

# NET'SENTINEL

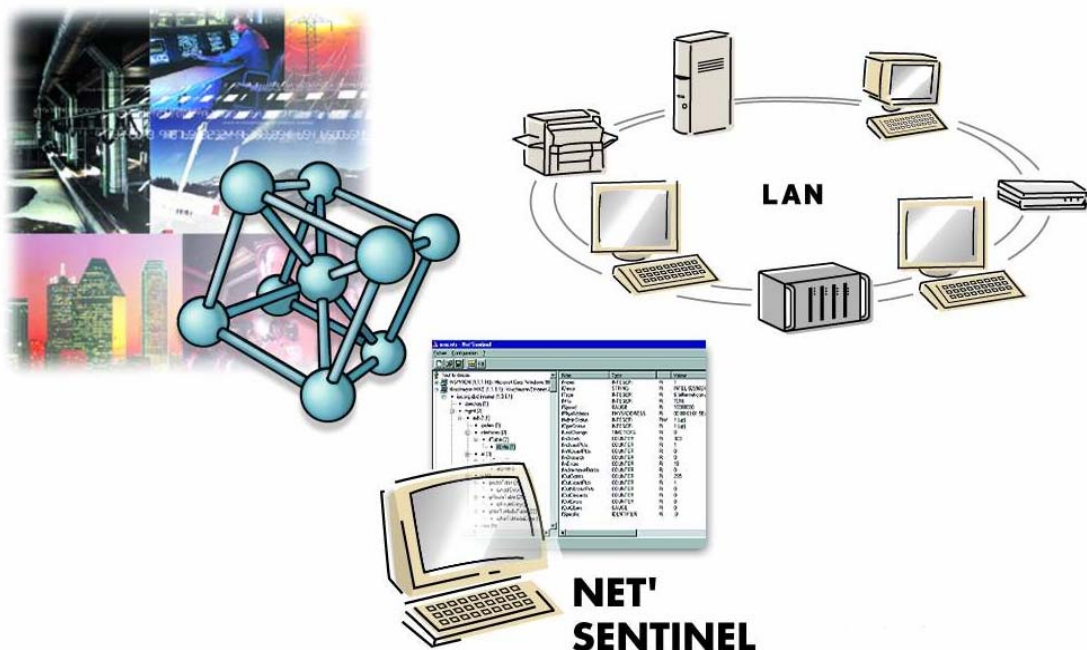
version 2.2

SNMP INTERFACE ... MIB browser ... DDE and OPC

## Interface to supervise network devices

**Net'Sentinel** is a SNMP supervision software which allows a TCP/IP network and all connected devices to be controlled from any DDE or OPC client application: industrial SCADA, spreadsheet, specific application, etc.

Associated with **Alert** software, **Net'Sentinel** is capable of triggering operator calls should there be a problem on the network or a device failure.



## SNMP supervision

**Net'Sentinel** supervises the devices connected on a TCP/IP network by means of the SNMP protocol version 1 and 2 (Simple Network Management Protocol) - a standard Internet family protocol.

**Net'Sentinel** is capable of browsing and identifying all the SNMP manageable devices connected on a network. The devices that are not manageable by SNMP can be browsed by automatic PING polling. The detected devices and information available in each device are displayed in a tree structure form.

The connection status of the devices is cyclically controlled; devices that are off-line, out of order or discarded are graphically signaled.

**Net'Sentinel** gives a real time read and write access to all information described in the devices MIB files (normalized files, provided by the device manufacturers, which describe the accessible data in a device). The read information can be processed in order to display the data value under different forms (strings, timers, counters, etc.).

**Net'Sentinel** also can receive asynchronous data (traps) that signal a specific event on a device. These traps are graphically signaled in the tree. When a trap is received a user message is automatically generated from the actual trap status and the contextual information received with it. This message is logged in the event log and can be sent to client applications, through the DDE and OPC (Data Access 2, Alarm & Event) interfaces.



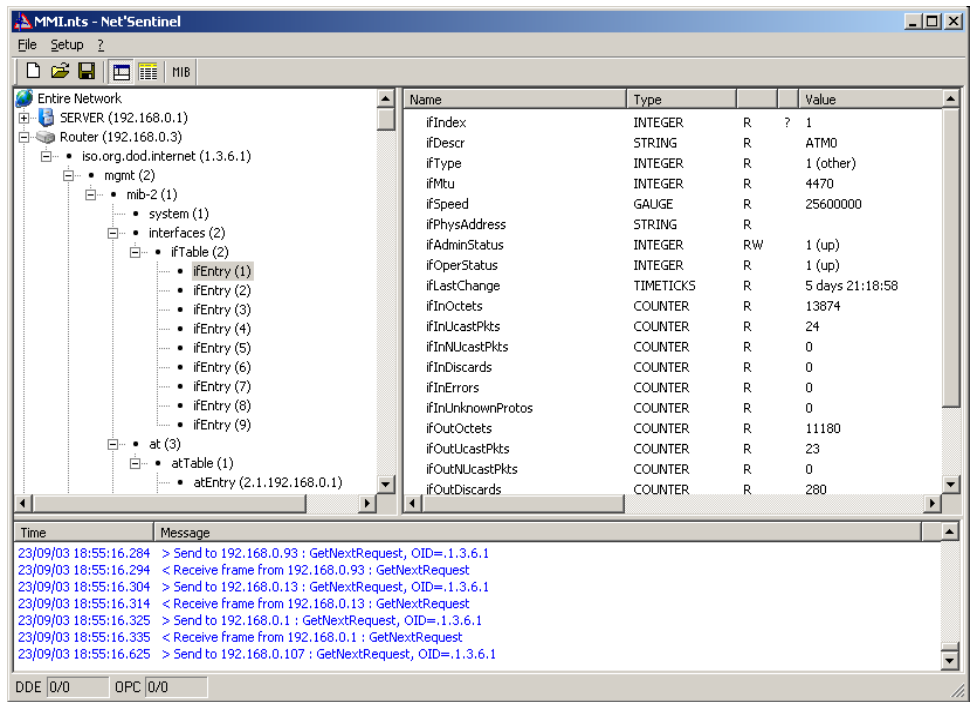
## Client interface

Using its integrated DDE and OPC server, **NetSentinel** can very easily be interfaced with any DDE or OPC client application:

- Industrial SCADA to control the network connections (backbone) and the network devices (bridges, routers, UPS, printers, Ethernet PLC, etc.).
- Spreadsheet : device setup control board, statistical report, etc.
- Specific application

All information referenced in the tree representation of the network can be accessed with the read and write rights that are specified in the device MIB. The connection status of a device and the actual number of alarms in a device are also accessible.

The syntax of the DDE or OPC link with a specific device item can be obtained by the means of a simple copy/paste operation. The OPC server also allows browsing from the client applications of the entire tree of the available information in every device of the network.



## Alarm processing

Alarms (traps defined as alarms) are counted, time-stamped and recorded in the event log.

An alarm can be acknowledged, which results in the associated message and alarm counter being reset.

The alarm state of an item can be retrieved by a client application under one of the following formats:

- Alarm counter (number of trap receptions), reset to zero by acknowledgement.
- Current alarm status (active or inactive, acknowledgement status can be included as an option) ; if the active state cannot be known (no reverse trap or status attached item), the returned status is the status of the alarm counter (zero/non zero).
- Alarm message, computed on every trap reception, emptied by acknowledgement.

An alarm also can trig a call of operators who are in charge of the network or specific devices, through the **Alert** software, by configuring it to supervise the **NetSentinel** alarms.



## Data management

The network polling is optimized. Only items that are currently displayed or required by a client application are cyclically polled. The SNMP port of each device is configurable (161 by default).

The basic cycle time is configurable, globally and at the level of each device. If needed, a device can be discarded (not polled).

The polling cycle of each item can be defined in terms of units of this basic cycle. Fixed information is read only once when its value is required.

Counter items are processed to compute the variation rate for a configurable period. Both values (absolute value and variation rate) can be displayed as well as being accessible for client applications.

Some of the items can be displayed or retrieved under different forms (timers, binary strings, etc).

The traps issued from the devices can be received on different configurable ports. They are time-stamped and

distributed with all associated contextual information. A trap can be associated with a reverse trap or an attached item that signals the return to the normal operating state.

An alarm message can be computed every time a trap is received, including its contextual information. This message is recorded in the event log and can be transmitted to the client applications.

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