Nokia eSOC

Improve customer experience and reduce operations expense with an evolved Service Operations Center
Simplify service management and improve your focus on the customer

Network quality represents a quarter of a consumer’s decision to stay with their operator. Customer care has increased to where it is now equal in importance.

- Nokia 2016 acquisition and retention study

Proactive customer care and simplified network and service operations are within your reach. Transform your business performance management with an evolved Service Operations Center (eSOC) solution from Nokia. The Nokia eSOC solution supports multi-technology, multi-domain and multi-vendor environments.

The best kinds of customer issues are ones that customers never find out about. They are also the least expensive to your organization. Reacting to customer problems after the fact impacts your brand and decreases customer retention rates. It also initiates costly processes — in the call center, network operations and field maintenance — that could more simply be addressed and even avoided altogether.

The Nokia eSOC solution combines intelligence from the network with service quality insights and customer/subscriber analytics. The result is automated, informed and effective operations. It automates less important aspects of network operations while your efforts are prioritized on troubleshooting those issues that have the most impact on customer service quality.

By combining customer experience and service quality insights, operations can prioritize healing service-affecting problems in the network.
From a business perspective, your goal is to never have network issues that affect customers. While that may be unrealistic, solving the issues before customers are aware of them is the next best thing. Historically, this has been done by reacting to information collected from the network on a technology-based, domain-specific manner which does not provide an effective view of the end-to-end service as the customer experiences it.

The Nokia eSOC addresses this by triangulating information from the three domains that are required to zero-in on how customers are being affected by the services that ride across the networks:

**Network operations indicators**
- including fault, performance and other OSS-related information. We collect this information, process and correlate it to perform root cause analysis of network-affecting conditions.

**Network activity and transaction data.**
- Collected from probes and other transaction sources, we analyze this data in near real-time to get up to the minute understanding of where the activity is on the network, where there are subscribers that can be affected by network and service problems.

**Customer/subscriber analytics data.**
- We perform big data analysis to identify patterns, correlations and causalities with alignment to the customers that are using the services on the networks.

One specific example is the Nokia Customer Experience Index that automatically processes a large number of KPIs through algorithms that are associated with customer satisfaction or Net Promoter Scores.

By combining the information from these 3 sources, Nokia eSOC prioritizes:
1. **What to fix?** Understand the service impact of problems and prioritize troubleshooting activities accordingly.
2. **When to fix?** Monitor the quality of the services in real-time and detect degradations before they become problems.
3. **How to fix?** Pinpoint the root cause automatically to accelerate the resolution of problems. Service quality management understands the end-to-end service delivery chain across network domains.
Awareness of the end-to-end service chain is the essence of a service operations center (SOC) and of your business. The Nokia eSOC solution enables you to carry out two critical functions:

- Prioritize the resolution of customer-affecting problems
- Facilitate and enrich other departments and their processes, including customer care, the network operations center (NOC), planning and engineering, and marketing.

**eSOC drives operational improvements to multiple departments**

**Organization and operational view**

- **Marketing**
  - Subscriber profiling and CRM data
  - Service and subscriber insights (analytics)
- **Planning and engineering**
  - Inputs on capacity planning and optimization based on service and subscriber analytics
- **Customer care**
  - Customer complaints related to service problems
  - Proactive communication on customer impacting problems
  - Assign service and customer-related tickets for resolution
  - Auto-correction where possible
- **NOC**
  - Resolved complaints and service issues reported back to SOC

**eSOC is two things:**

An operating department that orchestrates prioritized resolution of customer affecting service problems  
A facilitator to enrich other departments and their processes: Customer Care, NOC, Planning and Engineering, Marketing
Service modelling and structure — get a fresh perspective

Service modelling is a key component of Nokia’s eSOC solution and provides an important perspective on the services delivered over the various network components. This unique viewpoint of the Nokia eSOC enables you to prioritize actions around the performance of network components that are most affecting your customers’ experience of services. The Nokia eSOC service model structure is based on the service and resource hierarchy, and each service model consists of:

- The data hierarchy determining KQIs and corresponding KPIs
- Correlations and calculation rules that compute KQI from KPI and service quality from various KQIs
- Dynamic thresholds for identifying violations of KQI values and raising respective service alarms

Moving up to the service-level view enables you to look:

- **South to the network:** How are the individual network elements performing?
- **Across the full service:** How is the service performing?
- **North to the customer:** What is the customer’s experience?
Direct your operational resources to where they have the most impact on your customer and your business

The Nokia eSOC solution is an evolution in business performance management that is best applied when organizations are transitioning to customer-centric operations. This can be in the initial movement from network to service operations, the more advanced stages of service- and customer-centric operations and advanced stages where automated incident close-outs and optimized trouble-shooting techniques are being introduced.

1. Combine service and customer experience data to allow proper action prioritization
2. Employ service layer operational capabilities for end-to-end service monitoring and root-cause analysis
3. Automate recovery actions to reduce service restoration times
4. Enjoy end-to-end service and customer awareness and auto-healing capabilities.

The evolution of business performance management and operation maturity to an evolved service operation.
Start small. Think big.

You can implement the Nokia eSOC solution at your own pace and according to your needs. A program-based approach enables you to leverage modular off-the-shelf service software modules aligned with specific business processes to address relevant services. Select which modules to start with, such as SQM for LTE, and realize rapid returns. The Nokia eSOC solution is flexible and ensures fast delivery in multi-vendor and multi-technology environments.

As you add network technologies and develop new services, they can be quickly and easily supported as they are delivered to customers. In parallel, you can develop tighter integration with other systems, such as trouble ticketing, customer care, marketing, and planning and engineering. Many operators have embraced this approach and have found a way to continuously improve business agility and maintain their competitive advantage.

Benefits of moving from network-to service-centric operations

- 90%+ of the service problems are detected proactively by SOC
- 50% reduction in number of service related complaints
- 50% faster service restoration
- 20% faster alarm handling
- 20% reduction in site visits
- 11% LTE throughput improvement
eSOC solution overview

Analytics module
- Real-time, in-line analytics that drive operational actions
- Historical analytics for long-term intelligence and trending

Automation module
- Comprehensive range of automation actions including diagnostics, recovery, event suppression and trouble ticket management optimization

Solution features and benefits

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<tr>
<th>Feature</th>
<th>Benefit</th>
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<tr>
<td>Solution architecture features</td>
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<tr>
<td>Combination of pre-integrated, off-the-shelf software modules</td>
<td>Faster time to solution deployment</td>
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<td>Modular design enables phased implementation</td>
<td>More precise feature/function interception</td>
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<td>Service Quality Management features</td>
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<td>Holistic service and subscriber-based view of network resources</td>
<td>Ease of use and quick dashboard perspective of network, service and subscriber health</td>
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<td>Constant monitoring of network, service and customer KPIs</td>
<td>Real-time updates of all critical metrics</td>
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<td>Customer Experience Management features</td>
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<td>Alignment of customer/subscriber transaction events with network and service performance</td>
<td>Reduced number of customer complaints</td>
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<td>Automation features</td>
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<td>Automation reduces efforts for service restoration, site visits, and alarm handling</td>
<td>OPEX savings by reducing truck rolls and by reducing staff resources on a per incident close-out basis</td>
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<td>Advanced root cause analysis</td>
<td>Enables prioritization of trouble-shooting and resolution based upon highest criteria</td>
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About Nokia

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With state-of-the-art software, hardware and services for any type of network, Nokia is uniquely positioned to help communication service providers, governments, and large enterprises deliver on the promise of 5G, the Cloud and the Internet of Things. http://nokia.com

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