

implementing next generation
IT and communications solutions



NETvisor

SLA Suite

| telecommunication networks | it networks | research and development | cost effective operation



SLA Suite

For all size of enterprises and service providers

Service Quality Management (SQM) has become a key issue in telecom and IT services, just like in all highly competitive service industries. Global analyst reports and our decade of experience with telecommunication support systems both indicate a growing reliance on service quality assurance solutions. NETvisor, traditionally focused on this area, has turned all its expertise into SLA Suite, an innovative Service Quality Management and Analysis product.

The concept of SLA reporting is simple. Generating accurate and informative reports, however, requires a sophisticated and flexible tool such as NETvisor's SLA Suite.

Balázs Szabó,
Raiffeisen Bank

Key Benefits

- Present informative, accurate and aesthetic SLA and OLA reports to your customers and users.
- Track the real-time status of your service performance using the SLA Dashboard.
- Consolidate information from multiple systems like 3rd party performance management tools, alarm and incident managers and trouble ticketing applications.
- Use visual design tools to define and configure your report contents, data calculation algorithms and report layout.

Additional Benefits

- Define service performance indicators (KPI-s) of arbitrary complexity using the intuitive Data Flow processing model.
- Versatile 3rd party application connector modules are available to use data in your existing management applications.
- Automatically adjust reporting to changes of service and infrastructure items in your technical inventory or CMDB.

Overview

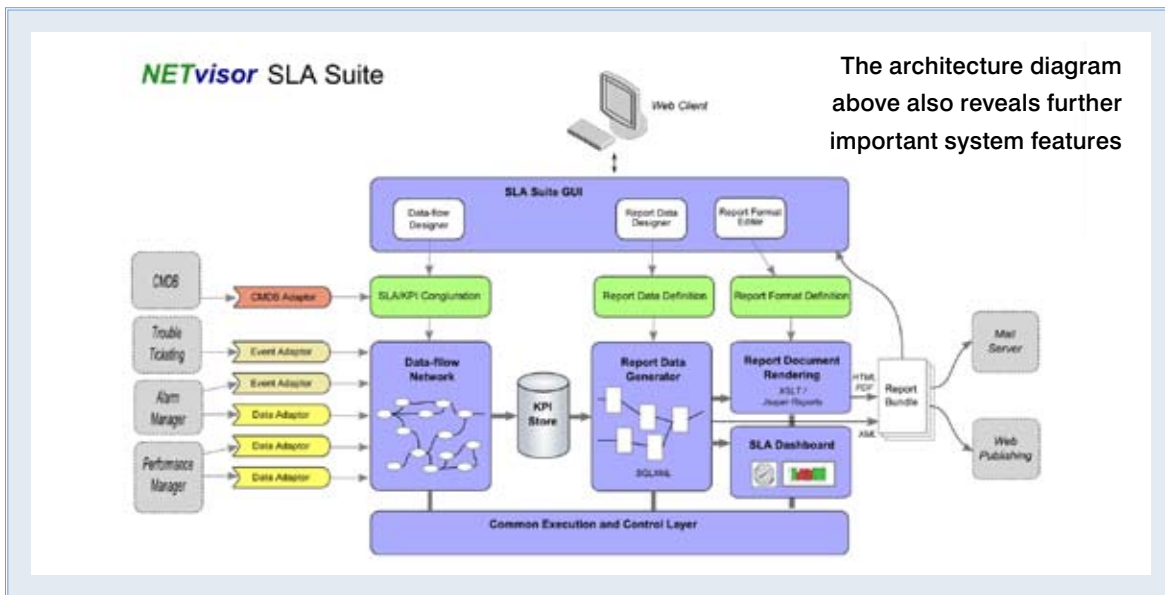
NETvisor SLA Suite consolidates processes, analyzes and reports on telecommunication and IT performance data and event records. In all cases, data originates from connected external systems, so SLA Suite is essentially a service quality data-aggregation solution.

The versatility and intelligence of the aggregation logic and the seamless report-formatting and real-time presentation capabilities make SLA Suite a unique tool suitable for all kinds of Service Management and Analysis tasks.

The architecture diagram above also reveals further important system features:

- Data sources are typically 3rd party management and OSS systems: performance probes and managers, trouble ticketing applications, alarm managers, etc.





- The system represents the quality of service elements using key performance indicator (KPI) timelines, which are persistently stored for quick access during the report generation phase.
- Report content and format is fully user-configurable using visual design tools, including KPI calculations, thresholds, service components selection, layout, graphs and graphics, etc.
- On-demand and scheduled reports generated in HTML, PDF, XML formats, published as files, on websites, or distributed in emails.
- The SLA Dashboard data is generated along with report data, albeit refreshed more frequently.
- The set of services to be included in aggregations and reports may be configured to automatically follow changes in external device and service inventory databases or CMDB-s.

Functionality and Use Cases

The principal function of SLA Suite is the comprehensive evaluation of service quality, either to prove compliance to SLA-s, or for internal trend, usage or problem analysis. The system supports the modeling of quality requirements or key performance indicators (KPI-s), which are either defined in the SLA contract, or based on subjective criteria. KPI values are periodically calculated and recorded as KPI timelines. These timelines are further combined, filtered and aggregated as needed before they are presented as event lists, tables, various charts, aggregate values, etc.

The results of SLA Suite's evaluations have multiple possible uses:

- The most evident feature is the capability to generate ready-to-present SLA report documents (in HTML, PDF, XML formats) and to publish them through files, Web content or Email. Reports are either generated on demand (from the Web GUI), or scheduled for automatic creation and distribution (e.g. monthly SLA reports).
- The system also supports the compilation of consolidated reports from multiple sub-reports (such as XML reports received from sub-contractors). SLA Suite digitally signs the reports processed ensuring the reports' authenticity.





- SLA Suite data can also be displayed as configurable Web portlets, enabling the creation of nearly real-time SLA dashboard views.
- The Web GUI also enables the tracking of SLA results as they evolve, and the investigation of potential problems at deeper levels, even down to raw measurement data.
- SLA Suite not only displays actual and recent SLA data, it is also able to visualize the historical trends behind SLA indicators. Such longer-term overviews are very well suited for baselining, capacity planning, and for the evaluation of long-term quality effects of technical or organizational changes.

Interfacing to OSS and management systems

SLA-S has open interfaces to connect to other telecommunication and IT management systems. Interfaces are either available or under development for the following systems:

HP Openview ServiceDesk	Technical inventory and trouble ticketing
Telcordia Granite	Technical inventory
HP Unified CMDB	CMDB
HP Service Manager	Trouble ticketing and service management
Clscoview IPM	Performance Management
Netvisor PVSR	Performance management
IBM Tivoli Provisio	Performance management
IBM Tivoli NetCool	Alarm Management
Trendium ServicePath	Performance management
Smarts InCharge	Alarm management
LDAP	Configuration management
Generic SQL connector	Performance, alarm or event data
Generic TT Interface (Batch and GUI)	Trouble ticketing

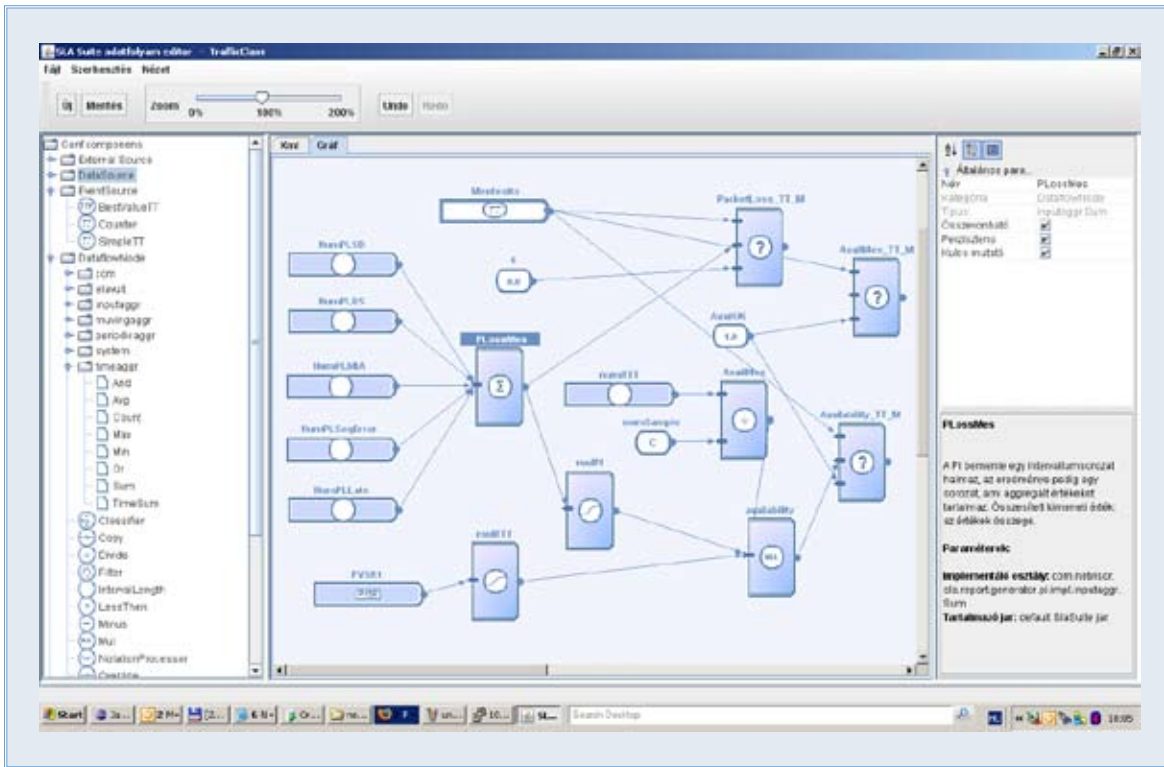
Thanks to well-defined and documented API-s, connectors to additional systems can be developed in a relatively short timeframe.

SLA-S Internal Architecture

The strength of SLA-Suite is based on an innovative data-driven architecture that allows for truly flexible KPI and report definitions and calculations. (Please refer to the figure above for an overview).

Raw measurements and management data are evaluated by a high-performance Data Flow Network (DFN). Computed SLA parameters, i.e. KPI-s are defined by assembling an arbitrary network of processing nodes readily available in the DFN node library, or custom developed for special, complex calculations (using the supplied API). KPI timelines calculated on the DFN are stored in a database, from which they are retrieved as XML document fragments. These fragments are selected, filtered, sorted, and combined into consolidated XML documents, which contain all data required for reports.



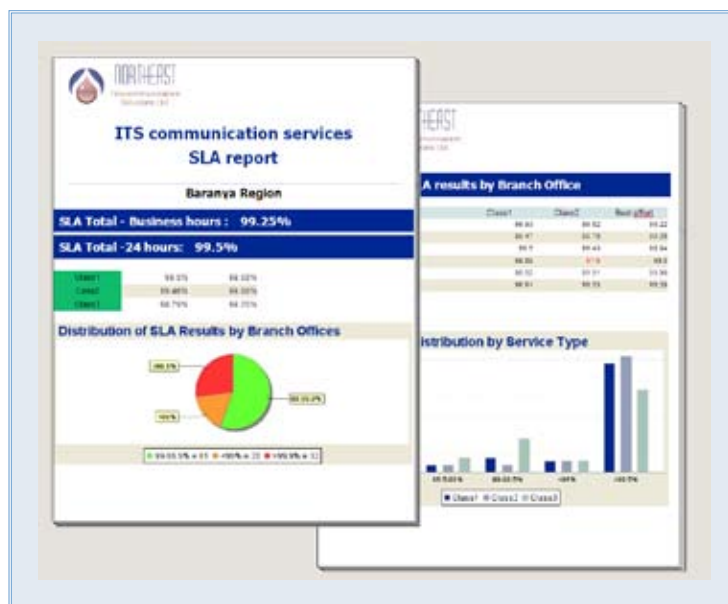


XML reports can be published (for machine processing), or, for human readers, the formatting module converts the XML data into user-friendly document formats, including charts, graphs, etc. Formatting is again based on user-defined templates, thus formatted reports' presentation (such as logos, page layout, texts and fonts, colors etc.) can be highly customized or branded.

SLA-S processing logic and configuration is defined in XML files, with visual design tools provided for all processing steps:

- Data flow logic (i.e. define KPI calculation rules from raw measurement data)
- Report data selection and aggregation logic (i.e. define XML reports from KPI-s)
- Report layout definition (i.e. define PDF or HTML rendering of XML report data)

SLA Suite is based on modern, open software technologies including AJAX, J2EE, SOA, Web Services, etc. Configuration and KPI data is safely and efficiently stored using an Oracle RDBMS, resulting in a robust, scalable solution that support the massive data handling requirements of large-scale services (i.e. over 100 000 service elements).



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