

END-TO-END SERVICE QUALITY MANAGEMENT:
FROM NETWORK, TO SERVICES, TO CUSTOMER

SERVICE QUALITY MANAGEMENT

BUSINESS CHALLENGE

Significant increases in network and service complexity are challenging today's Communications Service Providers (CSPs) to transform their service assurance processes.

Constantly evolving customer demands and preferences are forcing CSPs to develop the ability to rapidly introduce new services.

This also means that CSPs must be able to effectively manage service delivery quality and maintain customer experience at the highest possible level. As disparate systems have added complexity, and the assurance of new services has become a challenge, the traditional siloed approach to service delivery needs to be replaced with an end-to-end, resource-to-service-to-customer view coupled with centralized assurance.

Furthermore, the appearance of convergent, content-rich services is making the creation of links between isolated technologies an essential part of effective service quality management.

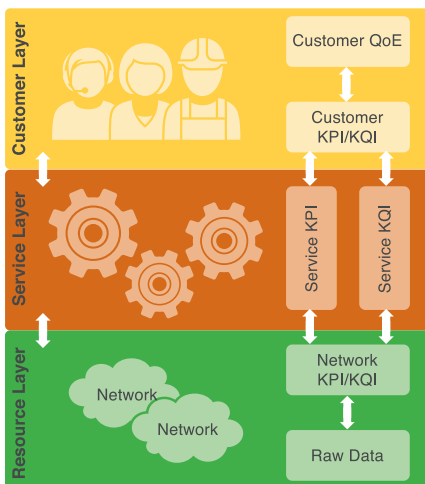
Partnership-based service delivery scenarios have also proved very popular, paving the way for the creation of service syndication, service delivery platforms, and XaaS offerings. To deliver these next-generation services, CSPs are joining forces with

content providers, aggregators, and network owners. This is necessitating the creation of a unified service assurance system and extensive standards-based integration capabilities for smooth, centralized data collecting and processing.

Finally, the ever-expanding world of next-generation fixed and mobile devices, while enabling customization and personalization

of features and components, is bringing with it the complex challenge of providing effective service delivery and customer experience management.

NetCracker's Service Quality Management (SQM) offering is an integral part of our Service Fulfillment & Assurance solution and is pre-integrated with other components of the NetCracker TOMS (Telecom



“*NetCracker’s solution lets us know which customers are impacted by network failures and proactively manage their Service Level Agreements. NetCracker’s ability to provide end-to-end correlation between customers, their services, and the network elements they use allows us to offer high quality, SLA-based services to our business customers.*”

Mitat Kizilelma,
Head of Operations, Cablecom

Operations and Management Solutions) Suite, including Network Management, Resource Management, IT Platforms, End-User Devices, and Customer Management. NetCracker's SQM offering gives CSPs the capabilities they need to provide end-to-end, cross-domain service assurance, service-to-resource topology correlation, customer-centric issue settlement prioritization, service and customer impact analysis, and proactive customer experience management.

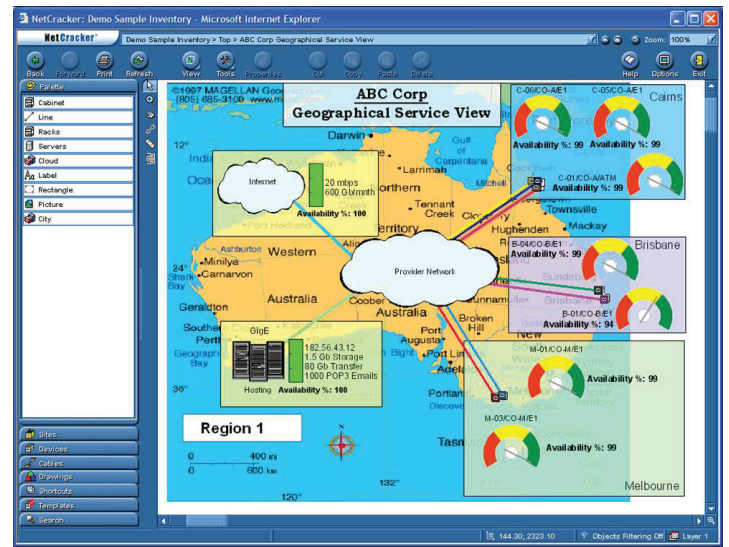
DETAILS

The three-level, modular architecture of NetCracker's TOMS-based SQM offering embodies a Resource-to-Service-to-Customer Layer structure as well as functional isolation. The latter makes it possible to make changes and upgrades on one layer without impacting the other two, and thus operational flow is never affected.

In the service quality assurance process, the lower layers serve as a backbone for the higher ones, while allowing for a two-way interaction through integration interfaces.

Enabling customer-centric (rather than network-centric) service problem resolution, NetCracker's SQM solution allows CSPs to focus on front-burner issues and forecast the quality of service (QoS) and the quality of experience (QoE) delivered to the customer.

Key components of the NetCracker SQM solution include KPI Inventory, SQM Core, and SLA Manager:



KPI INVENTORY

KPI Inventory collects and filters data from performance management, fault management, and trouble ticketing systems and groups them into logically isolated entities for further processing:

- KPI filtering
- ID KPI-to-service association
- Data refinement
- Data consistency validation
- Data clean up

SQM CORE

SQM Core stores, calculates, and aggregates quality-related data. It also manages performance degradation reports and triggers proper actions for performance problem resolution:

- KQI catalog
- KQI historical data storage
- Performance degradation reporting
- SQM statistics engine
- SQM and SLA reporting

SLA MANAGER

SLA Manager compares stated service level objectives with actual KQI values and also provides extensive reporting and SLA assessment capabilities:

- SLA specifications catalog
- SLA threat and violation identification and reporting
- SLA monitoring
- Business and retail SLA assessment
- SLA violation resolution orchestration

BUSINESS BENEFITS

The NetCracker Service Quality Management offering enables CSPs to:

- Improve customer experience and reduce churn through proactive, cross-domain SLA management and guaranteed high-quality service availability
- Forecast the QoS level for individual customers and prevent SLA violations through customer-centric service quality management
- Reduce time-to-market and time-to-operation through compliance with industry standards and pre-integration with Product and Service Catalogs and Resource Inventory
- Maximize operational efficiency through user-friendly GUI visualization capabilities
- Reduce OpEx through the timely detection of SLA violations, automated customer-facing event prioritization, and a focus on the most important service delivery breaches