

# **NetMaster NMS**

## Network availability in focus

NetMaster is a comprehensive Network Management System (NMS) designed for managing large scale microwave networks. With NetMaster, operators get a unified real-time view of the network to provide continuity of service and achieve uninterrupted flows of traffic and revenue. NetMaster is a single point of entry for managing all current and legacy radios, including Evolution Series and FibeAir IP-10 10 radios, as well as 3rd party network elements, such as power supplies, switches, multiplexers and routers.

## From small size to large scale networks

NetMaster offers comprehensive integrated management of network elements in a converged network. NetMaster is easily scalable from the smallest network to large scale heterogenous networks. It allows to expand the network on-the-fly, bringing new elements into service and letting operators start generating revenues immediately.

Versatile and flexible, NetMaster allows for various deployments, from a simple single-server installation to high-availability clusters without a single point of failure.



"NetMaster has been an invaluable tool for Conterra to monitor its wireless networks. It gives our Network Operations Center and field operations personnel a complete view of the microwave network in a very intuitive multi-user interface. NetMaster will enable Conterra to continue to scale networks with functionality that automates inventory and maintenance functions, for both new microwave platforms and legacy equipment. NetMaster is, and will continue to be a critical part of our network management strategy."

Anthony Good, VP Information Technology & Data Network Engineering Conterra Telecom Services, USA

"The ability to visualize and monitor our radio network in a simple and effective way was key factor to the choice of NetMaster. Using NetMaster we can reduce our maintenance costs by ensuring a greater degree of assertiveness in our network interventions."

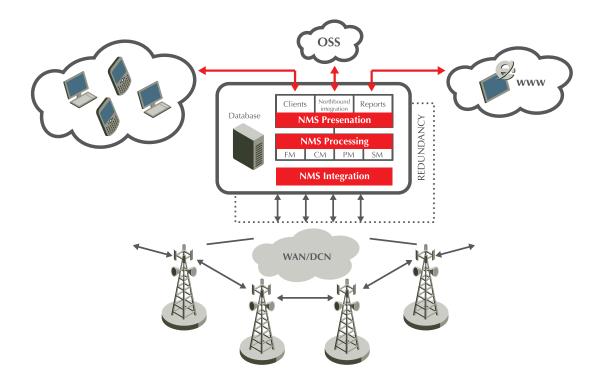
> Marco Antônio Pereira Gomes, Senior Operations Analyst VALE, Brazil





## NetMaster Architecture - Modular and Future-Proof Design

Based on a modular and future-proof architecture, NetMaster cost-effectively manages thousands of network elements. Network supervisors, field engineers and network maintenance staff can easily supervise the network from the view of the bird's eye down to the single network element level – from any location, from any device.



## Platform Independent Application Server

The application server manages the interaction of all NetMaster system components. It runs continuously in the background as a service. The application server is based on JAVA/J2EE technology, which makes it platform independent.

#### **Database Server**

The database server stores all configuration data and traffic related information collected from the network. The database server can be configured with redundancy and automated replication to increase system availability.

#### NetMaster Client

The client provides the user interface to the NetMaster features and services. Multiple clients can be logged on to the server simultaneously. Clients can be installed separately and are launched on demand and connected to the NetMaster application server.

The NetMaster client can be installed on various Microsoft Windows and Sun Solaris platforms.

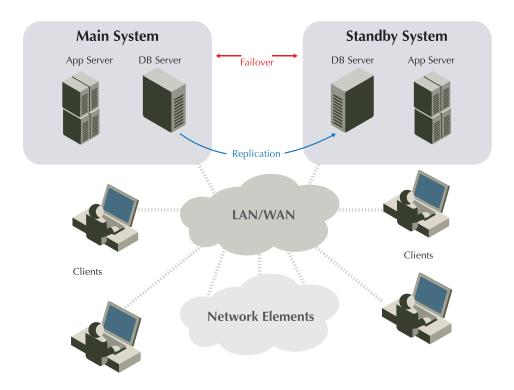
## Northbound Interface to Higher Order OSS

The NetMaster architecture supports open interfaces to higher order management network systems or other business operations components.



## Network Availability in Focus

Network downtime means lost revenues. NetMaster is the key to reducing time to recovery so that such failures minimally affect your customers. Easy scalability and fault tolerance of the network management system itself are no less important - NetMaster offers both to ensure continuous network uptime.



## Scalability

The modular structure of both Evolution Series and NetMaster allows the entire system to scale in size and functionality. For small networks, the application and database server can be hosted on the same platform. As the network grows, NetMaster can be scaled accordingly, from a small compact single-server configuration to a large distributed system, supporting thousands of deployed network elements.

NetMaster takes care of both the network expansion and easy upgrade to new technologies - it allows for easy migration to new all-IP equipment with minimal effort and zero downtime.

#### Real-time Network Awareness

NetMaster allows network operators to get a clear, real-time view of traffic and network performance, manage and monitor every network element and entire network as a whole. It discovers faults and traces them down to their root causes, enabling network operators recover network failures before they significantly affect the user.

## Redundancy

NetMaster can be configured to achieve co-located hardware redundancy as well as geographical system redundancy for disaster recovery:

- Hot and cold standby systems
- Data integrity through automated database replication

With redundancy and failover capabilities, NetMaster provides continuity of service even when faults occur.

## **Key Features**

## Managing wireless backhaul networks

- Unified view of the network
- Intuitive, easy-to-use workflow
- Redundancy and scalability
- · Manages different elements and networks
- Network availability in focus
- · Rapid deployment
- Fast root cause identification and repair
- Lowers life cycle costs

#### Fault management

- Alarm acquisition and verification
- Current and historical alarm views
- Alarm reports
- Template based alarm handling
- Audible notifications upon status change
- Email notifications to remote users

#### Configuration management

- Configuration of elements and sub-networks
- Complete network inventory reports
- · Software and license distribution
- Clock synchronization
- Backup/restore of element configuration

#### Performance management

- Collection of traffic statistics, quality metrics and analogue measurements
- Threshold crossing alarms
- Powerful analysis and presentation tools
- · Configurable pre-defined reports

#### Network awareness

- Auto-discovery of new network elements
- Drag-and-drop of network elements into any logical or geographical domain
- System self-monitoring and diagnosis
- Fast fault recognition

#### Tailored to your business

- Pay-as-you-grow with Mini/Basic Server/Premium editions
- 24-hour customer support

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