USER MANUAL

Version 1.02 - February 2014

XNet.Monitor

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Improvement Requests

Your comments will help us improve the quality of the user documentation. Do not hesitate to send improvement requests, or report any error or inaccuracy on this user manual by e-mail to doc@evs.com.

Regional Contacts

The address and phone number of the EVS headquarters are usually mentioned in the Help > About menu in the user interface.

You will find the full list of addresses and phone numbers of local offices either at the end of this user manual (for manuals on hardware products) or at the following page on the EVS website: http://www.evs.com/contacts.

User Manuals on EVS Website

The latest version of the user manual, if any, and other user manuals on EVS products can be found on the EVS download center, on the following webpage: http://www.evs.com/downloadcenter.

Table of Contents

What's New?

In the XNetWebMonitorTechnical Reference manual, the icon NEW ! has been added on the left margin to highlight information on new and updated features.

The changes linked to new features in version 1.02 are listed below:

New fields and modified fields in the Status tab in the Server Details area

- See section "Status Tab" on page 17.

New field in the Hardware tab

- See section "Hardware Tab" on page 26.

The user manual has been restructured and reviewed since the last published version (version 1.01).

The following change is not related to a new feature:

New section on network settings

- See section "Network Settings" on page 5.

1. Introduction

1.1. Product Overview

XNetMonitor is a tool aimed at monitoring EVS products. It displays real time information and status about the EVS video servers and other EVS products, as well as past alert and warning messages.

XNetMonitor uses the SNMP (Simple Network Management Protocol) protocol to request and receive monitoring data from the EVS servers. This internal status data is defined in the MIB (Management Information Base) on each EVS server.

One XNetMonitor application can monitor several EVS servers while one EVS server may also be monitored by several XNetMonitorapplications.

XNetMonitor is mainly a monitoring application that cannot act on the monitored servers. Some remote actions are however possible: Multicam version upgrade, keyword file maintenance, as well as remote access to an EVS server desktop, or to an LSM Remote Panel.

1.2. Installation

Requirement

- PC compatible computer
- Supported OS: Windows XP, Windows Vista, Windows 2003 Server, Windows 7
- .Net framework 3.0 or higher installed

Recommendation

The SNMP information is available through the PC LAN connector of the server. The XNetMonitor running computer should be connected to the same network, and not on any of the Gigabit Ethernet ports of the servers. These ports are dedicated to high flow video data and cannot be used for any other purpose.

Installation

XNetMonitor is delivered as a single executable file.

To install the program, run this installation file. During the installation, a warning will be displayed if .Net framework is not installed on your computer. In this case, you should manually install this.

If you need to install the .Net framework, double-click the DotNet 3.5 SP1 Install3.bat file, which is delivered with the XNetMonitor executable file.

During XNetMonitor installation, the only required parameter is the installation path for the application. If you want to change the default one, enter the desired path.

Once the application is installed it can be executed immediately.

Upgrade and Downgrade

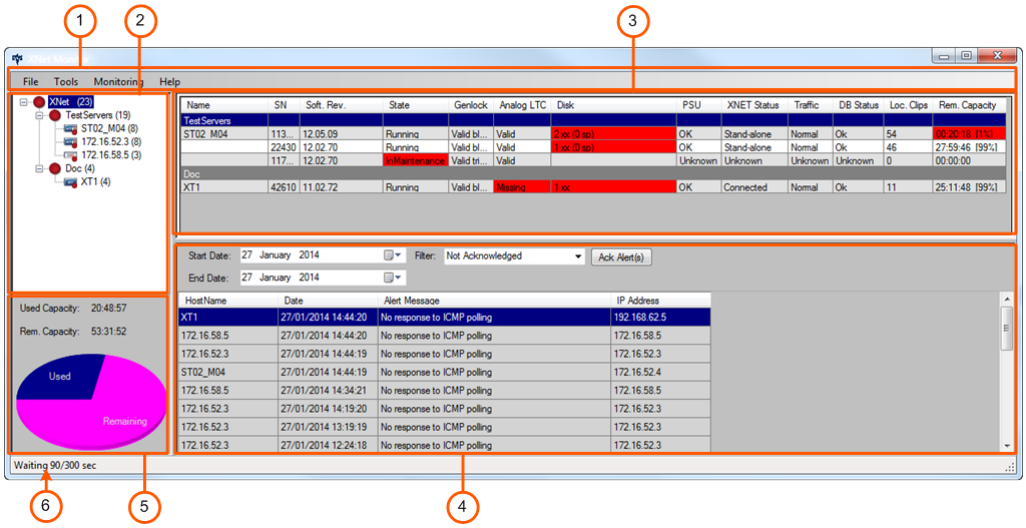
If an older version of XNetMonitor is already installed on your computer, it will be automatically removed and replaced by the new one when you will install the new version of XNetMonitor.

The XNetMonitor application must only be removed if you need to downgrade the application. Removing the application can be done as usual, through Windows Control Panel and Add or Remove Programs menu.

1.3. User Interface Overview

Introduction

When you access XNetMonitor, the main window is displayed. The schema below highlights the various areas on the main window.



Area Description

The table below describes the various parts of the XNetMonitor main window:

#	Window area	Description
1.	Menu bar	Gives access to various functions. See section "Menu Bar" on page 4.
2.	Monitored Device tree	It displays the monitored devices in a user-defined tree architecture. See section "Description of the Monitored Device Tree" on page 5.
3.	Monitoring Data area	It can display different data depending on what is selected in the **Monitored Device Tree**: • Detailed information on the selected EVS server. The area is then called the **Server Details** area. See section "Overview on the Server Details Area" on page 17 • Detailed information when another EVS hardware is selected. The area is then called the **Device Details** area. See section "Device Details" on page 28. • Summary information on several devices when a group of devices is selected. The area is then called the **Monitoring List** area. See section "Description of the Monitoring List" on page 15
4.	Alert Information area	Area that allows users to display and acknowledge the alerts. See section "Managing Alerts" on page 31
5.	Disk Usage	Displays a pie chart with the totalized used and left disk space for the selected devices(s).
6.	Status bar	Status information about the monitoring status.

1.4. Menu Bar

General Description

The menu bar gives access to various functions. You will find below a short description of the menu items.

Area Description

The following table presents the items on the menu bar:

Menu	Description
File menu	Allows you to manage the EVS servers and other EVS devices stored in the Monitor Device tree. See section "Managing the Monitored Device Tree" on page 8
Tools menu	Gives you access to the following configuration tools and settings: • "Customizing the Monitoring List" on page 8 • "Organizing Monitored Devices" on page 6 • "SNMP and General Settings" on page 12 • "Trap Configuration" on page 10 Gives you access as well as to the commands to manage Multicam versions and keyword files on the EVS servers: • "Multicam Upgrades" on page 41 • "Uploading a Keyword File on an EVS Server" on page 46
Monitoring menu	Allows you to start or stop the monitoring on the EVS servers and devices displayed in the **Monitored Device Tree**. See section "Start Monitoring" on page 14
Help menu	Gives you access to the user manual and information about the application.

2. Configuration

2.1. Network Settings

Introduction

Should you face issues to set up XNetMonitor in your network, and should a network configuration be required, you will find the necessary network information in this section.

Description

Monitoring

- Monitoring protocol :SNMP
- Communication for the polling : TCP on port 161 (bidirectional)
- Communication of the SNMP traps : UDP on port 162 (outbound out of the server only)

Remote desktop and LSM Remote functions

- TCP 50000 (bidirectional)

Config Web

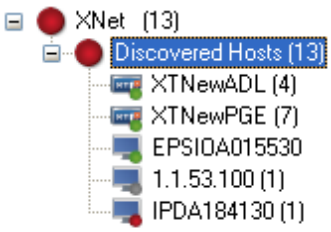
- Communication in HTTP on port 80 (bidirectional)

2.2. Monitoring Configuration

2.2.1. Description of the Monitored Device Tree

Introduction

The **Monitoring Devices Tree** displays the devices monitored on the network. They are listed in a tree architecture independent of the network architecture as shown on the screenshot below. The Monitoring list is defined by the user.



XNet Node

The higher node is called **XNet** as it represents the EVS XNet proprietary network. Under this first level node, you must add one or more groups. These groups are only virtual groups used for easy organization and management of multiple servers.

Groups

The groups are defined by the user. The group definition is not tied to the network architecture: this is only a virtual layout the user can organize freely. For easier management, it is recommended to organize the groups based on physical localization of the devices.

Hosts

The hosts are the monitored devices themselves. You can create them manually or automatically as explained in See section "Organizing Monitored Devices" on page 6.

Status Summary

In the Monitored Device Tree, a colored bullet displayed next to the group or device provides a summary of the device status, and has the following meaning:

- A red bullet means that there is a warning and/or an error on a host.
- A green bullet means that everything is ok for that item.

The number between brackets next to an item indicates the number of pending SNMP alert messages.

2.2.2. Organizing Monitored Devices

Introduction

To organize the monitored devices in the Monitoring List, you first have to create groups under the XNet node. Then, you can add the monitored devices under the created groups, either manually or automatically.

How to Add and Remove Groups

For an easy management, it is recommended to organize the groups based on physical localization of servers.

To add a new group, proceed as follows:

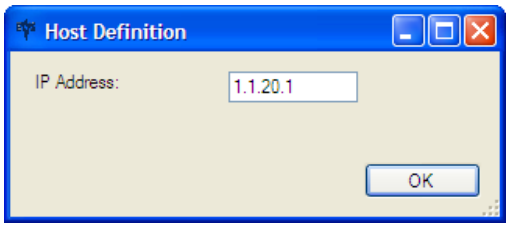
1. Right-click on the XNet node and select **Add group**.
2. Enter a representative group name.

To remove a group, right-click on it and select **Remove**.

How to Add Devices Manually

To add individual devices manually, proceed as follows:

1. Right-click on a group and select **Add host**.
2. Enter the device IP address in the Host Definition window.

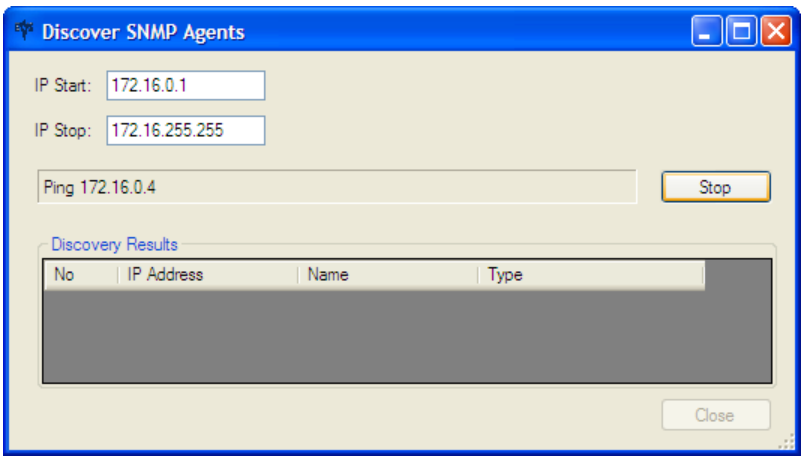


Once the devices are entered in the list manually, you can organize them in the different groups by drag-and–drop operation.

How to Add Devices Automatically

1. Open the **Tools** menu and select **Discover**.

   The Discover SNMP Agents window opens



2. In this window, set the IP address range in which the program will look for available devices.
3. Click the **Start** button to start the discovery process.

At the end of this process, the discovered devices will be listed in a new group called **Discovered Hosts**.

Once the devices are entered through the discovery process, you can organize them in the different groups by drag-and–drop operation.

Note
As this process is based on timeout for not used addresses, it may take some time to parse a long list.

How to Remove a Device

You can only remove a device when the monitoring is not started.

To remove a host, right-click on it and select the **Remove** command.

2.2.3. Managing the Monitored Device Tree

From the **File** menu, commands make it possible to manage the device and server list available in the **Monitored Device Tree**. This list is saved as an .xml file for future use and/or for transfer to another monitoring computer. This allows easy sharing and management synchronization of servers and hosts tree organization.

The following commands are available in the **File** menu.

Parameter	Description
New	To create a new virtual architecture from scratch.
Open	To open an existing architecture saved as an xml file.
Save	To save the currently open architecture xml file.
Save As	To save the currently open architecture xml file as a new file.
Exit	To close and exit XNetMonitor

2.2.4. Customizing the Monitoring List

Introduction

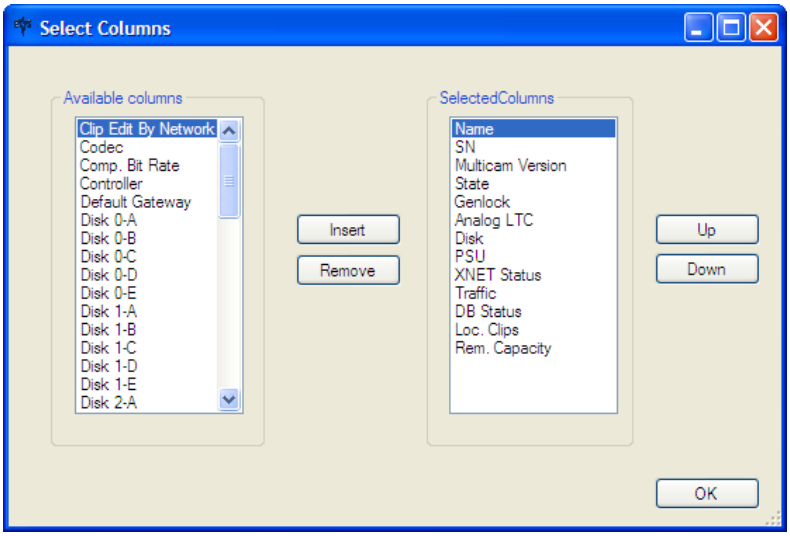
When you select XNet or a group in the Monitored Device Tree, the Monitoring Data pane displays the **Monitoring List**, which provides summary data about the servers available under XNet or under the selected group.

You can specify which information should be displayed in the Monitoring List and how it should be displayed via the Select Columns window.

How to Customize the Data

To customize the summary monitoring data, proceed as follows:

1. In the Monitoring Data pane, select the **Organize Columns** command from the **Tools** menu.
2. The **Select Columns** window opens:



3. Do one of the following actions:
   - To add a column to the display, select it in the left **Available columns** list and click on the **Insert** button.
   - To remove a column from the display, select it in the right **Selected Columns** list and click on the **Remove** button.
   - To change the columns order, select a column name in the right **Selected Columns** list and move it up or down in the list using the **Up** and **Down** buttons respectively.
4. Click on **OK** once the columns are organized as desired.

2.3. Trap Configuration

2.3.1. Description of the Trap Configuration Window

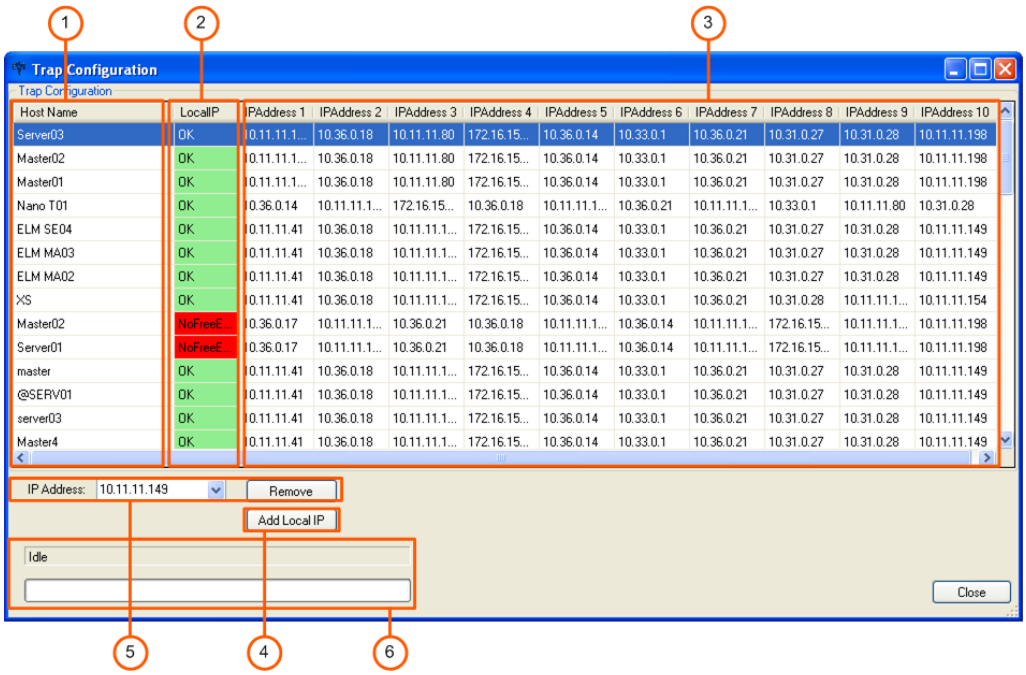
Overview

You can access Trap Configuration window by selecting the **Tools** menu, and the **Trap Configuration** command.

The Trap Configuration window displays the host tree (EVS servers or other EVS hardware). For each host, the list of IP addresses of the computers registered to the host to receive its SNMP trap messages. Such a computer is called a trap target.

The trap targets can be computers that host the XNetMonitor application or a polling service of XNetWebMonitor.

The Trap Configuration window contains the areas or buttons highlighted on the screenshot below:



Area Description

The table below describes the various parts of the Trap Configuration window:

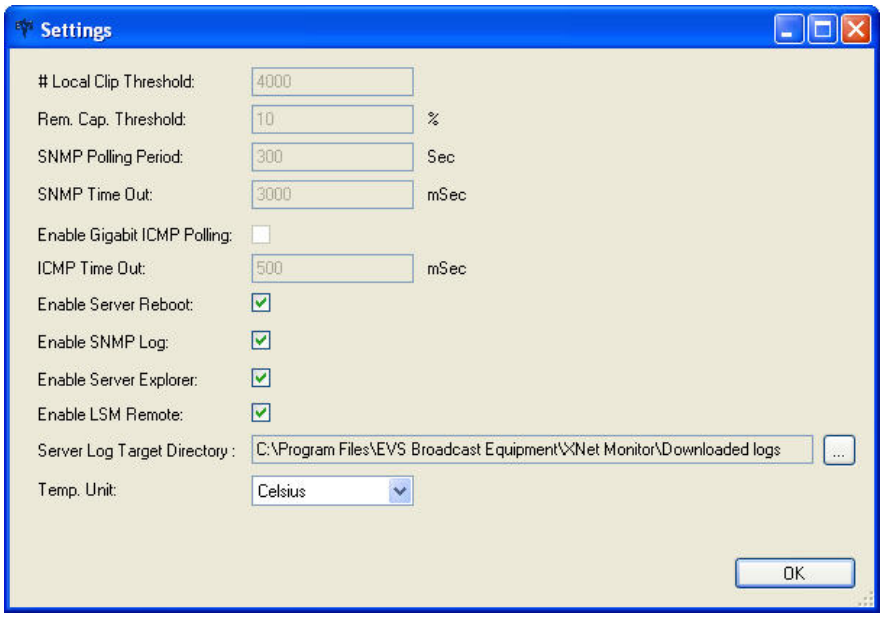
Part	Name	Description
1.	Host tree	List of the monitored devices to which XNetMonitor applications can be registered.
2.	**LocalIP** column	Trap status of the local IP address: • If the IP address is registered to receive the trap messages, the cell will appear as  . • If the IP address is not registered to receive the trap messages, the cell will appear as  .
3.	**IP Addresses** columns	List of all IP addresses of computers (max. 10 per host) registered as trap targets to the corresponding host.
4.	**Add Local IP** button	Button that allows administrators to add the current XNetMonitor IP Address on the monitored server.
5	**Remove** button	Button that allows administrators to remove, in one go, a trap target from all hosts it is registered to. This button is used in combination with the drop-down list on the left hand side, which allows the selection of the trap target to be removed.
6	**Trap Registration** status bar	The status field and progress bar at the bottom of the window display the currently executed command and its progress status.

2.4. SNMP and General Settings

Introduction

In the **Settings** command in the **Tools** menu, you can set following parameters.

Click **OK** once the parameters are properly configured for your application.



Field Description

Parameter	Description
# Local Clip Threshold	When this number of clips is reached on a machine, a message will be displayed to warn the user that a cleaning and purge will soon be necessary on that server.
Rem. Cap. Threshold	Same warning as the previous one but based on the server remaining storage capacity.
SNMP Polling Period	Wait time between polling. A small period will guarantee fast refreshing of data but will request high data flow on the network while a long period will display less up-to-date data but will reduce the load on the network.
SNMP Time Out	Delay after which a host will be considered as not responding. An alert message will be displayed in the event log if such an event happens for a monitored host. The automatic discovery process total duration depends on this parameter.
Enable Gigabit ICMP Polling	Enables the pinging of the Servers GBE ports.

Parameter	Description
ICMP Time Out	Time Out for the pinging of the Servers GBE ports
Enable Server Reboot	If this option is enabled, XNetMonitor will be able to initiate a reboot of any monitored server through the **Reboot** command in the contextual menu opened by right-clicking on a host in the Monitored Device Tree.
Enable SNMP Log	If this option is enabled, XNetMonitor will keep a log file with all SNMP messages.
Enable Server Explorer	Enables the **Explore** option from the Server Name contextual menu in the Monitored Devices Tree. The Explore option opens a ftp session on the server.
Enable LSM Remote	Enables the **LSM Remote** option from the Server Name contextual menu in the Monitored Device Tree.
Server Log Target Directory	Path to the directory used to store the SNMP log files.
Temp. Unit	Unit in which the temperature is expressed.

3. Monitoring

3.1. Start Monitoring

Once servers and hosts have been added in the groups, the monitoring is started by clicking on the **Start** command in the Monitoring menu.

To stop the monitoring once it is running, simply click on the **Stop** command in the same Monitoring menu.

The monitoring status is available in the status bar at the bottom of the XNetMonitor window.

- 'Polling not started' means that the monitoring has not been started yet since the application launch.
- 'Polling' followed by IP address means status data are presently read from the selected host MIB.
- 'Waiting x/y sec' indicates that the monitor is waiting for next polling process. It has already been waiting for x seconds out of a total of y seconds (according to related parameter setting).
- 'Polling ended' means that the monitoring has been stopped by the user. At monitoring restart, hosts will be immediately polled and the waiting period will be reset.

Note
When you start up XNetMonitor, the monitoring is always stopped and must be started manually using the Start command.

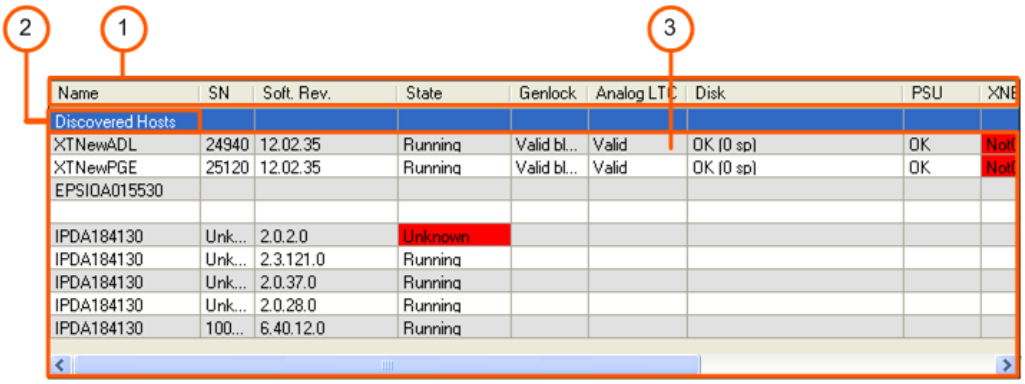
3.2. Monitoring List

3.2.1. Description of the Monitoring List

Overview

The Monitoring List area shows the groups of EVS servers and other EVS hardware, their status, and a set of parameters on each hardware.

The Monitoring List pane contains the areas highlighted on the screenshot below:



Area Description

The table below describes the various parts of Monitoring List area:

Part	Name	Description
1.	Column heading	Type of information available in the given column. The columns available in the Monitoring List are selected and ordered as defined in the section "Customizing the Monitoring List" on page 8.
2.	Group node	Name of the device or server group as defined in the Monitored Device Tree.
3.	Server List	Information on EVS servers and other EVS hardware belonging to a group. For more details on the fields available in this section, "Fields in the Monitoring List" on page 16. Clicking on a row corresponding to an EVS server or other hardware will display the detailed information on this host in the Server Details area.

3.2.2. Fields in the Monitoring List

The list of fields described in the table below is not exhaustive. It includes the fields available in the default display:

Name	Description
Name	It indicates the name of the EVS server. The name displayed is assigned in the following order of priority, based on whether a value is assigned or not: facility name, net name or IP address. A color circle in front of the EVS server indicates its status: • green: no active alert present for the server • red: at least an active alert present for the given server • gray: XNet Web cannot retrieve information with the SNMP protocol.
SN	It specifies the server's unique serial number.
Soft Rev.	It specifies the server software revision.
State	It indicates the functional status of the EVS server or other EVS hardware. The possible statuses are 'Running', 'Initializing', 'In Maintenance' or 'Halted'.
Genlock	It indicates the presence or absence of Genlock synchronization signal, and its type.
Analog LTC	It indicates the status of LTC (Longitudinal Time Code) analogue signal.
Disk	It indicates the disk connection status, and the number of spare disks.
PSU	It specifies the status of the power supply units.
XNet Status	It indicates the status of the SDTI network connection.
Traffic	It indicates the network traffic status.
DB Status	It indicates the status of the server database.
Loc Clips	It specifies the number of clips stored on the server.
Rem. Capacity	It indicates the remaining recording capacity on the EVS server in hours, and percentage.

3.3. Server Details

3.3.1. Overview on the Server Details Area

The Server Details area is located on the right hand side of the Monitored Device List.

When you select an EVS server in the Monitored Device List, the **Server Details** area provides detailed information on the selected server.

This information is organized in four tabs, which are themselves organized in different group boxes:

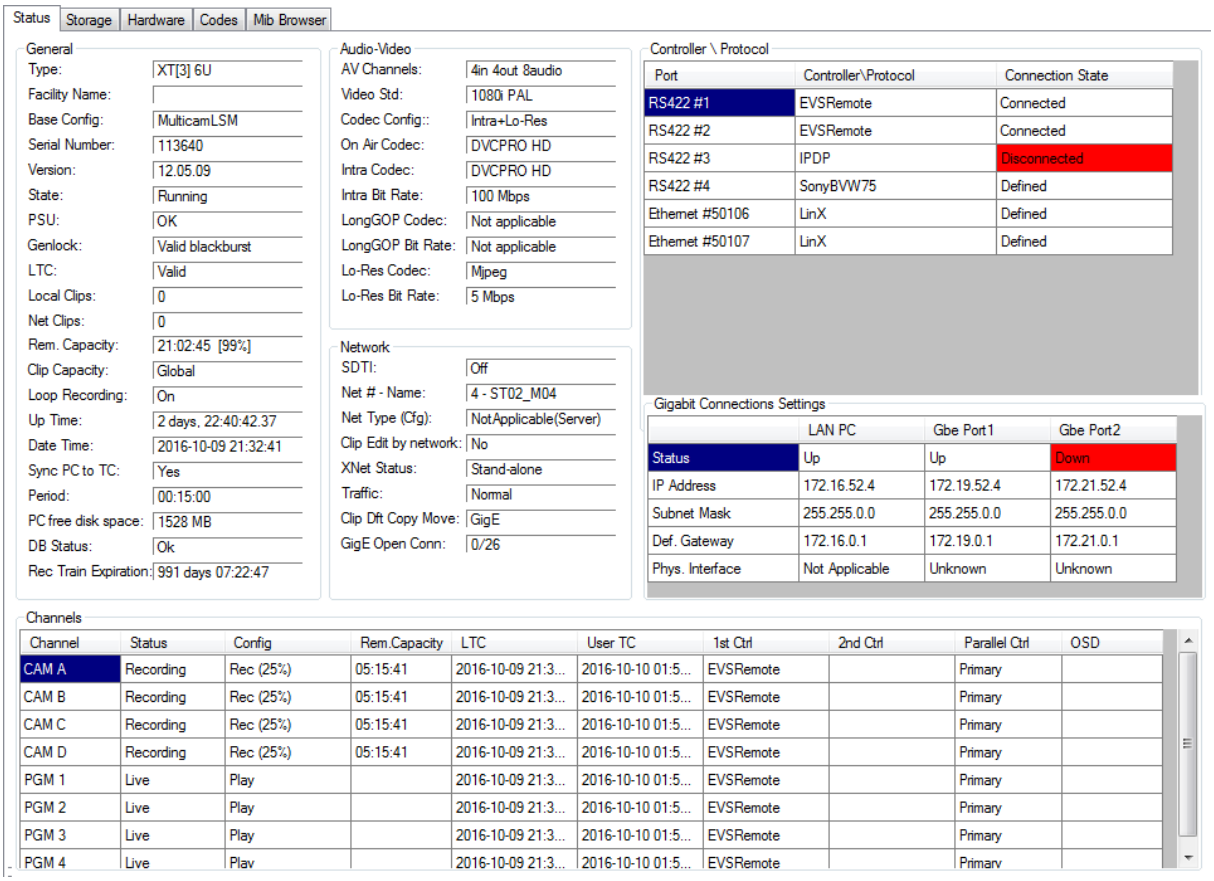
Tab Name	Included field groups
Status	General information, data about A/V, network, controllers, GigE connections, and channels
Storage	Information on disk capacity, array definition, disk numbers, and disk models
Hardware	List of the boards fitted on the EVS server
Codes	List of Codes installed on the EVS server
MIB Browser	View on the MIB (Management Information Base)

When you select another EVS hardware in the Monitored Device List, the **Device Details** area provides data on the selected hardware, its drives and communication interfaces. See section "Device Details" on page 28 for more information.

3.3.2. Status Tab

Overview

In the Status tab, the main parameters are organized in several group boxes as shown on the following figure.



The different group boxes and their parameters are detailed hereafter.

Note
If Multicam is not active and running on the selected server, most of the parameter fields will be left blank.

General Area

The table below describes the fields available in the General area:

Parameter	Description
Type	It indicates the server type: XT3, XT2, XS, …
Facility Name	It specifies the name given to the product by the user.
Base Config.	It indicates the base configuration used to start the server.
Serial Number	It specifies the server's unique serial number.
Version	It specifies the server software revision.
State	It indicates the functional status of the EVS server or other EVS hardware. The possible statuses are 'Running', 'Initializing', 'In Maintenance' or 'Halted'.

Parameter	Description
PSU	It specifies the status of the power supply units.
Genlock	It indicates the presence or absence of Genlock synchronization signal, and its type.
LTC	It indicates the status of LTC (Longitudinal Time Code) analogue signal.
Local Clips	It specifies the number of clips stored on the server.
Net Clips	It specifies the total number of clips stored on the whole SDTI network.
Rem. Capacity	It indicates the remaining recording capacity on the EVS server in hours, and percentage.
Clip Capacity	It specifies the clip capacity as defined on the server: Global or Per Channel.
Loop Recording	It specifies the loop recording mode as defined on the server.
Up Time	It indicates the elapsed time since the last boot.
Date Time	It indicates the MTPC date and time.
Sync PC to TC	It synchronizes the internal TC to the timecode read on the LTC input of the server and clears the TC discontinuities detected on the LTC input of the system.
Sync Period	It indicates the period at which the Sync PC to TC is applied.
PC Free Disk Space	It indicates the available space on the MTPC disk in megabytes (MB) or gigabytes (GB).
DB Status	It indicates the status of the server database.
NEW ! Rec. Train Expiration	Time lapse by which the field counter for the record trains has to be manually reinitialized on the EVS server. Failing a reinitialization, the record train will not longer be recorded. Warning messages are issued in Multicam.

Audio-Video Area

The table below describes the fields available in the Audio-Video area:

Parameter	Description
AV Channels	It specifies the configuration defined for video and audio channels: • number of IN and OUT video channels • number of audio embedded mono channels per video channel
Video Std	It specifies the video standard used on the server ports.
Codec Config	It specifies the codec essence(s) active on the EVS server.

Parameter	Description
On Air Codec	It specifies the codec in which the video is played out on the EVS server.
Intra Codec	It specifies the Intra codec in which the video is stored on the EVS server.
Intra Bitrate	It specifies the bitrate of compressed video data for the Intra codec.
LongGOP Codec	It specifies the LongGOP codec in which the video is stored on the EVS server.
LongGOP Bitrate	It specifies the bitrate of compressed video data for the LongGOP codec.
Lo-Res Codec	It specifies the Lo-Res codec in which the video is stored on the EVS server.
Lo-Res Bitrate	It specifies the bitrate of compressed video data for the Lo-Res codec.

Network Area

The table below describes the fields available in the Network area:

Parameter	Description
SDTI	It indicates the SDTI (Serial Data Transport Interface) network type.
Net # - Name	It indicates the server identification number and name on the SDTI network.
Net Type (Cfg)	It indicates the server type on the SDTI network. The possible values are: • Master • Server • Client • Not Applicable (SDTI not present or set to off).
Clip Edit by network	It specifies whether a clip can be edited through the network or not.
XNet Status	It indicates the status of the SDTI network connection.
Traffic	It indicates the network traffic status.
Clip Dft Copy Move	It specifies the preferred network (SDTI or GigE) for copy/move actions on clips.
GigE Open Conn	It indicates the number of open GigE connections on a given port.

Controller / Protocol Area

The table below describes the fields available in the Controller / Protocol area:

Parameter	Description
Port	It specifies the port used by the server controller.
Controller\Protocol	It specifies the controller or protocol used on that port.
Connection State	It specifies the connection status of the control port.

Gigabit Connection Settings Area

The table below describes the fields available in the Gigabit Connection Settings area:

Parameter	Description
Status	It indicates the status of the Gigabit connection.
IP Address	It specifies the IP address of the interface port.
IP Mask	It specifies the IP mask of the interface port.
Def. Gateway	It specifies the default gateway used by the interface port.
NEW ! Phys. Interface	It specifies on which hardware the gigabit port is located.

Channels Area

The table below describes the fields available in the Channels area:

Parameter	Description
Channel	It specifies the name of the record channel (CAM) or play (PGM) channel.
NEW ! Status	It indicates the status of the channel: • CAM: Recording, Rec Idle • PGM: Ready, Playing, Live, Idle If a channel has no audio or video, it will be displayed in red with one of the following indication: • (!A) when the audio is missing • (!V) when the video is missing • (!AV) when the audio and video are missing
Config	It specifies the configuration of the channel as record or play channel.
Rem. Capacity	It indicates the remaining capacity for each recorder channel.
LTC	It gives the LTC timecode of the channel.
User TC	It gives the User timecode of the channel.

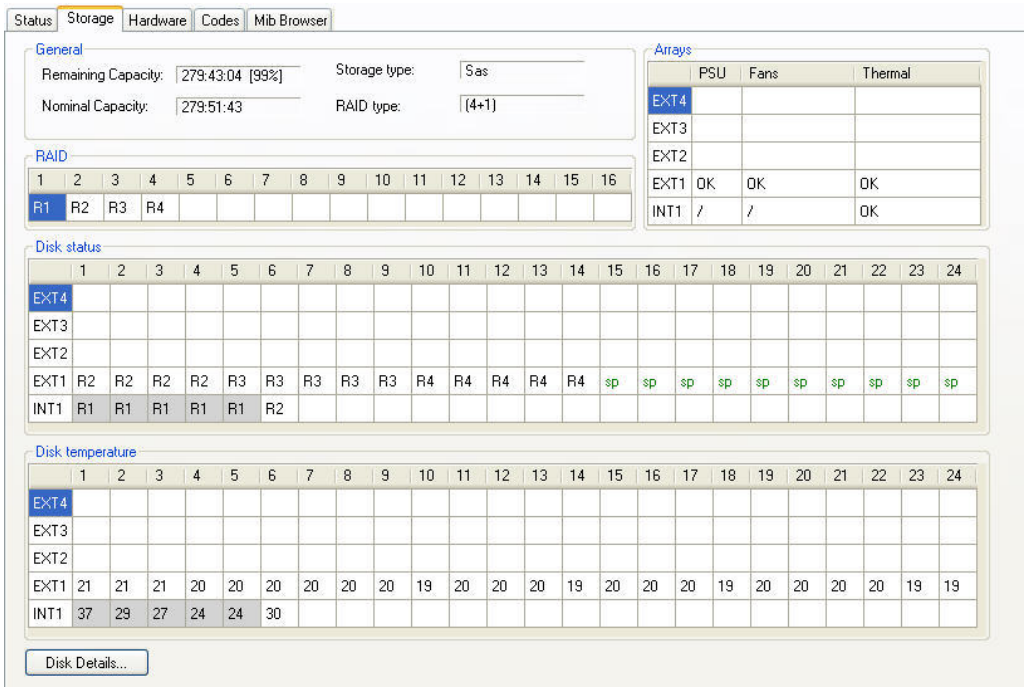
Parameter	Description
1st Ctrl	It specifies the primary controller defined for the selected channel. Possible values are: EVS Remote, EVS XTNano Remote, AVSP, IPDP
2nd Ctrl	It specifies the secondary controller defined for the channel, if any.
Parallel Ctrl	It specifies the controller used in parallel mode.
OSD	It specifies which controller (main or secondary) will manage the OSD display characters in parallel mode.

3.3.3. Storage Tab

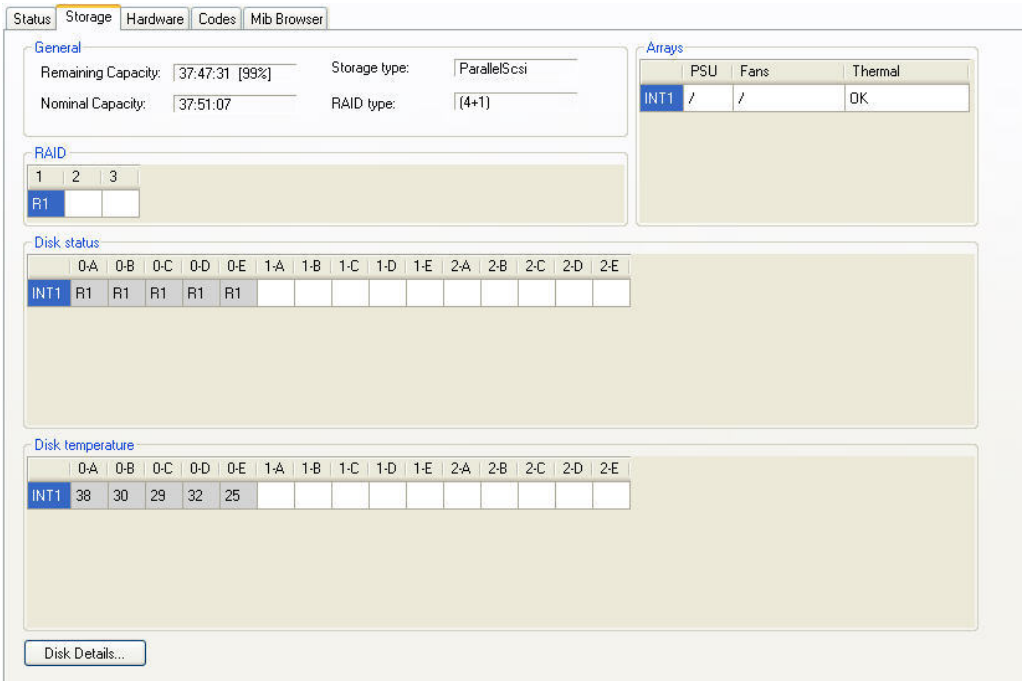
Overview

The Storage tab differs according to the type of disks used: SAS or SCSI.

SAS Disks



SCSI Disks



General Area

The table below describes the fields available in the General area:

Parameter	Description
Rem. Capacity	It specifies the remaining capacity of the storage expressed as a video duration (hours, minutes and seconds) as well as a percentage.
Nom. Capacity	It specifies the total capacity of the storage expressed as a video duration (hours, minutes and seconds).
Storage Type	It specifies the type of disks: SCSI (ParallelSCSI) or SAS.
Raid Type	It specifies the type of RAID: • 4+1: four disks and a parity disk, with a spare disk for SAS disks / without spare for SCSI disks • 5+1: five disks and a parity disk, without a spare disk for SAS disks

Arrays Area

The table below describes the fields available in the Arrays area:

Parameter	Description
PSU	It specifies the status of the PSU on the given array. See section "PSU HDX" on page 37 for examples of values for this field in case of SAS-HDX array. The values are the same for other arrays types.
Fans	It gives the state of the fans on the given array. See section "Fan HDX" on page 37 for examples of values for this field in case of SAS-HDX array. The values are the same for other arrays types.
Thermal	It gives the temperature status on the given array. See section "Disk Thermal" on page 38 for field values.

Raid Area

This area gives indication on the number of RAIDs defined in the server and their respective identification (R1,…)

Parameter	Description
Raid ID	It specifies the RAID storage system identification

Disk Overview Tab

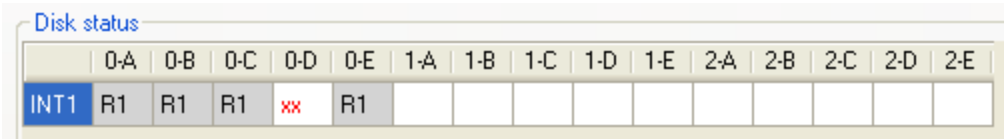
Disk Status Area

This area gives indication on the localization of each RAID and on the spare disks in the arrays:

The **xx** sign (red) identifies faulty disks, that should directly be replaced, especially when you work without spare disks.

The **??** sign (red) identifies disks other than EVS disks.

The **sp** sign (green) identifies the spare disks.

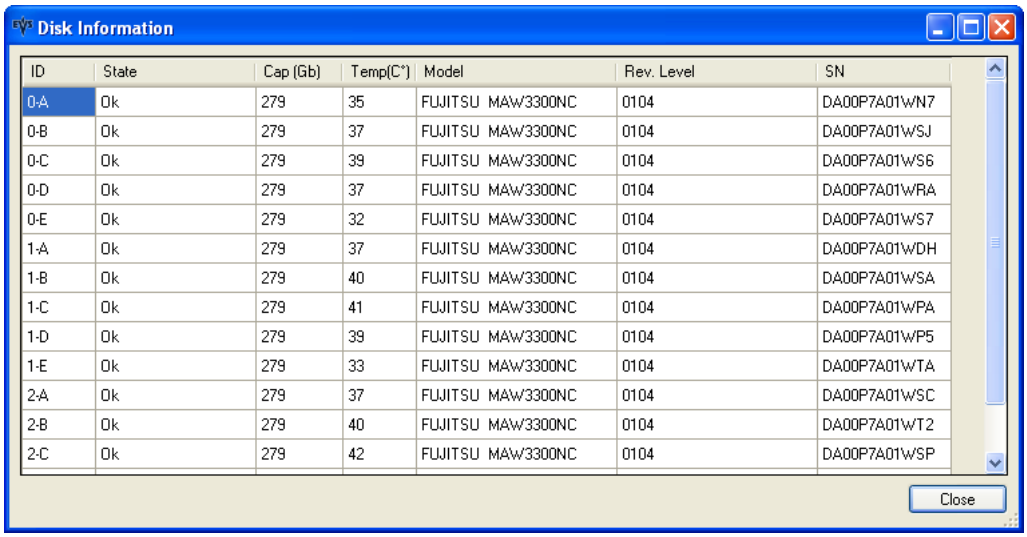


Disk Temperature Area

This area provides the internal temperature of each disk.

Disk Details Button

The **Disk Details** button gives access to the Disk Information window:

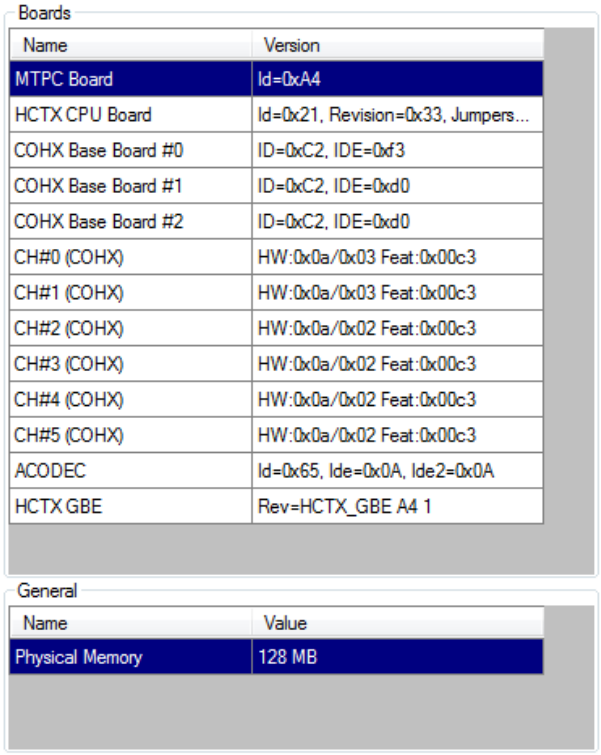


Parameter	Description
ID	Disk identification
State	Disk status: OK, not present, spare,…
Cap	Disk capacity in Gigabytes
Temp	Disk internal temperature in the unit defined in the general display settings
Model	Disk manufacturer and model
Rev. Level	Disk revision Level
SN	Disk serial number

3.3.4. Hardware Tab

Overview

The Hardware tab lists the available modules and boards installed in the server along with their respective version or revision number and their configuration when relevant.



Board Area

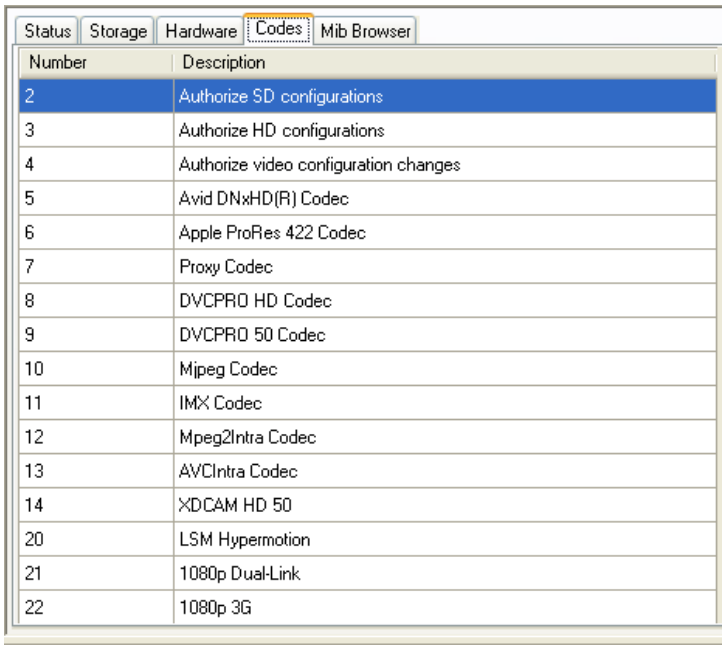
Parameter	Description
Name	Name of the board or module
Version	Revision of the board or module, and additional parameters

NEW ! General Area

Parameter	Description
Physical Memory	RAM of the EVS server

3.3.5. Codes Tab

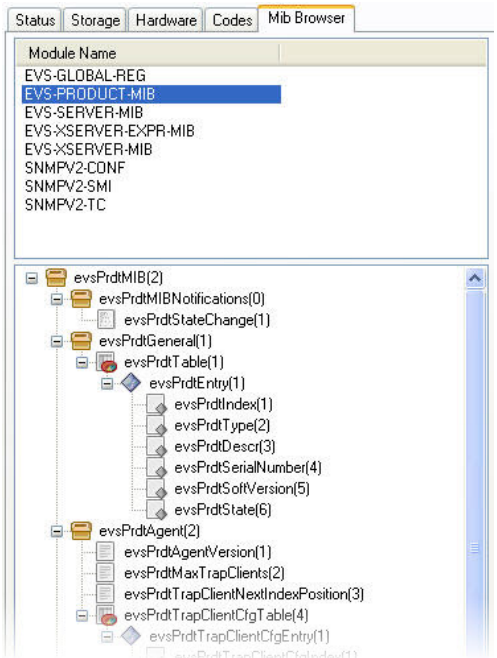
The Codes tab lists the license codes activated on the server along with their description.



Number	Description
2	Authorize SD configurations
3	Authorize HD configurations
4	Authorize video configuration changes
5	Avid DNxHD(R) Codec
6	Apple ProRes 422 Codec
7	Proxy Codec
8	DVCPRO HD Codec
9	DVCPRO 50 Codec
10	Mjpeg Codec
11	IMX Codec
12	Mpeg2Intra Codec
13	AVCIntra Codec
14	XDCAM HD 50
20	LSM Hypermotion
21	1080p Dual-Link
22	1080p 3G

3.3.6. MIB Browser Tab

The **MIB Browser** tab allows to view the MIB (Management Information Base) and provides a description of the parameters that can be polled. This tab is dedicated to maintenance operations.



3.4. Device Details

Introduction

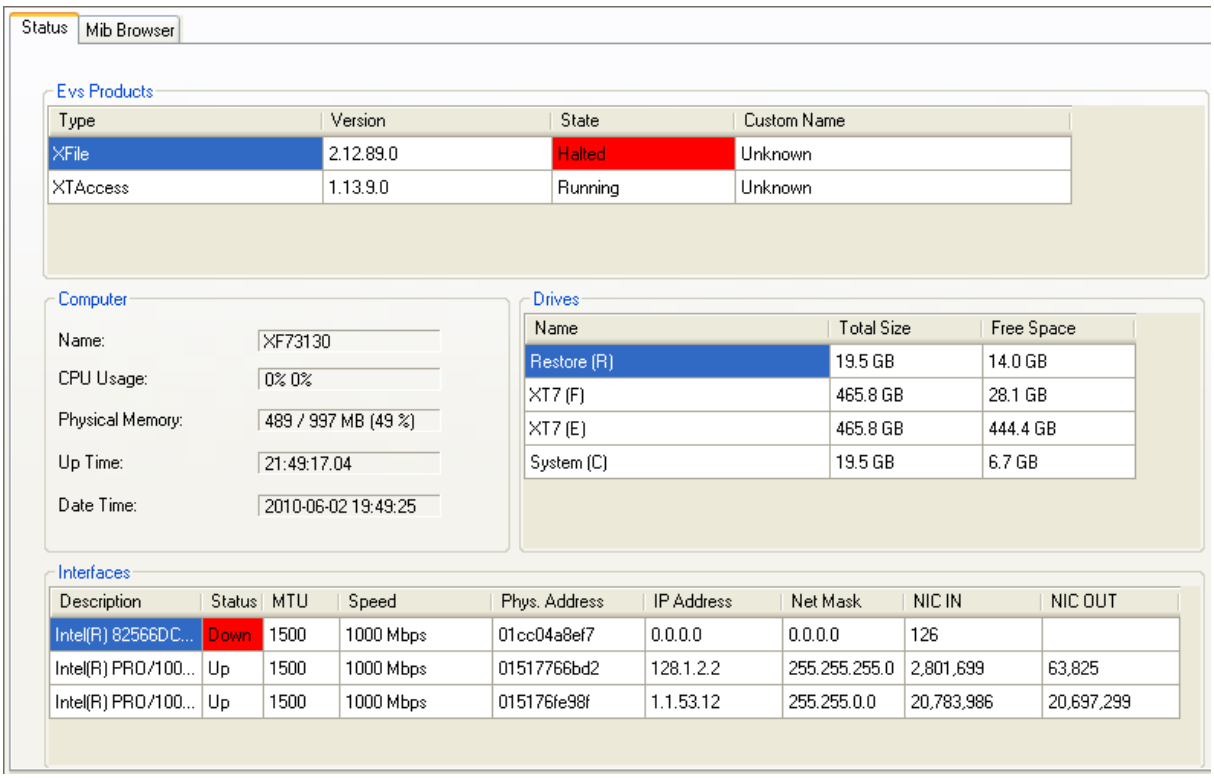
If a hardware other than an EVS server is selected in the Monitored Device List, the **Device Details** area on the right displays detailed SNMP information.

This information is organized the following tabs, which are themselves organized in different group boxes:

Tab Name	Included field groups
Status	Applications installed on the hardware, data on the computer, the drives, and the communication interfaces
MIB Browser	View on the MIB (Management Information Base)

Status Tab

In the Status tab, the main parameters are organized in several group boxes as shown on the following figure.



The different group boxes and their parameters are detailed hereafter.

EVS Products

Parameter	Description
Type	EVS application name.
Version	Server software revision.
State	Server state: running, in maintenance, faulty, halted, unknown.
Custom Name	Name given to the product from the MIB.

Computer

Parameter	Description
Name	Name of the computer.
CPU Usage	Percentage of use of central processing unit (CPU).
Physical Memory	Computer data storage used from the total amount.
Up Time	Elapsed time since the last boot.
Date Time	MTPC date and time.

Drives

This area lists the hard disks drives from the computer.

Parameter	Description
Name	Name of the computer.
Total Size	Total size (GB) of the drive.
Free Space	Free space (GB) still available on the drive.

Interfaces

Parameter	Description
Description	Generic description of the communication interface.
Status	Up or Down
MTU	Maximum Transmission Unit: size (in bytes) of the largest protocol data unit that the layer can pass onwards.
Speed	Data transfer rate in Megabits per second.
Phys. Address	Memory address that is electronically (in the form of binary number) presented on the computer address bus circuitry in order to enable the data bus to access a particular storage cell of main memory.
IP Address	Internet Protocol address of the communication interface.
Net Mask	Prefix bit mask expressed in quad-dotted decimal representation. For example, 255.255.255.0 is the subnet mask for the 192.168.1.0/24 prefix.
NIC IN	Number of octets getting through the network (input)
NIC OUT	Number of octets getting through the network (output)

MIB Browser Tab

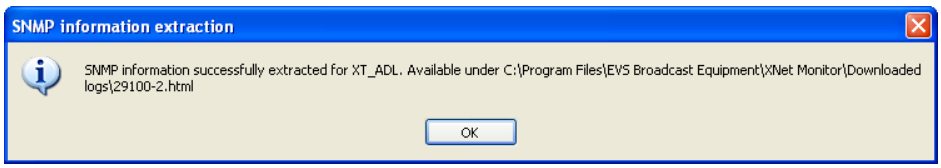
See section "MIB Browser Tab" on page 27 for an overview of the MIB Browser tab.

3.5. Extracting SNMP Information

To extract SNMP information relative to an EVS server, proceed as follows:

1. Right-click on the server in the **Monitored Device Tree**.
2. Select **Extract SNMP Information** from the contextual menu.

The extraction starts and once it is done, the SNMP Information Extraction window displays the .html file name and its storing folder and path:

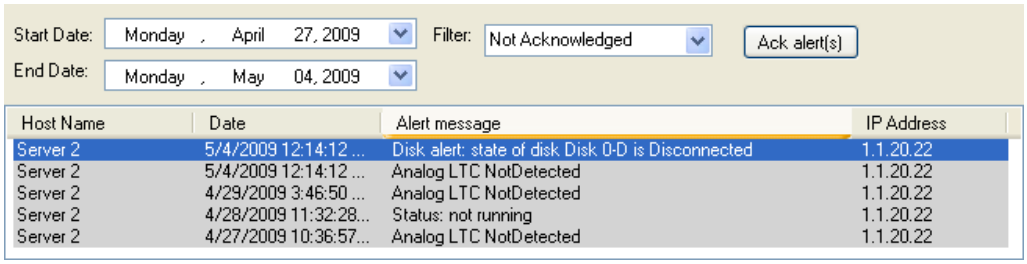


3.6. Alert Messages

3.6.1. Managing Alerts

Alert Messages Display

The SNMP Messages pane displays the SNMP alert messages sent by the host or groups of hosts selected in the Monitored Device Tree. These messages are displayed until they are acknowledged by the user.



Use the calendar of the **Start Date** and **End Date** drop-down fields to restrict the displayed alerts list to the selected.

Use the Filter drop-down menu to select the alerts to be displayed:

- **All:** All alerts that occurred during the selected period are displayed.
- **Acknowledged:** Only alerts that have already been acknowledged are displayed.
- **Not Acknowledged:** Only alerts that do not have been acknowledged yet are displayed.

Alert Messages Acknowledgement

The alert acknowledgment function helps you to easily remove alert messages from the displayed list once they have been visualized and/or taken care of.

Use the **Ack Alert(s)** button to acknowledge the selected alerts. These alerts are kept in the log file, but are not displayed anymore (depending on the display filter configuration).

3.6.2. List of Possible Alerts

Introduction

The section describes the fields for which an alert can be generated and the associated default message(s) (normal status) and alert/error messages.

Working Principle

When an error is generated for a field, it is displayed in the Monitoring window:

- **as an alert** in the Alert pane if the given field is not selected in the Alert Configuration window.

  The alert must be acknowledged by an administrator user to be removed from the list of active alerts. It is then sent to the list of acknowledge alerts.

- **as an error message** in the Server Details pane, and possibly in the Monitoring List pane (if the related field is displayed).

  When the SNMP information is sent back and when the situation is back to normal or when the alert is acknowledged, the field status is updated accordingly, and the error is replaced by the normal status.

Polling Status

It specifies the status of the polling service.

It indicates:

- whether the polling service is running correctly
- when the polling service last sent a query to the server (time interval in hh:mm:ss from current time)

Possible Values

Message	Explanation	Status Type
OK (00:03:00)	The polling service is working correctly, and the SNMP data was last sent 3 minutes ago.	Info
No response to IMCP polling	An ICMP (Internet Control Message Protocol) timeout was generated: the information was not sent in the requested time interval.	Error
No response to SNMP polling	An SNMP timeout was generated: the information was not sent in the requested time interval.	Error

State

It indicates the functional status of the EVS server or other EVS hardware.

The possible statuses are 'Running', 'Initializing', 'In Maintenance' or 'Halted'.

Possible Values

Message	Explanation	Status Type
Running	The EVS server is running a given configuration.	Info
Not Running	The EVS server	
Initializing	The EVS server is initializing (in the boot sequence).	Error
Maintenance	The EVS server is in the Multicam Setup window, hence it is not running a given configuration yet.	Error
Halted	The EVS server is turned off.	Error

PSU

It specifies the status of the power supply units.

Possible Values

Message	Explanation	Status Type
OK (1)	Only one PSU is installed on the server and is working fine	Info
OK (2)	Two PSUs are installed and are working fine	Info
! PSU 1	The first PSU is down.	Error
! PSU 2	The second PSU is down.	Error

GigE1/2 Status

It specifies the operational status of the first (GigE 1) or second (GigE 2) Gigabit Ethernet interface connector.

Possible Values

Message	Explanation	Status Type
Up	The GigE interface is running well.	Info
Down	The GigE interface is not working.	Error
Not present	No GigE card is installed.	Error

Controller

It specifies the connection status of a given controller enabled on an EVS server.

Depending on the pane where the message is displayed, it is displayed in slightly different ways.

Possible Values

Message	Explanation	Status Type
OK	All defined controllers are connected, which means up and running.	Info (in Monitoring List)
Connected	The corresponding controller is up and running.	Info (in Server Details)
Defined	The corresponding controller is defined in the configuration but is not used	Info (in Server Details)
Disconnected	The corresponding defined controller is disconnected, or the external communication has been lost.	Error (in Server Details)
DD35 disconnected VDCP, AVSP disconnected	The given controller(s) is/are disconnected on the EVS server.	Error (in Monitoring List or Alerts)

Genlock

It indicates the presence or absence of Genlock synchronization signal, and its type.

Possible Values

Message	Explanation	Status Type
OK Blackburst	A valid Blackburst signal is present.	Info
OK Tri-level	A valid Tri-level signal is present.	Info
Bad Blackburst	Bad Blackburst signal, or no Blackburst signal	Error
Bad Tri-level	Bad Tri-level signal, or no Tri-level signal	Error

Analog LTC

It indicates the status of LTC (Longitudinal Time Code) analogue signal.

Possible Values

Message	Explanation	Status Type
OK	A valid LTC signal is present on the EVS server.	Info
Missing	No LTC signal is detected on the EVS server.	Error
Corrupted	A bad LTC or an LTC drift is detected on the EVS server.	Error

Local Clips

It specifies the number of clips stored on the server.

The alert generation depends on the threshold defined for the Local Clips field in the Monitoring settings defined in the **Tools** > **Settings** menu. The default threshold is 4000.

Possible Values

Message	Explanation	Status Type
3500	When the number of clips is displayed in black, it means the number of clips on the EVS server does not exceed the threshold defined for the maximum number of local clips.	Info
4200	When the number of clips is displayed in red and bold characters, it means the number of clips on the EVS server exceeds the threshold defined for the maximum number of local clips.	Error

DB Status

It indicates the status of the server database.

Possible Values

Message	Explanation	Status Type
OK	The DB is OK.	Info
Corrupted	The DB is corrupted.	Error

XNet Status

It indicates the status of the SDTI network connection.

Possible Values

Message	Explanation	Status Type
Connected	The EVS server is connected to the network.	Info
Connecting	The EVS server's connection to the network is in progress.	Info
Stand alone	The system does not have the XNet license, or the required hardware, or the SDTI network is disabled.	Info
Not Connected	The EVS server is not connected to the network.	Error
Disconnected	The EVS server is in a disconnection phase.	Error
Connection fault	The EVS server cannot connect to the XNet network due to an incompatibility error.	Error

Traffic

It indicates the network traffic status.

Possible Values

Message	Explanation	Status Type
Normal	The traffic on the SDTI network is properly managed.	Info
Heavy	The SDTI network makes full use of the available capacity.	Warning (orange)
Corrupted	The SDTI network is overloaded, has lost at least one command from a controller, and is desynchronized.	Error

Rem. Capacity

It indicates the remaining recording capacity on the EVS server in hours, and percentage.

The alert generation depends on the threshold defined for the Remaining Capacity field in the Monitoring settings defined in the **Tools** > **Settings** menu. The default threshold is 5%.

Possible Values

Message	Explanation	Status Type
48:01:53 (97%)	The parameter is in a valid state (black font) when the Remaining Capacity threshold is not exceeded.	Info
01:03:32 (2%)	The parameter is in a warning state (orange font) when the Remaining Capacity threshold is exceeded.	Warning
00:00:00 (0%)	The parameter is in an error state (red font) when the Remaining Capacity is null.	Error

PSU HDX

It specifies the status of the power supply units of the external SAS disk array.

Possible Values

Message	Explanation	Status Type
OK (1)	Only one PSU is installed on the SAS-HDX disk array and is working fine	Info
OK (2)	Two PSUs are installed on the SAS-HDX disk array and working fine.	Info
/	No external storage system is installed.	Info
! PSU1	The first PSU of the SAS-HDX disk array is down.	Error
! PSU2	The second PSU of the SAS-HDX disk array is down.	Error

Fan HDX

It specifies the state of the fans on the external SAS disk array.

Possible Values

Message	Explanation	Status Type
OK	The fans is/are operating.	Info
/	No external fans are installed	Info
! Fan 1 **! Fan 1,2**	The fan 1 is faulty. The fans 1 and 2 are faulty.	Error

Disk Thermal

It specifies the temperature on the internal and external disks.

Possible Values

Message	Explanation	Status Type
OK	All temperatures measured on disks are OK.	Info
INT 1: Rising (orange)	The temperature of disk 1 on the internal disk array is rising (between 50 and 55°C).	Warning
EXT 2-3 : Rising (orange)	The temperature of disk 3 of the second external disk array is rising (between 50 and 55°C).	Warning
INT 1-2 : Overheating (red)	The temperature of disk 2 of the first internal disk storage board exceeds 55°C.	Error

RAID

It specifies the status of the raids.

Possible Values

Message	Explanation	Status Type
OK	The raid system is working fine.	Info
R1: Rebuilt X% (orange)	The system is rebuilding raid 1 of the raid matrix. The X represent the percentage processed of the rebuild operation. In the Server Details pane, Storage tab, the raid has an orange background in the RAID area.	Warning
R1: Degraded (red)	The raid 1 of the raid matrix has lost a disk and cannot afford any new disk failure without loosing the full storage. In the Server Details pane, Storage tab, the raid has a red background in the RAID area.	Error

Raid R/W Retry

It specifies the number of renewed attempts of read and/or write operations on disks of the raids.

As soon as at least a read or write operation had to retried, this generates a warning.

Possible Values

Message	Explanation	Status Type
0r / 0w	0 renewed read attempt, 0 renewed write attempt	Info
0r / 1w (orange)	0 renewed read attempt, 1 renewed write attempt	Warning

Raid R/W Error

It specifies the number of errors in read and/or write operations on disks of the raids.

As soon as at least a read or write operation failed, this generates an error.

Possible Values

Message	Explanation	Status Type
0r / 0w	0 read error, 0 write error	Info
0r / 1w (red)	0 read error, 1 write error	Error

Disk

It indicates the disk connection status, and the number of spare disks.

Possible Values

Message	Explanation	Status Type
OK (1 sp)	All disks are connected and accepted by the RAID matrix, and 1 spare disk is available.	Info (in Alerts and Monitoring List)
1 xx (6 sp)	All disks are connected and accepted by the RAID matrix, but one disk is faulty, and 6 spare disks are available.	Error (in Alerts and Monitoring List)
OK	The given disk is working fine.	Info (in Server Details)
Spare	The given disk is a spare disk.	Info (in Server Details)
Disconnected	The given disk is out of the RAID matrix.	Error (in Server Details)
Not Present	No disks are connected in the bay.	Error (in Server Details)

PC Free Disk Space

It indicates the available space on the MTPC disk in megabytes (MB) or gigabytes (GB).

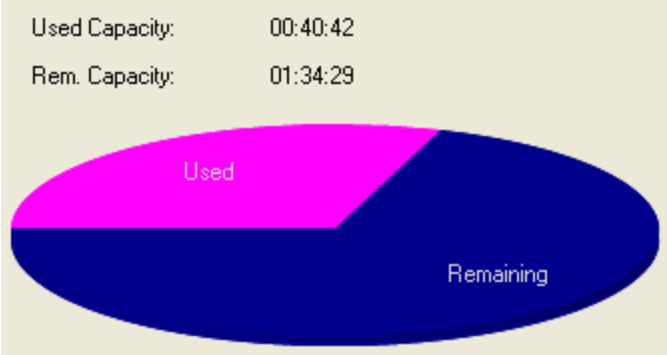
Possible Values

Message	Explanation	Status Type
300 MB	When the space available is more than the value defined in the SNMP agent (100 MB), the label is in a normal state.	Info
75 MB (orange)	When the space available is less than the value defined in the SNMP agent (100 MB), the label is in a warning state. For PCs (no MTPC card), this value is not displayed as a warning.	Warning
10 MB (red)	When the space available is less than 20MB, the label is in an error state. For PCs (no MTPC card), this value is not displayed as a warning.	Error

3.7. Disk Usage

The Disk Usage pane displays a summary of the total used and remaining disk space. This total is computed for all disks available on the server or group of servers selected in the Monitored Device Tree.

A color pie chart helps you to immediately visualize the disk usage of your system. More precise figures are given over that pie chart, expressed as a used and remaining video time in hours, minutes and seconds.



4. Server Maintenance Tasks

4.1. Multicam Upgrades

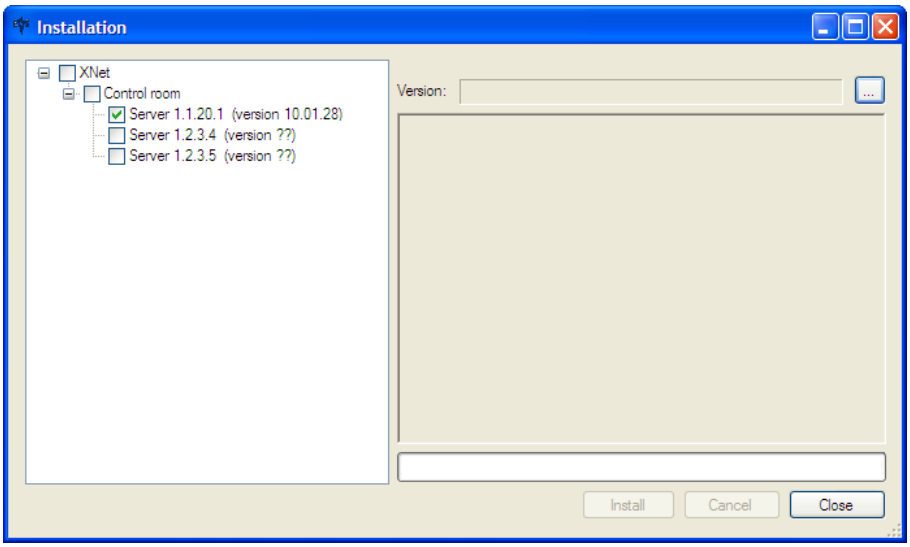
4.1.1. Installing a Multicam Version

How to Install a Multicam Version on an EVS Video Server

Note
The Multicam installation zip file can be generated from the makezip.bat file or from the XNet Install Zip.bat file available with all Multicam installation packages.

To remotely update Multicam on one or several servers, proceed as follows:

1. In the **Tools** menu, select **Server** > **Install Versions**. The Installation window appears:



2. Select the server(s) to update in the left pane of the Installation window.

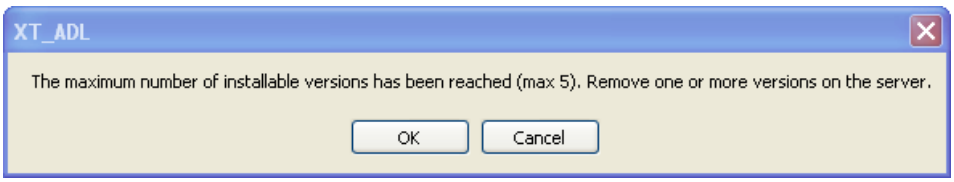
   As a reminder, the currently installed Multicam version is displayed next to each server.

3. In the **Version** field, browse your computer to select the new Multicam installation zip file.

4. Click on the **Install** button to start the installation process on all selected servers.

5. Before the server upgrade starts, the installer checks the number of Multicam versions installed on each server.

   If more than 5 versions are installed on the EVS server, the following error message appears. Otherwise, the upgrade process is automatically launched.



   If you get the above message, do the following:

   a. Click **OK**. The Remove Installed Versions window appears.

   b. Remove the requested versions as described in the section "Installing a Multicam Version" on page 41 '"Installing a Multicam Version" on page 41', on page "Installing a Multicam Version" on page 41.

The upgrade process is then launched. When the servers are upgraded, they are restarted, but you still need to launch the requested application.

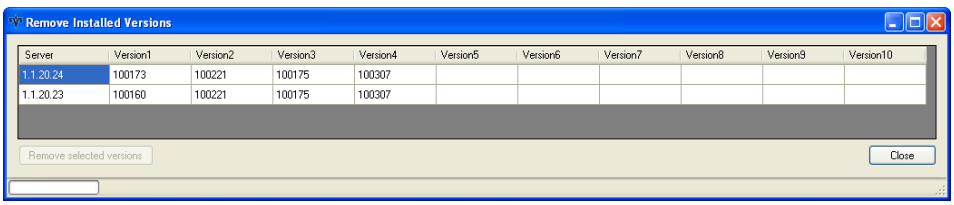
4.1.2. Removing a Multicam Version

How to Remove a Multicam Version from an EVS Server

To remove previously installed Multicam versions from an EVS server, proceed as follows:

1. In the **Tools** menu, select **Server** > **Remove Installed Versions**.

   The Remove Installed Versions window appears.



2. Select the version(s) you want to remove.

   The selected versions are highlighted in black.

3. Click the **Remove Selected Versions** button.

4. Click **Close**.

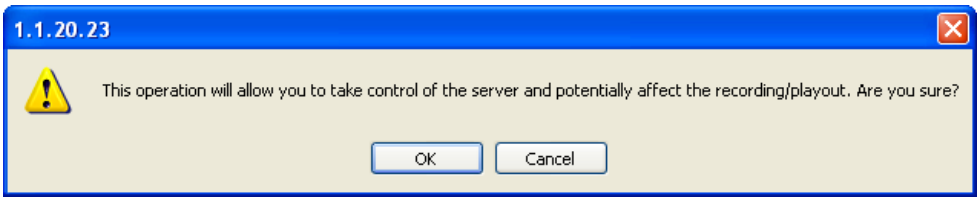
4.2. Remote Access to an EVS Server

4.2.1. Accessing Remotely a Server Desktop

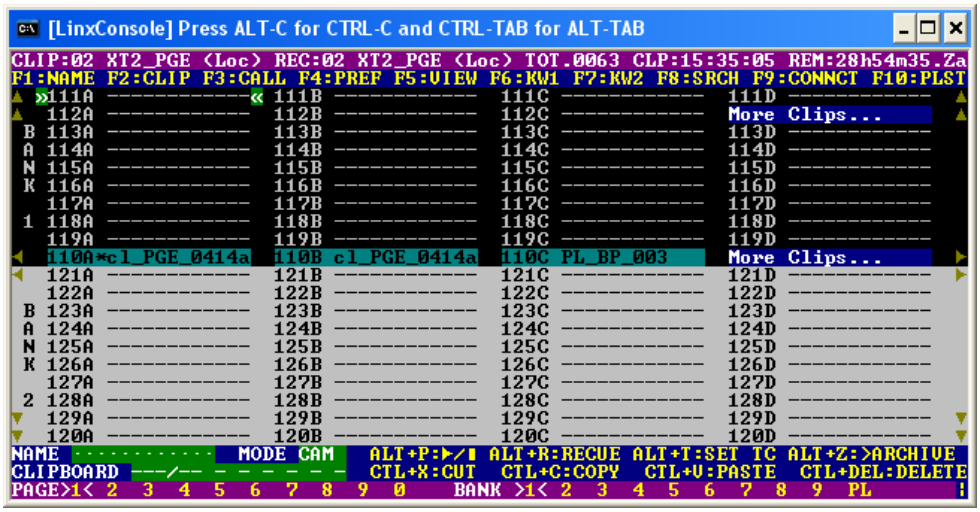
To access remotely a server desktop, proceed as follows:

1. Right-click on a server name, and select **Remote Desktop** from the contextual menu.

   A message appears to warn you that you are going to take control of the EVS server:



2. Click **OK** to open the server screen:



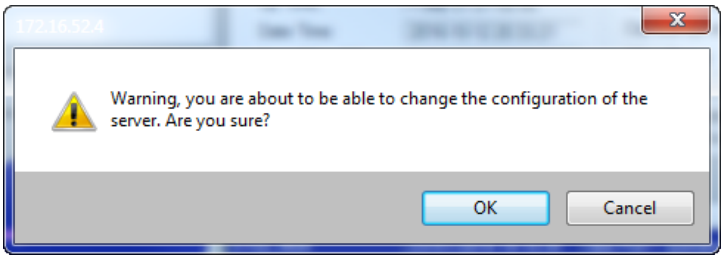
From this screen, you are able to navigate through Multicam and EVS screens exactly as you accessed them from a keyboard.

4.2.2. Accessing the Multicam Web Setup

To access remotely a server desktop, proceed as follows:

1. Right-click on a server name, and select **Web configuration** from the contextual menu.

   A message appears to warn you that you are going to take control of the EVS server:



2. Click **OK** to open the server screen.

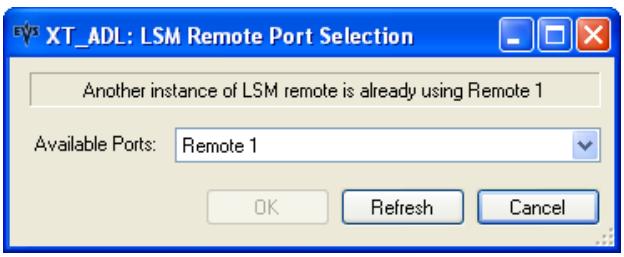
   The Multicam Web Setup window opens.

   Refer to the EVS Server Configuration manuals for more information.

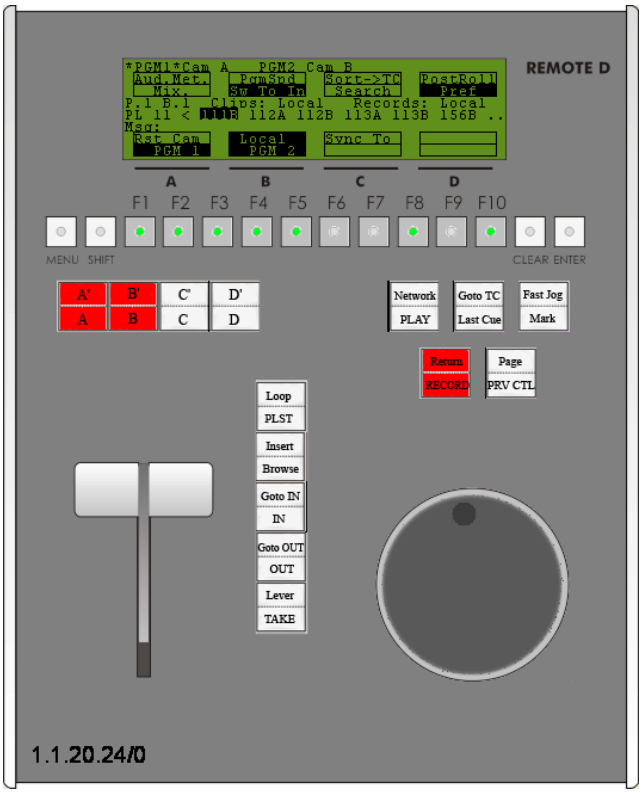
4.2.3. Accessing Remotely an LSM Remote Panel

Important
This function must only be used for training purposes. It is not intended to be used for operations.

1. To connect to and take control of an LSM Remote connected to a server, proceed as follows:
2. Right-click on a server name and select **LSM Remote** from the contextual menu.
3. In the following window, select the port number linked to the physical remote device:



4. Clicking **OK** opens an interactive window representing the LSM remote panel and from which you can use the different commands, such as on the physical remote itself.



You can close this window by pressing **Escape**.

4.2.4. Rebooting an EVS Server

To remotely reboot a server, right-click on it in the Monitored Device Tree and select **Reboot** in the contextual menu.

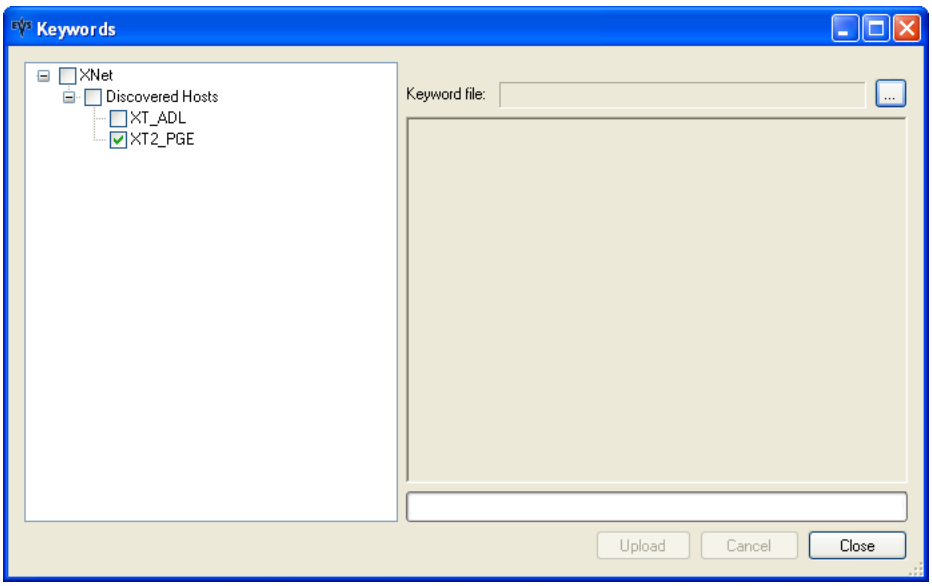
The Server Reboot message window is displayed. You must confirm the reboot process to start it on the remote host.

Note
This command will be available only if the corresponding parameter is enabled in the Settings window.

4.3. Uploading a Keyword File on an EVS Server

To upload a keyword file on one or several servers, proceed as follows:

1. In the **Tools** menu, select **Server** > **Keyword Files**. The Keywords window appears.

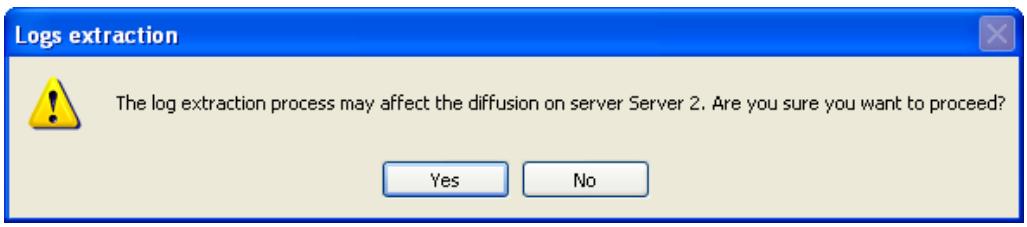


2. Select the server(s) to receive the keyword file in the left pane of the Keywords window.
3. In the **Keyword File** field, browse your computer to select the keyword file to upload.
4. Click on the **Upload** button to start the keyword file copy on all selected servers.

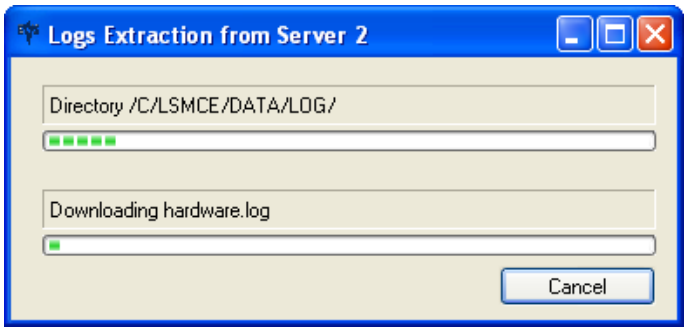
4.4. Server Logs Extraction

To remotely recover the SNMP logs stored on a server, right-click on it in the Monitored Device Tree and select Extract logs in the contextual menu.

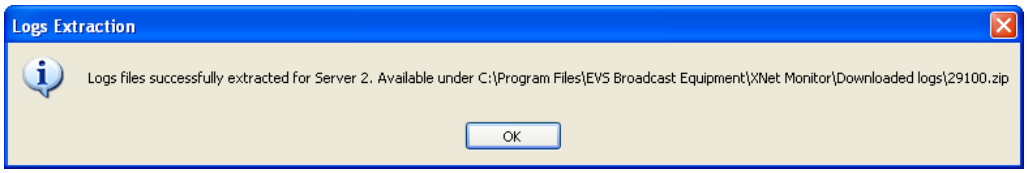
The following warning message window is displayed to warn you that the extraction process may interfere with the video diffusion from that server. Launch the extraction process again later if you cannot accept any diffusion trouble at this time.



The next window displays progress bars of the extraction and the current directory and file being downloaded.



Once the logs extraction is done, a window briefly appears about the log files compression then the Logs Extraction window displays the zip file name and its storing folder and path.



The different logged information (configuration, alerts…) is stored in different folders and files and packed together in a zip file. Next to the zip files is a text file (LogExtracion_ servername.log) for each server that logs the extractions dates, operations, results and resulting zip file.

Note
At log extraction, the log file on the remote server is closed and transferred. After this operation, a new log file is created on the remote server to log the events that happen from now on.

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