



Service Assurance

Managing the Service Assurance Process

Service Assurance targets the needs of service providers in monitoring and assuring high quality for the services they provide. The Network Operations Center (NOC) is responsible for the Service Assurance process. This entails that the NOC constantly monitors network equipment, IT infrastructures and the services produced on them, 24 hours a day, 365 days a year. If a malfunction should occur, the NOC initiates the necessary actions to resume service and also provides the help desk and/or customers with current information while the problem is being resolved.

Challenges today

The problems that a NOC faces today are normally in one or several of these categories:

- There are multiple support systems – one from each network equipment supplier, but no one provides a unified view.
- A huge number of un-correlated alarms appear on multiple consoles when an error occurs, which make it hard to see the root cause. The alarms do not contain information on how and where to solve the problem.
- The possibility to actually monitor a service end-to-end is normally very poor.
- It is not possible to see which customers and services are impacted by a particular fault and in what degree - are the SLAs violated?
- Almost all monitoring are reactive, not proactive.

- The support for administering, monitoring and reporting the actions taken to repair a fault are poor.

Service Assurance our way

At Teleca we have put together a solution package for the NOC to address the issues raised above. The solution is comprised of a number of product components within the Service Assurance area. They are visualised in the figure below:

1. A Fault Management (FM) system receives all the alarms from all the event sources. It unifies them into a common alarm format, it correlates them and provides a common user interface for acknowledgement and further actions.
2. A Performance Management (PM) system obtains performance metrics from the network and services, through polling or batch transfers, to provide a detailed view of the QoS (Quality of Service).
3. A number of Robots simulate users to monitor the services end-to-end. They measure availability, response times, throughput etc. and provide the basics for reporting SLA fulfilment.
4. A Trouble Ticketing system is used to handle the workflow and logistics support for restoration of problems reported both by the network itself and by the customers.
5. A Service Quality Management system where services are modelled and reported upon, allowing different actors to monitor the impact of IT performance on services and SLAs. The

Teleca is an international consulting company building and applying advanced technology. The company's business concept is to strengthen the customers' market position and time to market. Teleca builds and integrates solutions for technology and software intensive customers worldwide. Core values are honesty, reliability and hard work. The company has 2,700 employees with operations in 15 countries in Asia, Europe and USA.

information is gathered as shown in the figure above from all other components within the Service Assurance area.

Deployment strategy

We have adopted the following stepwise approach when implementing this Service Offering:

- **Requirements** phase. In a joint workshop the most critical requirements on the NOC are outlined, i.e. the organisation, the processes and the existing environment are documented.
- **Proof of Concept** phase. In a two to six week Proof-of-Concept project the applications proposed by Teleca are installed and put into operation at the NOC. The software is customised for the most important types of equipment and services.
- **Implementation** phase. The software is purchased. It is fine-tuned and integrated with the other support systems to make the installation fully operational and efficient. The software is fully adapted to the established work processes. This is normally a two to four month activity.

Our Service Offer

Teleca helps network operators and service providers to identify and deploy our Service Assurance solutions based on best-of-breed components commercially available off the shelf. One of our partners in the Service assurance area is Micromuse and their product Netcool. We were appointed the Micromuse award "EMEA Value Added Reseller of the year" both 2001 and 2002. Our unique characteristics are rapid deployment and outstanding skills around the Netcool suite.

In total we have deployed numerous Service Assurance solutions in the Nordic area. Recent engagements cover Service Assurance projects for mobile operators 3 and Vodafone.

