Tech Mahindra to Transform Autonomous Network Operations with New Large Telco Model based on NVIDIA AI Enterprise and AWS Cloud Infrastructure

Technology

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Barcelona, Spain – March 4 th , 2025: Tech Mahindra (NSE: TECHM), a leading global provider of technology consulting and digital solutions to enterprises across industries, announced a new Multi-Modal Network Operations Large Language Model for Telcos, developed using the NVIDIA AI Enterprise software and AWS Cloud infrastructure. The model is based on Llama 3.1 8b instruct model and is heavily customized for telecom networks, by training on large network datasets and applying the latest generative AI and agentic AI frameworks. It is designed to manage vast structured data (events, alarms, counters), unstructured data (logs, MOPs, SOPs, images, text, marketing), and all relevant network data, allowing proactive issue resolution and enhanced service quality.

This model enables the transformation of traditional telecom networks into fully autonomous networks (L4 and above). While telcos have been implementing AI use cases with a transactional approach, achieving true

operational efficiency requires a holistic embedding of AI capabilities within the network. Tech Mahindra, working with NVIDIA and AWS, is facilitating this transition and helping the telecom industry harness the full potential of AI for enhanced performance and operational excellence. This collaboration brings together Tech Mahindra's network automation platform ,netOps.ai, Tech Mahindra Optimized Framework TENO that incorporates NVIDIA AI Enterprise software, including NVIDIA NeMo™ and NIM microservices, along with AWS's Amazon Elastic Container Registry (Amazon ECR), Amazon Elastic Compute Cloud (Amazon EC2), and Amazon Elastic Kubernetes Service (Amazon EKS). This model empowers telecom operators to transform their networks into intent-based networks, embodying the principles of Self-Driving Networks (Zero x and Self x).

Manish Mangal, Chief Technology Officer, Telecom & Global Business Head, Network Services, Tech Mahindra, said, *"The shift towards autonomous networks has become imperative within the telecom industry. Our collaboration with NVIDIA and AWS is pioneering a Multi-Modal Network Operations Large Model designed to enhance security, automate network management, and improve operational efficiency. Through this work, we will empower telcos to reduce operational costs and pave the way for a more agile and resilient network environment."* In the initial phase of the development, the Multi-Modal Network Operations Large Model will prioritize improving operational efficiency through "Intelligent Observability", introducing two critical AI-driven use cases. First, the Dynamic Network Insights Studio will

provide a unified 360- degree AI-powered network observability solution, offering deep insights into network performance for AI teams, network operations, and C-suite executives. Complementing this, the second use case, Proactive Network Anomaly Resolution Hub, will be an advanced AI-powered auto-resolution system that will autonomously detect and resolve network anomalies such as alarms or events with zero human intervention.

Chris Penrose, Vice President of Telco Business Development, NVIDIA, said, *"The introduction of large telco models that understand the network language is a transformational moment for the telecom industry, helping to deliver AI-accelerated operations. Large telco models like Tech Mahindra's new Multi-Modal Network Operations Large Model — based on NVIDIA AI Enterprise — offer the foundation for creating multiple AI agents that will help enable fully autonomous networks."*

Additionally, the solution architecture will seamlessly integrate AI-driven intelligence into network operations, encompassing three key components including first efficient data ingestion from the network; second, data curation and model customization to enhance AI training; and third, automated action implementation for quick resolution and restoration of services.

Global AI spending in telecom is running into multi-billion-dollar investments; this collaboration reinforces Tech Mahindra's commitment to driving AI innovation in telecom and redefining network operations through intelligent

automation, deep learning, and multimodal AI models. Further to this collaboration, Tech Mahindra's long-term vision is leveraging the Multi-Modal Network Operations Large Model to impact other business use cases as well.

About Tech Mahindra

Tech Mahindra (NSE: TECHM) offers technology consulting and digital solutions to global enterprises across industries, enabling transformative scale at unparalleled speed. With 150,000+ professionals across 90+ countries helping 1100+ clients, Tech Mahindra provides a full spectrum of services including consulting, information technology, enterprise applications, business process services, engineering services, network services, customer experience & design, AI & analytics, and cloud & infrastructure services. It is the first Indian company in the world to have been awarded the Sustainable Markets Initiative's Terra Carta Seal, which recognizes global companies that are actively leading the charge to create a climate and nature- positive future. Tech Mahindra is part of the Mahindra Group, founded in 1945, one of the largest and most admired multinational federation of companies. For more information on how TechM can partner with you to meet your Scale at Speed™ imperatives, please visit https://www.techmahindra.com

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