OSSera

NEW GENERATION

Service Quality Management

ABOUT US

OSSera, Inc. is a global provider of Operational Support System (OSS) solutions for IT organizations, service planners, service operations, and network operations. OSSera's multi-threaded symmetrically distributed platform fully leverages modern multi-core server hardware to provide higher flexibility, reliability, and scalability for service and resource management solutions. OSSera's products support the TM Forum's suite of standards especially in the area of Service Management, Fault Management, Performance Management, Data Mediation, and Configuration Management.

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Member of the
TeleManagement Forum

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Management of Service Quality for Wireless, Broadband, Cloud, and Content Services

Problems and Challenges

Service quality can be defined as "the collective effect of service performances which determine the degree of satisfaction of a user of the service" (ITU E.800). In other words, quality is the customer's perception of a delivered service.

Service Quality Management is proactive versus reactive.

Service Quality Management is the monitoring and maintenance of end-to-end services for specific customers or classes of customers.

However, service providers continue to struggle with bridging the gap between the conventional methods of network performance management and the customer's perception of QoS.

Network performance solutions require scale, high throughput and flexibility (i.e.: the ability to handle gaps in performance data.)

Plus, Service Quality Management systems must be able to handle a variety of service metrics from existing performance management data sources (polled, near-real-time, and historical), existing fault management service impacting events, usage data, probe data, and customer experience agent metrics.

Service providers continue to look for solutions that provide:

- a service modeling and planning tool that can map service impacting events along with service quality thresholds.
- a scalable, flexible, and reliable data mediation platform
- a real-time flexible thresholding platform with a rich formula builder.
- a means of correlating threshold crossing alerts with service impacts for predictive analysis.

"We wanted to eliminated Visio diagrams and manage our Value-Added-Services in a unified solution."

- LARGE WIRELESS & BROADBAND SERVICE PROVIDER (ASIA)

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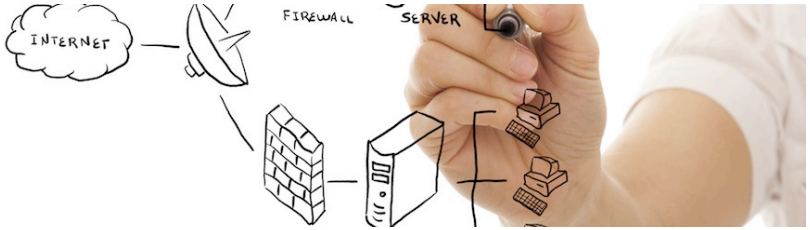


UNIFIED SERVICE PROBLEM, IMPACT & QUALITY MANAGEMENT

Solution

The OSSera approach enables the TeleManagement Forum's (TMF) suite of business transformation standards. Here is a definition from the TMF:

Service Quality Management (SQM) applications are designed to allow operators to monitor and manage the levels of service they are delivering. Service quality measurements are collected and compared against established quality indicators, and the conclusions made available to interested parties.

OSSera's solution combines Service Problem, Impact, and Quality Management into a unified framework to seamlessly monitor the service blueprints developed by service planners in a Unified Data Model. These service blueprints with both correlations and KPI/KQI formulas are passed to Service Operation Center (SOC) stakeholders. The SQM solution enables the SOC to:

- Identify customers and services potentially impacted due to changes in the network based upon KPI/KQI threshold crossings along with service impacting events.
- Analyzes problems impacting end-to-end services where users can drill-down to the originating KPI/KQI Threshold Crossing Alarms against a Node or Node Group.
- Monitor, analyze, and report the end-to-end service quality

OSSera's primary focus is on the Service Management Domain and Service Planning tools.

These rich Service Specification and Catalog planning tools allow a planner to create service impacting nodes, node groups, and network paths which are glued together with Service Sequence, Topology, and Impact diagrams for critical Customer-Facing and Network-Facing Services.

All models are stored in the Unified Data Model (UDM) connecting the points across all services.

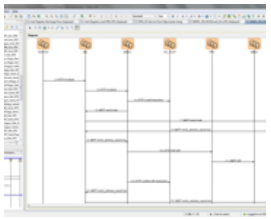
Also the UDM is the glue between organizations from the Service Planning teams to the Operational stakeholders. All service diagrams, node groups, nodes, and network paths can now be explored by the Operation teams with real-time alert status indicators.

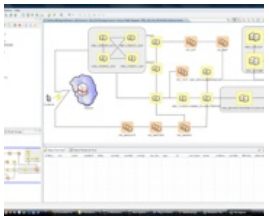
Real-time events, threshold crossing alarms, as well as KPI/KQI metrics are available to the Operational teams to determine Service Problem, Service Quality, and Service Impact Analysis.

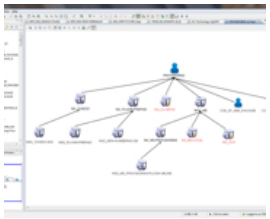
This is the fundamental difference with OSSera's solution:

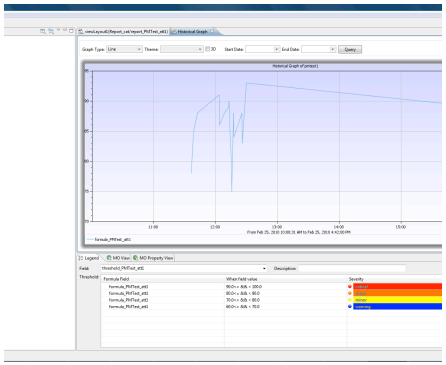
- Connecting the Dots across Service and Resource Management silos
- Connecting the Dots across Strategy, Infrastructure, & Product to Operational organizations

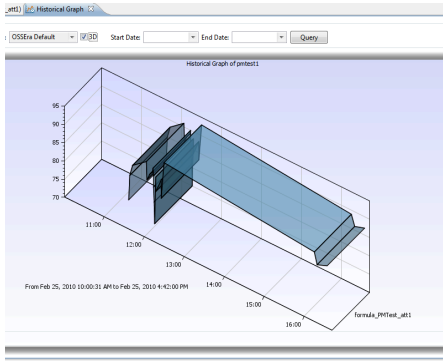
"We see great value with the Service Sequence and Topology diagrams between our planners and operators."
- LARGE WIRELESS & BROADBAND SERVICE PROVIDER (ASIA)











Service Specification, Inventory, and Operations (Service Impact and QoS Monitoring)

OSSera's Service Inventory Manager allows planners to model sequence diagrams, service topology, and network topology all with a single editor. This gives users a unified view into their services. Users can define services or import sequence diagrams in other formats such as UML or Visio to define services.

Service Sequence Diagrams

Service sequence diagrams help to map out the different event flows between objects which provide the end-to-end service. This type of interaction diagram shows how processes operate with one another and in what order to fulfill the service. This type of view is essential for service designers, service specification, and service catalog definition. Using the sequence diagrams, Service Planners can automatically generate service topology diagrams which model the sequence of interactions between managed node groups.

Service Topology Diagrams

OSSera Service Manager systematically allows users to convert sequence diagrams into service topology diagrams automatically. This feature was developed as specified by our customers to reduce manually having to create diagrams.

Planners can drill down on node groups in both the Service Sequence and Service Topology diagrams to related nodes.

Service Impact Diagrams

Service Planner then can associate node groups with Sub-Services and Services. Service Impact Diagrams are specific to each service provider, therefore Service Impact Diagrams are configurable and proprietary.

Correlation Definitions

Service Correlations are also specified and associated to Service Impact Diagrams. Correlations are triggered based upon object filtering and matching alert definitions.

Threshold Definitions

Thresholds, Threshold Sets, and Formulas are defined and versioned. Data Collectors are also defined by the Performance Administrator to gather metrics to be processed in real-time.

Service Monitoring and Impact Analysis

Now that services are specified, correlations, and thresholds, are associated to nodes in the models. The models, stored in a Unified Data Model, are deployed into a runtime operations system.

Operators can manage alerts, alert propagations, thresholds, and associated service models in real-time. Users can traverse service models to investigate what services are impacted if a resource fails and act accordingly to resolve the problem to restore the service.

Therefore when a service fails operators can drill down to the root cause related to the service based upon the Service Planner's detailed Sequence, Topology, and Impact Diagrams specified for Resource-Facing and Customer-Facing Services.

Service Quality Monitoring

Furthermore, the Service Operation Center can access Service Quality Monitoring views including real-time and historical graphing tools of specified KPI/ KQI's for a given Node, Node Group, Resource-Facing Service, or Customer-Facing Service.

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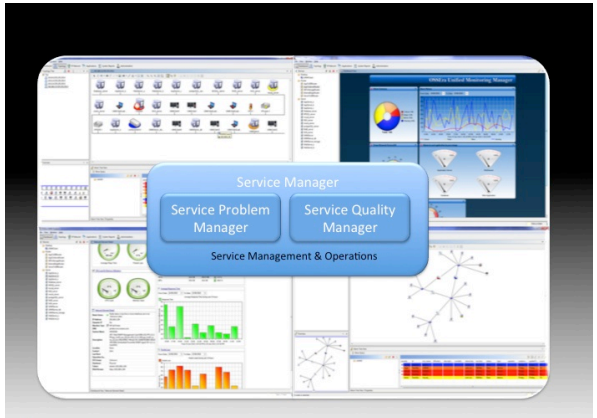
Multi-Threaded, Symmetrically Distributed, High Availability, 1000's of concurrent clients



Technology and Architecture

OSSera's fundamental architecture can support:

Tier 1 Scalability:

- No loss of events, metrics, or system performance during an "Event or Metric Storm"
- Over 1000 concurrent clients
- N-number of redundant servers

99.999% High Availability

OSSera servers can be configured in a symmetrically distributed configuration. The fully distributed and load balanced processes require no primary to secondary back configuration where operators lack visibility to critical network/ service monitoring functions. The runtime processes can be configured along with database clustering to meet 99.999% availability requirements. To summarize:

- Servers are policy enabled and managed.
- Each server can be configured with redundant layers of software components.
- All servers are load balanced and share the duty in serving clients.
- In the case of system failure, surviving servers will automatically redistribute the load to provide the highest system availability possible.

OSSera's Unified Software Framework software architecture supports a complete Linux Redhat and MySQL deployment to lower your Total Cost of Ownership.

Also the software can run on your existing investment in Sun Oracle infrastructure fully leveraging any available hardware processing power.

NOTE: As a member of TMF, OSSera has adopted the TMF specifications on technologies and integration. A technology neutral approach has been followed. The software has been designed to be able to work on different platforms and adapt to technologies that are commonly used by the industry of today.

redhat LINUX MySQL Sun ORACLE

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