



# XNet Monitor

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## ICONOGRAPHY





# What's New?

In the User Manual the icon **NEW !** has been added next to the text to highlight information on new and updated features.

The changes linked to new features in version 1.6.8 are listed below.

## **RAID Type 10+2 is supported.**

- See section "Storage Tab" on page 24.

## **An Interface column can be added to the Monitoring List.**

## **A second PC LAN column is displayed in Dual PC LAN mode.**

- See section "Network Connection Settings Area" on page 22.

**QSFP interfaces are displayed in the IP Interface Monitoring table in case the server is connected with the XHub-VIA Live IP Aggregator.**

- See section "Live IP Tab" on page 31.

# 1. Introduction

## 1.1. Product Overview

XNet Monitor 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.

XNet Monitor 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 XNet Monitor application can monitor several EVS servers and other EVS products while one EVS server or product may also be monitored by several XNet Monitor applications.

XNet Monitor 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.



The full list of EVS products that can be monitored with XNet Monitor are specified in the release notes. All currently supported EVS servers can be monitored with XNet Monitor.

## 1.2. Installation

### Requirements

- PC compatible computer
- Supported OS: Windows Server 2008 R2, Windows 7, Windows 10
- .Net framework 4.6 or higher installed

### Recommendation

The SNMP information is available through the PC LAN connector of the server. The computer running XNet Monitor 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.

### Upgrade and Downgrade

If an older version of XNet Monitor 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 XNet Monitor.




The XNet Monitor 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. Accessing the Application

### How to Open XNet Monitor

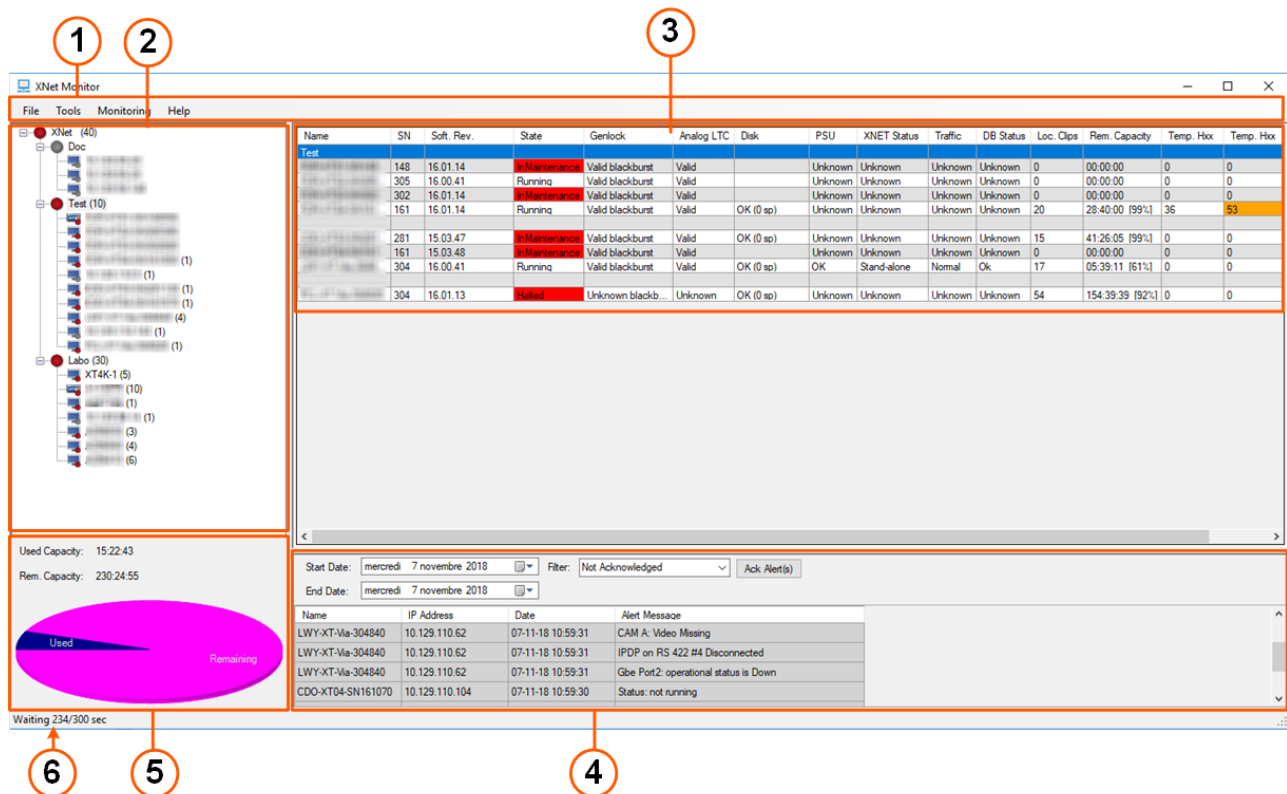
To open the XNet Monitor application, do one of the following actions:

- Click the XNet Monitor icon on the desktop 
- Click the Windows icon and select **EVS Broadcast Equipment > XNet Monitor**.

## 1.4. User Interface Overview

### Introduction

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



The XNet Monitor application window is shown with the following components highlighted by numbered callouts:

- 1**: File menu
- 2**: Tools menu
- 3**: Monitoring menu
- 4**: Main data table
- 5**: Status bar (Waiting 234/300 sec)
- 6**: Capacity usage graph

**Main Data Table:**

Name	SN	Soft. Rev.	State	Genlock	Analog LTC	Disk	PSU	XNET Status	Traffic	DB Status	Loc. Clips	Rem. Capacity	Temp. Hox	Temp. Hox
Test	148	16.01.14	Maintenance	Valid blackburst	Valid		Unknown	Unknown	Unknown	Unknown	0	00:00:00	0	0
	305	16.00.41	Running	Valid blackburst	Valid		Unknown	Unknown	Unknown	Unknown	0	00:00:00	0	0
	302	16.01.14	Maintenance	Valid blackburst	Valid		Unknown	Unknown	Unknown	Unknown	0	00:00:00	0	0
	161	16.01.14	Running	Valid blackburst	Valid	OK (0 sp)	Unknown	Unknown	Unknown	Unknown	20	28:40:00 [99%]	36	53
	201	15.03.47	Maintenance	Valid blackburst	Valid	OK (0 sp)	Unknown	Unknown	Unknown	Unknown	15	41:26:05 [99%]	0	0
	161	15.03.48	Maintenance	Valid blackburst	Valid	OK (0 sp)	Unknown	Unknown	Unknown	Unknown	0	00:00:00	0	0
	304	16.00.41	Running	Valid blackburst	Valid	OK (0 sp)	OK	Stand-alone	Normal	Ok	17	05:39:11 [61%]	0	0
	304	16.01.13	Stated	Unknown blackb.	Unknown	OK (0 sp)	Unknown	Unknown	Unknown	Unknown	54	154:39:38 [92%]	0	0

**Capacity Usage Graph:**

Used Capacity: 15:22:43  
Rem. Capacity: 230:24:55

Used (blue) / Remaining (pink)

**Alerts Table:**

Name	IP Address	Date	Alert Message
LWY-KT-Via-304840	10.129.110.62	07-11-18 10:59:31	CAM A: Video Missing
LWY-KT-Via-304840	10.129.110.62	07-11-18 10:59:31	IPDP on RS 422 #4 Disconnected
LWY-KT-Via-304840	10.129.110.62	07-11-18 10:59:31	Gbe Port2: operational status is Down
CDO-KT04-SN161070	10.129.110.104	07-11-18 10:59:30	Status: not running



## Area Description

The table below describes the various parts of the XNet Monitor main window:

#	Window area	Description
1.	Menu bar	It 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 6.
3.	Monitoring Data area	It displays different data depending on what is selected in the <b>Monitored Device Tree</b> : <ul style="list-style-type: none"> <li>Detailed information on the selected EVS server. The area is then called the <b>Server Details</b> area. See section "Overview on the Server Details Area" on page 17</li> <li>Detailed information when another EVS hardware is selected. The area is then called the <b>Device Details</b> area. See section "Device Details" on page 33.</li> <li>Summary information on several devices when a group of devices is selected. The area is then called the <b>Monitoring List</b> area. See section "Description of the Monitoring List" on page 15</li> </ul>
4.	Alert Information area	It allows users to display and acknowledge the alerts. See section "Managing Alerts" on page 38
5.	Disk Usage	It displays a pie chart with the total used and remaining disk space for the selected device.
6.	Status bar	It provides information about the monitoring status.



## 1.5. 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
<b>File</b> 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 11
<b>Tools</b> menu	Gives access to the configuration tools and settings described in these sections: <ul style="list-style-type: none"><li>• "Customizing the Monitoring List" on page 9</li><li>• "Organizing Monitored Devices" on page 7</li><li>• "SNMP and General Settings" on page 12</li><li>• "Trap Configuration" on page 10</li></ul> Gives access to commands to manage Multicam versions and keyword files on the EVS servers: <ul style="list-style-type: none"><li>• "Multicam Upgrades" on page 53</li><li>• "Uploading a Keyword File on an EVS Server" on page 59</li></ul>
<b>Monitoring</b> menu	Allows you to start or stop the monitoring on the EVS servers and devices displayed in the <b>Monitored Device Tree</b> .  See section "Start Monitoring" on page 14
<b>Help</b> menu	Gives access to the user manual and information about the application.

## 2. Configuration

### 2.1. Network Settings

#### Introduction

Should you face issues to set up XNet Monitor 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)

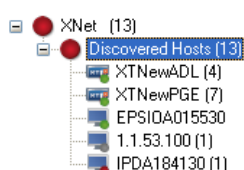


## 2.2. Monitoring Configuration

### 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 7.

#### 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.

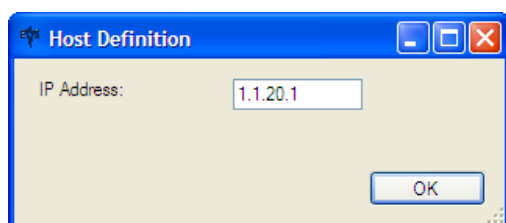
To remove a group, right-click on it and select **Remove**.

### 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.

You can also enter the hostname if it has been declared in a DNS server or in a host file.

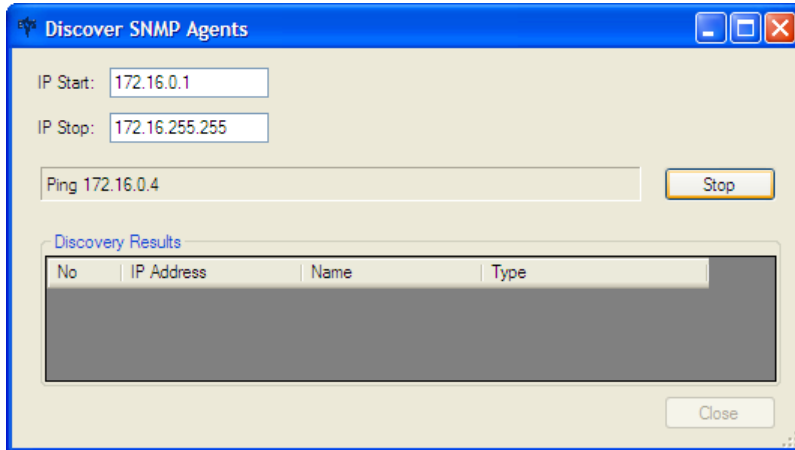


Once the devices are entered in the list manually, you can organize them in the different groups by drag-and-drop operation.

## 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.



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. Customizing the Monitoring List

### Introduction

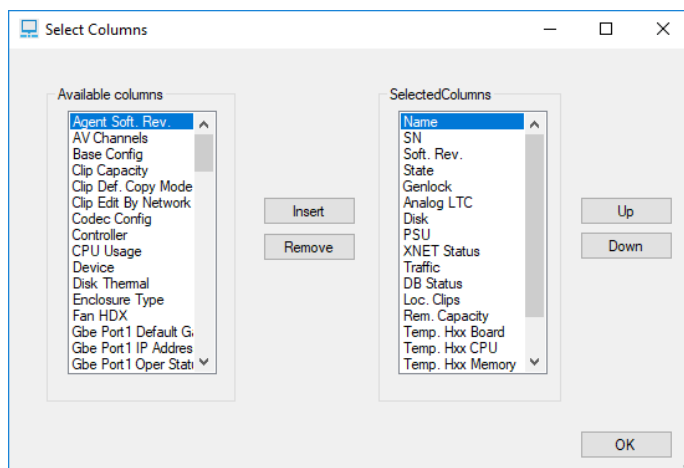
When you select XNet or a group in the Monitored Device Tree, the Monitoring Data pane displays the **Monitoring List**, which provides summary data about the servers available under XNet or under the selected group.

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

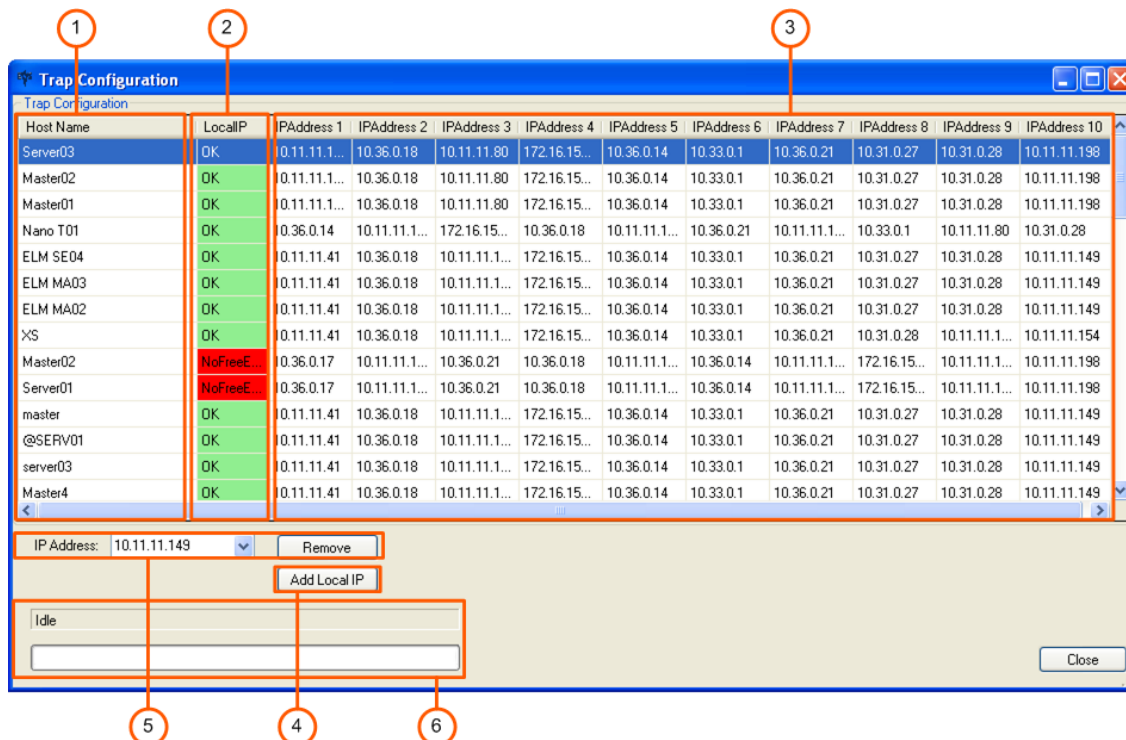
#### Overview

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 XNet Monitor application or a polling service of XNet Monitor.



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 XNet Monitor applications can be registered.
2.	LocalIP column	Trap status of the local IP address: <ul style="list-style-type: none"> <li>If the IP address is registered to receive the trap messages, the cell will appear as .</li> <li>If the IP address is not registered to receive the trap messages, the cell will appear as .</li> </ul>
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 XNet Monitor 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.

## 2.3.2. 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.

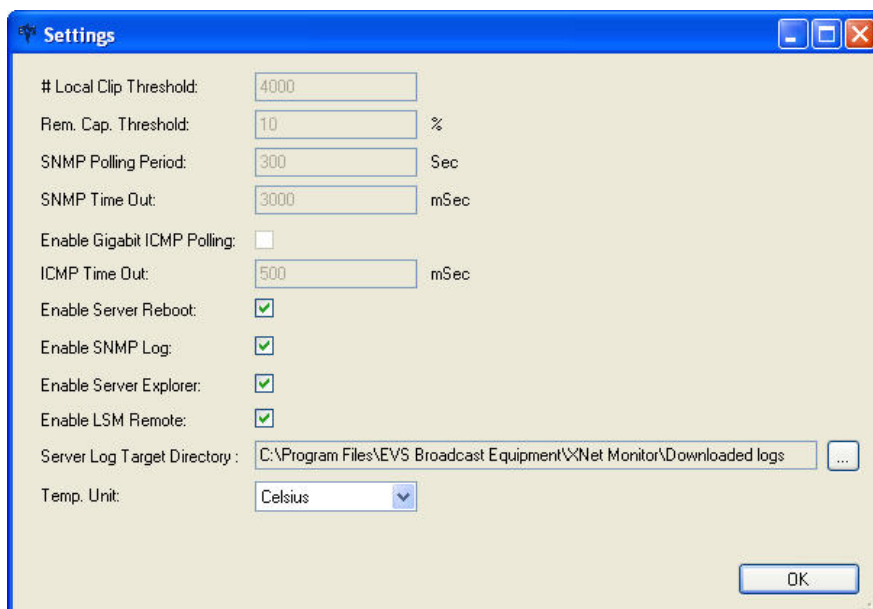
Parameter	Description
Save	To save the currently open architecture xml file.
Save As	To save the currently open architecture xml file as a new file.
Exit	To close and exit XNet Monitor

## 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.

Parameter	Description
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.
ICMP Time Out	Time Out for the pinging of the Servers GbE ports
Enable Server Reboot	If this option is enabled, XNet Monitor will be able to initiate a reboot of any monitored server through the <b>Reboot</b> 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, XNet Monitor will keep a log file with all SNMP messages.
Enable Server Explorer	Enables the <b>Explore</b> 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 <b>LSM Remote</b> 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 XNet Monitor 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.



When you start up XNet Monitor, 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:



Name	SN	Soft. Rev.	State	Genlock	Analog LTC	Disk	PSU	XNET Status	Traffic	DB Status	Loc. Clips	Rem. Capacity
<b>Dnc</b>												
EVSServerADL	24940	15.02.16	Running	Valid blackburst	Valid	OK (0 sp)	OK	Connected	Normal	Ok	51	15:43:47 [98%]
XT3-PGE	25120	15.02.16	Running	Valid blackburst	Valid	OK (1 sp)	OK	Connected	Normal	Ok	54	21:15:45 [98%]
<b>Test</b>												
FDR-XT01-SN148...	148...	15.01.37	Running	Valid blackburst	Valid	OK (0 sp)	OK	Stand-alone	NotApp...	Ok	57	22:29:21 [98%]
FDR-XT02-SN117...	117...	15.02.28	InMaintenance	Valid blackburst	Valid	OK (0 sp)	Unknown	Unknown	Unknown	Unknown	78	19:43:59 [96%]

#### 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 9.
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	<p>name of the EVS server.</p> <p>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.</p> <p>A color circle in front of the EVS server indicates its status:</p> <ul style="list-style-type: none"><li>• green: no active alert present for the server</li><li>• red: at least an active alert present for the given server</li><li>• gray: XNet Web cannot retrieve information with the SNMP protocol.</li></ul>
SN	server's unique serial number.
Soft Rev.	server software revision.
State	functional status of the EVS server or other EVS hardware.
Genlock	presence or absence of genlock synchronization signal, and its type.
Analog LTC	status of LTC (Longitudinal Time Code) analogue signal.
Disk	disk connection status, and the number of spare disks.
PSU	status of the power supply units.
XNet Status	status of the XNet network connection.
Traffic	network traffic status.
DB Status	status of the server database.
Loc. Clips	number of clips stored on the server.
Rem. Capacity	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 five tabs, which are themselves organized in different group boxes:

Tab Name	Included field groups
<a href="#">Status</a>	General information, data about A/V, network, controllers, GbE connections, and channels
<a href="#">Storage</a>	Information on disk capacity, array definition, disk numbers, and disk models
<a href="#">Hardware</a>	List of the boards fitted on the EVS server
<a href="#">Codes</a>	List of Codes installed on the EVS server
<a href="#">MIB Browser</a>	View on the MIB (Management Information Base)
<a href="#">Temperature</a>	Temperatures measured at various points in the EVS server
<a href="#">Live IP</a>	Monitoring of PTP signal and SFP ports.

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 33 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.

Status

Storage

Hardware

Codes

Mib Browser

Temperature

Live IP

General

Type: XT4K

Facility Name: FDR-XT04-SN161050

Base Config: MulticamLSM

Serial Number: 161050

Version: 16.01.14

State: InMaintenance

PSU: Unknown

Genlock: Valid blackburst

LTC: Valid

Local Clips: 20

Net Clips: 0

Rem. Capacity: 28:40:00 [99%]

Clip Capacity: Global

Loop Recording: On

Up Time: 0 day, 17:49:29

Date Time: 2018-11-07 09:00:06

Sync PC to TC: Yes

Period: 00:15:00

PC free disk space: 216496 MB

DB Status: Unknown

Rec Train Expiration: Unknown

Audio-Video

AV Channels: 2in 2out 16audio

Video Std: UHDTV-4K 59.94Hz

Codec Config.: Intra+Lo-Res

On Air Codec: XAVC 300

Intra Codec: XAVC 300

Intra Bit Rate: 600 Mbps

LongGOP Codec: Not applicable

LongGOP Bit Rate: Not applicable

Lo-Res Codec: Mjpeg

Lo-Res Bit Rate: 5000 Mbps

Interface: 3G Level-A

HDR: HLG - Rec2020

Controller \ Protocol

Port	Controller\Protocol	Connection State
RS422 #1	EVSRremote	Defined
RS422 #2	EVSRremote	Defined
RS422 #5	IPDP	Defined
Ethernet #50106	LinX	Defined
Ethernet #50107	LinX	Defined

Network Connection Settings

	LAN PC1	Gbe Port1	Gbe Port2	XNet
Status	Up	Unknown	Unknown	Detected
IP Address	10.129.110.4	10.129.112.4	10.129.113.4	0.0.0.0
Subnet Mask	255.255.254.0	255.255.255.0	255.255.255.0	0.0.0.0
Def. Gateway	10.129.111.254	10.129.112.254	10.129.113.254	0.0.0.0
MAC Address	00031D1021C7	001CF3012C81	001CF3012C80	001CF305C2DE
Phys. Interface	Not Applicable	1Gbe on TGE	1Gbe on TGE	10Gbe on TGE
Mode	Static	Static	Static	-

Network

XNet: No relay 2970

Net # - Name: 4 - FDR-XT04

Net Type (Cfg): XNet - Allowed

Clip Edit by network: Yes

XNet Status: Unknown

Traffic: Unknown

Network Copy/Push: GigE

GigE Open Conn: 0/6

Channels

Channel	Status	Config	Rem.Capacity	LTC	User TC	1st Ctrl	2nd Ctrl	Parallel Ctrl	OSD
CAM A	Unknown	Rec 3G Level-A (50%)	14:20:00	2018-11-06 17:49:45...	2018-11-07 00:08:49:...	EVSRremote		Primary	
CAM B	Unknown	Rec 3G Level-A (50%)	14:20:00	2018-11-06 17:49:45...	2018-11-07 00:08:49:...	EVSRremote		Primary	
PGM 1	Unknown	Play 3G Level-A		2018-11-06 17:49:45...	2018-11-07 00:08:49:...	EVSRremote	IPDP	Parallel	Main
PGM 2	Unknown	Play 3G Level-A		2018-11-06 17:49:45...	2018-11-07 00:08:49:...	EVSRremote	IPDP	Parallel	Main

The different group boxes and their parameters are detailed hereafter.

You will find more details on many of these parameters in the Configuration manual of the relevant EVS server.



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	Server type: XT3, XS3, ...
Facility Name	Name given to the product by the user.
Base Config.	base configuration used to start the server.  In case of a Dual LSM configuration, the term <b>Dual</b> is added next to the active base configuration.
Serial Number	server's unique serial number.
Version	server software revision.
State	functional status of the EVS server or other EVS hardware.
PSU	status of the power supply units.
Genlock	presence or absence of genlock synchronization signal, and its type.
LTC	status of LTC (Longitudinal Time Code) analogue signal.
Local Clips	number of clips stored on the server.
Net Clips	total number of clips stored on the whole XNet network.
Rem. Capacity	remaining recording capacity on the EVS server in hours, and percentage.
Clip Capacity	Clip capacity as defined on the server: Global or Per Channel.
Loop Recording	Loop recording mode as defined on the server.
Up Time	Elapsed time since the last boot.
Date Time	MTPC date and time.
Sync PC to TC	Indicates whether the internal TC is synchronized to the timecode read on the LTC input of the server and whether the TC discontinuities detected on the LTC input of the system are cleared.
Period	Period at which the Sync PC to TC is applied.
PC Free Disk Space	available space on the MTPC disk in megabytes (MB) or gigabytes (GB).
DB Status	status of the server database.
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	configuration defined for video and audio channels: <ul style="list-style-type: none"><li>• number of IN and OUT video channels</li><li>• number of audio embedded mono channels per video channel</li></ul>
Video Std	video standard used on the server ports.
Codec Config	Codec essence(s) active on the EVS server.
On Air Codec	Codec in which the video is played out on the EVS server.
Intra Codec	Intra codec in which the video is stored on the EVS server.
Intra Bitrate	Bitrate of compressed video data for the Intra codec.
LongGOP Codec	LongGOP codec in which the video is stored on the EVS server.
LongGOP Bitrate	Bitrate of compressed video data for the LongGOP codec.
Lo-Res Codec	Lo-Res codec in which the video is stored on the EVS server.
Lo-Res Bitrate	Bitrate of compressed video data for the Lo-Res codec.
Interface	Connection interface an EVS server will use in 3D, 1080p, UHD-4K resolutions or with the XIP or XT-VIA rear panel.  Presence of XHub-VIA is indicated by XIP - XHub.
HDR	OETF function (opto-electric transfer function) used for High Dynamic Profile.

## Network Area

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

Parameter	Description
XNet	<p>XNet network speed:</p> <ul style="list-style-type: none"> <li>• 3G-SDTI</li> <li>• XNet-VIA</li> <li>• Off</li> </ul>
Net # - Name	Server identification number and name on the XNet network.
Net Type (Cfg)	<p>Defines the privileges of the EVS server on the XNet network.</p> <p>The possible values are:</p> <ul style="list-style-type: none"> <li>• Local</li> <li>• XNet</li> </ul> <p>Also defines if the EVS server may or may not become the XNet server.</p> <p>The possible values are:</p> <ul style="list-style-type: none"> <li>• Preferred</li> <li>• Allowed</li> <li>• Forbidden</li> </ul>
Clip Edit by network	Specifies whether a clip can be edited through the network or not.
XNet Status	status of the XNet network connection.
Traffic	network traffic status.
Network Copy/Push	Preferred network (XNet or Gigabit) for copy, move and push actions on clips.
GigE Open Conn	Number of open GbE connections on a given port.



## Controller / Protocol Area

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

Parameter	Description
Port	Port used by the server controller.
Controller\Protocol	Controller or protocol used on that port.
Connection State	Connection status of the control port. If it is disconnected, <b>Disconnected</b> displays in red, and this generates an alert.

## Network Connection Settings Area

The table below describes the fields available in the Network Connection Settings area for each PC LAN (max. 2), each GbE port (max. 2), and each XNet-VIA interface (max. 1) being used on the EVS server:

If teaming is applied on the GbE ports, the GbE #2 port is referred to as "Not Present".

**NEW !**

Only in Dual PC LAN mode, two PC LAN columns will be displayed.

Network Connection Settings				
	LAN PC1	LAN PC2	Gbe Port1	Gbe Port2
Status	Up	Up	Down	Up
IP Address	10.129.150.18	10.129.121.41	10.129.112.43	10.129.113.43
Subnet Mask	255.255.255.0	255.255.255.0	255.255.255.0	255.255.255.0
Def. Gateway	10.129.150.254	10.129.121.254	10.129.112.254	10.129.113.254
MAC Address	8E2510202CB8	8E2510202CB9	001CF3014B81	001CF3014B80
Phys. Interface	Not Applicable	Not Applicable	1Gbe on TGE	1Gbe on TGE
Mode	Static	Static	Static	Static

Parameter	Description
Status	Status of the connection.
IP Address	IP address of the interface port.
Subnet Mask	IP mask of the interface port.
Def. Gateway	Default gateway used by the interface port.
MAC Address	MAC address of the hardware
Phys. Interface	Physical location of the corresponding port
Mode	Method used for IP address assignment (static or dynamic)

## Channels Area

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

Parameter	Description
Channel	Name of the record channel (CAM) or play (PGM) channel.
Status	<p>Status of the channel:</p> <ul style="list-style-type: none"> <li>• CAM: Recording, Rec Idle</li> <li>• PGM: Ready, Playing, Live, Idle</li> </ul> <p>If a channel has no audio or video, it will be displayed in red with one of the following indication:</p> <ul style="list-style-type: none"> <li>• (!A) when the audio is missing</li> <li>• (!V) when the video is missing</li> <li>• (!AV) when the audio and video are missing</li> <li>• (!IP) when the IP input stream is not properly configured and/or connected</li> </ul>
Config	<p>Configuration of the channel as record or play channel.</p> <p>SLSM recorders, as well as the number of phases, are specified in this field.</p>
Rem. Capacity	remaining capacity for each recorder channel.
LTC	LTC timecode of the channel.
User TC	User timecode of the channel.
1st Ctrl	<p>Primary controller defined for the selected channel.</p> <p>Possible values are: EVS Remote, EVS XTNano Remote, AVSP, IPDP</p>
2nd Ctrl	Secondary controller defined for the channel, if any.
Parallel Ctrl	Controller used in parallel mode.
OSD	Controller (main or secondary) managing the OSD display characters in parallel mode.

## 3.3.3.Storage Tab

### Overview

Status

Storage

Hardware

Codes

Mib Browser

Temperature

Live IP

General

Remaining Capacity: 17:54:40 [96%]

Storage type: Sas

Nominal Capacity: 18:37:12

RAID type: (5+1)

RAID

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

R1

Disk status

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

EXT4

EXT3

EXT2

EXT1

INT1

R1

R1

xx

R1

R1

R1

Disk temperature

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

EXT4

EXT3

EXT2

EXT1

INT1

30

31

35

31

33

Disk Details...

Arrays

PSU

Fans

Thermal

EXT4

EXT3

EXT2

EXT1

INT1

/

/

OK

### 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.
Nominal 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: SAS.
Raid Type	It specifies the type of RAID: <ul style="list-style-type: none"> <li>4+1: four disks and a parity disk, with a spare disk</li> <li>5+1: five disks and a parity disk, without a spare disk</li> <li>10+1: ten disks and a parity disk, with 1 spare disk</li> <li><b>NEW !</b> 10+2: ten disks and two parity disks, with 0 spare disks</li> </ul>

## 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 47 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 47 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 48 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 status															
	0-A	0-B	0-C	0-D	0-E	1-A	1-B	1-C	1-D	1-E	2-A	2-B	2-C	2-D	2-E
INT1	R1	R1	R1	xx	R1										

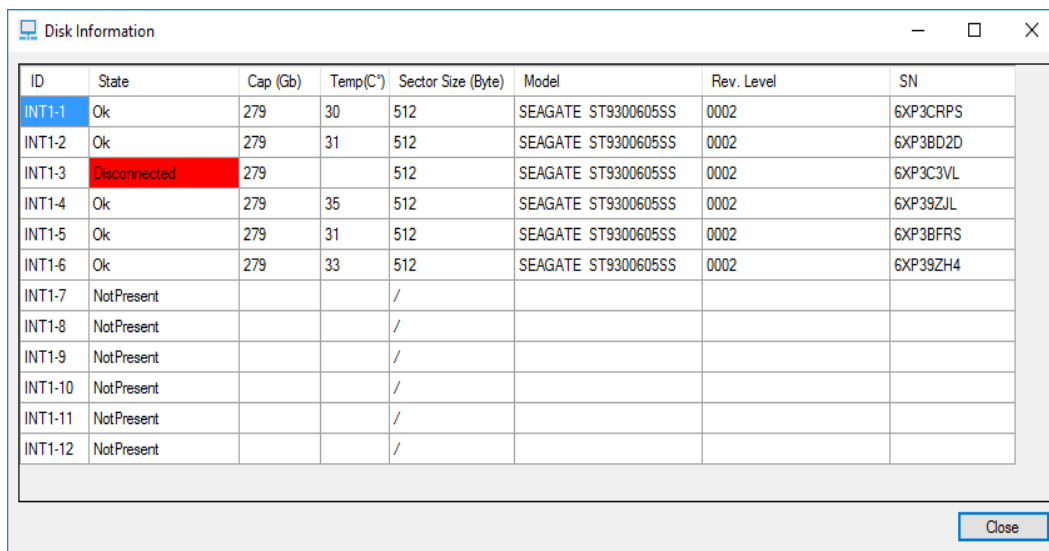


## Disk Temperature Area

This area provides the internal temperature of each disk.

## Disk Details Button

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



ID	State	Cap (Gb)	Temp(C°)	Sector Size (Byte)	Model	Rev. Level	SN
INT1-1	Ok	279	30	512	SEAGATE ST9300605SS	0002	6XP3CRPS
INT1-2	Ok	279	31	512	SEAGATE ST9300605SS	0002	6XP3BD2D
INT1-3	Disconnected	279		512	SEAGATE ST9300605SS	0002	6XP3C3VL
INT1-4	Ok	279	35	512	SEAGATE ST9300605SS	0002	6XP39ZJL
INT1-5	Ok	279	31	512	SEAGATE ST9300605SS	0002	6XP3BFRS
INT1-6	Ok	279	33	512	SEAGATE ST9300605SS	0002	6XP39ZH4
INT1-7	NotPresent			/			
INT1-8	NotPresent			/			
INT1-9	NotPresent			/			
INT1-10	NotPresent			/			
INT1-11	NotPresent			/			
INT1-12	NotPresent			/			

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
Sector Size	Size of the disk sector
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.

Status

Storage

Hardware

Codes

Mib Browser

Temperature

Live IP

Boards

Name	Version
MTPC Board	HS-873: Id=0xA6
H3XP-S CPU Board	Id=0xC0, Revision=0x08, Jumpers=0x0F
V4X Base Board #0	ID=0xD0, IDE=0x9f
CH#0 (V4X)	Str:"V4X 1.0 " Feat:0x0000
CH#1 (V4X)	Str:"V4X 1.0 " Feat:0x0000
CH#2 (V4X)	Str:"V4X 1.0 " Feat:0x0000
CH#3 (V4X)	Str:"V4X 1.0 " Feat:0x0000
ACODEC	A3X: Id=0xA3, Ide=0x0A, Ide2=0x8C
Multiviewer Board	MV4: 06.03 31/08/17 - Fpga 0x601 - Product Id 0x60
TGE	TGE 10 GBe: Vs 0.1 Feat. 0x00/0x00/0x00/0x00

General

Name	Value
Physical Memory	2048 MB
HW Edition	5.11

### Board Area

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

### General Area

Parameter	Description
Physical Memory	RAM of the MTPC board
Hardware Edition	version of the EVS server hardware, that corresponds to a specific set of board revisions. The components of each hardware edition are detailed in the Tech Ref manual, Hardware Edition History section.



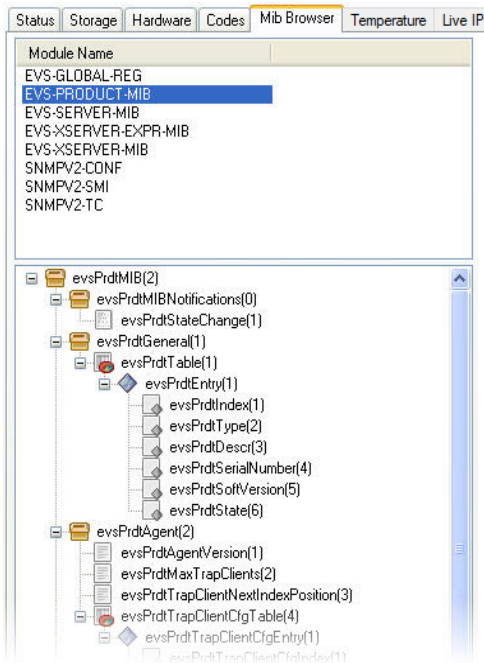
## 3.3.5. Codes Tab

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

Status	Storage	Hardware	Codes	Mib Browser	Temperature	Live IP
Number	Description					
2	Authorize SD configurations					
3	Authorize HD configurations					
4	Authorize video configuration changes					
5	Avid DNxHD HD Codec					
6	Apple ProRes 422 HD Codec					
8	DVCPRO HD Codec					
9	DVCPRO 50 Codec					
10	Mjpeg Codec					
11	IMX Codec					
12	Mpeg2Intra Codec					
13	AVC-Intra HD Codec					
15	XAVC-Intra HD Codec					
16	DNxHR 4K Codec					
17	ProRes 4K Codec					
18	AVC-Ultra 4K Codec					
19	XAVC 4K Codec					
20	LSM Hypemotion					
21	1080p Dual-Link					
22	1080p 3G					
23	3D Dual-Link					
24	3D 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.



## 3.3.7. Temperature Tab

### Overview

The Temperature tab lists the temperatures measured in several points of the EVS server.

The measures are always given in Celsius degrees. The temperature settings do not impact these measurements.

- Between 50 °C (122 °F) and 80 °C (176 °F), the warning range is reached and the temperature is displayed on an orange background.
- Above 80 °C (176 °F), the alert range is reached and the temperature is displayed on a red background.

These temperature measurements can also be displayed in the Monitoring List

Status	Storage	Hardware	Codes	Mib Browser	Temperature	Live IP
Temperature						
Name	Value °C					
Hxx Board	36					
Hxx CPU	53					
Hxx Memory	34					
VCodec1	45					
VCodec2	45					
VCodec3	51					
VCodec4	57					

### Temperature Area

Parameter	Description
Name	<p>Name of the board or module where the temperature is measured:</p> <ul style="list-style-type: none"> <li>• Hxx Board: Controller board</li> <li>• Hxx CPU: CPU module on the controller board</li> <li>• Hxx Memory: Memory module on the controller board</li> <li>• VCodec1: Codec1 module</li> <li>• etc.</li> </ul>
Value °C	Temperature in Celsius degrees

## 3.3.8. Live IP Tab

### Overview

The Live IP tab allows you to monitor the SFP or QSFP interfaces and it also displays PTP related information.

### Without XHub-VIA Live IP Aggregator

The screenshot shows the 'Live IP' tab in the XNet Monitor interface. The 'SFP Monitoring' section displays a table with columns: Name, Tx Mbps, and Rx Mbps. The 'PTP Monitoring' section displays a table with columns: Status, Locked, Clock Mac Address, Frame Rate, Master Module, Profile, and Domain.

Name	Tx Mbps	Rx Mbps
SFP-1C	0	0
SFP-1D	0	0
SFP-2C	0	0
SFP-2D	0	0
SFP-3C	0	0
SFP-3D	0	0
SFP-4C	9359	9359
SFP-4D	2510	2510
SFP-5C	2512	2512
SFP-5D	2510	2510
SFP-6C	2513	2513
SFP-6D	2510	2510
SFP-7C	0	0
SFP-7D	0	0

Status	Locked	Clock Mac Address	Frame Rate	Master Module	Profile	Domain
Ok	Yes	0x080011ffe21e542	59.94Hz	1	Interop AES SMPTE	127

### NEW ! With XHub-VIA Live IP Aggregator

The screenshot shows the 'Live IP' tab in the XNet Monitor interface with XHub-VIA Live IP Aggregator. The 'IP Interface Monitoring' section displays a table with columns: Name, Status, Speed, Tx Mbps, and Rx Mbps. The 'PTP Monitoring' section displays a table with columns: Status, Locked, Clock Mac Address, Frame Rate, Master Module, Profile, and Domain.

Name	Status	Speed	Tx Mbps	Rx Mbps
QSFP 25	Inactive	Unknown	0	0
QSFP 26	Inactive	Unknown	0	0
QSFP 27	Inactive	Unknown	0	0
QSFP 28	Inactive	Unknown	0	0
QSFP 29	Active	100G	10490	18423
QSFP 30	Active	100G	10490	18423

Status	Locked	Clock Mac Address	Frame Rate	Master Module	Profile	Domain
Ok	Yes	0x42e521feff110008	59.94Hz	1	Interop AES SMPTE	127



## IP Interface Monitoring Area

**NEW !** The IP Interface Monitoring area allows to monitor the status, speed and input and output bandwidth (expressed in Mbps) for each SFP or QSFP interface.

## PTP Monitoring Area

The PTP Monitoring area shows Precision Time Protocol-related information.

The table below describes the fields available in the PTP Monitoring area:

Parameter	Description
Status	Status of the PTP. <ul style="list-style-type: none"><li>• <b>OK</b> (green): locked to PTP clock, Organization Extension is activated on PTP generator, the framerate is supported.</li><li>• <b>Bad</b> (red): not locked to PTP clock.</li><li>• <b>OE issue</b> (orange): locked to PTP clock, Organization Extension is not activated on PTP generator or the framerate is not supported.</li><li>• <b>System Framerate issue</b> (yellow): locked to PTP clock, Organization Extension is activated on PTP generator, the framerate configured on the PTP is not in line with the XT framerate.</li></ul>
Locked	Field indicating whether the server clock is aligned to the master clock or not.
Clock Mac Address	MAC address of the grandmaster clock of the PTP infrastructure in the IP network.
Frame Rate	Supported framerate.
Master Module	Indicates which of the SFP+ modules (PTP master module) operates as the single PTP client for the XNet Monitor and synchronizes the other video codec modules.  The PTP master module is the V4X module 1-C.

Parameter	Description
Profile	<p>Field specifying the PTP profile (set of required options, prohibited options, ranges and defaults of configurable attributes) specific to the broadcast industry and used by SMPTE 2110.</p> <p>The supported profiles are:</p> <ul style="list-style-type: none"> <li>• IEEE_1588_2008</li> <li>• AES67_2015</li> <li>• SMPTE_2059</li> <li>• INTEROP_DEFAULT_AES_SMPTE</li> <li>• INTEROP_AES_SMPTE</li> </ul>
Domain	<p>Field specifying the PTP domain</p> <ul style="list-style-type: none"> <li>• that contains the devices that need to share a common grandmaster clock</li> <li>• in which the specified PTP profile has to be used.</li> </ul> <p>This allows multiple timing systems to exist in the same network. Devices will ignore and drop all messages on a domain different from their own.</p> <p>Value between <b>0</b> and <b>127</b>.</p>

## 3.4. Device Details

### Introduction

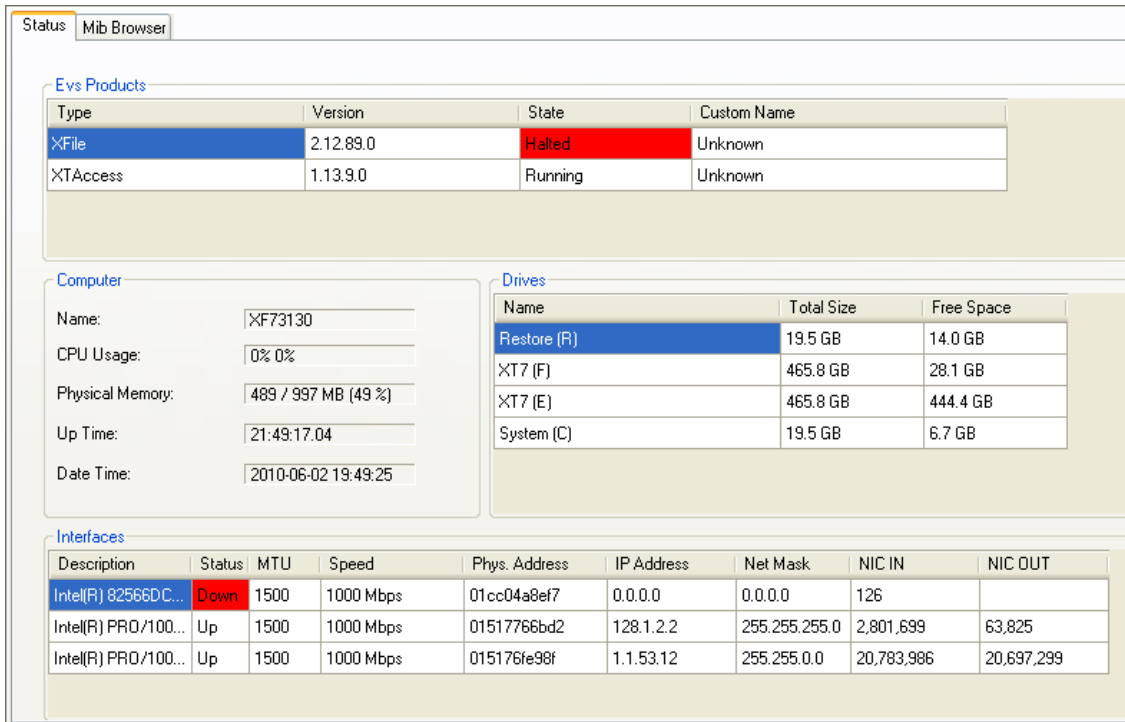
If a hardware other than an EVS server is selected in the Monitored Device List, the **Device Details** area on the right displays detailed SNMP information.

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.



**EVS Products**

Type	Version	State	Custom Name
XFile	2.12.89.0	Halted	Unknown
XTAcess	1.13.9.0	Running	Unknown

**Computer**

Name: XF73130

CPU Usage: 0% 0%

Physical Memory: 489 / 997 MB (49 %)

Up Time: 21:49:17.04

Date Time: 2010-06-02 19:49:25

**Drives**

Name	Total Size	Free Space
Restore (R)	19.5 GB	14.0 GB
XT7 (F)	465.8 GB	28.1 GB
XT7 (E)	465.8 GB	444.4 GB
System (C)	19.5 GB	6.7 GB

**Interfaces**

Description	Status	MTU	Speed	Phys. Address	IP Address	Net Mask	NIC IN	NIC OUT
Intel(R) 82566DC...	Down	1500	1000 Mbps	01cc04a8ef7	0.0.0.0	0.0.0.0	126	
Intel(R) PRO/100...	Up	1500	1000 Mbps	01517766bd2	128.1.2.2	255.255.255.0	2,801,699	63,825
Intel(R) PRO/100...	Up	1500	1000 Mbps	015176fe98f	1.1.53.12	255.255.0.0	20,783,986	20,697,299

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

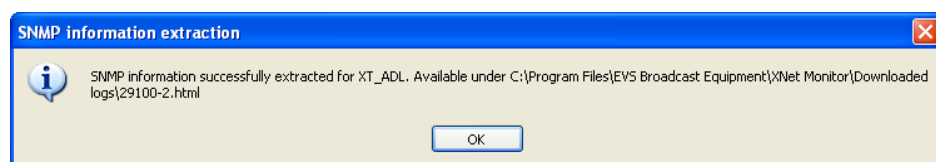
See section "MIB Browser Tab" on page 29 for an overview of the MIB Browser tab.

## 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. Description of Alerts Pane

#### Introduction

The Alerts pane is displayed below the Monitoring List pane on the Monitoring window.

It shows the list of SNMP alerts generated for the monitored devices (host or host groups) selected in the Monitored Device tree.

The alert messages are displayed until you acknowledge them.

In the Alerts pane, you can:

- display alerts based on alert categories.
- sort the columns in the alert list.
- acknowledge an (active) alert.

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

Category	Description
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.

## Area Description

The screenshot shows the alert monitoring interface. Callout 1 points to the date selection area (Start Date and End Date). Callout 2 points to the filter dropdown menu. Callout 3 points to the table of alerts.

**Start Date:** jeudi 6 juillet 2017 **Filter:** Not Acknowledged **Ack Alert(s)**

**End Date:** jeudi 6 juillet 2017

Name	IP Address	Date	Alert Message
FDR-XT4K-SN161050	10.129.110.4	06-07-17 10:47:21	CAM F: Audio Embedded Missing
FDR-XT4K-SN161050	10.129.110.4	06-07-17 10:47:21	CAM E: Audio Embedded Missing
FDR-XT4K-SN161050	10.129.110.4	06-07-17 10:47:21	CAM D: Audio Embedded Missing
FDR-XT4K-SN161050	10.129.110.4	06-07-17 10:47:21	CAM C: Audio Embedded Missing
FDR-XT4K-SN161050	10.129.110.4	06-07-17 10:47:21	CAM B: Audio Embedded Missing
FDR-XT4K-SN161050	10.129.110.4	06-07-17 10:47:21	CAM A: Audio Embedded Missing
FDR-XT4K-SN161050	10.129.110.4	06-07-17 10:47:21	Gbe Port2: operational status is Down



The table below describes the various parts of Alerts pane:

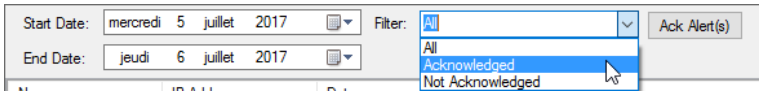
Part	Name	Description
1.	Alert filter	<p>Drop-down field that allows you to select the alert category to be displayed in the grid, as well as the date range when the alert was generated.</p> <p>On the right, the Ack Alert(s) icon allows you to acknowledge all displayed alerts.</p>
2.	Column heading	<p>Type of information available in the given column.</p> <p>Clicking on the column heading allows the sorting of the elements in ascending or descending order.</p> <p>The columns displayed cannot be modified:</p> <ul style="list-style-type: none"><li>• <b>Name:</b> Name of the host</li><li>• <b>IP Address:</b> IP address of the host</li><li>• <b>Date:</b> Date and time when the alert was generated</li><li>• <b>Alert Message:</b> Error message (For full information on error messages, "List of Possible Alerts" on page 39).</li></ul>
3.	Alert Information	Information on the alerts displayed.

## 3.6.2. Managing Alerts

### Introduction

This topic explains how you can display and manage alerts from the Alerts area in the Monitoring window. The possible actions are summarized in a table below.

## Possible Actions on Alerts

In order to ...	Proceed as follows:
Filter the alerts to be displayed	<p>Select the requested alert category in the <b>Filter</b> drop-down field, and the date range in which the alerts to be displayed have been generated.</p> 
Sort the alert items based on the values of a column (ascending or descending order)	Click the column heading on which the alert items should be sorted.
Acknowledge alerts	<p>Click the <b>Ack Alert(s)</b> on the right of the filter fields.</p> <p>All alerts displayed are removed from the Alert list, and added to the <b>Acknowledged</b> list.</p>

## 3.6.3. 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.

The warnings are displayed in orange, and the errors in red.

### Working Principle

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

- **as an alert** in the **Alerts** 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 ICMP 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 specifies the functional status of the EVS server or other EVS hardware.

### Possible Values

Message	Explanation	Status Type
Running	The EVS server is running a given configuration.	Info
Not Running	The EVS server is not running a configuration	Info
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

## GbE 1/2 and PC LAN 1/2 Status

It specifies the operational status of the Gigabit Ethernet interface connectors (port 1 & 2), the PC LAN connectors (port 1 & 2), as well as issues related to GbE and/or PC LAN teaming.

### Possible Values

Message	Explanation	Status Type	GUI
Up	The corresponding GbE or PC LAN interface is installed and running well.	Info	Server Details
Down	The corresponding GbE or PC LAN interface is not working.	Error	Server Details
Not present	The corresponding GbE or PC LAN is NOT installed.	Error	Server Details
GbE Port 1: operational status is Down	The GbE port 1 is not working.	Error	Alerts
PC LAN Port 1: operational status is Down	The PC LAN port 1 is not working.	Error	Alerts
Team Up	The GbE or PC LAN interfaces are running well, and the both links work correctly in teaming.	Info	Server Details
Team Link 1 Down	The GbE link 2 or PC LAN link 2 is functional whereas the GbE link 1 or PC LAN link 1 is either not cabled, or does not work properly.	Error	Server Details
Team Link 2 Down	The GbE link 1 or PC LAN link 1 is functional whereas the GbE link 2 or PC LAN link 2 is either not cabled, or does not work properly.	Error	Server Details
Team Down	The GbE or PC LAN interfaces are installed but do not work properly on both links.	Error	Server Details

Message	Explanation	Status Type	GUI
<b>GbE Port 1/ PC LAN Port 1: operational status is degraded - team link 1 down</b>	The GbE link 2 or PC LAN link 2 is functional whereas the GbE link 1 or PC LAN link 1 is either not cabled, or does not work properly.	Error	Alerts
<b>GbE Port 1/ PC LAN Port 1: operational status is degraded - team link 2 down</b>	The GbE link 1 or PC LAN link 1 is functional whereas the GbE link 2 or PC LAN link 2 is either not cabled, or does not work properly.	Error	Alerts

## 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	GUI
<b>OK</b>	All defined controllers are connected, which means up and running.	Info	Mon. List
<b>Connected</b>	The corresponding controller is up and running.	Info	Server Details
<b>Defined</b>	The corresponding controller is defined in the configuration but is not used	Info	Server Details
<b>Disconnected</b>	The corresponding defined controller is disconnected, or the external communication has been lost.	Error	Server Details
<b>XX on RS422 #Y disconnected</b>	The given controller(s) (XX) is/are disconnected on the given RS422 port number (Y) of the EVS server.	Error	Alerts Pane



## Channels

It specifies errors on the status of the record or play channels.

### Possible Values

Message	Explanation	Status Type	GUI
Recording	Normal status on the recorded media.	Info	Server Details
Recording (!A)	Embedded audio missing on the recorded media.	Error	Server Details
CAM X: audio embedded missing		Error	Alerts
Recording (!V)	Video missing on the recorded media.	Error	Server Details
CAM X: video missing		Error	Alerts

## Genlock

It specifies 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	Error
Unknown Blackburst	No Blackburst signal detected	Error
Bad Tri-level	Bad Tri-level signal	Error
Unknown Tri-level	No Tri-level signal detected	Error



## Analog LTC

It specifies 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.

For local clips, 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 specifies 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 specifies the status of the XNet 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 XNet 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 specifies the network traffic status.

### Possible Values

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



## Rem. Capacity

It specifies 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

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

## 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 disk array is installed.	Info
! Fan 1	The fan 1 is faulty.	Error
! Fan 1,2	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	The temperature of disk 1 on the internal disk array is rising (between 50 and 55°C).	Warning
EXT 2-3 : Rising	The temperature of disk 3 of the second external disk array 2 is rising (between 50 and 55°C).	Warning
INT 1-2 : Overheating	The temperature of disk 2 of the first internal disk storage board 1 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%	The system is rebuilding raid 1 of the raid matrix, X standing for the part of the rebuild operation processed in %.  In the Server Details pane, Storage tab, the raid has an orange background in the RAID area.	Warning
R1: Degraded	The raid 1 of the raid matrix has lost a disk and cannot afford any new disk failure without losing 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 one read or write operation has been retried, this generates a warning.

### Possible Values

Message	Explanation	Status Type
0r / 0w	0 renewed read attempt, 0 renewed write attempt	Info
0r / 1w	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 one read or write operation has failed, this generates an error.

### Possible Values

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



## Disk

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

### Possible Values

Message	Explanation	Status Type	GUI
OK (1 sp)	All disks are connected and accepted by the RAID matrix, and 1 spare disk is available.	Info	Mon. 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	Mon. List
OK	The given disk is working fine.	Info	Server Details
Spare	The given disk is a spare disk.	Info	Server Details
INT/EXT X-X Disconnected	The given disk on the internal or external array (array number + disk number) is out of the RAID matrix.	Error	Alerts & Server Details
INT/EXT X-X Not Present	No disk is connected on the internal or external array (array number + disk number).	Error	Alerts & Server Details

## PC Free Disk Space

It specifies 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	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	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



## Rec Train Expiration

It specifies that the remaining time left before you have to reinitialize the field counter for the record trains.

### Possible Values

Message	Explanation	Status Type	GUI
Record Train Maintenance should be performed in less than 12 weeks.	It remains between 4 and 12 weeks to reinitialize the record train field counter.	Warning	Alert
Record Train Maintenance should be performed in less than 28 days.	It remains less than 4 weeks to reinitialize the record train field counter.	Error	Alerts

## Temperature

It specifies the temperature of the hardware components.

### Possible Values

Message	Explanation	Status Type	GUI
The system has encountered a temperature issue. Please consider restarting Multicam at your earliest convenience	The temperature exceeds the warning threshold (80 degrees).	Error	Alerts
The system has encountered a serious temperature issue. Please shut down the server as soon as possible	The temperature exceeds the maximum threshold (95 degrees).	Error	Alerts



## Other

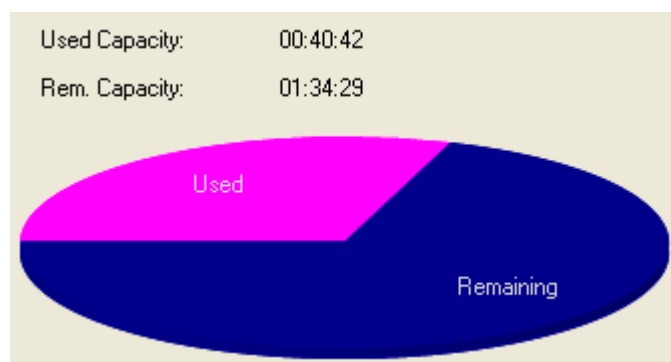
### Possible Values

Message	Explanation	Status Type	GUI
Your server ran into a problem that it couldn't handle. To keep the server operating optimally, a reboot is recommended.	A division by 0 occurred in the Linux kernel when Multicam was running.	Error	Alerts
The system has encountered a System Backup issue. A backup of your content is recommended before restarting Multicam.	A system backup issue occurred.	Error	Alerts
The system has encountered a RAID access issue. Please restart Multicam as soon as possible. Stopping the recorders is recommended	There was an issue with the R4X board.	Error	Alerts

## 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

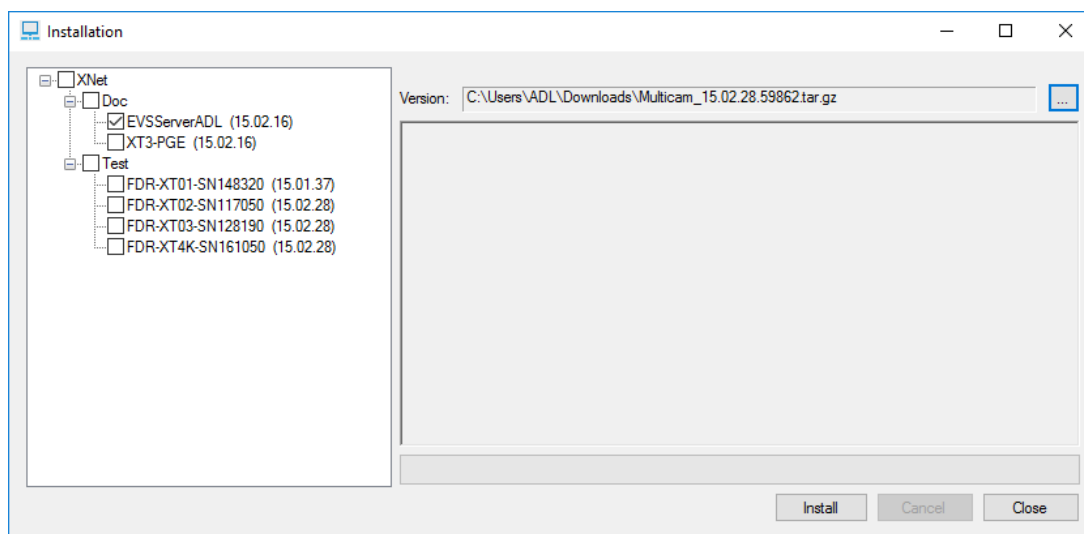
##### How to Install a Multicam Version on an EVS Video Server



With Multicam versions 15.XX and higher, the Multicam installation file (.gz file) is directly made available and can be used as such in XNet Monitor to update your Multicam version.

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 10 versions are installed on the EVS server, an error message appears requesting you to remove old versions before installing a new one. 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 53 "Installing a Multicam Version" on page 53', on page "Installing a Multicam Version" on page 53.

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



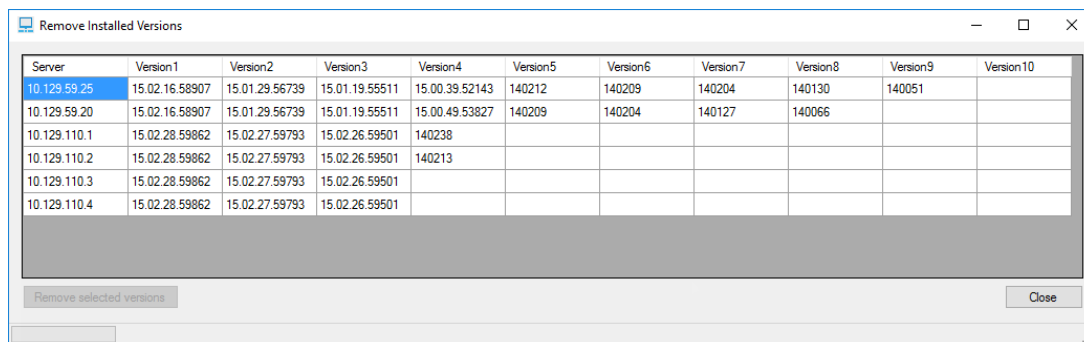
Servers currently running Multicam 14 will not show Multicam 15 versions and higher.

### 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. Click the version(s) you want to remove.

The selected versions are highlighted in black.

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

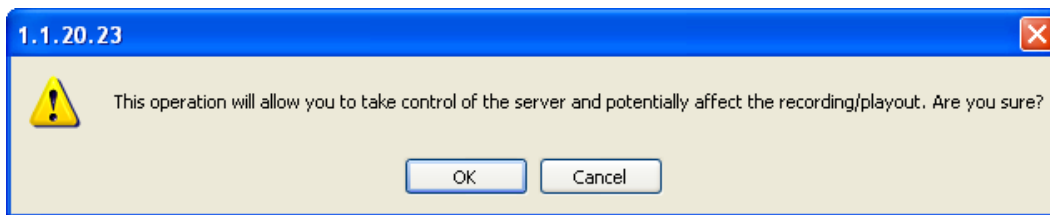
## 4.2. Remote Access to an EVS Server

### 4.2.1. Accessing Remotely a Server Desktop

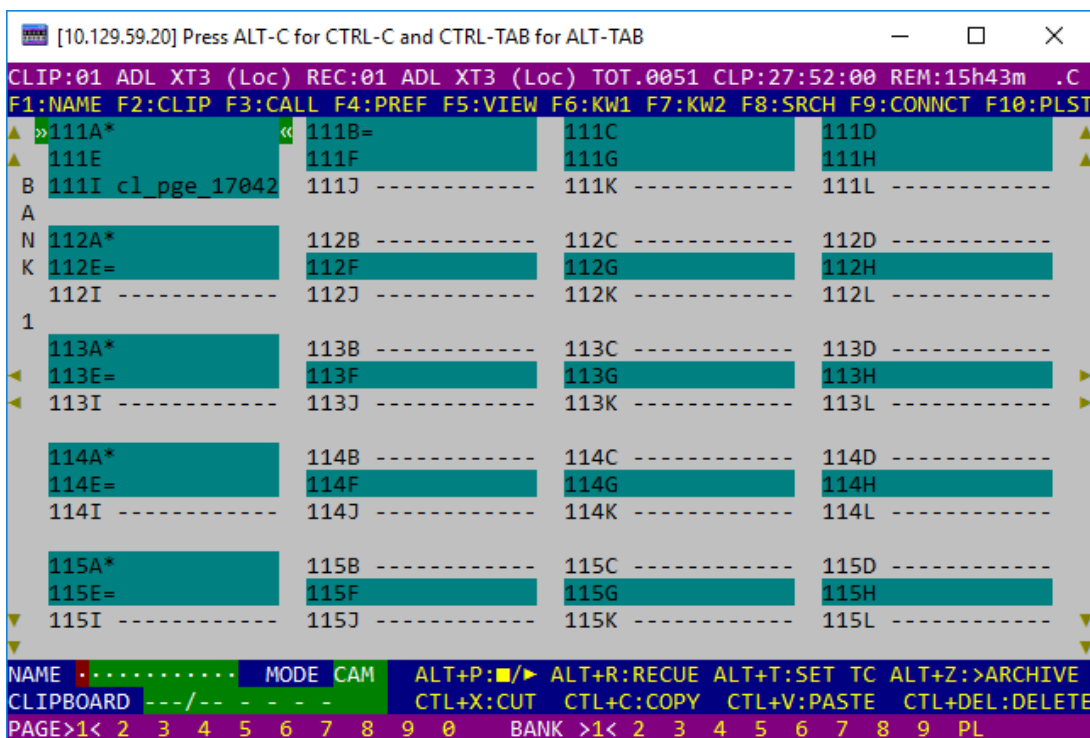
To access remotely a server desktop, proceed as follows:

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 window:



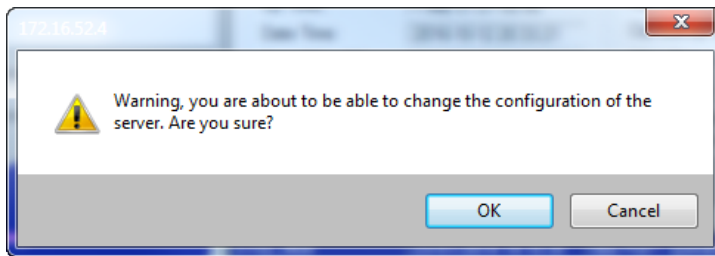
From this window, you are able to navigate through Multicam Configuration module exactly as you would access it using a keyboard.

## 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.

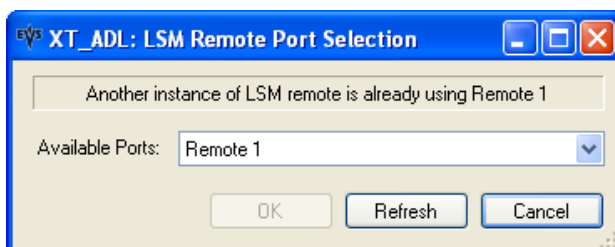
Refer to the EVS Server Configuration manuals for more information.

## 4.2.3. Accessing Remotely an LSM Remote Panel

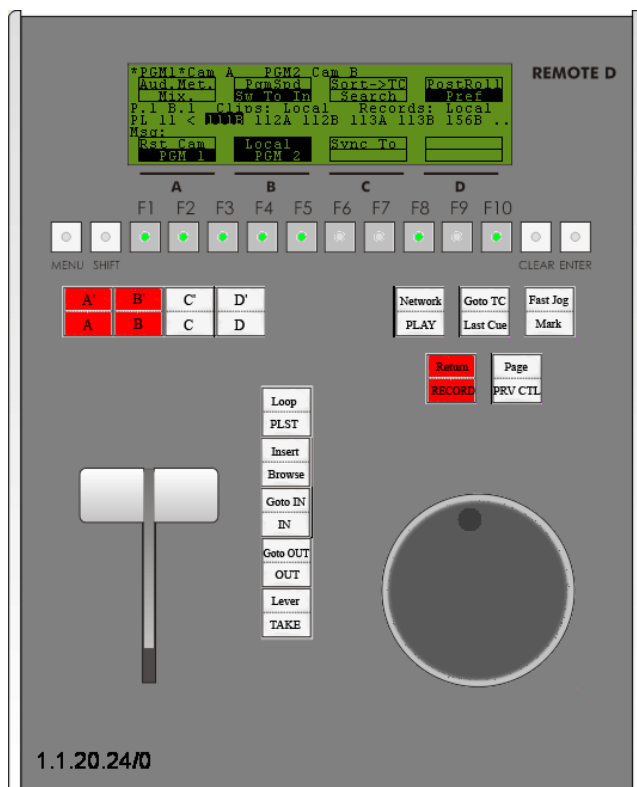


This function must only be used for training purposes. It is not intended to be used for operations.

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.



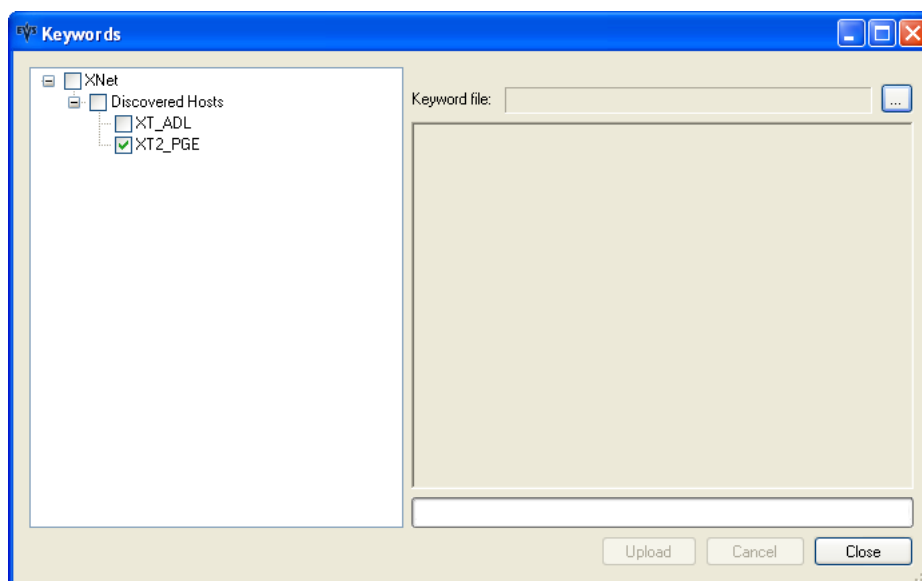
This command will be available only if the corresponding parameter is enabled in the Settings window.



## 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.

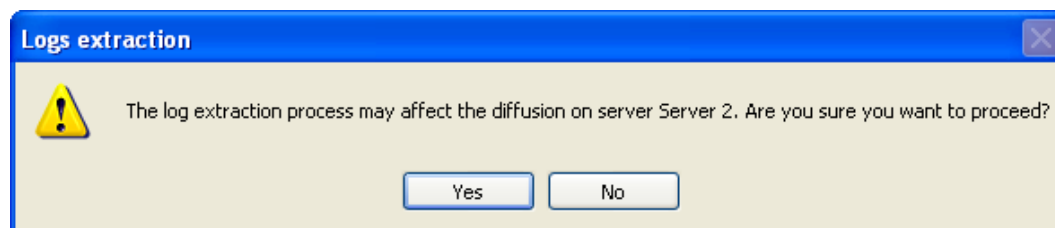


2. Select the server(s) to receive the keyword file in the left pane of the Keywords window.
3. In the **Keyword File** field, browse your computer to select the keyword file to upload.
4. Click on the **Upload** button to start the keyword file copy on all selected servers.

## 4.4. Server Logs Extraction

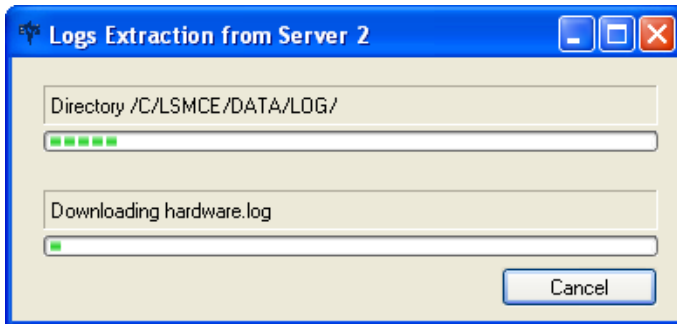
To remotely recover the SNMP logs stored on a server, right-click on it in the Monitored Device Tree and select Extract logs in the contextual menu.

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.

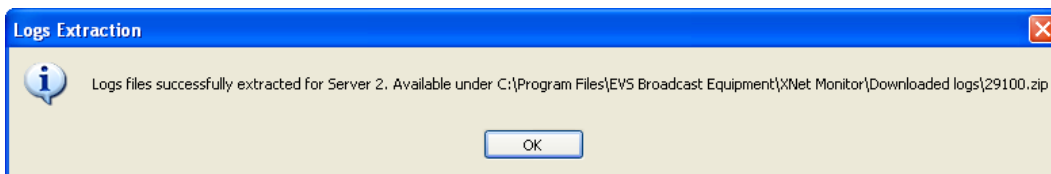




The next window displays progress bars of the extraction and the current directory and file being downloaded.



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.



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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