



MBW Element & Network Management

GO Net Systems' Mobile Broadband Wireless EMS/NMS

Rural - Suburban - Metropolitan Scale Superior Wi-Fi Performance, Coverage, and Economics



Key Features

- Non-stop, real-time monitoring and control of GO Net Systems Wi-Fi network deployments
- Proactively monitor and manage network devices and network health
- Sophisticated network and RF performance management capabilities
- Highly-scalable pay-as-you-grow system architecture

The MBW Advantage

- Complete fault management monitoring, alarm and notification capabilities
- Geographical maps and multiple logical topology views
- Comprehensive performance management for GO Net Systems devices, and third-party CPE and clients
- Remote device configuration, bulk configuration and firmware upgrade capabilities

Overview

The GO Net Systems Mobile Broadband Wireless (MBW) Element Management System (EMS)/Network Management System (NMS) platform is a carrier-grade management solution providing a comprehensive and intuitive interface to automatically discover, configure, and monitor the status and performance of GO Net Systems' Wi-Fi network elements and network deployments.

- Network device discovery and mapping
- Device configuration and management
- Fault and alarm management/notification
- Element and network performance management
- Security management

The management platform scales from small deployments comprising 10s of devices up to large-scale municipal deployments of 1,000 managed devices. The MBW EMS/NMS platform is based on highly-scalable pay-as-you-grow client/server distributed architecture and uses standard SNMP protocols to remotely manage the devices over wired and wireless backhaul links. The platform is also equipped with northbound interfaces to existing OSS/BSS infrastructure.

Network Discovery and Mapping

The MBW EMS/NMS platform supports three types of topology views; a navigation topology tree, a logical spanning tree map layout and geographical map that position the devices based on their longitude and latitude readings from the devices. In addition to the standard network topology view, the system allows the user to organize the network into hierarchical sub maps.

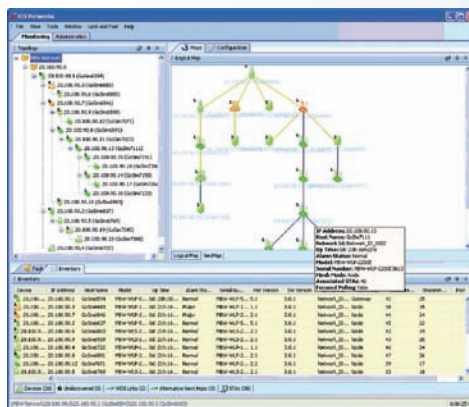


FIGURE 1. MBW EMS/NMS Discovery and Topology Mapping

Device Configuration and Management

The MBW EMS/NMS platform simplifies network deployments and maintenance by providing full device configuration, diagnostic and control of GO Net Systems' Wi-Fi base stations via an intuitive graphical user interface (GUI). It also supports the scheduling and execution of firmware upgrades for individual or multiple devices. The platform also enables backup and restore of device configurations in bulk and optionally scheduled modes.

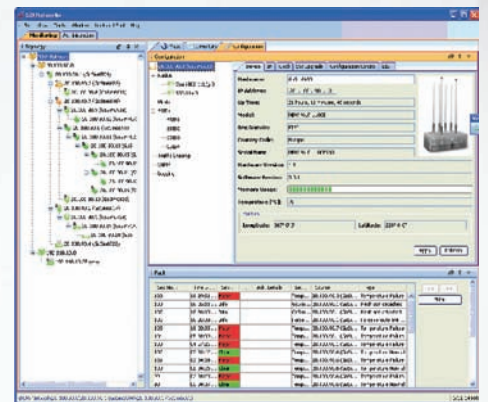


FIGURE 2. MBW EMS/NMS Device Configuration and Management

Fault and Alarm Management/Notification

The MBW EMS/NMS platform also provides a comprehensive fault management system with active alarms and events display.

- Assign severities for each alarm detected. Assign color codes and propagate up the topology hierarchy. Provides alarm summary counters per severity.
- Sort and filter alarm functions on system-wide base. View per-device alarm logs.
- Configure email notification parameters for various alarm states
- Open alarm table accessible to northbound OSS via SNMP; open alarm table can be read from 3rd party OSS with complete trap forwarding support.



Innovative Technology • Scalable Architectures • Proven Experience

About GO Net Systems

GO Net Systems provides cost-effective carrier-class Mobile Broadband Wireless (MBW) solutions for rural, suburban and metropolitan scale deployments based on 802.11 (Wi-Fi) standards. GO Net Systems' MBW solutions comprise products and services aimed at delivering superior wireless performance, coverage, and economics for service providers, mobile operators and municipalities worldwide. With GO Net Systems' innovative xRF™ adaptive beamforming smart antenna technology coupled with highly-scalable broadband architectures, wireless networking infrastructure requirements can be reduced delivering immediate upfront CAPEX and recurring OPEX savings. And with GO Net Systems' comprehensive design and deployment services, customers can deploy wireless IP networks of any size with ease and confidence.

Element and Network Performance Management

The MBW EMS/NMS platform provides rich historical and real-time statistical performance graphs with multiple sample resolutions and presentation views. Performance statistics are available for:

- Physical 802.11 backhaul/mesh and access radio interfaces
- SSIDs
- VLANs
- Associated Wi-Fi clients
- Third-party Wi-Fi CPE equipment

Network operators can compare or correlate performance on one or more parameters on one or multiple managed entities. The Performance Management module also provides valuable information about spectrum utilization in the access channels, non-Wi-Fi interference, directional gain, traffic distribution and more allowing network operators to proactively analyze and optimize the performance of their wireless network.

Security Management

The MBW EMS/NMS platform provides a highly secured management system. Security features include:

- User management, authorization with interface to LDAP server and customized user privileges profiling.
- Audit trail logs of all sensitive management tasks
- All sessions between the clients and server are encrypted and authenticated via secured HTTPS; client can reside behind firewalls

Pay-As-You-Grow Scalability

The MBW EMS/NMS platform provides tools to monitor and configure small networks (10s of elements) all the way to large-scale networks (up to 1,000 elements). And the licensing scheme is based on the number of managed devices so it is a simple and cost-effective platform to scale as needs evolve.

Ordering Information

Part Number	Item
MBW-EMS-NMS -10	EMS/NMS for up to 10 managed devices
MBW-EMS-NMS -100	EMS/NMS for up to 100 managed devices
MBW-EMS-NMS -1000	EMS/NMS for up to 1000 managed devices



FIGURE 3. MBW EMS/NMS Performance Management

System Requirements (Up to 1000 managed devices)

Server Machine - Hardware

- Single 32bit Intel Pentium processor, 3.8GHz, 2MB L2-Cache.
- Memory – 2GB DDR2-400 SDRAM
- Disk – 100GB SATA
- CD-ROM drive
- Gigabit Ethernet Interface

Client Machine - Hardware

- Single 32bit Intel Pentium processors, 3.8GHz, 2MB L2-Cache.
- Memory – 1GB
- Disk – 4MB of free disk space
- Display resolution 1024 * 768 and above

Operating Systems

- Windows XP/2003 Server
- Windows Vista (client only)
- RedHat Linux Enterprise

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