Application Note

Network & Service Insights for Proactive Operators

ExploreQOS completes the SQM solution offer by exploring and analyzing the network performance and its associated services, such as voice, messaging and data. ExploreQOS is an intuitive, network-wide solution that allows prompt detection of problems in 2G to 5G Core and Radio environments, with an accurate diagnosis of the dysfunctions' root causes.

· Interactive dashboarding that allow users to dynamically filter on different widgets: pie charts, word cloud, table and charts… to push investigation down to the root cause

· Multi-dimensional dashboards: KPIs are calculated over several dimensions giving a detailed view per service (voice, SMS, data and USSD)

· Configure and receive real-time alerts
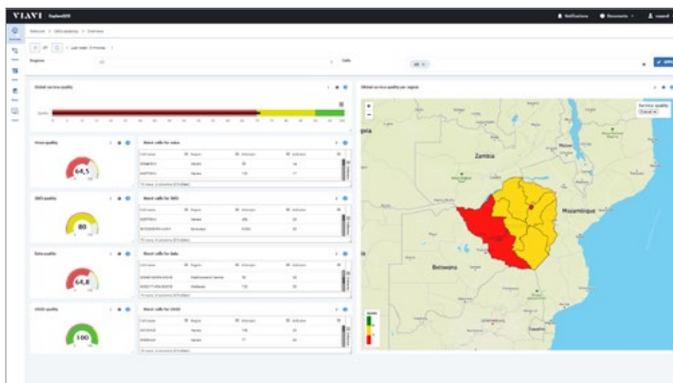
Cell Analysis Overview in ExploreQOS

 ExploreQOS

A pillar of the NITRO Mobile Platform:

ExploreQOS is one of three products that provides 360° insights for network performance and its associated services, such as voice, messaging and data, from 2G to 5G Core and radio environments.

Get the full picture with ExploreQOS, SecureQOS & MonitorQOS

SecureQOS offers a comprehensive troubleshooting solution that provide the root causes of any dysfunctions, from a transaction's history to its end-to-end call trace and protocol decoding bits.

MonitorQOS is a simple yet amazingly powerful tool to monitor your network by creating your own customizable KPIs. It can connect to existing data sources and users can build their own dashboards answering their specific needs.

Cell and Network Element Analysis

ExploreQOS aggregates and correlates millions of subscriber-centric data events 24/7 across the entire network. It can quickly assess which of the network elements and/or services are being impacted. From a high-level view of the network performance to detailed KPI trends, users obtain immediate insights into the performance quality of their network and can have a clear picture of the subscribers' experience across multiple vendor and access technology areas.
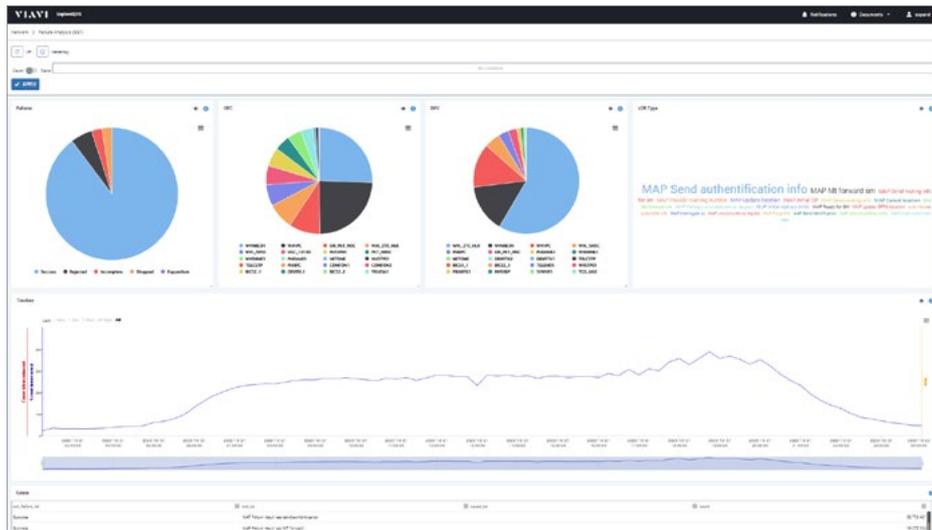
SS7 Failure Analysis dashboard in ExploreQOS

Automatic Anomaly Detection

Network operators tend to visualize every single KPIs to identify an anomaly on its network, through trends or by setting and viewing manually configured alarms on the system. For most cases, users will be alerted once the issue has occurred, which is already too late.

VIAVI offers solutions to detect automatically when an issue is coming on the network so that user can proactively launch maintenance tasks to fix or repair any dysfunction nodes.

Based on AI (Artificial Intelligence) machine learning algorithm rules, the system learns continuously the KPI values. 2 thresholds (low and high) are defined automatically and continuously by the tool to consider the normal behavior (confidence interval) for a KPI value at a given time.

When the KPI value crosses the threshold, an abnormal situation is raised.

Device Analysis

ExploreQOS provides a countrywide view of device statistics, with insightful KPIs per device model and vendor all for device monitoring, troubleshooting and/or benchmarking. This allows engineers to isolate problematic device models and individual devices. It can also be used to validate performance per device model when launching new services. ExploreQOS easily lists handsets with poor-quality via its advanced filtering and sorting capabilities while browsing through the KPIs. ExploreQOS also includes KPI reporting and trending capabilities, browsing from global dashboards to detailed lists of KPIs.

Interactive Dashboards

A complementary set of dashboards is available to the user to investigate deeper issues using different dimensions of the xDRs, for each flow of network traffic: SS7, RAN, Packet Core and Diameter.

Failure analysis dashboards, updated every 15 minutes, are commonly based on an intuitive and interactive approach where the user can interact with any value on the screen.

VIAVI (NASDAQ: VIAV) is a global provider of network test, monitoring and assurance solutions for communications service providers, enterprises, network equipment manufacturers, government and avionics. We help these customers harness the power of instruments, automation, intelligence and virtualization to Command the network. VIAVI is also a leader in light management solutions for 3D sensing, anti-counterfeiting, consumer electronics, industrial, automotive, and defense applications. Learn more about VIAVI at www.viavisolutions.com.