

THE NEW WAY FOR NETWORK OPERATION MANAGEMENT

"A POWERFUL INTEGRATED TOOL FOR NETWORK DEVICES AND SERVICES MANAGEMENT"

MONITORS ANY DEVICE OVER TCP/IP



CONFORMS FULLY WITH THE ISO FCAPS MODEL REGARDING NETWORK MANAGEMENT MATTERS



NeaNMS is an application which integrates the cataloguing of all network elements with their operational and performance monitoring as well as the access to the services these elements provide.







Thanks to the information and alerting features, NeaNMS allows for the management of the H24 service, providing a real-time summary view of all network devices and active services.

NeaNMS is arranged in interacting modules, operating on a common database (Asset Inventory) which contains the details of everything which is connected to the network.

These modules are functionally consistent with the FCAPS (Fault, Configuration, Accounting, Performance and Security) model defined by the ISO standard, regarding network management matters.

This modular structure makes NeaNMS highly adaptable to various contexts, essential for proactive network monitoring and capable of **reducing costs** caused by potential outages, **verifying** any deviation from the expected service level, as well as clearly **defining** the criteria for supplying access services to the network.

NeaNMS allows you to:

-  monitor the **health** of network equipments (servers, routers, switches or services)
-  know in advance the conditions of **critical parameters** in order to prevent problems
-  receive **e-mail** or SMS notifications when:
 - any fault occurs
 - the predefined threshold value is reached
-  monitor the **workload** of network equipments (e.g.: during the server consolidation process)
-  evaluate the ICT services' observance of **service level agreement (SLA)** values
-  define network access criteria thanks to the **AAA** (Authentication, Authorization, Accounting) process management

NeaNMS details.

ASSET INVENTORY

The cataloguing of network elements is a key factor in the process of maintaining detailed information on the **characteristics** of all elements connected to the network. The ensuing inventory is the reference point which all management tools base on. **NeaNMS** characterizes all network elements with a variety of specific attributes (e.g.: type, location, category, network interfaces, etc) which are integrated with all the IP **subnets** administered within the network.

FAULT MANAGEMENT

NeaNMS verifies network nodes reachability as well as services availability, both in **active** mode, by repeatedly polling the network elements, and in **passive** mode, by listening to notifications (*SNMP trap*) from the elements themselves.

In the event of a polling failure (*fault*), or upon SNMP trap reception, an event will be generated which can be associated to a severity level and therefore to a **forwarding notification** policy via e-mail, SMS, synthesized voice message or execution of an external repair tool.

The web-based console allows the user to keep an eye on the occurring events, with more emphasis as the represented severity level.

Each network element polling is arranged hierarchically in order to allow clear identification of the problem source (**root cause analysis**). Such hierarchy also allows **NeaNMS** to build the **graphic representation** of the whole network.

Yet, the modular polling management allows customizing and quick implementation of new controls for **any device and protocol** which is able to be polled over TCP/IP.

DNS MANAGEMENT

For the purpose of information consistency, DNS can also be aligned with the network elements and network interfaces inventory.

NeaNMS creates the complete DNS zones for all the catalogued domains and subnets, making them available for the *zone transfer* process.

PERFORMANCE MANAGEMENT

During the active verification phase performed by the Fault Manager, **NeaNMS** gathers device and service performance data (e.g.: network interfaces input/output traffic, CPU and memory usage, web server response time), making it available as graphic charts through the web-based console.

The performance data can be configured with **monitoring threshold criteria** so that events will be generated if the threshold criteria are met. The generated events are managed according to the policies which are also proper of the Fault Management and they are clearly represented in the graphic charts.

CONFIGURATION MANAGEMENT

Automatic system configuration **backup** and archival into the relational database can be scheduled for any type of system. It is possible to manage exportable configuration **models** in order to apply them remotely to network devices which implement the configuration restore functionality.

SECURITY MANAGEMENT

In order to safeguard the maintained data and the proper functioning of the network, it is important to consider not only the network design policies, but also the implementation of the services provided by all network devices.

With Security Management module, **NeaNMS** gives the user the opportunity to schedule security probes for all the network elements, according to definitions which are shared on the Internet. The web-based console provides the list of the found vulnerabilities as well as the history of performed scans for each network element, in order to keep track of the security restoring time for the vulnerable elements.

SERVICE MANAGEMENT

NeaNMS allows for the **provisioning** and the **service management** provided on any telecommunications network thanks to the integrated RADIUS server, used for the functionality of **AAA** (Authentication, Authorization, Accounting), controlled and managed through a powerful console.

Among the implemented features are:

- user profiling
(maximum / minimum guaranteed bandwidth)
- tariff pricing of the consumed traffic
(by time and volume)
- tariff plan management (prepaid and postpaid)
- report generation
- roaming for wholesales management
- login to network elements, file servers, VPN servers, etc.

OTHER FEATURES

Multi-user access

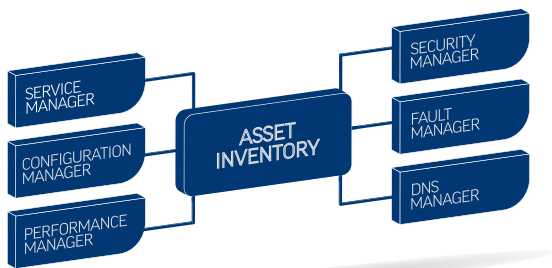
Console access can be customized by creating hierarchical groups in order to manage sub-users, allowing for the visibility of single portions of the network or only of certain sections of the console itself.

Trouble Ticket

The system includes a trouble-ticket / task management module which can be integrated with the Fault and Performance Management notification.

Load balancing and HA

All **NeaNMS** features are compliant with HA (*High Availability*) configurations. The polling engine is also capable of working in load-balancing configuration, in order to share the workload over server pools for **carrier-class** solutions.



Features and advantages.

A **modular and highly adaptable** solution with all the necessary features to monitor and check the operability of network equipment.

Alarm notification via e-mail or SMS messages allows the user to **stay in touch with the network** even being away from office.

Facilitates the ICT personnel's job and **improves** the operability and reliability of the network.

A state-of-the-art web-based console can be easily consulted from any common **Internet browser**.

Thanks to a detailed event reporting capability, provides clear descriptions and timely information regarding network performance and problems severity, allowing for adequate **planning** for the future network evolution.

A self-explanatory real-time graphic chart allows the user to easily monitor all network equipment operations.

The powerful **relational database** allows the easy management of users accessing the network, with the possibility of organizing them into groups and profiles.

