

ABB's integrated Network Management Suite

The comprehensive utility NMS solution based on FOXMAN / FOXView



A highly reliable utility communication network is key to supervise and control utility applications containing mission critical services at all times. Therefore, a professional management tool to handle the communication network is essential. ABB's integrated and modular Network Management Suite with FOXMAN / FOXView as core elements

allow tailor made NMS solutions for complex utility communication networks. The management functionality comprises not only FOX-devices but covers all network elements typically used in today's integrated utility communication networks. This includes power line carrier systems, radios, data-switches just to mention a few.

Integration is key

ABB's NMS Suite is the answer to the strong need for integrated Network Management Solutions for complex utility networks. Former 'point to point' communication based architectures could easily be managed with simple tools. However, today's networks form meanwhile complex meshed structures comprising a wide range of technologies such as fiber optics, wireless or power line carrier and sophisticated traffic protection schemes for LAN- as well as for PDH/SDH-traffic. Therefore ABB's NMS suite provides management for a comprehensive range of technologies and devices:

– **ABB's FOX-Family of new generation utility multiplexers such as FOX505, FOX515, FOX515H/Hs and FOX660:**

As an example of continuity and investment protection for existing installations, even earlier FOX-U devices are fully supported. The FOX-family offers a wide range of communication services like integrated protection-signaling, IEEE C37.94 interworking, voice- / PDH- / SDH- and Ethernet-based connections up to STM-64 and WDM-support. For FOX-networks, trail handling-solutions for efficient end-to-end provisioning are possible.

– **ABB's comprehensive portfolio of LAN-switches, routers and firewalls:** Together with latest Ethernet over SDH transport multiplexers, they play an important role in IEC61850 deployments.

– **High performance power line carrier of the ETL600-series and related protection devices:** They are still a key technology for highly reliable teleprotection applications or as backup for fiber optic links with mission critical services.

– **AR-series of wireless / radio devices:** Often used e.g. in distribution networks and Smart Grids.

– **3rd party equipments:** They can be integrated depending on availability of accessible SNMP-data. Basic MIB-support is a way straight forward while for more complex management tasks the NMS-agents can be adapted.

For customers with existing overall, SNMP-based management systems in place, the ABB Suite offers a SNMP-north-bound interface for enhanced alarm integration.

As high availability and redundancy are crucial for all utility networks including their control and management systems, the NMS suite provides various options to achieve such targets. This may include servers with redundant hardware or even fully duplicated, decentralized control centers with mirrored hardware and software infrastructure.

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Client / server based multi-view platform

ABB's NMS-suite runs on Windows based systems or in Linux server environments with lean Windows clients. All concurrent users benefit from dual-view displays options for enhanced network display with animated, geographical network representation. All management-tasks can be performed by simple point & click operation.

The topology tree provides fast access to all network elements as managed objects. Equipment parameters can be configured and changed with a few mouse-clicks.

Hierarchical network maps including support of management-domains are easily generated by drag & drop. Any third party representing objects can be added and linked to the relevant information-sources.

Features

The NMS Suite supports the full set of FCAPS – functionalities, such as:

– **Fault-& Alarm-Management**

Full support of continuously updated alarm- & event list windows including an acknowledgement-process that allows trace-back of NMS-related activities. The network view shows equipment failures & their severity levels; detailed alarm-information can be retrieved by few clicks on the corresponding network element icon.

– **Configuration Management**

Once connected to the network, all network elements can be completely configured remotely. Configuration files can be backed-up or restored at any time. Configuration of TDM-services as well as all Ethernet / IP functionalities (e.g. VLANs, filtering, routing, QoS profiles) is provided by one management SW.

– **Performance management**

The management SW can monitor individual ports of network elements and measure their performance according the corresponding standards such as G.826, RFC1213 and RMON.

– **Security Management**

The NMS supports the definition individual users and user-profiles with corresponding access rights. All user-logins are password protected and their activities logged.

– **Accounting management**

Can be achieved by export of NMS-data to additionally available commercial tools.