles.> Analyze intra-day billing> Identify emerging trends in customer-specific usage	Transportation <ul style="list-style-type: none">> Real-time management of traffic patterns and congestion> Live monitoring of railroad conditions> Optimize long-haul trucking routes and load capacities

Get started with Deep Learning today - <https://developer.nvidia.com/deep-learning>

Explore Analytics Partner Applications here - www.nvidia.com/dgx-apps

Learn more about GPU Accelerated Analytics here - www.nvidia.com/analytics