



# Introduction

#### SCOPE

Network Configurations Roaming Management Traffic Steering Service Openings

#### **SOLUTIONS**

RoamsysNext NCO
RoamsysNext WRM
3 Scandinavia Custom Dev

**3 Scandinavia ("Tre")** is a leading MNO in northern Europe running fast and secure mobile networks in Sweden and Denmark, including 5G roaming services. Tre is a very active member in the GSM industry and regularly helps to push new ideas and developments forward. Just recently, together with RoamsysNext, Tre has been awarded by research company ROCCO as one of the 5 most innovative MNOs for their E2E network configuration automation project. Tre is part of CKH Group, which has networks in 11 countries – 6 in Europe and 5 in Asia.

# **CHALLENGE**

Tre has several hundreds of roaming partners that send between 100 and 120 IR.21 files every month, covering thousands of changes. Every single change needs to be identified, checked for relevance, translated into various formats and then implemented in different network elements. Running this change process manually is resource-intensive, intransparent, expensive and error-prone. To improve this process and automate the network configuration from end-to-end, Tre leverages the RoamsysNext NCO and WRM solutions which communicate directly with an internal system developed by Tre in-house. In addition to the network configurations, the RoamsysNext applications also support Tre with the roaming partner management, service openings and steering targets both on a local level as well as in the communication towards CKH Group.

**CHANGE** 

**DETECTION** 



# Network Configuration Optimizer (NCO)

"Our real-time implementation process, supported by RoamsysNext, significantly reduces the waiting time for each department.

Now, our customers can connect to the correct roaming partner 100% of the time, plus inbound roaming is less prone to errors."

Sanaz Moshirian, Project Manager Roaming, 3 Scandinavia

**ANNUAL KEY FIGURES** 

### FETCH IR.21 DOCUMENTS FROM GSMA

All RAEX IR.21 files that Tre receives are automatically fetched from the GSMA InfoCentre. Additional files that roaming partners still send by email in legacy formats are captured by the RoamsysNext team to enable a fully automated handling of all roaming partners.

#### **DETECT RELEVANT CHANGES**

The NCO solution automatically analyzes all received files and detects the changes. To decide whether a change is relevant for Tre, all necessary parameters are considered by the tool: the current roaming footprint of Tre, the network elements in use and other individual parameters defined by Tre.

Estimated time saving on relevant change detection: 95%

# **READY-TO-USE CONFIG FILES**

NCO can automatically translate the detected relevant changes in all sorts of different input formats required by the various network elements, e.g. firewalls, billing systems, core network elements or mediation systems. In the case of Tre, the changes are sent to their in-house tool and the network updates are then distributed and triggered from there.

Estimated reduction of misconfigurations and backlogs: 20%

2.2K+ IR.21 SECTION UPDATES

1.4K+ NEW IP ADDRESS

7.4K+ NEW MSISDI

8.5K+ NODES



# Wholesale Roaming Manager (WRM)

"We have highly automated the network configuration process in Sweden and Denmark, and we are very pleased with the results. Together with RoamsysNext, we now want to help the other networks within the group to take their network management to the next level."

Matthew Bisoffi, Head of Group Roaming, CKH Group

**KEY FIGURES** 

#### **GROUP PARTNER MANAGEMENT AND SERVICE OPENINGS**

CKH GROUP is centrally running the roaming management with RoamsysNext solutions to align the strategy and increase transparency across all networks. The targets for new service openings are agreed on between the group and the individual networks, and the progress is monitored on both sides with the WRM solution. As part of the group, Tre has successfully launched more than 1.200 service openings across Sweden and Denmark. Estimated increase in workflow efficiency: **20%** 

#### **INCREASE IN ROAMING REVENUES**

With the support of the WRM solution, Tre not only gained more transparency and reporting capabilities across the service openings but was also able to run more openings in less time.

Estimated increase in launches and resulting revenues: 15%

#### **COST AND TRAFFIC OPTIMIZATION**

Recently, CKH Group has also implemented the RoamsysNext Steering module to manage the steering target parameters across all networks from a central level. This allows CKH to most efficiently utilize the IOT discount agreements that have been agreed on a group level. Although the Steering module has only been in use for a few months, targets for more than 60 countries have been adjusted for Tre Sweden and Denmark already.

# **ABOUT 3 SCANDINAVIA**

Tre Skandinavien (Hi3G Access AB) was started in December 2000 with the vision to create a completely new platform for mobile communication. Since then, we have grown at an enormous speed and today own and operate 3G, 4G and 5G mobile networks in both Sweden and Denmark.

### **ABOUT ROAMSYSNEXT**

We are an independent tech company facilitating mobile operators and connected companies via a large-scale software-as-a-service platform. Based on more than ten years of experience, our sophisticated software solutions help operators to establish a smooth, secure and reliable roaming collaboration process. Over 120 customers in more than 90 countries worldwide put their faith in our products. We are the GSMA's exclusive provider of RAEX solutions since 2009.



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