

Prominent Eastern European Service Provider Turkcell Maximizes Its 4G/LTE Wireless Network Performance and Service Delivery

Full-Service Telecom Uses NETSCOUT nGeniusONE for Maximum Visibility into Its 4G/LTE Network and For Resolving Performance and Service Issues

OVERVIEW

Region

Eastern Europe, Turkey

Business Value

- Uses NETSCOUT® solutions that are powered by Adaptive Service Intelligence™ (ASI) technology to obtain an end-to-end, comprehensive view of its Service Provider network and key service dependencies.
- Optimized network performance and maximized service delivery to subscribers.
- Increased the quality of its end-user experience while bolstering service performance 75-100 percent.
- Reduced Mean Time to Knowledge (MTTK) and performance problem identification by 75 percent or more.
- Lowered war room incident time from an average of 30+ hours down to less than 10 hours.
- Increased return on investment (ROI) by reducing CAPEX and OPEX 10-24 percent or more through displacing several performance management tools, by improving operations staff productivity, and by reducing time spent in the war room.



Customer Profile

Headquartered in historic Istanbul, Turkey, and with business operations in Turkey and Cyprus, Turkcell İletişim Hizmetleri A.Ş., or Turkcell, is the leading mobile phone operator in the country servicing over 35 million subscribers. It is also the first Turkish company to be listed on the New York Stock Exchange. Turkcell offers a complete array of mobile services including voice and data over their 3G/4G network. The company also has international roaming agreements with 605 operators in 201 countries and claims to have more general packet radio service (GPRS) roaming agreements than any other telecom operator.

Challenges

Turkcell's customers demand superior 24/7/365 service, and achieving that level of service reliability is not easy. The lifeblood of Turkcell's business is its service performance. If there is any customer-impacting service drop off, it eventually reverberates through to its bottom line. Turkcell's primary ongoing challenge was that it needed a performance-monitoring tool that provides end-to-end visibility based on real-time, continuous traffic-based intelligence. It also needed to be able to pinpoint performance problems quickly to reduce Mean Time to Knowledge (MTTK) and to maintain a flawless customer experience.

LTE control plane monitoring, user plane visibility and session tracing must all be visible, as all are indispensable to ensuring and maintaining the exceptional quality service Turkcell subscribers have come to expect.

Turkcell also needed customized reporting procedures coupled with real-time intelligence regarding its LTE signaling behavior. Turkcell's approach is to solve problems proactively, not reactively, before they are noticed in their network. So, proactive alarming of budding issues was

a much-coveted service triage feature that Anil Ercan Sonmez of Turkcell Operations and his team members needed.

Accordingly, Turkcell set out to identify the top service assurance management tools on the market to optimize the performance of their mobile services as well as to troubleshoot potential problems with their LTE traffic. After testing products from CA, Splunk, JDSU, HP and Anritsu, [Turkcell chose the NETSCOUT nGeniusONE® Service Assurance platform](#) for its feature-rich capabilities.

The NETSCOUT Solution

Once NETSCOUT nGeniusONE was deployed, it immediately paid back rich dividends to Turkcell. Before using the NETSCOUT nGeniusONE platform, Turkcell had to use raw traces and Wireshark captures. Now, they use NETSCOUT's Adaptive Service Intelligence™ (ASI) technology in its network for complete visibility of MME, P-GW and S-GW signaling for the continuous monitoring of its 3G and 4G/LTE network for service anomalies, such as what access point name (APN) subscribers used so as to find why calls were rejected. It now monitors its control and user plane traffic 24/7, and if a problem should arise, the company can quickly troubleshoot service-affecting errors. According to Anil Ercan Sonmez, of Turkcell Operations, ["With NETSCOUT nGeniusONE, I can see our overall network situation in one screen, and can easily deep dive into the relevant details."](#)

Turkcell now has a complete service assurance platform that provides rapid triage while optimizing performance of mobile services. It no longer has to endure helter-skelter problem identification, which extended MTTK and caused friction within the operations team. But what specific results has Turkcell received through its daily usage of NETSCOUT solutions?

Results

The results that Turkcell has achieved using NETSCOUT have been remarkable – and quantifiable. Besides the obvious enhancement of possessing a holistic view of service dependencies and interrelationships, it has increased agility in solving performance issues while simultaneously increasing ROI in both the short- and long-term, and has markedly enhanced end-user experience.

Some of the quantifiable results Turkcell has derived include:

- Diminished time spent in the war room, resolving incidents from 30+ hours to a maximum of 5-10 hours per incident.
- Bolstered and improved service assurance by shortening service disruptions 50-74 percent.
- Improved problem identification rate by 75 percent or more.
- Reduced overall time spent troubleshooting service issues by 75 percent or more.
- Slashed MTTK 75 percent or more.
- Trimmed mean time to resolution (MTTR) by a minimum of 80 percent with NETSCOUT nGeniusONE as compared to an alternative solution.

Taking all the above into consideration, Turkcell improved its mobile service performance, which correlates directly to its bottom line as customer satisfaction and superior cell service ensure a happy customer base.

These improved metrics, while extraordinary, do not tell the whole story. Besides this rich panoply of benefits, one of the more underrated yet significant features of the NETSCOUT nGeniusONE solution to Turkcell is its consolidation of network monitoring tools. Eliminating tool sprawl contributes to improved IT staff productivity. [Says Anil Ercan Sonmez,](#)

"I have extensive knowledge about service assurance systems. The NETSCOUT nGeniusONE Service Assurance platform is flexible, easy to instrument, and to configure."

Summary

The ubiquity of Turkcell's service performance instrumentation significantly enhances operational efficiencies and provides end-to-end network visibility. As Turkcell continues to grow, and with ever-expanding demand for its services, it must keep up with, and satisfy, subscriber requirements while continually meeting rigorous service performance standards. Ayhan Yilmaz, an IT manager at Turkcell, believes they are well positioned to do so as he says, "The NETSCOUT nGeniusONE Service Assurance platform [allows us to troubleshoot performance deficiencies in our network](#) quickly and efficiently."

Turkcell has optimized its operation and services by dramatically enhancing its network performance monitoring and problem-resolution processes. It does this due to the detailed granularity – and comprehensive view – of its services dependencies inherent to the NETSCOUT nGeniusONE solution as bolstered by the power of its patented ASI technology. NETSCOUT solutions provided immediate short-term benefits to Turkcell, and as it goes forward, Turkcell will continue to reap those benefits long-term as well.

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