Trend Micro Reinvents Proactive Security with Digital Twin Technology

Innovation at the speed of agentic AI, built on NVIDIA AI, provides a data-driven foundation for supercharged decision-making

DALLAS, July 31, 2025 /PRNewswire/ -- Trend Micro Incorporated (TYO: 4704; TSE: 4704), a global cybersecurity leader, today unveiled a groundbreaking new cyber resilience model that reinvents how enterprises approach proactive security. Trend's Digital Twin capabilities will empower enterprises to simulate real-world cyber threats, validate their defenses, and adapt policies in real time across complex and diverse digital environments.

To learn more about how Trend's Digital Twin technology is reshaping proactive security, visit: https://www.trendmicro.com/en_us/business/ai/digital-twin.html

Bartley Richardson, Senior Engineering Director, Agentic AI at NVIDIA:"In today's rapidly evolving cybersecurity landscape, organizations need proactive solutions that can anticipate and counter potential threats before they occur. Powered by NVIDIA NIM microservices, Trend's cybersecurity digital twins bring AI-driven protection to enterprise infrastructure."

At the core of this model is Trend's advanced agentic AI and industry-first application of cybersecurity digital twin technology. By creating high-fidelity, continuously updated simulation of an organization's infrastructure, Trend enables security teams to visualize risk, test scenarios safely, and make rapid, data-driven decisions that improve resilience and reduce business disruptions.

The shift from periodic assessments to continuous, intelligent simulation marks a major evolution inproactive cybersecurity. It allows organizations to stay ahead of adversaries, harden their environments to circumvent cybersecurity threats, and confidently secure mission-critical operations against an ever-changing threat landscape. The technology shifts security practices from static and reactive to dynamic and predictive, enabling measurable improvements across a range of critical use cases.

Stuart Samples, Chief Technology Officer at Northeast Georgia Health System:"Trend's digital twin approach completely changes our ability to understand risk in real-time. It helps us catch threats we didn't even know to look for, allowing our team to focus less on firefighting and more on confidently driving innovation."

Trend's cybersecurity Digital Twin technology is powered by NVIDIA accelerated computing and NVIDIA AI Enterprise software, including NVIDIA NIM microservices. This enterprise-grade software enables the delivery of agentic AI models, optimized inference, and secure, scalable deployment—combining the simplicity of APIs with the flexibility of self-hosted infrastructure to strengthen cybersecurity outcomes with AI-driven precision.

Trend's Digital Twin model will help organizations proactively manage risk across their entire infrastructure—from on-prem to cloud, IT to OT, and legacy to next gen AI-powered systems. It comes as governments and industry leaders accelerate AI infrastructure investments. Trend's approach to digital twins enables customers to make better informed risk decisions and enhance security operations across their organization.

> **Scenario planning:** AI agents simulate threats and tactics within the Digital Twin, long before a real-world incident occurs. This helps to test current mitigation strategies in a continuous cycle, to improve resilience planning for sensitive and complex environments.
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> **Security investments:** Decision makers can introduce new tools, policies, or architectural changes to see how they perform in the virtual environment. This results in better informed, data-driven investment decisions.
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> **Business resilience optimization:** Digital Twin technology can be used to simulate business-critical failure scenarios to highlight how data flows, how decisions are made, and how disruptions ripple across IT/OT systems and teams. These real-time risk insights boost enterprise security planning capabilities without risking disruption to production systems.

Frank Dickson, Group Vice President, Security & Trust at IDC:"As threats migrate to OT, proactive security is critical. Trend Micro's Digital Twin technology introduces a new operational model for enterprise cyber security: simulation. Sometimes even probing a production network can result in downtime, often making it extremely difficult to expose vulnerabilities and confirm compensating measures. A continuous cycle of adversary simulation and defensive validation becomes a value tool to ensure that organizations stay ahead of cyber threats, while being sensitive to the fragility of some operational environments."

The announcement is the latest in a line of innovation-led projects from Trend designed to help network defenders harness AI, close skill gaps, and improve security outcomes.

Most recently, Trend announced it would open source its Trend Cybertron AI model and agent framework in a bid to accelerate the development of autonomous cybersecurity agents. Its work has also expanded to cover protection for GenAI workloads and advances to sovereign AI infrastructure.

Rachel Jin, Chief Enterprise Platform Officer at Trend: "Enterprises are struggling to defend complex, dynamic infrastructure environments from highly adaptive, AI-powered adversaries. Rapid shifts in threat actor tactics and IT infrastructure mean reactive, point-in-time risk assessments are no longer fit for purpose. Our Digital Twin technology empowers customers to simulate threats and safely validate security controls without touching production systems—to finally close the gap between digital transformation and defensive readiness."

About Trend Micro
Trend Micro, a global cybersecurity leader, helps make the world safe for exchanging digital information. Fueled by decades of security expertise, global threat research, and continuous innovation, Trend Micro's AI-powered cybersecurity platform protects hundreds of thousands of organizations and millions of individuals across clouds, networks, devices, and endpoints. As a leader in cloud and enterprise cybersecurity, Trend's platform delivers a powerful range of advanced threat security techniques optimized for environments like AWS, Microsoft, and Google, and central visibility for better, faster detection and response. With 7,000 employees across 70 countries, Trend Micro enables organizations to simplify and secure their connected world. www.TrendMicro.com.

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