



DAVANVIEW SNMP - SNMP MANAGEMENT FOR CONTRIX INTERFACE CONVERTERS

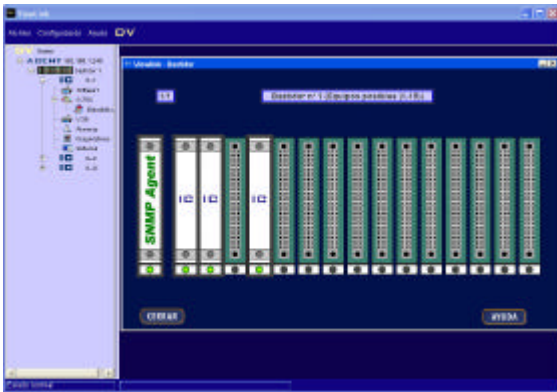
General Description

DAVANView SNMP is a software application that remotely manages CONTRIX interface converter devices using the SNMP protocol.

DAVANView SNMP can be run into two different ways:

- In an autonomous, self contained mode. It can connect to multiple SNMP Agents located in 19" interface converter cards racks. It does not need any additional software but it can not receive and store any type of alarms (SNMP traps).
- As a 'plug-in' for different SNMP shells as **HP OpenView** or **SNMPC** from CastleRock

In this second case, the SNMP Agent on the remote rack must be configured to send traps to the IP address of the SNMP shell. Then, the Operator can view and acknowledge in an intuitive and graphical way the alarms on the managed devices.



DAVANView SNMP has a complete and intuitive GUI that allows the following tasks on the managed devices:

- Check and change the configuration parameters
- View the status of leds, dip switches, alarms, loopbacks, ...
- Loopback activation and deactivation
- Reboot the device
- Get the G.704 statistics as per ITU G.821 (ES, SES, UAS, ...) for the last 24 hours and the last 7 days

- Setup the SNMP Agent configuration parameters (SNMP parameters, serial communication parameters, alarms, statistics,..)

System Architecture

SNMP Agent and Manager

The SNMP Management architecture from DAVANTEL is based on the Manager – Agent paradigm. The SNMP Manager, represented by the **DAVANView SNMP** software is the element that views in a graphical way the status and configuration on the managed devices. The SNMP Manager talks with the SNMP Agent by means of SNMP commands over a UDP/IP connection. The basic commands are:

- **GET (object):** gets the value of a configuration or status object on the managed device (loopback status, configuration parameters, leds, ...)
- **SET (object):** sets the value of a configuration or diagnostics parameter (loopback activation, alarm acknowledgement, ...)
- **TRAP:** the SNMP Agent send a trap or alarm to notify the Manager an event (DTR drop, LOS, loopback activation, ...)

The SNMP Agent is the element that is close to the managed devices. In DAVANTEL architecture, this element is inserted into the controller card of the RC-IC-48 19" interface converter chassis. The SNMP Agent gets SNMP commands (GET or SET) from the Manager and translates them into low level serial based commands to the managed. After receiving the answer, processes it and builds the proper SNMP response to the Manager. By the other hands, the SNMP Agent continuously polls the managed devices to check their status and in case of any fault or event, it send an alarm (TRAP) to one or more SNMP Manager.

Manager – Agent – Devices communications

The communication between SNMP Manager and Agent is done by means of SNMP commands. SNMP traffic is encapsulated into UDP packets over an IP session. The SNMP Agent from **DAVANTEL** has an Ethernet 10BaseT port for its direct connection to an IP based network. This SNMP Agent is inserted into the controller card on the RC-IC-48 19" rack for interface converter cards.

The communication between SNMP Agent and the interface cards in the rack is done using an RS-485 point to multipoint bus. Management messages are encapsulated into a proprietary asynchronous protocol at 9600 bps with CRC error detection mechanisms.

The communication between the rack mount interface card and their remote desktop interface converters is done by using in-band management protocols into the E1 frame. The operator can choose between using 'spare bits' in TSO or using any other complete timeslot in case the transport network can not warranty the transparency on these 'spare bits'.



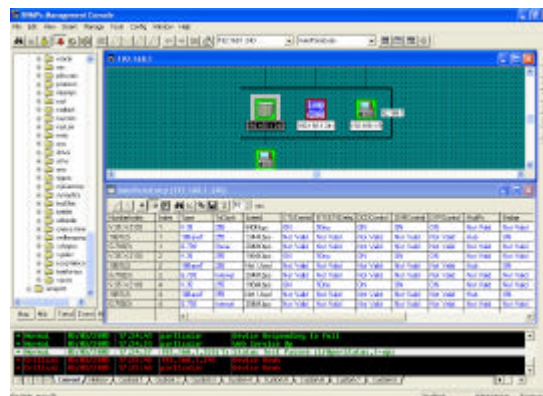
HP OpenView or SNMPc from CastleRock integration

DAVANView SNMP can be integrated as a plug-in into any SNMP shell as HP OpenView or SNMPc from CastleRock.

In any case, DAVANTEL provides the device enterprise MIB (Management Information Base) which defines all the manageable parameters on the devices as well as all the reported alarms (TRAPS). This information (file) must be compiled into the selected SNMP environment to properly view these alarms or to managed the remote devices in a straight forward way using the MIB Browser included into the shell.

Operator can link the DAVANView SNMP software to the SNMP Agent so when click on such a device, the application software is automatically executed showing the front and rear panel of the managed device.

This way, the Operator can view and managed the different equipments in an intuitive and graphical way without any knowledge on the enterprise MIB.



Features

DAVANView SNMP - Manager

- Configuration management
- Reboot of the remote devices
- Diagnostics: loopback activation and deactivation. BERT tests and measurements.
- Alarms configuration: individual activation/deactivation and priority setup
- E1 interface statistics as per ITU G.821 (ES, SES, UAS, ...) for the last 24 hours and the last 7 days
- SNMP Agent configuration parameters setup including RS-485 communication parameters, trap and rack temperature sensor configuration

SNMP Agent

- Small form factor for insertion into the controller card on the RC-IC-48 19" rack for CONTRIX interface converter cards
- Temperature sensor with associated alarm
- Console port (menu driven) for IP, SNMP, and RS-485 configuration
- Multipoint RS-485 bus (4 wires) for communication with the inserter converter cards
- RS-485 expansion connector allowing a single SNMP Agent to manage up to 7 close racks
- Up to 120 local devices plus their remote units
- Availability for sending traps to two different managers

System Requirements

For a proper DAVANView SNMP software installation, you need a PC with the following system requirements:

- Windows OS (98/2000/NT/XP)
 - CD-ROM
 - Network card with installed TCP/IP protocol
- (* Please, check the HP OpenView or SNMPc system requirements directly from the vendor.