



ETERE SNMP CONSOLE:

A centralized, automatic and real-time monitoring of
broadcast system networks

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1. INTRODUCTION

Nowadays, broadcast facilities are implementing challenging improvements that seem to increase system's complexity more and more, these systems requires a great capability to help manage the overall technical workload and enables engineers to find and correct problems. Etere is an integrated broadcasting solution based on a distributed architecture that allows different modules to run on different workstations interconnected by a network and integrated with the devices used by broadcast stations, making all these elements work as a single system.

In a complex scenario with several components involved, a centralized dashboard that gives the ability to monitor the system's functioning becomes crucial for the overall system management; actually, that tool will act as the "electrocardiograph" that will permit to keep the health of the system under control by listening and checking its heartbeats in real-time.

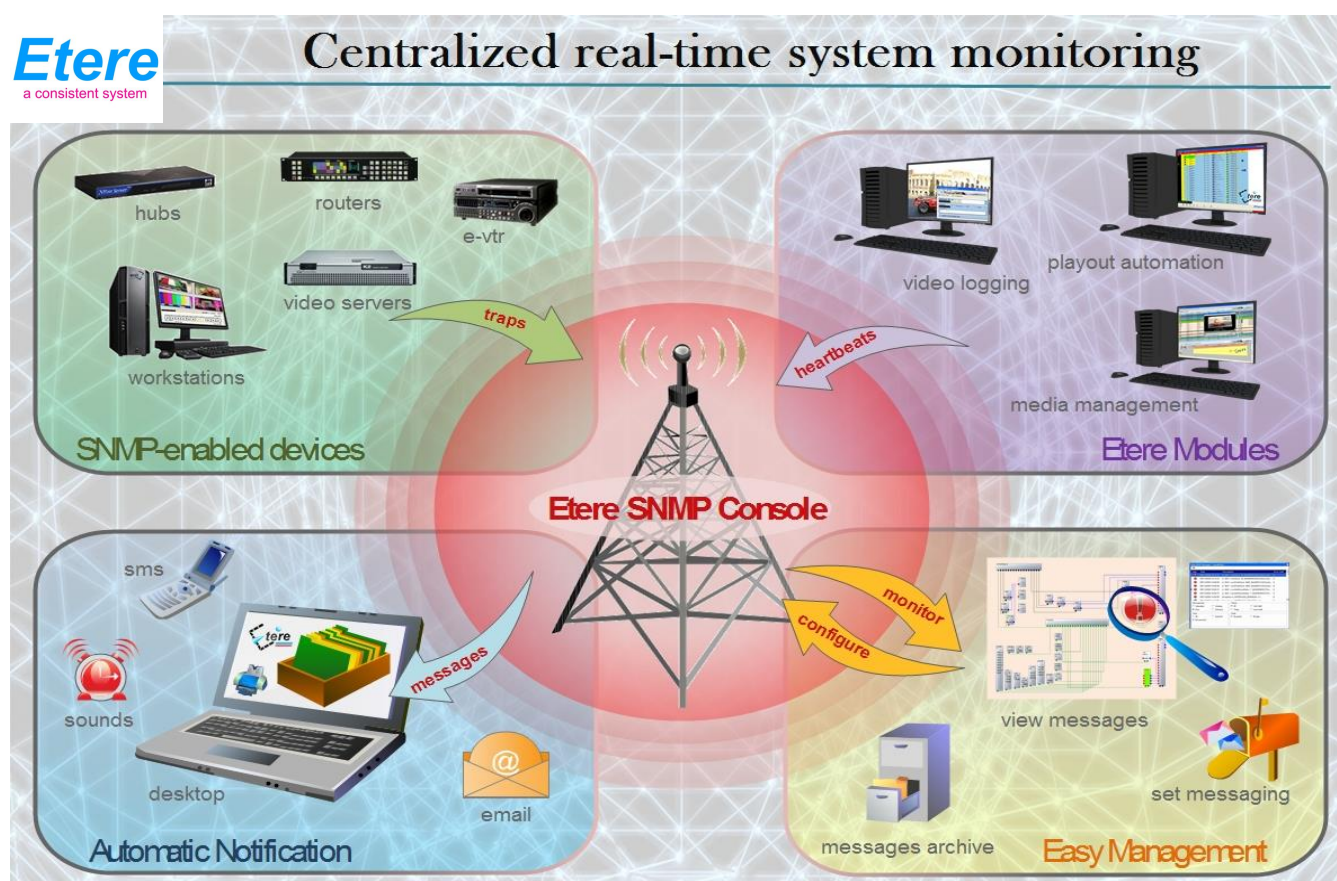
For this purpose, Etere has used SNMP technology, a standard on network monitoring, for developing **Etere SNMP Console**, a simple but effective assurance monitoring service able to gather SNMP messages from all SNMP-enabled devices from a module connected to the network that makes them available as graphical warnings, acoustic alarms, email messages and even sms notifications.

The use of SNMP (Simple Network Management Protocol) technology brings Etere systems with a set of rules for defining how to identify problems on devices, modules and connections which are connected to a data network. In this terms, **Etere SNMP Console** is a key solution for the monitoring and control of devices over an entire network, it unifies into a single user-friendly interface all tools required for the management of SNMP-enabled devices, thus simplifying, for example, the detection, location and handling of failures occurred anywhere within the network.

This paper describes how **Etere SNMP Console** is able to monitor all the devices on which SNMP is enabled from a central or remote interface, thus demonstrating why it is a very convenient tool highly appreciated by operators all around the world due to its capability to always keep an eye on all components involved in the broadcast chain with maximum simplicity and minimum interaction.

2. ETERE SNMP CONSOLE

The **Etere SNMP Console** is a module that makes part of the Etere's solutions suite, it is a module specifically designed to ease the monitoring the functioning of not only SNMP-enabled devices but also any Etere module in general, this key feature will permit system supervisors and operators to monitor through a intuitive user interface any failure occurred anywhere within the station's network, providing useful detection and handling functionalities, as shown in the following figure:



Etere SNMP Console is a windows-based software application that enables users to discover, configure and monitor in real-time SNMP-enabled devices and other Etere products, this application is designed to provide outstanding monitoring capabilities including access to any device within the network, the possibility of handling attached files for each device; and the ability to monitor alarms generated from each device within the network, all of this, from a central module.

The **Etere SNMP Console** will provide operators with automatic messages informing about the status, warnings and errors of all enabled devices, displaying them with issue-specific colors and highlighting all events which requires to be solved urgently.

Etere SNMP Console notify SNMP alarms as acoustic, email or sms messages; being also possible to sent alarms directly to the Etere's customer support service that will undertake them to provide as soon as possible a cross-check service by means of the SNMP workstation. Among the most significant characteristics of Etere SNMP console the following can be mentioned:

- Tight integration for monitoring not only SNMP-enabled devices but also any Etere module (e.g.: Etere Ingest, Etere Automation, Etere Data Mover, Etere Memory, etc).
- Automatic gathering of system messages within a reliable SQL database with further filtering and archiving features.
- A highly graphical interface based on a colored map of resources that describes which objects are managed by the system and how they are connected.
- Acoustic and visual alarms to point out devices which are off-line or functioning incorrectly.
- Alarms and warnings can be filtered differently for each user, and settings are available for each device in the network.
- Notifications can be shown on screen, logged to a database and automatically e-mailed to one or more e-mail accounts.
- Easy highlighting of currently used resources in real-time, indicating also which workstation and user is using that resource.
- Ensured support for mostly used interfaces including SDI, Ethernet, GPI, RS422, etc.

3. DETAILED FEATURES

Facility monitoring features provided by **Etere SNMP Console** drastically simplifies the detection, location and handling of failures occurred anywhere within the network, easing workloads and reducing downtimes for broadcasters; **Etere SNMP Console** will expands broadcaster's capabilities by allowing them to incorporate and monitor many different types of IT equipment such as routers, servers, etc, as well as locating monitored devices reachable over a network.

3.1 Graphical interface

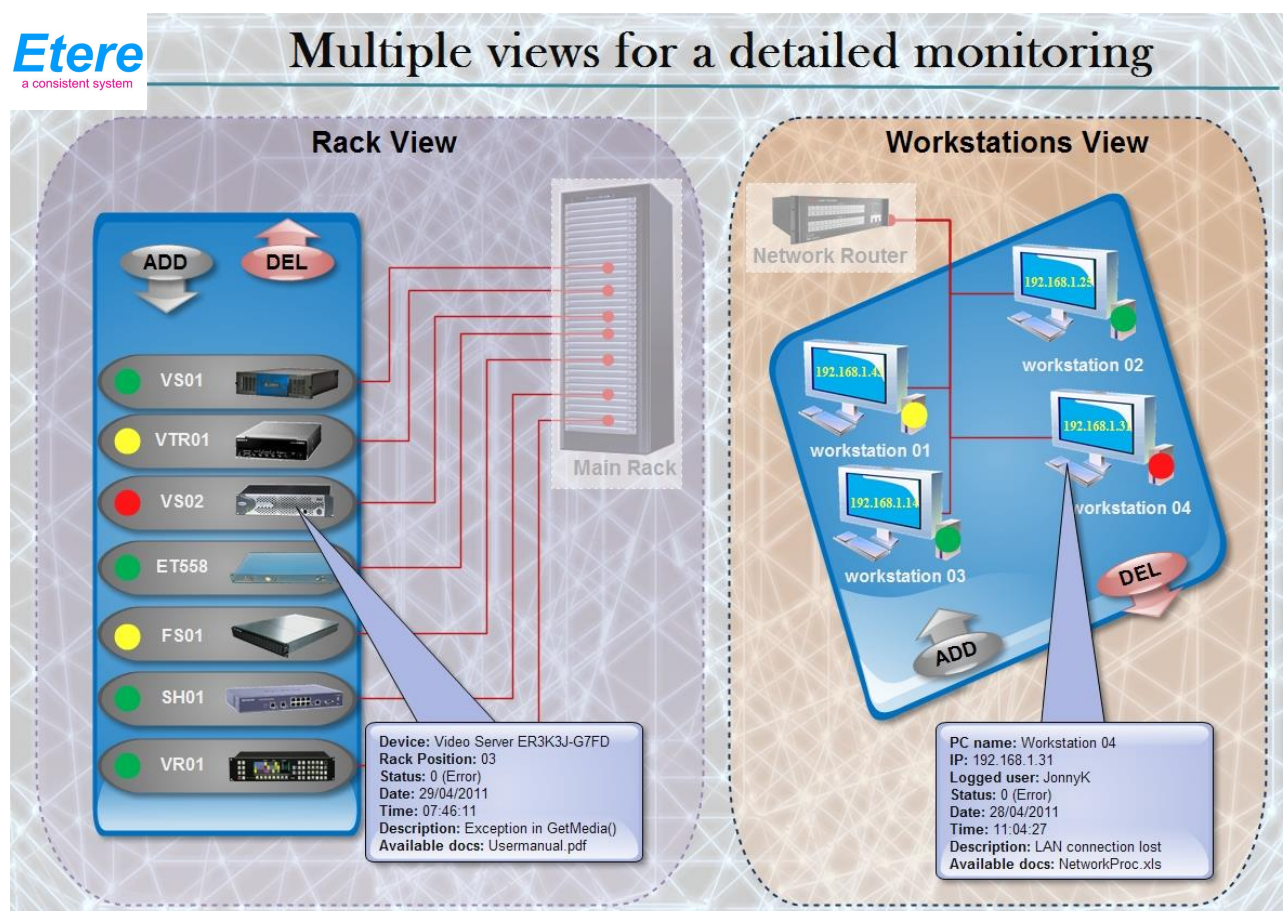
The **Etere Resource Viewer** is a software application that provides practical, real-time control and monitoring of system infrastructures over multiple network protocols, it provides a graphical monitoring and feedback according to specific user's configurations, thus reducing the complexity of network management to simple and intuitive operations.



The **Etere SNMP Console** enhances the service management capabilities of **Etere Resource Viewer** to manage a wide range of devices under a central monitoring environment thanks to a quick and flexible interface for deploying –without depth skills- an enterprise map of devices on which it will be possible to know in real-time- who's using a resource, which resources are in error, which resources have active connections or simply view its SNMP messages.

3.2 Multiple Views

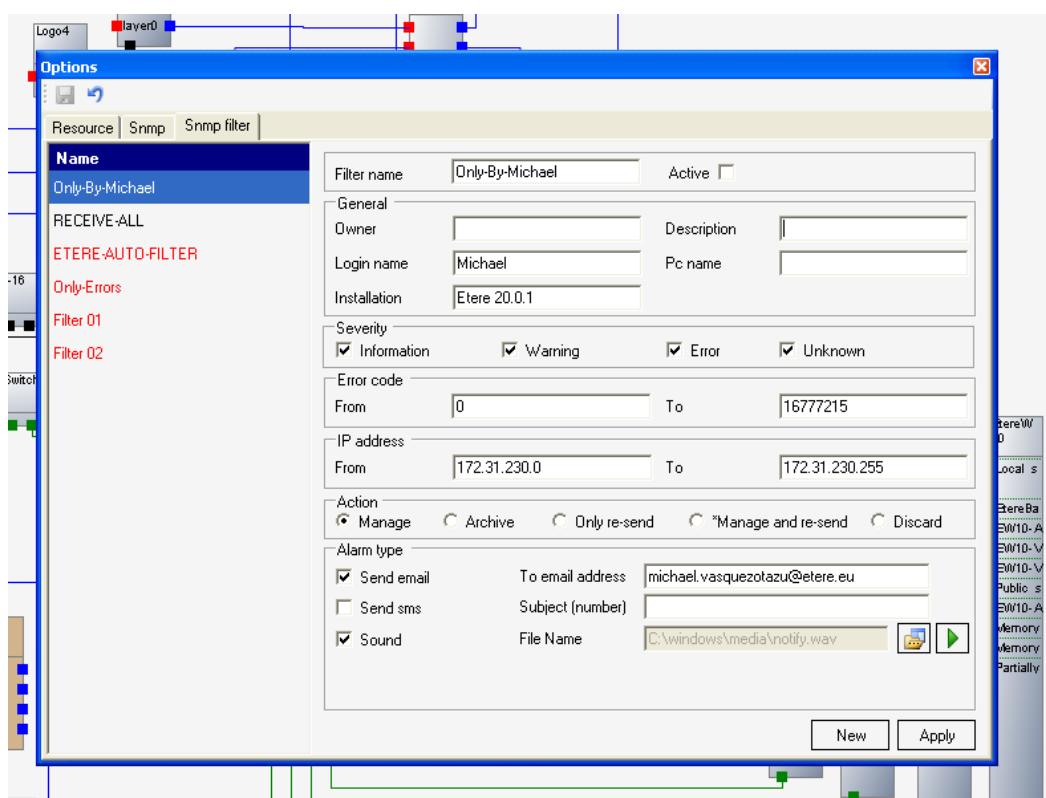
With Etere you can freely set and use different views for monitoring your system, it is possible to monitor, besides the entire network, a more organized view formed by rack devices or specific workstations, being accessible in all cases, through a simple click, all the SNMP messages including key information such as the name of the device, notified status, logged date and time, problem description, rack position, IP address, etc:



The figure above illustrates how multiple views enables easy monitoring of specific SNMP-enabled devices grouped by rack or user-defined profiles; being this and another customization features the best solution for providing a quick and effective manipulation of your system's network map.

3.3 Filtering rules

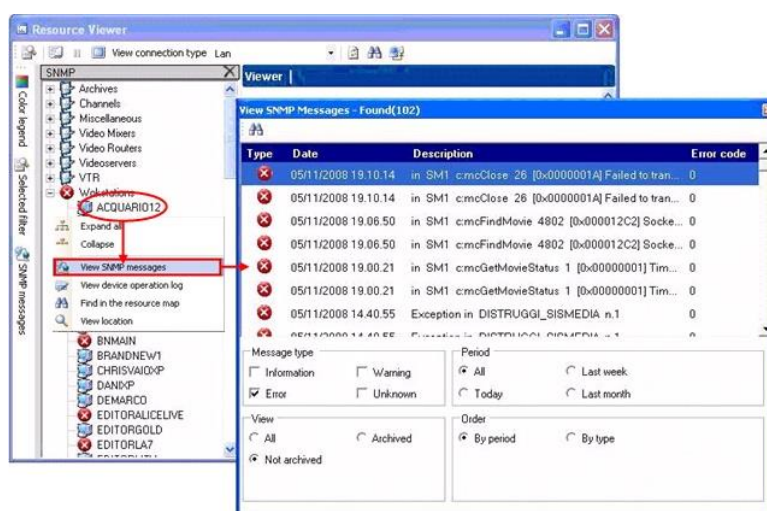
Gathered messages can be configured by the user to filter only specific incoming traps, thus allowing to receive only those notifications which you consider "relevant" for your monitoring purposes:



As shown in the figure above, filtering profiles are managed as profiles, each profile can feature parameters to filter messages using specific criteria including by owner, by login name, by installation, by description, by workstation, by severity, by error range, by IP intervals, by action types, and additionally, it will be possible to decide the notification method (i.e.: send email, send sms or play sound).

3.4 Detailed notifications

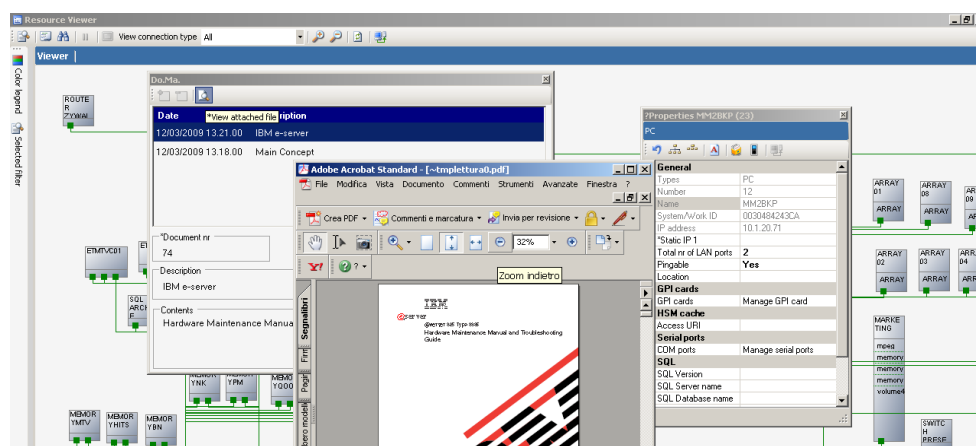
SNMP messages besides being highlighted in the map of resources, they are also delivered as email messages, sms notifications, sound alarms or SNMP traps to other Etere SNMP Consoles, in all cases, just by making double-click on SNMP messages, the user will access detailed information on them including the device name, the notified status, date and time, rack position, IP address, error code, description and the list of workflows currently looped due to the device failure:



Notification messages of a certain device can be filtered to allow a faster and efficient monitoring, available filtering criteria include by messages type, by period or by archived status.

3.5 Attached files

Etere provides an intuitive interface for storing files of any type related to a certain resource within a SQL database, thus making them available to be consulted in case of malfunctioning of a certain device or just for reading how to use said device:



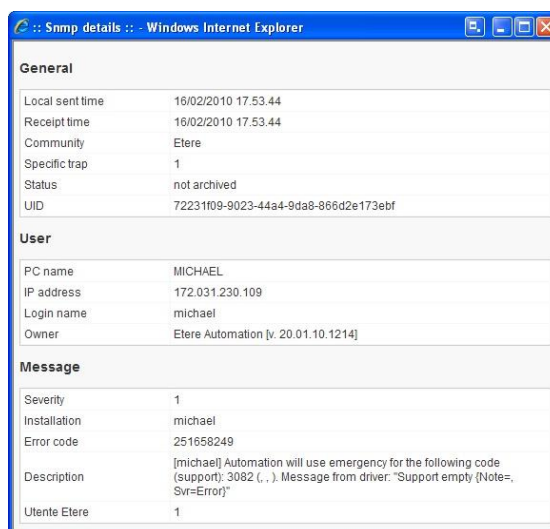
3.6 Remote Consultation

Etere also provides a well-designed and easy-to-use interface for monitoring your entire network as easy as surfing the internet, thus improving the monitoring of modules subscribed to the **Etere SNMP Console** to detect errors, missing heartbeats and any possible failure:

The screenshot shows the etereweb interface. At the top, there's a header with the Etere logo and a 'Select Zone' dropdown. Below the header, there are several filter sections: 'Message type' (Information, Warning, Error, Unknown), 'Date range' (All, Last week, Today, Last month), 'View' (All, Not archived, Archived), 'Order' (By period, By Type, Desc), and 'Other' (View device name, Timer). A 'Show' button is next to a 'Ultimi 100' dropdown. Below the filters, a table displays a list of messages. The table has columns for message details, date, and status. The messages are filtered to show errors from 08/02/2010.

Grid updated at: 12/03/2010 13.15.52						
[Open details]	✖	MICHAEL	08/02/2010	[michael] rvtmbms1 CH-1: Error while resetting. Automation error	709	not archived
[Open details]	✖	MICHAEL	08/02/2010	[michael] rvtmbms1 CH-1: Error while stopping. Automation error	11	not archived
[Open details]	⚠	ETEREONAIRCLONE	08/02/2010	[etereona] Master & Clone are shifted, shift value is 12419f	251658244	not archived
[Open details]	⚠	ETEREONAIRCLONE	08/02/2010	[etereona] Automation is now master	251658246	not archived
[Open details]	⚠	ETEREONAIRCLONE	08/02/2010	[etereona] Master & Clone are shifted, shift value is 99f	251658244	not archived
[Open details]	⚠	MICHAEL	08/02/2010	[michael] Master & Clone are shifted, shift value is -70f	251658244	not archived
[Open details]	✖	ETEREONAIRCLONE	08/02/2010	The application etereau.exe [3916] on ETEREONAIRCLONE is started?	5000	not archived
[Open details]	✖	ETEREONAIRCLONE	08/02/2010	The application etalgin.exe [588] on ETEREONAIRCLONE is started?	5000	not archived

Here, the operator will be able to filter messages –in real time- by using the parameters available on the top of the page; these parameters include the message type, date range, archived status, and maximum results number. Furthermore, detailed information on each message can be accessed with just one click:



4. BENEFITS

This paper has described the **Etere SNMP Console** and all its features that permits to always keep an eye on all components involved in the broadcast system network with maximum simplicity and minimum interaction, this by allowing to monitor in real-time the devices on which SNMP is enabled from a central or remote interface. The key benefits derived from these features, that confirm Etere as a complete Media Enterprise Resource Management system, can be summarized in the following points:

- ✓ **Integration**, any SNMP-enabled device, equipment or system can be incorporated in the monitoring system.
- ✓ **Software-based**, no extra equipment needs to be installed in order to start monitoring your system in real-time.
- ✓ **Visual indications**, device alarms are gathered, filtered, archived and notified automatically via e-mail, sounds, sms or SNMP traps.
- ✓ **Network security**, devices are discovered and accessed only by users belonging to authenticated groups enabled for monitoring.

- √ **Customizable views**, a set of different views to monitor, besides the entire network, only certain racks or specific workstations.
- √ **Graphical management**, all components are configured, browsed and used under a fully graphical interface which is simple by full of functions.
- √ **Multiple selection**, launch multiple actions on different devices with a single click.

5. About Etere

Etere is an international leader in the media market. Etere develops and distributes a wide range of high technology software for broadcasting and media businesses. With more than 20 years of experience, Etere provides powerful, flexible, cost-effective, high-performance, end-to-end media solutions. Etere is the only company worldwide that can offer you a solution to all your media needs in one single package.

Etere is the only solution 100% workflow based for all broadcast and media environments. It's a common framework where there is real-time sharing of all the data among several applications to manage all media business requirements. The workflow approach allows a fully customized design with edge performances.

From its headquarters in Tolentino, Italy, Etere guarantees the best after-sales support service on the market with engineers ready to give professional assistance 24 hours a day, 7 days a week. The service includes voice, email, VPN and VoIP with unlimited calls and connection time, and a pro-active system to help diagnose problems before they appear.

Etere: a consistent system

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