

Element Management System for *iConverter*[®] Network Interface Devices

NetOutlook[®] EMS is an intuitive and easy-to-use Element Management System that simplifies management of Carrier Ethernet 2.0 *iConverter*[®] Network Interface Devices (NIDs). *NetOutlook* EMS improves reliability, scalability and availability of complex networks with a single management interface.

NetOutlook EMS provides automated and scalable management with Fault, Configuration, Accounting/Administration, Performance and Security (FCAPS) functionality for networks with up to 10,000 NIDs.

NetOutlook EMS streamlines Carrier Ethernet 2.0 business services and mobile backhaul deployments throughout the entire lifecycle of provisioning, service management, performance monitoring and fault restoration.

With server and database redundancy, backup and restore, *NetOutlook* EMS is a high-availability management system that provides rapid restoration from natural disasters.

NetOutlook EMS conforms to the Telecommunications Management Network (TMN) layered model, providing standard based interoperability with Network Management Systems.

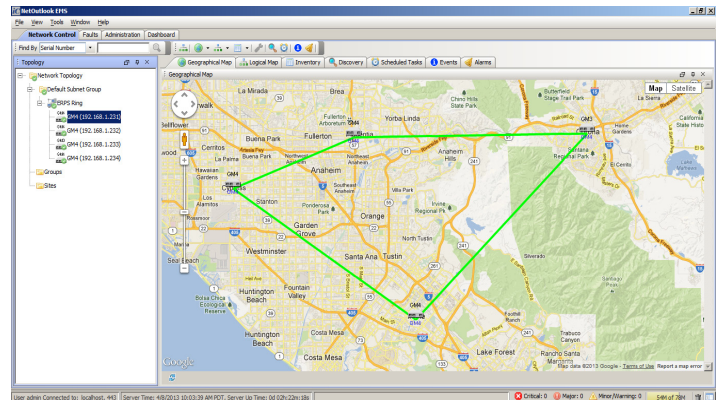
The system is Java-based and offers cross-platform support for Windows, LINUX and UNIX* operating systems. *NetOutlook* EMS employs a three-tier architecture comprised of a client application, a server application and a database for optimal accessibility, performance and availability.

Fault Management

NetOutlook EMS supports advanced alarm management by detecting faults, failures and threshold crossing events in real-time. Alarms can be filtered, labeled, sorted for rapid fault isolation, and exported for additional processes. Alarms can be forwarded to other applications, such as email, for processing through the northbound interface. *NetOutlook* EMS provides fault isolation with IEEE 802.1ag Loopback and Linktrace.

Configuration Management

Management and provisioning is centralized with an intuitive Graphical User Interface that visually displays all *iConverter* NIDs on the network. *NetOutlook* EMS provides complete configuration capabilities of service parameters, traffic management, SLA assurance and security. Bulk provisioning and configuration tasks can be scheduled or performed in real time. ITU-T Y.1564 and RFC 2544 Service Activation Testing can be performed remotely with *NetOutlook* EMS for rapid service activation.



KEY FEATURES

- Comprehensive FCAPS compliance
- Scalable up to 10,000 elements
- Real-Time event monitoring and configuration
- Fault and Alarm management
- Comprehensive Reports /Charts for Performance metrics, events and alarms
- Bulk operation and task scheduling with filtering capability
- High-availability with server application redundancy
- Database backup and disaster recovery
- Automatic discovery and topology updates
- Automatic link discovery with color-coded status display
- Logical and Geographical network mapping
- Easy to integrate with northbound OSS and BSS systems
- Client Access through web browser or Java applet

Accounting, Administration and Inventory

Newly installed NIDs are automatically detected and added to the inventory for management and provisioning. *NetOutlook* EMS provides a complete infobase of the discovered *iConverter* NIDs in a tree view as well as geo-located map view. Both the tree and map views facilitate informed troubleshooting with color-coded link status of all the NIDs. Inventory can be filtered, sorted and queried with manual or automatic grouping of devices. *NetOutlook* EMS also supports discovery display of third-party equipment.

Performance Monitoring

NetOutlook EMS supports real-time monitoring of SLA-impacting Key Performance Indicators (KPI). Performance statistics are gathered at user-specified intervals and can be plotted in graphical form displayed within the *NetOutlook* EMS dashboard for analysis. Performance data can be analyzed and exported for reporting to third-party applications.

Security

Northbound and Southbound interfaces of *NetOutlook* EMS provide full-session authentication and encryption via secure protocols, including SSH, HTTPS and SNMPv3. Access privilege profiles can be assigned and customized for each user. User activities are logged by *NetOutlook* EMS audit trail mechanism for future inspection.

BSS/OSS Integration

Designed to be a standalone management system or part of management suite, *NetOutlook* EMS supports standard northbound interfaces for cross application integration with existing Billing Support Systems (BSS), Operational Support Systems (OSS) and umbrella applications. The SNMP API forwards alarms and events to other northbound application layers.

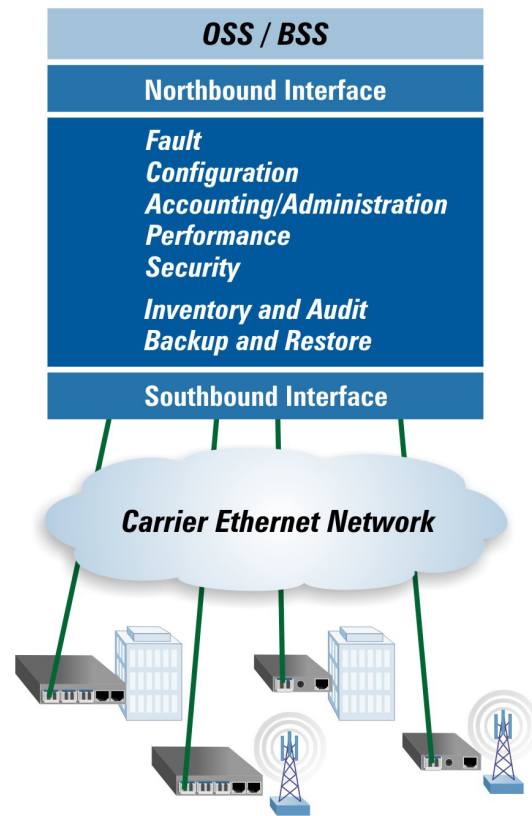
Resiliency and Backup/Restore

NID configuration settings can be backed up and restored on-demand or at user-defined periodic intervals.

High-availability is achieved with both server-level redundancy and database-level redundancy.

NetOutlook EMS requires zero maintenance and features automated back up and system errors logs. In case of disaster recovery, the system continues to operate uninterrupted.

*Supported in upcoming release



NetOutlook EMS provides centralized management for *iConverter* GM3 NIDs, GM4 NIDs and HybridNIDs*. *iConverter* NIDs are MEF Carrier Ethernet 2.0 certified compliant to deliver advanced services, enable rapid service deployments, SLA assurance and comprehensive fault management.

ORDERING INFORMATION

New Server Software and Node Licenses	
8110S-100	NetOutlook EMS Software with 100 Node License ♦
8110S-500	NetOutlook EMS Software with 500 Node License ♦
8110S-1K	NetOutlook EMS Software with 1,000 Node License ♦
8110S-10k	NetOutlook EMS Software with 10,000 Node License ♦
Node Licenses for Existing Server Software	
8110U-100	NetOutlook EMS 100 Node License ♦
8110U-500	NetOutlook EMS 500 Node License ♦
8110U-1K	NetOutlook EMS 1,000 Node License ♦
8110U-10k	NetOutlook EMS 10,000 Node License ♦
Annual Service Contracts	
8110M-100	Annual Service and Maintenance for up to 100 Nodes
8110M-500	Annual Service and Maintenance for up to 500 Nodes
8110M-1K	Annual Service and Maintenance for up to 1000 Nodes
8110M-10k	Annual Service and Maintenance for up to 10,000 Nodes

♦ Includes 1 year service and maintenance