



MWC 2025

BARCELONA

03. – 06.03.25

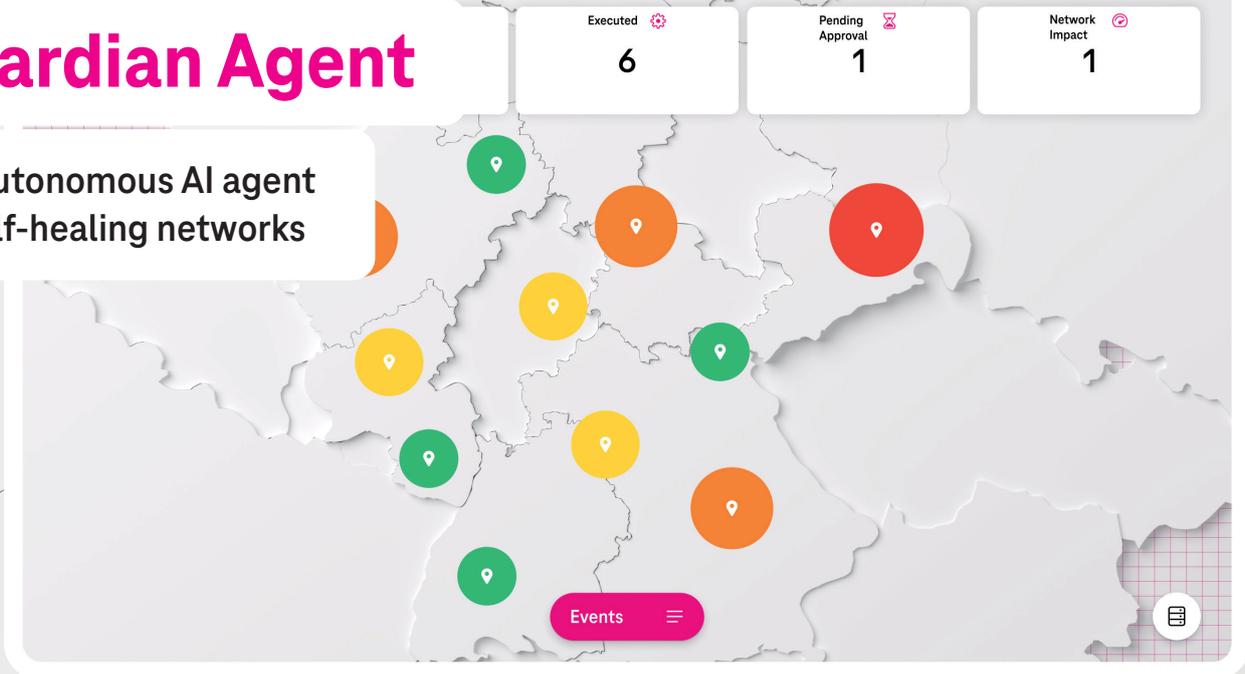
SHAPING TECHNOLOGY FOR ALL

RAN



Guardian Agent

The autonomous AI agent for self-healing networks



Deutsche Telekom is developing advanced AI-driven agents for implementation in operational RAN environments, enabling autonomous network monitoring, real-time anomaly detection, and intelligent corrective actions that proactively resolve network degradations and reduce total repair time.

Key facts

- Agentic AI in RAN operations
- Autonomous network monitoring
- Real-time anomaly detection
- Intelligent corrective actions
- Proactively resolves network degradations
- Reduces mean time to repair

A1, Rhine Bridge Leverkusen

Priority: **Medium** | Date: **03.03.2025 - 14:00**

Data Sources: Social Media, Web, Internal Database

Event Detail

Type: **Traffic Jam** | Size: **L**

Numbers of Users: **7.000** | Location: **A1, Rhine Bridge Leverkusen**

KPIs: 1, 2, 3

Progress: Observing, Identifying, Diagnostic, Solving, Resolved

As telecommunication networks become increasingly complex, traditional rules-based automation falls short when it comes to 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. These agents collaborate in a human-like manner, detecting anomalies and executing self-healing actions to optimize RAN performance.

At the heart of this initiative is the RAN Guardian Agent, a pioneering agentic AI-driven solution designed to tackle high-load scenarios in RAN operations. Built using Gemini 2.0 in Vertex AI from Google Cloud, this solution includes the following capabilities:

- Autonomous RAN performance monitoring: continuously analyzes key network parameters in real time to predict and detect any anomalies.
- AI-driven issue classification and routing: identifies and prioritizes network degradations based on multiple data sources.
- Proactive network optimization: recommends or autonomously implements corrective actions, including resource reallocation and configuration adjustments.