

REDKIT Has Reached a Significant Automation Level in Configuration Management



PROBLEM STATEMENT

As network complexity grows in today's telecommunications industry, **efficient and accurate configuration management has become more critical than ever**. Manual processes in network management often led to **operational errors, time delays, and service disruptions**, making automation essential for operators seeking to enhance efficiency and maintain high service quality.

Configuration changes were difficult to manage effectively. Tracking the generation and execution of configurations was complex, as it was hard to verify whether the **correct golden templates** were being used and whether they were properly generated for each device given **variations between vendors**. When golden templates were updated, **synchronization across the network often failed**, leading to configuration discrepancies — and the process did not always comply with internal standards or external regulations.

About Vodafone Türkiye

A part of the **Vodafone Group**, which operates as one of the world's leading technology communications providers, **Vodafone Türkiye** offers a range of telecommunications technologies including **fixed, mobile, and content services** to individuals and enterprises in line with its vision of **"building a digital future for everyone."**



*Managing configuration changes wasn't the only challenge. It was equally important to verify system state **before and after operations** — confirming equipment met necessary conditions pre-configuration was time-consuming and prone to misconfigurations. It was also unclear whether services were successfully activated, requiring additional verification. This created a need for teams to **constantly connect to devices**, increasing the likelihood of errors.*

OBJECTIVE

REDKIT was created to eliminate manual configuration risk and establish **fail-safe, zero-touch service provisioning and activation**:

- ▶ Automatically generates configurations aligned with **compliant golden templates**
- ▶ Uses **device- and vendor-specific templates**, removing manual configuration and individual template verification
- ▶ Automatically recognizes golden template updates and **keeps devices synchronized**
- ▶ Streamlines activation by **auto-retrieving information from third-party systems** based on work orders
- ▶ Ensures **fail-safe zero-touch activation** through pre- and post-checks
- ▶ Lets engineers execute commands **with a single click** instead of using multiple tools



REDKIT was born inside one of Türkiye's most demanding transport networks, where **thousands of configuration changes and service activations** keep the network alive every day. For years, these tasks depended on engineers **manually logging into devices** — checking parameters, applying templates, validating outputs, and documenting changes. **It worked, until the network scaled faster than human capacity could follow.**

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SOLUTION

Access Network Transport Operations Team of Vodafone Turkey began using REDKIT, a product developed collaboratively by Vodafone Turkey and TechNarts, to streamline the service provisioning and activation process.

Automatically generating reports **within a minute** sharply reduces operational overload – **freeing NOC and field teams to focus on restoring service** rather than manually parsing alarms.

GOLDEN TEMPLATE AUTOMATION

- ▶ Automatically generates configurations aligned with golden templates that **comply with internal and external regulations**
- ▶ Templates are specifically designed **per device and vendor type**, removing the need for manual configuration and individual template verification
- ▶ When a golden template is modified, the system **automatically recognizes the change** and keeps devices up to date
- ▶ Reduces the risk of incorrect templates and **minimizes synchronization issues** between teams

FAIL-SAFE PRE- & POST-CHECKS

- ▶ **Pre-checks** assess equipment suitability and compliance before zero-touch automation runs
- ▶ **Post-checks** provide a clear status of whether activation completed successfully
- ▶ Together, these checks ensure a **fail-safe zero-touch activation process** without manual, individual evaluations

STREAMLINED ACTIVATION

Activation is streamlined by automatically retrieving information from third-party systems based on work orders, covering the onboarding of:

- ▶ **Network elements (NE)**
- ▶ **Links and link aggregation groups (LAGs)**
- ▶ **Tunnels**
- ▶ **Mobile services**
- ▶ **Enterprise services**

Engineers can execute commands with just a click, instead of switching between multiple tools – helping personnel stay focused and concentrate on critical tasks.

ZERO-TOUCH FEATURES

- ▶ **NeLTE (4G) Site Configuration / Deletion**
- ▶ **NodeB (3G) Site Configuration / Deletion**
- ▶ **BTS (2G) Site Configuration / Deletion**
- ▶ **NMS Site Configuration / Deletion**

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OUTCOMES

REDKIT gave Vodafone Türkiye's operations teams a faster, more reliable way to manage configuration and activation at scale:

- ▶ **Single source of truth** across different roles, replacing scattered, inconsistent data views
- ▶ **Quick troubleshooting** of network problems, without switching between multiple tools
- ▶ **No need for teams to manually connect** to devices for configuration or verification
- ▶ **100% golden template compliance** across all devices and vendors
- ▶ **Fail-safety** built in through both pre- and post-checks at every activation

REDKIT turned configuration management from a **manual, error-prone task** into a **fully governed, zero-touch process** – giving Vodafone Türkiye's operations teams **consistent, audit-ready control** across every device and vendor, without the need to touch equipment directly. What once demanded constant manual verification now runs **safely, predictably, and at scale**, freeing engineers to focus on higher-value work instead of chasing configuration errors.

ABOUT TECHNARTS

TechNarts is a software development company founded in 2007, focused on creating measurable impact through innovation, strong engineering culture, and deep technical expertise. With over 18 years of experience in advanced technologies and proven methodologies, TechNarts delivers tailor-made software solutions and services across complex IT infrastructures.

Specializing in OSS/BSS solutions and Track & Trace systems, TechNarts operates across multiple verticals, with a strong focus on telecommunications. The company designs and delivers purpose-built solutions that address real operational challenges and create long-term value at scale.