NVIDIA Launches Morpheus to Bring AI-Driven Automation to Cybersecurity Industry

New Framework Powered by NVIDIA GPUs, BlueField DPUs Enables Cybersecurity Providers to Develop AI Solutions That Can Instantly Detect Cyber Breaches

GTC -- NVIDIA today announced the NVIDIA Morpheus application framework, which provides cybersecurity partners with a complete suite of accelerated AI skills that detect and prevent security threats as they happen.

NVIDIA Morpheus is a cloud-native cybersecurity framework which uses machine learning to identify, capture and take action on threats and anomalies that were previously impossible to identify, including leaks of unencrypted sensitive data, phishing attacks and malware. Deploying Morpheus with security applications takes advantage of NVIDIA AI computing and NVIDIA® BlueField®-3 DPUs to provide users the ability to protect their data center from its core to the edge.

“Zero-trust security models demand we monitor every transaction in the data center in real time. This poses a significant technical challenge – needing to sense intrusion within the server, detecting threats immediately, and operating at the data rate of modern data centers,” said Jensen Huang, founder and CEO of NVIDIA. “NVIDIA Morpheus combines Mellanox in-server networking and NVIDIA AI to do real-time, all-packet inspection to anticipate threats and eliminate them as they arise.”

Morpheus, when combined with BlueField DPUs, enables every compute node in the network to serve as a cyber-defense sensor at the edge, letting organizations analyze every packet with line-rate speed without data replication. In contrast, traditional AI security tools typically sample around five percent of network traffic data, leading to threat-detection algorithms based on incomplete models.

Morpheus applies real-time telemetry, policy enforcement and processing at the edge coupled with AI to analyze more security data without sacrificing cost or performance. Developers can also create their own Morpheus AI skills using deep learning models, leveraging existing IP investments.

AI-Enabled Security Ecosystem
Leading hardware, software and cybersecurity solutions providers are working closely with NVIDIA to optimize and integrate data center security offerings with the NVIDIA Morpheus AI framework. This includes industry leaders ARIA Cybersecurity Solutions, Cloudflare, F5, Fortinet and Guardicore, along with hybrid-cloud platform providers Canonical, Red Hat and VMware.

“Defending complex and evolving environments requires constant visibility,” said Adam Mishler, chief information security officer at Best Buy. “Providing real-time, dynamic network maps will help identify areas where we can further strengthen our posture and serve as a foundation for enhancing ML-based anomaly detection. The NVIDIA Morpheus framework helps provide a flexible and scalable platform for anomaly detection capable of adapting with the ever changing cyber-threat landscape.”

“With a rapidly expanding attack surface, our tools for advanced detection at the edge are becoming increasingly important,” said Aaron Sant-Miller, a chief data scientist at Booz Allen Hamilton. “We’ve partnered with NVIDIA to design, develop and deliver portable cyber AI tools that address this need. Morpheus is the foundation for our Cyber Precog Flyaway Kit, an AI-enabled cyber-hunt platform that packs data center compute into a small, ruggedized GPU form factor.”

“Splunk is excited to collaborate with NVIDIA to uncover more ways to utilize GPU-accelerated deep learning to enhance how we help our joint customers turn their data into doing,” said Tim Tully, senior vice president and chief technology officer at Splunk. “We look forward to using the Morpheus framework to potentially provide a path for our team to quickly prototype and integrate new capabilities in our platform, as well as offload compute-intensive tasks to GPU architectures to aid our customers.”

Additionally, Morpheus is optimized to run on NVIDIA-Certified Systems™ from the world’s leading server manufacturers, including Atos, Dell Technologies, GIGABYTE, H3C, HPE, Inspur, Lenovo, QCT and Supermicro.

Availability
Networking and cybersecurity developers, software partners, startups and computer manufacturers can apply now for early access to the NVIDIA Morpheus platform.

Tune in to watch Huang’s GTC21 keynote address streaming live on April 12 starting at 8:30 a.m. PT.

About NVIDIA
NVIDIA’s (NASDAQ: NVDA) invention of the GPU in 1999 sparked the growth of the PC gaming market and has redefined

modern computer graphics, high performance computing and AI. The company's pioneering work in accelerated computing and artificial intelligence is reshaping trillion-dollar industries, such as transportation, healthcare and manufacturing, and fueling the growth of many others. More information at https://nvidianews.nvidia.com/.

Certain statements in this press release including, but not limited to, statements as to: the benefits, performance, features and impact of NVIDIA Morpheus; the number of connections exposed in a data center in a potential attack; NVIDIA Morpheus keeping data centers safe by anticipating threats and eliminating them; what Morpheus enables and applies; the providers working with NVIDIA to offer Morpheus; network maps helping to identify improvement areas and its benefits; Morpheus being the foundation for new products and how it helps; the benefits of NVIDIA's collaborations with Best Buy, Booz Allen Hamilton and Splunk; NVIDIA and Splunk enhancing customers' experience, providing a path to develop new capabilities, and offloading tasks to GPU architectures; and the systems Morpheus is optimized to run on are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners' products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the most recent reports NVIDIA files with the Securities and Exchange Commission, or SEC, including, but not limited to, its annual report on Form 10-K and quarterly reports on Form 10-Q. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

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