

Deutsche Telekom and Google Cloud Partner on Agentic AI for Autonomous Networks

The RAN Guardian agent to be shown at Mobile World Congress, demonstrating how AI agents for RAN can improve customer experience and enhance network performance

BONN, Germany and SUNNYVALE, Calif., Feb. 25, 2025 /PRNewswire/ -- Deutsche Telekom and Google Cloud today announced a new partnership to improve Radio Access Network (RAN) operations through the development of a network AI agent. Built using Gemini 2.0 in Vertex AI from Google Cloud, the agent can analyze network behavior, detect performance issues, and implement corrective actions to improve network reliability, reduce operational costs, and enhance customer experiences.

As telecom networks become increasingly complex, traditional rule-based automation falls short in addressing real-time challenges. Agentic AI leverages large language models (LLMs) and advanced reasoning frameworks to create intelligent agents that can think, reason, act, and learn independently. The RAN Guardian agent collaborates in a human-like manner, detecting network anomalies and executing self-healing actions to optimize RAN performance.

"Traditional network management approaches are no longer sufficient to meet the demands of 5G and beyond," said Abdu Mudesir, Group CTO, Deutsche Telekom. "We are pioneering AI agents for networks, working with key partners like Google Cloud, to unlock a new level of intelligence and automation in RAN operations as a step towards autonomous, self-healing networks."

In addition to Gemini in Vertex AI, the RAN Guardian agent also uses CloudRun, BigQuery, and Firestore to help deliver:

- **Autonomous RAN performance monitoring:** The RAN Guardian agent will continuously analyze key network parameters in real time to predict and detect anomalies.
- **AI-driven issue classification and routing:** The agent will identify and prioritize network degradations based on multiple data sources, including network monitoring data, inventory data, performance data, and coverage data.
- **Proactive network optimization:** The agent will also recommend or autonomously implement corrective actions, including resource reallocation and configuration adjustments.

"By combining Deutsche Telekom's deep telecom expertise with Google Cloud's cutting-edge AI capabilities, we're building the next generation of intelligent networks," said Angelo Libertucci, global industry lead, Telecommunications, Google Cloud. "This means fewer disruptions, faster speeds, and an overall enhanced mobile experience for Deutsche Telekom's customers."

Join Deutsche Telekom and Google Cloud at MWC

Abdu Mudesir and Google Cloud's Muninder Sambi will present at Deutsche Telekom Booth #3M31 in Hall 3, on March 3, from 13:30-14:00, on how agents are shaping the future of network operations. In addition, Deutsche Telekom is also presenting a "RAN Guardian Agent" showcase in its booth.

About Deutsche Telekom

<https://www.telekom.com/companyprofile>

Google Cloud Boilerplate

Google Cloud is the new way to the cloud, providing AI, infrastructure, developer, data, security, and collaboration tools built for today and tomorrow. Google Cloud offers a powerful, fully integrated and optimized AI stack with its own planet-scale infrastructure, custom-built chips, generative AI models and development platform, as well as AI-powered applications, to help organizations transform. Customers in more than 200 countries and territories turn to Google Cloud as their trusted technology partner.

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