

# **CONFIGURATION MANAGEMENT SENTINEL rApp**

Solution Description



## CYIENT Configuration Management Sentinel rApp

*Cyient Configuration Management Sentinel (CCMS) rApp monitors the network to identify degradations caused by CM changes. CCMS provides bespoke reports with detailed root cause analysis, enabling operators to identify the specific configuration changes responsible for the issues detected.*

CCMS continuously tracks configuration changes across multi-vendor RAN networks, correlating each modification with alarms and KPI shifts to detect negative impact. It identifies degraded cells and produces clear, actionable reports after every analysis cycle, enabling operations teams to resolve issues quickly, maintain stability, and strengthen configuration governance.

In dynamic RAN environments, CM changes happen frequently across vendors and regions. Without automated governance, parameter drift and inconsistent policies can increase mean time to detect (MTTD) and mean time to repair (MTTR). CCMS introduces continuous compliance and impact assessment so operators can move from reactive firefighting to proactive, data-driven operations.

CCMS leverages the Ericsson Intelligent Automation Platform (EIAP) to accelerate rApp design, deployment, and lifecycle management, including analytics data collection for Fault Management (FM) and Performance Management (PM), inventory & topology for near real-time scope selection, policy design & execution, service Topology and Orchestration Specification for Cloud Applications (TOSCA), and workflow execution.

The Ericsson Intelligent Automation Platform (EIAP) provides Service Management and Orchestration (SMO) for Open RAN and further enhances openness, network management, and automation by supporting multi-vendor and multi-technology RAN environments.

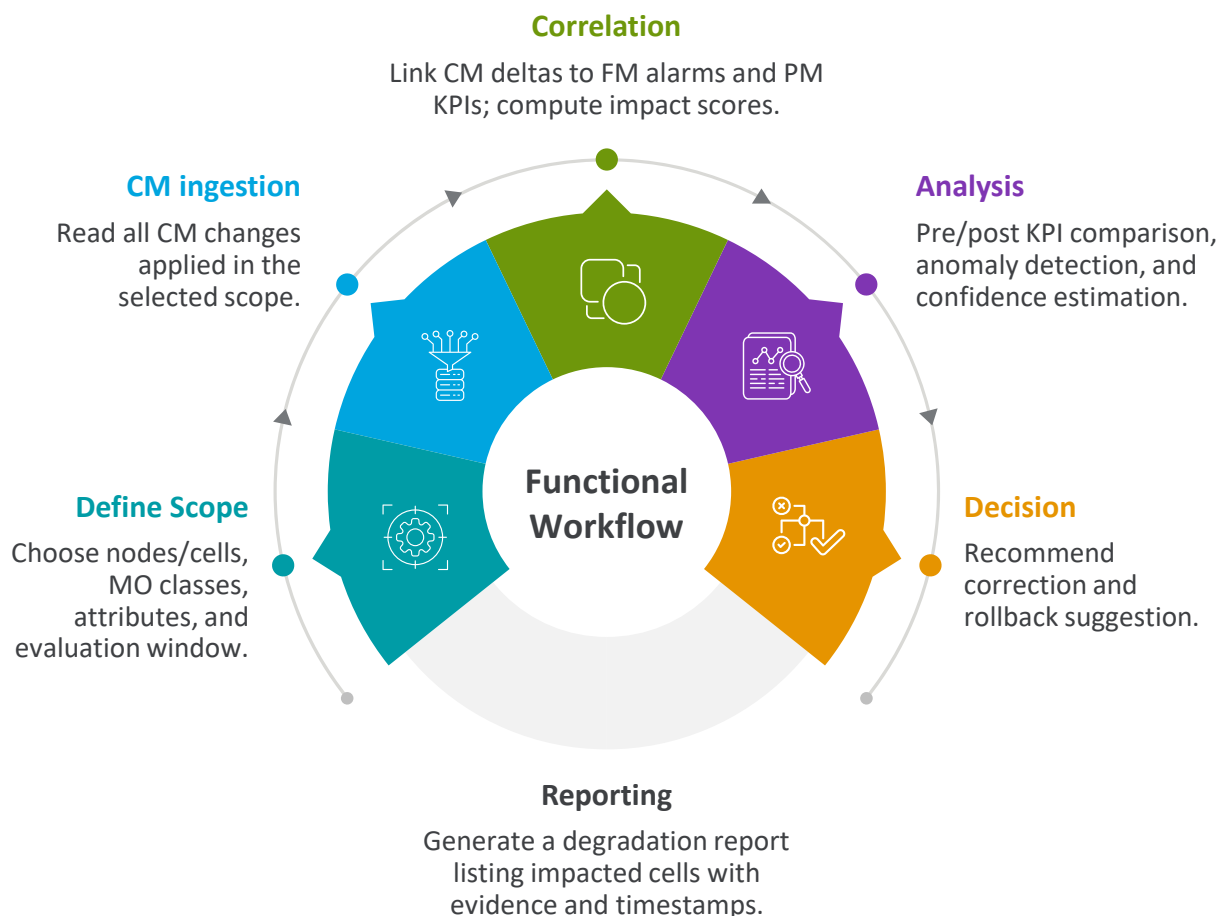
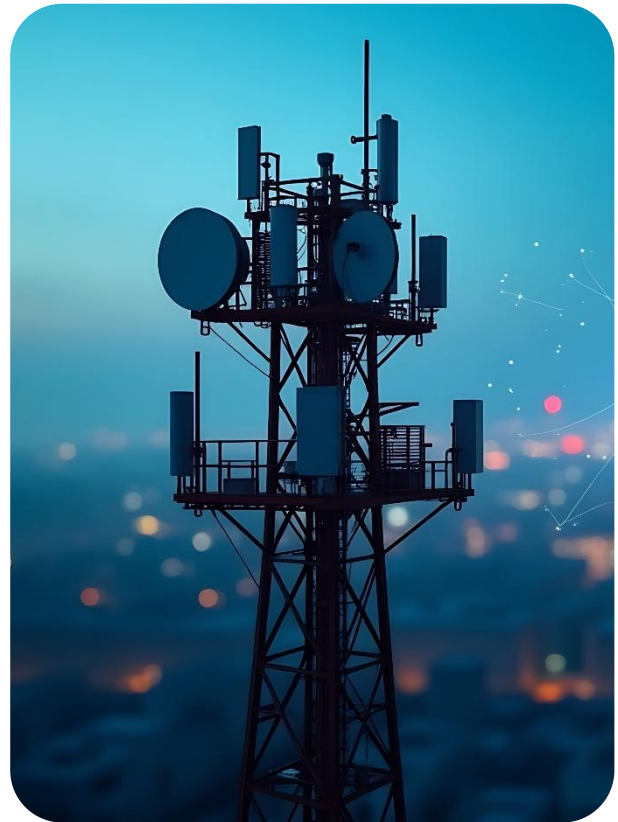
EIAP is supported by open interfaces and the industry's leading Software Development Kit (SDK) to enable an ecosystem of developers with all the capabilities needed to innovate, build, validate, share, and operate rApps.



## CCMS rApp Solution Description

CCMS allows users to continuously or periodically audit CM changes and their impact. It ingests CM deltas from the network, correlates them with FM alarms and PM KPIs, and classifies the risk and impact level. Provides bespoke impact reports of the CM changes within a network slice.

The increasing automated actions within networks demand active monitoring of those changes and their impact. CCMS allows the users to define the network scope (cells/nodes), a set of managed objects (MOs) classes and attributes, and the evaluation window. For each change, CCMS computes pre/post KPI deltas, anomaly likelihood, and confidence, then produces an impact report. In open loop mode, the recommended actions require user approval and action; in closed loop mode, CCMS can interact with other rApps and automatically trigger the recommended correction in the network.



## Workflow Architecture for Impact Assessment

The functional workflow illustrates how configuration changes are evaluated for operational impact. It begins with Define Scope, where nodes, cells, MO classes, and attributes are selected. In CM Ingestion, all configuration deltas within that scope are collected. The Correlation phase links CM changes to relevant FM alarms and PM KPI variations, generating impact indicators. During Analysis, pre and post change KPIs are compared, anomalies are detected, and confidence levels are assessed. Finally, Decision provides recommended corrections or rollbacks, while Reporting produces an impact report with evidence, timestamps, and a list of affected cells to support informed network operations.

## Outcomes

Each analysis cycle produces a concise report highlighting the cells affected by configuration changes, the exact change identifier, and the timestamp of the modification. The report quantifies impact through pre and post change KPI deltas—such as throughput, accessibility, and retainability—and correlates these with any relevant alarms. It then provides a recommended action enriched with policy context, enabling faster resolution and improved configuration governance. Reports can be exported to PDF or CSV for seamless distribution across NOC and engineering teams.

## CCMS rApp Characteristics

Vendor	Ericsson
RAN Technology	4G / 5G
RAN Infrastructure	Cloud RAN / O-RAN
Category	Automation & AI Foundation

## Key Features

- Reduce MTTD and MTTR by correlating CM changes with FM alarms and PM KPIs in near real time.
- Increase configuration governance with rule-based evaluation, exclusions, and quarantine windows.
- Improve customer experience by preventing performance regressions due to unintended parameter changes.
- Rollback suggestions when degradation is detected.
- Accelerate release and feature rollouts through automated consistency checks and impact assessments.

Cyient (Estd: 1991, NSE: CYIENT) delivers intelligent engineering solutions across products, plants, and networks for over 300 global customers, including 30% of the top 100 global innovators. As a company, Cyient is committed to designing a culturally inclusive, socially responsible, and environmentally sustainable tomorrow together with our stakeholders.

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