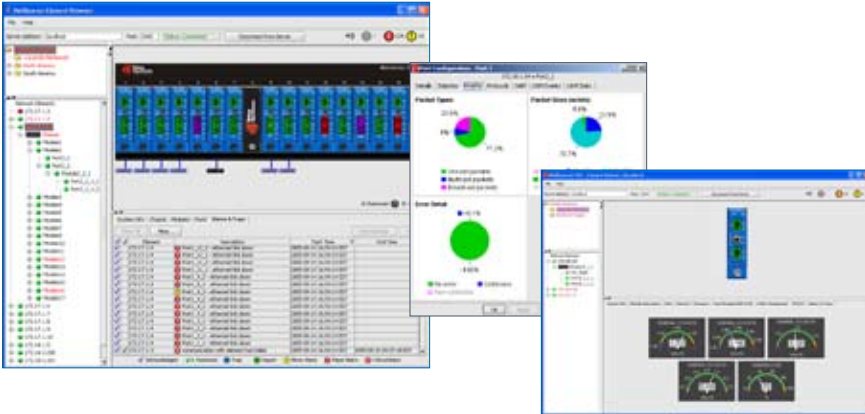# Metrobility® NetBeacon® ESP

Element Management System

NetBeacon ESP Element Management System (EMS) by Telco Systems is a comprehensive and extensible element manager that provides a scalable, secure, and reliable hierarchical system approach for network deployments.

Extensible Element Management

NetBeacon ESP provides a user friendly, graphical point-and-click interface to provision, monitor, and manage chassis-based Metrobility products. Net-Beacon ESP supports hundreds of devices across a geographically dispersed network.

Authorized users can manage each Metrobility device from any designated NetBeacon ESP management station to provision services, monitor performance, and respond to alarms.

Fault Management

NetBeacon ESP notifies administrators of network problems using traps and alarms based on detected faults, as well as changes in configuration and operational status. Color-coded and audible alarms ensure that problems do not go unnoticed and that administrators can respond proactively to potential problems to minimize downtime.

Test features such as remote loopback, link loss carry forward, and far end fault can be enabled through NetBeacon ESP.

NetBeacon ESP also enables proactive management by identifying degrading power supplies and optical transceivers by reporting on power and voltage levels, optical power, and temperature.

Configuration Management

NetBeacon ESP discovers the Metrobility elements, automatically updates the inventory database, and initiates monitoring activities for each element. These processes speed network provisioning and enable faster service turn-up.

Performance Management

NetBeacon ESP provides administrators the ability to identify bottlenecks and potential problems. Standards-based loopback and network test functions, which are available on designated Metrobility products, support end-to-end service level agreement monitoring and verification.

Security

Administrators can control access to resources using a choice of three authentication modes — including RADIUS. Network administrators can fine tune user permissions based on existing company authorization policies. These policies allow finely grained access to any network element resource. Administrators can assign geographically independent permissions by element and by function.

- **Service Provisioning**

- **End-to-End Service Assurance**

- **MEF-Defined Services Support**

- **Secure Access**
  - RADIUS support for authenticated and authorized management access
  - SSL and Shared Key

- **Communication Protocols**
  - SNMP v1, v2c, v3s
  - FTP, TFTP, Telnet

- **Performance Statistics**
  - Interface
  - RMON
  - TCP, IP, UDP, ARP

NetBeacon® ESP Ethernet Service Provisioning

Distributed Registry-based Architecture

NetBeacon ESP consists of three components:

1. Database Configurator
2. Element Manager
3. Element Browser

The **Database Configurator** provides database connectiivity configuration. The **Element Manage**r performs actual monitoring of the network elements. Using the **Element Browser**, the user can manage, test, and/or monitor the network elements.

All components can be located on a single server, or they may be distributed on a management server and several workstations creating a true hierarchical system approach to element management that is highly scalable and fault tolerant.

System Requirements

For optimal operation, the hardware should satisfy the recommended requirements.

NetBeacon Component	Minimum Hardware Requirements	Recommended Hardware Requirements	Supported Operating System
Full (all components on a single platform)	3 GHz processor, 1 GB RAM, 80 GB disk, 1024x768 screen resolution	3+ GHz processor, 1+ GB RAM, 80+ GB disk, 1024x768 screen resolution	Windows XP Professional Windows 2003 Server
Registry	2 GHz processor, 512 MB RAM, 60 GB disk	3 GHz processor, 1 GB RAM, 80 GB disk	Windows XP Professional Windows 2003 Server
Element Manager	2 GHz processor, 512 MB RAM, 60 GB disk	3 GHz processor, 1 GB RAM, 80 GB disk	Windows XP Professional Windows 2003 Server
Database Manager	2 GHz processor, 512 MB RAM, 60 GB disk	3 GHz processor, 1 GB RAM, 80 GB disk	Windows XP Professional Windows 2003 Server
Element Browser	2 GHz processor, 512 MB RAM, 60 GB disk Monitor to support 1024x768 screen resolution	2 GHz processor, 512 MB RAM, 60GB disk Monitor to support 1024x768 screen resolution	Windows XP Professional Windows 2003 Server

Compliance

NetBeacon ESP supports the following:

- FTP
- ICMP
- IP
- MIB-II
- RADIUS
- RMON Group 1
- TCP
- Telnet
- TFTP
- UDP
- Internet Standard Subnetting Procedure
- RMON High Capacity Networks
- SNMP v1, v2c, and v3

Ordering Information

| Part Number	Description
Network Management	
NBESP-99	Management Software for Windows® XP Professional, Windows 2003 server, and NetBeacon ESP software license for 99 network elements
NBESP-249	Management Software for Windows XP Professional, Windows 2003 server, and NetBeacon ESP software license for 249 network elements
NBESP-UNLIMITED	Management Software for Windows XP Professional, Windows 2003 server, and NetBeacon ESP software license for unlimited network elements
NetBeacon ESP Upgrade to Software License	
NBESP-99UP 249	NetBeacon ESP software license upgrade from 99 to 249 network elements
NBESP-99UP UNL	NetBeacon ESP software license upgrade from 99 to unlimited network elements
NBESP-249UP UNL	NetBeacon ESP software license upgrade from 249 to unlimited network elements

EMS Functions

Service Provisioning
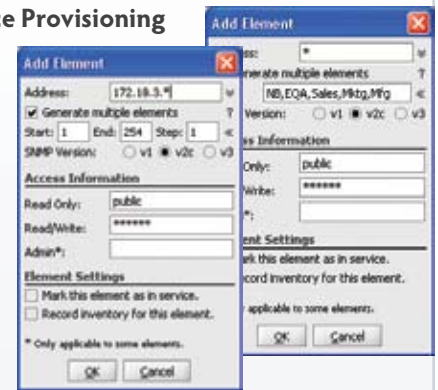
Secure Access
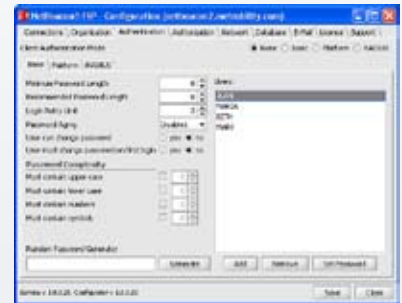
Audible and Visual Alarm Indicators

Database Manager

- **Alarms and traps**
- **Security**
- **Inventory**

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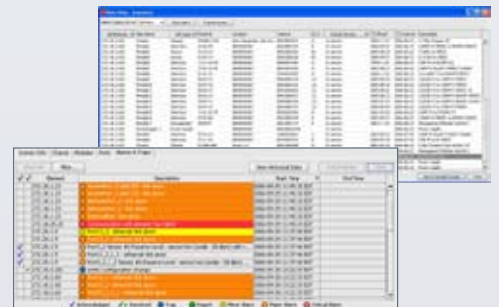
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