Ericsson Automated Configuration Consistency rApp

Solution brief

Available on Ericsson Intelligent Automation Platform

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Ericsson Automated Configuration Consistency (EACC) rApp enables users to uncover baseline CM consistency errors. EACC can correct any inconsistency found in either open-loop or closed loop mode and has the ability to rollback changes if KPI degradation is detected.

The network is an ever-evolving landscape with many changes performed by different organizations impacting the network behavior. This is in addition to the need for intelligence in the parameter settings for the different features to work in harmony.

Without the stabilizing influence of configuration governance and usage of rules across the network, network actuations can be a time costuming maintenance task.

Faulty and unusual network behavior are both harder to identify and understand when the network configuration is inconsistent and unstable.

Ericsson Automated Configuration Consistency (EACC) rApp gives time back to the operator.

The time-consuming tasks of consistency checking, the subsequent operations task of making the necessary changes and the follow-up monitoring activity ensuring all is as expected, can now been done quietly and efficiently in the background.

The time wasted finding a fault or a behavioral change because the network settings were different than what is desired and distracted the troubleshooting.

The time given back as it allows to focus on value added activities.

Benefits:

- Increased network automation by using closed loop for the inconsistency identification and the auto-correction of inconsistencies, will allowing engineers more time for ingenuity at non-routine tasks.

- The planning and roll-out of RAN releases and features can be made faster and more reliable by automating the consistency tasks.

- With good ruleset governance with simple, moderate and complicated rules applied against the network scope, the EACC rApp shall enable improved network performance and therefore customer experience with a consistent behavior.

- The auto-rollback of any changes that has caused degradation brings confidence to the autonomous nature of the changes.

rApps benefit strongly from Ericsson Intelligent Automation Platform capabilities

Beyond adherence to R1 for inter-rApp communication and access to external interfaces, the platform facilitates all the tasks around design, development, testing and life cycle management for rApp developers. The most relevant capabilities in these regards are the following:

- **AI/ML APIs** for model training, execution and life cycle management
- **analytics data collection** capabilities for raw data in a file- or stream-based format, with fault and performance management (FM/PM) provided out of the box
- **analytics processing** capabilities to provide insights on network behavior and performance
- **data management and movement**
- **controller framework** uses the open standard R1 interface to abstract details of the underlying system, allowing developers to focus on the use case
- **inventory and topology** offers near real-time source of truth
- **policy design and execution** for policy handling using multiple engines
- **service orchestration** covers the TOSCA-based orchestration engine for declarative orchestration
- **workflow execution** realization for activities supports the design and creation of new use cases
- **design and onboarding environment**

Our solution

Ericsson Automated Configuration Consistency (EACC) rApp provides self-service analytics to enable users to uncover baseline consistency errors and visualize overview of configuration management, thus empowering data-driven decisions.
It provides a scheduled automated correction of inconsistencies for selected MO classes and attributes for selected nodes with ability to rollback changes if KPI degradation detected.

EACC provides the means for a user to schedule a CM consistency audit on a regular basis and at a time of their choosing.

Each audit can be configured to run on a selection of nodes for selected MO classes and attributes. Support for parameters rulesets is provided which allows for local modifications and additions.

Once the audit begins, EACC analyses and produces an audit report of all inconsistencies found. In open loop, the user needs to approve any change to be applied to the network including any necessary rollback changes.

In closed loop, all changes are applied without approval and EACC operates in zero touch mode.

EACC rApp uses the capabilities of the Ericsson Intelligent Controller (EIC) to read network CM data and write CM changes to the network. The topology service is used for choosing network scope.

EIC enabler rApp, Ericsson Performance Monitoring Enabler (EPME) rApp, is used to handle the job of performance monitoring, which in turn uses the KPI service in EIC.

Working together with the EPME rApp, EACC monitors possible impacts for each individual change with the help of the EPME.
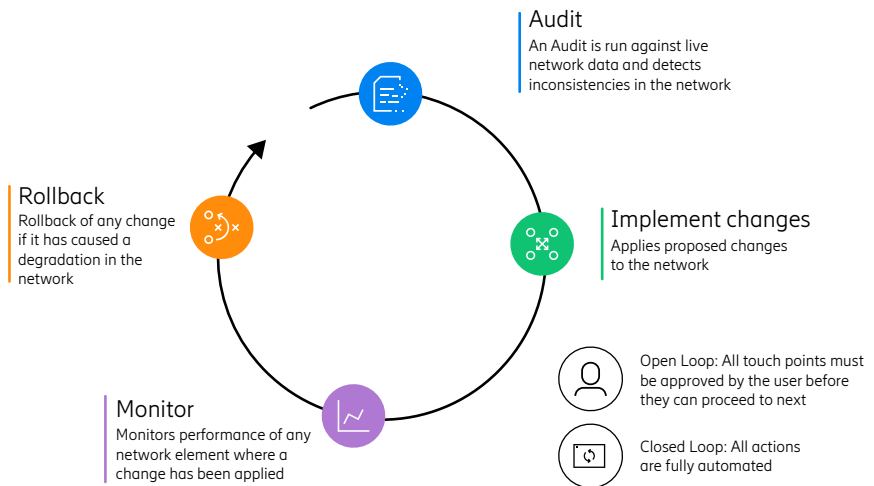
The rollback in case of degradation can be performed in closed loop and the rollback policy can be configured by the user.

Exclusion lists are catered for, where the user defines cells/nodes that are not to be audited.

A Quarantine solution also omits cells/nodes for changes for a period automatically.

Key benefits

Exclusions	User defines cells/nodes that are not to be audited
Quarantine	Omits cells/nodes for changes for a period automatically

Audit
An Audit is run against live network data and detects inconsistencies in the network

Implement changes
Applies proposed changes to the network

Monitor
Monitors performance of any network element where a change has been applied

Rollback
Rollback of any change if it has caused a degradation in the network

Open Loop: All touch points must be approved by the user before they can proceed to next

Closed Loop: All actions are fully automated

Key benefits

- Increased network automation by identifying and auto-correction of inconsistencies, reducing time to find faults and simpler consistency checks, allowing engineers more time for ingenuity at non-routine tasks.

- Faster roll out of RAN releases & features by automating the consistency tasks.

- Enable improved network performance and therefore customer experience with a consistent behavior.

If you'd like to know more, visit ericsson.com/rapps

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