

CENTRALIZED NETWORK MANAGEMENT IN  
MULTI-VENDOR, MULTI-TECHNOLOGY ENVIRONMENTS

## NETWORK/ELEMENT MANAGEMENT SYSTEM

### BUSINESS CHALLENGE

Rapid technological advances combined with increasing customer demands for quick access to high-quality services anywhere, anytime are prompting Communications Service Providers (CSPs) to look for alternative and, frequently, complex ways of achieving market differentiation.

As CSPs compete for customer loyalty and telecom market share, they are extending their product portfolios, developing new partnership schemes, and deploying next-generation, content-rich services on top of converged networks.

To succeed in delivering the most up-to-date, in-demand services and in running multi-technol-

ogy networks, CSPs must make sure they can collect, analyze, and manage information from multi-vendor network and element management systems in a timely manner. Efficient interaction with these systems is essential for several reasons.

First, to introduce new services on time, CSPs must minimize integration times with third-party systems and increase network scalability for easy, on-demand re-configurations in multi-vendor environments. Second, to reduce OpEx and TCO, CSPs need to increase the efficiency of network usage and have a clear understanding of network performance capability and resource

availability. Third, to deliver competitive customer experience, CSPs must proactively track and manage network events and alarms across multiple technologies.

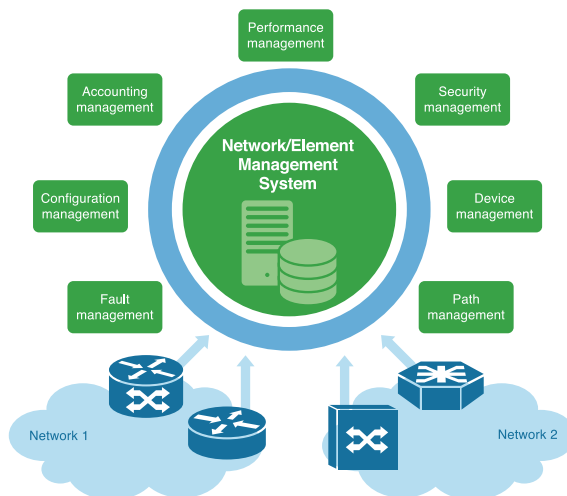
To meet these requirements, CSPs need a technology- and vendor-agnostic solution for the centralized management of

multiple networks and network elements. This solution must also provide next-generation, flexible, standards-based interfaces to any third-party system and also empower CSPs with a web-based user interface that acts as a single point of access to information about network events, alarms, capacity, utility, etc.

Network/Element

Management System is part of the Network Management solution included in NetCracker's TOMS (Telecom Operations and Management Solutions) Suite. It integrates with NetCracker's Performance Management, Fault Management, and Configuration Management and facilitates vendor-agnostic network operation as well as upstream, standards-based system integration. It helps CSPs optimize processes and OpEx by reducing the number of human interactions and workloads required and by automating complex operations and tasks such as network design, extension, troubleshooting, and maintenance.

*NetCracker's Network/  
Element Management  
System provides CSPs  
with essential network  
management capabilities  
including event, alarm,  
accounting, and security  
management, as well as  
comprehensive utility  
management.*

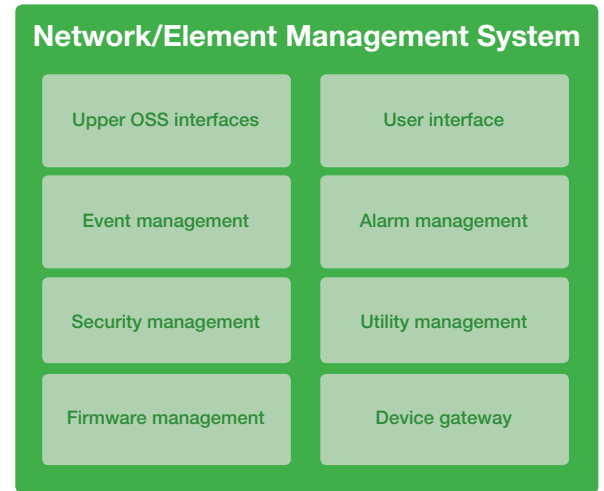


## DETAILS

NetCracker's Network/Element Management System provides CSPs with essential network management capabilities including event, alarm, accounting, and security management, as well as comprehensive utility management. It also provides a variety of southbound and northbound interfaces, as well as a highly configurable, user-friendly interface based on state-of-the-art Java and Adobe Flex.

The NetCracker Network/Element Management System assures interoperability, investment protection, and seamless integration with multi-vendor infrastructure by providing Java Remote Method Invocation (Java RMI) APIs as well as many other industry-proven northbound integration mechanisms. It also delivers SNMP1/2/3 interfaces and pluggable southbound integration cartridges to seamlessly integrate with third-party network management systems.

NetCracker's Network/Element Management System includes Path Management, Transport Network Management, and FCAPS:



### PATH MANAGEMENT

**Path Management** gives CSPs the capability for effective creation, modification, and deletion of end-to-end logical service paths in multi-technology environments and fosters fast and efficient service delivery:

- Management of virtual private networks
- Management of path QoS
- VLAN management
- Automated path design and activation
- Path status monitoring and visualization

### TRANSPORT NETWORK MANAGEMENT

**Transport Network Management** provides comprehensive capabilities for management of Transport Layer technologies and provides all required tools and features to manage all devices that actually carry the service path:

- SDH/SONET management
- IP-MPLS, VPLS management
- Optical network management
- Metro Ethernet management
- xPON, xDSL network management

### FCAPS

**FCAPS** deals with Fault, Configuration, Accounting, Performance, and Security functional areas covering major, industry-standard features to assure end-to-end network element and device management. It also includes:

- Event and alarm management
- Lifecycle management
- Graphical representation of network elements and network topologies
- Fail-safe design policy

## BUSINESS BENEFITS

NetCracker's Network/Element Management System enables CSPs to:

- Optimize OpEx through centralized network management in multi-vendor, multi-technology environments
- Improve customer experience through error minimization, proactive troubleshooting, and trouble ticket prioritization
- Reduce CapEx and TCO through increased efficiency of network usage
- Minimize workloads and data duplication through operations optimization and automation
- Minimize integration times through standards-based interfaces and integration mechanisms