



# FUTURE  
CONNECTIONS

# Future Connections Nix Configuration Consistency Auditor rApp

Solution brief

Available on Ericsson Intelligent Automation Platform

# Future Connections Nix Configuration Consistency Auditor rApp

The Future Connections Nix Configuration Consistency Auditor rApp rectifies baseline configuration consistency errors based on an innovative engine of low-code configuration management (CM) policy settings and configuration consistency check. The solution can operate in open loop or closed loop mode and considers user-defined exceptions. Additionally, the rApp can revert configuration changes and quarantine network elements if it detects any degradation in KPIs.

Mobile networks are multi-vendor, multi-technology entities that continually evolve and adapt to new features and topologies. To ensure predictable performance, it is necessary to continually update the reference parametrisation with increasingly complex conditions.

In this scenario, maintaining the network parameters in accordance with the policies accepted by the supplier is a very difficult and expensive task. The volume and variety of settings to be reviewed are increasing and, at the same time, the response time required must be minimal to guarantee the integrity and performance of the network.

The Future Connections Nix Configuration Consistency Auditor rApp is a multi-vendor solution which uses easy-to-build rules to set CM policies to validate the configuration of the network.

## Benefits

- The Future Connections Nix Configuration Consistency Auditor rApp reduces the time typically spent

detecting and correcting errors due to misalignment with the baseline, reduces the inconsistencies in the network and improves performance and predictability

- The solution provides a full baseline analysis using an innovative method for reading parameter configuration policies and detecting CM deviations compared to the baseline. It enables complex network parameter setting comparison, not only single-value parameters but also parameters with several dependencies such as other parameters, network topology, hardware type, etc. Managed object creation or deletion can also be included.
- The rApp implements advanced AI models that include exception handling to ensure network stability. When closed loop operation is performed, a pre-defined indicator auto-detects deviations that could be associated with the rApp activity and applies a rollback to the previous configuration

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.



# Our solution

The Future Connections Nix Configuration Consistency Auditor rApp provides a full ecosystem for auditing the entire network configuration, including managing complex conditions and creating or deleting instances. To support this, a low-code engine enables setting complex network CM policies which are then used to execute network audits to detect CM deviations compared to the baseline.



The Future Connections Nix Configuration Consistency Auditor rApp can operate in a multitude of ways. In its simplest implementation, the solution reads an operator-defined configuration file to enforce network elements parameterisation. It includes a vast number of options:

- All managed objects are suitable for being audited. Dependencies between different elements are considered and can be linked
- Instance creation or deletion can be performed
- Conditional parameterisation uses a rich format of user-defined functions which could include cross-references to other managed objects parameters, site-topology, tier or distance checks, etc.
- Open and closed loop mode can be selected
- If closed loop operation is used, the audit cycle is drastically reduced. A performance evaluation is done to ensure no degradation has been introduced by the rApp execution. If a degradation is identified, the solution applies a rollback to a previous configuration

Other main features can be customised according to the operator's requirements:

- During the deployment of the Future Connections Nix Configuration Consistency Auditor rApp, operators can add user-defined functions to their own implementation to ensure that all their baseline conditions are considered

- If network configuration exceptions repository is accessible from the RIC, the rApp exception enforcement module can read them and consider them in the audit procedure

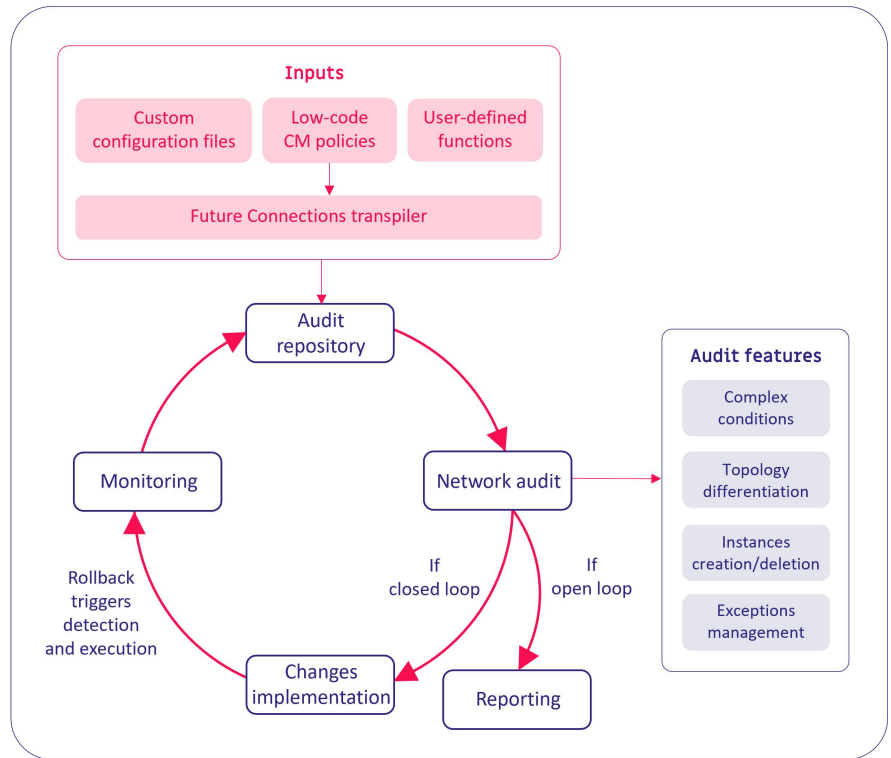


Figure 1. The execution diagram of the Future Connections Nix Configuration Consistency Auditor rApp

## Key benefits

The Future Connections Nix Configuration Consistency Auditor rApp enables CSPs to:

- **Improve performance and predictability of the network** by minimising network elements inconsistencies
- **Automate very time-consuming processes** to improve network operation, optimising human resources and freeing them for more productive tasks
- **Enjoy a more versatile solution** than others available on the market, with creation and deletion of instances, setting of conditions based on topology, etc
- **Implement the level of customisation desired**, with proprietary solutions to enforce baseline audit and exception management
- **Roll out new elements and features securely and speedily**, with automated rollback procedure when closed loop operation mode is used

Future Connections is an independent telco solutions provider and software developer with in-depth experience in network performance assurance, RAN optimisation and automation and in telco managed services.

The company delivers service management and orchestration solutions that are flexible, modular, scalable and multi-technology. They are customised to work on a variety of platforms to address a wide range of well-defined use cases, delivering operating expenses' reductions and improved efficiencies.

The company utilises big data analytics and AI/ML techniques to drive workflow automation and orchestration, and leverages cloud-native software stacks and DevOps methodologies to accelerate time-to-market and rapidly respond to operator needs.