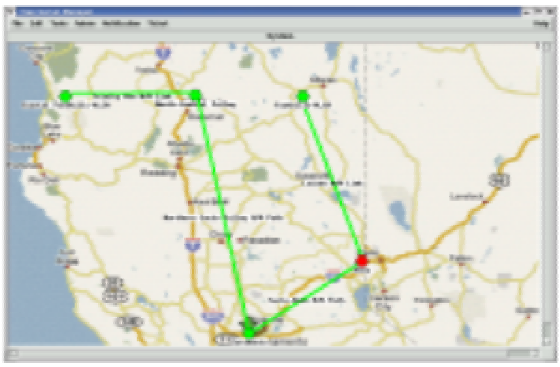
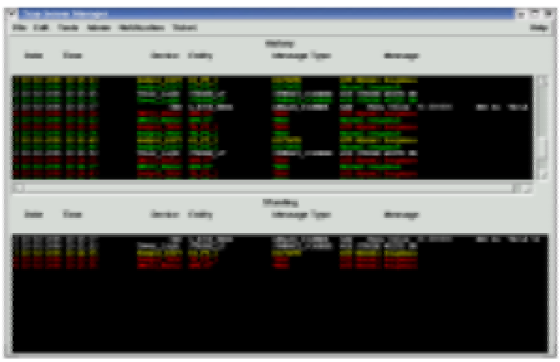
TrapServer™

by SchoRen NMS Solutions, LLC



Graphical Display using TrapServer Manager Area Viewer



Text Display using View Events

TrapServer™ is a multi-user, event-monitoring, report (graphical and/or textual display) and automatic notification system that supports a Multi-Vendor structured infrastructure of an *enterprise* and *telecommunications* system. It collects, consolidates and stores years of valuable event data from a large variety of network elements and telecom equipment including Remote Terminal Units (RTU), any device that provides a craft port, legacy and newly acquired equipment including *microwave, fiber, central office* and *other intelligent transmission devices* deployed in a single operating company.

TrapServer™ combines technologies of open source Redhat Linux ES release 4, Postgresql, Tomcat WEB Application Server and Python operating on a Dell Server Platform to bring a comprehensive and adaptable solution to improve the quality of service for any users network. TrapServer™ provides multi-LAN connections, multi-serial connections and multi-dial in connections to support different schemes of alarm information transport. Events from any network element can be based on Non-Proprietary (e.g., SNMP, TCP/IP, PPP, telnet, ping, ASCII, TBOS, TL-1 TA BS, MODBUS, etc.) or Proprietary (Badger 481 RTU & MCS-11 Protocol) network architecture for trouble resolution, locating and automated notification via email (with reply email acknowledgement and paging).

Key Standard Features

• Graphical & Textural Display	Color reflects priority of alarm
• Packaging	Cabinet/Desk/19 or 23 inch Rack
• Operating System	Redhat Linux ES release 4 Also supports RH 9 & Fedora
• Redundancy for Disaster Recovery Support	Supports Multi-TrapServers
• Event Monitoring Capacity	10,000 plus events per day
• History/Archive	10+ years based on event capacity
• Quantity of Clients (standard)	30 Concurrent Users (Browsers/Displays)
• Remote Access Client	Standard Browser and includes
• WEB Access Security	https encryption plus user name/ password

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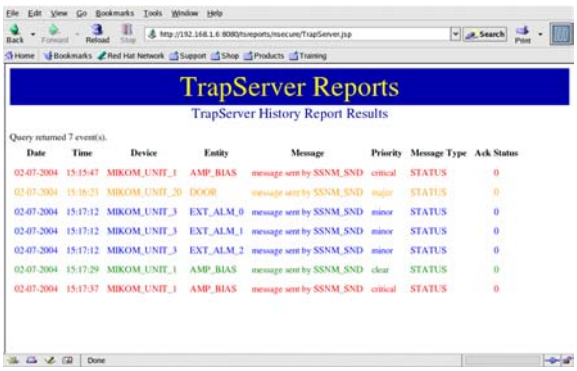
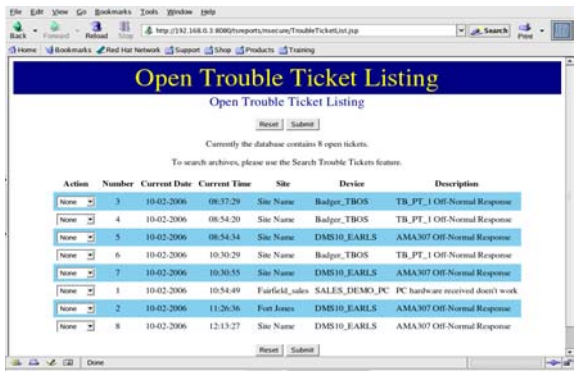


TrapServer Web Report



Trouble Ticket Listings Example

TrapServer™ hardware interface modules can optionally provide **Message Filtering** and **Message Recognition**, **Summarization** of "fuzzy" messages from elements, and **Message Correlation** using Boolean logic and **Event Counters**.

Standard TrapServer™ Features

- Craft Access to Network Elements
- ANSI based SQL DB
- SNMP (V1 & V2) trap Forwarding
- SNMP (V1 & V2) trap monitor
- User Defined Audible
- Site Derived Alarms
- Alarm Forwarding
- SNMP Poll MIB Objects
- Browser Access to ""Ack"" Event
- Dial-Up Remote Access Monitoring
- Standard Reports
- Critical, Major, Minor & Clear Priorities
- Alarm Reminders
- Priority Filtering

Optional TrapServer™ Features

- TL1 Fault monitoring
- Automated TL1 Session Establishment
- TL1 Detailed monitoring
- TBOS Monitoring
- Modbus Protocol Support
- Badger 481 RTU Protocol Support
- Other Binary Oriented Polling Protocol (ie. Badger)
- RAID support
- Email Notification and Reply Email "ACK"
- Paging (Alphanumeric/Beeper) Notification
- Trouble Ticket Generation
- Customizable Reports
- ASCII monitors or ASCII Manager
- Scheduler in ASCII Manager for polling monitored devices
- Module Library of intelligent Interfaces

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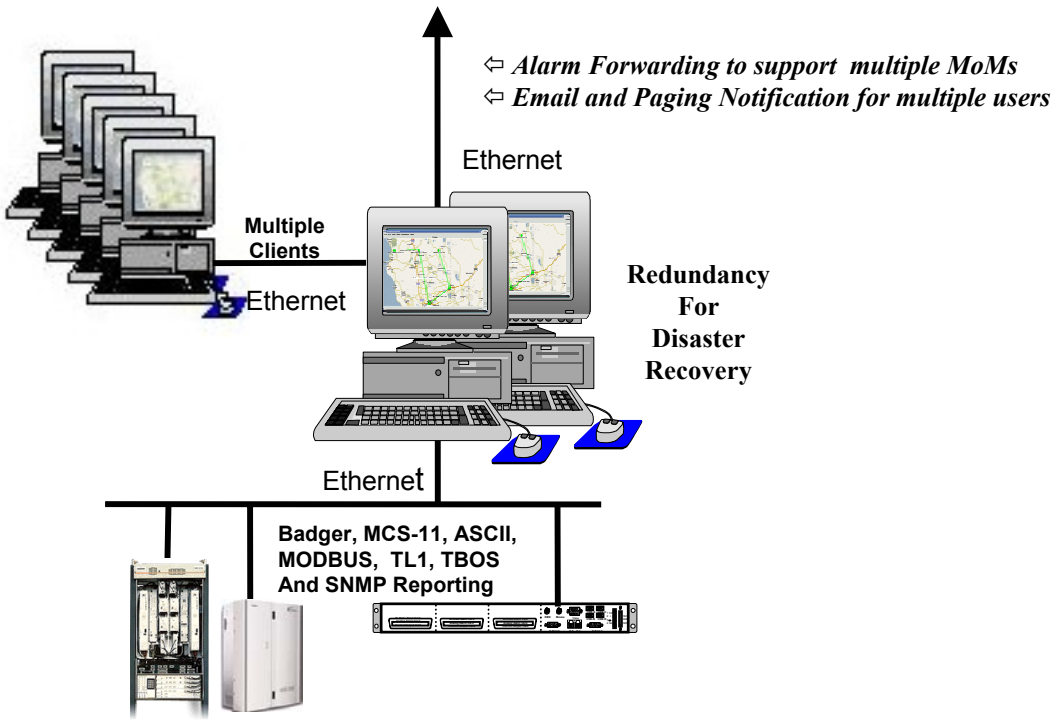

TrapServer™ Benefits:

- ✓ **Supports any Network Element (NE)** based on Non-Proprietary (e.g., SNMP, TCP/IP, UDP, PPP, telnet, ASCII, TBOS, TABS, ping, MODBUS, etc.) or Proprietary (Badger 481 RTU & MCS-11) Protocol used in Alcatel Microwave Systems) architecture for trouble resolution , locating and automated dispatch.
- ✓ **Translates** all NE reported events into SNMP and forwards to other managers.
- ✓ Provides **automated** dispatching to minimize the probability of alarms from being "lost in the crowd" of an over-worked NOC.
- ✓ Is a **local archive** for all reported equipment activity.
- ✓ Cost-efficient, **one unit solution** for entire Network.
- ✓ Saves labor through **ease-of-use** and **ease-of-configuration** resulting in labor savings.

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