

Benefits at a glance

- Manage network-wide QoS
- Detect bypass traffic
- Identify traffic anomalies in real time
- Track SIP and H.323 calls
- Manage service level agreements



Performance Intelligence Center

Traffic Management KPI Service Package

Business Requirement

Competition continues to increase in both the wireline and wireless telecommunications markets, putting downward pressure on operator margins and directly affecting their ability to invest in the network. Visibility to the core network and its functions is essential to managing and improving margins. As operators migrate to next-gen networks (NGN) and IP Multimedia Subsystem (IMS), this becomes even more critical.

Challenge

Network growth is typically based on utilization studies of current facilities using data from switches, databases, SMSCs and SGSN/GGSNs. However, data collected from a single source does not identify the different types of traffic on the network, nor does it give a universal, network-wide view. Operators need to see the “big picture” of the entire network in order to manage critical factors that impact profitability, such as Quality of Service (QoS) at interconnects, non-billable traffic, trunk utilization, SGSN/GGSN throughput and utilization and traffic volumes across GPRS and UMTS interfaces.

Complete, real-time visibility to the network is essential for effective network management and revenue assurance. This allows operators to accurately engineer network components and invest only as necessary. With the ability to analyze and characterize network usage, operators can maximize their network resources and reduce operating and capital expenses.

Solution

Tekelec’s Performance Intelligence Center (PIC), allows wireline and wireless operators to manage network traffic in a proactive manner in order to plan effectively, handle growth and avoid unnecessary capital expenditures. The solution provides the tools operators need to manage all aspects of the network, while providing business-critical information to other departments within the organization.

The Traffic Management KPI Service Package provides statistics and performance data related to all traffic traversing the network. Operators are able to identify traffic levels, perform circuit utilization studies, calculate and monitor call completion rates and track routing of calls throughout the entire network in real time.

Unlike typical network monitoring systems and performance management tools, Tekelec provides powerful reporting flexibility, allowing the user to decide what data and reports are needed. Comprehensive QoS reports and interconnect traffic analysis help operators maximize call completion rates, increase revenue and meet interconnect commitments.

Tekelec’s Traffic Management KPI Service Package delivers data and detailed traffic reports to enable operators to characterize network traffic quickly, including type, volume, origination and destination, as well as causes for uncompleted calls. Operators can identify and quantify voice and data traffic in the network, manage trunk utilization, calculate throughput of network elements and perform traffic studies across all network segments.

Benefits

- **Manage Network-Wide QoS.** Revenue depends on call completion. If calls cannot be completed, revenues cannot be collected. When interconnect partners drop customer calls, the operator loses money. Tekelec provides operators with visibility to call completion rates at any point in the network. For example, operators can set alerts when call completion rates fall below configurable thresholds. Thus, they can ensure customer calls are completed and identify what network issues may be affecting call completion.
- **Detect Bypass Traffic.** Industry statistics cite that as much as 50 percent of all interconnect traffic is classified as non-billable traffic. Most operators lack the tools necessary to detect this traffic and its origination. As a result, operators continue to build their networks to accommodate traffic that does not generate revenue. Several operators have recovered significant revenue by deploying Tekelec's solution, which helps them identify suspect traffic.
- **Identify Traffic Anomalies in Real Time.** Operators are able to track and analyze abnormal traffic patterns as they occur to minimize the potential impact to the network and their customers. Operators can identify denial of service attacks based on sudden increases in traffic levels within concentrated areas of the network. They can also identify when traffic levels fall below normal on any one trunk or trunk group. In addition, they can set thresholds on traffic volumes and receive real-time notification when traffic exceeds normal levels, without having to change translations in the switches.
- **Track SIP and H.323 Calls.** As they cross network boundaries, SIP and H.323 calls are routed to legacy tandems for connection into the PSTN. Often the call is "re-originated" at the tandem because of incompatibilities between the protocols. PIC provides multi-protocol support to track all types of calls in the network.
- **Manage Service Level Agreements.** Operators can use key performance indicators (KPIs) provided by PIC to negotiate the best possible wholesale price for services and effectively manage interconnect SLAs and performance to avoid penalties.

Features

- Ability to integrate with Tekelec's EAGLE® 5 Integrated Signaling System (ISS) for a probeless solution.
- Vendor agnostic – based on industry standard network protocols.
- One platform for all network technologies; no need for separate systems to support new technologies such as VoIP and IMS.
- Real-time statistics, reporting, and alarming. Reports are customer configurable, and can be scheduled or generated on demand. Users can customize dashboards to display network traffic events in real time.
- Integrated ProAlarm module provides alarm capability, allowing the user to define thresholds and generate and display alarms based on real-time network events.
- Users can create configurable reports and define critical metrics based on xDR data collected through PIC.
- Examples of protocols supported:
 - SS7, CLASS, SIGTRAN, IN, INAP
 - GSM (MAP, BSSAP, GPRS, UMTS), CDMA (MAP, ANSI-41, IS-95), CAMEL, WIN, MMS, SMPP
 - WAP, POP3, SMTP, FTP, HTTP
 - MGCP, H.248, H.323, BICC, MEGACO, SIP, SIP-I, SIP-T, GSX, RTP, DIAMETER
- Proven technology with customers worldwide.
- PIC Performance Management provides operators the tools they need for:
 - Troubleshooting
 - Traffic Management
 - Roaming Management
 - Service Management

USE CASE 1 – MANAGING SMS TRAFFIC SPIKES

Problem

An operator encounters challenges as the amount of SMS traffic increases over their network. They need a tool that will allow them to track various SMS statistics, including overall quantity of messages, various error codes and delivery times of SMS messages.

Solution

By using the PIC application ProTraq, the operator can set up KPIs that look at the volume of SMS messaging, failure rate, and delivery time. In addition, by setting alarm thresholds, the operator is able to monitor alarms when the delivery time exceeds five seconds.

Benefits

- Swift identification and resolution of issues in the operator's network.
- Operator is able to plan capacity requirements more effectively.

USE CASE 2 – IMPROVING THE MOBILE WEB CUSTOMER EXPERIENCE

Problem

As subscribers surf the Internet more and more via their mobile device (Blackberry, iPhone, etc.), operators need to be able to track the quality of service related to the display time of the first page (WAP, HTML, etc.). The operator also needs for this page to arrive in less than five seconds.

Solution

By using the PIC ProTraq application, the service provider is able to set up KPIs that look at various parameters being sent, including the timing between messages. Using this tool they can set alarms on their KPIs to indicate if the average display time goes above their five second goal.

Benefits

- Improved customer experience results in lower number of complaints, support costs, and customer churn.
- Quickly identify and resolve quality issues.
- Information is used for marketing, including differentiating themselves from competing service providers.

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