

Nexign and MegaFon Reaffirm Commitment to Excellence in Network Optimization



Company: MegaFon OJSC

Region: Russia

Solution: Nexign Network Monetization Suite

Overview

MegaFon and Nexign have been collaborating for almost two decades to take full advantage of networks and deploy new standards and original innovations. One of the cornerstones of this partnership is Nexign Network Monetization Suite. The solution comprises Online Charging System (OCS); Nexign Policy and Charging Rules Function (PCRF), User Data Repository (UDR), and Authentication, Authorization and Accounting (AAA); RAN Congestion Awareness Function (RCAF) and Service Capability Exposure Function (SCEF); as well as Diameter Routing Agent (DRA). For MegaFon, it means highly optimized 4G (LTE) network management, lower expenses and stronger brand loyalty. Also, MegaFon receives capabilities to launch next-generation rate plans and services, such as a pre-5G option.

Customer

MegaFon is a pan-Russian provider of digital opportunities and a leader in the Russian and global telecommunications market. The company combines all IT and telecommunications areas: mobile and fixed-line services, mobile and broadband internet, digital TV and OTT services, innovative digital products and services across Information and Communication Technologies (ICT), the Internet of Things, Big Data analytics and processing, cloud solutions, cyber security, financial services, digital advertising and marketing, e-commerce, and converged IT solutions in system integration.

Objective

MegaFon has been executing a comprehensive strategy aimed at optimization of the existing networks. The telecom operator needed technologies to maximize customer experience and mobile internet connection speed and quality through adaptive traffic management.

Nexign Network Monetization Suite

Throughout the long-term partnership, MegaFon has been enjoying the benefits of Nexign Network Monetization Suite, and Nexign has been working on enhancements to the Suite products in line with its vision on network monetization. Policies and Charging Rules Function (PCRF) and Online Charging System (OCS) in particular provide additional flexibility and enable MegaFon to regularly launch advanced offerings that excite customers.

Implemented in 2013, Nexign PCRF helps the operator flexibly manage mobile traffic and bring new QoS-based services to market. With policy control at fingertips, the operator can easily tune Quality of Service (QoS) and charge services based on customer status, traffic type, application, device type, location, service usage, balance, etc. As a result, the operator introduced application-based charging for popular services, the turbo internet speed option, and prompt alteration of mobile internet speed upon reaching the threshold or topping up the balance. Furthermore, PCRF is crucial for ensuring higher quality in the VoLTE calls.

After a while, PCRF was enriched with congestion management features. Nexign's experts suggested an approach to additionally optimize the radio access network by using advanced functionality of base stations and new algorithms.

In 2019, the PCRF architecture was modified to adhere to updated 3GPP standards. Meanwhile, selected processes were transferred to RAN Congestion Awareness Function (RCAF). This allowed the operator to apply innovative traffic management algorithms to congested base stations.

The 2020 experience highlighted the value of RCAF. Under pandemic-related restrictions, demand for broadband mobile internet soared across outlying districts, while the load in some suburban network areas increased by 2.5 times. MegaFon's specialists collected delayed congestion statistics for the Policy and Charging Control team, who applied data-driven traffic control policies to normalize network operations. RCAF automates this process and provides real-time analysis of data on network condition, traffic, as well as applications and customers on the network. In this case, the time to response drops from several days to several minutes.

In 2020–2021, pilot projects of the PCRF and RCAF product set, which leveraged vendor-specific features through Nexign's know-how, were tested in selected regions with high traffic consumption and frequent congestion at base stations. The automated traffic control policy, which included prioritization per traffic type, led to the increase in the average download rate and the decrease in the number of congested cells by 25% in the tested network area. The pilots also unlocked new use cases for RCAF-backed innovative products for MegaFon's customers. Nexign RCAF went live at MegaFon in 2022.

Nexign Network Monetization Suite ensures the fast creation and configuration of new rate plans and options based on smart traffic management, enabling the operator to slash time to market to a few days.

Results

- Increased concept-to-production flexibility with time to market shortened to a few days
- Improved customer satisfaction index (CSI) through better quality of service and expanded product portfolio
- Enhanced network capacity, reduced number of congested sectors, and minimized costs on radio access network infrastructure

«As we are committed to delivering consistently great quality of service to our customers, MegaFon has adopted a wide technological campaign for intelligent traffic management. Nexign's policy management products ensure highly efficient utilization of resources and network capacity as well as drive new revenue streams through innovative offerings, such as pre-5G.»

*Stanislav Shilov,
Head of Perceived Quality Analysis, MegaFon*

«We continuously elaborate methods of traffic control and network optimization as well as test new approaches. The products within Nexign Network Monetization Suite efficiently use the capabilities of the operator's existing base stations and radio access network management systems. This enables the operator to provide a high quality of service while keeping expenses low and exploring innovative 5G use cases even in LTE networks.»

*Andrey Knyazev,
Head of BSS Development and Operations, Nexign*