

GenAI-enabled anomaly detection & analysis

Transforming telecom networks with generative AI accelerated RAN anomaly detection to boost network performance, streamline operations, and ensure exceptional service.



The solution:

Traditional AI anomaly detection struggles to adapt to the complexity of modern RAN. This Catalyst introduces a bespoke GenAI-powered framework that uses time-series analytics, spatial-temporal correlation, and closed-loop automation to detect, resolve, and prevent anomalies - turning complexity into a competitive edge.



Addressing the challenge:

The solution plays a crucial role in Autonomous Networks by accelerating incident detection, enabling automated root cause analysis and faster resolution, reducing manual actions in real time, thereby laying the foundations for CSPs to achieve level 4 autonomy and higher.

1. AI-Powered Anomaly Detection: Capgemini's EIRA framework, integrated with Amazon SageMaker's MLOps, delivers spatial-temporal event correlation, anomaly detection, and RCA with continuous model updates.
2. Generative AI: Using Amazon Bedrock, it predicts anomalies, simulates scenarios, and provides contextual insights.
3. Cloud Services: Incorporates Amazon S3 for storage and Glue for seamless data integration, creating a robust, cloud-native architecture.
4. Aira's GenAI-based App Gen will generate appropriate applications based on RCA and corrective intents to prevent anomaly/issue occurrence.



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Through this Catalyst, Telefónica continue to move toward the goal of achieving a fully autonomous network. It will enable us to incorporate self-management and self-adaptation capabilities into Fault Management processes, two essential functionalities to reach Level 4 autonomy.

In addition to improving operational KPIs (such as reduced response times and increased network availability), the most important outcome is to allow us to boost operational efficiency, which in turn enhances the quality of services we deliver to our customers, providing us with the capability of offering reliable, stable, high-quality services.



Business impact:

Advanced anomaly detection ensures proactive management, enhancing customer experience, cost efficiency, and competitive advantage for CSPs.

