

TECHNICAL REFERENCE

Remote Installer

Version 7.30 - May 2017



IPDirector





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What's New?

In the Remote Installer Technical Reference the icon **NEW !** has been added on the left margin to highlight information on new and updated features.

The sections updated to reflect the new and modified features in the Remote Installer manual of IPDirector version 7.30 (compared to version 7.20) are listed below.

License management

The IPAccess licensing mode is no more in use from version 7.30. Therefore, the **Use Dedicated License** option has been removed from the workgroup configuration parameters.

- See section "General Section" on page 55.

IPBrowse configuration

The two following features were already implemented in version 7.20 but this has only been described in the current manual.

IPBrowse can be used with or without the Indexing Service. This is set from the Remote Installer:

- See section "Selecting the IPBrowse Mode" on page 215.

Depending on whether the Indexing Service mode has been enabled or disabled for IPBrowse, the IPBrowse Configurator window will slightly differ.

- See section "Overview of the IPBrowse Configurator Tool" on page 218.

A new parameter (7.30) sets whether a new clip or a reference to the clip will be created when the clip is sent as is to a bin.

- See section "Overview of the IPBrowse Configurator Tool" on page 218.

Grabs and Thumbnails

The EVS Registry service must be started for the thumbnails and grabs to be processed properly.

- See section "Introduction" on page 144 ("Managing Services").
- See section "Introduction" on page 78 "Thumbnails and Grab Configuration").

1. Connection to Servers

1.1. Introduction

The following section describes the physical connections and software configurations which are required to use IPDirector with servers. It also includes sample configurations to illustrate various typical uses for the system.

1.2. Configuration and Connection

1.2.1. Introduction

Any IPDirector workstation can be connected to one or several servers via one physical RS-422 connection.

This chapter provides examples of different configurations of IPDirector workstations connected to EVS video servers.

Control of any channel of an individual server requires that an RS-422 connection exists between a workstation and that server. Each connection provides access to only one server for channel control.

In the case of a single IPDirector workstation connected to a server within a network of servers, the RS-422 connection also provides access to the whole XNet for clip and train retrieval together with all database functionality. See section "One IPDirector and a Network of Servers" on page 3.

In the case of several IPDirector workstations connected through an GigE network with a single station connected to an EVS server, all channels of the connected server can be controlled by any workstation. See section "Multiple IPDirector Workstations and One Server" on page 3.

If a server has no RS-422 link to an IPDirector workstation network its channels cannot be controlled.

Each server has its channel configuration set individually by selecting an application from the list on the Multicam Setup window. Please refer to the Configuration manual related to your server.

1.2.2. Server Configuration

When using an application line with a LSM or Spotbox base configuration, port configuration and protocols are set from the Channels tab of the Multicam Configuration window.

CONFIGURATION						
1.SERUER	2.CHANNELS	3.NETWORK	4.MONITORING	5.PROTOCOL	6.GPI	7.OPERATION
1/7 Advanced Mode						
Base settings			Port settings			
Inputs	4		RS422 #1	EUS Remote		
Outputs	2		RS422 #2	-----		
Base config	Multicam LSM		RS422 #3	EUS IPDP		
SLSM Rec	None		RS422 #4	-----		
3D	No		RS422 #5	-----		
3G/Dual	No		RS422 #6	-----		
Channel and control settings						
		Name	Main ctrl	Sec. ctrl	Mode	OSD
OUT1	PGM1	PGM1	EUS Remote	EUS IPDP	3 Parall	Sec
OUT2	PGM2	PGM2	EUS Remote	EUS IPDP	3 Parall	Sec
IN1	REC1	CAM1	EUS Remote	-----		
IN2	REC2	CAM2	EUS Remote	-----		
IN3	REC3	CAM3	EUS Remote	-----		
IN4	REC4	CAM4	EUS Remote	-----		

This window can be accessed from the Multicam Setup window by pressing **F8** when the server is not running.

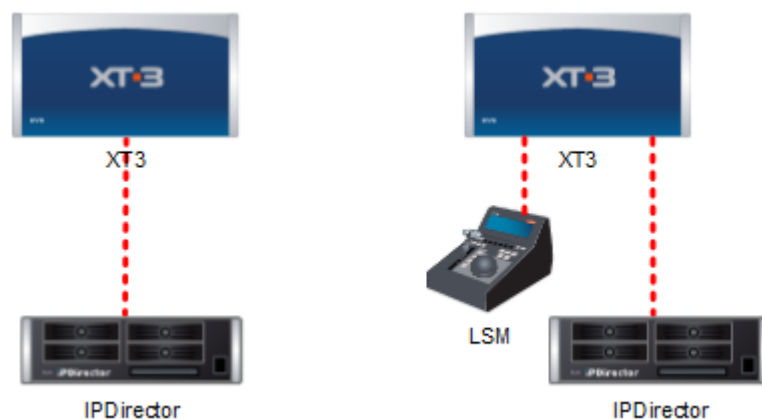
Since Multicam 11, the channel configuration can be changed while the Multicam application is running. Press **SHIFT + F2** to access the Multicam Configuration window.

Switch to Advanced Mode (press **F3**) to display the Secondary Controller.

See section "Setup of Server for Use with IPDirector" on page 4 for more details.

1.2.3. One IPDirector and One Server

In its most basic configuration, connection is made between one IPDirector workstation and a server using one RS-422 connection.

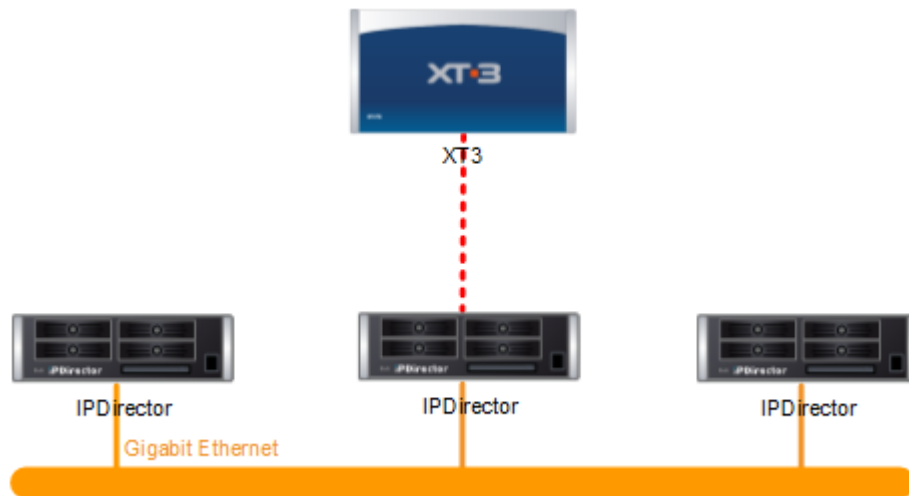


IPDP Spotbox mode provides all of the functionality of IPDirector to a single server and allows control of all of the server channels from IPDirector or third party devices, but no control from an LSM remote panel.

LSM mode provides all of the functionality of IPDirector to a single server and allows control of all of the server channels from IPDirector or third party devices, but the primary control of Port 1 must be from an LSM remote panel.

1.2.4. Multiple IPDirector Workstations and One Server

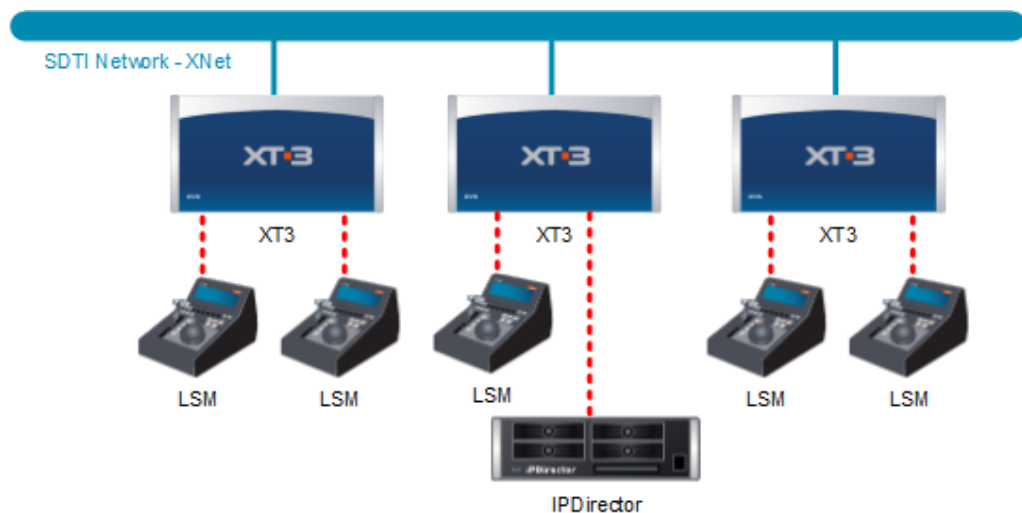
Several IPDirector workstations can be inter-connected via Ethernet and with only one station of IPDirector which has a connection via an RS-422 with a server. Any of the IPDirector workstations can thus control the channels of the connected server, and access and manipulate the database of the single server. For example the first workstation can be used for clip creation and playback while the second creates a log sheet and another acts as a browse station, collating and organizing the media for later use.



1.2.5. One IPDirector and a Network of Servers

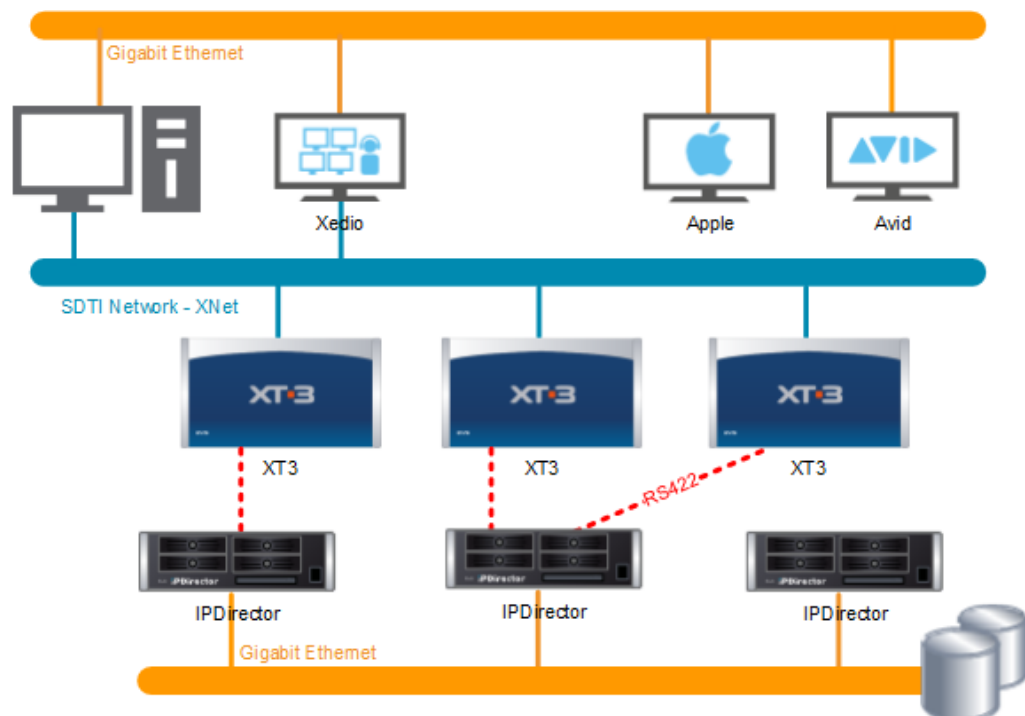
Several servers can be connected on an XNet with only one station of IPDirector which has a connection via an RS-422 with a single server.

All the media on an XNet[2] can be accessed. The connection via the RS-422 to a single server machine gives access to media and data from any server within the network, but it only provides control of the channels on the RS-422 connected machine.



1.2.6. Multiple IPDirector Workstations and a Network of Servers

The example below integrates all previous configurations into a complete IPDirector environment. The possible combinations of connections of different devices to a workstation of IPDirector and a server make the architecture easy to connect and very flexible. It is possible to connect a network of up to 29 servers on an XNet[2] to up to 255 IPDirector Workstations. Each workstation is capable of running all IPDirector applications, or different workstations can each run an application and a central database can collate all data from the IP network. As each server has an RS-422 connection to an IPDirector workstation all channels can be controlled from any IPDirector workstation.



1.3. Setup of Server for Use with IPDirector

1.3.1. General Remark

This chapter describes the necessary steps to configure a primary and second control for a channel but does not describe all the parameters which are necessary to fully configure a server.

Please refer to the Configuration manual related to your server for more information on how to configure the server.

1.3.2. Serial Link and Channel Configuration

Since Multicam 11 and the EVS video servers hosting V3X and H3X boards, the server can be configured with all 8 channels controlled via one RS-422 connection allowing any combination from 6 recorder channels and no player channels to 6 player channels and no recorder channels.

8-channels configurations are supported (4 Play – 4 Rec, 2 Play – 6Rec,...).

The old server generation can be configured with 6 channels allowing any combination from 6 recorder channels and no player channels to 6 player channels and no recorder channels. But the servers are limited to 6 channels (3 Play – 3 Rec, 2 Play - 4Rec, 4 Play – 2 Rec...).

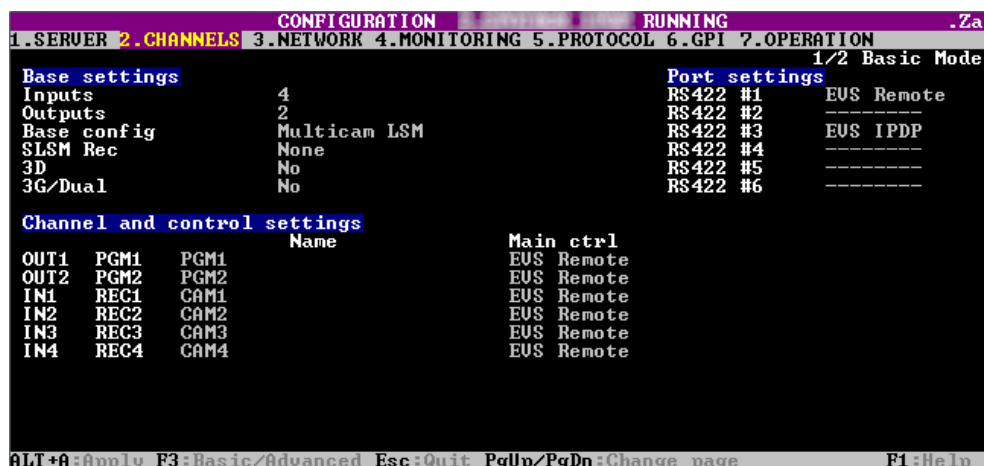
Since Multicam 14, 12 channels configurations are supported by the EVS servers. Configurations can have a maximum of 12 recorder channels and no player channel or 6 recorder and 6 player channels.

Since Multicam 11, the configuration of server serial port connections and the assignment of secondary device control (SONY BVW75, VDCP, ODETICS ...) to the channels can be defined from the Multicam Configuration window (Channels tab) before starting the Multicam application (press **F8**) or while the server is running (press **SHIFT + F2**). However, changing the channel configuration while Multicam is running requires a restart of the application. Be careful as the serial and channel configuration is stored in each line since Multicam 11. So, restarting the Multicam on another line may change the serial port assignment.

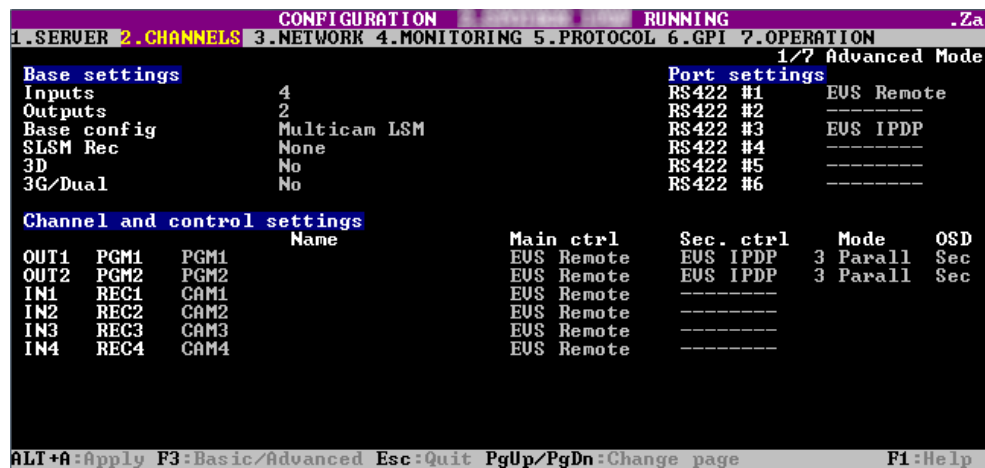
1.3.3. Multicam LSM Mode

1. Access the Multicam Configuration window in one of the following ways:
 - press **F8** when the server is not running
 - press **SHIFT+F2** if the application is already running
2. Select the Channels tab.

The following window is displayed (the example below is a Multicam LSM 4 In and 2 Out configuration):



- Press **F3** to access the Advanced Mode which displays more pages per tab:



- Use the **TAB** or **SHIFT+TAB** and **←**, **→**, **↑**, **↓** keys on the keyboard to pass from one parameter to the other.

Use **SPACE BAR** to modify the value of a parameter.

- For every channel, select the secondary device. You must specify the communication protocol used by the external device, the com port it is physically connected to, the control mode and which OSD will be displayed on the monitoring output of the channel.

The control mode can be:

Exclusive: the main controller and the secondary controller cannot control the channel at the same time. You will always give/get back the control of the channel to/from the main controller interface.

Parallel: the main and secondary controller can control the channel at the same time. It will typically be the case when the same operator wants to control a channel from 2 different devices at different times.

When working in parallel mode, you must specify which OSD settings will be used on the monitoring output of the channel: the OSD configuration of the main controller or that of the secondary controller.

The particularities of that mode are:

- One EVS remote device must be connected on RS422 #1
- The EVS remote device must be defined as the main controller of PGM1. The IPDirector can be defined as secondary controller of this channel.
- The recorders can only be started / stopped from the EVS remote device. The IPDirector applications cannot start nor stop the recorder channels.
- The server can be set to be used as a standard LSM and then have up to five channels controlled using one RS-422 port.

1.3.4. IPDP Spotbox Mode

- Access the Multicam Configuration window in one of the following ways:
 - press **F8** when the server is not running
 - press **SHIFT+F2** if the application is already running



2. Select the Channels tab

The following window is displayed (the example below is a Multicam LSM 4 In and 2 Out configuration):

CONFIGURATION				NOT RUNNING	
1.SERUER	2.CHANNELS	3.NETWORK	4.MONITORING	5.PROTOCOL	6.GPI 7.OPERATION
Base settings				1/2 Basic Mode	
Inputs	2			RS422 #1	EVS IPDP
Outputs	4			RS422 #2	-----
Base config	Spotbox			RS422 #3	-----
SLSM Rec	None			RS422 #4	-----
3D	No			RS422 #5	-----
3G/Dual	No			RS422 #6	-----
Channel and control settings					
		Name	Main ctrl		
OUT1	PGM1	PGM1	EVS IPDP	1	
OUT2	PGM2	PGM2	EVS IPDP	1	
OUT3	PGM3	PGM3	EVS IPDP	1	
OUT4	PGM4	PGM4	EVS IPDP	1	
IN1	REC1	CAMERA1	EVS IPDP	1	
IN2	REC2	CAMERA2	EVS IPDP	1	

ALT+A:Apply F3:Basic/Advanced Esc:Quit PgUp/PgDn:Change page F1:Help

3. Press **F3** to access the Advanced Mode which displays more pages per tab:

CONFIGURATION				NOT RUNNING	
1.SERUER	2.CHANNELS	3.NETWORK	4.MONITORING	5.PROTOCOL	6.GPI 7.OPERATION
Base settings				1/7 Advanced Mode	
Inputs	2			RS422 #1	EVS IPDP
Outputs	4			RS422 #2	-----
Base config	Spotbox			RS422 #3	Sony BUW75
SLSM Rec	None			RS422 #4	Sony BUW75
3D	No			RS422 #5	Sony BUW75
3G/Dual	No			RS422 #6	Sony BUW75
Channel and control settings					
		Name	Main ctrl	Sec. ctrl	Mode OSD
OUT1	PGM1	PGM1	EVS IPDP	1 Sony BUW75	3 Parall Main
OUT2	PGM2	PGM2	EVS IPDP	1 Sony BUW75	4 Parall Main
OUT3	PGM3	PGM3	EVS IPDP	1 Sony BUW75	5 Parall Main
OUT4	PGM4	PGM4	EVS IPDP	1 Sony BUW75	5 Parall Main
IN1	REC1	CAMERA1	EVS IPDP	1 -----	
IN2	REC2	CAMERA2	EVS IPDP	1 -----	

ALT+A:Apply F3:Basic/Advanced Esc:Quit PgUp/PgDn:Change page F1:Help

4. Use the **TAB** or **SHIFT+TAB** and **←**, **→**, **↑**, **↓** keys on the keyboard to pass from one parameter to the other.

Use **SPACE BAR** to modify the value of a parameter.

5. For every channel, select the secondary device. You must specify the communication protocol used by the external device, the com port it is physically connected to, the control mode and which OSD will be displayed on the monitoring output of the channel.

The control mode can be:

- **Exclusive:** the main controller and the secondary controller cannot control the channel at the same time. You will always give/get back the control of the channel to/from the main controller interface.
- **Parallel:** the main and secondary controller can control the channel at the same time. It will typically be the case when the same operator wants to control a channel from 2 different devices at different times.

When working in parallel mode, you must specify which OSD settings will be used on the monitoring output of the channel: the OSD configuration of the main controller or that of the secondary controller.

Please refer to the Configuration manual of your server for more information on how to define main and secondary devices control of channels.

1.4. Serial Link Redundancy

Introduction

Two serial links can now be connected to two serial ports of the same server. The two links are connected to two different IPDirector workstations. No special configuration is needed on the IPDirector side.

On the server side, protocol IPDP must be defined on the two serial ports to activate the redundancy mechanism. This is as simple as that. The Multicam will manage the two links automatically.

Multicam LSM Mode

In the configuration menu (Tab 2 Channels), two ports must be set for IPDirector (protocol IPDP). In this situation, if a connection is lost, it connects the second connection defined.

```

CONFIGURATION  NOT RUNNING
1.SERVER 2.CHANNELS 3.NETWORK 4.MONITORING 5.PROTOCOL 6.GPI 7.OPERATION
1/2 Basic Mode
Base settings
Inputs 4
Outputs 2
Base config Multicam LSM
SLSM Rec None
3D No
3G/Dual No
Port settings
RS422 #1 EUS Remote
RS422 #2 -----
RS422 #3 EUS IPDP
RS422 #4 EUS IPDP
RS422 #5 -----
RS422 #6 -----
Channel and control settings
Name Main ctrl
OUT1 PGM1 PGM1 EUS Remote
OUT2 PGM2 PGM2 EUS Remote
IN1 REC1 CAM1 EUS Remote
IN2 REC2 CAM2 EUS Remote
IN3 REC3 CAM3 EUS Remote
IN4 REC4 CAM4 EUS Remote
ALT+A:Apply F3:Basic/Advanced Esc:Quit PgUp/PgDn:Change page F1:Help

```



NOTE

At startup, the server will connect the IPDirector with the lowest local machine number.

Mode Spotbox

Since Multicam 11, the serial port redundancy configuration is the same for Spotbox and Multicam LSM mode.

In the configuration menu (Tab 2 Channels), two ports IPDirector (protocol IPDP) must be defined. In this situation, if a connection is lost, it connects the second connection defined.

```
CONFIGURATION NOT RUNNING
1.SERVER 2.CHANNELS 3.NETWORK 4.MONITORING 5.PROTOCOL 6.GPI 7.OPERATION
1/2 Basic Mode

Base settings
Inputs      2
Outputs     4
Base config Spotbox
SLSM Rec    None
3D          No
3G/Dual     No

Port settings
RS422 #1    EUS IPDP
RS422 #2    EUS IPDP
RS422 #3    Sony BUW75
RS422 #4    Sony BUW75
RS422 #5    Sony BUW75
RS422 #6    Sony BUW75

Channel and control settings
Name
OUT1 PGM1 PGM1 Main ctrl 1
OUT2 PGM2 PGM2 EUS IPDP 1
OUT3 PGM3 PGM3 EUS IPDP 1
OUT4 PGM4 PGM4 EUS IPDP 1
IN1  REC1 CAMERA1 EUS IPDP 1
IN2  REC2 CAMERA2 EUS IPDP 1

ALT+A:Apply F3:Basic/Advanced Esc:Quit PgUp/PgDn:Change page F1:Help
```



NOTE

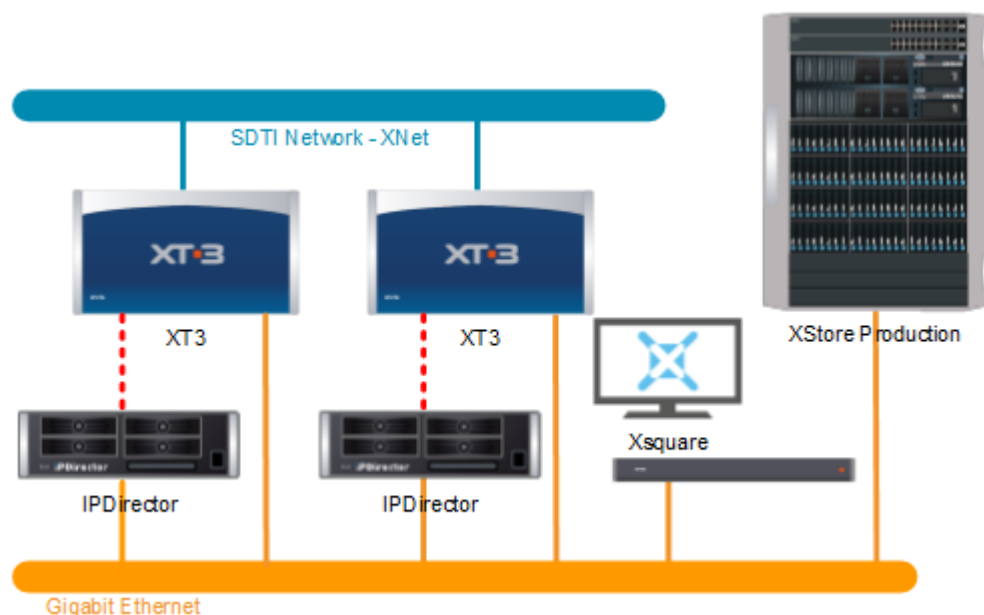
At startup, the server will connect the IPDirector with the lowest local machine number.

1.5. Gigabit Connection for Software Player and XML Unit

Context of Use

The Gigabit connection of the EVS servers has become an essential element of any setup.

It is used to backup, stream and restore the video content on the servers, but it also allows accessing trains and clips from the interface of the IPDirector Software Player.



Requirements

In order to use the Software Player within the IPDirector application, all the servers, where the trains and clips should be browsed, have to be connected on the same Gigabit Ethernet as the IPDirector workstations. The IP address range and the subnet mask should match the IPDirector and the Xsquare system LAN settings.

Default Gateway settings are available if the servers and workstations are spread in different VLANs.



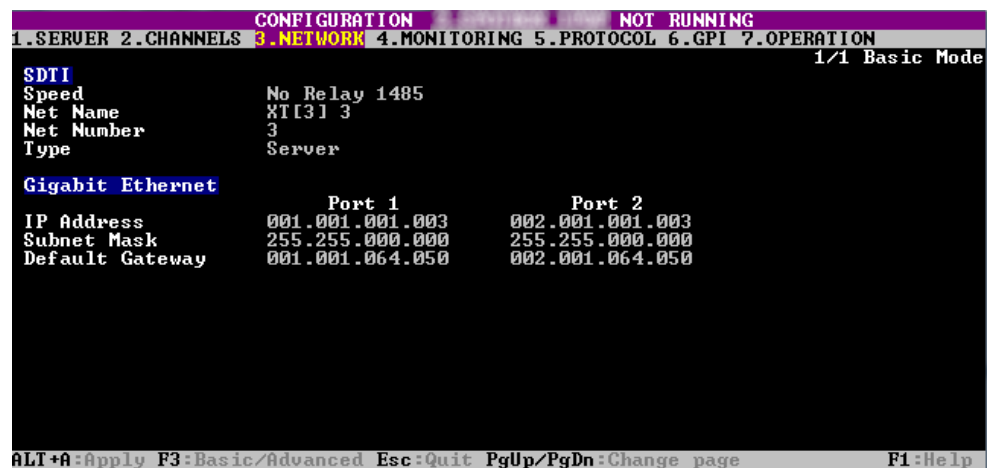
NOTE

The Gigabit connections require a GBX module on the H3X (or HCTX) board in the servers. Gigabit connectors can be present on the back of the server without a GBX module inside.

Please refer to the Technical Reference Hardware manual related to your server for more information.

How to Set the Gigabit Parameters on the Server

- Access the Multicam Configuration window in one of the following ways:
 - press **F8** when the server is not running
 - press **SHIFT+F2** if the application is already running
- Select the Network tab:



- Set IP Address, Subnet Mask and Default Gateway
- Press **ESC** to apply the configuration modifications.

If the Gigabit Ethernet configuration is modified while the Multicam is running, a restart will be requested in order to apply the new addresses, masks or default gateway.

The Gigabit settings are sent to the IPDirector database and would be monitored in the LAN and WAN tab within the Remote Installer. See section "LAN and WAN Configuration" on page 66 for details.



Limitations and Recommendations

Some limitations and recommendations exist on the Gigabit connections:

- From Multicam 12: up to 25 accesses per server including backup, restore, streaming and software player browsing.
- A software player browsing has the same impact on a server disk array as a local or distant PGM.
- Gigabit connections manage Ethernet frame size: Original (1500) or Jumbo Frames (9000 bytes of payload (MTU)) which offer better performances around 30%. If IPD and XT-Access workstations should negotiate jumbo frames with servers, all Gigabit Ethernet NICs and switches have to be configured in order to support this frame size.

2. Remote Installer

2.1. Introduction

2.1.1. Product Description

The Remote Installer allows you to install IPDirector applications and configure all IPDirector workstations on the network from any IPDirector workstation.

The tool allows any administrator to remotely manage (configure, start, stop...) all IPDirector workstations on the network.

The Remote Installer is a service and a configuration application.

The service is started automatically at start up and the configuration application (the GUI), can be run from the Windows taskbar but can only be run on one workstation at one time for editing.

It can also be run in a Read Only mode. This mode allows the administrator to open the Remote Installer on several workstations at one time.

2.1.2. Getting Started


Starting the Remote Installer Application

Remote Installer Start Modes

The Remote Installer can be opened in an Edit mode or in a Read-only mode.

The Edit mode can only be run on one workstation at one time.

The Read-only mode allows the administrator to open the Remote Installer on several workstations at a time. It gives a limited access: the settings cannot be edited, only viewed.

A  icon on the Windows taskbar indicates that the Remote Installer is already open on a workstation of the network.

How to Open the Remote Installer

To open the Remote Installer on a machine, proceed as follows:

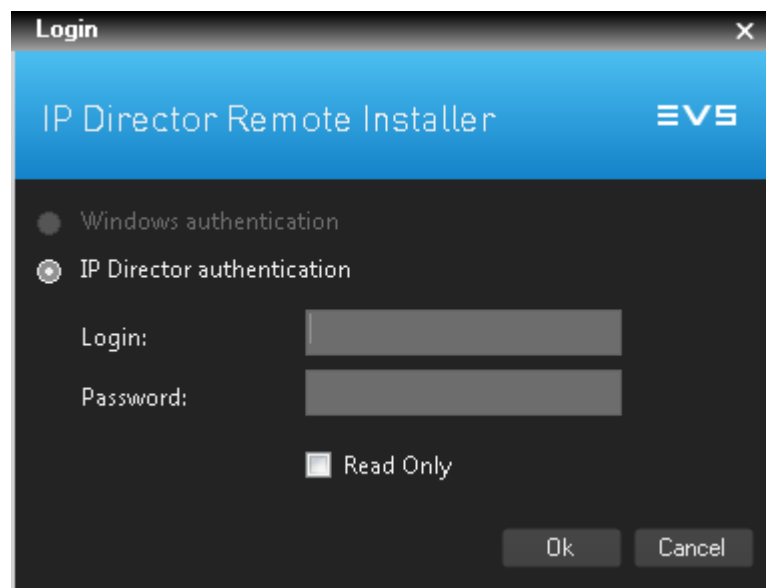
1. Right-click the  icon from the Windows taskbar.

2. Select **Open Configurator** from the menu.

- The workstation may be integrated into an Active Directory domain. In this case, the Remote Installer will automatically open without requesting additional access codes when the user starts it.

The user groups the user belongs to in the Windows domain is linked to a profile in the User Manager. This determines the set of user rights and user settings the user will have in the application. See the User Manager Technical Reference for more information.

- If the workstation is not integrated into an Active Directory domain, a login screen will display. Go to next step.



This parameter is set in Configure > General. See section "General Section" on page 55.

3. Enter a login and password.



NOTE FOR THE ADMINISTRATOR

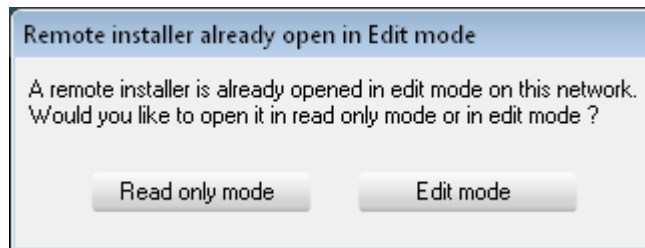
If you are the administrator and if you log on for the first time, you must use the following login and password (case sensitive):

Login: administrator

Password: evs

4. (optional) Select **Read Only** to open an instance of the Remote Installer in Read-only mode. This avoids closing a Remote Installer which would already be opened in Edit mode on the network. The Remote Installer opened in Read Only mode gives a limited access. The settings cannot be edited, only viewed.
5. Click **OK**.

6. If you did not select **Read Only** while the Remote Installer is already open on another workstation, a warning message is displayed:



- Click the **Read Only mode** button to open the Remote Installer in Read-only mode.
- Click the **Edit mode** button to close the distant Remote Installer and open the Remote Installer in Edit mode on the current workstation.



WARNING

The user currently logged on the distant workstation will not be informed.

The Remote Installer icon on the Windows taskbar turns to .

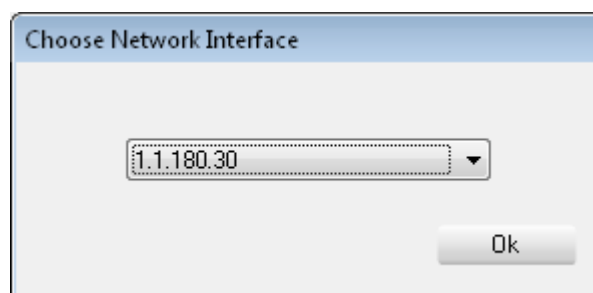
Once started, you can see all the workstations belonging to the network. See section "Overview of the Remote Installer Window" on page 18 for a description of the window areas.

Making Checks and Solving Issues

Prerequisites

Multiple Network Interfaces

If several network interfaces are connected on the workstation, an IP address must be chosen in order to start the Remote Installer.



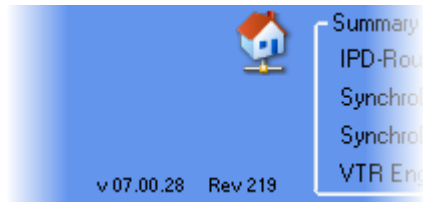
Ethernet Frame Size

In order to work properly, all IPDirector workstations connected to the network must be set to **the same Ethernet frame size**.

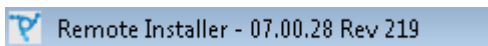
It is recommended to work with standard Ethernet frames (MTU 1500) or Jumbo Ethernet frames (MTU 9000). **Avoid mixing the two sizes.**

Remote Installer Version

On each workstation line, the Remote Installer version number is displayed. As an example:



This information is useful to check if all workstations have the right version of Remote Installer. This version number should correspond to the version number info shown in the upper left corner of the application. As an example:



Solving Potential Issues

No Valid Database has been Restored

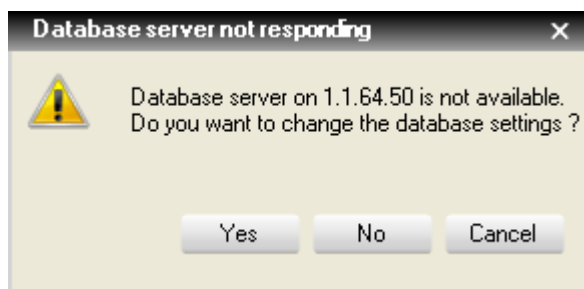
If no valid database has been restored, the administrator/evs login/password will not work.

The Database cannot be Reached

If the database cannot be reached due to a network problem or the local database is stopped, the administrator/evs login/password may not work.

Workstation not Connected anymore to the Database

If your workstation is not connected anymore to the last used database, this message is displayed:



Click **Yes**, to open the Database Configuration window.

See section "Setting the Database Information" on page 43 for more information.



NOTE

All IPDirector workstations have their own database. In Standalone mode, specify the computer name or the IP address of your workstation. If you have no Ethernet activity on any network adapter, restart your workstation. The Remote Installer will automatically point to the IP address 127.0.0.1 (which is the Windows default local host address).

Wrong Version of the Database

The **Database** button is orange when a wrong version of database is detected within the workgroup.

- If all workstation were fresh installed, the default value for the database setting is 127.0.0.1 (local host IP address). This address cannot be kept as a valid workgroup database address if the workgroup contains more than one workstation. Only one database on one workstation must be chosen for the workgroup.

Wrong DB version on 127.0.0.1

See section "Configuring the Database" on page 34.

- If the database version is not compatible with the installed IPDirector version, the IP address if the DB server is written on the button. The database version must be upgraded.

Wrong DB version on 1.1.180.30 (example of IP address)

See section "Upgrading the Database" on page 39.

Database Conflict

The **Database** button is red when there is a database conflict within the workgroup:

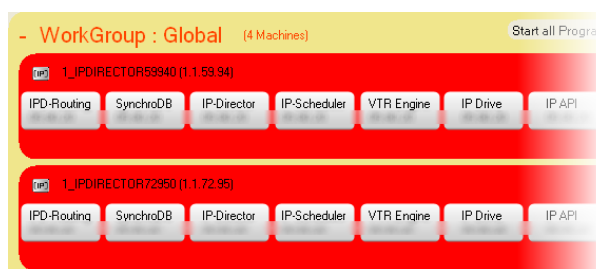
Database conflict on this WorkGroup

See section "Resolving a Database Conflict" on page 34.

Workstations Network Number Conflict

If several machines have the same network number, a conflict is detected by the Remote Installer.

In this case the background color of these workstations turns red.



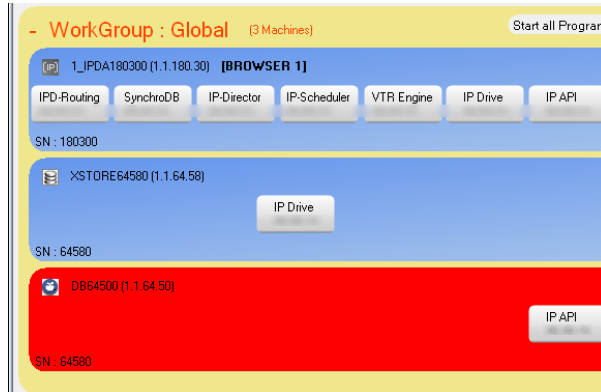
On the Status bar, at the lower right corner of the window, the **NumUser** status is red as well.

NumUser

See section "Setting Network Information for the Workstation " on page 44.

Workstation without a Valid Registered Serial Number

In case a workstation does not have a valid registered serial number, the background color of these workstation is red.



On the Status bar, at the lower right corner of the window, the **Serial Number** status is red also:

Serial Number

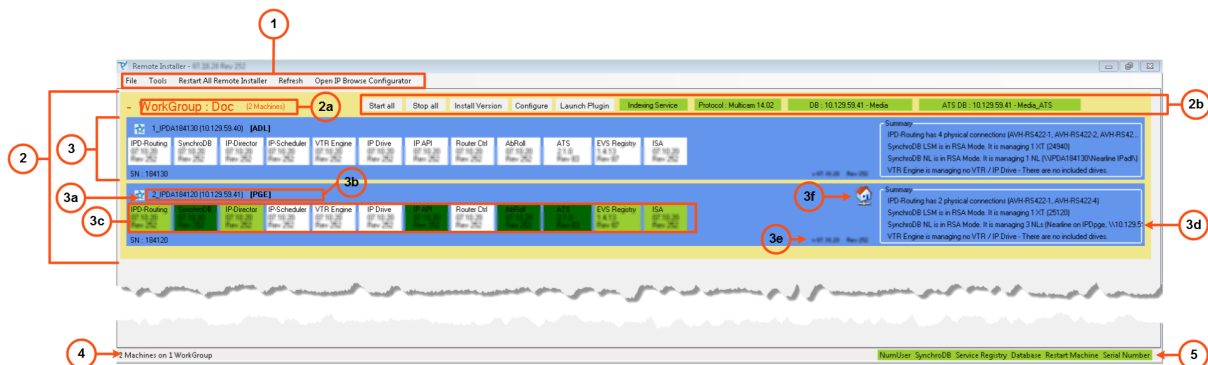
See section "Configuring Serial Number" on page 48.

2.2. User Interface

2.2.1. Overview of the Remote Installer Window

Illustration

The Remote Installer window contains the areas highlighted on the screenshot below:



Area Description

Menu Bar (1)

The Menu bar provides a series of buttons and menus options related to Remote Installer exit, restart, and refresh, to specific information display, and to IPBrowse configuration.

See section "Menu Bar" on page 20 and section "Configuring IPBrowse" on page 216.

Workgroup (2)

A workgroup is the association of a series of workstations on the network. A workgroup is represented by a yellow area.

- a. Workgroup name and number of workstations in the workgroup.

A contextual menu is available by right-clicking this area. See section "Workgroup Contextual Menu" on page 21.

- b. Workgroup toolbar:

This area provides a series of buttons to perform actions on the whole workgroup: installing version, starting and stopping applications, configuring the workgroup, launching plugins, managing the database and the ATS database.

It gives indication on the compatibility between the Multicam versions on the different EVS video servers.

See section "Workgroup Toolbar" on page 23.








Workstation (3)

Each workstation on the network is represented by a separate line.

The background color of each line gives indication on the workstation status. See section "Workstation Status Color Code" on page 26.

A contextual menu is available by right-clicking the workstation colored area. See section "Workstation Contextual Menu" on page 27.

- a. **Workstation Type icon** representing the workstation type: IPDirector , Storage , API Proxy , Indexing Service , Other . The type is chosen from a contextual menu, available by right-clicking the icon.
- b. **Workstation information:** computer name, IP address and an optional description.
- c. **Workstation services:**
 Each service is represented by a button. See section "Introduction" on page 144.
 Depending on the workstation type, the number of services varies.
 A contextual menu is available by right-clicking each button. See section "Managing Services" on page 144.
 The background color of each button gives an indication on its status and role.
- d. **Summary:** this area provides information about:
 Number and type of serial ports configured
 Working mode of SynchroDB to manage server(s), number and name of server(s).
 Working mode of SynchroDB to manage directory(ies), number and name of directory(ies).
 VTR devices managed by the VTR Engine service.
 Drives managed by the IP Drive service.
- e. **Remote Installer version number**
- f. **Local Workstation icon:**
 This allows the user to easily locate the local workstation from the list.

Number of machines in the network (4)

This area gives the number of workstations and the number of workgroup present on the network.

Status Bar (5)

The Status bar gives information on the status of some pieces of information by means of color codes.

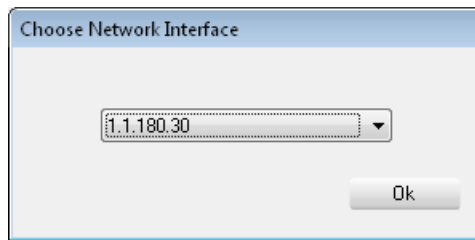
2.2.2. Menu Bar

File

Opens a menu with a single option: **Exit** to exit the Remote Installer.

Change Network Interface

Used to specify the network interface connected with the database and the other workstations.



Select the IP address corresponding to the right interface if you forgot to specify it after installing the Remote Installer setup.



NOTE

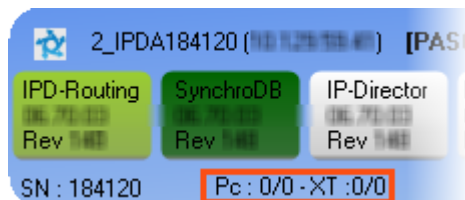
This option appears only if several network interfaces are enabled and connected on the workstation.
In the event of WAN connections, this network interface can have an impact on functions.

Tools

The Tools menu provides the following options:

Monitoring Information

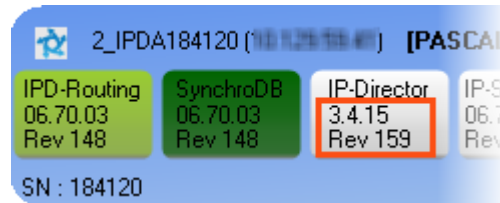
Displays Monitoring Information on each IPDirector workstation when the services (SynchroDB, IP-Routing) are started.



Show Software Player Version

Displays the Software Player version instead of the IPDirector version on the **IPDirector** service button.

Example for version 6.70:



Restart All Remote Installer

Used to send a restart command to the Remote Installer of each workstation.

Refresh

Used to refresh the listed workstations detected by the Remote Installer. Refresh is automatically done with a time out.

Open IP Browse Configurator

Launches a configuration tool which is designed to define some settings for the IPBrowse clients.

See section "Configuring IPBrowse" on page 216.

2.2.3. Workgroup

Workgroup Contextual Menu

A contextual menu is available when right-clicking the Workgroup name.

Rename WorkGroup

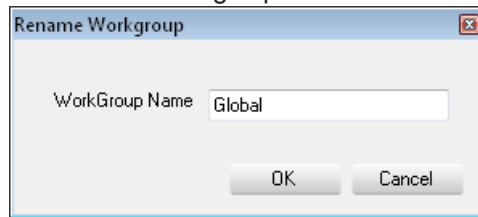
Used to edit the name of the workgroup or to select another existing name. All workstations inside the current workgroup will be affected.



NOTE

It is recommended to change the Workgroup name. This avoids auto-deployment of the Remote Installer when plugging new stations on a existing setup.

- To rename a workgroup:



Enter the new name and click **OK** to apply the modification. Wait a few second or click **Refresh** to display the new name inside the Remote Installer.

- To move the workstations of a workgroup into another workgroup:
If other workgroups exist, they are listed below Rename Workgroup.
Clicking on one workgroup name will move all the workstations within the other one (ex: Global2).
Change DB settings and the Local Machine Number to avoid conflicts inside the destination workgroup.

Populate Host files (network without DNS server)

See section "Populating Hosts Files" on page 190.

Clear Host files (network with DNS Server)

See section "Populating Hosts Files" on page 190.

Get All EVS Logs

Used to grab EVS logs from all the workstation members of the workgroup.

See section "Managing Logs" on page 188.

Get All IPDirector Logs

Used to grab IPDirector logs from all the workstation members of the workgroup.

See section "Managing Logs" on page 188.

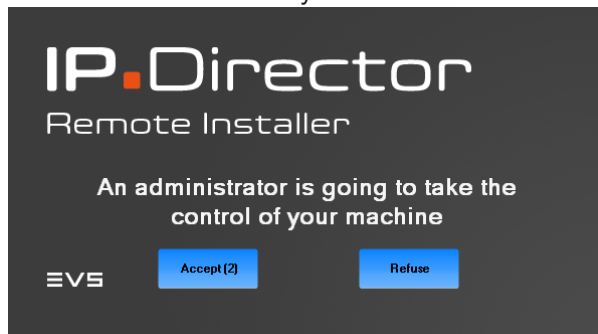
Clear All IPDirector Logs

This remote process clears all the C:\EVSLogs/IPDirector folders located on the workstation system disks from the workgroup.

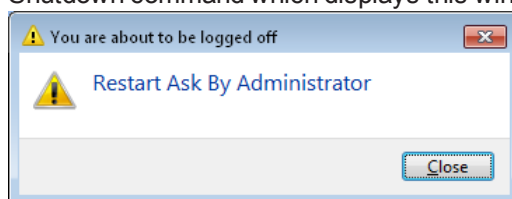
Restart All Machines

This remote process allows restarting all the workstations within the current workgroup.

On distant workstations where a restart order has been remotely given, a warning message is displayed. The users of this workstation can click **Refuse** within the 10 seconds countdown if they want to counter the remote shutdown operation.



After accepting or waiting for 10 seconds, the shutdown process calls a Windows Shutdown command which displays this window for 20 seconds.

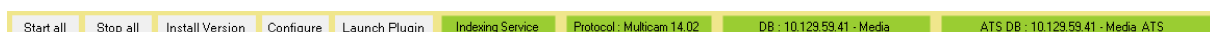


Once this message is displayed, users cannot stop the system shutdown command. Please quickly save all work in progress and log off. Then, the complete Restart All Machine sequences may take more than 30 seconds to begin on distant stations.

Workgroup Toolbar

Workgroup Functionalities in Edit Mode

In Edit mode, several buttons are available on the top right of the Workgroup area to perform actions on the whole workgroup.



Start All

Clicking this button start all programs on all IPDirector workstations of the workgroup. This means:

- the "mandatory" IPD-Routing and SynchroDB services
- the IPDirector application: the Login screen is displayed when the workstation is not integrated into an Active Directory domain.
- the Remote Installer services set to **Auto Start**. This can be IP-Scheduler, VTR Engine, IP Drive, IP API, Router Control, ATS and EVS Registry.

Stop All

Clicking this button stops all running programs (IPD-Routing, SynchroDB, IPDirector, IP-Scheduler, VTR Engine, IP Drive, IP API, Router Control, ATS and EVS Registry) on all workstations of the workgroup.

Install Version

Clicking this button displays a menu with the options to install a new IPDirector package or a new Remote Installer version on the IPDirector workstations within the current workgroup.

Install Package

Select **Install Package** to install an IPDirector package, an IPBrowse or IPClipLogger (.ipd file).

The package will be imported and automatically activated.

See sections "Installing IPDirector Package" on page 32 and "Installing IPBrowse or IPClipLogger from the Remote Installer" on page 213.

Install Remote Installer Version

Select **Install Remote Installer Version** to force the installation of the current Remote Installer version.

The Remote Installer version will be deployed on all IPDirector workstations within the current workgroup.



WARNING

As the deployment is an automatic process, be careful if a Remote Installer is open when installing a new station with a newer version. This version will be spread over the whole workgroup.

See section "Installing a Remote Installer Version on Other Workstations" on page 30.

Configure

Clicking this button displays the Edit Workgroup window to configure all the workstations of the workgroup.

See section "Configuring the Workgroup Parameters" on page 53.

Launch Plugin


Clicking this button displays the list of available plugins.

Refer to the Application Note IPDirector [version number] HTA.

Indexing Service

The **Indexing Service** button has two functions.

- It gives access to the IPDirector Indexing Service web interface used to monitor and manage the Indexing service.
- Its color code gives information on the workgroup Indexing service status:

 all services are stopped.


 a component displays an warning/error; missing redundancy


 a component needs to be started; missing components


 services are started

Protocol Multicam [Version]

This icon shows the Multicam version selected via **Configure**. Its color gives indication on the compatibility between the Multicam versions on the different EVS video servers.

 is displayed when all the services are stopped and therefore version compatibility cannot be checked.

 is displayed when all the services are started and all the EVS servers have the Multicam version selected via **Configure**.

 is displayed when all the services are started and at least one EVS server has a Multicam version different than the one selected via **Configure**.

DB [IP address] [Database Name]

The **Database** button shows the IP address and the database name. Its color gives indication on database status.

Right-clicking this button displays a menu with different options to configure, backup, restore, clean or upgrade the database, or to execute script.

See section "Maintaining the Database" on page 33.

A left click displays database information.

ATS DB [IP address] [Database Name]

The **ATS DB** button shows the IP address and the name of the database used for the ATS service. Its color gives indication on ATS database status.

When no archiving system is used, this does not have to be configured.

Right-clicking this button displays a menu with different options to configure, upgrade the database.

See section "Configuring the Archive Parameters" on page 227

A left click displays ATS database information.

Workgroup Functionalities in Read-Only Mode

The workgroup functionalities are not available in Read-only mode.



The **Configure** button is replaced by a **View Config** button which gives access to a read-only view of the Edit Workgroup window.

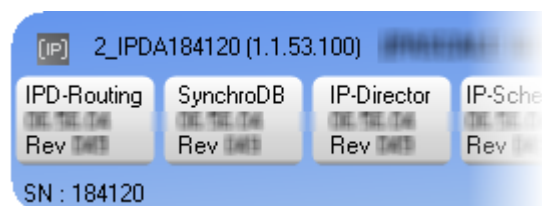
The **Database** and the **ATS DB** buttons do not give access to the configuration options. Only the Database Information window is available.

2.2.4. Workstation

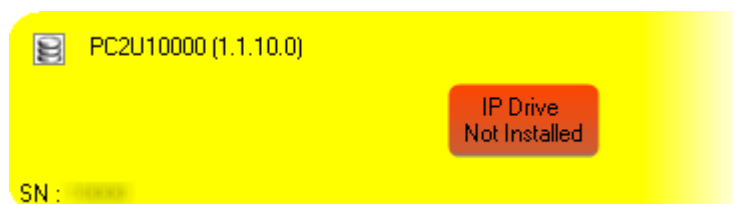
Workstation Status Color Code

The background color of each workstation line gives indication on the workstation status.

- A BLUE color background indicates that the machine has the same version as the first workstation in the list and that no conflict has been detected.

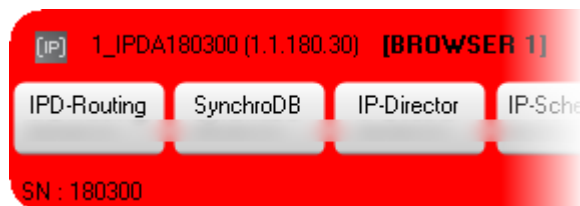


- A YELLOW color background means that some IPDirector software components have incompatible versions or that some workstations do not have the same version installed.



- A RED color background indicates a conflict has been detected in the configuration settings:
 - SynchroDB server management. See section "Configuring SynchroDB" on page 151.
 - local machine number. See section "Setting Network Information for the Workstation" on page 44.

- DB configuration. See section "Resolving a Database Conflict" on page 34.
- no serial number defined. See section "Configuring Serial Number" on page 48.
- ...



- An ORANGE color background indicates that a restart of the workstation is needed.



A warning is also displayed in the Status bar:



Workstation Contextual Menu

A contextual menu is available when right-clicking the workstation colored area.

Start All

Starts all the following services on the selected workstation:

- the mandatory services: IPD-Routing and SynchroDB
- the Remote Installer services set to **Auto Start**. This can be IP-Scheduler, VTR Engine, IP Drive, IP API, Router Control, ATS and EVS Registry.
- the IPDirector application: the Login screen is displayed when the workstation is not integrated into an Active Directory domain.

See section "Starting Services" on page 147.

Stop All

Stops all services on the selected workstation.

See section "Stopping Services" on page 149.

Send Version

Send an IPDirector package on a specific workstation. It allows upgrading an incompatible workstation within a workgroup without stopping all programs on the other members.

See section "Installing IPDirector Package" on page 32.

Send Current Remote Installer Version

Used to send the current Remote Installer version on a specific workstation.

See section "Installing a Remote Installer Version on Other Workstations" on page 30.

Configure Database

Used to edit the database configuration on a specific workstation.

It allows modifying database characteristics on a workstation in conflict with its own workgroup.

See section "Setting the Database Information" on page 43.

Configure Network Information

Used to configure the workstation network information: local machine number, workgroup containing the workstation.

It is also used in the case when several machines have the same network number.

See section "Setting Network Information for the Workstation " on page 44.

Configure Serial Communication

Used to define the type of device connected to the workstation serial ports.

See section "Configuring the Serial Ports" on page 45.

Configure Serial Number

Used to define a serial number on all the workstations listed in the Remote Installer.

It is also used in case a workstation does not have a valid registered serial number.

See section "Configuring Serial Number" on page 48.

View IPD logs

Used to display the distant EVSLogs\IPDirector folder in a local Explorer window.

As soon as an IPDirector service is started on a workstation, it shares the EVSLogs folder. It allows opening the log folders from any location on the network using its UNC path.

Get EVS Logs

Used to grab EVS logs from one workstation on the network.

See section "Managing Logs" on page 188.

Get IPDirector Logs

Used to grab IPDirector logs from one workstation on the network.

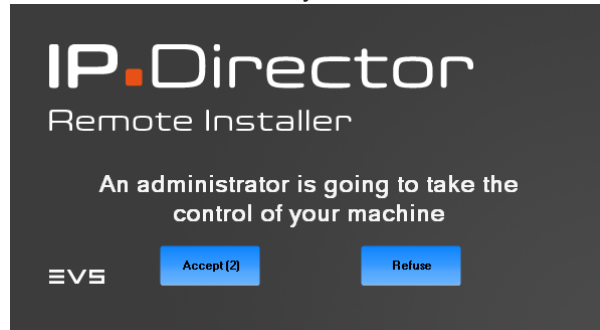
See section "Managing Logs" on page 188.

Clear IPDirector Logs

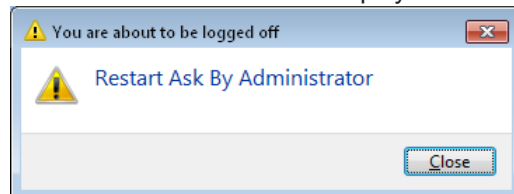
This remote process clears the EVSlogs\IPDirector folder located on the workstation system disk.

Restart Machine

This remote process allows restarting a specific workstation from the Remote Installer. On distant workstations where a restart order has been remotely given, a warning message is displayed. The users of this workstation can click **Refuse** within the 10 seconds countdown if they want to counter the remote shutdown operation.



After accepting or waiting for 10 seconds, the shutdown process calls a Windows Shutdown command which displays this window for 20 seconds.



Once this window is displayed, users cannot stop the system shutdown command. Please quickly save all work in progress and log off. Then, the Restart Machine sequence may take more than 30 seconds to begin.

Restart Remote Installer

This remote process allows restarting the Remote Installer on a specific workstation. The distant workstation displays message information:



Then the Remote Installer icon appears and the workstation tab is again visible within the Remote Installer.

Remote Desktop

This remote process allows using the Remote Desktop Protocol included in the Windows OS. It displays the screen of another computer on your own screen and allows you to control the other computer remotely. See section "Remotely Accessing a Workstation" on page 194.

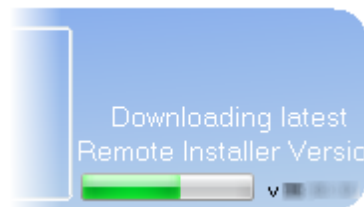
2.3. Installing a Remote Installer Version on Other Workstations

How to Install the Current Remote Installer Version on all Workstations at Once

1. Click the **Install Version** button.
2. Select **Install Remote Installer Version** from the menu.

The IPDirector starts to install the version on all IPDirector workstations of the current workgroup.

A progression bar shows the installation progress on each workstation listed in the Remote Installer.

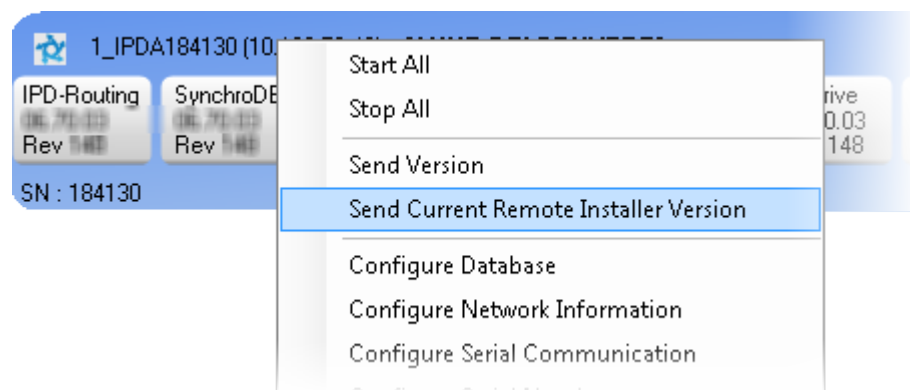


3. Wait until all progress bars have finished.

The Remote Installer will restart at the end of the installation.

How to Install the Current Remote Installer Version on a Single Workstation

1. Right click the workstation area
2. Select **Send Current Remote Installer Version** from the menu.



3. Answer **Yes** to confirm the workstation selection.
4. Wait until the progress bar has finished and the Remote Installer has restarted.

**NOTE**

In order to work properly, all IPDirector workstations connected to the network must be set to the same Ethernet frame size. It is recommended to work with standard Ethernet frames (MTU 1500) or Jumbo Ethernet frames (MTU 9000). Avoid mixing the two sizes.

2.4. Installing IPDirector Package

How to Install the Package Version on all Workstations at Once

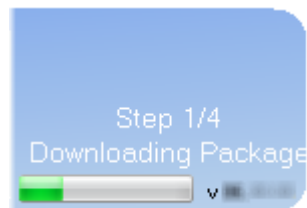
1. Make sure the Remote Installer version has been installed on every workstation.
2. Stop running services on all the workstations of the workgroup by clicking **Stop all**.
3. Click the **Install Version** button and select **Install Package** from the menu.

A window opens.

4. Browse to the directory where the IPDirector package file is located (.ipd file).
Usually the package name corresponds to the IPDirector package version.
5. Click **Open**.

The Remote Installer starts to install the package on all workstations.

A progression bar shows the installation progress on each workstation listed in the Remote Installer.



6. Wait until all progress bars have finished.

After refresh, the blue background of the workstation areas indicates that the version has been successfully installed and that versions are compatible.

All the services are installed with the package installation (IPD-Routing, SynchroDB, IPDirector, IP-Scheduler, VTR Engine, IP Drive, IP API, Router Control, ATS and EVS Registry)

How to Install the Package Version on a Single Workstation

1. Right click the workstation area.
2. Select **Send Version**.
3. Browse to the directory where the IPDirector package file is located (.ipd file).
Usually the package name corresponds to the IPDirector package version.
4. Click **Open**.
5. Wait until all progress bar has finished.

2.5. Maintaining the Database

2.5.1. Introduction

Possible Actions on the Database

A right-click on the **Database** button on the top right part of the window gives access to a contextual menu allowing the following actions:

- Defining all database parameters necessary to set up your IPDirector environment
- Backing your database up to a file
- Restoring an empty or a previously backed up database file
- Cleaning the database
- Upgrading automatically the DB to the current version
- Executing scripts (for example, to upgrade an older version of the database to the current DB format or get DB info to identify the restored DB file or version).

Database Status

The background color of the **Database** button gives indication on the database status.

Green

The database configuration was successful.



Orange

This indicates a wrong version of database within the workgroup.



See section "Upgrading the Database" on page 39.

Red

This indicates a database conflict within the workgroup.



See section "Resolving a Database Conflict" on page 34.

2.5.2. Resolving a Database Conflict

Context of Use

A red **Database** button highlights a database conflict within the workgroup.

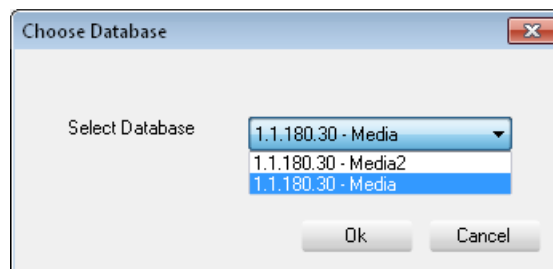
This is the case when one or several workstations point to another database.

Database conflict on this WorkGroup

How to Resolve a Database Conflict

1. Make sure all running programs are stopped.
2. Right-click the **Database** button.
3. Select **Configure**.
4. From the Choose Database window, select your database server, represented by its name or IP address.

Since Version 6, if two DB instances are hosted on the same DB server, the instance name is also displayed to ease the selection.



2.5.3. Configuring the Database

Context of Use

This step is used to specify the parameters of the database server.

When more than 3 IPDirector workstations are connected together on the same IP Network, the database must be run on a separate dedicated workstation.

The procedure described hereafter is also used when all workstation were fresh installed and the default value for the database setting is taken into account. Then, **Database** button is orange and mentions 127.0.0.1, which is the local host IP address.

Wrong DB version on 127.0.0.1

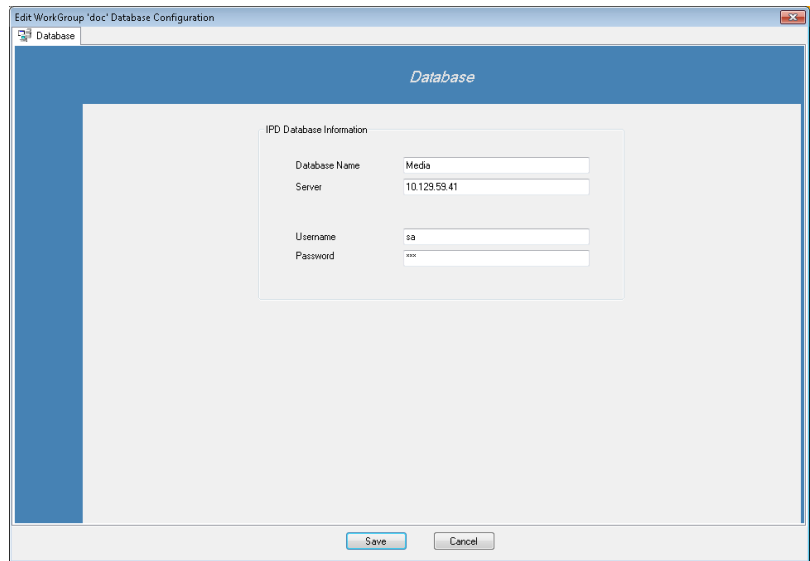
This address cannot be kept as a valid workgroup database address if the workgroup contains more than one workstation. Only one database on one workstation must be chosen for the workgroup.

How to Configure the Database

To configure your database,

1. Make sure all running programs are stopped.
2. Right-click the **Database** button.
3. Select **Configure** from the menu.

The Database Configuration window opens:



4. Fill in the fields as follows.

Field	Comment
Database Name	By default, the name of the database on the network is Media since IPDirector version 5. EVS strongly recommends keeping the default value.
Server	Specify the name of the server where the database is located. This server can be the local IPDirector workstation, another IPDirector workstation or a dedicated SQL database server. You may specify the IP address of the workstation or the computer name.
Username	This typically does not change. Default value: sa . You can change this value, as long as the database Username has also been changed.
Password	This typically does not change. Default value: evs . You can change this value, as long as the database Password has also been changed.

5. Click **Save**.

The **Database** button becomes green to indicate that the DB configuration was successful.

DB : 10.129.59.41 - Media (example of IP address)

How to Check the Database Configuration

(Left-)Click the **Database** button.

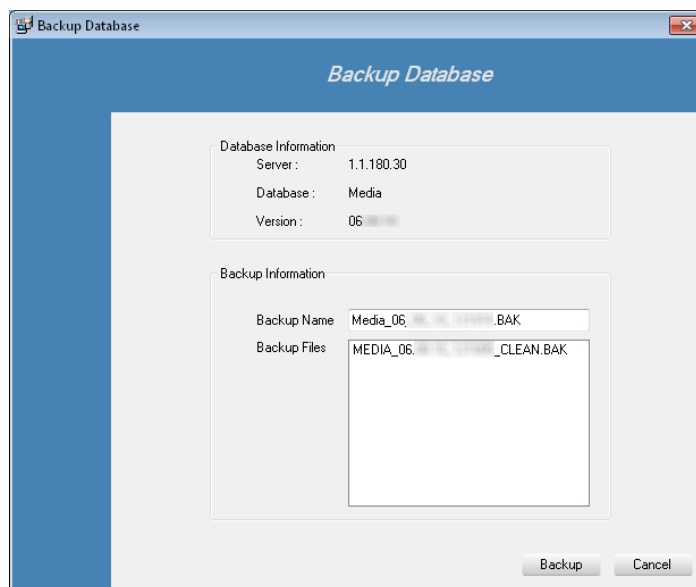
The Database Configuration window opens.

2.5.4. Backing up the Database

To create a backup file of your database, the **Database** button must be green.

1. Right-click the **Database** button.
2. Select **Backup** from the menu.

The Backup Database window opens.



3. Check the Database Information parameters.

If they are not correct, click **Cancel** and select the **Configure Database** from the Database contextual menu to modify them.

See section "Configuring the Database" on page 34.

4. Do one of the following actions:

- a. To create a new backup file, enter a name for the file in the **Backup Name** field.

Default value is the current DB Version Name + Date + .BAK

It is recommended to give a name to the file which describes the contents of the database being backed up.

Example: Media_06_XX_XX_YYMMDD_MyFacilityName.BAK

- b. To overwrite an existing file, if any exist for the current database version on the local PC, select it from the Backup Files list.

It is not recommended to overwrite the original DB file that has been delivered with the software and named with a **_Clean** extension.

5. Click **Backup**

A message will tell you that the database has been successfully backed up.

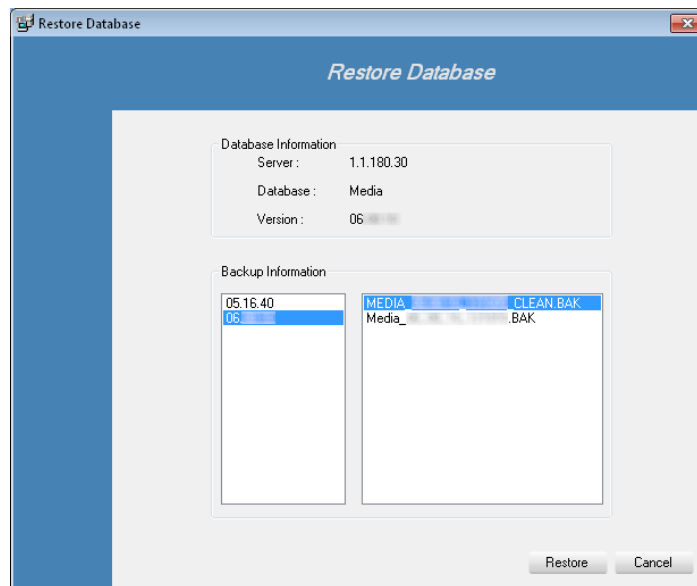
The backup file is created on the workstation where the backup function is performed and is stored in the C:\Program Files (x86)\EVS Broadcast Equipment\IPDirector\Database folder.

2.5.5. Restoring the Database

To restore a backup file to your database, the **Database** button must be green.

1. Right-click the **Database** button.
2. Select **Restore** from the menu.

The Restore Database window opens.



3. Check the Database Information parameters.

If they are not correct, click **Cancel** and select the **Configure Database** option from the Database contextual menu to modify them.

See section "Configuring the Database" on page 34.

4. From the left pane of the Backup Information area, select the database version of the backup file you would like to restore.
5. From the right pane of the Backup Information area, select the file you want to restore.

The clean database version is clearly identified with an extension: **Media_06_XX_XX_YYMMDD_Clean.BAK**.

6. Click **Restore**.

A warning message will ask for confirmation, as all the data will be lost.

7. Click **Yes** to restore the database.

A message will tell you that the database has been successfully restored.

2.5.6. Cleaning the Database



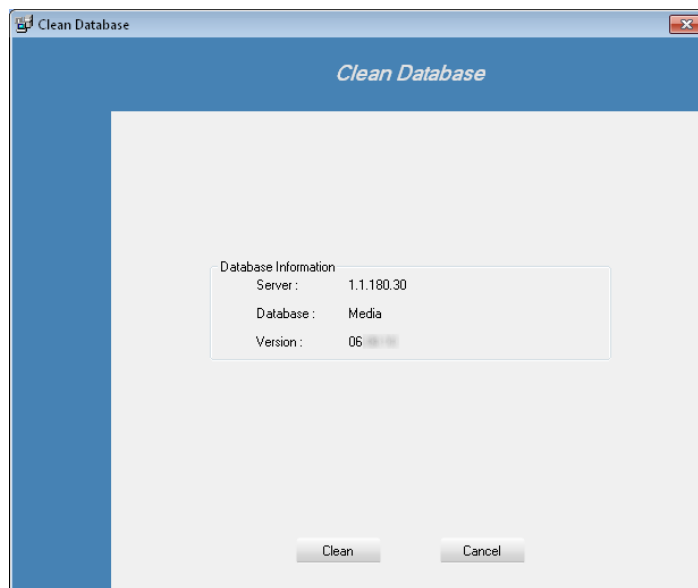
WARNING

All the database content will be removed (Configurations, User Rights, Medias...). The database returns to clean state.

To clean your database, the **Database** button must be green.

1. Right-click the **Database** button.
2. Select **Clean** from the menu.

The Clean Database window opens.



3. Check the Database Information parameters.
If they are not correct, click **Cancel** and select the **Configure Database** from the Database contextual menu to modify them.
See section "Configuring the Database" on page 34.
4. Click **Clean**.
A warning message will ask for confirmation, as all the data will be lost.
5. Click **Yes** to clean the database.
A message will tell you that the database has been successfully cleaned.

2.5.7. Upgrading the Database

Context of Use

The required database version depends on the installed IPDirector version.

The system checks the installed database version roughly every 30 seconds. This process cannot be initiated by a refresh.

An orange **Database** button followed by a DB server IP address highlights a wrong version of database within the workgroup.

Wrong DB version on 1.1.180.30 (example of IP address)

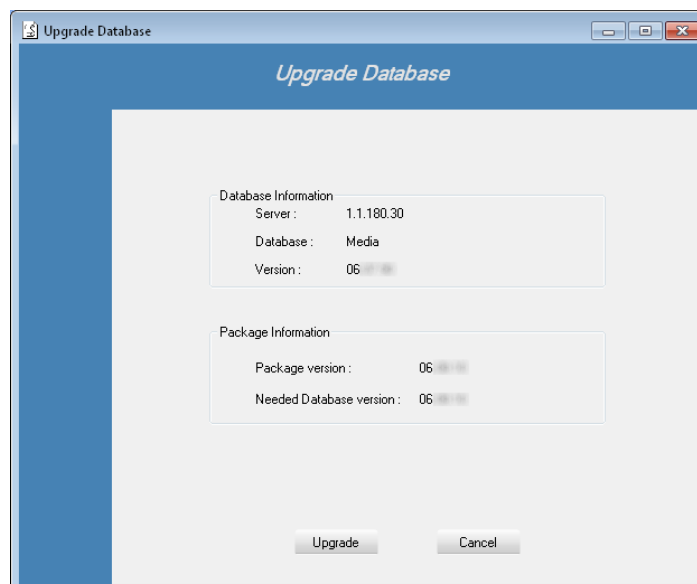
The upgrade process will detect the database version needed regarding the IPDirector version installed, select the appropriated scripts and apply them in the right order.

How to Upgrade the Database

To upgrade the database,

1. Make sure all running programs are stopped.
2. Right-click the **Database** button.
3. Select **Upgrade Database**.

The Upgrade Database window opens.

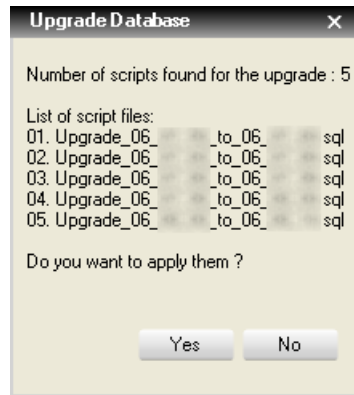


4. Check the Database Information parameters.

If they are not correct, click **Cancel** and select the **Configure Database** from the Database contextual menu to modify them. See section "Configuring the Database" on page 34.

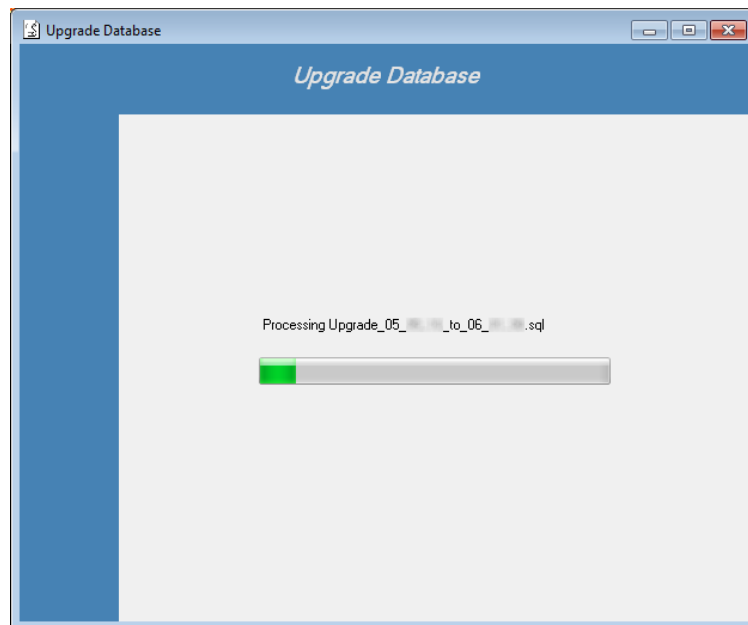
- Click the **Upgrade** button if Database Information parameters displayed are correct.
A window pops up with the list of scripts to be applied.

Example:

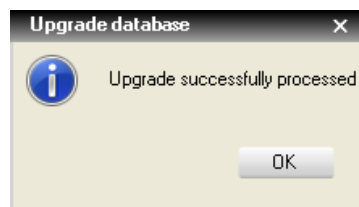


- Click **Yes** to start the upgrade.

This applies the scripts from the old version to the needed database version. The progress bar is displayed:

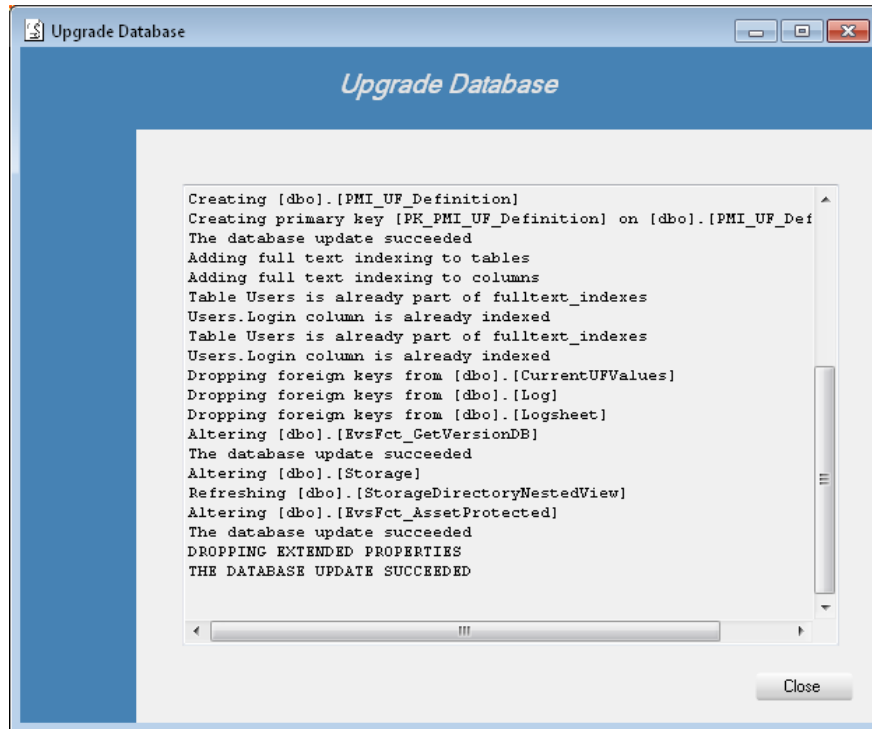


When the upgrade is done, the system tells you it has been successfully processed:



- Click **OK**.

8. From the final report in the Upgrade Database window, check that the message **The database update succeeded** is displayed:



2.5.8. Executing Database Script

Context of Use

It is highly recommended to apply all the required scripts at once by using the **Upgrade Database** option rather than to execute a script by script upgrade by using the **Execute Script** option. See section "Upgrading the Database" on page 39.

The **Execute Script** feature is now mainly used for applying maintenance technical script (s). These scripts can be provided by the EVS Support team to solve a specific issue on your setup.

How to Execute a Database Script

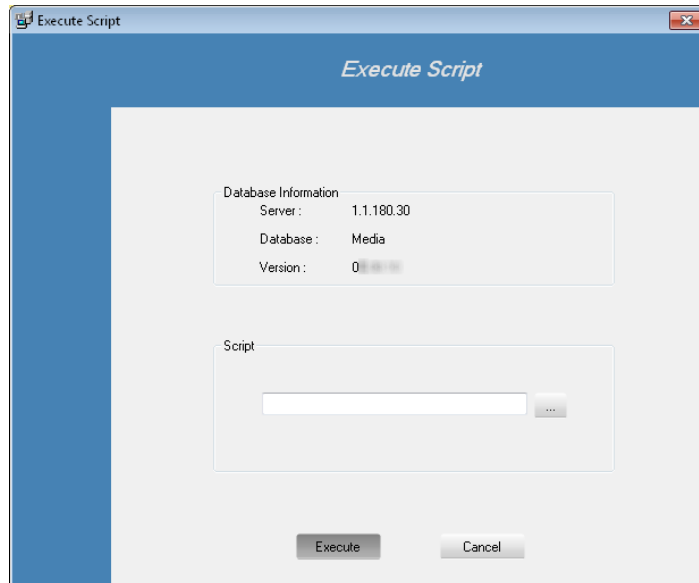
Before executing any script, be sure your SQL server engine is running on your database server.


To execute SQL script on your database, the **Database** button must be green.

1. Right-click the **Database** button.

2. Select **Execute Script** from the menu.

The Execute Script window opens.



3. Check the Database Information parameters.
If they are not correct, click **Cancel** and select the **Configure Database** from the Database contextual menu to modify them.
See section "Configuring the Database" on page 34.
4. Click the **Browse** button  to display the list of available scripts.
5. Select the script file to execute and click **Open**.
The selected script is displayed in the **Script** field of the Execute Script window.
6. Click **Execute**.
A warning message will ask for confirmation.
7. Click **Yes** to execute the script.
A message will tell you that the script has been successfully executed.

2.6. Configuring the Workstation Parameters

2.6.1. Setting the Database Information

Context of Use

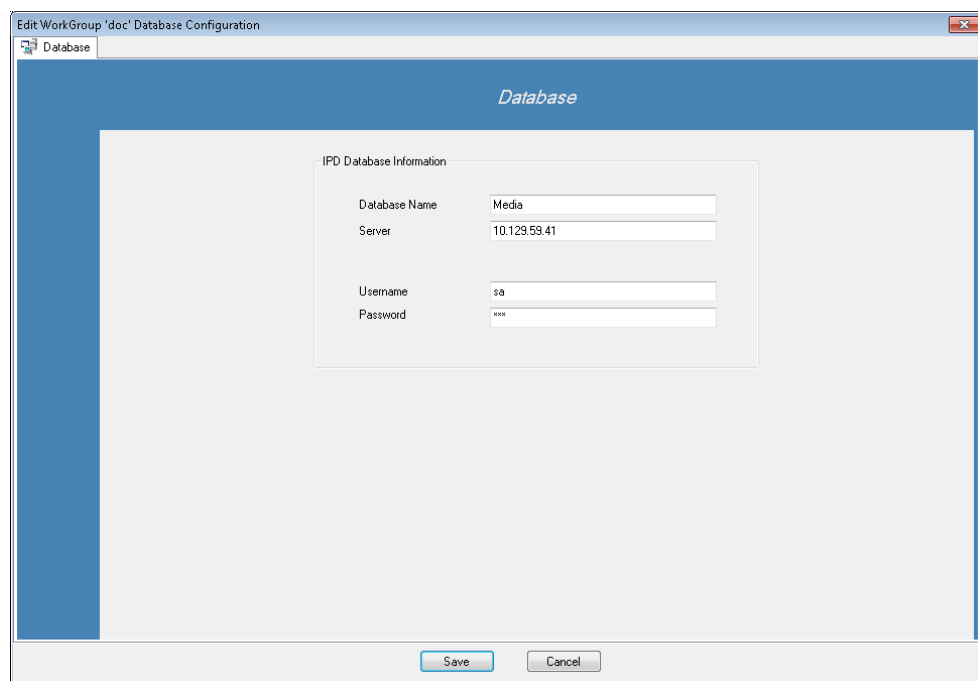
This step is used to edit the database configuration on a specific workstation.

It allows modifying database characteristics on a workstation in conflict with its own workgroup without stopping all programs on the other members.

How to Set the Database Information

1. Stop all the services on the workstation to edit.
2. Right-click the Workstation name.
3. Select **Configure Database** from the contextual menu.

The Database configuration window is displayed:



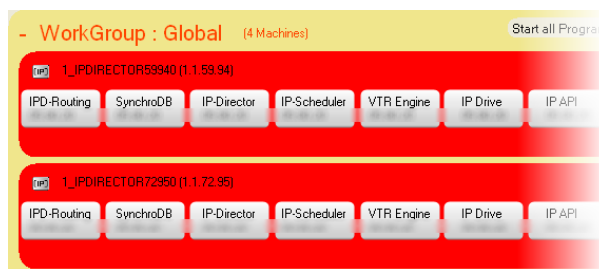
4. Modify the Server name (Computer Name or IP address) to specify your new database containing a valid Login/Password.

2.6.2. Setting Network Information for the Workstation

Context of Use

This step is used to configure the workstation network information: local machine number, selection of workgroup containing the workstation.

It is also used in case several machines have the same network number. Then, a conflict is detected by the Remote Installer and the background color of these workstations is red.



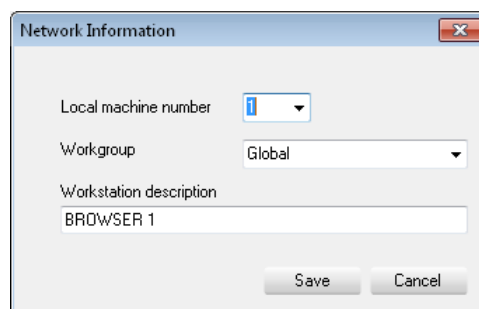
On the Status bar, at the lower right corner of the window, the **NumUser** status is red also.

NumUser

How to Configure Network Information

1. Make sure all running programs are stopped.
2. Right-click the Workstation name.
3. Select **Configure Network Information** from the contextual menu.

The Network Information window is displayed:



4. From the **Local Machine Number** field, select the Local machine number.

The Local machine number field is used to assign an ID to an IPDirector workstation in the network. All workstations in the network must have a different number and must be from 1 to 255.



5. From the **Workgroup** field, select the Workgroup the workstation belongs to.

The Workgroup defines the workgroup name (16 characters maximum) to be used by this IPDirector workstation. Normally all workstations MUST be in the same defined workgroup name. See section "Workgroup Contextual Menu" on page 21.

6. In the **Workstation Description** field, enter a description.

This free-text will be displayed beside the Computer Name and IP address of the workstation. As a technical assistance, it can give the identity of a workstation in the workgroup.

Example: The workstation is dedicated for a browsing usage in room 1.



7. Click **Save**.

2.6.3. Configuring the Serial Ports

Context of Use

This step is used to define the type of device connected to the workstation serial ports.

Two kinds of RS422 connections exist:

- AVH-RS422: using an internally mounted EVS USB to RS422 module.
- COM: using a RS422/RS232 port on the station motherboard.

4 AVH-RS422 connections and 6 COM connections are possible. However, only 4 connections may be managed from one IPDirector workstation at any time.

Different types of devices can be connected to a serial port.

- MPlay: This remote is used to control the playout of clips, playlists or graphics. It is designed to simultaneously control up to 4 player channels. Its buttons can be configured, from the IPDirector interface, to perform classic transport functions.
- BEPlay: This remote controller is used for browsing, editing and playing content. It can be configured, from the IPDirector interface, to control selected channels and to send media to predefined destinations.
- VTR: controlled by the VTR Engine service.
- EVS Server (server connection).
- Router Control: controlled by the Router Ctrl service.

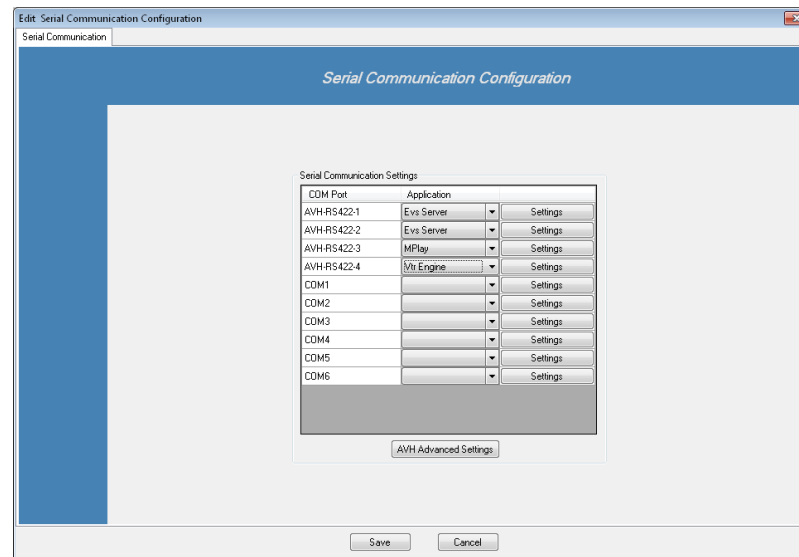
The **Router Control** option is displayed provided that a router has been configured and the Router Ctrl service has been configured. It automatically appears next to the right port as soon as it is selected from the Edit [Workstation] Router Control Management window. See section "Defining the Workstation Responsible for the Control of the Router" on page 223.

All parameters are local to the IPDirector workstation and must be set independently on all IPDirector workstations.

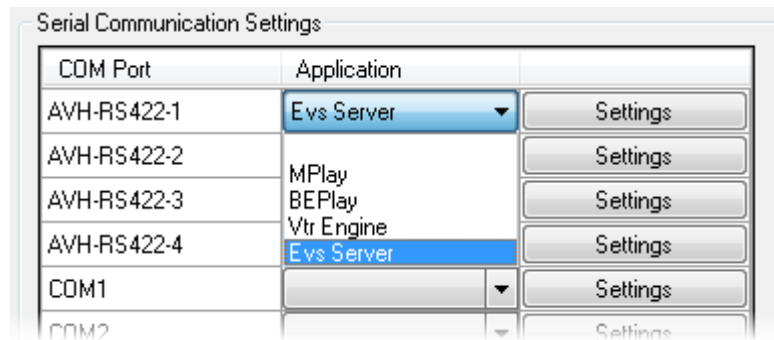
How to Configure Serial Communication

1. Make sure that all concerned services are stopped.
2. Right-click the Workstation name.
3. Select **Configure Serial Communication** from the contextual menu.

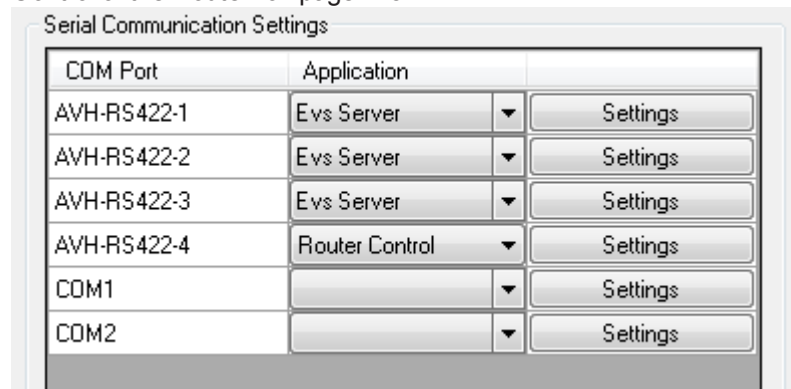
The Serial Communication Configuration window is displayed:



4. For each port used, select the hardware type connected to that port from the **Application** menu:

**NOTE**

The **Router Control** option is automatically displayed next to the right port when the port has been associated with a router during router control configuration. See section "Defining the Workstation Responsible for the Control of the Router" on page 223.



Only 4 connections may be managed from one IPDirector workstation at a time.

Leave the **Application** field empty if the port is not used.

5. Click the **Settings** button to define the settings for MPlay, BEPlay, Vtr Engine.

The **Settings** button is not available when **EVS Server** is selected, as no setting is needed.

A Settings window specific to the selected Application opens.

6. Select or enter the settings and click **Close**:

- MPlay: Specify the **Baud rate**, **Data bits**, **Parity** and **Stop bits** of the serial protocol used by the Remote.
- BEPlay: Specify the **Baud rate**, **Data bits**, **Parity** and **Stop bits** of the serial protocol used by the Remote.
- Vtr Engine:

Basic Settings:

COM Port: Shows the RS422 port connected to VTR (COM1 to COM6 or AVH-RS422-1 to AVH-RS422-4).

VTR Name: The VTR name is used in the VTR Control Panel in the IPDirector interface.

Description: Enter a description for your facility.

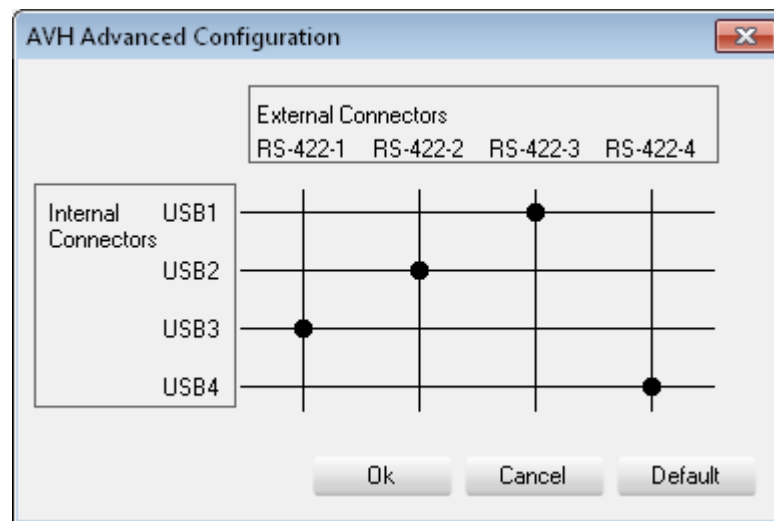
Default Recorder: Select the server Default Recorder connected to the VTR. The VITC of this recorder is taken for ingests.

Advanced Settings:

Specify the **Baud rate**, **Data bits**, **Parity** and **Stop bits** of the serial protocol used by the VTR.

- Click the **AVH Advanced settings** button to defined the connections between physical external RS-422 connectors and internal associated Windows USB ports.

The AVH Advanced Configuration window opens:



To keep the default parameters, click **Default**.

- Click **OK**.
- Click **Save** from the Serial Communication Configuration window.

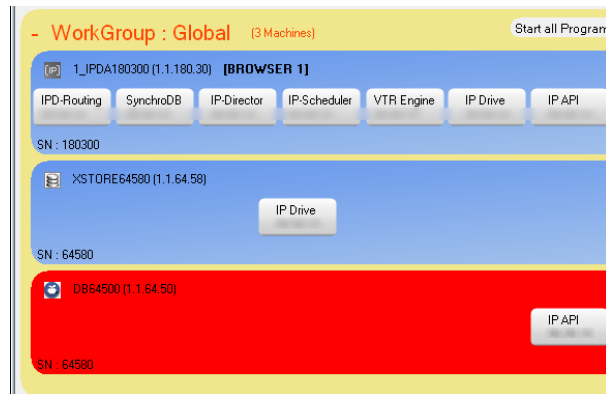
2.6.4. Configuring Serial Number

Context of Use

This step is used to define a serial number on all the workstations listed in the Remote Installer.

All EVS applications require a serial number in order to generate a unique UmID for clips or files.

In case a workstation does not have a valid registered serial number, the background color of this workstation is red.

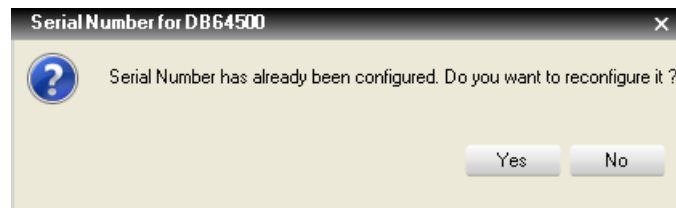


On the Status bar, at the lower right corner of the window, the **Serial Number** status is red as well:

Serial Number

How to Configure Serial Number

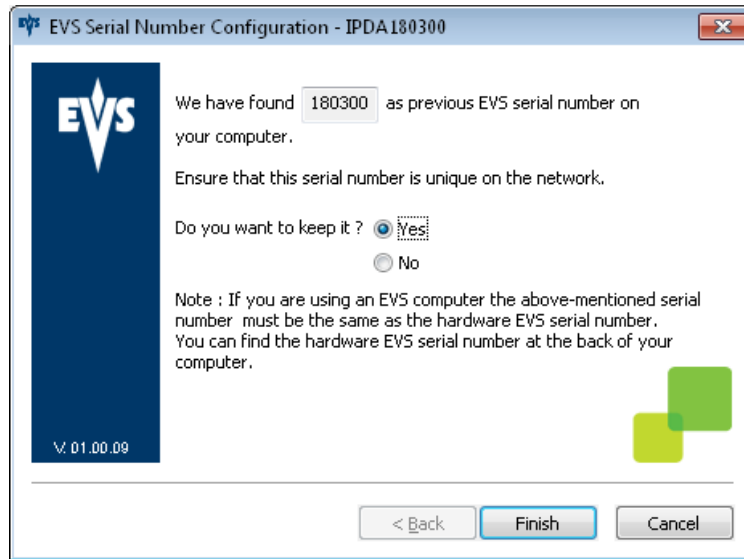
1. Right-click the Workstation name.
2. Select **Configure Serial Number** from the contextual menu.
 - If a Serial Number is already defined, trying to configure it again displays a pop-up window:



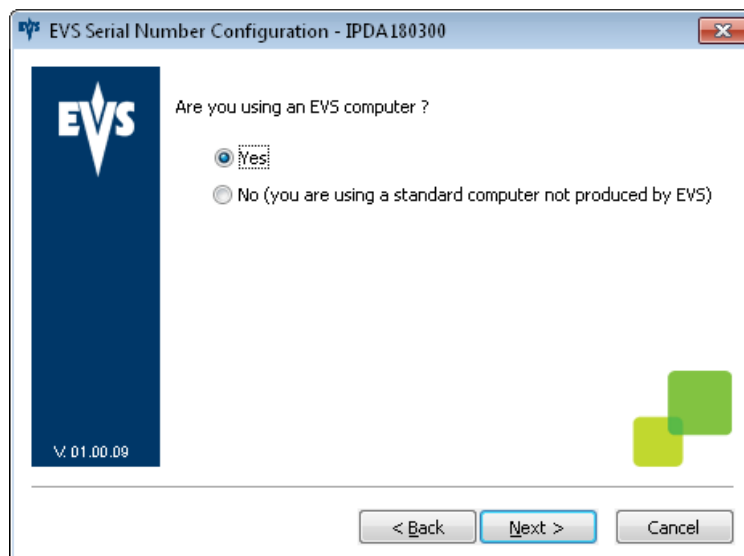
Click **Yes** if you want to continue. Then, the EVS Serial Number Configuration application is launched.

- If a conflict exists on the workstation, the EVS Serial Number Configuration application is launched.
3. Answer the question from the EVS Serial Number Configuration window.
Three different cases can come up.

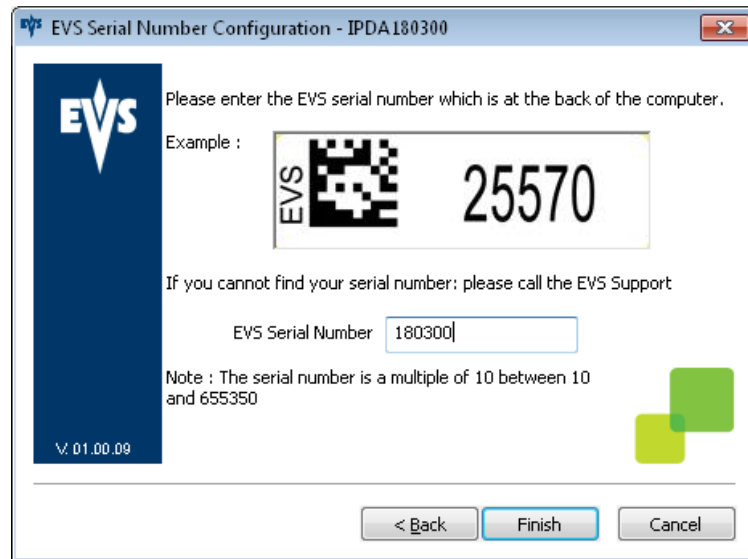
- If a previous Serial Number is found in any configuration settings (file or registry), the application shows this message:



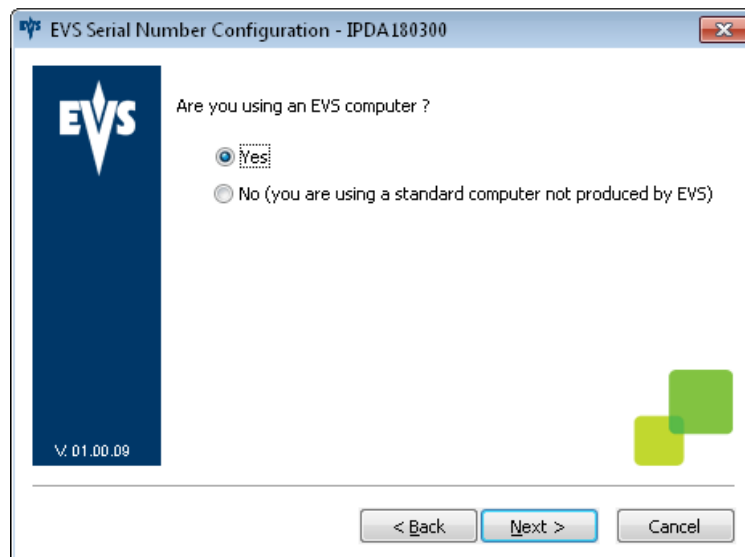
- a. Check the serial number
 - b. Keep the default value **Yes**
 - c. Click **Finish**.
- If no Serial Number can be found on the system and the computer is produced by EVS, the application displays a series of questions:



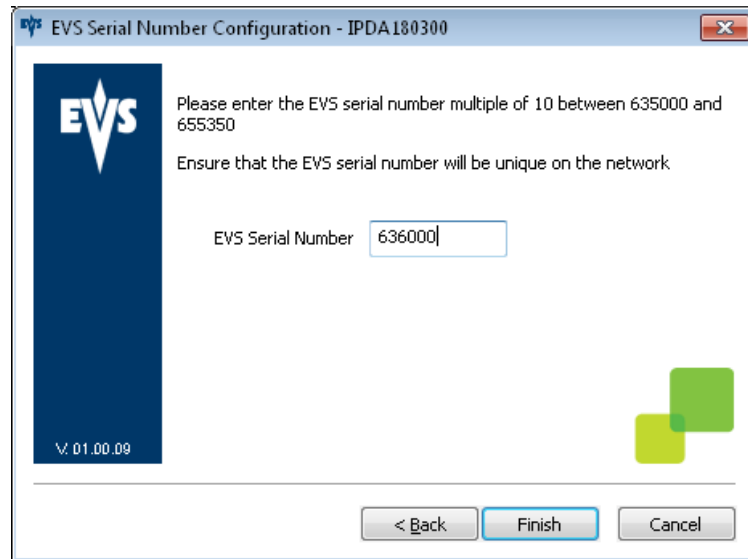
- a. Keep the default value **Yes**
- b. Click **Next**.



- c. Enter the serial number found on the back (or side) of the computer. The serial number is a number multiple of 10 between 10000 and 655350. The serial number must be unique.
- d. Click **Finish**.
- If no Serial Number can be found on the system and the computer is not produced by EVS, the application displays a series of questions:



- a. Select the non default value **No**
- b. Click **Next**.



- c. Enter a serial number multiple of 10 between 635000 and 655350. The serial number must be unique.
- d. Click **Finish**.

Once the Serial Number is configured, an entry in the registry of Windows will be used by any EVS application.

The background color status of the workstation becomes blue in the Remote Installer and the Serial Number is displayed on IPDirector workstation.



2.7. Configuring the Workgroup Parameters

2.7.1. Introduction

All the parameters necessary to set up the IPDirector environment are configured from the Edit Workgroup [Name] General Parameters window, available by clicking the **Configure** button.

Be sure your database parameters have been correctly defined before configuring all parameters. See section "Configuring the Database" on page 34.

The Edit Workgroup window provides a series of tabs for the configuration of various parameters:

- **General** Parameter configuration used by the application
- **Storage Priorities** configuration used by the target engine and the software player.
- **XT Networks** configuration (logical server network creation)
- **Services** configuration (defines the user used for logging services)
- **LAN and WAN** Configuration (for advanced network configuration)
- **SynchroDB**: Load Balancing configuration for SynchroDB network configurations.
- **XML Unit** defines which Xsquare workstations will manage the transfer to targets defined from the Remote Installer
- **Thumbnails** configuration (defines the automatic thumbnail creation).
- **Targets** configuration (standard Send to, AVID TM export, Clean Edit export, server export and Final Cut Pro export)
- **Xsquare**: used to connect to Xsquare, retrieve the list of Xsquare targets from IPDirector applications and set a default template for backup to nearline/restore to XT operations.
- **IP Logger Export** settings regarding Third Party logging export.
- **Near Line Management** configuration (defines static directories managed on the network)
- **Define varID groups** configuration (organizes servers in varID groups)
- **As will run log** configuration (defines PGM monitored and folder for the production playlist logging)
- **Playlist** configuration (defines 6 headers of the playlist element metadata)
- **Redundancy** configuration (defines master/slave servers for IpEdit and Edit to Air)
- **IP-API** configuration (defines general parameters used by all the IP API services)
- **Director's Cut** configuration (defines the gateways to be managed)
- **Router Control**: used to declare the router to control. See section "Declaring the Router" on page 222.

- **Router Control Channels:** used to configure the physical connections between a router and a server. See section "Configuring the Physical Connections between a Router and a Server" on page 225.
- **Archive:** used to enable the archive process in IPDirector and to configure the archive system parameters and the archive database information.

2.7.2. General Parameters Configuration

Overview of the General Tab

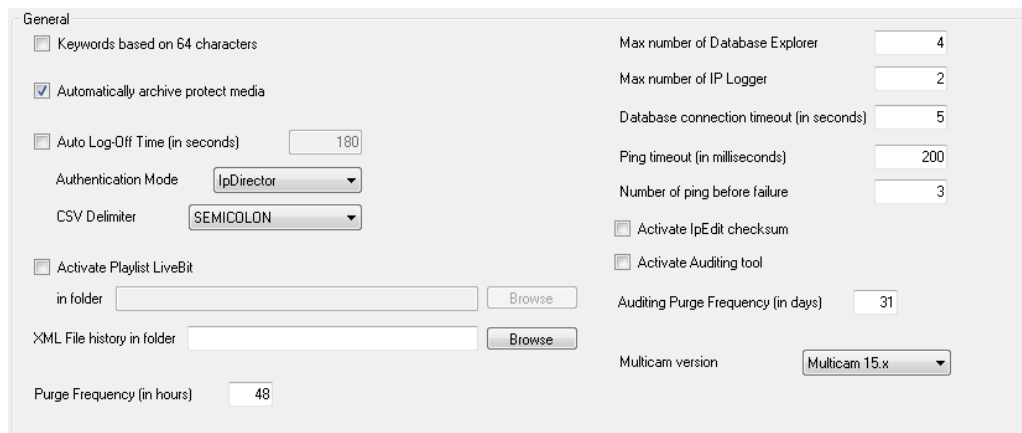
The screenshot shows the 'General Parameters' configuration window. The window title is 'Edit WorkGroup 'doc' General Parameters'. The 'General' tab is selected. The window is divided into several sections:

- General:**
 - ☐ Keywords based on 64 characters
 - ☒ Automatically archive protect media
 - ☐ Auto Log-Off Time (in seconds)
 - Authentication Mode:
 - CSV Delimiter:
 - ☐ Activate Playlist LiveBit
 - in folder:
 - XML File history in folder:
 - Purge Frequency (in hours)
 - Max number of Database Explorer:
 - Max number of IP Logger:
 - Database connection timeout (in seconds)
 - Ping timeout (in milliseconds)
 - Number of ping before failure:
 - ☐ Activate IpEdit checksum
 - ☐ Activate Auditing tool
 - Auditing Purge Frequency (in days)
 - Multicam version:
- Database Explorer:**
 - ☒ Auto-refresh mode of Database Explorer
 - ☒ Auto-refresh in filter mode
 - Max number of items to display in browser (if activated)
 - Search retention period
- Associations:**
 - ☒ Auto-associate clips to logs
 - ☒ Auto-associate Keywords to clips
 - ☒ Notify Associations
 - ☒ Auto-associate clip at startUp
 - ☒ Auto-associate level rating to clips

At the bottom of the window are three buttons: , , and .

General Section

NEW !



Keywords based on 64 characters

The IPDirector can work either with 12 characters keywords or with 64 characters keywords.

- In the 12 characters mode:
Keywords are pushed to clips on the servers and are visible in server and IPDirector Interfaces (clip keywords are synchronized between the server database and the IPDirector database).
- In the 64 characters mode:
Keywords can be 64 characters long but are no longer pushed to clips on the server. Keywords assigned to clips defined on the server are only visible in the server interfaces and keywords assigned to clips defined on IPDirector workstations are only visible in the IPDirector interfaces. Log keywords are no longer pushed to the clips associated to the logs. (No keyword synchronization between the IPDirector and the servers).

Default value: cleared. IPDirector normally works in 12 characters mode.



NOTE

EVS suggests using the 64 characters mode only on major events or facilities where this function is required. It is not possible to return to a 12 characters keyword mode without clearing the IPDirector database.

Automatically archive protect media

If this option is selected, all protect media created for a log sheet will be automatically archived on the machine as default in the settings of the server. The clip always moves to the defined session folder on the station.

Default value: selected.

Auto log off

Auto log off Time: the system will automatically log off if the IPDirector has not been used after X seconds.

Authentication Mode

This parameter determines whether the workstation is integrated into an Active Directory domain (**Active Directory**) or not (**IPDirector**).

CSV Delimiter

Allows choosing CSV delimiter in CSV files. You can select Semicolon, Comma, Tab or Space.

Default value: Semicolon



NOTE

If you intend to import the CSV file into Excel, you should use a delimiter that obeys your regional settings as defined inside Windows. For example: In Belgium the delimiter is Semicolon, whereas in North America the default delimiter is a comma.

Activate Playlist LiveBit

Not available for usage without direct consultation with EVS staff. This mode requires specific software and setup provisions.

XML File history in folder

Allows defining a specific history folder for all the XLM files exchanged by the system with the XML Unit(s).

If no folder is defined, the history folder is located by default in the Jobs Done folder of the first XML Unit.

Purge Frequency (in hours)

The purge frequency of the XML File history folder.

Default Value: 48

Max number of Database Explorer

This parameter limits the number of Database Explorer windows opened simultaneously by the IPDirector users.

It avoids forgotten Database Explorer windows in a complex layout. These windows are forgotten and overload the IPDirector database (thus create database latencies).

Default value: 4

Max number of IP Logger

This parameter limits the number of IP Logger windows open simultaneously by the IPDirector User.

As the previous setting, the aim of this parameter is to avoid unwanted traffic to the database.

Default value: 2.

Database connection timeout

This parameter set the previously hardcoded timeout connection request sent to the IPDirector database (in seconds).

Default value: 5 seconds.

Using a distant network connection, we encountered false database status. Increasing the period between two requests reduces the risk of bad status which freezes the user interface.

Ping timeout

This parameter set the previously hardcoded timeout ping request sent to the IPDirector database (in milliseconds).

Default value: 200 milliseconds.

Number of ping before failure

This parameter set the previously hardcoded number of ping sent to the IPDirector database before considering a failure.

Default value: 3



NOTE

We recommend you to keep the default values for these 3 last settings.

Activate IpEdit checksum

This parameter sets the IPEdit in a specific verbose mode that displays messages according the synchronization status between server timeline engine and database.

This mode is not intended to be activated under normal operations.

Activate Auditing tool

This option activate the auditing tool.

This tool records deletion operations of clip elements, playlists and edits in the IPDirector database. The audit log will contain, among others, the user ID of the operator, the item name, the deletion date and time, VarID, UmlID,...

Default value: disable.

Auditing Purge Frequency

This parameter sets the period of time, in days, after which the audit log is deleted.

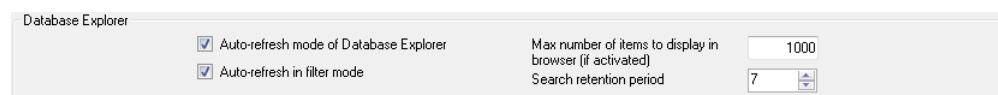
Default value: 31

Multicam Version

This parameter is used to select the Multicam version installed on the EVS video servers.

It must be the same on all the servers.

Database Explorer Section



The screenshot shows a window titled "Database Explorer" with the following settings:

- ☒ Auto-refresh mode of Database Explorer
- ☒ Auto-refresh in filter mode
- Max number of items to display in browser (if activated): 1000
- Search retention period: 7

Auto-refresh Mode of the Database Explorer

This parameter automatically refreshes the Database Explorer of IPDirector. This parameter should be disabled on very large setups (typically when more than 30 workstations are connected together on the same IP network).

Default value: selected.

Auto-refresh in filter mode

This parameter automatically refreshes research items in filter mode in the Database Explorer of IPDirector. This parameter should be disabled on very large setups (typically when more than 30 workstations are connected together on the same IP network).

Default value: selected.

Max number of items to display in browser (if activated)

Specify the maximum number of elements (clips, logs, etc.) that can be displayed at any one time in a list in the IPDirector application.

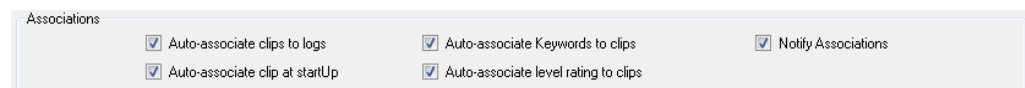
Default value: 1000

Search retention period

This number limits the auto-complete search feature results to the X last days of operation.

Default value: 7 (One week)

Associations Section



Associations					
<input checked="" type="checkbox"/>	Auto-associate clips to logs	<input checked="" type="checkbox"/>	Auto-associate Keywords to clips	<input checked="" type="checkbox"/>	Notify Associations
<input checked="" type="checkbox"/>	Auto-associate clip at startUp	<input checked="" type="checkbox"/>	Auto-associate level rating to clips		

Auto-associate clips to logs

When this option is selected, clips which include log timecode are automatically associated to those logs. If this option is cleared, the automatic association process between clips and logs is not activated.

Default value: selected.

Auto associate clips at start up

If this option is selected, when the SynchroDB service is started, an automatic process will check the association of clips to logs.

Default value: selected.

Auto associate keywords to clips

This option allows the logged keywords to be automatically pushed to their associated clips. If this option is cleared, the keywords are disassociated from their corresponding clips.

Note that if the **Keywords on 64 characters** option is selected, the keywords will not be pushed to the clips on the server side, they will only be pushed to clips on the IPDirector side.

Default value: selected.

Auto associate level rating to clips

This option allows the logged level rating to be automatically pushed to their associated clips. If this option is cleared, levels rating are disassociated from their corresponding clips.

Default value: selected.

Notify associations

When this option is selected, as soon as a clip/log association is created or deleted, a notification is sent to all IPDirector Workstations to refresh their interfaces. If this option is cleared, those notifications will not be automatically sent and a manual refresh should be done in the IPDirector interface to see the clip/log association modifications. It should only be cleared for very large setups when the associations do not have to appear instantly and constantly refreshed. It will lead to less CPU database consumption and will improve the reactivity of the IPDirector interfaces.

Default value: selected.



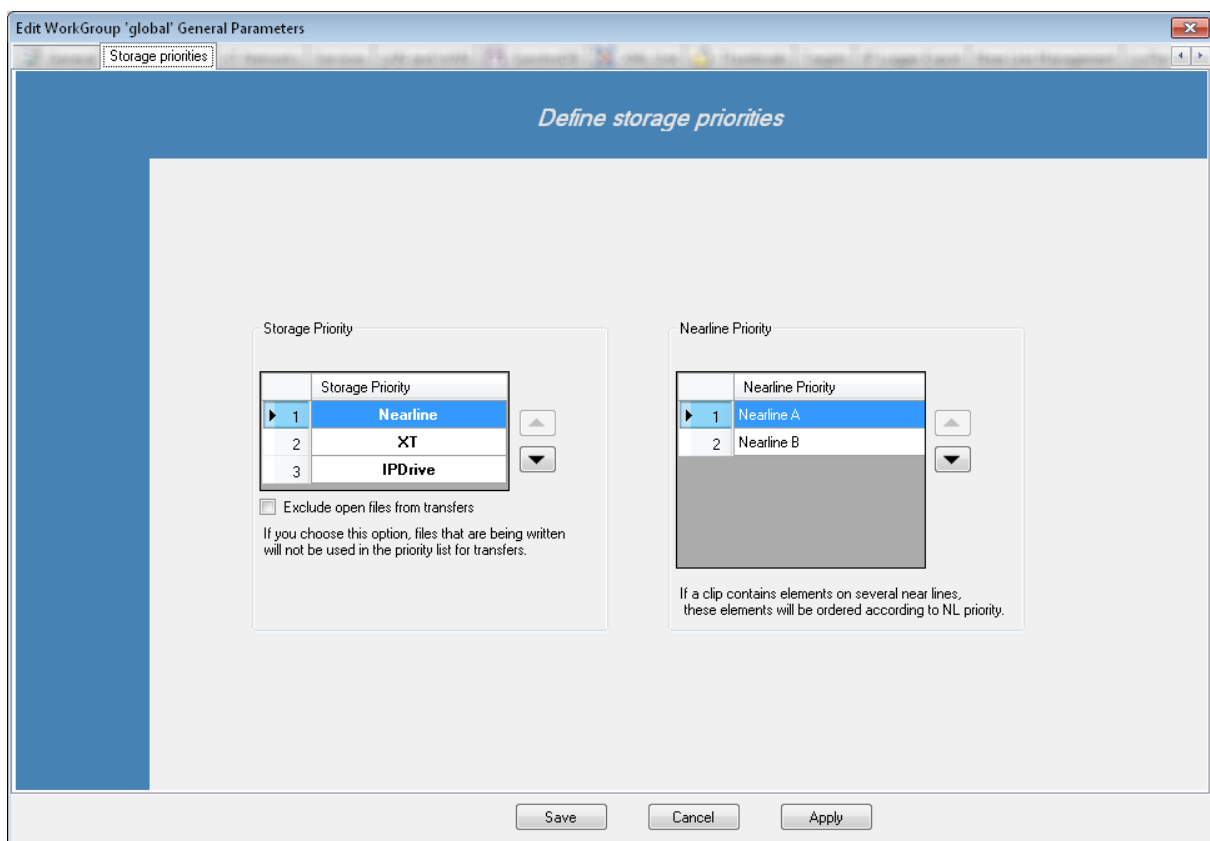
NOTE

All these parameters are global to all IPDirector workstations on the network. It must only be set once and can be defined on any workstation.

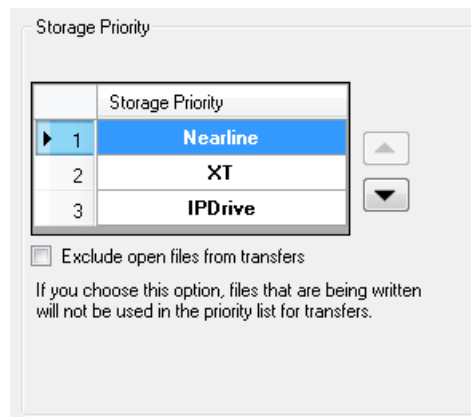
2.7.3. Storage Priorities Configuration

Introduction

Select the Storage priorities tab:



Storage Priority



This parameter sets the priority of the source used by the function **Send to [Target]** or **Backup to Nearline**. When clips contain several elements in the Database Explorer, this priority manages which resources will be sent to the target or the nearline.

For example, a clip owns a high resolution XT clip element and a high resolution nearline clip element. When users request a **Send to [Target]** or **Backup to Nearline**, the priority defines the source (Nearline or XT or IP Drive) used for the operation.

If **Nearline** is set to priority 1, the high resolution file is copied to the target or nearline.

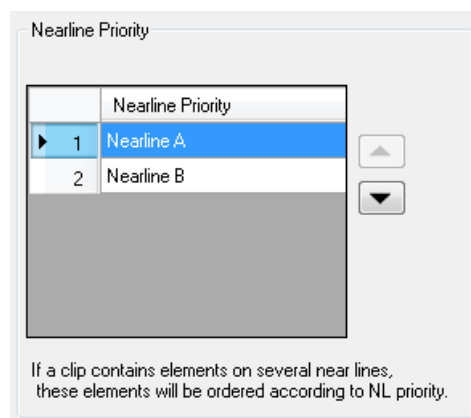
If **XT** is set to priority 1, the high resolution XT clip is backed up to the target or nearline.

If **Nearline** is set to priority 1 and no high resolution file exists in the clip, the second priority is used and the high resolution XT clip is backed up to the target or nearline.

Exclude open files from transfers

Select this option to exclude nearline growing files off the priority storage list. Online clips or closed files are privileged.

Nearline Priority



This parameter orders the storages used under the **Nearline** item of the previous Storage Priority table.

In a clip, only one high resolution XT clip element should exist but several instances of the same high resolution file may be spread over different Nearline storages.



For transfer performance reasons, storages which have better access bandwidths should be used in priority beside the less efficient ones.

2.7.4. XT Networks Configuration

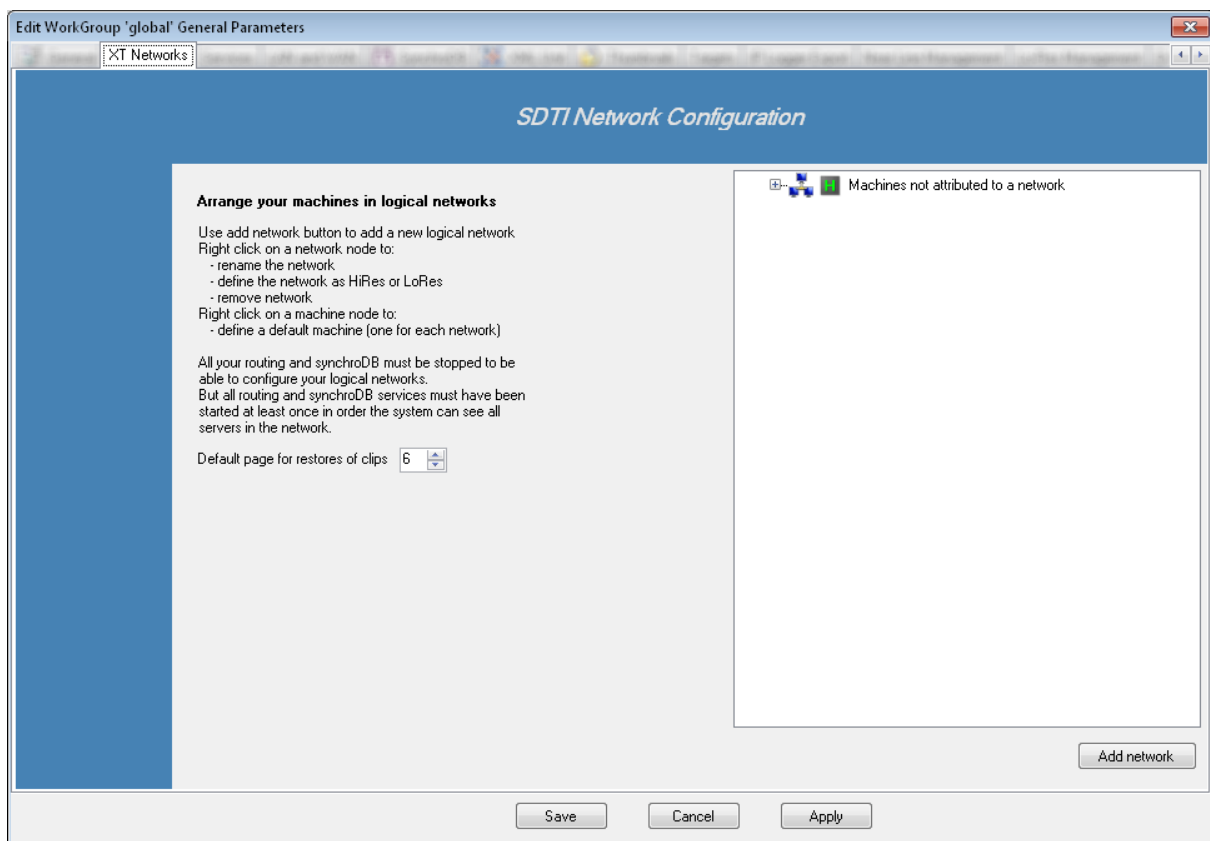
Purpose

The purpose of this tab is to create logical networks for the servers.

This tab is also used to specify the default page and server for restores of Nearline clips.

See section "Nearline Management Configuration" on page 123 for details.

Overview of the XT Networks Tab

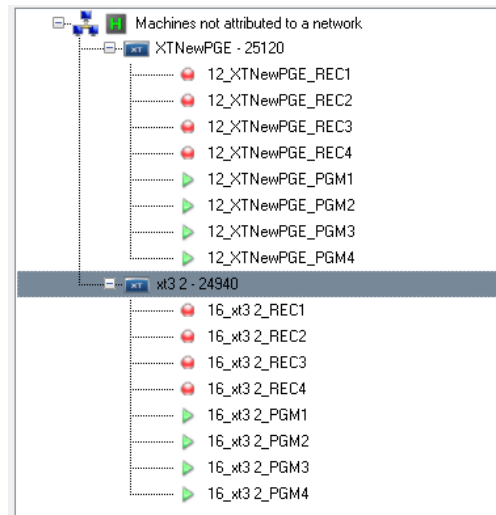


NOTE

All Services (IPD-Routing, SynchroDB, IPDirector, IP-Scheduler, VTR Engine, IP Drive, IP API and Router Control) must be stopped to visualize this tab. However, the services (IPD-Routing and SynchroDB) must have been started once before to list the servers within the IPDirector database.

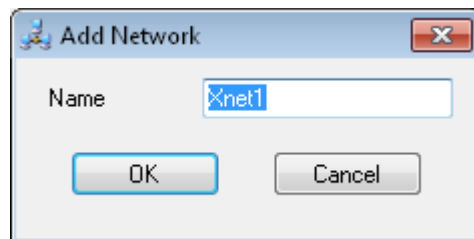
How to Add a Network

The right pane of the XT Networks tab displays all the servers found inside the database. The first time the system is configured, no machine is attributed to a network:

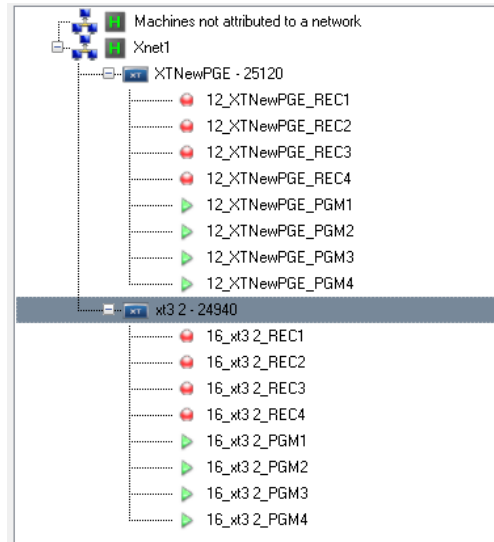


1. Click the **Add Network** button:

The Add Network window appears:



2. Enter a new logical network name (default names: Xnet1, Xnet2, Xnet3...).
3. Click **OK** to create the network and incorporate the list.
4. Repeat the **Add Network** operation to create all wanted logical networks.
5. Drag and drop the servers from the **Machines not attributed to a network** list to the new networks.



Possible Operations

Renaming Network

Right-click the name of a network and select **Rename Network**.

Removing Network

Right-click the name of a network and select **Remove Network**.

Setting the default server and page for restoring near line clips

1. Tag a server as default by right-clicking its name and selecting **Default Machine**.

The default machine is shown with this icon: XT[2] 1

2. Select the page for receiving restored clips from the near line storages with the following parameter:

Default page for restores of clips

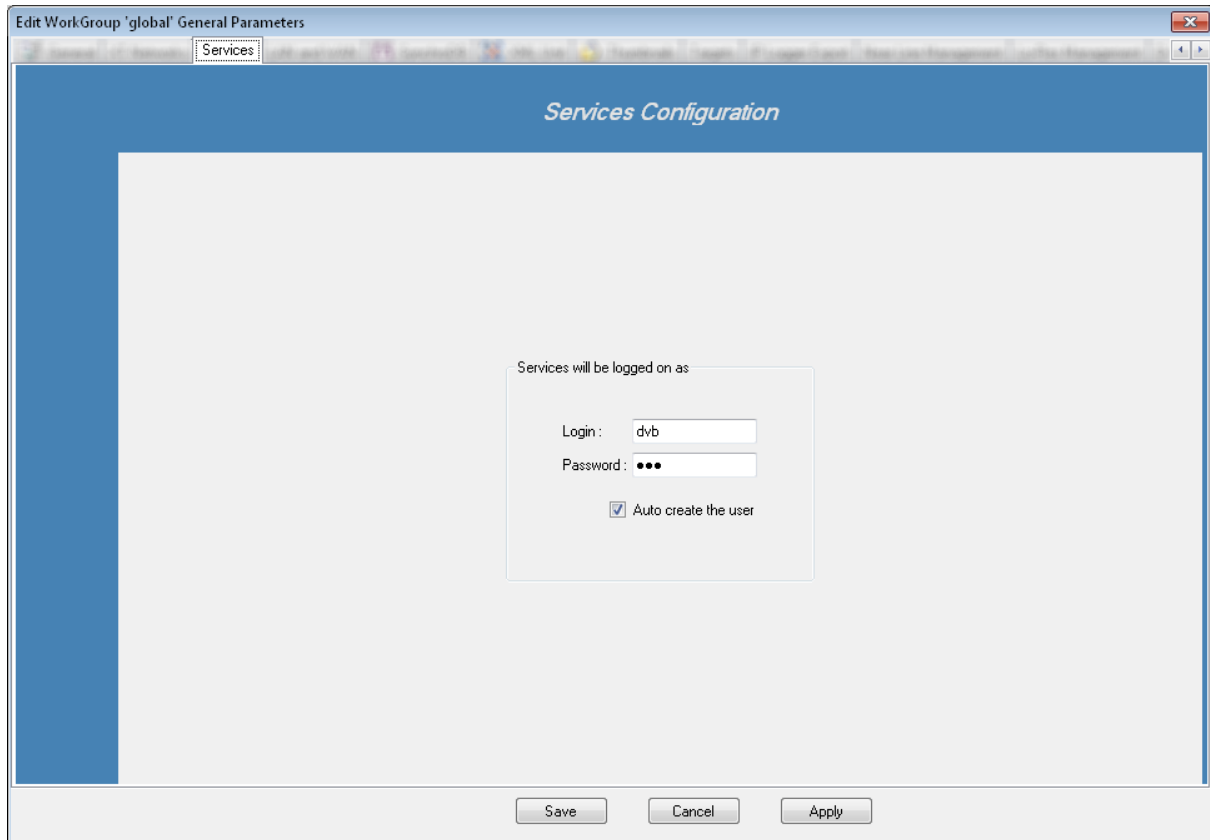
2.7.5. Services Configuration

The purpose of this function is to allow an administrator to define a different user for the IPDirector services to be started with instead of the default user of DVB. This setting should only be changed with a complete understanding of its impact.

The IPDirector services cannot be logged on as Local System to access network resources. The default user used is DVB. This user is present on every EVS systems to allow exchanges between products.

For example: IP-Scheduler sends XML files to a shared folder, the DVB user must also be present on the workstation to allow these files to be shared easily.

Changing the logon used by the services can have an important impact on file sharing and access between EVS products and other 3rd Party systems.



Login

Enter the login name of the user.

Default value: dvb

Password

Enter the password of the user.

Default value: (blank)

Auto create the user

If this option is selected, a new user is created on all the workstations detected by the Remote Installer (if this user does not already exist).

Default value: Cleared.



NOTE

All Services (IPD-Routing, SynchroDB, IPDirector, IP-Scheduler, VTR Engine, IP Drive, IP API and Router Control) must be stopped to visualize this tab.

2.7.6. LAN and WAN Configuration

XT IP Addresses

This box shows the Serial Number, Net number, Name, IP addresses, Ports, Login and Password of the server managed by the SynchroDB services inside the workgroup.

These values are auto-obtained and cannot be edited and are used for the XML processes (Send to / Export) when sending via the Gigabit Ethernet mechanism.

The SynchroDB and IPD-Routing services must be started to visualize the list. It may take some time for this list to appear once the services are started.



WARNING

The server Gigabit feature allows exporting and sending clips through a TCP/IP network. Your server must be upgraded with a GBX module on the H3X (or HCTX) card. Please contact EVS for more information.



NOTE

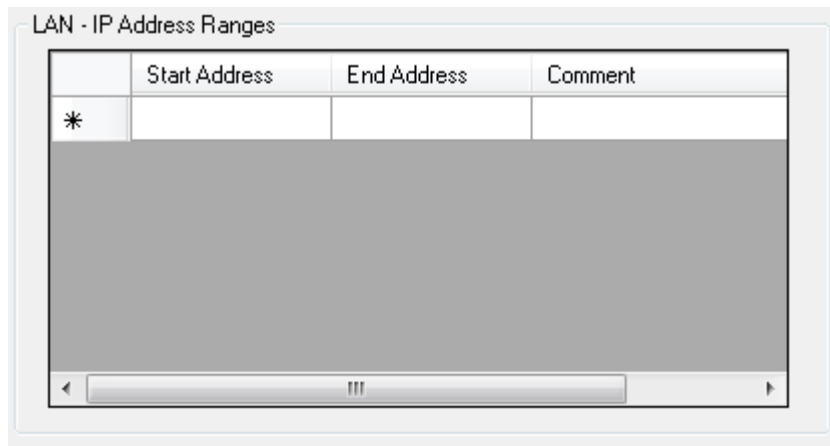
The Gigabit Ethernet settings are set inside the Multicam Configuration, Tab Network (SHIFT+F2, Tab 3 Network) while the application is running and pressing **F8** on a line in the EVS Menu. Please refer to the Server Software Technical reference manual.

LAN – IP Address Ranges

While local IPDirector workstations inside the LAN utilize Multicast to communicate, distant IPDirector workstations (WAN) communicate by Unicast with the local IPDirector workstations (LAN) inside IP address range(s).

It is desirable to define small range(s) of IP addresses to reduce Unicast communication to a minimum number of addresses.

Default value: (blank)



	Start Address	End Address	Comment
*			

WAN – IP Addresses

Local IPDirector workstations (LAN) communicate by Unicast with the distant IPDirector workstation(s) defined in the WAN section.

Default value: (blank)



	Address	Comment
*		

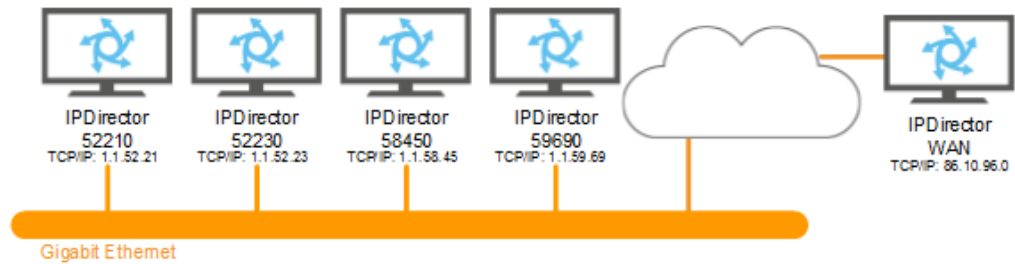


NOTE

All Services (IPD-Routing, SynchroDB, IPDirector, IP-Scheduler, VTR Engine, IP Drive, IP API and Router Control) must be stopped to edit the LAN – IP Address Ranges, the WAN – IP Addresses and the Advanced Parameters..

For example:

4 IPDirector workstations on an Ethernet network (LAN) and 1 IPDirector accessible by an Internet connection (WAN).



Advanced Parameters

By clicking the **Advanced Parameters** button, you access this window:

The screenshot shows the 'Ports' configuration window. It contains several sections for configuring ports:

- Ports:** A list of services with their corresponding port numbers in input fields.

IpComm :	31001
Routing Service :	31002
Routing Service Udp Server :	31003
IPWS Server :	31016
CMS Search API :	31060
Remote Installer Client :	31004
Remote Installer Port :	31005
RI Server From ... to ... :	31020 31029
Monitoring Server from ... to ... :	31030 31039
SWP range added from ... to ... :	100 110
AbRoll User Service:	8733
IPDirector Close App :	31006
SynchroDB User Interface :	31007
IpScheduler User Interface :	31008
VtrEngine User Interface :	31009
Routing User Interface :	31010
IP Drive User Interface :	31014
IPWS User Interface :	31015
Software Player port :	31018
IPD Plugin User Interface :	31041
Router Control User Interface :	31042
AbRoll User Interface :	31044
- Infrastructure Ports:** A section for infrastructure services.

Infrastructure Service Administration (web api/ui) :	31051
Infrastructure Service Administration (discovery) :	31065
Indexing Crawler (web api) :	31052
Indexing Pusher (web api) :	31053
Indexing Pusher (endpoint) :	31061
ElasticSearch (http) :	9200
ElasticSearch (tcp) :	9300
Zookeeper :	2181
- Multicast:** A section for multicast settings.

Routing Service :	224 14 0 1
Remote Installer :	224 14 0 2
Remote Installer Install :	224 14 0 3

At the bottom right, there are 'OK' and 'Cancel' buttons.

The LAN/WAN configuration give you the possibility to change ports used by IPDirector Application and all the services:

Ports	Default Values
IpComm:	31001
Routing Service:	31002
Routing Service Udp Server:	31003
IPWS Server	31016
CMS Search API	31060
Remote Installer Client:	31004



Ports	Default Values
Remote Installer Port:	31005
RI Server From ...to...	31020, 31029
Monitoring Server from ...to...	31030, 31039
SWP range added from ...to...	100, 110
ABRoll User Service	8733
IpDirector Close App:	31006
SynchroDB User Interface:	31007
IpScheduler User Interface:	31008
VtrEngine User Interface:	31009
Routing User Interface:	31010
IP Drive User Interface	31014
IPWS User Interface	31015
Software Player port	31018
IPD Plugin User Interface	31041
Router Control User Interface	31042
ABRoll User Interface	31044

Infrastructure Ports	Default Values
Infrastructure Service Administration (web api/ui)	31051
Infrastructure Service Administration (discovery)	31065
Indexing Crawler (web api)	31052
Indexing Pusher (web api)	31053
Indexing Pusher (endpoint)	31061
ElasticSearch (http)	9200
ElasticSearch (tcp)	9300
Zookeeper	2181

Multicast	Default Values
Routing Service	224.14.0.1
Remote Installer	224.14.0.2
Remote Installer Install	224.14.0.3

Inside the LAN, IPDirector workstations communicate by multicast.

**NOTE**

We recommend you to keep the default values for these settings. Your network administrator provides you the new port numbers or multicast addresses if needed.

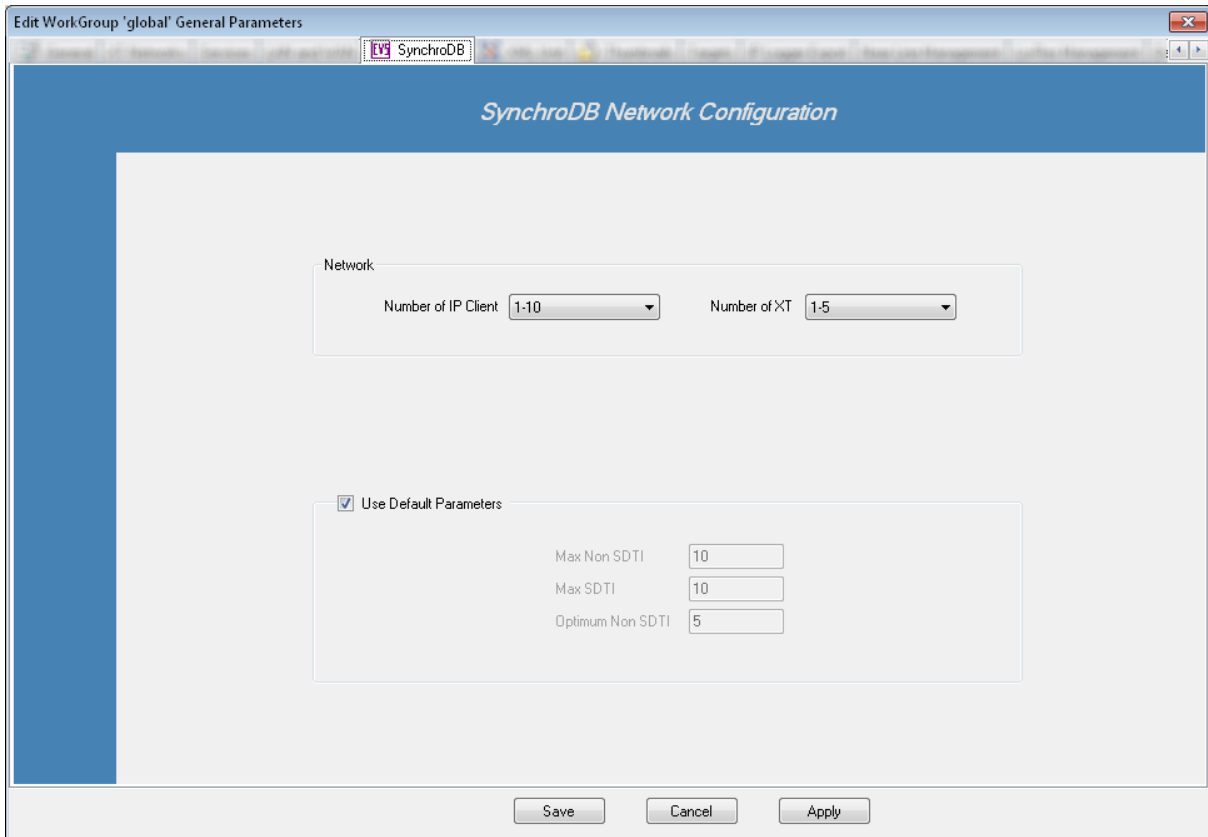
2.7.7. SynchroDB Configuration (Load Balancing)

The SynchroDB Load Balancing parameters are only relevant when some SynchroDB workstations are defined to operate in the Network mode.



WARNING

In Restricted Stand Alone and None modes, these parameters are not taken into account.



Network

Specify the appropriate IP Client (IPDirector workstation) and XT (server) ranges.

Use Default Parameters

- **Automatic:** Select the **Use Default Parameters** check box

In this case, the system will automatically calculate the variables of the load balancing process. You only need to specify the Number of IP Client workstations present on the IP network and the number of XTs (All EVS Servers) available on the XNet network.

- **Manual:** Clear the **Use Default Parameters** check box.

If you want to manually define the automatic load balancing variable, clear the **User Default Parameter** check box.

3 variables must be defined:

- **Max Non-SDTI:**

The maximum number of servers (for which an RS422 connection to an IPDirector workstation exists) the SynchroDB in network mode should manage at one time when network mode is employed.

- **Max SDTI:**

The maximum number of server or other system(s) (for which no RS422 connection to an IPDirector workstation exists) the SynchroDB in network mode should manage at one time when network mode is employed.

- **Optimum Non SDTI:**

The optimum number of servers (for which an RS422 connection to an IPDirector workstation exists) the SynchroDB in network mode should manage at one time when network mode is employed.



NOTE

We recommend you to keep the default values for these settings.

2.7.8. XML Unit Configuration

Introduction

Purpose of XML Unit

XML units must be defined if you plan to:

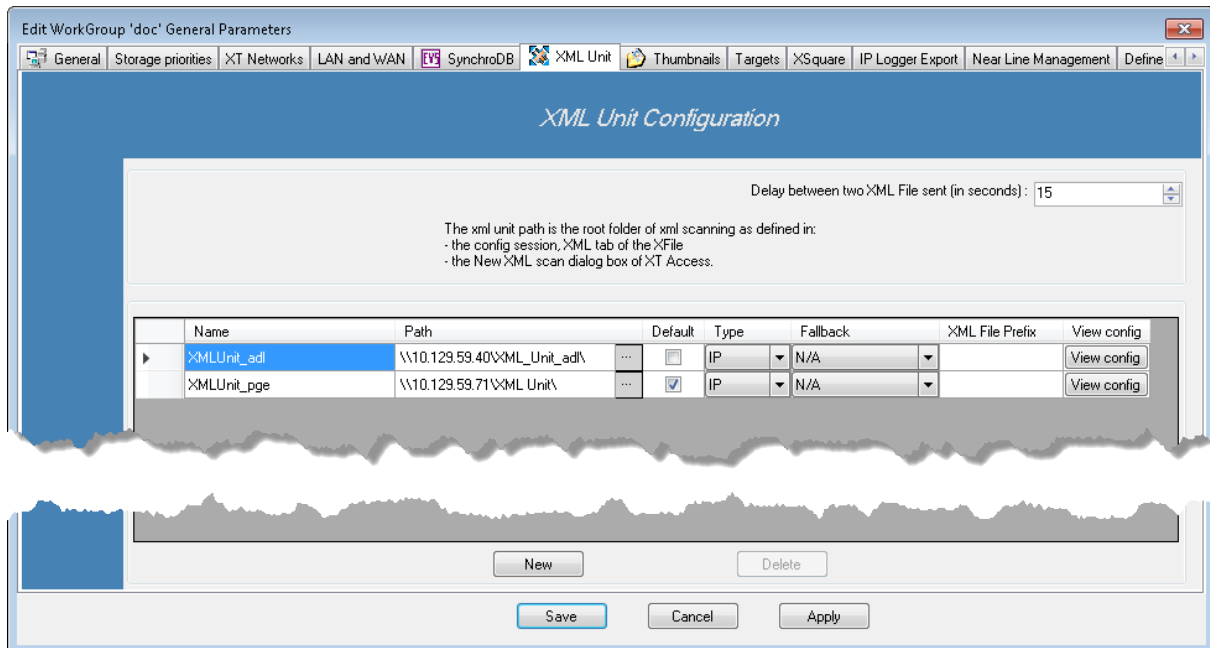
- Manually select the destination folder where the clips will be moved to.
- Send a clip to a CleanEdit system.
- Send a clip to an Avid system using the Transfer Manager.
- Send a clip to a Final Cut Pro.
- Send a clip to an EVS video server on another network.



NOTE

The default archive procedure (send to → default archive) from the IPDirector interface, does not use XML unit process.

Overview of the XML Unit Tab



Delay between two XML file sent (in seconds)

This parameter indicates the time (in seconds) between 2 XML files sent to an XML unit from one IPDirector workstation.

What is it used for?

The Xsquare system executes the XML instructions of one XML unit based on their creation time. If one IPDirector workstation on the network sends lots of instructions at one time, it could delay the execution time of other IPDirector instructions.

This parameter allows the system to minimize this kind of bottleneck by spacing the time in which one system can send consecutive instructions to an XML unit.

Default value: 15 Seconds

Creating a New XML Unit

Types of XML Units

XML unit (type IP) is an XML folder located on the network and scanned by the Xsquare application. Xsquare is designed to manage clip transfers on the network using the server Gigabit feature.

A XML unit (type SDTI) is an XML folder located on one XF workstation where all XML files (corresponding to a backup request, a clip export to a CleanEdit, AVID system, FCP system or Nearline) will be sent.



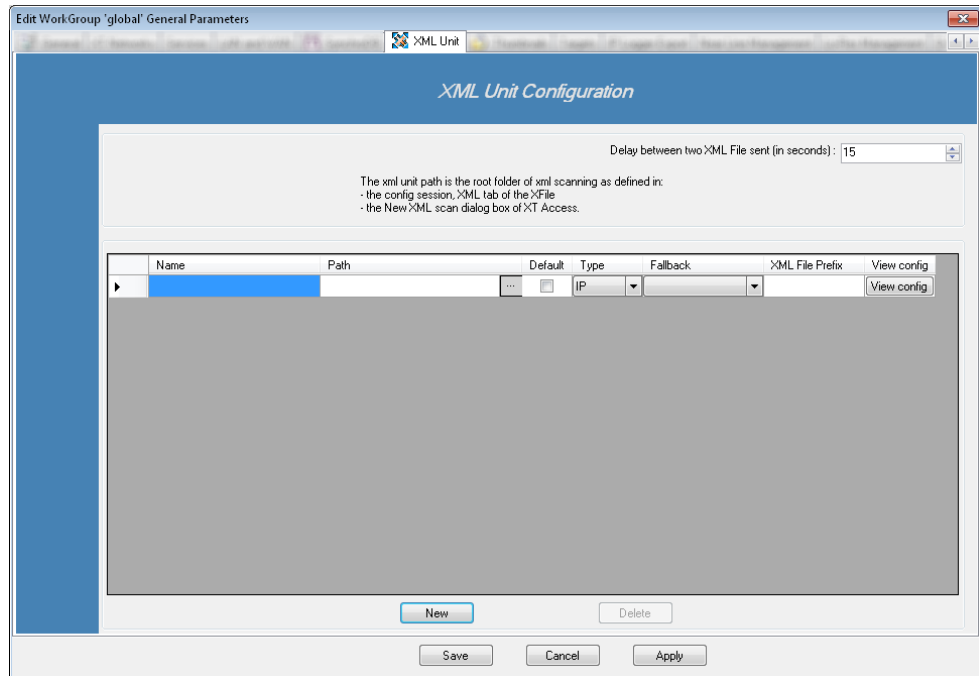
NOTE

The SDTI type is no more used. Only Xsquare XML unit (IP type) is validated.

How to Create a XML Unit

1. Click the **New** button to add a new unit.

A new line is added in the unit list.

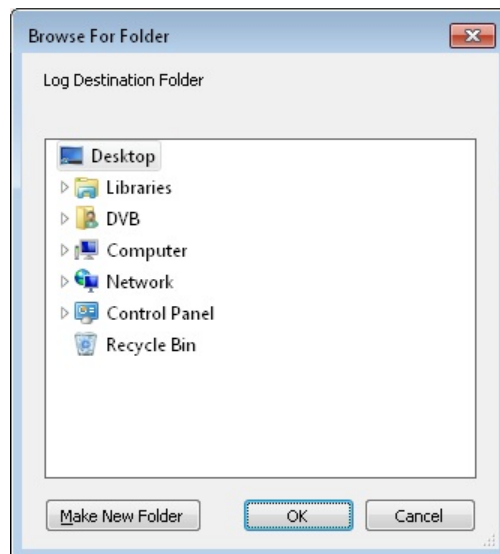


2. Click in the **Name** column and give a name to the unit.

This name is mainly for purposes of administration, and defining the XML processing device later in the configuration.

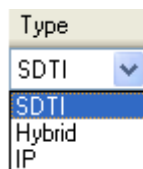
3. Click the **Browse** button  in the **Path** column to select the folder where the XML files will be sent.

The Browse for Folder window opens:



This folder should be a UNC path to the network location where the folder exists. Be sure this folder is shared with full access rights.

4. (optional) If the unit is to be defined as the default unit for all workstations, select the box in the **Default** column of the unit.
5. Specify the type of the XML Unit from the **Type** column:



- **SDTI**: Do not use this option anymore.
- **Hybrid**: This mode is not used and will be removed in a future version.
- **IP**: Use this option if the XML Unit is an Xsquare folder.

Please refer to the Xsquare user manual.

6. (optional) Select another SDTI XML Unit in the **Fallback** column to ensure a failover process if this one is not responding (mostly use to switch from an IP XML Unit to a SDTI XML Unit).



WARNING

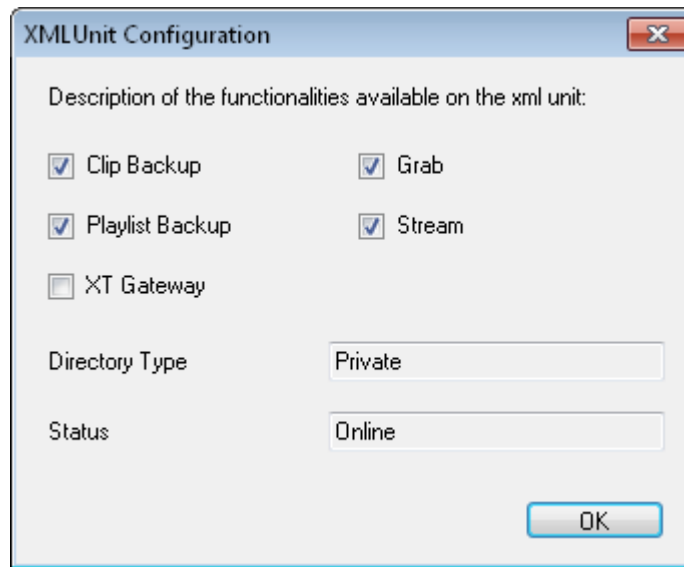
Create first the other XML Units and click **Apply** to add them in the Fallback XML Unit list.



NOTE

The **XML File Prefix** parameter is no more used.

7. (optional) Click the **View config** button to check the XML Unit status (**Offline** or **Online**) from the XML Unit Configuration window:



See section "What is the XML Unit LiveBit?" on page 76 for more information.

8. Once all XML Units are configured, click on the **Apply** button.
9. Once all the XML units are configured, click on the **Apply** button before configuring another target type.

All paths are checked when the configuration is applied. If a path is not reachable, a warning message appears. The configuration is saved anyway.

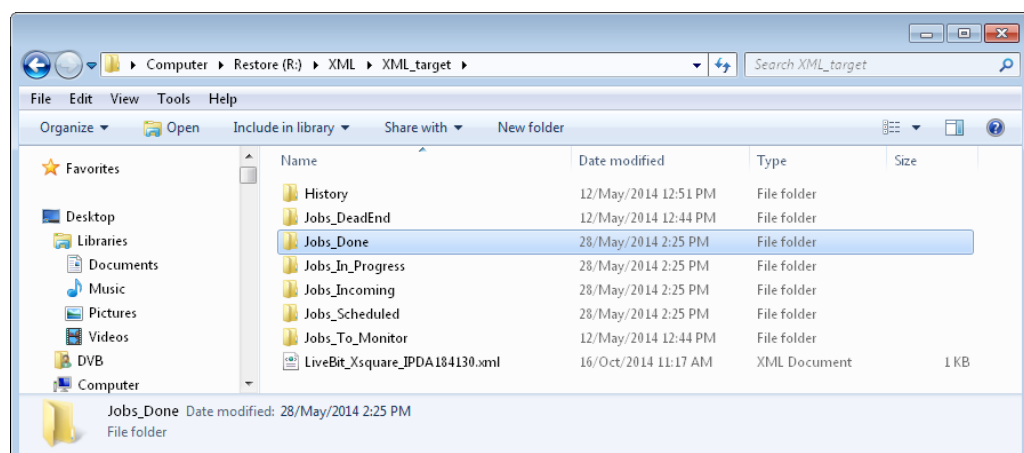
What is the XML Unit LiveBit?

EVS XML Unit (Xsquare) generates an XML file located on the root of the XML Unit.

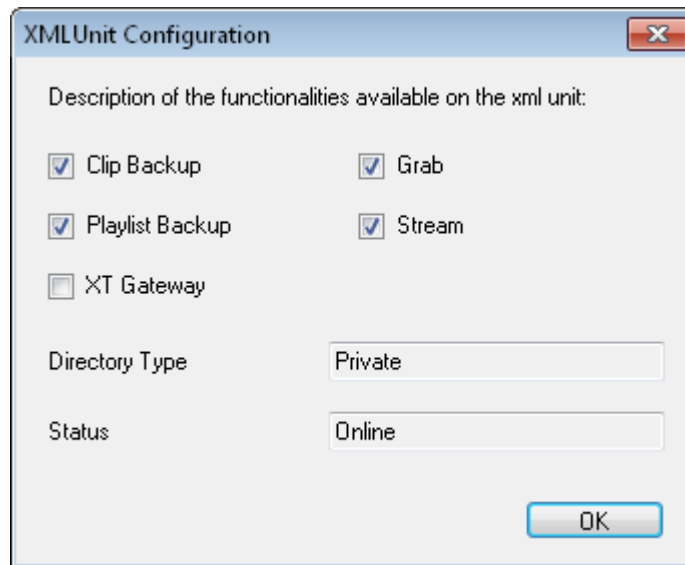
This file is refreshed every 30 seconds and updates its status and capabilities.

Before sending an order to an XML Unit, IPDirector can check if this one is online or not and if the wanted job can be done or not.

Example of an Xsquare XML Unit folder:



Inside the XML Unit tab, the **View config** button will display this status as long as the Xsquare is launched and is scanning the XML Unit folders:



The status is **Online** or **Offline** and the Directory Type is **Private** or **Load Balancing**. The functionalities available on the XML Unit are shown with selected boxes.

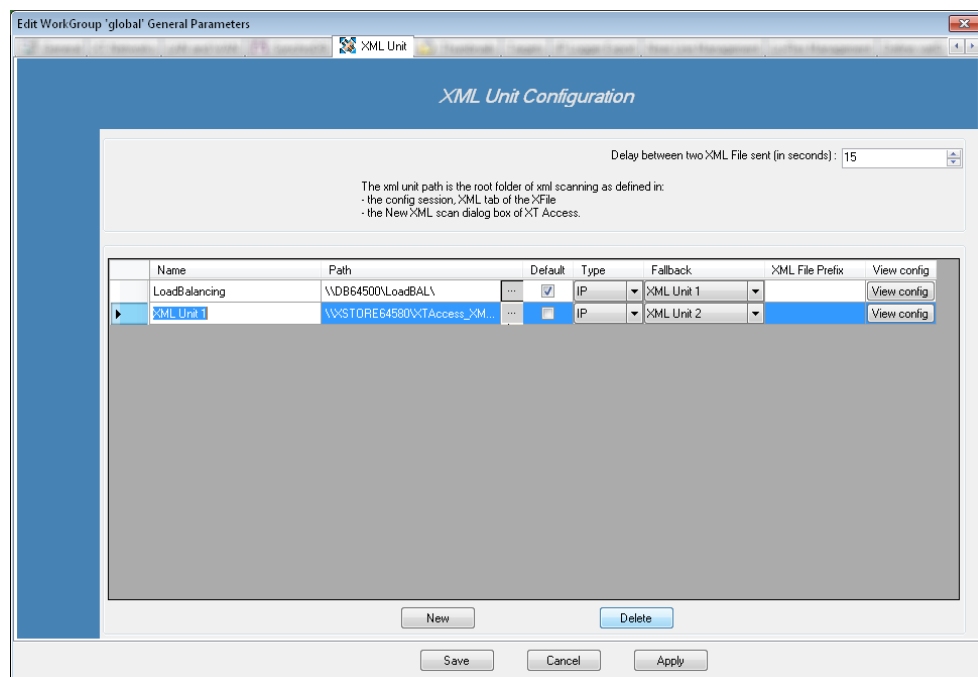


NOTE

This View config feature is just a status window. It cannot be edited or modified.

Deleting a XML Unit

1. Click on the XML unit line to select it.



2. Click the **Delete** button.

If the XML Unit is declared as a Fallback unit in another line, a warning message appears.

- a. Click **Yes** to delete the XML Unit and reset the fallback association in other lines.
- b. Click **No** to keep the XML Unit line and abort the delete order.

2.7.9. Thumbnails and Grab Configuration

Introduction

Purpose

This must be configured if you plan to have thumbnails created automatically as clips, logs and playlists are created. It is also used to configure the Grab function.

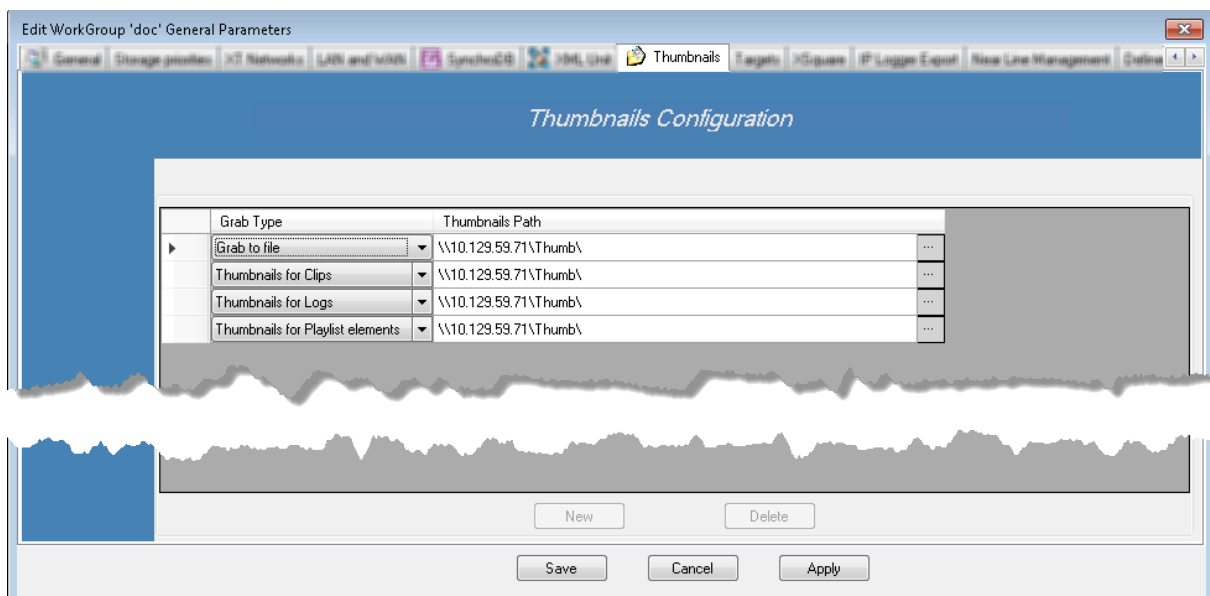
Conditions

- Thumbnails and Grabs will physically be created by Xsquare workstations. You need at least one Xsquare on the Ethernet network to use this function.

NEW !

- The EVS Registry service must be started for the thumbnails and grabs to be processed properly.

Overview of the Thumbnails Tab



Creating a New Thumbnail or Grab Unit

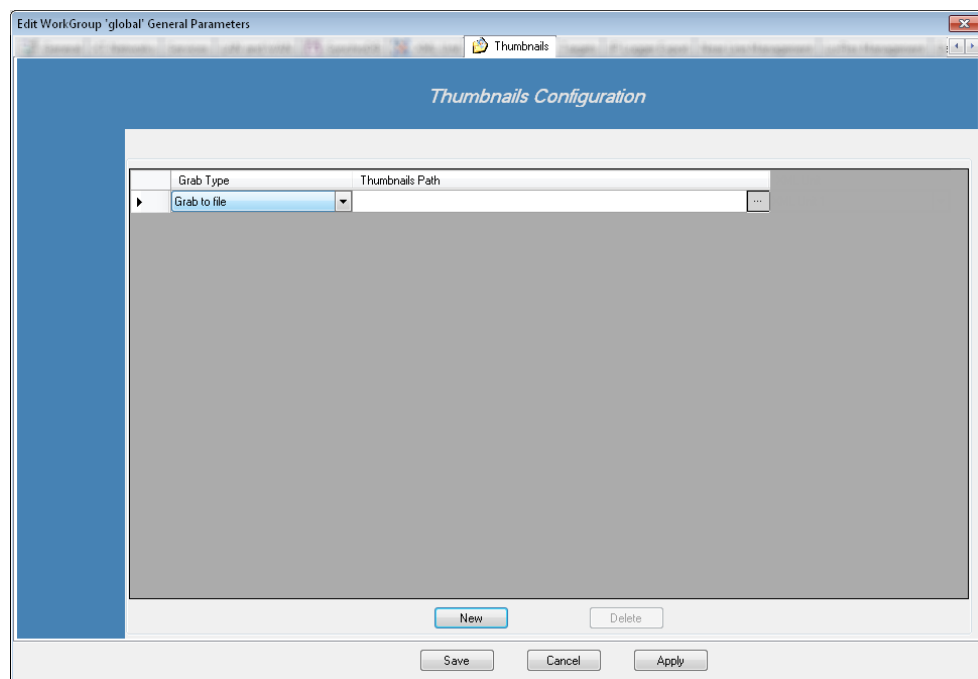
At least one Thumbnail unit must be defined to activate the automatic thumbnail creation process.

Thumbnails are created for clips, logs and playlists. One configuration line is needed for each grab type.

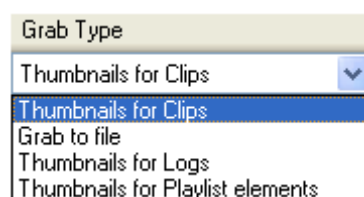
Maximum 4 lines of configuration can be added in this tab.

1. Click on the **New** button to add a configuration line.

A new line is added in the unit list.




2. Select the type of configuration from the **Grab Type** column.



Only one type of each grab type can be defined.

- **Thumbnails for Clips** to send thumbnail requests for clips.
- **Grab to file** to send grab requests.
- **Thumbnails for Logs** to send log thumbnail requests.
- **Thumbnails for Playlist elements** to send thumbnail requests for playlist elements.

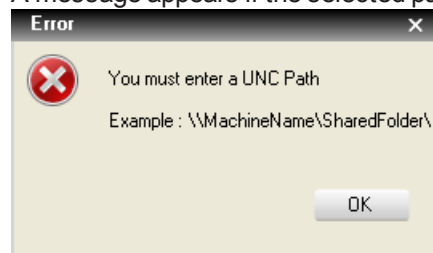
3. In the **Thumbnail Path** column, define the directory (with its full path) where the thumbnail files (.jpg) will be stored. Proceed in one of the following ways:
 - Enter the UNC path in the text field
 - Click the **Browse** button  to select the destination folder.

**NOTE**

No Path is needed for a **Grab to file** grab type.
The path for grab files is defined by users from the IPDirector interface (**Tools > Settings > Image Capture**) or by the administrator in the Settings Tab inside the User Manager application.

**NOTE**

Only UNC DNS name or IP address path are valid.
(Ex: \\servername\sharedfolder\, \\1.1.10.100\sharedfolder\)
No local paths are valid. It is required to use an IP Address when working with IPDirector workstations connected in a WAN configuration as they may not be able to resolve the UNC Host Name of the computer.
A message appears if the selected path is not valid:



Be sure this folder is shared with full access rights. EVS recommends this directory should be located on the database server in the \thumbnails directory.

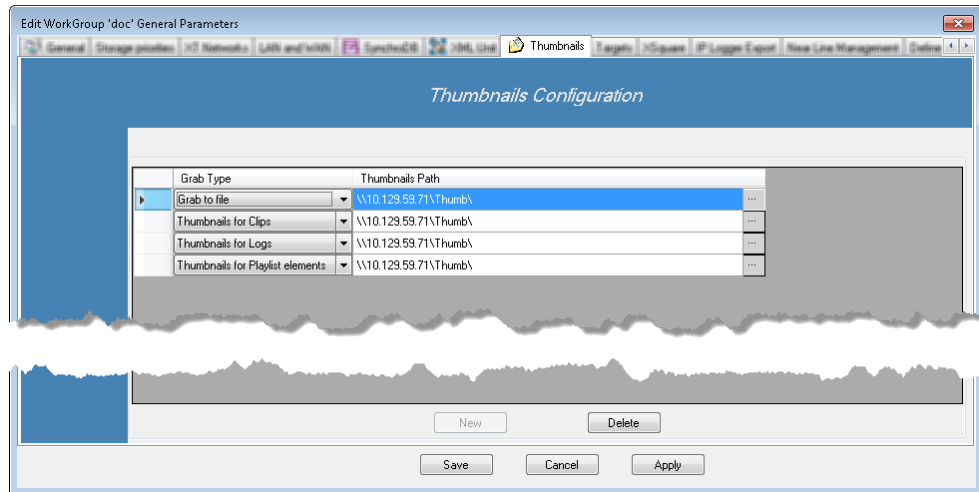
**NOTE**

Thumbnail and Grab paths are global to all IPDirector workstations on the network. They should only be defined once and can be defined from any workstation.

4. Once all the paths are configured, click on the **Apply** button.

Deleting a Thumbnail or Grab Unit

1. Click on the unit line to select it.



2. Click the **Delete** button.

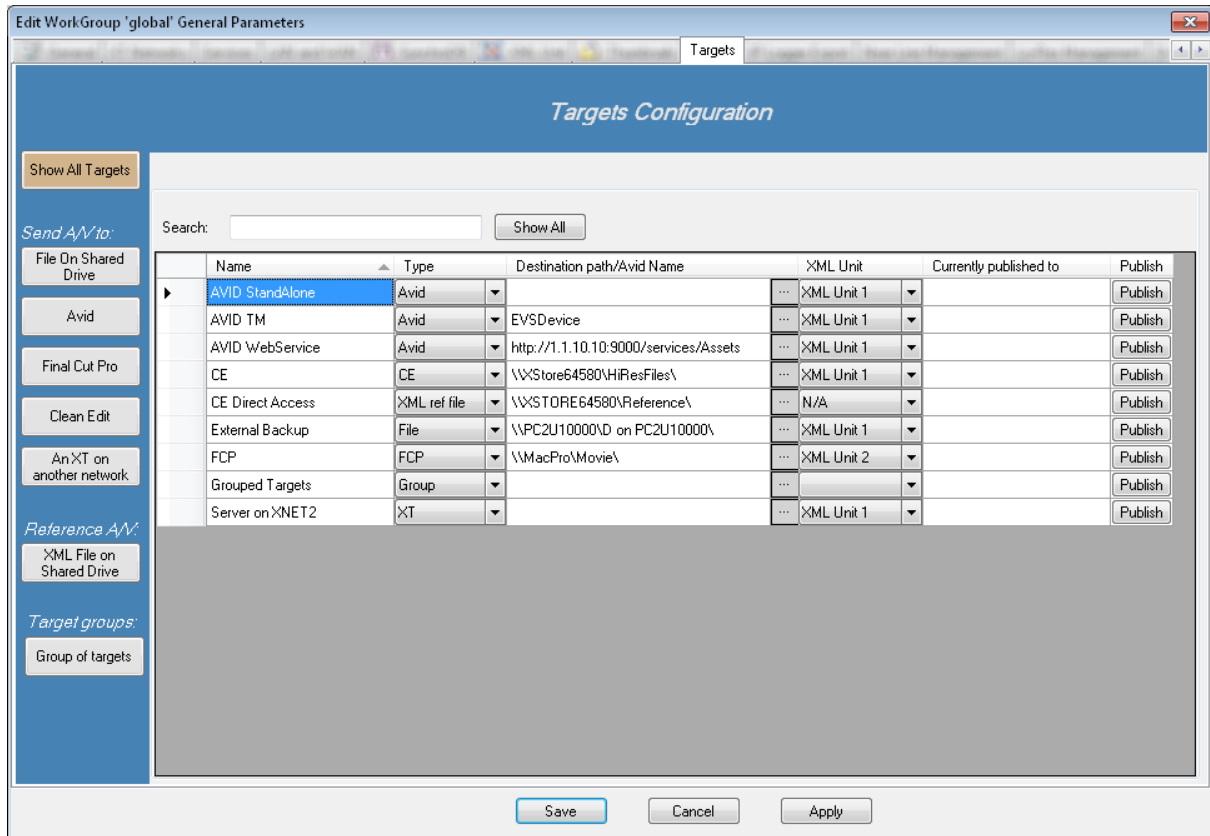
The unit is deleted.

2.7.10. Targets Configuration

Overview of the Targets Tab

This tab is used to configure all the different targets from the same place.

A XML unit must have been created before configuring any target.



Show All Targets

Displays all configured targets. Editing of the individual fields is not allowed with the exception of the publish feature which is available.

Send A/V to

- **File On Shared Drive:** Allows configuring conventional folder targets.
- **Avid TM:** Allows configuring Avid targets via an AVID Transfer Manager, Web Services or Stand Alone mode.
- **Final Cut Pro:** Allows configuring dedicated Final Cut Pro targets.
- **Clean Edit:** Allows configuring Clean Edit targets with A/V material.
- **An XT on another network:** Allows configuring XT (server) export targets.

Reference A/V

- **XML File on Shared Drive:** Allows configuring targets which use a XML file for referencing the backup job.

Target groups

- **Group of targets:** Allows grouping several pre-defined targets into a single one.

File On Shared Drive Configuration

Introduction

This tab is used to pre-configure the destination directories where clips can be sent from the IPDirector interface using the **Send To** option.

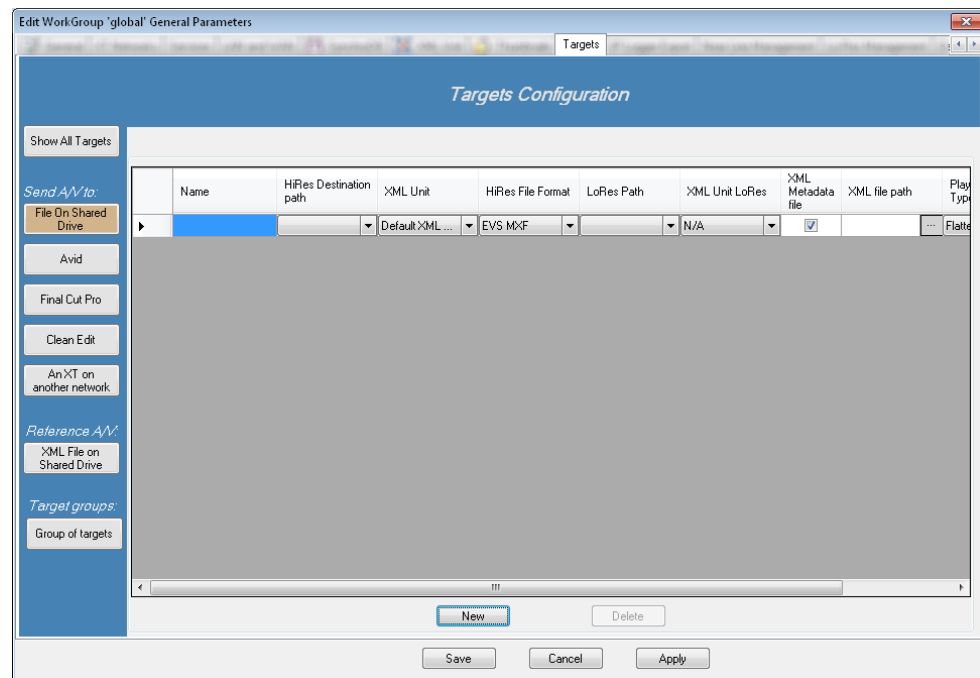
Click the **File on Shared Drive** button on the left to access the File on Shared Drive configuration parameters.

File archive targets are usually created in advance from the Remote Installer. However, a new destination target can also be created from the IPDirector interface, from the Send To menu.

Creating a new File On Shared Drive Target

1. Click the **New** button to add a new folder.

A new line is added in the list.



2. Click in the Name column and give a name to the target.

This name will appear in the IPDirector Send To menu. It is used to identify the destination target in the IPDirector interface.

3. Define a HiRes Destination Path:

Select in the list or browse the network to define the folder where the HiRes files are sent.

This folder should be a UNC path to the network locations where the folder exists.

Be sure this folder is shared with full access rights.



NOTE

Only UNC DNS name or IP address path are valid. (Ex:
\\MachineName\Target\, \\1.1.1.100\Target\
No local path is valid.

4. Select the XML unit used to perform the HiRes job (using the Gigabit network). Choose one specific unit in the list if the job must be performed by the Xsquare system where this XML unit is located (the XML unit is linked to the destination target).
5. Select the HiRes file format among MXF EVS, OP1A MXF XDCAM, QuickTime Movie, QuickTime Reference, Avid MXF OPAtom, DV-DIFF, OP1A MXF SMPTE or Wave format.

It defines the type of files which will be created by the Xsquare system.



NOTE

The LoRes Path and the XML Unit LoRes are no more used.

6. (optional) Select the **XML Metadata File** option.

If the box is selected, IPDirector sends XML metadata files linked to clips.

IPDirector includes extended metadata stored in the database. When clips are exported to targets, metadata can be joined in XML files created in the same target clip folder or in a different one.

7. Define the XML file path if you have selected the **XML Metadata File** option.

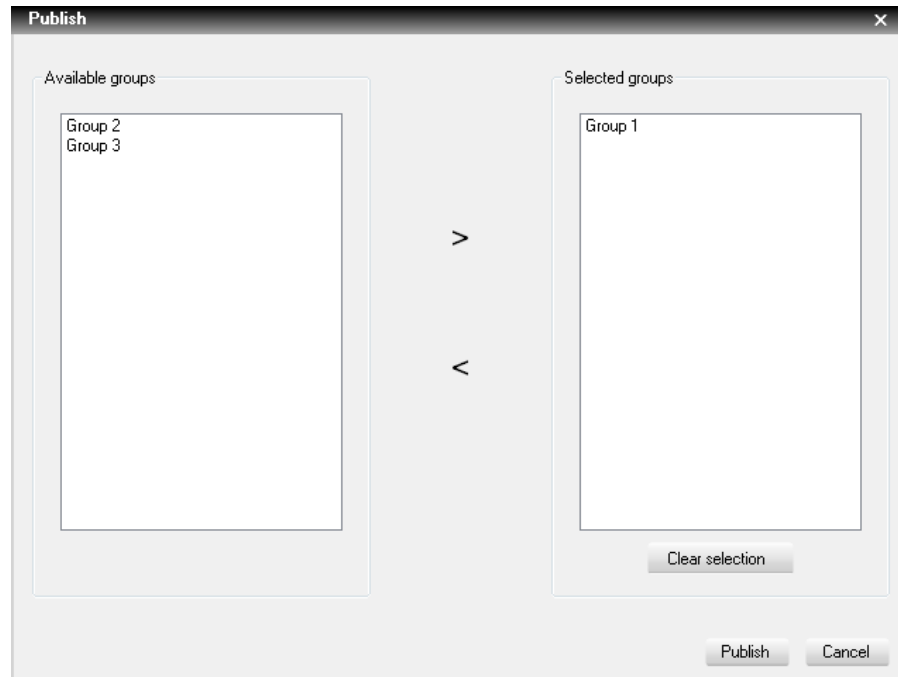
This is the target folder which receives the XML metadata files. This folder can be the same folder as the Backup Destination Directory or a different one.

Be sure this folder is shared with full access rights.

8. Publish the destination target to groups which need visibility to it:

- a. Click the **Publish** button.

The Publish window pops up.

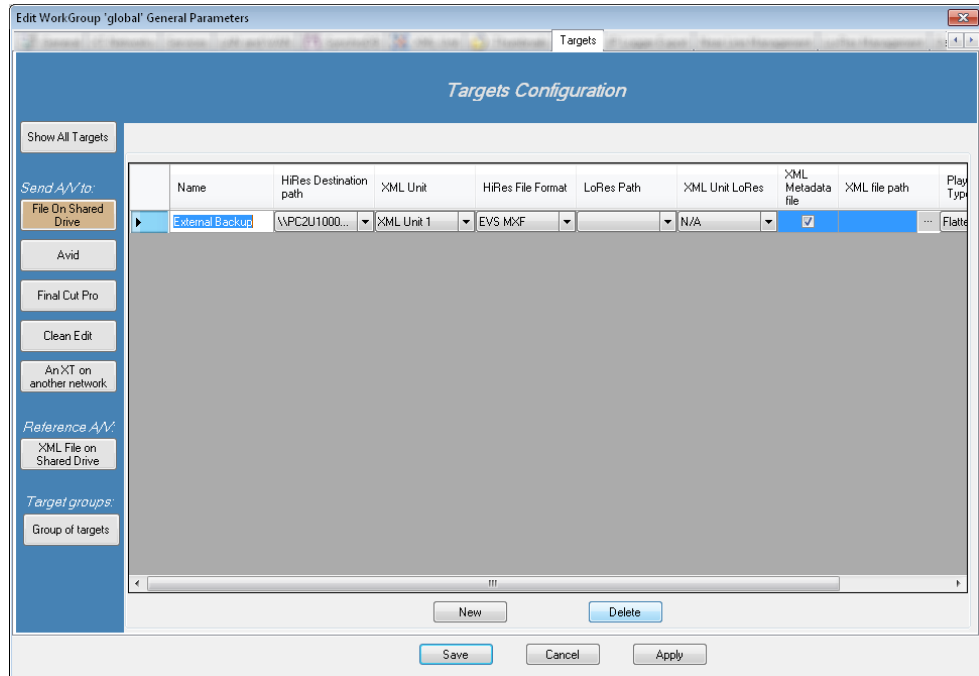


Groups are created in the User Manager application (see User Manager manual).

- b. Select group(s) in the left side.
- c. Click the arrow > to push group(s) to the right side.
- d. Click the **Publish** button.
9. Select the backup type of the playlist:
- EDL and clips: All playlist elements become files and an XML file is created in the same destination folder with the EDL information.
 - EDL and flatten file: The playlist is rendered into a single file and an XML file is created in the same destination folder with the EDL information.
 - EDL only: An XML file is created in the same destination folder with the EDL information.
 - Flatten file only: All playlist elements become files and no XML file is created.
10. Once all File on Share Drive targets are configured, click on the **Apply** button before configuring another target type.

Deleting a File On Shared Drive Target

1. Click on the line header to select it.



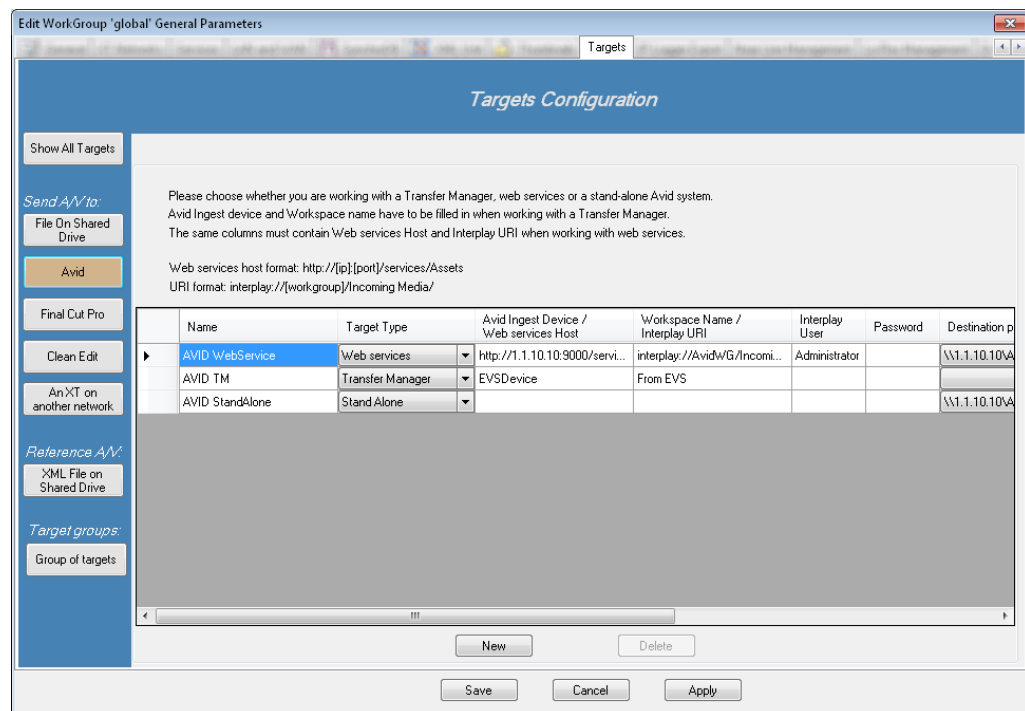
2. Click the **Delete** button.

Avid Configuration

Introduction

This tab must be used to define and configure the different AVID destination target(s) available on the network where clips are to be sent from the IP Director interface using the **Send To** option

Click the **Avid** button in the left menu:



There are now three kinds of AVID targets:

- The AVID Transfer Manager
- The AVID Webservices (allows sending playlists and timelines)
- The AVID StandAlone (without checking to an AVID Interplay)



NOTE

XML Unit creation is required before configuring any AVID target.

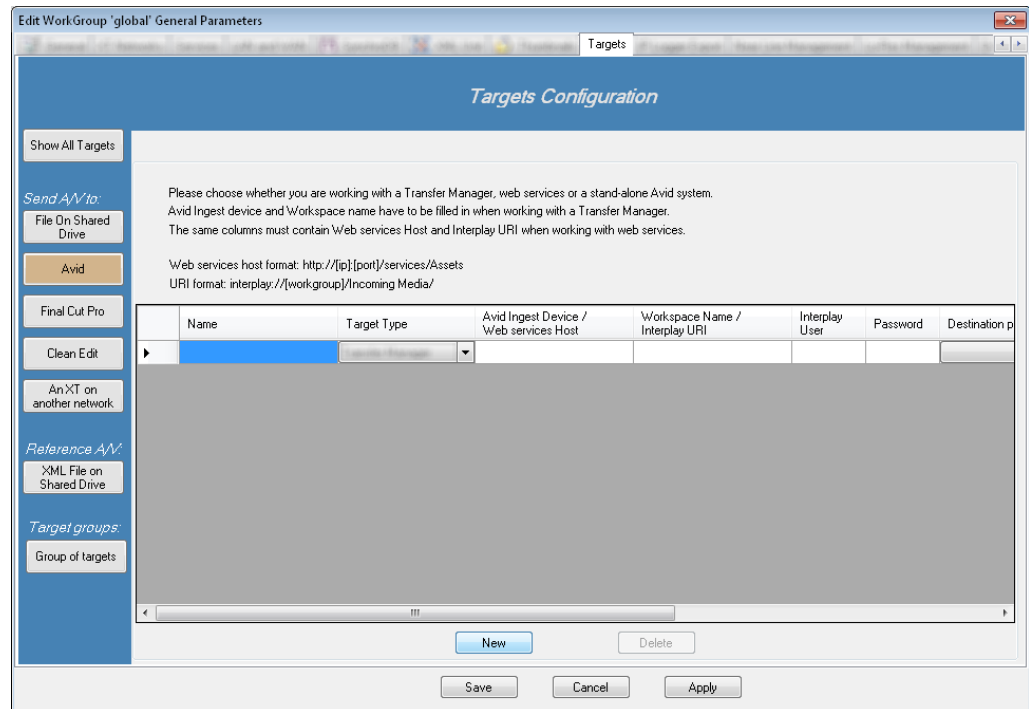


NOTE

Webservices requires the usage of AVID Interplay

Creating a New AVID Transfer Manager Target

Click on the **New** button to add a new target. A line is added in the unit list.



Name:

Give a name to the AVID Transfer Manager target. This name will appear in the IPDirector Send To menu. It is used to identify the AVID target in the IPDirector interface.

Target Type:

Select the target type **Transfer Manager**.

Avid Ingest Device (/Webservices Host):

Enter the name of the Ingest Name for the interface with Avid Transfer Manager Server. This information is used by Avid Transfer Manager Server to specify from which ingest device the transfer is initiated.

Default: EVSDevice

Workspace Name (/Interplay URI):

Enter the Avid workspace name dedicated to this target (optional). The exported clips could be sorted in different workspaces on the AVID side.

Use of this function requires an Asset Management system on the AVID system like Media Manager or Interplay.

Default: <Blank>

Interplay User – Password – Destination path

These fields are not used and cannot be edited if the target type is Transfer Manager.

XML Unit:

Specify the XML unit which will be used to perform the job. This unit should be located on the XSquare workstation which will dialog with the AVID Transfer Manager Server.

**NOTE**

XSquare XML Unit can be selected for a Transfer Manager target type. Please refer also to the XSquare User Manual for an AVID Transfer Manager configuration.

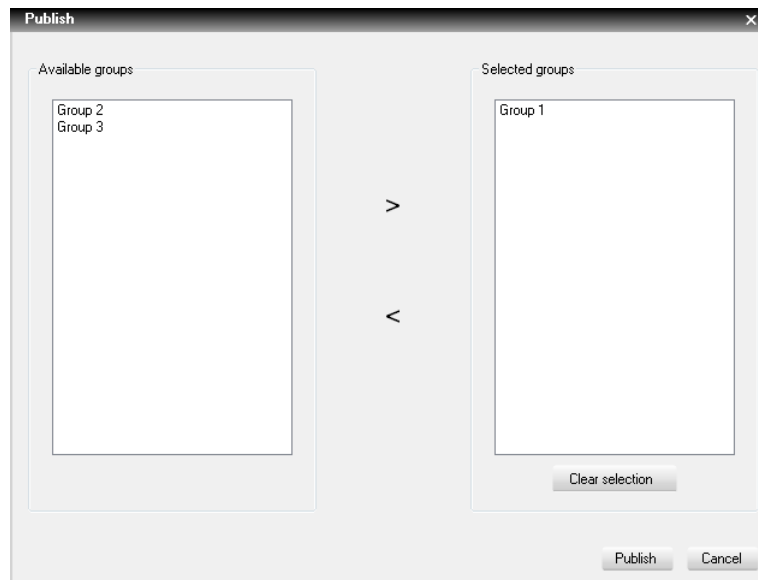
Playlist Backup Type:

This field is not used and cannot be edited if the target type is Transfer Manager.

It is not possible to send playlist or timeline through a Transfer Manager.

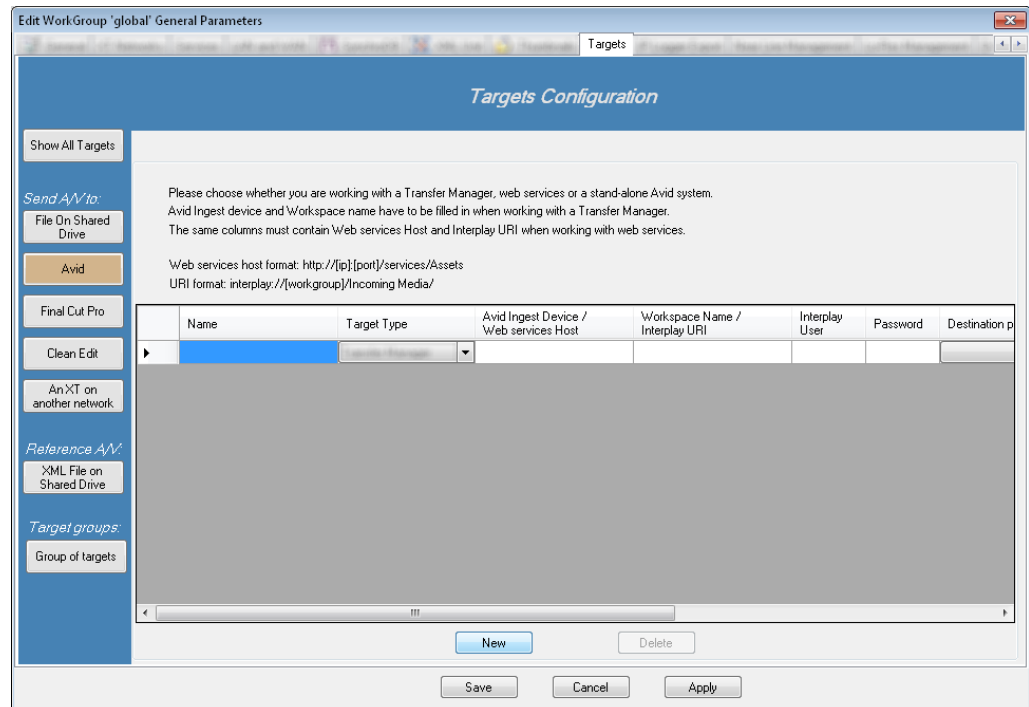
Publish:

If this destination target must be visible to other groups, click on the **Publish** button and a new window pops up to allow you to publish to different groups. Select group(s) in the left side and click the arrow > to push group(s) to the right side. Finally, click on **Publish**.



Creating a New AVID Web Services Target

Click on the **New** button to add a new target. A line is added in the unit list.



Name:

Give a name to the AVID Web services target. This name will appear in the IPDirector Send To menu. It is used to identify the AVID target in the IPDirector interface.

Target Type:

Select the target type **Web services**.

(Avid Ingest Device/) Webservices Host:

Enter the host address link to the Webservices on the Avid Interplay System. This information is used by XSquare to connect specific host and ports dedicated to the target.

Default: [http://\[ip\]:\[port\]/services/Asset](http://[ip]:[port]/services/Asset)

[ip]: IP address of the computer where the Avid Webservices are running.

[port]: The port configured for your Avid Webservices

(Workspace Name/) Interplay URI:

Select in the list or browse the network to define the path where the clip/playlist will be seen in the Interplay DB. Sub-folder can be added after the Incoming Media folder.

Default: interplay://[workgroup]/Incoming Media

[workgroup]: the AVID workgroup target.

Interplay User:

Enter the name of an AVID user which has the Interplay entry right.

Password:

Enter the password of the previously defined Interplay user.

Destination path:

Enter the path where the OPAAtom files are saved on the AVID Storage.

Default: [\\\[ip\]\Avid](#) Mediafiles\

**NOTE**

The AVID Webservices target always sends OPAAtom files. There is no file type configuration for this kind of target.

**NOTE**

The destination path should match with the Avid MXF OPAAtom storage on the AVID system.

XML Unit:

Specify the XML unit which will be used to perform the job. This XML unit is located on an XSquare workstation which interacts with the AVID computer where the Webservices are running.

**NOTE**

Only XSquare XML Unit can be selected for a Web services target type. Please refer also to the XSquare User Manual for an AVID Webservices configuration.

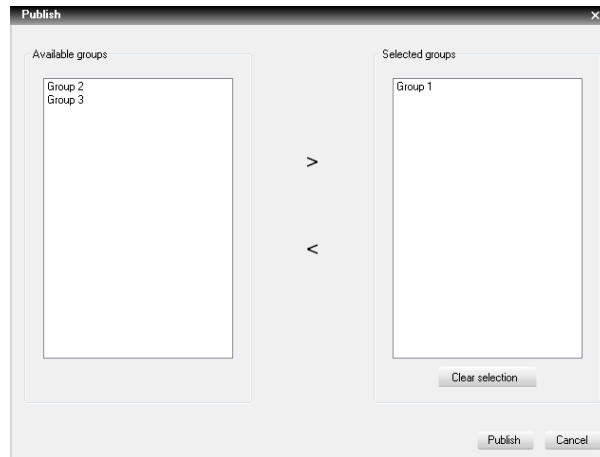
Playlist Backup Type:

Define the type of the backup for the playlist and timeline.

- EDL and Clips: XSquare transfers all the clips and create an AVID sequence which references all playlist and timeline elements.
- EDL only: not supported.
- Flatten file only: XSquare concatenates the playlist or the timeline in a single media file on the AVID storage.

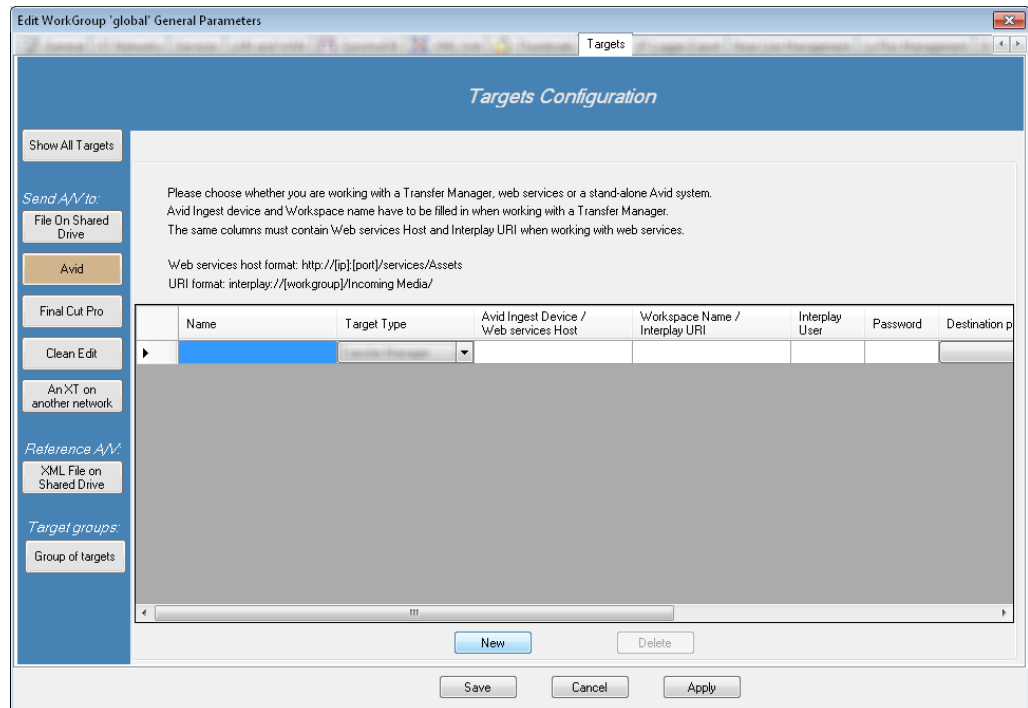
Publish:

If this destination target must be visible to other groups, click on the **Publish** button and a new window pops up to allow you to publish to different groups. Select group(s) in the left side and click the arrow > to push group(s) to the right side. Finally, click on **Publish**.



Creating a New AVID StandAlone Target

Click on the **New** button to add a new target. A line is added in the unit list.



Name:

Give a name to the AVID StandAlone target. This name will appear in the IPDirector Send To menu. It is used to identify the AVID target in the IPDirector interface.

Target Type:

Select the target type **StandAlone**.

Webservices Host - Interplay URI - Interplay User – Password:

These fields are not used and cannot be edited if the target type is StandAlone, as there is Interplay referencing engine.

Destination path:

Enter the path where the OPAAtom files are saved on the AVID Storage.

Default: [\\\[ip\]\Avid](#) Mediafiles\

**NOTE**

The AVID Webservices target always sends OPAAtom files. There is no file type configuration for this kind of target.

**NOTE**

The destination path should match with the Avid MXF OPAAtom storage on the AVID system.

XML Unit:

Specify the XML unit which will be used to perform the job. This XML unit is located on an XSquare workstation which interacts with the AVID computer where the Webservices are running.

**NOTE**

Only XSquare XML Unit can be selected for a Web services target type. Please refer also to the XSquare User Manual for an AVID Webservices configuration.

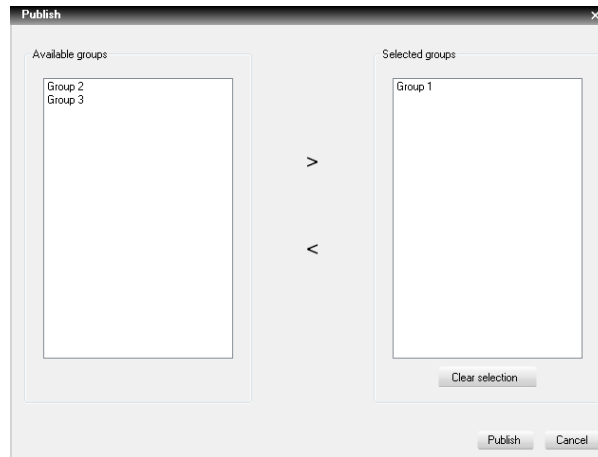
Playlist Backup Type:

Define the type of the backup for the playlist and timeline.

- EDL and Clips: XSquare transfers all the clips and create an AVID sequence which references all playlist and timeline elements.
- EDL only: not supported.
- Flatten file only: XSquare concatenates the playlist or the timeline in a single media file on the AVID storage.

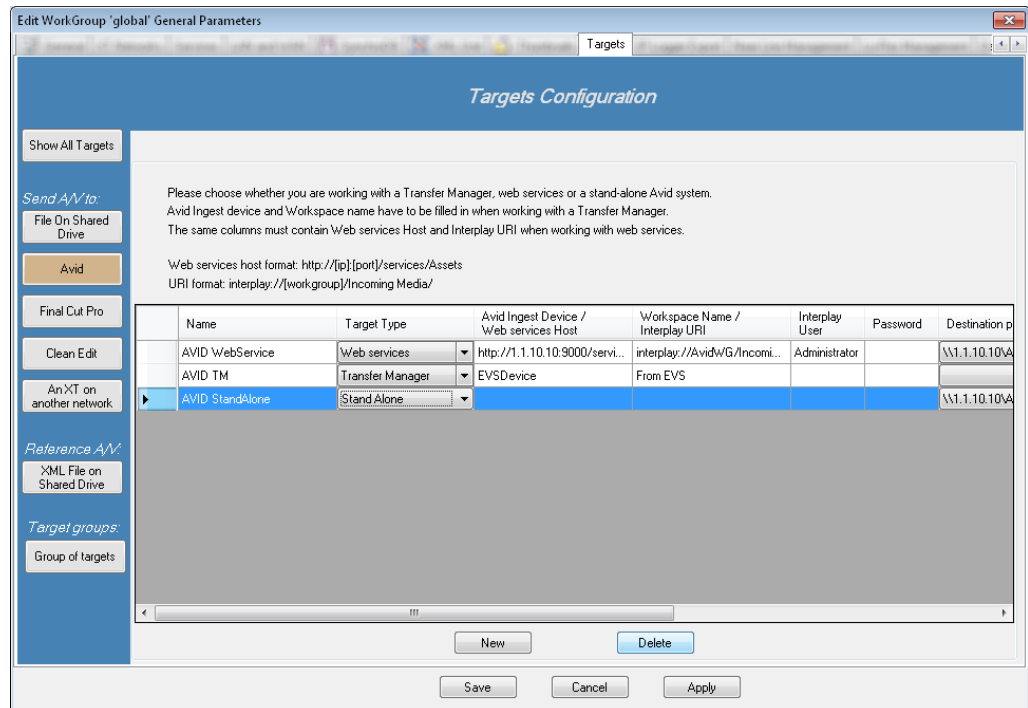
Publish:

If this destination target must be visible to other groups, click on the **Publish** button and a new window pops up to allow you to publish to different groups. Select group(s) in the left side and click the arrow > to push group(s) to the right side. Finally, click on **Publish**.



Deleting an AVID Target

Click on the line header to select it.



Click on the **Delete** button.



NOTE

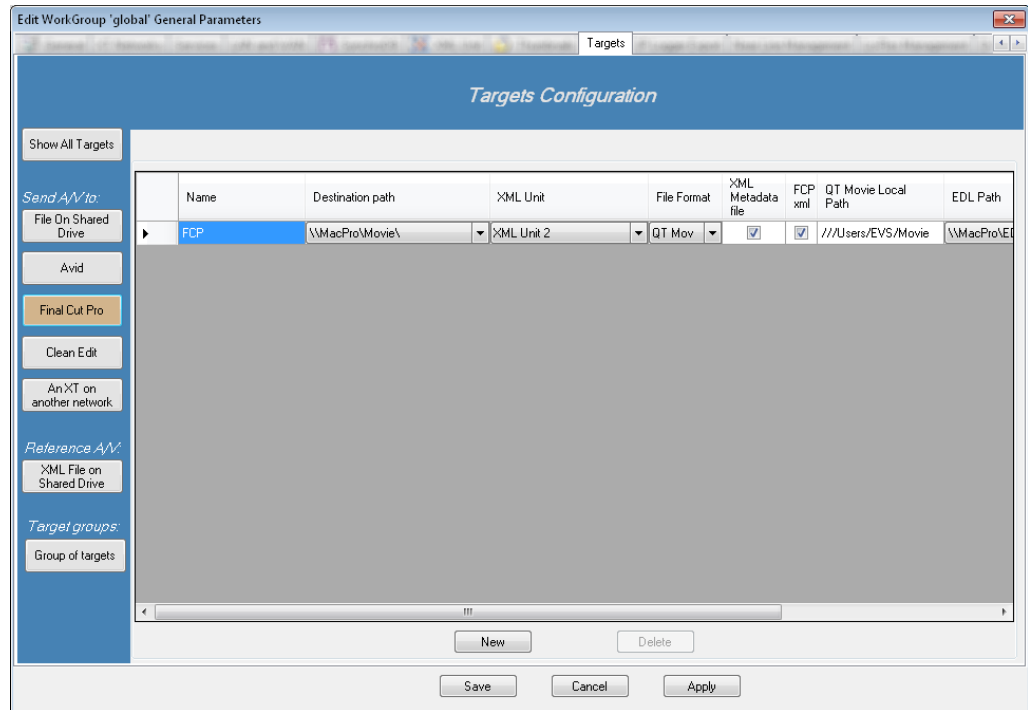
Once all AVID targets are configured, click on the **Apply** button before configuring another target type.

Final Cut Pro Configuration

Introduction

This tab must be used to define and configure the different Final Cut Pro destination target (s) available on the network where clips are to be sent from the IPDirector interface using the **Send To** option.

Click the **Final Cut Pro** button in the left menu:

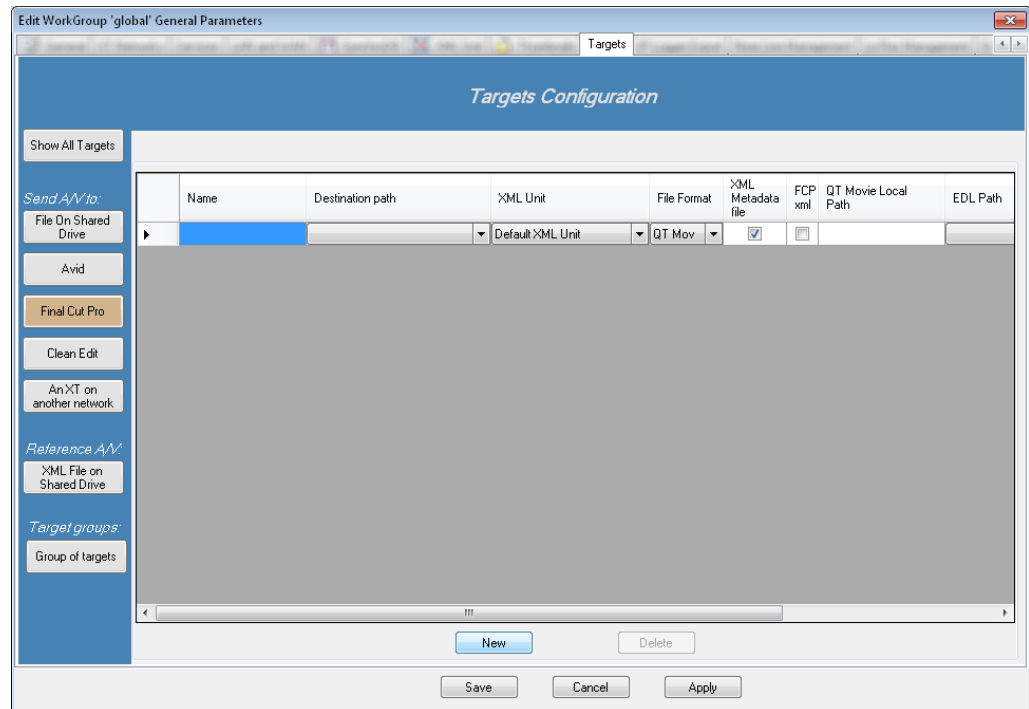


NOTE

XML Unit creation is required before configuring any FCP target.

Creating a new Final Cut Pro target

Click on the **New** button to add a new folder.



A new line is added in the unit list.

Name:

Click in the Name column and give a name to the Final Cut Pro target. This name will appear in the IPDirector Send To menu. It is used to identify the destination target in the IPDirector interface.

Destination Path:

Select in the list or browse the network to define the folder where the files are sent. This folder should be a UNC path to the network locations where the folder exists. Be sure this folder is shared with full access rights.



NOTE

Only UNC DNS name or IP address path are valid. (Ex:
\\MachineName\Target\, \\1.1.1.100\Target\
No local paths are valid.

XML Unit:

Select the XML unit used to perform the job (using the Gigabit network). Choose one specific unit in the list if the job must be performed by the XSquare system where this XML unit is located (the XML unit is linked to the destination target).

File Format:

Choose the QuickTime Movie or QuickTime Reference format. It defines the type of files which will be created by the XSquare system.

XML Metadata file:

If the box is selected, IPDirector sends metadata XML files linked to clips.

**NOTE**

IPDirector includes extended metadata stored in the IPD database. When clips are exported to targets, metadata can be joined in XML files created in the same target clip folder.

FCP xml:

If the box is selected, IPDirector generates an XML file to be imported into Apple Final Cut Pro. This allows importing EVS custom metadata. Only 6 EVS custom metadata can be imported in Final Cut Pro Project fields:

- EVS Keyword 1 -> Master Comment 1
- EVS Keyword 2 -> Master Comment 2
- EVS Keyword 3 -> Master Comment 3
- EVS Rating -> Master Comment 4
- Clip Number -> Comment A
- Camera ID -> Comment B

QT Movie Local Path:

This path is the local path referenced into the XML FCP to point to the Quick Time Movies File. Final Cut Pro only supports local path and the format used is an APPLE UNC Path.

**NOTE**

It is mandatory to fill this parameter if the FCP XML box is selected. The path informs the FCP that clips are linked to the received XML metadata files.

EDL Path:

Select in the list or browse the network to define the folder where the EDL files are sent. This folder should be a UNC path to the network locations where the folder exists. Be sure this folder is shared with full access rights.

**NOTE**

Only UNC DNS name or IP address path are valid. (Ex:
\\MachineName\Target\, \\1.1.1.100\Target\
No local paths are valid.

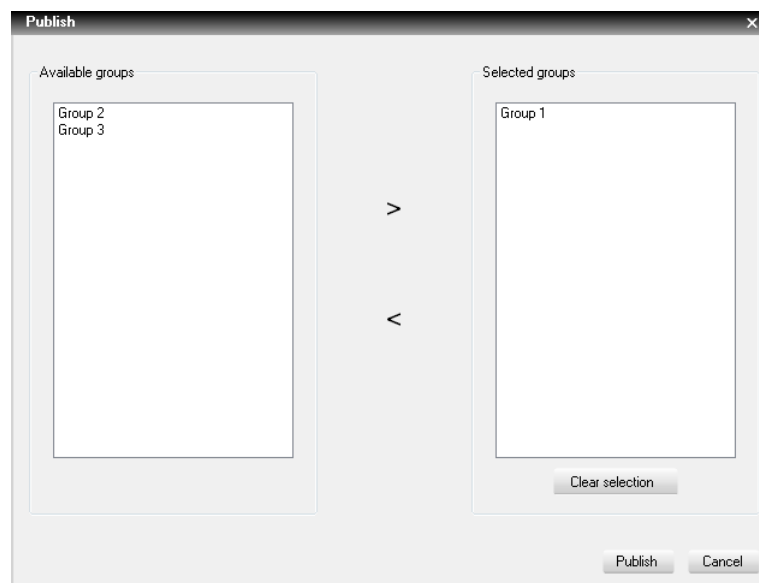
Playlist Backup Type:

Define the type of the backup for the playlist and timeline.

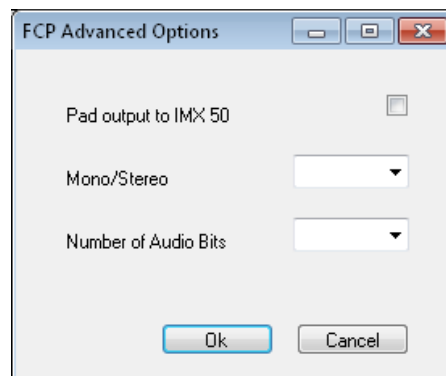
- EDL and Clips: XSquare transfers all the clips and create an EDL file which references all playlist and timeline elements. The EDL would be loaded in the Apple Final Cut Pro.
- EDL only: not supported.
- Flatten file only: XSquare concatenates the playlist or the timeline in a single media file on the Apple Final Cut Pro storage.

Publish:

If this destination target must be visible to other groups, click on the **Publish** button and a new window pops up to allow you to publish to different groups. Select group(s) in the left side and click the arrow > to push group(s) to the right side. Finally, click on **Publish**.

**Advanced:**

This new optional parameters allow forcing the Pad Output to IMX50, selecting Mono/Stereo for audio and selecting the number of audio bits between 16/24.

**Pad output to IMX 50:**

If the box is selected, the metadata of the exported clip flags it with an IMX 50 video codec even if the clip is coded in IMX 30 or IMX 40.

Mono/Stereo:

If the setting is blank, the original audio configuration is not affected.

If the setting is set to **Mono**, the audio tracks are identified as separated mono tracks.

If the setting is set to **Stereo**, the audio tracks are identified per pair of stereo tracks.

Number of Audio Bits:

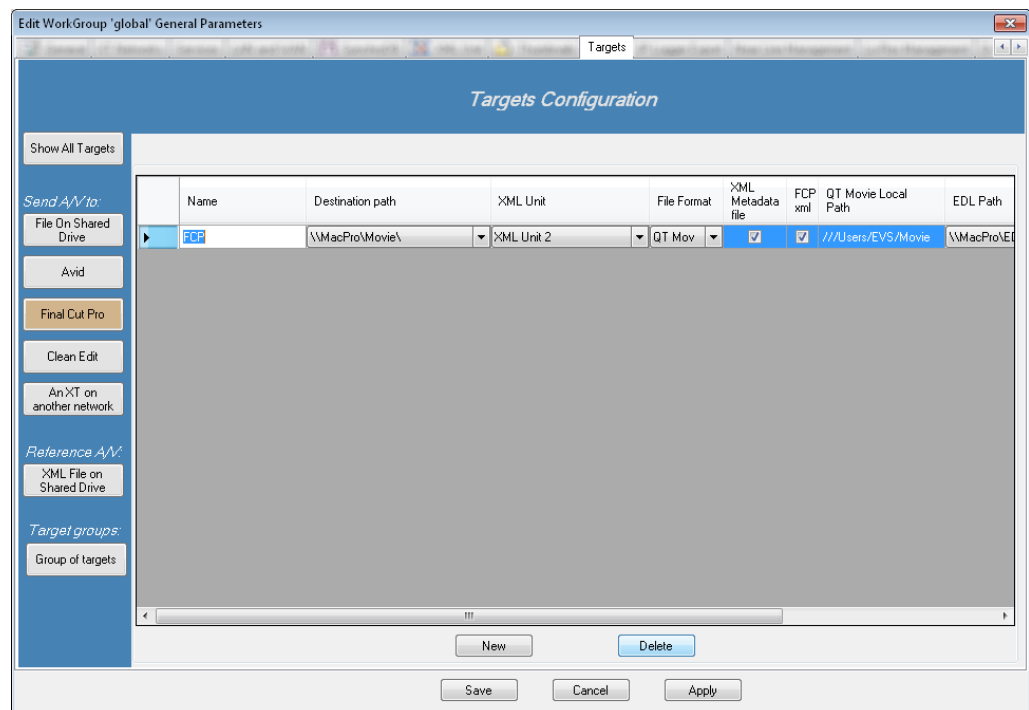
If the setting is blank, the original audio configuration is not affected.

If the setting is set to **16**, the audio format is converted to 16 bits.

If the setting is set to **24**, the audio bit format is converted to 24 bits.

Deleting a Final Cut Pro Target

Click on the line header to select it.



Click on the **Delete** button.

**NOTE**

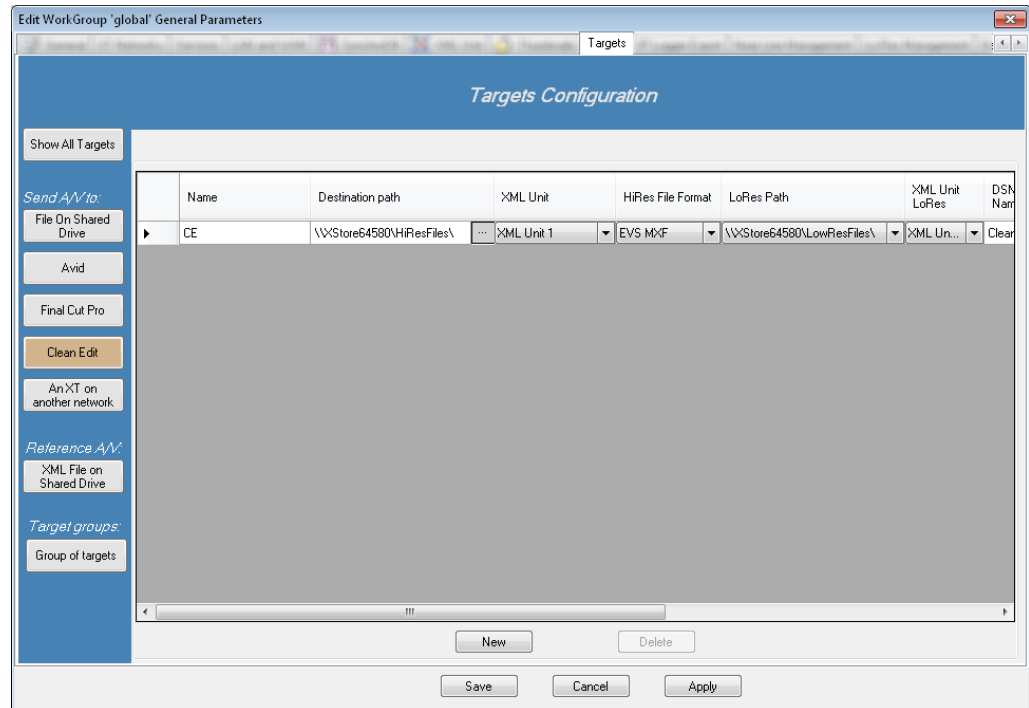
Once all FCP targets are configured, click on the **Apply** button before configuring another target type.

CleanEdit Configuration

Introduction

This tab is used to define and configure the different Clean Edit destination target(s) available on the network where clips are to be sent from the IPDirector interface using the **Send To** option.

Click the **CleanEdit** button in the left menu:

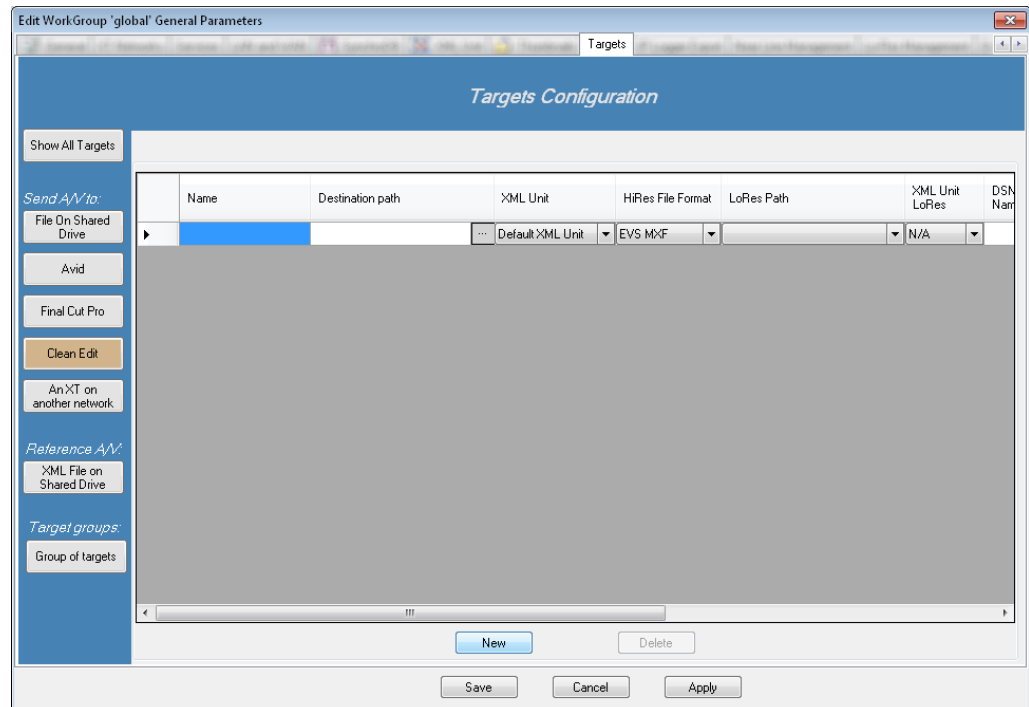


NOTE

Create XML Unit(s) first to configure this tab.

Create a New Clean Edit Target

Click on the **New** button to add a new target. A line is added in the unit list.



Name:

Give a name to the target. This name will appear in the IPDirector Send To menu. It is used to identify the Clean Edit target in the IPDirector interface.

Destination Path:

Select in the list or browse the network to define the folder where the HiRes files are sent. This folder should be a UNC path to the network locations where the folder exists. The path is usually \\HiResFiles. Be sure this folder is shared with full access rights.



NOTE

Only UNC DNS name or IP address path are valid. (Ex: \\XStoreName\HiResFiles\, \\1.1.1.100\HiResFiles\)
No local paths are valid.

XML Unit:

Specify the XML unit which will be used to perform the HiRes job. This unit should be located on the XSquare system which updates the CleanEdit database.

HiRes File Format:

Choose the MXF EVS, OP1A MXF XDCAM, QuickTime Movie, QuickTime Reference, Avid MXF OPAAtom, DV-DIFF, OP1A MXF SMPTE or Wave format. It defines the type of files which will be created by the XSquare system.

LoRes Path:

No more used.

XML Unit LoRes:

No more used.

DSN Name:

Enter a DSN Name (Data Source Name that will allow you to access to the CleanEdit Database).

Default: CleanEditDB

DSN User:

Enter the corresponding DSN User to access to CleanEdit Database.

Default: EVS

DSN Password:

Enter the corresponding DSN Password to access to CleanEdit Database.

Default: cleanedit

XML Metadata File:

If the box is selected, IPDirector sends metadata XML files linked to clips.

**NOTE**

IPDirector includes extended metadata stored in the IPD database. When clips are exported to targets, metadata can be joined in XML files created in the same target clip folder or in a different one.

XML File path:

Specify the target folder which receives the XML Metadata files. This folder can be the same folder as the Backup Destination Directory or a different one. Be sure this folder is shared with full access rights.

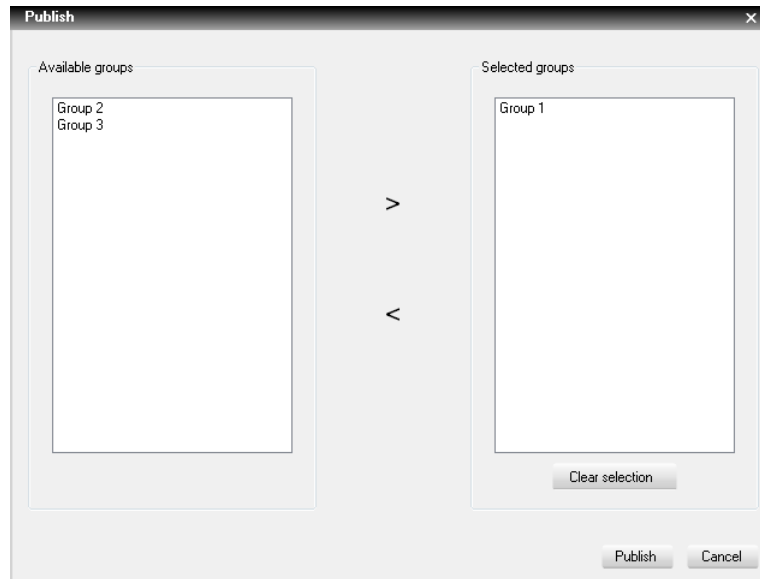
Playlist Backup Type:

Define the type of the backup for the playlist and timeline.

- EDL and Clips: XSquare will transfer all the clips and create an EVS EDL file which references all playlist and timeline elements (currently not supported)
- EDL only: not supported.
- Flatten file only: XSquare will concatenate the playlist or the timeline in a single media file on the CleanEdit storage (currently not supported)

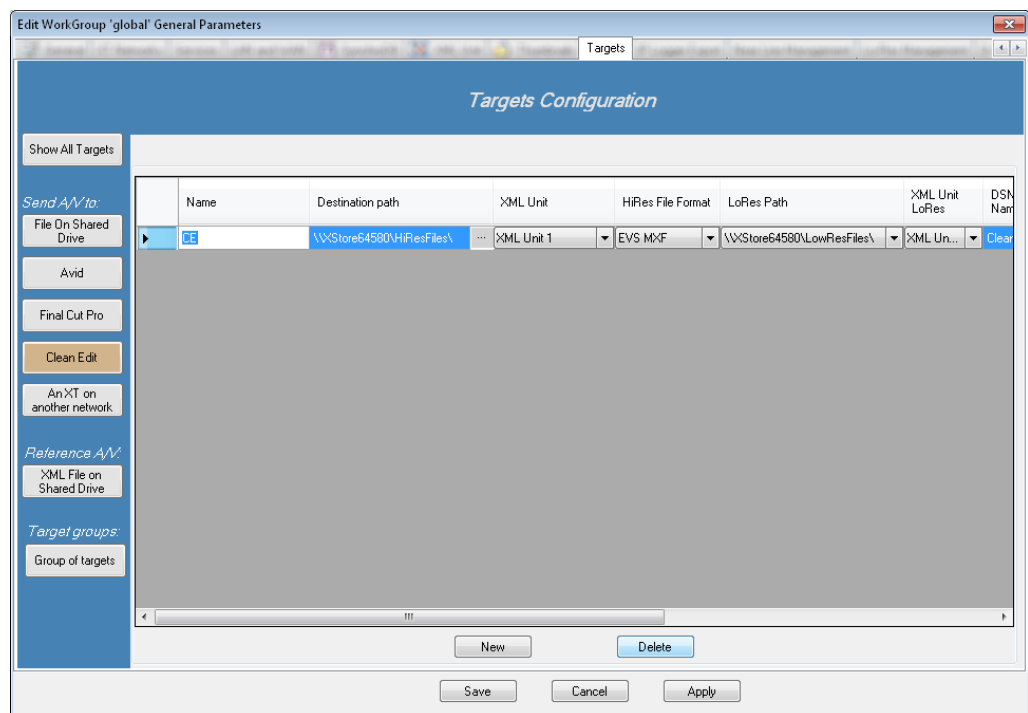
Publish:

If this Clean Edit target must be visible to other groups, click on the **Publish** button and a new window pops up to allow you to publish to different groups. Select group(s) in the left side and click the arrow > to push group(s) to the right side. Finally, click on **Publish**.



Deleting a Clean Edit Target

Click on the line header to select it.



Click on the **Delete** button.



NOTE

Once all CE targets are configured, click on the **Apply** button before configuring another target type.

An XT on Another Network Configuration

Introduction

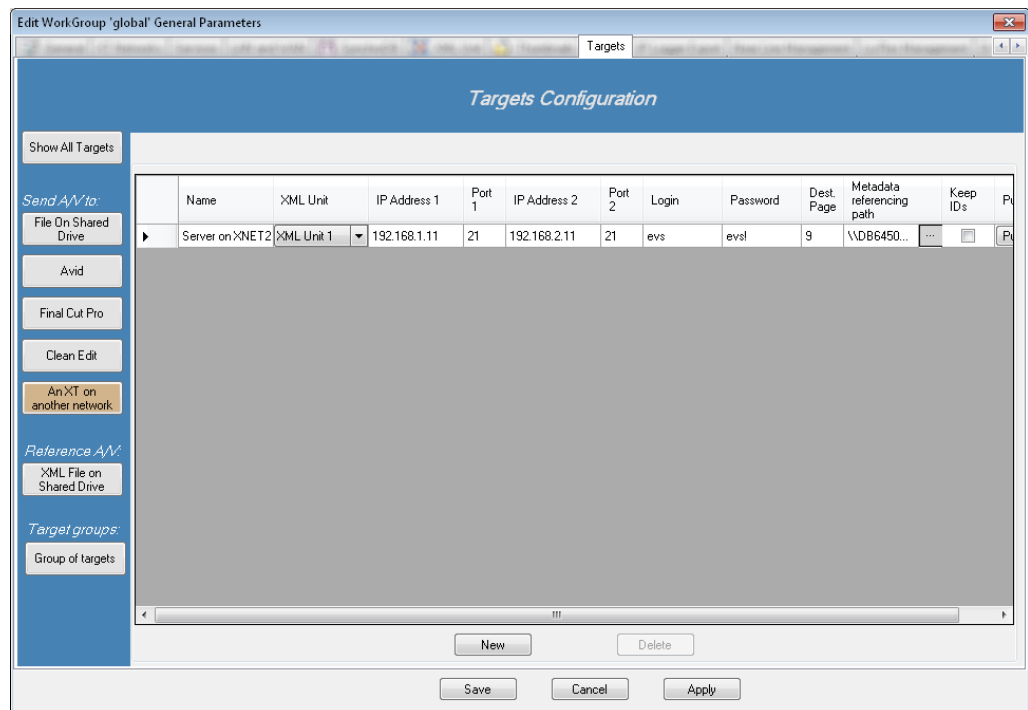
This tab is used to define and configure the XT targets. With the gigabit feature of the server, it is possible to send clip to another server through a TCP/IP Network.

Click the **An XT on Other Network** button on the left to access the XT on Other Network configuration parameters.



WARNING

This feature is only available on a server upgraded with a GBX module on the HCTX card. The Xsquare software must be installed on a network computer. Please contact EVS for more information.

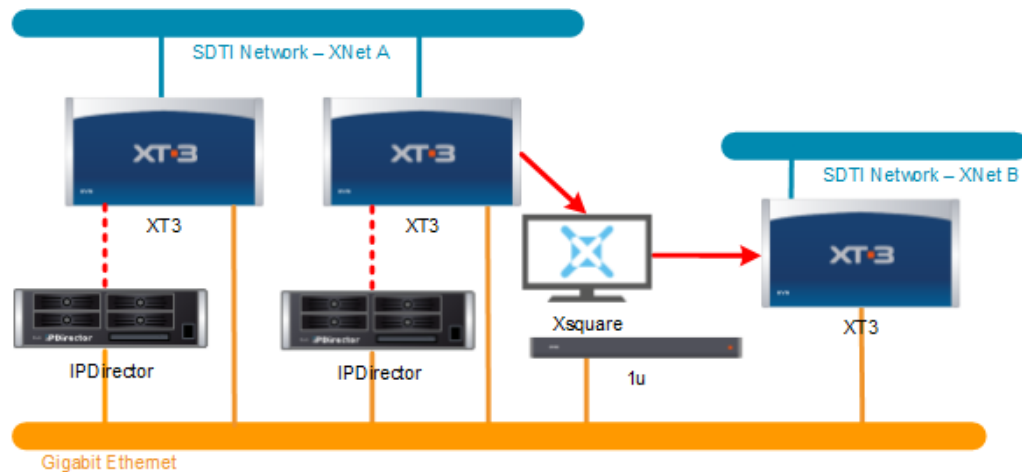


Clips can be transferred from an SDTI network to another one using a TCP/IP Network, even if this second SDTI network is not connected to IPDirector.

Sending a clip through a server target will initialize Xsquare which manages the clip copy between the two servers.

IPDirector sends a XML file to the shared folder scanned by Xsquare (a previously defined XML Unit). This XML file contains source and target information. Xsquare executes the job.

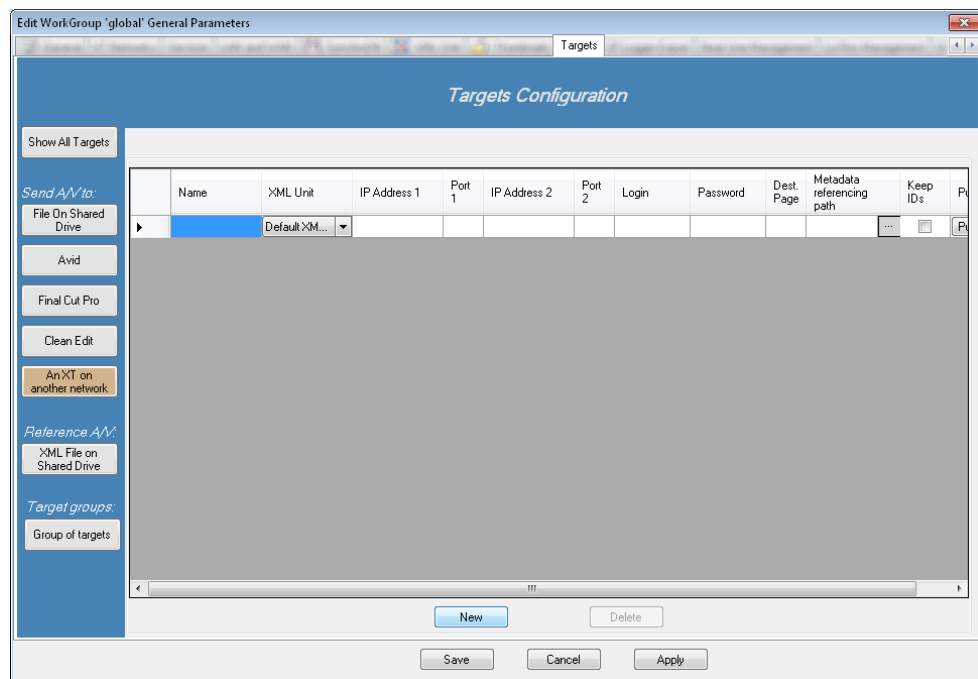
Please refer to the Xsquare and Multicam Manuals for more information.



Creating a New XT (server) Target

1. Click the **New** button to add a new server target.

A new line is added in the list.



2. Click in the Name column and give a name to the server target.
This name will appear in the IPDirector Send To menu.
3. Select the XML unit used which will be used to perform the job.
4. Enter the IP address of the first destination server Gigabit port in the IPAddress1 column.
5. Enter the FTP port number corresponding to the first server gigabit port in the Port 1 column.

Default: 21.

6. Enter the IP address of the second destination server Gigabit port in the IPAddress 2 column.
7. Enter the FTP port number corresponding to the second server gigabit port in the Port 2 column.
Default: 21.
8. Enter the login username of the FTP server in the Login column.
Default: evs
9. Enter the login password of the FTP server in the Password column.
Default: evs!

**NOTE**

The H3X (or HCTX) Gigabit connection settings are set inside the Multicam Setup Configuration (SHIFT+F2, Tab 3 Network).
Please refer to the Server Software Technical reference manual.

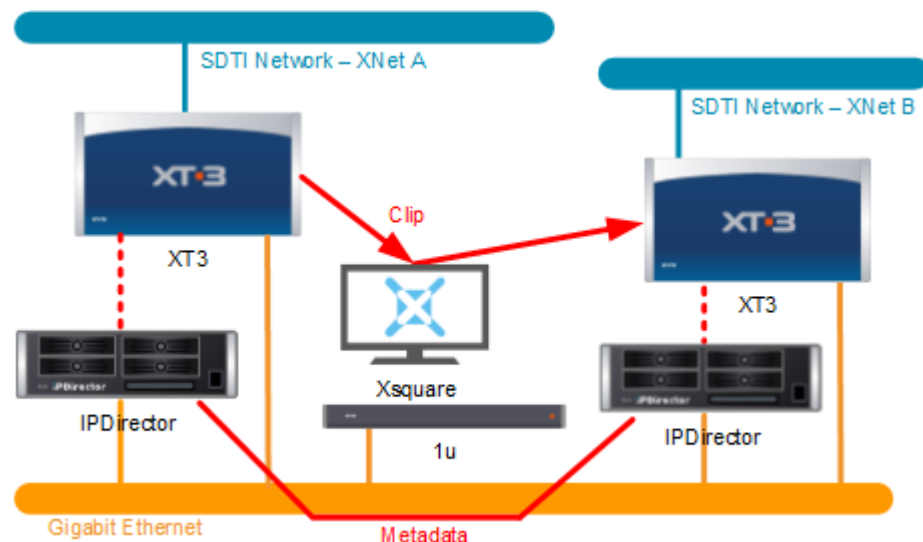
10. In the Dest. Page column, specify a destination page on the target server to receive exported clips.

Value: 0-9

11. Specify the target folder which receives the Metadata Referencing files in the Metadata Referencing Path column.

This feature is typically used to send IPDirector metadata from a network to another one.

If the XT (server) target is used to transfer clips from an SDTI network to another one using a TCP/IP Network and if the both network are connected on two different IPDirector workgroup, then the clip metadata has to be exported to the IPDirector target workgroup. This workgroup will ingest the clip metadata and associate it with the transferred file.

**NOTE**

A dedicated job must be added within the IP-Scheduler on the target workgroup.
See section "Configuring IP-Scheduler" on page 157 for details.

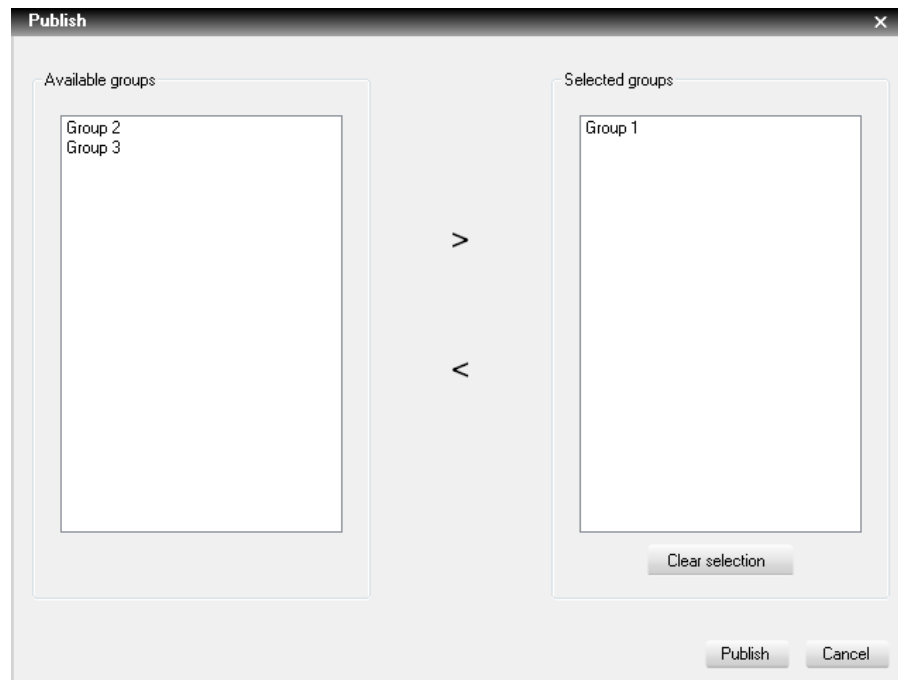
12. (optional) Select the **Keep IDs** option.

If the box is selected, the clip is transferred with the same UmID and VarID on the distant server.

13. Publish the XT (server) target to groups which need visibility to it:

- a. Click the **Publish** button.

The Publish window pops up.

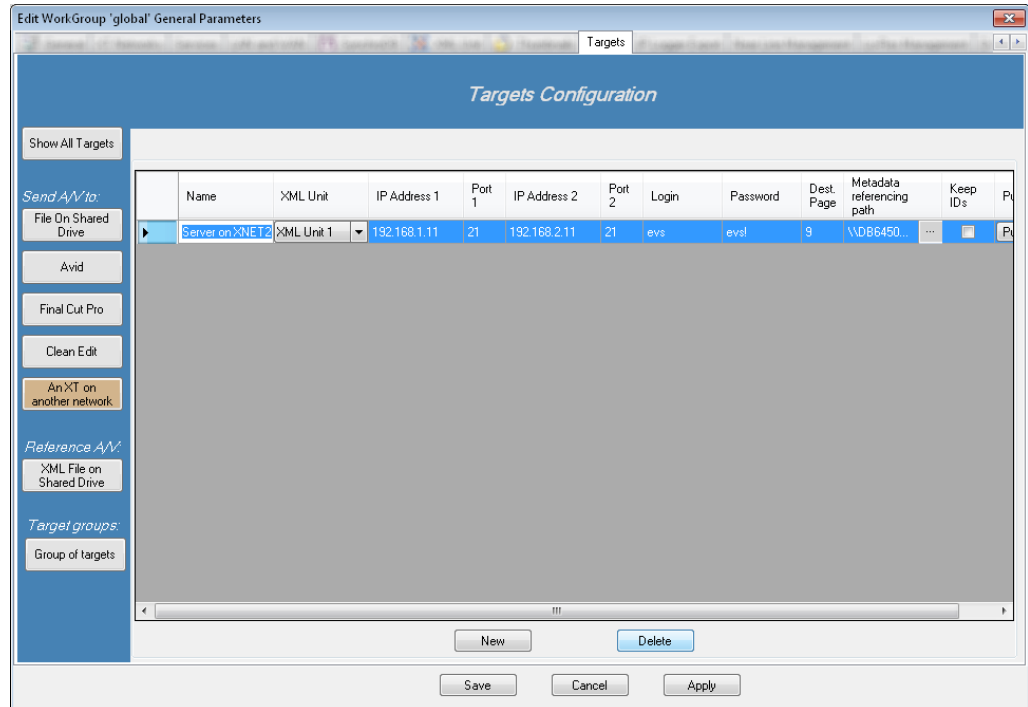


Groups are created in the User Manager application (see User Manager manual).

- b. Select group(s) in the left side.
 - c. Click the arrow > to push group(s) to the right side.
 - d. Click the **Publish** button.
14. Once all XT (server) targets are configured, click on the **Apply** button before configuring another target type.

Deleting an XT (server) Target

1. Click on the line header to select it.



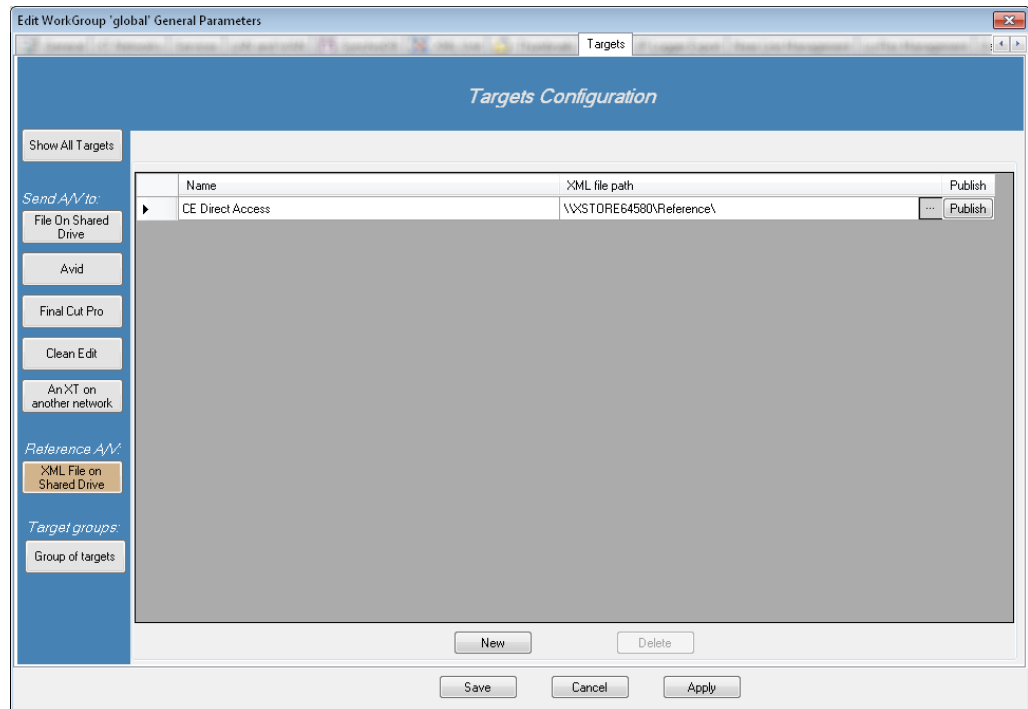
2. Click the **Delete** button.

XML File on Shared Drive Configuration

Introduction

This tab is used to define and configure the different XML File on Shared Drive target(s) available on the network and where XML files can be sent from the IPDirector interface using the **Send To** option.

Click the **XML File on Shared Drive** button on the left to access the XML File on Shared Drive configuration parameters.

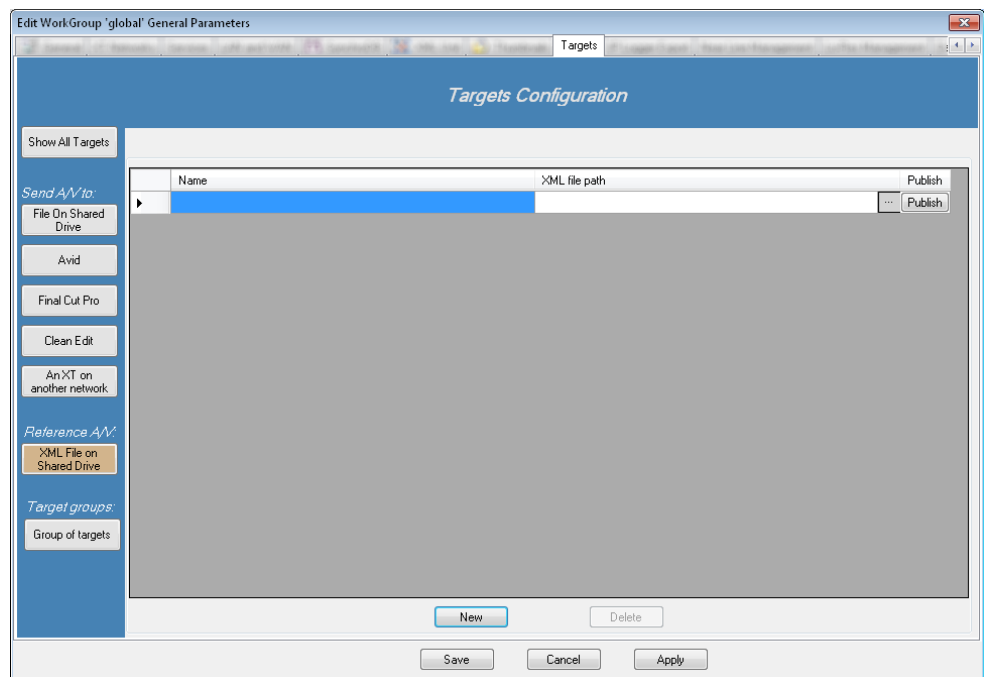


This kind of target is mainly used to send clip information on a system which is able to grab the clip by itself from the Server Network (XNet) or through the Server Gigabit Network.

Creating a New XML File Target

1. Click the **New** button to add a new server target.

A new line is added in the list.



2. Click in the Name column and give a name to the target.

This name will appear in the IPDirector Send To menu. It is used to identify the XML file target in the IPDirector interface.

3. Define a XML File Path:

Select in the list or browse the network to define the folder where the XML files are sent.

This folder should be a UNC path to the network locations where the folder exists.

Be sure this folder is shared with full access rights.



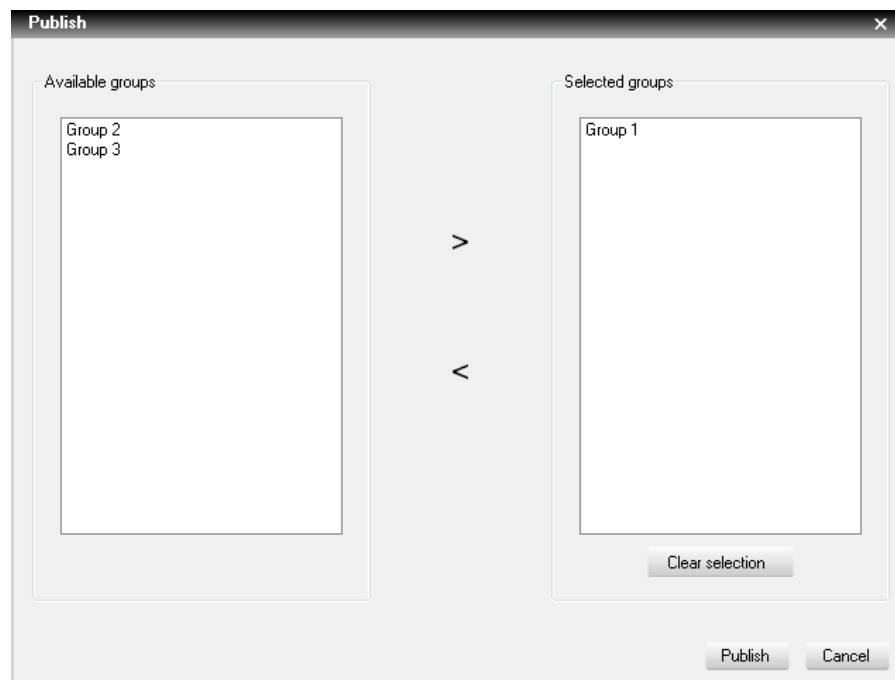
NOTE

Only UNC DNS name or IP address path are valid. (Ex:
\\MachineName\Target\, \\1.1.1.100\Target\
No local path is valid.

4. Publish the XML File target to groups which need visibility to it:

- a. Click the **Publish** button.

The Publish window pops up.

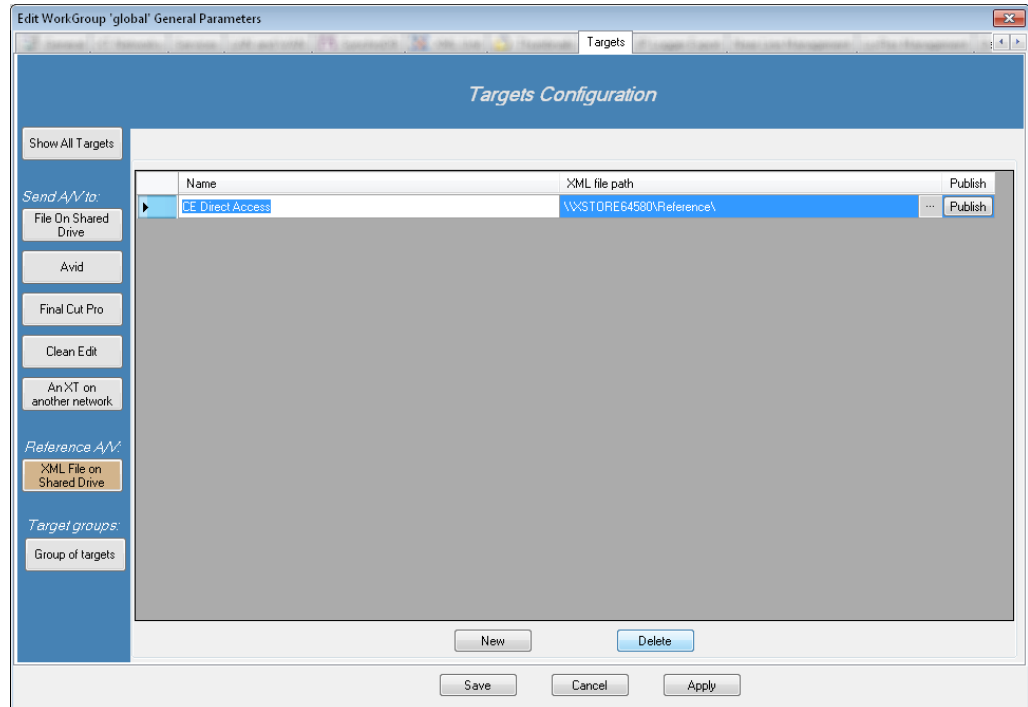


Groups are created in the User Manager application (see User Manager manual).

- b. Select group(s) in the left side.
 - c. Click the arrow > to push group(s) to the right side.
 - d. Click the **Publish** button.
5. Once all XML File targets are configured, click on the **Apply** button before configuring another target type.

Deleting an XML File Target

1. Click on the line header to select it.



2. Click the **Delete** button.

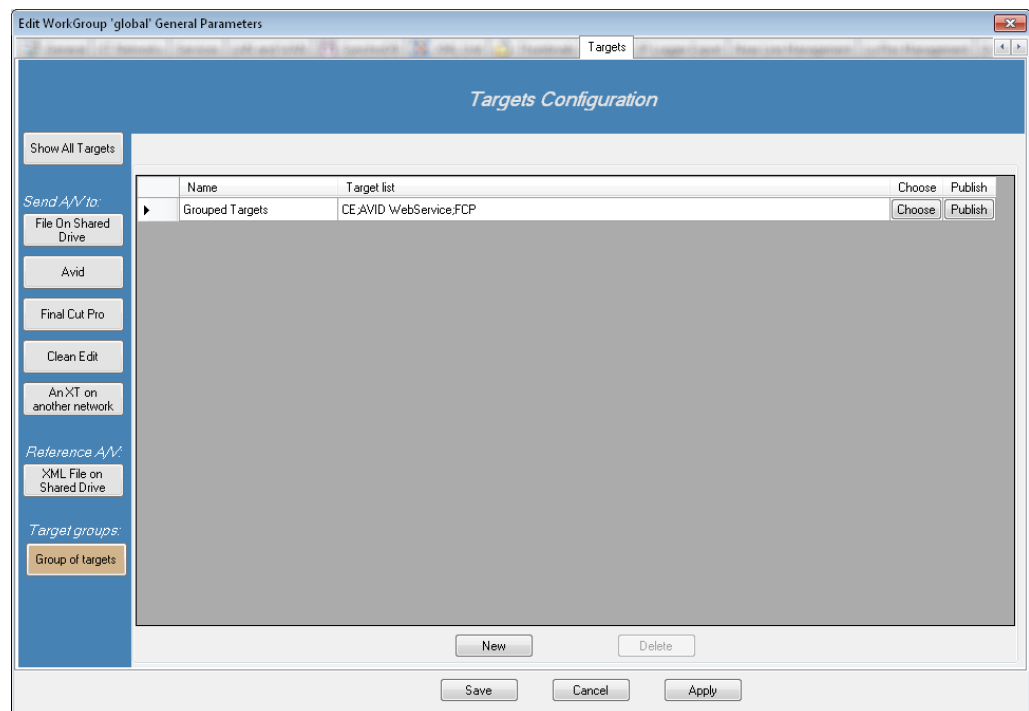
Group of Targets Configuration

Introduction

This tab must be used to define and configure the different Group of targets available on the network where XML files are to be sent from the IPDirector interface using the **Send To** option.

This kind of target is a list of previously defined targets. It allows, in one operation, to send clips to several targets.

Click the **Group of Targets** button in the left menu:



This kind of target is a list of previously defined targets. It allows, in one operation for the IPDirector operator, to send clips to several targets.

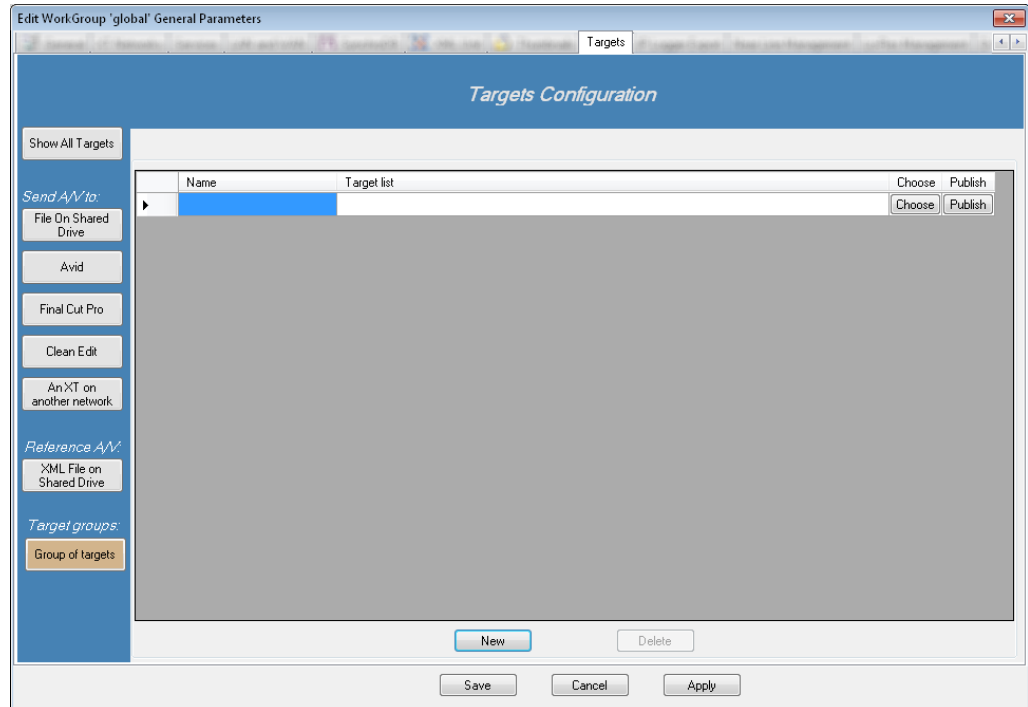


NOTE

Target creations are required before configuring any Group of targets.

Creating a New Group of Targets

Click on the **New** button to add a new group. A line is added in the unit list.



Name:

Give a name to the group of targets. This name will appear in the IPDirector Send To menu. It is used to identify the target in the IPDirector interface.

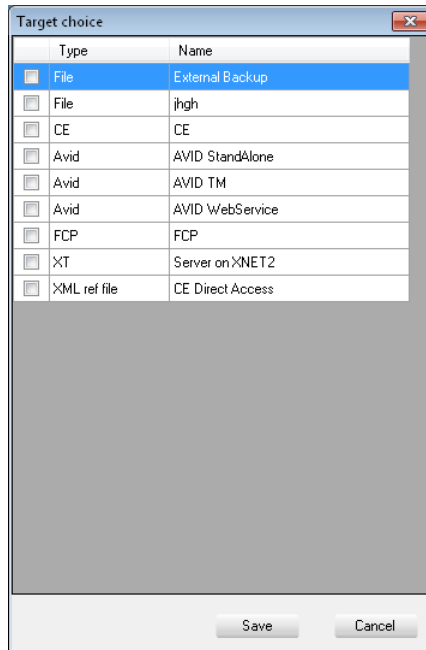
Target list:

This field displays a summary of the chosen targets, it cannot be edited.

Select the targets using the **Choose** button.

Choose:

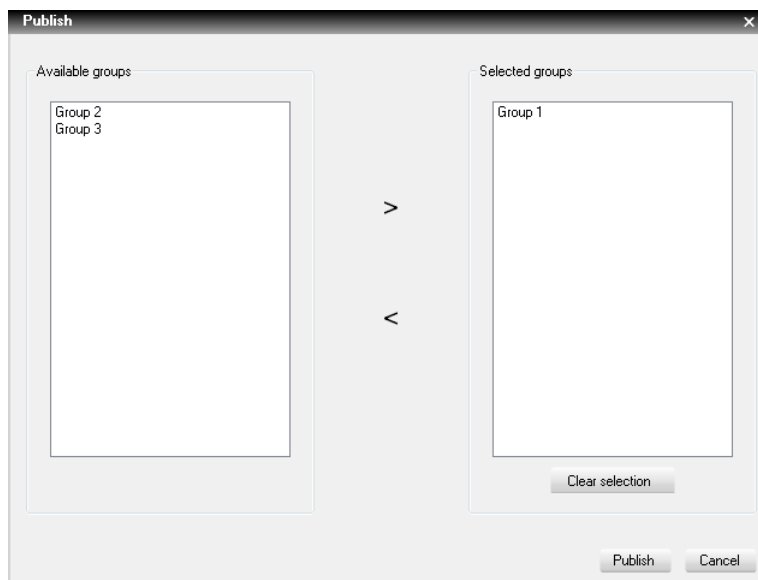
Clicking the **Choose** button opens a pop-up window:



Simply check boxes in front of each wanted target and click **Save**.

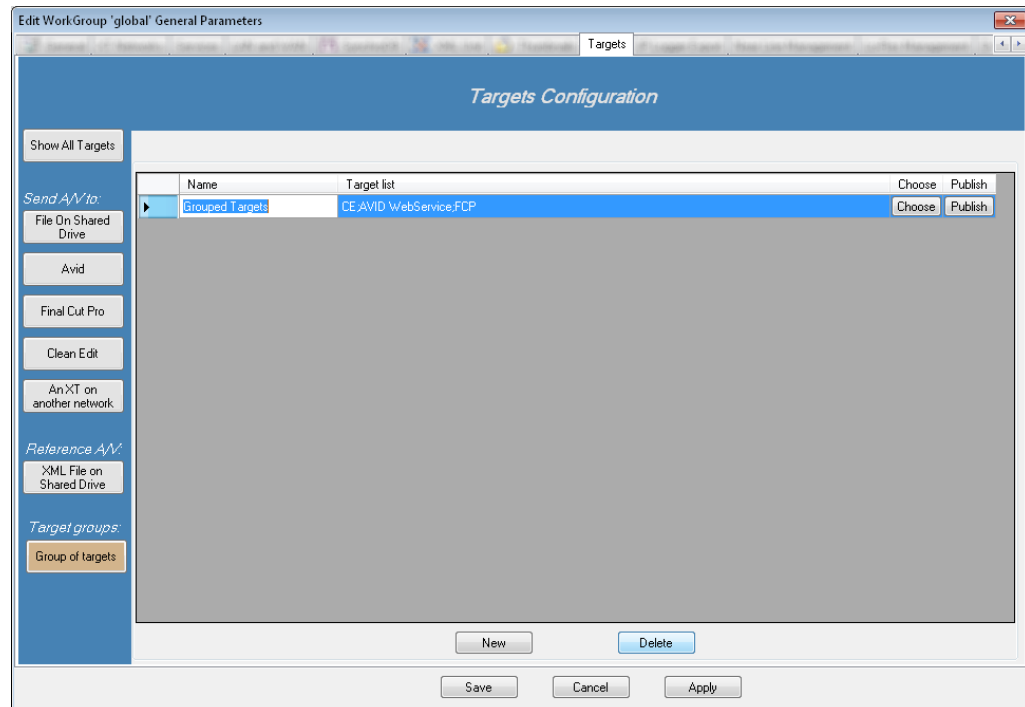
Publish:

If this Group of targets must be visible to other groups, click on the **Publish** button and a new window pops up to allow you to publish to different groups. Select group(s) in the left side and click the arrow > to push group(s) to the right side. Finally, click on **Publish**.



Deleting a Group of Targets

Click on the line header to select it.



Click on the **Delete** button.



NOTE

Once all targets and groups are configured, click on the **Apply** button in order to validate all the created targets.

If you click the **Show All Targets** button, a target summary is displayed.

2.7.11. Xsquare Parameters Definition

Context of Use

Targets defined in Xsquare, also called SOAP jobs, are available in IPDirector to send media items to (send to (Xsquare) targets operations triggered from IPDirector).

The backup to nearline or to IPDrive operations, the restore to XT operations and the copy by GigE operations triggered from IPDirector are performed according to Xsquare templates.

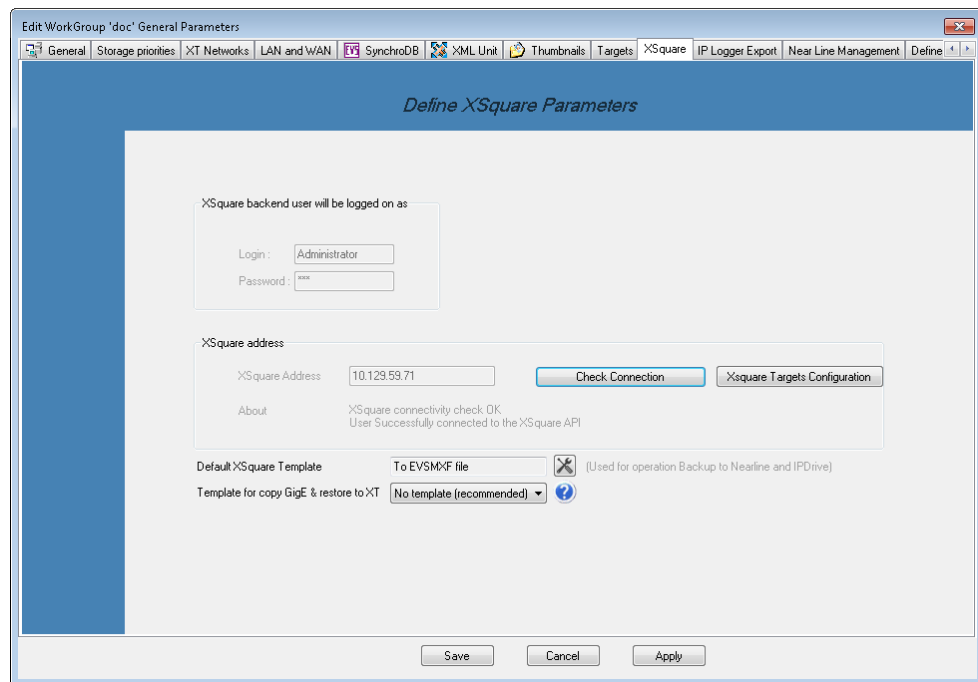
All these operations are possible provided that Xsquare has been declared in the Remote Installer and that it is reachable.

The Xsquare targets configuration is done in Xsquare and must fulfill some requirements detailed in the current section.

The nearline configuration, with the selection of an Xsquare template, is described in section "Nearline Management Configuration" on page 123. The configuration of the IPDrive service, with the selection of an Xsquare template, is described in section "Configuring IP Drive" on page 163. The selection of a default template is done from the Xsquare tab.

How to Set Xsquare Parameters and Check the Connection

1. Click the **Configure** button to access the Edit Workgroup window.
2. Go to the Xsquare tab.



3. Make sure that the login and password correspond to the administrator user.
The default administrator login and password are pre-filled.
4. Enter the IP address of the workstation hosting Xsquare in the **XSquare Address** field.
5. Check the connection with Xsquare by clicking the **Check Connection** button.
The result is written in the **About** field.

6. (optional) Click the **Xsquare Targets Configuration** button

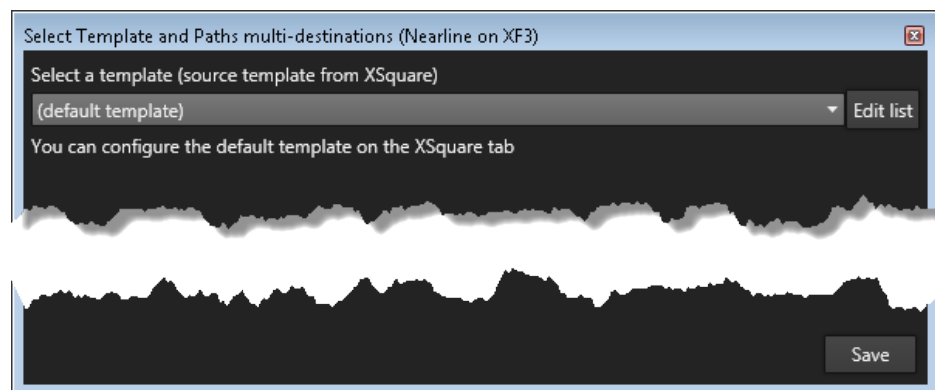
The Xsquare Targets Browser window opens and displays the list of Xsquare targets pre-defined in Xsquare and published to the user currently logged in the Remote Installer.



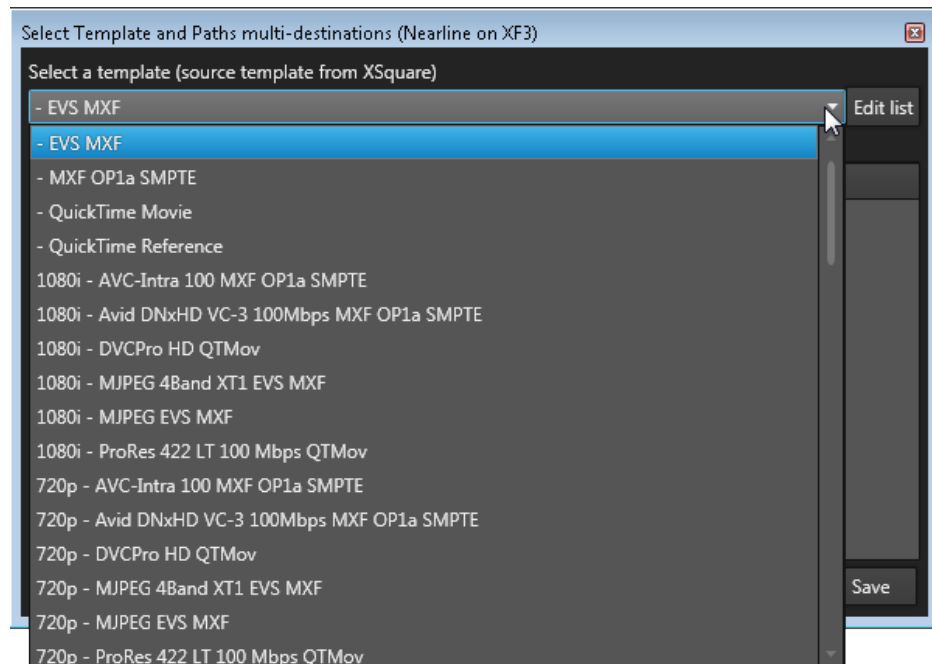
7. Select an Xsquare template that will be used as default template for operations such as backup to nearline / IP Drive. By default, the **Default Xsquare template** field is empty.

- a. Click the  button.

The Select Template and Paths Multi-Destinations window opens:

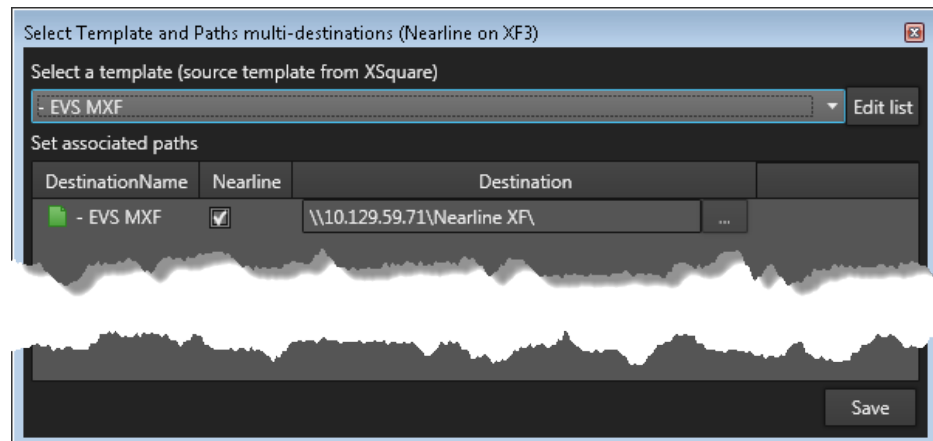


- b. Click the arrow next to the **Template** field to display the list of available templates:



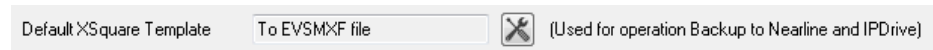
- c. Select a template.

The selected template is listed in the window:



- d. Click **Save**.

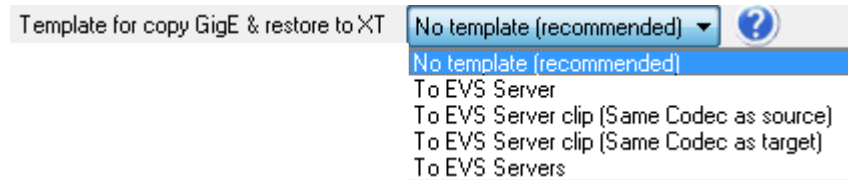
The default Xsquare template is displayed in the **Default Xsquare Template** field:



WARNING

The selected default template will be used for the backup to nearline and to IPDrive operations. If you need to use an other template for a specific nearline/IPDrive, you need to modify the configuration in the Nearline tab (see section "Nearline Management Configuration" on page 123) or in the IPDrive configuration of the local workstation (see section "Configuring IP Drive" on page 163).

8. Select an Xsquare template that will be used for operations such as Copy by GigE and restore (from nearline / IP Drive) to XT.
 - a. Click the arrow next to the **Template for Copy by GigE & Restore to XT** field to display the list of available templates:



- b. Select a template.

Constraints for the Configuration of Targets in Xsquare

This section describes actions which must be performed in Xsquare to ensure a proper working of Xsquare targets in IPDirector.

Creation of Xsquare Roles

This is done from **Administration > Roles**.

- An Xsquare role must be created for each IPDirector user and defined as follows: `_username`.
- These roles must be granted the rights to read and modify targets published to the group(s) the corresponding user belongs to.

Creation of Xsquare Groups

This is done from **Administration > Groups**.

- Xsquare group(s), corresponding to the groups created in the User Manager, must be created.

Creation of Xsquare Users

This is done from **Administration > Users & Access**.

- Users must be created in Xsquare, so each IPDirector user have an Xsquare account with the same access codes (login/username and password) in both applications.
- The Xsquare role created for each user must be assigned to the right user.
- Each user must be assigned to the same group of users in the User Manager application and in Xsquare.

Publication of Targets

This is done from **Job Initiators > Targets SOAP Jobs**.

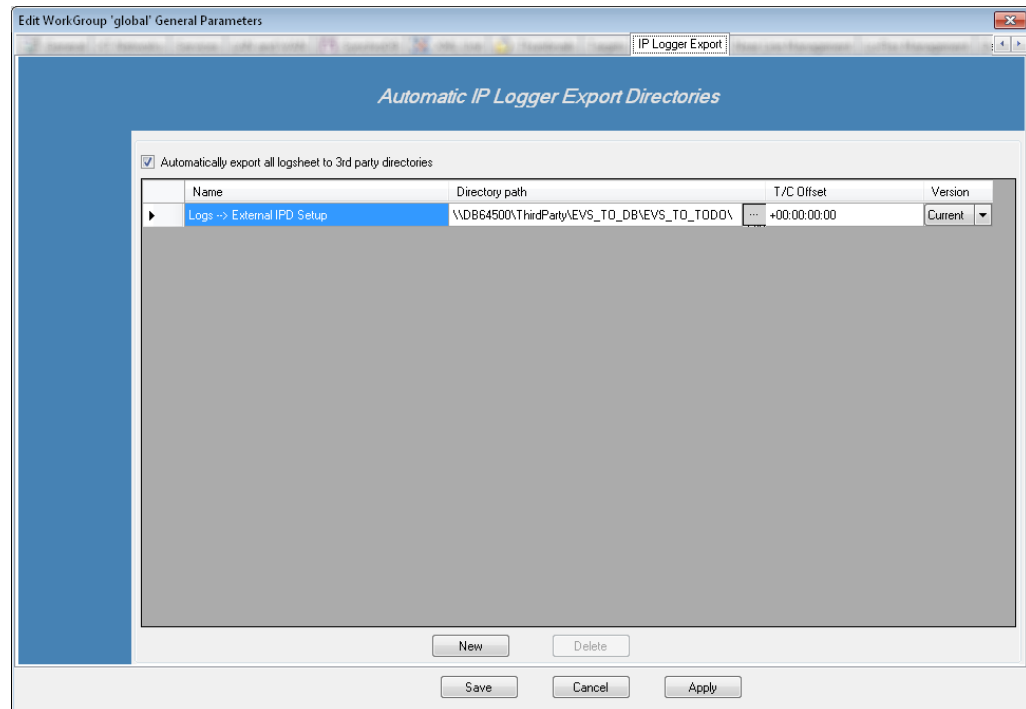
- Each Xsquare target must be published to a group of users to allow them to view the Xsquare target from IPDirector.

2.7.12. IP Logger Export Configuration

Introduction

This tab should be used to define and configure the Log Export directories available on the network where logs, logsheets and modifications are sent as XML files.

Select the IP Logger Export tab.



Automatically export all logsheets to 3rd party directories:

Export all logging operations done on every new log sheet that will be created in the IPDirector workgroup.

☒ Automatically export all logsheet to 3rd party directories

If this option is disabled and the Export Destination Directory is defined, the IPDirector operator manually decides which logsheet will be exported. During the logsheet creation, this option is available inside the Step1 of its properties. Once the creation is completed, the option cannot be changed.

Please refer to the Logsheet Creation chapter in the IPDirector user manual.

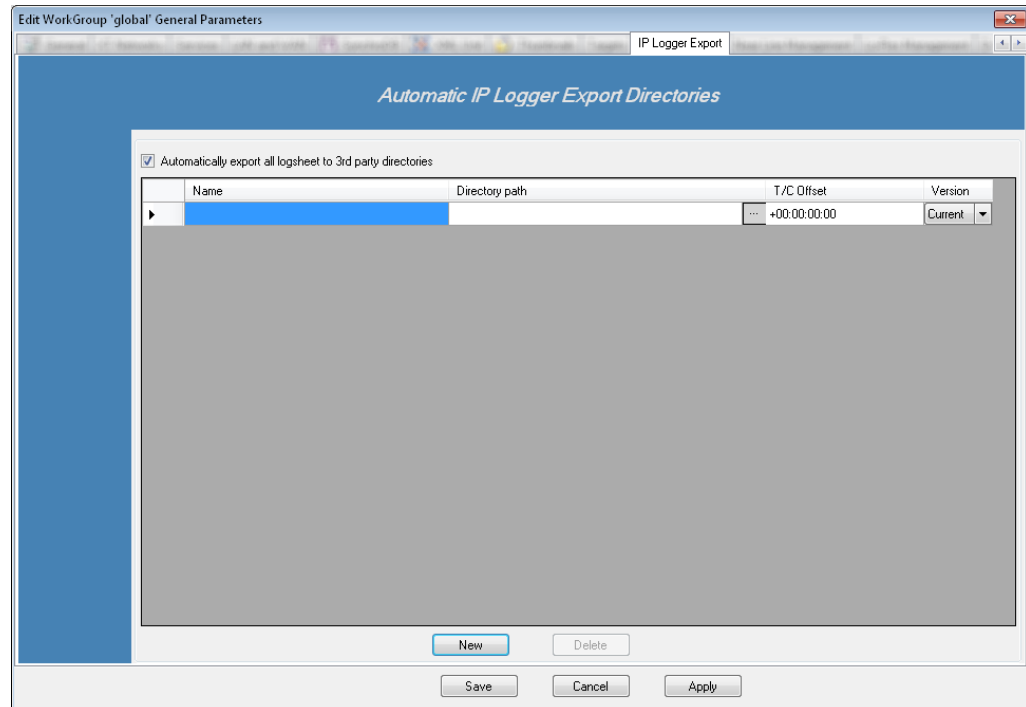


NOTE

Please contact EVS staff for additional information about third Party features.

Creating a New IP Logger Export Directory

Click on the **New** button to add a new directory. A line is added in the list.



Name:

Click in the Name column and give a name to the IP Logger Export Directory.

Directory path:

Select in the list or browse the network to define the folder where logging XML files are sent to Third Party systems or to other IPDirector workgroups.



NOTE

Only UNC DNS name or IP address path are valid. (Ex: \\ThirdParty\LOGfromEVS\, \\1.1.1.100\LOGfromEVS\)
No local paths are valid.



NOTE

The directories must be shared with full access control.

T/C Offset:

Enter a valid Timecode value. All logs exported in the specific directory will be updated with the new offset Timecode.

The aim of this parameter is to allow exporting logs on an external setup which is located on a different time zone.

Default value: +00:00:00:00 (Original log Timecode is kept)

**NOTE**

If the TC value entered is not correct, an error is displayed:

**Version:**

Select the export version between **Current** and **L="UserInterface">egacy**.

Since IPDirector V5&6, the logging XML format has changed. This new standard is the **Current** one. The old standard is the **Legacy** one.

If it is planned to export log with an IPDirector V4 destination setup, it is mandatory to select **Legacy**.

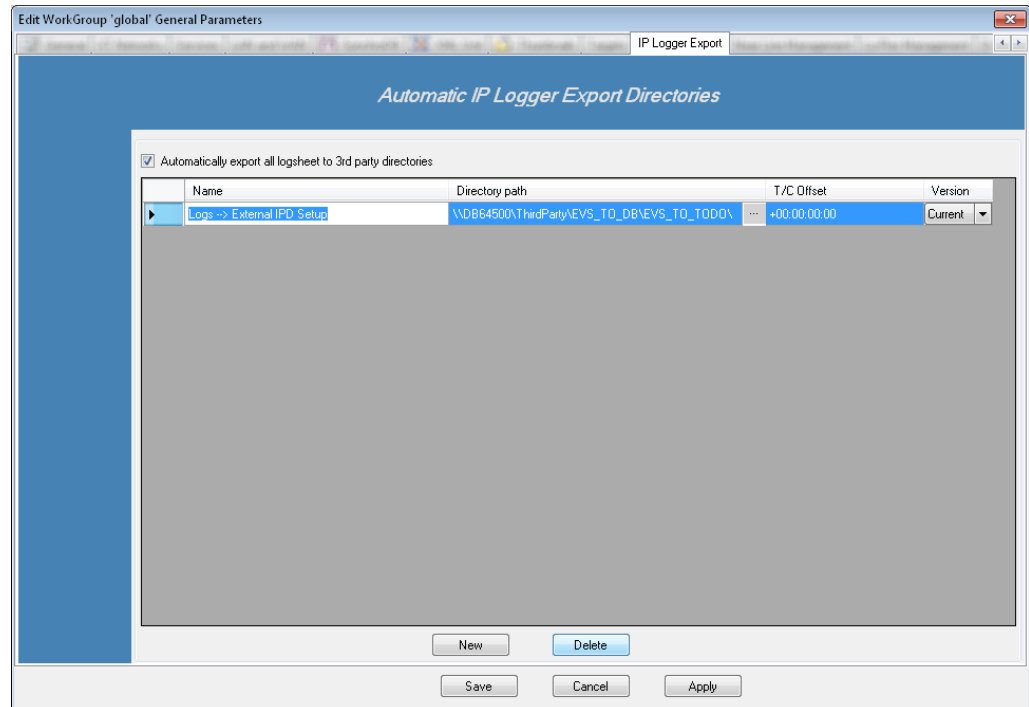
For an IPDirector V5 destination setup, it is strongly recommended to select **Current**.

The Current version of logging xml files contains XML version tags:

```
<?xml version="1.0" encoding="utf-8" ?>
- <Logsheet_With_Log Version="2.0.1">
- <Logsheet Version="2.0.1">
  <Name>test V5</Name>
  <Date>23-Jul-2008</Date>
  <TCTable>0</TCTable>
  <ClipLogAssociation>1</ClipLogAssociation>
  <Description />
- <Recorders>
  <Recorder SerialNumber="25660" LSMID="0" UmID="A1boOedX" Camera="A" PreviewRecorder="true" AssociationType="0" />
</Recorders>
- <MetadataDefinition Version="2.0.1">
- <LogsheetProfiles>
  - <LogsheetProfile>
    <Name>Template Profile</Name>
    <Description />
    <LogsheetProfile GUID="73d8ab3540f54571b7161c687d925666">Template Profile_UF</LogsheetProfile>
    <AutomaticKeywordProfile GUID="6406a5f37ed742528dda366e4aff84ab">Template Profile_AK</AutomaticKeywordProfile>
  </LogsheetProfile>
</LogsheetProfiles>
- <Profiles>
  - <Profile GUID="73d8ab3540f54571b7161c687d925666">
    - <header>
```

Deleting an IP Logger Export Directory

Click on the line header to select it.



Click on the **Delete** button.



NOTE

Once all directories are configured, click on the **Apply** button before configuring another tab.

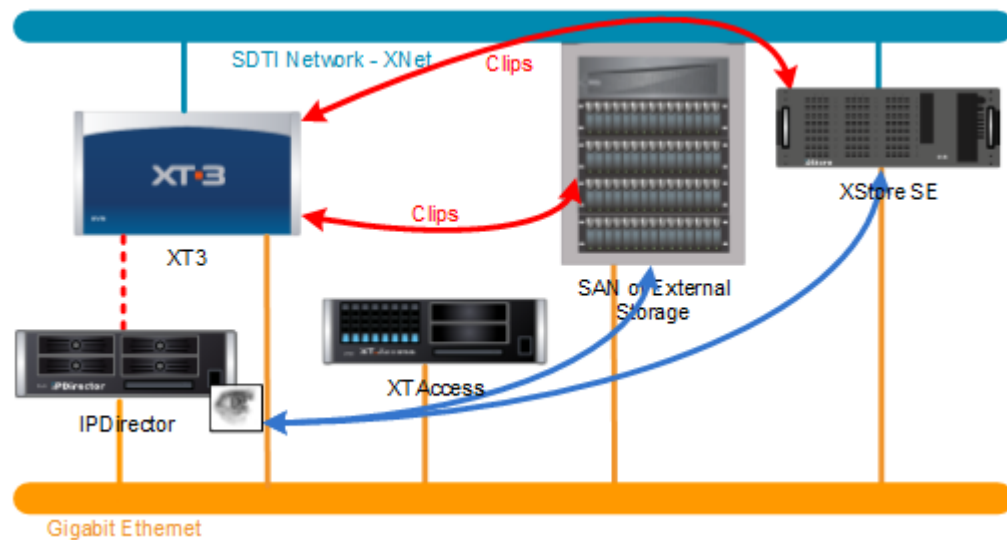
2.7.13. Nearline Management Configuration

Introduction

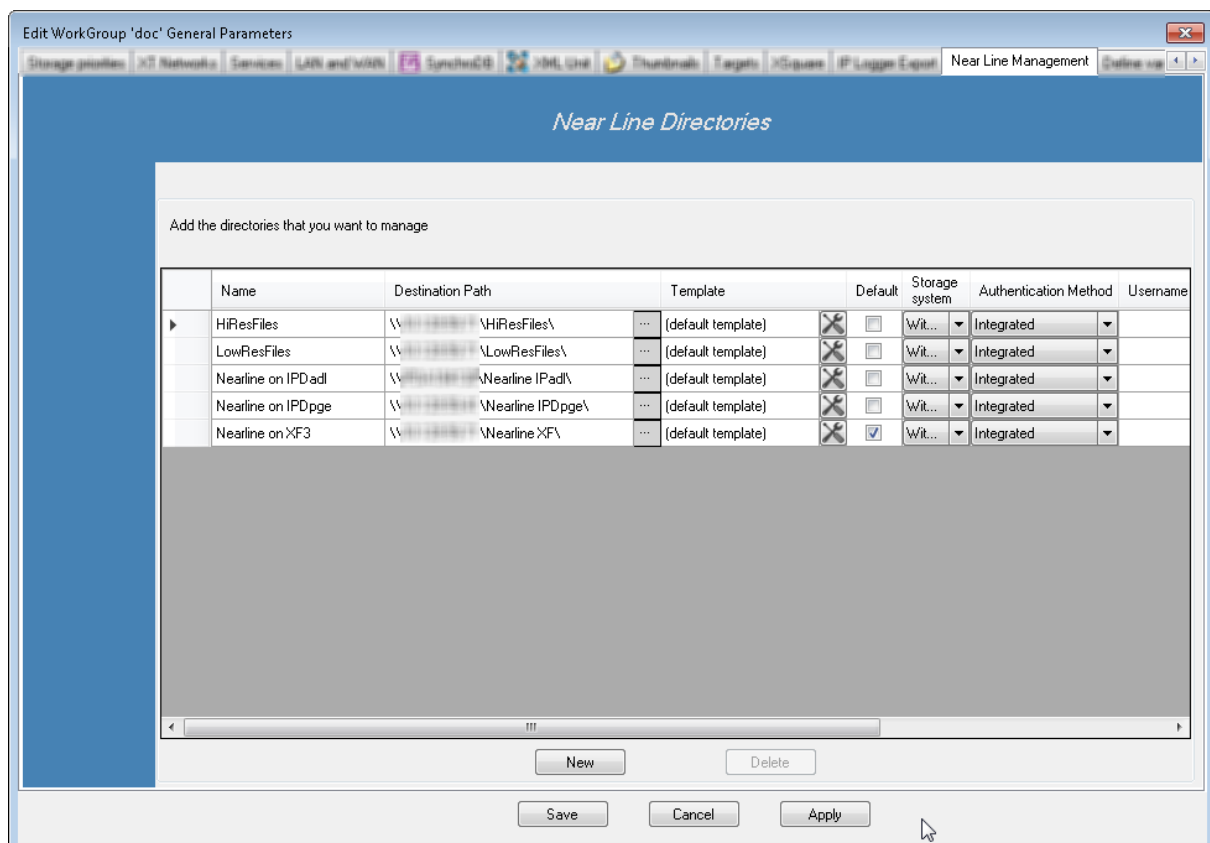
Purpose

This tab is used to define and configure the nearline directories available on the network where clips will be managed by IPDirector.

The aim of the nearline management is to scan directories where clips are stored outside the server and waiting for an eventual restore. The clips are stored on a storage system which is referred to as a nearline directory.



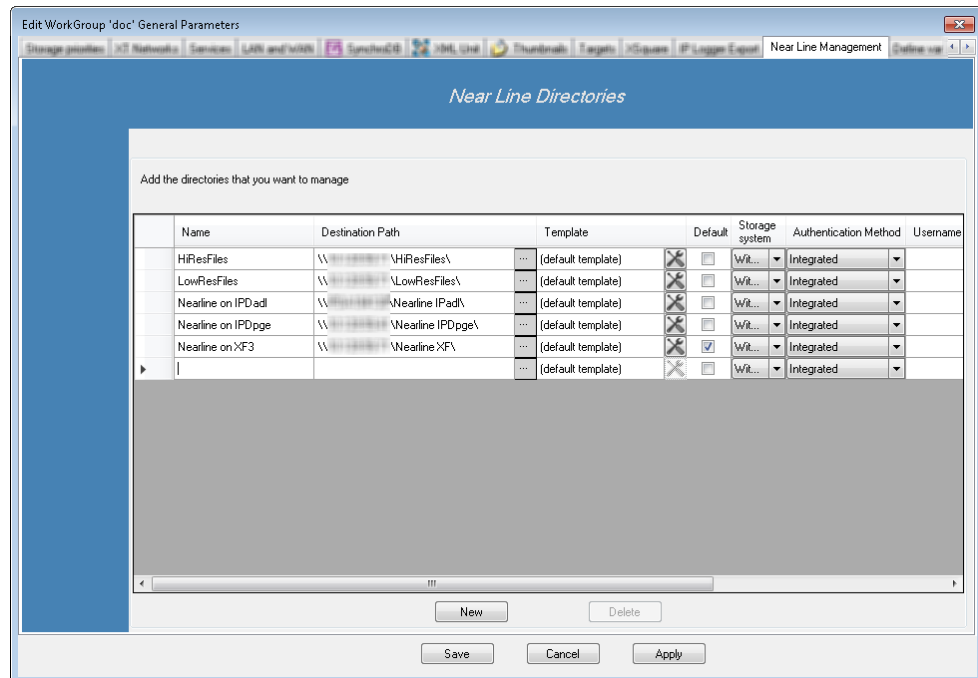
Overview of the Nearline Management Tab



Creating a New Nearline Directory

1. Click the **New** button to add a configuration line.

A new line is added in the list.



2. Click in the Name column and give a name to the directory.

This name will appear in the IPDirector Backup to Nearline menu. It is used to identify the nearline directory in the IPDirector interface.

3. Define a Destination Path:

Select in the list or browse the network to define the folder where the files are sent, scanned or restored from.

This folder should be a UNC path to the network locations where the folder exists.

Be sure this folder is shared with full access rights.



NOTE


Only UNC DNS name or IP address path are valid. (Ex:
\\MachineName\\Target\\, \\1.1.1.100\\Target\\)
No local path is valid.



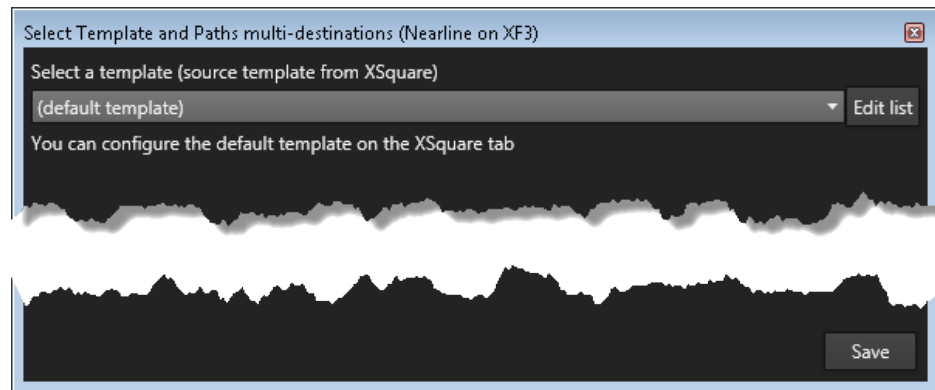
WARNING

It is NOT advised to specify IP Drive disk as a static nearline directory. This is because the management of removable disks is managed dynamically by the IP Drive service.

4. Select an Xsquare template that will be used for backup to / restore from nearline operations. This can be the template selected as default template from the Xsquare tab (see section "Xsquare Parameters Definition" on page 115), or another Xsquare template.

- a. Click the  button next to the nearline being configured.

The Select Template and Paths Multi-Destinations window opens:

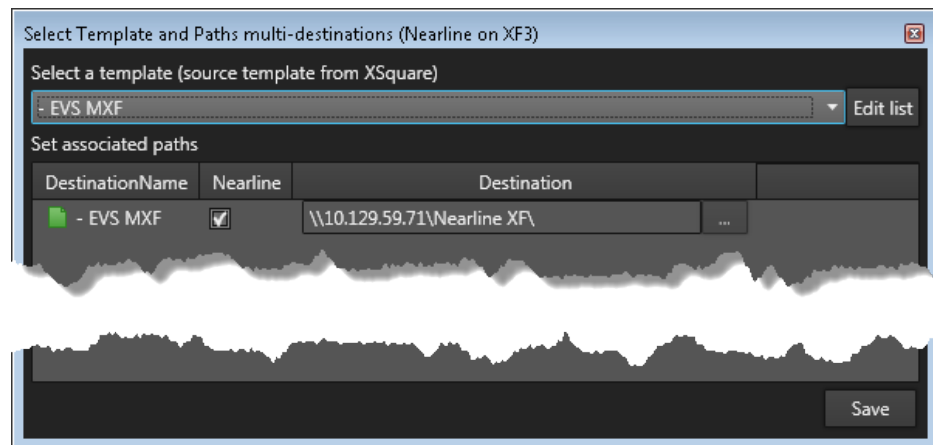


- b. Click the arrow next to the **Template** field to display the list of available templates:



- c. Select a template.

The selected template is listed in the window:



- d. Click **Save**.

The selected Xsquare template is displayed in the **Template** field for the configured nearline:

Nearline on IPDadl	\\IPDA184130\Nearline IPadl\	(default template)	<input type="checkbox"/>	Wit...	Integrated
Nearline on IPDpge	\\10.129.59.41\Nearline IPDpge\	(default template)	<input type="checkbox"/>	Wit...	Integrated
Nearline on XF3	\\10.129.59.71\Nearline XF\	- EVS MXF	<input checked="" type="checkbox"/>	Wit...	Integrated

5. (optional) Select the **Default** option if the directory must be defined as the default directory for all workstations.

This default nearline directory will be available from the list in the IPDirector Backup to Nearline menu.

6. Define the family of the nearline storage operating system from the Storage System column.
- **With notifications** for all OS Windows based. An auto-notification of files is received on this kind of storage.
 - **Without notifications** for all other OS (Linux, UNIX...). Manual refresh needed for incoming files and notification only available for transfer.



NOTE

The auto-notification is not supported with OS non-Windows based. The EVS SAN storages are considered as Others Storage system if they were not produced or updated with a SAMBA OS version 3.0.33 (or higher). Please contact EVS Staff for further information.

7. From the Authentication Method column, define the authentication method used by the SynchroDB to scan and receive notification from the nearline storage.
- **Integrated:** The IPDirector and nearline network is built with a common user (administrator) on every workstations and storages.
 - **User/Pwd:** The nearline storages have a user and password different than the IPDirector Network. SynchroDB services should be identified on the storage system with this user and password.

**NOTE**

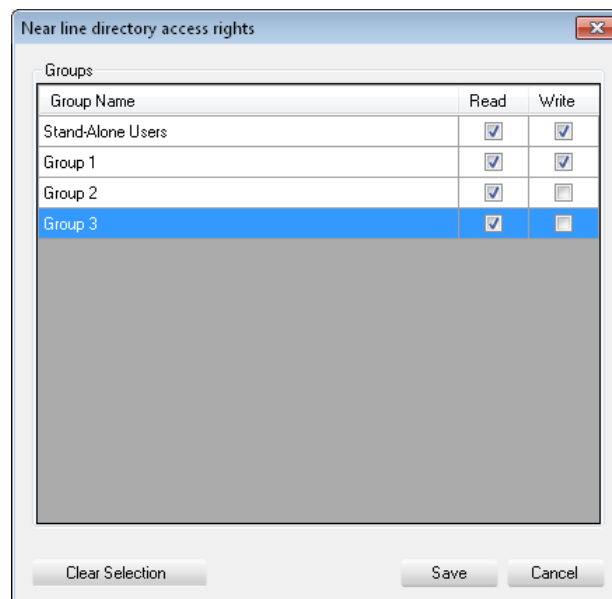
The EVS IPDirector workstations are all provided with a common Windows user called DVB (without password and member of the administrator group). It highly simplifies the network sharing. Thus, if the nearline directory is located on EVS storage (XStore, IP Drive...), the Authentication Method should be set to **Integrated**.

8. Specify the username for the authentication method User/Pwd.
If the authentication method is set to **Integrated**, the username is not taken into account.
9. Specify the password for the authentication method User/Pwd.
If the authentication method is set to **Integrated**, the password is not taken into account.
10. (optional) Select the **Master** option to generate and update XML Metadata files on the nearline.
 - If selected, the metadata of clips are updated on the nearline.
 - If cleared, the metadata of clips are modified in the IPDirector database only.

**NOTE**

Typically, if two IPDirector workgroups manage the same nearline, one should be Master and the other not, avoiding update conflicts.

11. Set the access rights to the nearline directory.
Groups and user rights must have been defined from the User Manager application.
 - a. Click the **Access Rights** button to open the Nearline Directory Access Rights window.



- b. Select **Read** or **Write** for each group.

Selecting a **Read** box gives access to the visibility of the directory inside IPDirector (Restoring clips is allowed).

Selecting a **Write** box allows backup of clips from a server to a nearline directory (Reading is automatically allowed).

Click the **Clear Selection** button to clear all checked boxes.



NOTE

Administrator accounts can Read and Write in all directories even if the rights are not configured.

12. (optional) Define the Cluster configuration

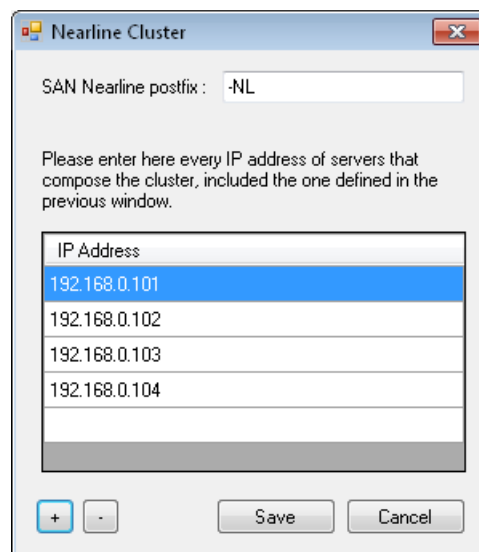


NOTE

The Nearline Cluster configuration is designed for Storage Area Network (SAN). The configuration requires information provided by EVS Staff related to each specific project.

By default, keep this configuration window empty.

- a. Click the **Cluster** button to open the cluster configuration:



- b. In the **San Nearline Postfix** field, enter the postfix (for e.g. -NL) which will be added to the nearline shared path name.

A hidden shared path is created on the SAN server in order to disable the cache on client workstations which browse growing files. It avoids browsing problems in the software player with this kind of files.



Thus normal shared path (\\Sanserver\Sharedpath) is used for standard browsing and the hidden shared path (\\Sanserver\Sharedpath-NL) for growing file browsing.

- c. Enter the first server IP address in the default field.

The IP addresses list must contain all the server physical IP addresses (members of the SAN Cluster) in order to receive all file notifications.

Once a SAN is built with several servers, a virtual shared path is configured and gives a single common access to the storage. This virtual path is thus entered in the Destination Path field.

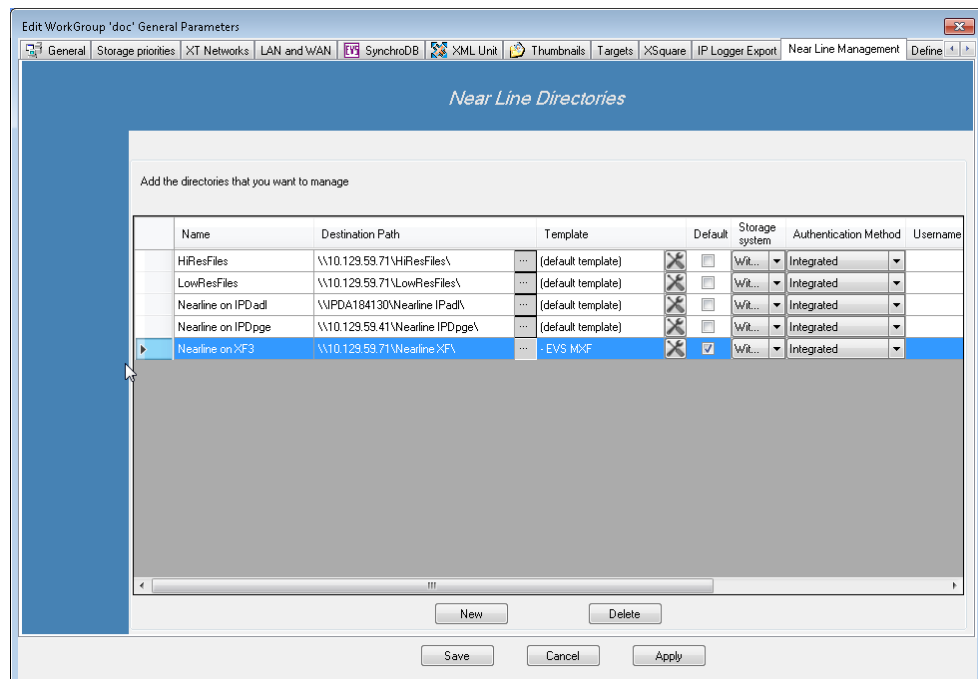
The notifications described previously in the Storage System section are only received from one member of the cluster if the all IP addresses are not listed.

- d. Click  to add a new line and enter the second server IP address.
- e. Repeat the steps till all IP addresses are entered.
- f. To delete a line, select it and click .
- g. Click **Save**.

13. Once all nearline directories are configured, click the **Apply** button before configuring another target type.

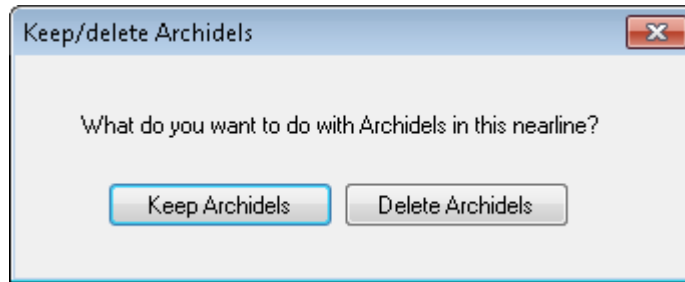
Deleting a Nearline Directory

1. Click on the nearline line to select it.



2. Click the **Delete** button.

The Keep / Delete Archidels window opens:



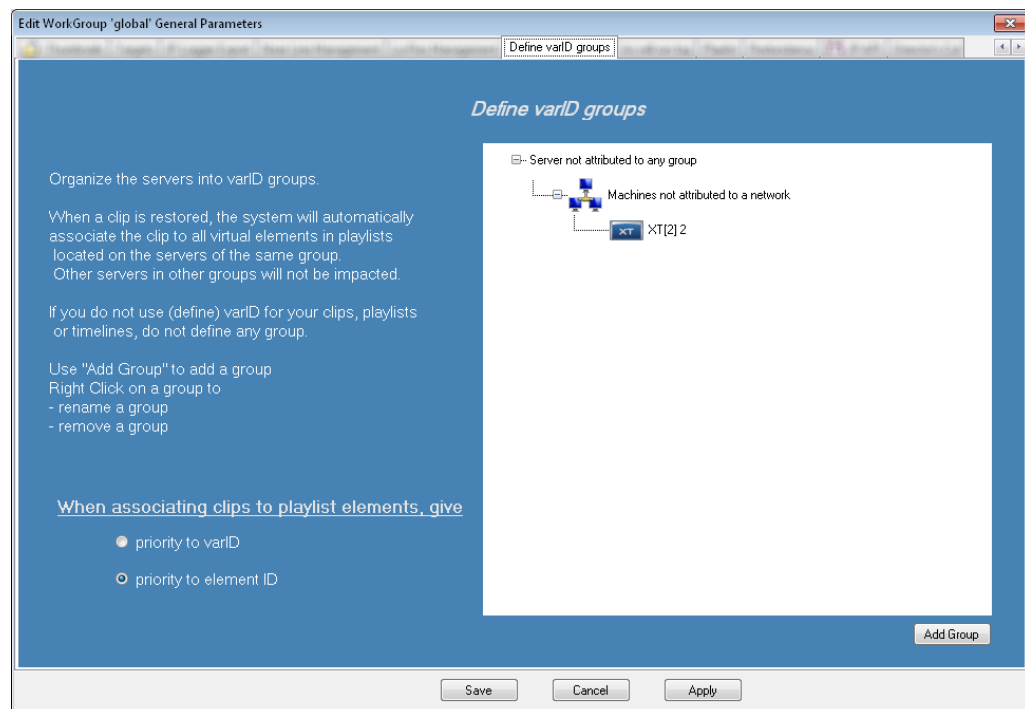
3. Click one of the buttons:
 - **Keep Archidels:** the reference to the nearline files which have been archived by the HSM on the tape library will be kept. This allows a future restore on nearline in case the nearline storage is made available again later on, or a restore on another nearline.
 - **Delete Archidels:** the reference to the nearline files which have been archived by the HSM will be lost.

2.7.14. VarID Groups Configuration

This tab should be used to organize the EVS servers into different varID groups. These groups delimit the server zone where a duplicated clip can be found in order to find a best element for a playlist.

An engine is running as a background task and is always optimizing playlists in order to play a maximum of local online elements. It also discovers restored clip and replaces virtual playlist elements matching by the varID. Thus, it could be necessary to define server groups to delimit the engine search.

Select the Define varID groups tab.



When associating clips to playlist elements, give:

- Priority to varID
The engine replaces distant clips in playlists by local clips regarding the varID inside one of the defined groups.
- Priority to element ID
The engine gives priority to the element ID within playlists when replacing virtual element by a clip. VarID is no longer used.
This mode is the default behaviour.

Define varID groups

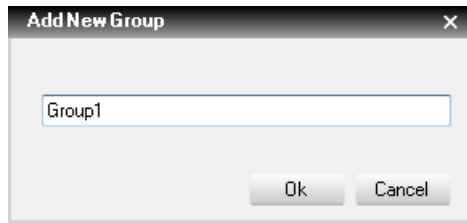
This zone is used to create and manage varID groups.

By default, the logical networks (defined in the XT Networks tab) are listed in the **Server not Attributed to Any Group** branch. All servers are thus considered belonging to the same varID group.

How to create a new var ID group?

Click the **Add Group** button.

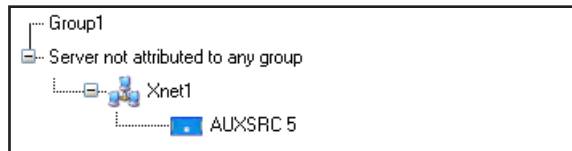
This window pops up:



Enter the group name and click **OK**.

How to insert a server in a varID group?

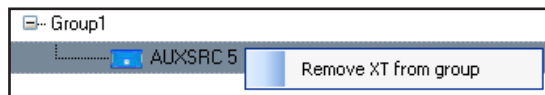
Open the logical network branches to display servers. Select the server and drag & drop it on the varID group name.



Once all servers are attributed to groups, the **Server not Attributed to Any Group** branch is no more displayed.

How to remove a server from a varID group?

Right click on the server name and select **Remove XT from group**.

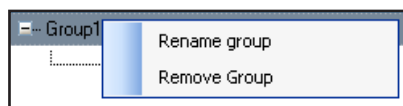


The server is brought back to its original position in the **Server not Attributed to Any Group** branch.

How to rename or remove a group?

Right click the group name and select **Rename group**, a window pops up.

Edit the name and click **OK**.



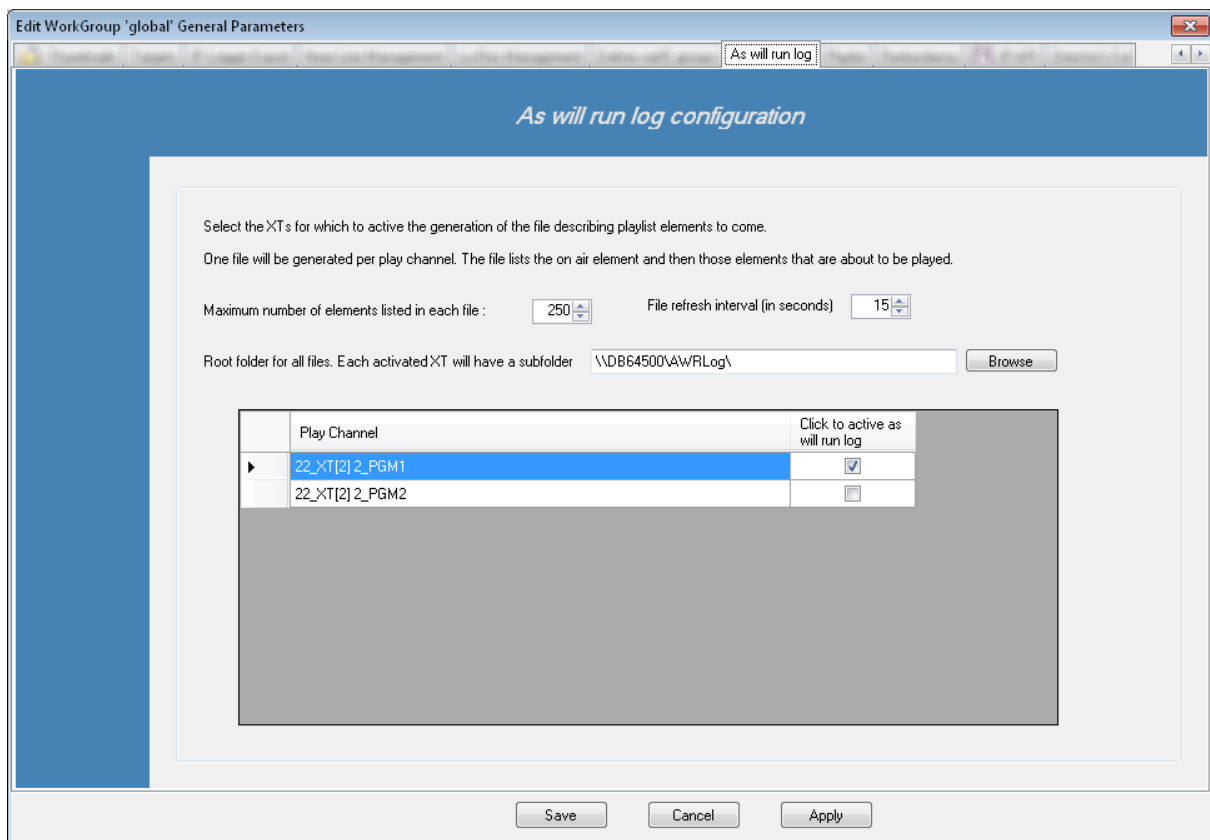
Right click the group name and select **Remove group**. The group is no more displayed and all servers are brought back to their original places.

2.7.15. As Will Run Log Configuration

Purpose

This tab is used to configure the As Will Run Log feature. The process, once activated per player channel, generates text file(s) containing elements that are about to be played.

Overview of the As Will Run Log Tab



Maximum number of elements listed in each file:

Define the maximum number of future elements that will be played on each PGM. This limitation avoids filling files with an infinite number of lines due to a playlist containing an infinite loop.

Once an element is finished, it is removed from the list. The list only displays the future, not the present and the past.

Default: 250 (lines)

File refresh interval:

Adjust the interval time (in seconds) between two updates of files.

Default: 15 (seconds)



Root folder for all files:

Define here the folder on the network where files are created and updated or click on the

Browse button  to select the folder.

This folder should be a UNC path to the network locations where the folder exists.

Be sure this folder is shared with full access rights.



NOTE

Only UNC DNS name or IP address path are valid.
No local paths are valid.
A message appears if the selected path is not valid.

A subfolder is created per server:

XXXXX (XXXXX=Server Serial Number)

A file is created for each monitored PGM within the subfolder of its server.

XXXXX_PGM.Y.TXT (XXXXX=Server Serial Number and Y=PGM Number)

Selection of PGM monitored by the As Will Run Log:

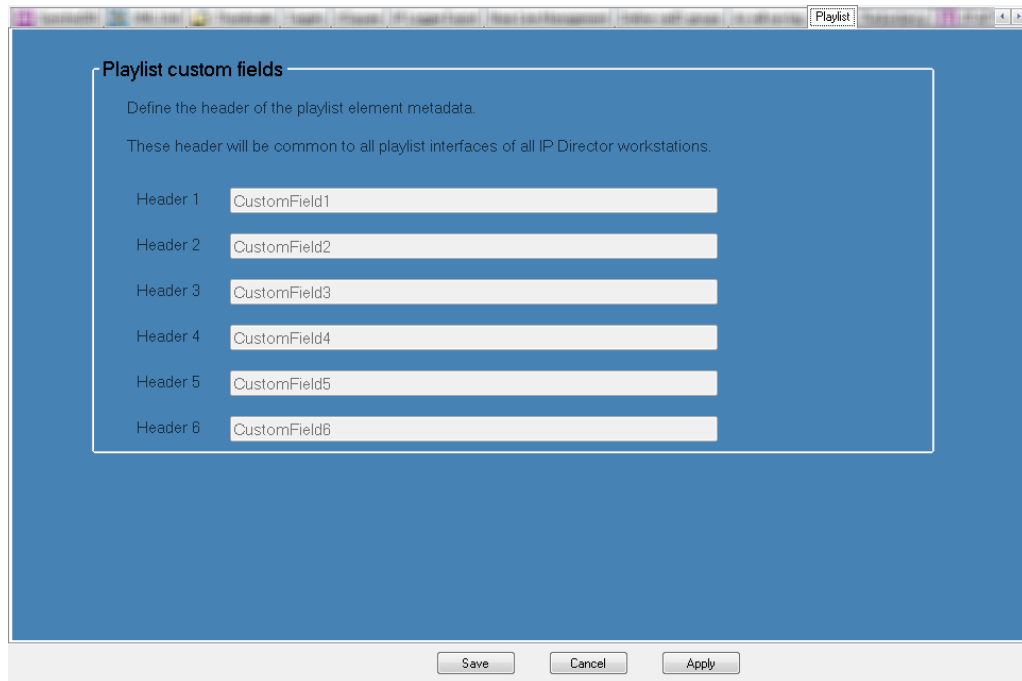
Select PGM boxes to activate the process.

	Play Channel	Click to active as will run log
▶	22_XT[2] 2_PGM1	<input checked="" type="checkbox"/>
	22_XT[2] 2_PGM2	<input type="checkbox"/>

Once the As Will Run Log settings are configured, click on the **Apply** button before configuring another tab.

2.7.16. Playlist Configuration

This tab is used to define 6 custom fields for third party usage in a Playlist.



These settings are designed for a third party usage of the playlist metadata. The external Media Asset Management systems (MAM) import playlist in the IPDirector database using the EVS-to-DB job (IP-Scheduler) or the Webservices (IP-API). In these imports mode only, playlists can receive 6 custom fields. This tab allows defining the 6 headers of the playlist element metadata.



NOTE

The playlist custom fields cannot be edited or created within the main interface of IPDirector. It is limited to a third party usage only!



NOTE

Once the Playlist settings are configured, click on the **Apply** button before configuring another tab.

2.7.17. Redundancy Configuration

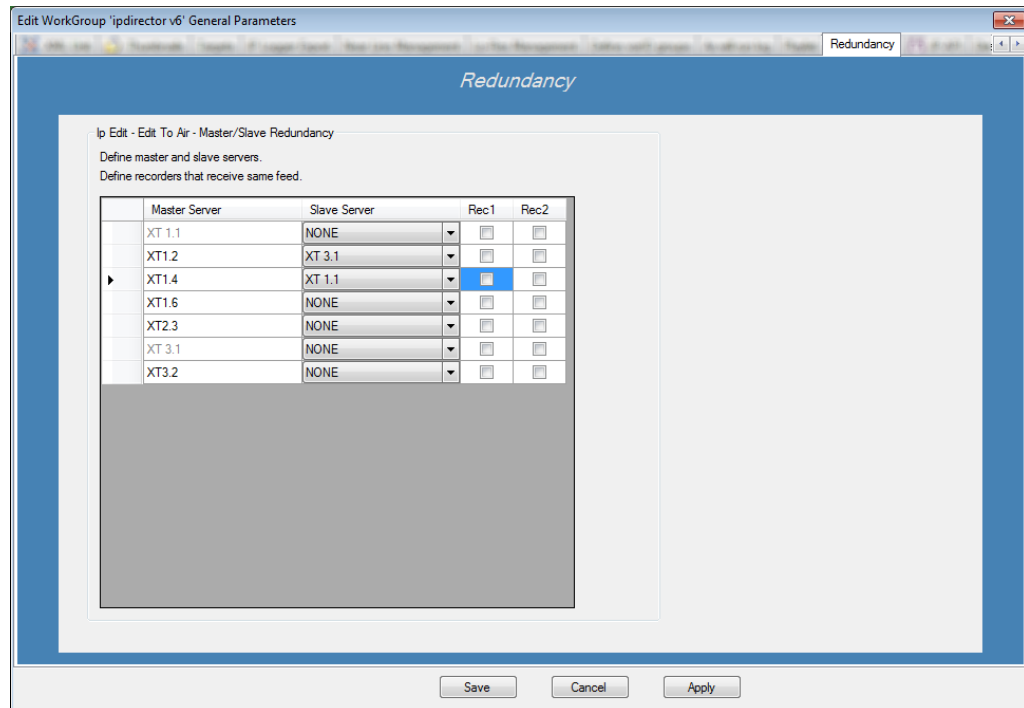
This tab should be used to configure the redundancy between two EWP servers.

On 6 channel server only, IPEdit can operate an Edit While Playout mode. Basically, PGM1&2 are used for playing the timeline live and the PGM3&4 for editing. The REC1&2 (or just REC1) are used to ingest feeds and clips.

The redundancy engine reproduces timelines, clip creations and all edits made on the Master server to the Slave server. The recording feeds REC 1&2 should be the same on both servers (Master & Slave).

**NOTE**

All services must be started in order to configure the Redundancy.

**Ip Edit – Edit To Air – Master/Slave Redundancy**

- **Master Server:**
This list shows all 6 channels servers (not XS or XT 4 channels).
All lines are available except the ones that contain server used as slave in another line. In this case, the line is greyed out.
- **Slave Server:**
Select in the drop down menu the desired Slave server for redundancy.
All 6 channels servers are listed except the ones already assigned slave in other lines.
- **Rec1&2:**
Define if recorders 1&2 of the server (Cam A&B) must be synchronized in term of clip re-creation.
Once a recorder is defined, the two servers used for redundancy should receive the same feed for this channel.

How to assign a slave server to a master server?

Choose the line with the desired Master server, and assign it its slave companion. Select then the recorder channels which receive the same feed on both servers.

	Master Server	Slave Server	Rec1	Rec2
▶	AUXSRC 5	NONE	<input type="checkbox"/>	<input type="checkbox"/>
	XT 1.4	NONE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	XT 2.1	XT 1.4	<input type="checkbox"/>	<input type="checkbox"/>
	XT 2.2	XT 2.2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Only non-paired servers are listed in the Slave server list.

Once a server is selected as a Slave one, its line is greyed out.

How to unassign a slave server from a master server?

Re-open the Slave server drop down list and select NONE.



NOTE

Once the Redundancy settings are configured, click on the **Apply** button before configuring another tab.

2.7.18. IP-API Configuration

This tab is used to configure the API Webservices and the Auto-Complete engine.

Machine Configuration File Parameters

This setting is not configured from the IP-API tab.

The starting mode is different for every IPDirector or IP-API Proxy workstation and is set in the IP-API service configuration. Please refer to the IP-API Service Management Chapter for details.

Global Configuration Parameters

Enter the Proxy address and validate it by clicking the **Check** button.

By default, the database IP address is configured. It corresponds to 99% of cases since the proxy is usually installed on the database.

If the API-Proxy is installed on dedicated workstation, change the IP address.

This configuration is not taken into account if only one IP-API service is running in server mode without any proxy workstation.



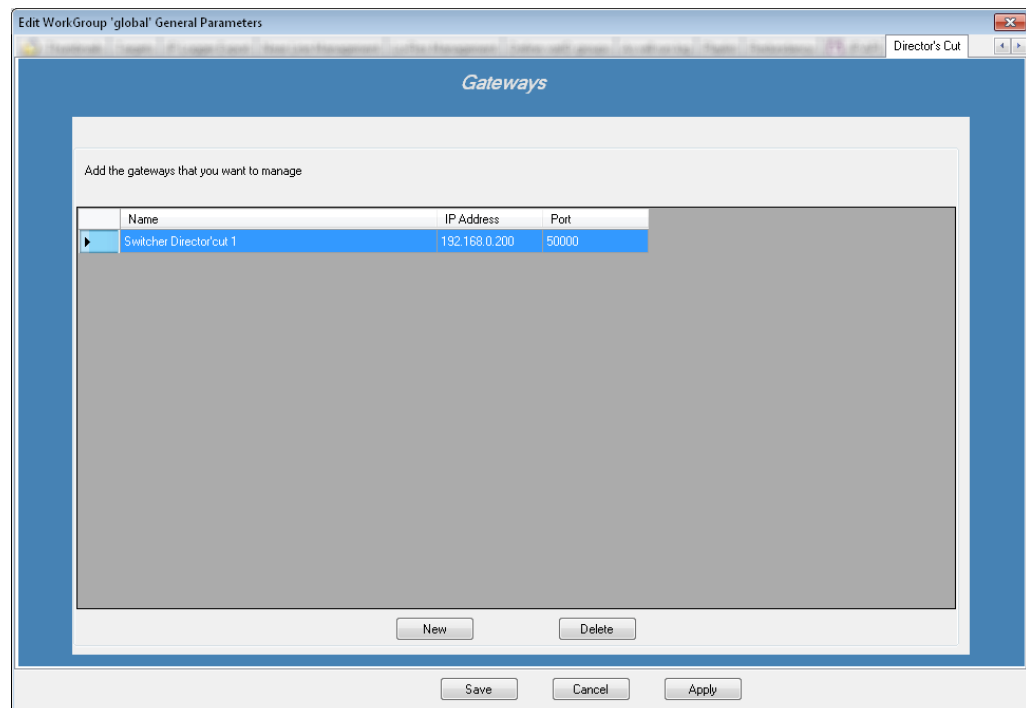
NOTE

Once the IP-API settings are configured, click on the **Apply** button before configuring another tab.

2.7.19. Director's Cut Configuration

Introduction

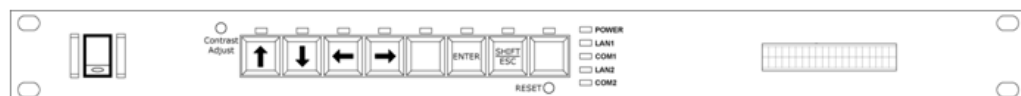
This tab is used to configure the Director's Cut Gateway (DC-100).



The DC-100 is the hardware gateway between the switcher and the IPDirector.

It will offer a generic XML protocol that will allow the IPDirector to speak one language that virtualize any switcher protocol.

The DC-100 is connected to an IPDirector workstation through an Ethernet link.

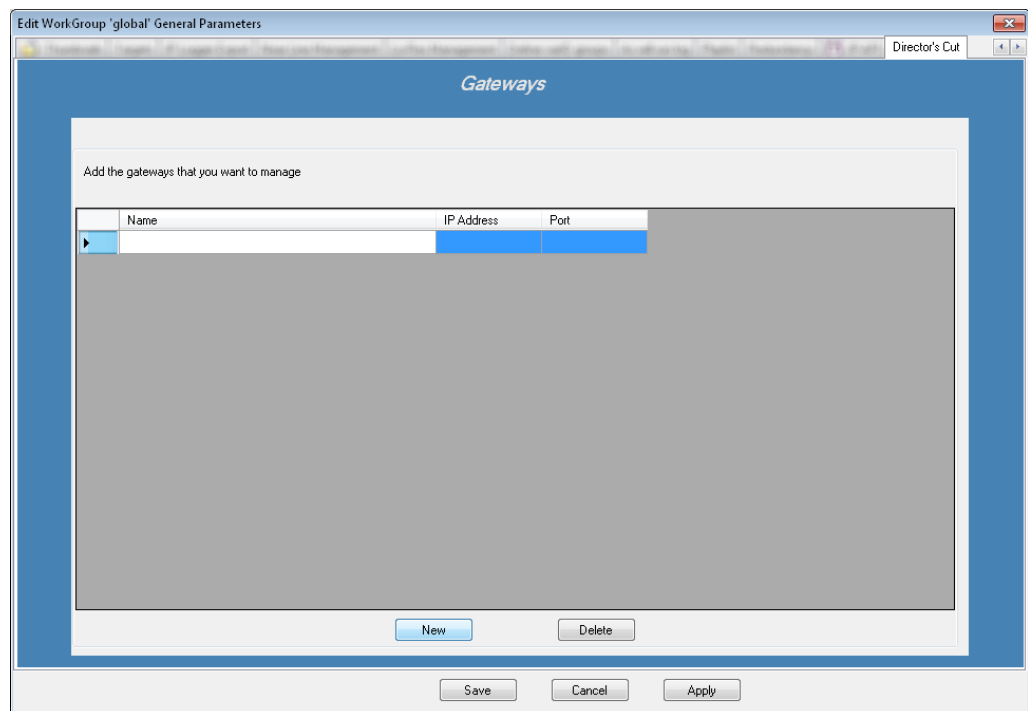


The Switcher Gateway can be monitored from the Monitoring Management tool. See section "Overview of the Monitoring Management Window" on page 172.

Adding a New Gateway DC-100

1. Click on the **New** button to add a new Gateway.

An empty line is displayed .



2. Enter the name of the Gateway in the **Name** column.
3. Enter the IP Address of the DC-100 in the **IP Address** column. This address is set on the LCD screen of the DC-100 and requires a restart of the unit.
4. Enter the port number of the DC-100 in the Port column.

The port number value can be found in the DC-100 configuration web page. Open a web browser (like Internet Explorer), enter the IP address of the DC-100. The DC-100 Home Page will be displayed:



Default Value: 50000.

5. Once the Director's Cut settings are configured, click on the **Save** button to validate the whole IPDirector configuration.

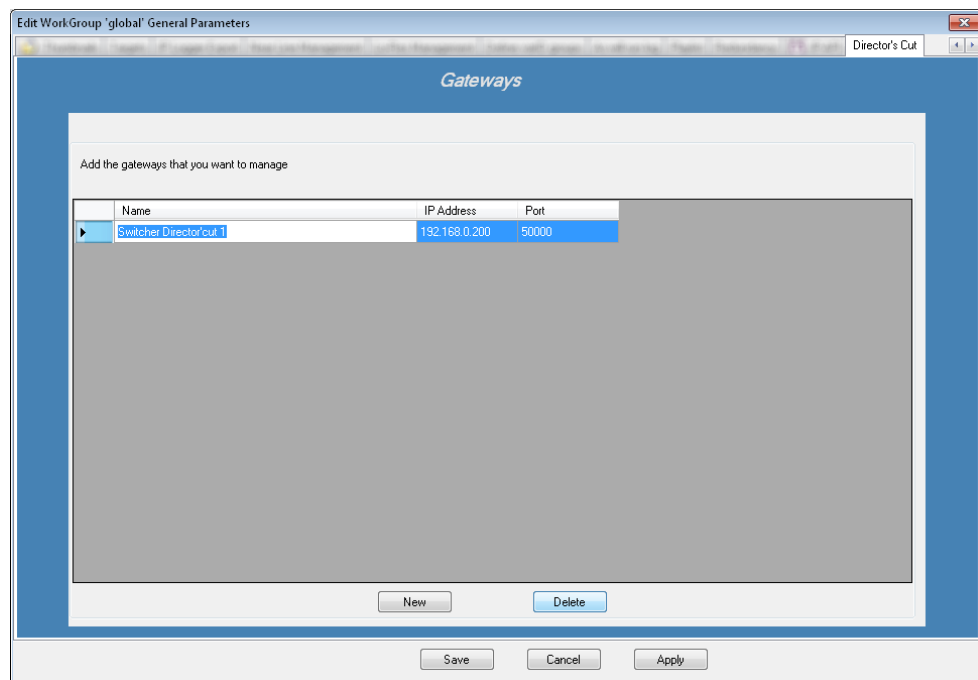


NOTE

Please refer to the DC-100 User Guide to configure the gateway unit.

Deleting a Gateway

1. Click on the line header to select it.



2. Click on the **Delete** button.

2.7.20. Configuring the Archive Parameters

Context of Use

This step is used to enable the archiving process in IPDirector and to configure the archiving system parameters and the archive database information.

When no archiving system is used, this does not have to be configured.

The Archive Service window can be accessed in one of the following ways:

- click the **ATS DB** button, at the top right corner of the Remote Installer window.
- click the **Configure** button from the workgroup toolbar, and select the Archive tab.



WARNING

When hosting ATS database on EVS Mirrored DB servers, the following actions must be applied after creation:

- Create mirroring on ATS database
- Add a dedicated virtual IP address on ATS database mirroring
- Replace the Server IP address by the newly created virtual IP address
- Configure a witness
- Install the latest maintenance jobs on both DB servers

How to Configure the Archive Parameters

To configure your ATS parameters and create the ATS database,

1. Make sure all running programs are stopped (**Stop all**)
2. Click the **ATS DB** button.

The Archive Service window opens:

3. Select the **Enable Archive in IPD** option.

The fields become available.

4. In the **HSM** field, enter the parameters of the storage management system (HSM) in the following format: [HSM provider]://[HSM IP address]:[HSM port].
Ex: flashnet://10.10.10.10:8199
5. In the **Archive Group** field, enter the name of the LTO tape library where your media items will be archived, as it is set in the HSM.
6. In the **ATS Database Name** field, enter the name of the ATS database.
7. In the **Server** field, enter the IP address of the machine hosting the ATS database.
8. In the **Username** and **Password** fields, respectively enter the username and password for the ATS database.
9. Click **Create DB** to create the ATS database on the selected workstation.
10. Click **Save**.

ATS Database Status

The background color of the **ATS DB** button gives indication on the ATS database status.

White

The archiving process is not enabled and the ATS database information has not been configured yet.

ATS DB : -

The ATS database information has been configured but the archiving process is not enabled.

ATS DB : 10.129.59.41 - Media_ATS

Red

The archiving process is enabled but the ATS database has not been installed yet on the local workstation, or on the workstation set as ATS DB server during the configuration.

ATS DB not installed

Green

The archiving process is enabled and the ATS database configuration was successful.

ATS DB : 10.129.59.41 - Media_ATS

Orange

The archiving process is enabled but the ATS database is not the right version.

Wrong ATS DB version on 10.129.59.41

Right-click the **ATS DB button** and select **Upgrade** to upgrade the ATS DB scripts.

2.8. Managing Services

2.8.1. Introduction

Workstation Services

All the services are Windows services loaded at the Windows start up.

Each service is represented by a button on the Workstation area and by an icon on the Windows taskbar. They are not displayed in the same order in both places.



NOTE

Version number displayed in the screenshot is for information only. This must not be taken as a reference.

A right-click on a **Service** button gives access to several options to start, stop, monitor the service or to edit the service configuration.

The icon color gives an indication on the application state: orange: stopped, green: started, dark green: started as Master (when applicable).

IPD-Routing Service

This service establishes communications between IPDirector stations and EVS servers. This service starts automatically on IPDirector workstations.

SynchroDB Service

The SynchroDB is a service running on every IPDirector workstation. All SynchroDB services on the network will manage database synchronization between the IPDirector SQL database and the XNet database. These SynchroDB services will manage all servers, and the configured nearline directories.

This service starts automatically on IPDirector workstations.

The Archive Service (AS), used in the Archive and Restore to nearline process, is managed with the Synchro DB service. It receives the requests from IPDirector and communicates with the ATS service.

Only one SynchroDB manages jobs in a workgroup (the SynchroDB running with the Master role). Declaring more than one SynchroDB as a Master Candidate is allowed and brings you failover functionality.

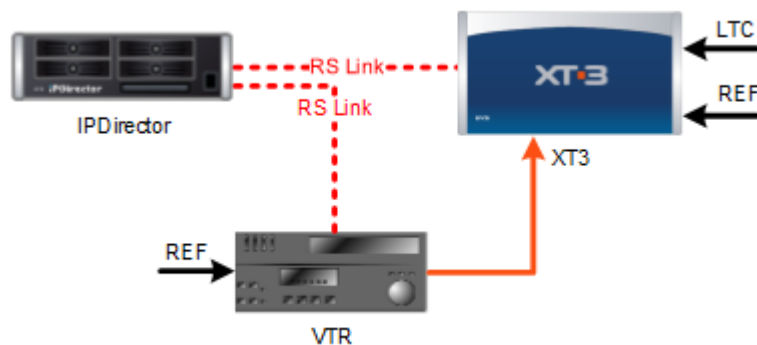
IP-Scheduler Service

This service manages jobs in a workgroup. This is only the case for the IP-Scheduler running as the MASTER. Starting more than one IP-Scheduler is allowed and brings failover functionality.

This service can be started automatically if configured to do so. Otherwise it starts manually on IPDirector workstations.

VTR Engine Service

VTR Engine allows you to manage VTR (maximum 4 by workstation) with the unused RS422 connections of the IPDirector workstation.



This service can be started automatically if configured to do so. Otherwise it starts manually on IPDirector workstations.

IP Drive Service

IP Drive allows you to auto detect external drives connected to IPDirector, XF or XSquare workstations (or other PC with external disks). Those drives can be managed by a SynchroDB and recognized as a nearline directory inside IPDirector.

See section Directory Sharing Configuration in "Configuring SynchroDB" on page 151 and "Nearline Management Configuration" on page 123.

IP Drive can be installed on another workstation. XF, XStore, Xsquare and other storage computers are able to run an IP Drive.

This service can be started automatically if configured to do so. Otherwise it starts manually on IPDirector workstations.

IP API Service

An integrated API is provided with the IPDirector package. It is installed on each workstation and mainly dedicated to search queries (Autocomplete Indexer)

IPWS is a SOAP Web Service enabling IPDirector to act as a Web Service server and to handle requests from the API clients.

An API client that wants to send a request to the IPDirector IPWS API can connect to any IPDirector where the Web Service is started. However, to use only one point of contact and be able to use the processing power of multiple Web Services, a Web Service Proxy can be installed on a gateway server (i.e. the DB Server). This proxy will route the requests to a "Web Service Farm" composed by all Web Services started in the IPDirector workgroup. This Proxy function adds load balancing and redundancy capabilities to the IPDirector IPWS API.

For details, please refer to the document **IPDirector_API_HowTo.pdf** provided with the release notes.

**NOTE**

IP API can be installed on another workstation. Typically, database computers are able to run an API Proxy.
See section "Installing and Configuring IP Drive and API Proxy" on page 205.

The Auto-Complete search feature available in the IPDirector GUI is based on an engine which is hosted by the IPWS API service.

The Auto-Complete engine can only be started in an IP API service in Server mode (not in Proxy mode). It responds to the Auto-Complete requests. The Auto-Complete engine usually consumes a lot of memory and receives lots of requests. So it only starts on machines where this configuration is specified.

It is therefore possible to find a setup where no machine handles the Auto-Complete feature if no IP API service is started or configured for it.

Router Control Service

This service manages communication with a video router.

This service can be started automatically if configured to do so. Otherwise it starts manually on IPDirector and API Proxy workstations.

See section "Defining the Workstation Responsible for the Control of the Router" on page 223 for more information on the service configuration.

AB Roll

This service manages the AB Roll engine and allows the use of the AB Roll Playlist module.

If the service is not started, users will not be able to set the player channels of a studio in AB Roll mode, to link a studio to the AB Roll interface, to preload a playlist on this interface, or to use the transport functions.



ATS

This service receives the requests from the AS service and communicates with the HSM archive system. If it stops working, the ATS service from another workstation will take the Master role. In such cases when different ATS services have been involved in a job processing, both workstations will be referenced in the Transfer Monitoring window.

See section "Configuring the Archive Management Parameters" on page 226.

EVS Registry

This service is used to register the AS and ATS services.

NEW !

It must also be started to allow the grabs and thumbnails to be processed properly.

It is installed with the IPDirector package.

This service can be started automatically if configured to do so. No other configuration is required. No Master role is involved.

The Status bar gives information on the status of the EVS Registry service by means of color code.

Service Registry : no service registry is started in the workgroup

Service Registry : at least one service is started on the workgroup

It is recommended to start the EVS Registry service on 3 workstations for security reasons, no more, not to overload the database.

ISA - Infrastructure Service Administration

The **ISA** service handles discovery and configuration functions. The Indexing Service is using ISA information to run.

The ISA service is the infrastructure service used to manage the services related to the infrastructure. One of its application is to manage the Indexing Service Administration.

See section "Managing and Monitoring the Indexing Service" on page 173 for more information.

2.8.2. Starting Services

Prerequisites

SynchoDB and IPDirector services must have been configured before start.

Manually Starting a Service



NOTE

It has no sense to start or auto start a VTR Engine on a workstation which is not connected to a VTR.

It has no sense to start or auto start an IP Drive on a workstation which is not supposed to receive external drives.

Any service can be manually started on a workstation in one of the following ways:

- Right-click the corresponding **Service** button and select **Start** from the contextual menu.
- Right-click the corresponding **Service** icon on the Windows taskbar and select **Start Service** from the contextual menu.

IPDirector can be manually started on a workstation in one of the following ways:

- Right-click **IPDirector** service button in the Remote Installer and select **Start** from the contextual menu.
- Select the **IPDirector** option from **Start Menu > Programs > EVS Broadcast Equipment > IPDirector**
- Double-click the desktop icon:



When starting an IPDirector application on a workstation which is not integrated into an Active Directory domain, the Login screen is displayed.

Automatically Starting a Service

Some services can be automatically started in some conditions:

- Options are available to start several services at once.
- A setting is available to set an Auto Start option on some services.
- Starting some services automatically starts other ones.

How to Set a Service to Auto-Start

A setting is available to set an Auto Start option on some services and make them automatically start in some conditions.

The **Auto Start** option is available for IP-Scheduler, VTR Engine, IP Drive, IP API, Router Ctrl, AB Roll, ATS and EVS Registry services.

To set a service to **Auto Start**,

1. Right-click the **Service** button
2. Select **Auto Start** from the contextual menu.

How to Start "All" Services at Once

The mandatory IPD-Routing and SynchroDB services and the services set to **Auto Start** will automatically start in one of the following ways:

- Click the **Start All** button to start all these programs from the workgroup.
- Right-click a workstation area and select **Start All** from the contextual menu to start all these programs from the workstation.
- Start the SynchroDB service to start all these programs from the workstation.
- Start IPDirector to start all these programs from the workstation.

Display of Services Started

When a service is started, its button has a green background.

The **Service** icon becomes green on the Windows taskbar of the workstation where the service is started.

Example for IPD-Routing:  -> 

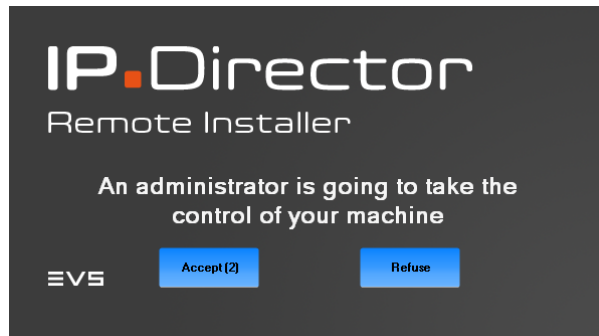
2.8.3. Stopping Services

Services must be stopped to be able to edit their configuration.

The **Stop** option will close properly the IPDirector application and the **Kill** option will stop the IPDirector process. The **Kill** option must be used as a last resort if the service cannot be stopped.

Stopping one or Several Services

1. Any service can be manually stopped on a workstation in one of the following ways:
 - Right-click the **Service** button corresponding to a service of the workgroup and select **Stop** from the contextual menu.
 - Right-click the corresponding **Service** icon on the Windows taskbar and select **Stop Service** from the contextual menu to stop the service on the current workstation
 - Click the **Stop All** button to stop all the programs from the workgroup.
 - Right-click a workstation area and select **Stop All** from the contextual menu to stop all the programs from the selected workstation.
2. On distant workstations where a stop order has been remotely given, a warning message is displayed.



(optional) The users of this workstation can click **Refuse** within the 10 seconds countdown if they want to counter the operation.

Killing Services

The **Stop** options will properly close the corresponding application or service while the **Kill** option will stop the corresponding service process. The **Kill** option must be used as a last resort if the service cannot be stopped.

- Right-click the **Service** button corresponding to a service of the workgroup and select **Kill** from the contextual menu.

Display of Services Stopped

When a service is stopped, its button has a white background.



The **Service** icon becomes orange on the Windows taskbar of the workstation where the service is started.

Example for IPD-Routing:  -> 

2.8.4. Configuring Services

Configuring IPD-Routing

There is no more configuration done on the IPD-Routing service.

However, the following conditions must be met to ensure a proper working:

- The Network Information must have been configured. See section "Setting Network Information for the Workstation " on page 44.
- The Serial Communication must have been configured. See section "Configuring the Serial Ports" on page 45.



Configuring SynchroDB

Purpose

It is important to specify which server, XStore, XF and directory will be managed by which SynchroDB.

All parameters are local to the IPDirector workstation and must be set independently on all IPDirector workstations.

Limitations and Constraints

- Only one SynchroDB service should manage one server, XStore, XF or directory at a time on the network. Otherwise, a conflict is detected by the Remote Installer. In this case the color of involved machines turns red.
- If one server is not managed by any SynchroDB on the IPDirector workstations, it will not appear in the Channel Explorer of the IPDirector application.

SynchroDB Configuration Window

The SynchroDB service is configured from the SynchroDB Configuration window.

To open the SynchroDB Configuration window in Edit/Configuration mode,

1. Make sure the SynchroDB service is stopped.
If the service is running, the **View Config** option is available instead of the **Edit Config** option and no edition can be done from the window.
2. Right-click the **SynchroDB** button
3. Select **Edit Config** from the contextual menu.

The SynchroDB Configuration window opens:

LSM Sharing Configuration

Restricted Stand-alone

This option allows you to spread the management of servers between many IPDirector workstations by statically defining the server serial numbers.

Be sure that one server is only managed once on the IPDirector network SynchroDB services.

Specify the serial numbers of the servers the SynchroDB will manage on the XNet network.

1. Enter the serial number of the server in the **Serial Number** field.
2. Click on the **Add** button.

The server is added to the list.



TIP

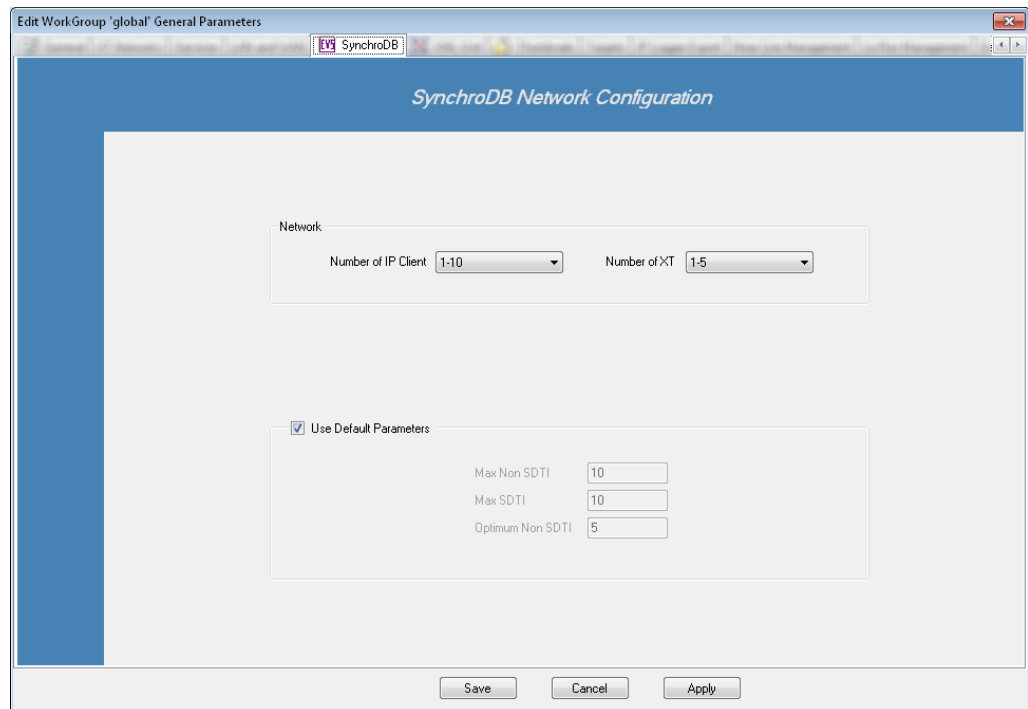
If the XNet network is already running, a convenient place to gather all the server serial numbers is from the **SHIFT + F4** screen on any of the Multicam user VGA stations.

Network

Use this option to automatically assume the management of servers amongst different SynchroDB mainly for emergency purposes.

For example if a SynchroDB of one workstations stops, another SynchroDB can take the duties and manage the servers which were originally managed by the SynchroDB that has stopped.

The default settings of the network mode can be changed manually from the SynchroDB tab of the main Remote Installer Configure tool. See section "SynchroDB Configuration (Load Balancing)" on page 71.



In the case of a complete SynchroDB management using the network mode, you need to set the basics parameters comparing to your setup size.



NOTE

It is strongly recommended to keep the parameters by default.

None

Select this option to indicate that no server will be managed by the local SynchroDB of this IPDirector workstation. After reviewing the SynchroDB configuration, you may notice that a selection of **None** will appear as a Restricted Stand-Alone mode with an empty list. This is identical to selecting **None**.

Directory Sharing Configuration

Directory Sharing Configuration

☒ **Restricted Stand-Alone**
SynchroDB will only manage directories which are specified in the list

☐ **Network**
SynchroDB will automatically share the management of the directories not managed

☐ **None**
SynchroDB will not manage any

Directory List

☒ Nearline

Restricted Stand-alone

This option allows you to spread the management of the static Nearline directories between many IPDirector workstations.

Be sure that one directory is only managed once on the IPDirector network SynchroDB services.

Force the Nearline directory to be managed by this SynchroDB by selecting the box in front of its name.

The Nearline directories must have previously been defined in the Remote Installer / Configure / Near Line Management tab. See section "Nearline Management Configuration" on page 123.

Network

Use this option to automatically assume the management of Nearline directories amongst different SynchroDB mainly for managing new drives detected by the IP Drive service.

See section "Configuring IP Drive" on page 163.

If a SynchroDB of one workstation stops, another SynchroDB can take the duties and manage the directories which were originally managed by the SynchroDB that has stopped.

None

Select this option to indicate that no directories will be managed by the local SynchroDB of this IPDirector workstation.

After reviewing the SynchroDB configuration, you may notice that a selection of **None** will appear as a Restricted Stand-Alone mode with an empty list. This is identical to selecting **None**.

Master Management

Master Management

☒ Master Candidate

Only one SynchroDB manages jobs in a workgroup: the SynchroDB running with the Master role.

It is mandatory to declare at least one SynchroDB as a Master Candidate even if it is a standalone workstation. This workstation may consume more CPU resources.

Declaring more than one SynchroDB as a Master Candidate is allowed and brings you failover functionality. Then, the SynchroDB with the lowest routing number assume the Master role.

The SynchroDB with the Master role manages the following jobs:

- Thumbnails creation
- Backup and restore status
- Target status
- LTC distribution
- Ingest scheduling
- Near Line directory status
- Warning management.

The Master role is clearly identified with a dark green status within the Remote Installer.



Configuring IPDirector Service

Purpose

This step is used to associate a player channel of a specific server to a Video Display (Video Board).

Prerequisites

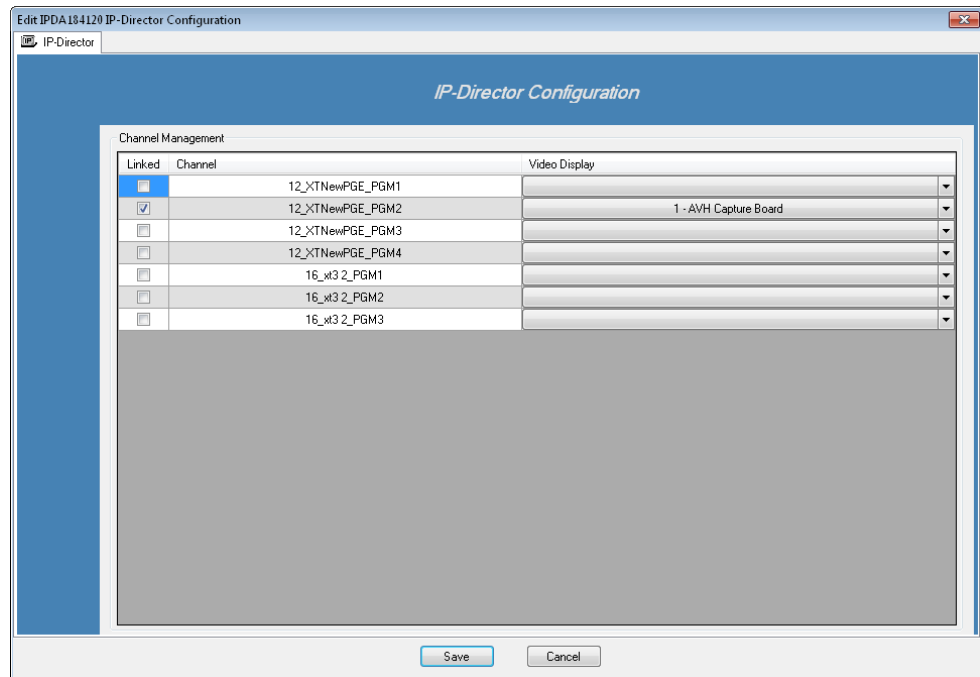
- A physical connection exists from the required video source (player channel) on the server to the input of the IPDirector workstation video card.
- The Serial Communication must have been configured.
- The SynchroDB service must have been configured.
- The IPD-Routing and SynchroDB services must be started.
- The IPDirector application must be stopped.

If the application is running, the **View Config** option is available instead of the **Edit Config** option and no edition can be done from the window.

How to Assign a Channel to a Video Display

1. Right-click the **IPDirector Service** button on the Workstation area.
2. Select **Edit Config** from the contextual menu.

The IPDirector Configuration window opens:



3. Select the box in the **Linked** column corresponding to the player channel you want to link to the video display.
4. Select which video display device it must be linked to from the drop down list in the **Video Display** column.



NOTE

The linked box can be selected without being linked to a Video Display. For example, this is used when an external monitor is connected to your workstation.

5. Click **Save**.
6. Repeat steps 1 to 5 for all IPDirector workstations as these parameters are local to the IPDirector workstation.

Configuring IP-Scheduler

Prerequisites

- The Serial Communication must have been configured.
- The SynchroDB service must have been configured.
- The IPDirector service must have been configured.
- To automatically start IP-Scheduler with the IPDirector application, select **Auto Start** from the **IP-Scheduler** button contextual menu.

Master Role

Definition

Within a workgroup, an IP-Scheduler service can run as Master or Slave.

- The Master is the only IP-Scheduler service which manages jobs in the workgroup. There is only one Master per workgroup.
- The Slave(s) bring(s) failover functionality and has/have a Waiting status.

Setting

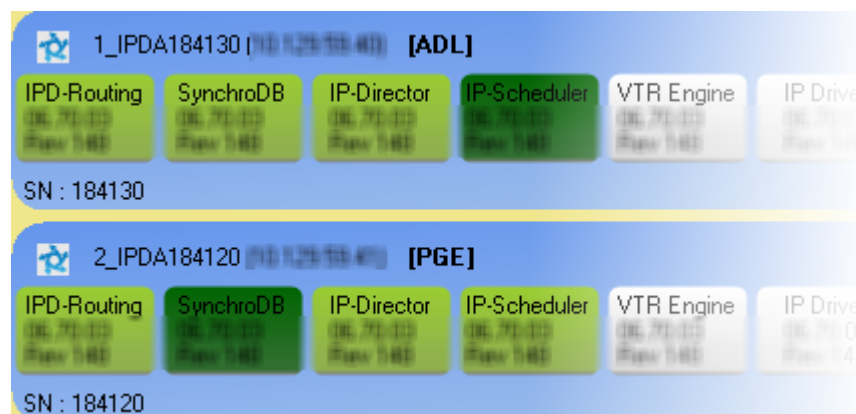
If only one IP-Scheduler service is started in the workgroup, it automatically runs as Master.

When more than one IP-Scheduler are started on a workgroup, the service with the lowest routing number takes the Master role.

In case the Master stops working, the slave IP-Scheduler with the lowest routing number takes the Master role in the workgroup.

Display

The Master role is clearly identified with a dark green status within the Remote Installer. The Slave(s) has/have a light green status.



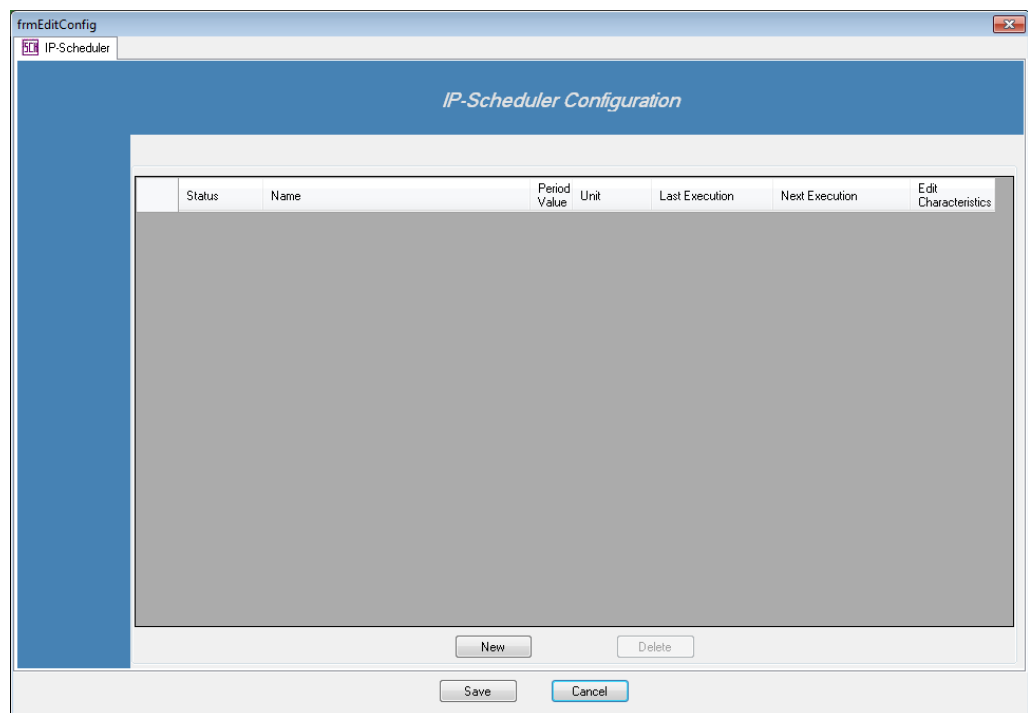
IP-Scheduler Configuration Window

The IP-Scheduler service is configured from the IP-Scheduler Configuration window.

To open the IP-Scheduler Configuration window in Edit/Configuration mode,

1. Make sure the IP-Scheduler service is stopped.
If the service is running, the **View Config** option is available instead of the **Edit Config** option and no edition can be done from the window.
2. Right-click the **IP-Scheduler** button.
3. Select **Edit Config** from the contextual menu.

The IP-Scheduler Configuration window opens:

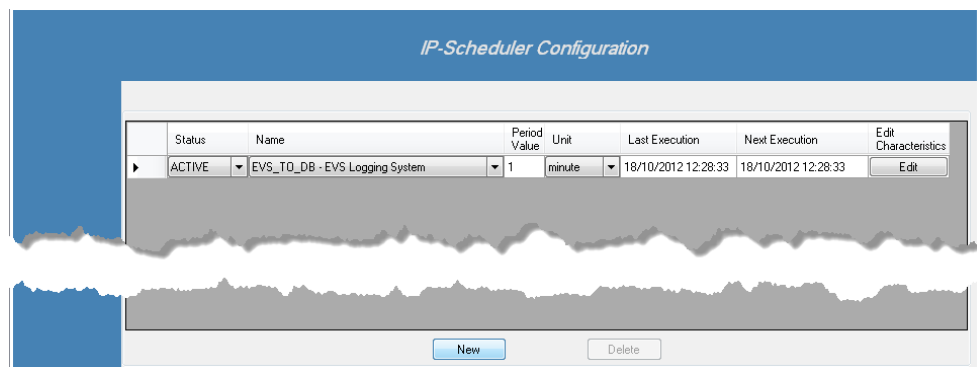


Adding a Job

Creating a new job is mainly useful for managing external information systems like a stats feed or other data coming from an XML managed system.

1. Click the **New** button.

A new line is added in the list.



2. Set the status of the job from the Status column: it can be active or inactive.

Once a job is configured, it is possible to stop it temporally without having to delete it and loose its characteristics.

3. From the Name column, select the type of job you want to create:

- EVS_TO_DB – EVS Logging System
- IDF_TO_EVS – Convert IDF Start List to Keyword Grid
- EQUIPRO – Handles communication with XML engine
- GetCleanEditEDL – Receives the CleanEdit edit timelines
- MoveFileTo – Move every files to another directory

4. Select the periodicity of the IP Scheduler polling process. The IP Scheduler will poll into one incoming directory, searching for new XML files.

- a. Enter a value in the Period Value column.

Default value: 1

- b. Select the period unit (second, minute, hour or day) from the Unit column.

Default: minute

The Last Execution value corresponds to the date and time when the job was lastly polled.

The Next Execution value corresponds to the date and time when the job will be polled next time.

5. Click the **Edit** button in the Edit Characteristics column to define the different directories involved in the job process from the Edit Job Characteristics window.

Every job has different characteristics.

EVS_TO_DB – EVS Logging System

This type of job runs when the IPDirector is interfaced to an external logging system or stats system. This external application will send XML files corresponding to logsheets,

logs and/or keyword grids which will be inserted in the IPDirector database.

This job also includes the Clip Creation feature and ingest of the metadata referencing XML file.

The processed information is then available for browsing purposes in the IPDirector interfaces.

The screenshot shows a window titled "Edit job characteristics". Inside, there's a section labeled "Job characteristics" with five rows of configuration options:

- EVS_TO_TODO:** A text box containing "\\DB64500\ThirdParty\EVS_TO_DB\EVS_TO_TODO" and a "Browse" button.
- EVS_TO_TREATED:** A text box containing "\\DB64500\ThirdParty\EVS_TO_DB\EVS_TO_TREATED" and a "Browse" button.
- EVS_FROM_TODO:** A text box containing "\\DB64500\ThirdParty\EVS_TO_DB\EVS_FROM_TODO" and a "Browse" button.
- EVS_FROM_TREATED:** A text box containing "\\DB64500\ThirdParty\EVS_TO_DB\EVS_FROM_TREATED" and a "Browse" button.
- RETRY_DURATION:** A text box containing "1" and a "minutes" label.

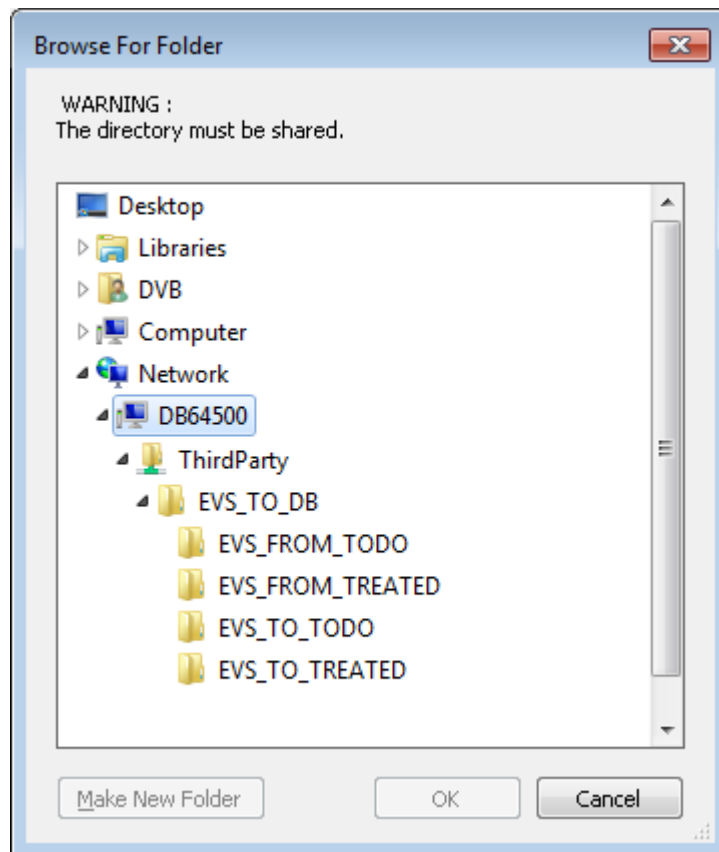
At the bottom of the window are two buttons: "Accept" and "Cancel".

The IP Scheduler will poll on the EVS_TO_TODO directory to find all jobs (XML files corresponding to logsheets, logs and/or keyword grids) which must still be treated, and insert the corresponding data in its database. When the EVS system has treated the job, the XML file will be moved into the EVS_TO_TREATED directory.

The third party system will poll on the EVS_FROM_TODO directory to find all jobs (xml files) which must still be treated and process the information. When the third Party system has treated the job, the xml file must be moved into the EVS_FROM_TREATED directory.

Directory Name	Directory content
EVS_TO_TODO	Data to be treated from third party system to EVS system
EVS_FROM_TODO	Data to be treated from EVS system to third party system
EVS_TO_TREATED	Data treated from third party system to EVS system
EVS_FROM_TREATED	Data treated from EVS system to third party system

Click the **Browse** buttons in front of the characteristics to define the corresponding directories.

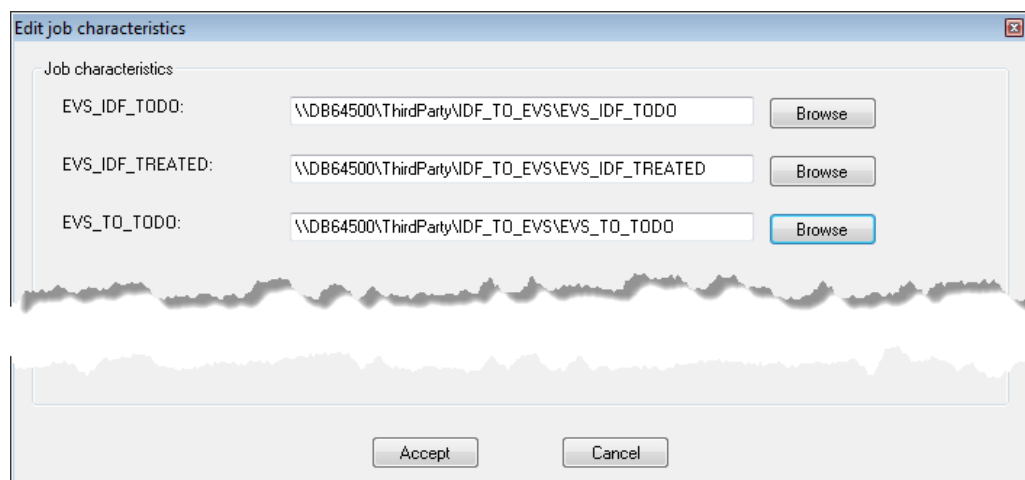
**WARNING**

The directories must be shared with full access control.

When all directories are defined, click **Accept** to validate the new job characteristics.

IDF_TO_EVS – Convert Start List to Keyword Grid

This job is used to convert IDF XML files into keyword grids. IDF XML files contains athletes start list, players, teams or default keywords.



- **EVS_IDF_TODO:** this is the directory where the IDF XML files will be dropped. The IP Scheduler will poll in this directory for new files to be treated.

- **EVS_IDF_TREATED:** When the IP Scheduler has treated a file, it is moved to the EVS_IDF_TREATED directory.
- **EVS_TO_TODO:** The IP Scheduler transform and IDF XML file into an EVS Keyword grid XML file which, in turn, must be imported into the IPDirector database. In consequence, the EVS_TO_TODO directory of this job must correspond to the EVS_TO_TODO directory of the “EVS_TO_DB – EVS Logging System” job described here above.

Click on the **Browse** buttons in front of the characteristics to define the corresponding directories.



WARNING

The directories must be shared with full access control.

EQUIPRO – Handles communication with XML engine

Please contact EVS for information. This job is used for a specific customer implementation.

GetCleanEditEDL – Receives the CleanEdit edit timelines

Please contact EVS for information. This job is used on specific custom applications.

MoveFileTo – Move every file to another directory

This job is used to zip the content of a source folder and move the zipped file to another destination directory.

- **SOURCE_DIRECTORY:** the content of this directory is zipped and copied to the destination directory.
- **TARGET_DIRECTORY:** this directory receives the zipped files containing the files found inside the source directory.

Click the **Browse** buttons in front of the characteristics to define the corresponding directories.



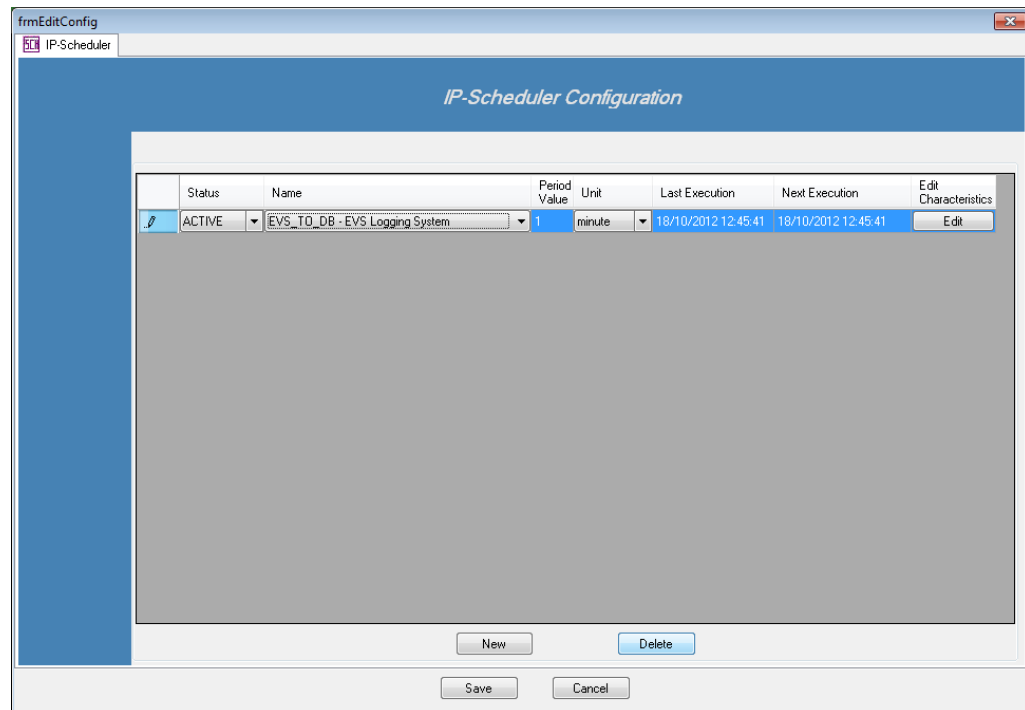
WARNING

The directories must be shared with full access control.

Deleting a Job

To delete a job, simply select the job by clicking on the header line.

Then, click on the **Delete** button.



Configuring VTR Engine

There is no more configuration done on the VTR Engine service.

However, the following conditions must be met to ensure a proper working:

- The Serial Communication must have been configured. See section "Configuring the Serial Ports" on page 45.
- The SynchroDB and IP-Scheduler services must have been configured. See sections "Configuring SynchroDB" on page 151 and "Configuring IP-Scheduler" on page 157.
- To automatically start VTR Engine with the IPDirector application, select **Auto Start** from the **VTR Engine** button contextual menu.

Configuring IP Drive

Prerequisites

- At least one SynchroDB service should be in Network Mode when using IP Drive in order to automatically manage the detected drives.
- The Serial Communication must have been configured. See section "Configuring the Serial Ports" on page 45.

- The SynchroDB and IP-Scheduler services must have been configured. See sections "Configuring SynchroDB" on page 151 and "Configuring IP-Scheduler" on page 157.
- To automatically start IP Drive with the IPDirector application, select **Auto Start** from the **IP Drive** button contextual menu.

IP Drive Configuration Window

The IP Drive service is configured from the IP Drive Configuration window.

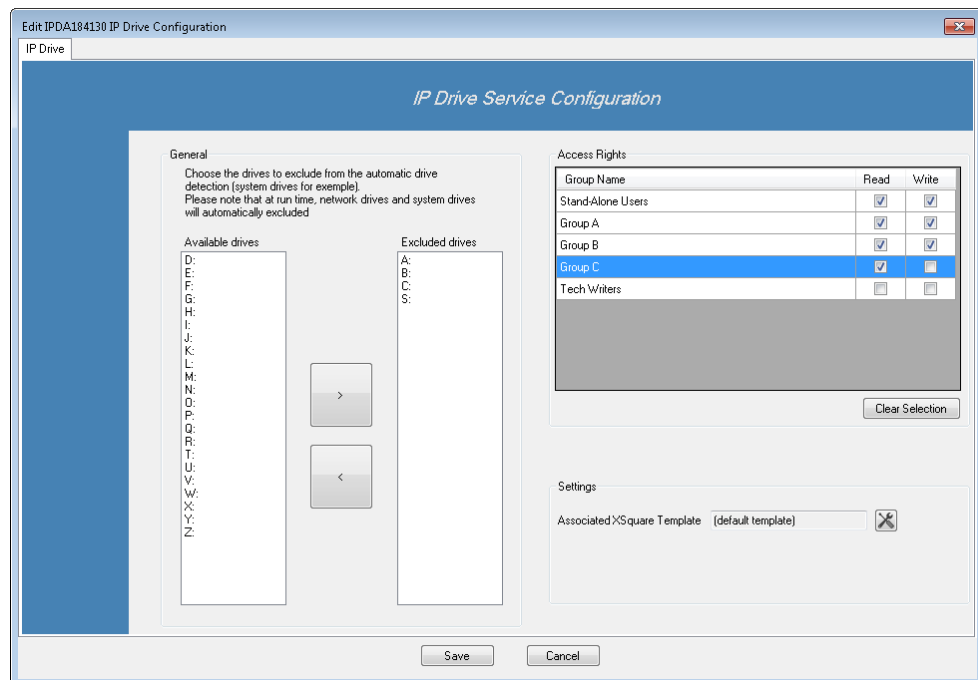
To open the IP Drive Configuration window in Edit/Configuration mode,

1. Make sure the IP Drive service is stopped.

If the service is running, the **View Config** option is available instead of the **Edit Config** option and no edition can be done from the window.

2. Right-click the **IP Drive** button.
3. Select **Edit Config** from the contextual menu.

The IP Drive Configuration window opens:



See the sections below for a description of all the window areas.

4. (optional) Repeat previous steps for all IPDirector workstations as these parameters are local to the IPDirector workstation.

General

The aim of the General setting is to exclude known drive(s) from the auto detection and especially ones which do not contain relevant media files.

As it is impossible to keep a fixed letter drive in Windows OS, IP Drive has to monitor all letter drives to assume the auto detection. Typically, system drives should be excluded (A, B, C, and R).

General

Choose the drives to exclude from the automatic drive detection (system drives for example). Please note that at run time, network drives and system drives will automatically excluded

Available drives		Excluded drives
D: E: F: G: H: I: J: K: L: M: N: O: P: Q: S: T: U: V: W: X: Y: Z:	<div style="text-align: center;">></div> <div style="text-align: center;"><</div>	A: B: C: R:

Select the letter in the Available drives list to be excluded from the detection and click > to add it in the Excluded drives list (most EVS hardware will recommend excluding at least C: System, R: Restore and floppy A: / B: drives).

To remove it from the Excluded drives list, select it and click < to add it in the Available drives list.

Access Rights

As seen in the Near Line Management Configuration chapter, rights must be defined for drives detected on the workstation where IP Drive is activated.

Once group and user rights are defined inside the User Manager application, the drive access rights can be defined.

Access Rights

Group Name	Read	Write
Stand-Alone Users	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Group 1	<input type="checkbox"/>	<input type="checkbox"/>
Group 2	<input type="checkbox"/>	<input type="checkbox"/>
Group 3	<input type="checkbox"/>	<input type="checkbox"/>

Clear Selection

Select all wanted Read or Write boxes for each group.

Read

Selecting a Read box gives access to the visibility of the drive inside IPDirector (Restoring clips is allowed).

Write

Selecting a Write box allows performing a backup of the clips from a server to a drive (Reading is automatically allowed).



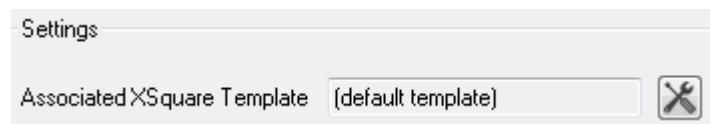
NOTE

Administrator accounts can Read and Write in all drives even if the rights are not configured.


Clear Selection

Click the button to clear all checked boxes.

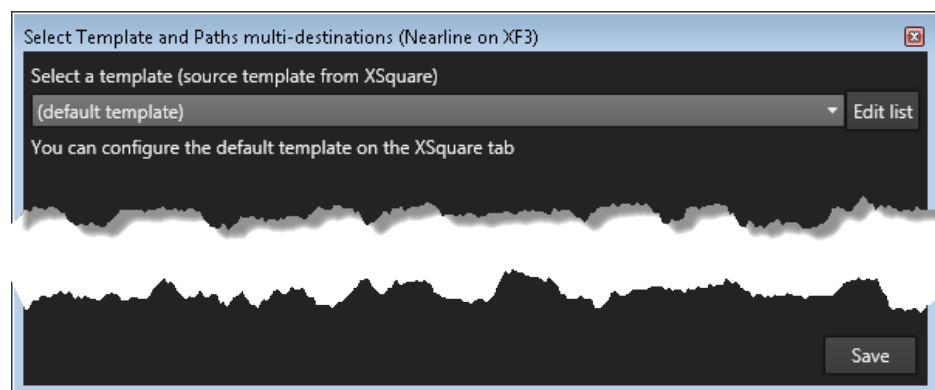
Settings



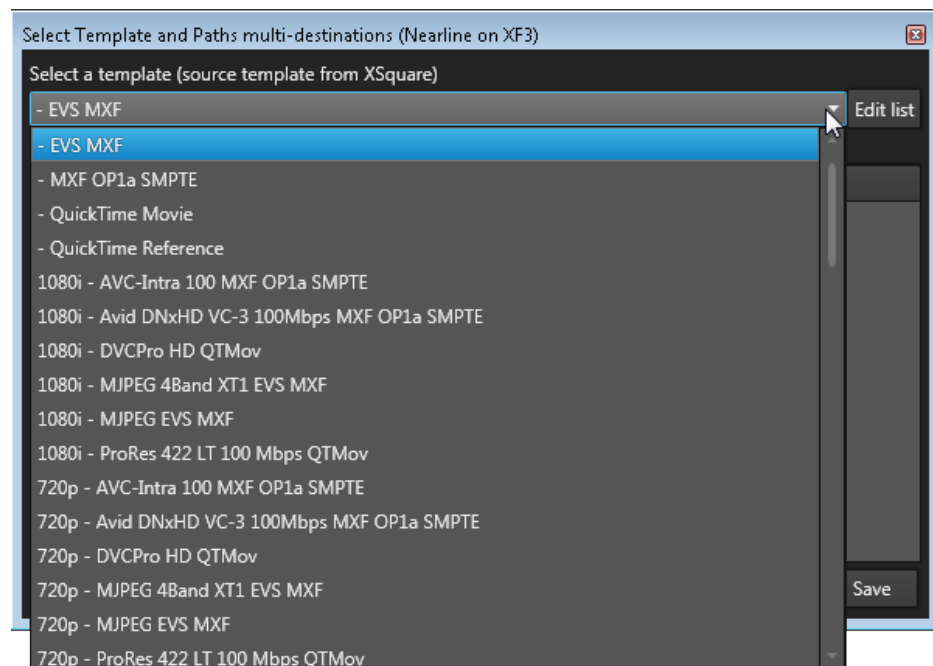
1. Select an Xsquare template that will be used for backup to / restore from nearline (IP Drive) operations. This can be the template selected as default template from the Xsquare tab (see section "Xsquare Parameters Definition" on page 115), or another Xsquare template.

- a. Click the  button next to the nearline being configured.

The Select Template and Paths Multi-Destinations window opens:

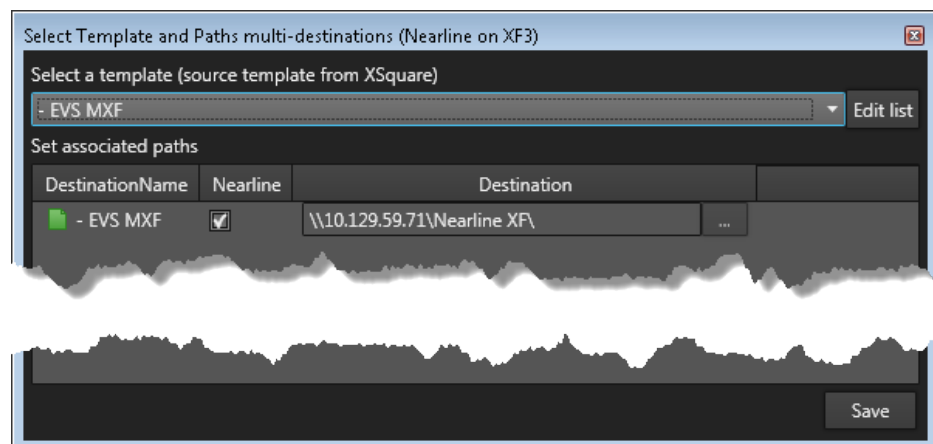


- b. Click the arrow next to the **Template** field to display the list of available templates:



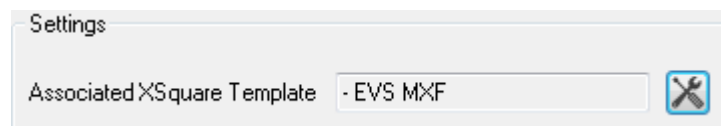
- c. Select a template.

The selected template is listed in the window:



- d. Click **Save**.

The selected Xsquare template is displayed in the **Associated Xsquare Template** field:



Configuring IP API

Prerequisites

- At least one SynchroDB service should be in Network Mode when using IP Drive in order to automatically manage the detected drives.
- The Serial Communication must have been configured. See section "Configuring the Serial Ports" on page 45.
- The SynchroDB, IP-Scheduler and IP Drive services must have been configured. See sections "Configuring SynchroDB" on page 151 "Configuring IP-Scheduler" on page 157. and "Configuring IP Drive" on page 163.
- The ISA service must be started.
- To automatically start IP API with the IPDirector application, select **Auto Start** from the **IP API** button contextual menu.

Master Role

The IP API with the lowest routing number takes the Master role.

This IP API is in charge of the API Notifications and usually consumes a lot of memory.

Other IP API started in the workgroup has a Waiting status (Only as an automatic failover for the IP API).

The Master role is clearly identified with a dark green status within the Remote Installer.



IP API Configuration Window

The IP API service is configured from the IP API Configuration window.

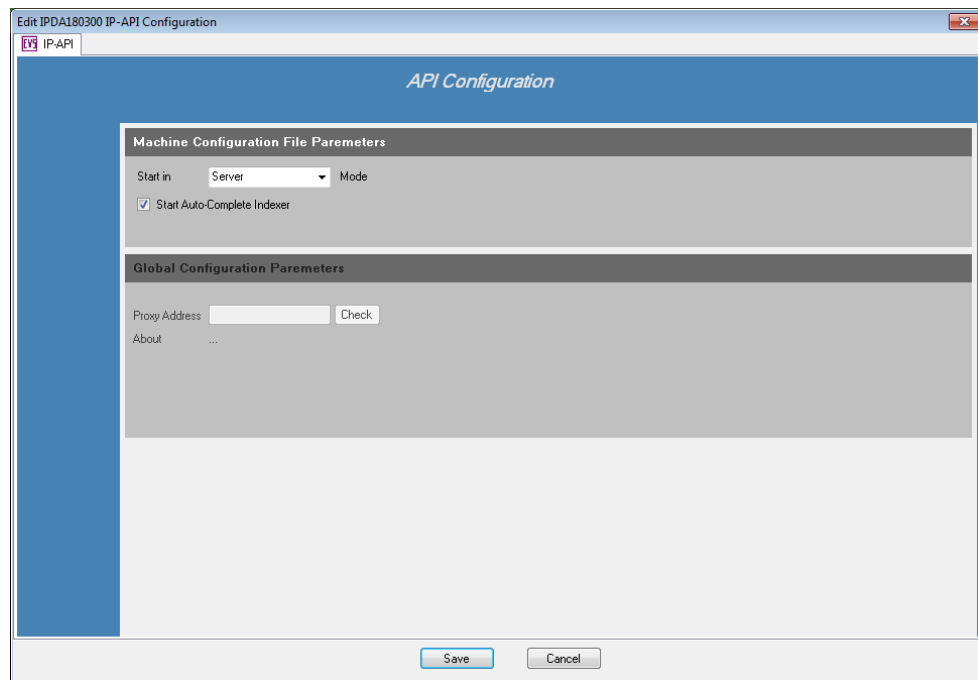
To open the IP API Configuration window in Edit/Configuration mode,

1. Make sure the IP API service is stopped.
If the service is running, the **View Config** option is available instead of the **Edit Config** option and no edition can be done from the window.

2. Right-click the **IP API** button.

3. Select **Edit Config** from the contextual menu.

The IP API Configuration window opens:



See the sections below for a description of all the window areas.

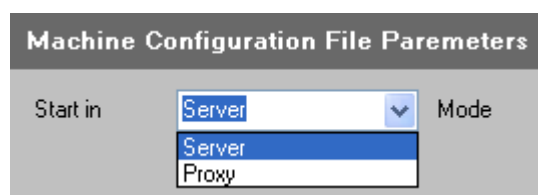
4. Repeat previous steps for all IPDirector workstations as these parameters are local to the IPDirector workstation.

Machine Configuration File Parameters

Starting Modes

The aim of the Machine Configuration File Parameters section is to define the starting mode of the IP API Service.

Two modes are listed for the starting mode:

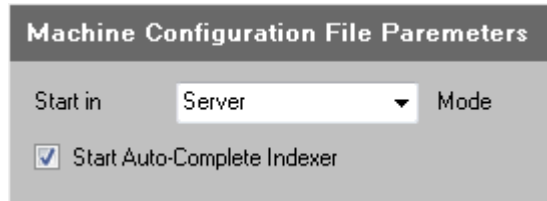


- **Server** (the default mode): Started in server mode, the API service replies to API clients. The Master one provides the notifications.
- **Proxy**: Started in proxy mode, the API service routes the requests made by the API clients to the API servers and the notifications from the Master IP-API. This configuration is used for a one point of contact using the power of several API servers.

This mode is generally used on an API Proxy workstation. See section "Installing and Configuring IP Drive and API Proxy" on page 205.

Start Auto-Complete Indexer

In order to start the Auto-Complete Indexer, select the following box:



The dialog box is titled "Machine Configuration File Parameters". It contains a "Start in" dropdown menu with "Server" selected, followed by the word "Mode". Below this is a checkbox labeled "Start Auto-Complete Indexer" which is checked.

At least one IP-API Service should be started in Auto-Complete Indexer mode to provide the feature in the IPDirector GUI, **even if the API is not used by a third party client.**

Several Services can be started in this mode to load-balance the requests on multiple stations (It also avoids the single point of failure in a workgroup). But each station will consume the same memory size to load the Auto-Complete catalog.

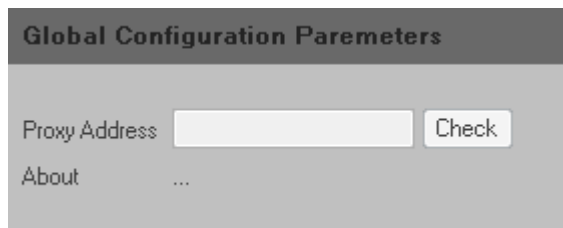
It is advised on big setups to avoid starting the AutoComplete Indexer on the IP API service which has already the Master role (the API Notifications).



NOTE

It is advised on big setups to avoid starting the AutoComplete Indexer on the IP API service which has already the Master role (the API Notifications).

Global Configuration Parameters



The dialog box is titled "Global Configuration Parameters". It contains a "Proxy Address" text field with a "Check" button to its right. Below this is an "About" label followed by an ellipsis (...).

This section cannot be edited from the IP API service configuration.

It is accessible from the IP API tab in the Remote Installer configuration only. See section "IP-API Configuration" on page 138.

Configuring AB Roll Service

There is no configuration required for the AB Roll service.

The AB Roll service with the lowest routing number takes the Master role.

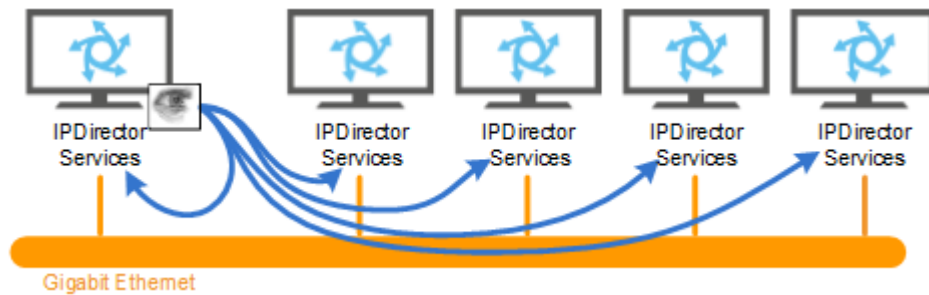
In case an AB Roll service with a lower routing number starts afterward, the first one remains Master. If the Master stops or fails, the AB Roll service with the lowest routing number will then take the Master role.

The Master role is clearly identified with a dark green status within the Remote Installer.

2.8.5. Monitoring Services

Context of Use

It is possible to remotely monitor all services from any workstation on the network using one common interface.



NOTE

The monitoring interfaces are designed for technical assistance. The delivered information is dedicated to skill users in contact with the EVS support staff.

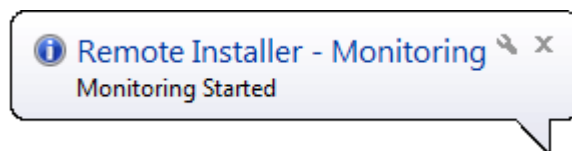
Starting the Monitoring Management Tools

Monitoring Management tool

To launch the Monitoring Management tool, proceed in one of the following ways. The service can be stopped or started.

- Right-click any of the **Service** buttons on a workstation area and select **Monitor** from the contextual menu.
- Right-click the **Remote Installer** icon or any **Service** icon on the Windows taskbar and select **Monitor Status**.

The Monitoring Management tool contacts all the workstations on the network and finally displays a tooltip above the Windows taskbar.



The Monitoring Management window is displayed. See section "Overview of the Monitoring Management Window" on page 172.

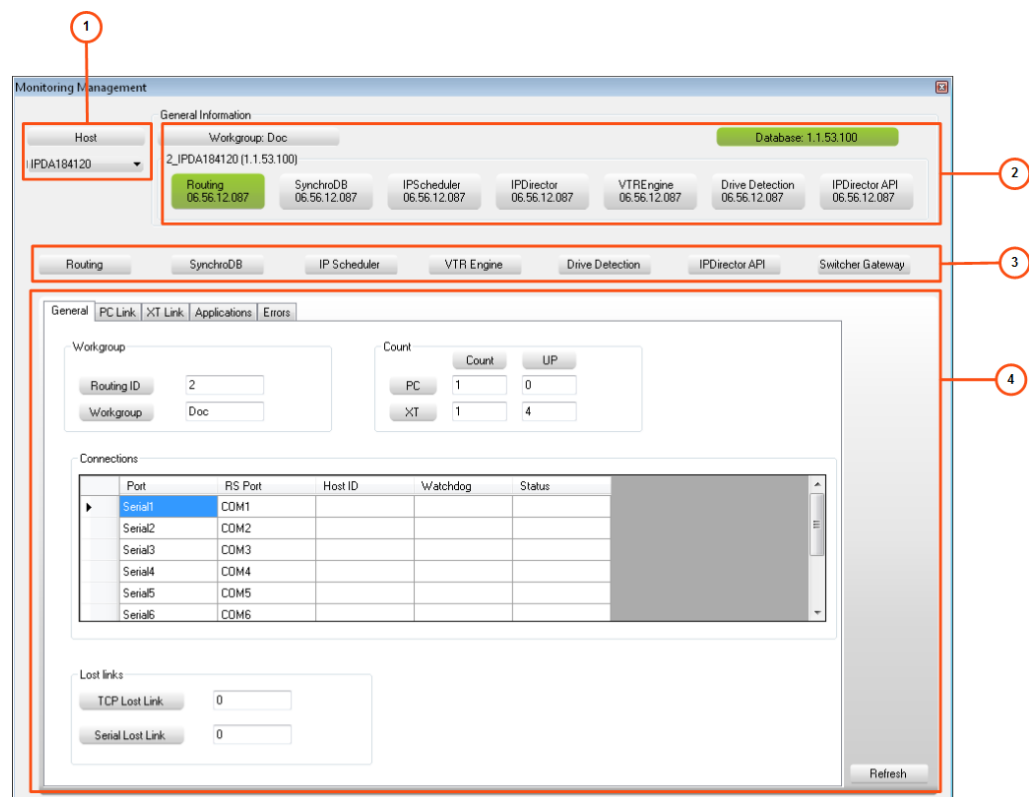
Advanced Monitoring Manager tool

To launch the Monitoring Manager tool for the advanced monitoring of a service, proceed in one of the following ways. The service must be started.

- Right-click the **Service** button on a workstation area and select **Advanced Monitor** from the contextual menu.
- Hold the **CTRL** key and right-click the **Service** icon on the Windows taskbar. Then, select **Monitor Status**.

The Monitoring Manager window is displayed.

Overview of the Monitoring Management Window



Monitored Host (1)

This zone shows the workstation to monitored. All the workstations discovered by the Remote Installer are available for selection in the drop-down list.

General Information (2)

This zone displays the workgroup name, the database IP address and status, and status (started or not) and versions of all services for the monitored workstation.

Service Buttons (3)

This zone is used to select the workstation service to monitor.

The **Switcher Gateway** button is used to monitor the connected devices used with Director's Cut.

Service Monitoring Zone (4)

This zone shows the monitoring information for the selected service on the selected workstation. Depending on the monitored service, different tabs are displayed.

The values displayed are grabbed when the monitoring is started or when the workstation is selected. The display is not dynamic. To display accurate values, click the **Refresh** button.

2.9. Managing and Monitoring the Indexing Service

2.9.1. General Description

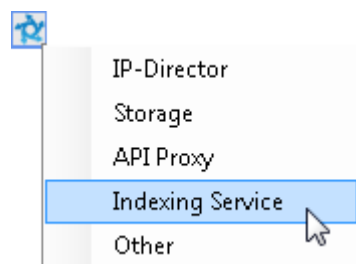
Introduction

The Indexing Service is a system used by the API to perform searches and to synchronize a SQL DB with an ElasticSearch DB. It uses configuration information from the Infrastructure Administration service.

It is made of several components called Crawler, Pusher, ElasticSearch and Zookeeper.

A web interface is used to manage the Indexing Service components and to monitor their proper working. See section "Managing and Monitoring the Indexing Service Components" on page 174.

The Indexing Service can run on one or several workstations. The workstation may be dedicated to other major tasks, or be entirely dedicated to indexing service. Such a workstation is declared by right-clicking the **Workstation Type** icon and selecting Indexing Service:



Then, the icon displays .

On a workstation configured as Indexing Service, ElasticSearch is configured to work with 2/3 of the workstation RAM (with a maximum of 31 GB) towards 1/3 for Elasticsearch started on a workstation configured as IPDirector.

The workload may be distributed across the services from the different machines.

The system may provide redundancy. When a machine stops running, another one takes over, so the system is always ready to work.

See also section "Introduction" on page 144 ("Managing Services") for more information on the **ISA** service.

See also section "Workgroup Toolbar" on page 23 for more information on the **Indexing Service** button and its status color code.

Indexing Service Components

ElasticSearch

ElasticSearch is the document oriented database used by the Indexing service.

Crawler

This synchronization service checks the updates done in IPDirector SQL database, transforms data into a form usable by ElasticSearch, and send them to the Pusher.

Pusher

This synchronization service sends data received from the Crawler to ElasticSearch.

Zookeeper

This service selects the Crawler and Pusher services with Master/Leader role when services are started on several workstations, and manages redundancy when a service fails.

Master/Leader Management

The Master/Leader management does not require any user intervention and is automatically managed by the Zookeeper service.

Each component acting as Master/Leader is identified by the  icon.

2.9.2. Managing and Monitoring the Indexing Service Components

Guidelines for the Size of Indexing System

Purpose

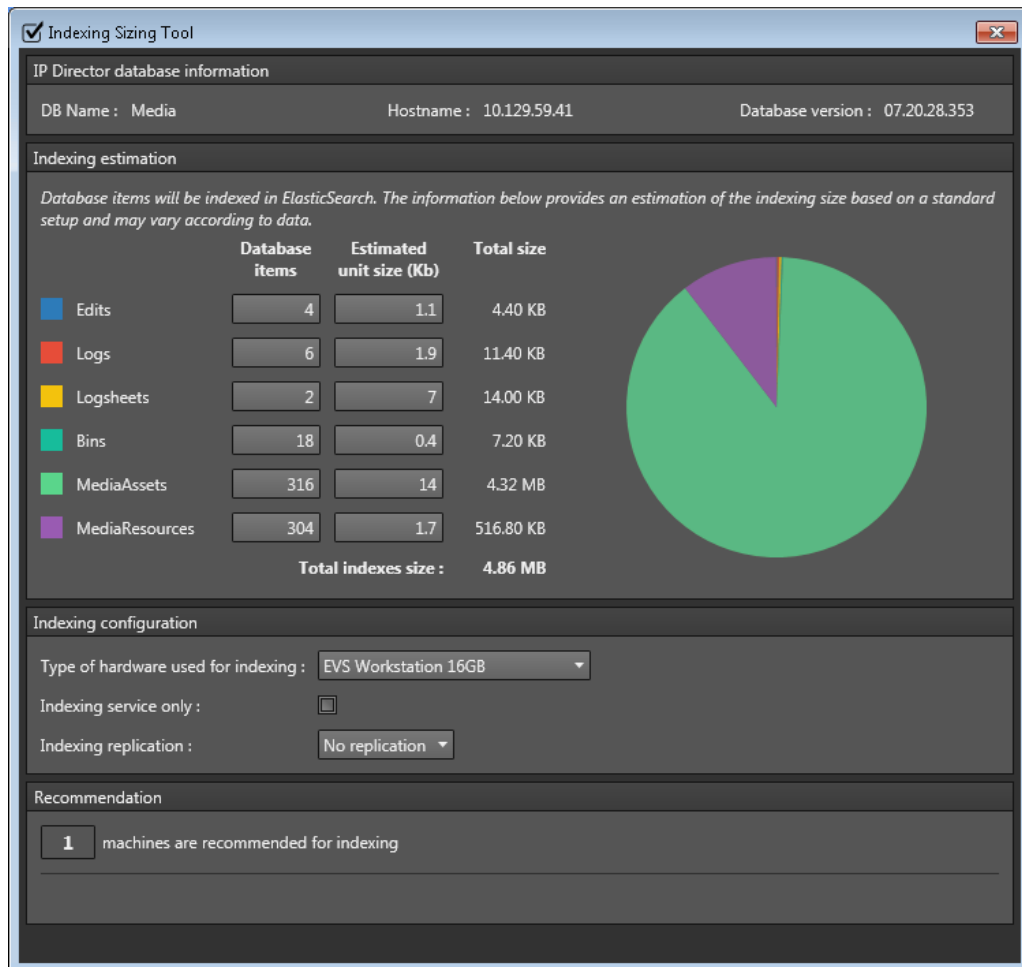
A tool is available to provide guidelines about the recommended number of machines to be used for indexing ElasticSearch based on your setup.

Overview

To open the tool,

- Right-click the **Indexing Service** button of the workgroup from the main Remote Installer window.

The Indexing Sizing Tool window opens:



IPDirector Database Information

This area is for information only. It shows the database name, IP address and version.

Indexing Estimation

This area is for information only.

The Database Items column shows the number of items of each type stored in the database.

The Estimated Unit Size column gives an estimation of the size (Kb) for a single item of each type.

The Total Size column gives the estimation of the size occupied by all the items of each type stored in the database, based on the actual number of items and the estimation of their size.

Indexing Configuration

From this area, you have to specify some parameters of your system.

Type of hardware used for indexing

In this field, specify the installed memory (RAM) of the hardware that will be used for indexing:

- **16 GB of RAM**
- **64 GB of RAM**

Indexing service only

Tick the checkbox if the machine which will be used for indexing will only be used for indexing purpose.

Clear the parameter if the machine is also used for management.

Indexing replication

In this field, specify the type of replication of your system:

- **No replication** (no redundancy: ElasticSearch indexed once)
- **1 replica** (simple redundancy: ElasticSearch indexed twice)
- **2 replicas** (double redundancy: ElasticSearch indexed three times).

See section "Settings" on page 182 for more details about this parameter.

Recommendation

This area gives you the recommended number of machines based on the parameters above.

ISA Service - Infrastructure Service Administration

The ISA service communicates with each Indexing Service component and ensures the discovery of the different elements by the other ones. So, no configuration of the Indexing Service components is required.

It must be started on all the workstations of a workgroup to ensure the proper distribution and discovery of each workstation. See section "Starting Services" on page 147.



Accessing the IPDirector Indexing Service Window

Prerequisites

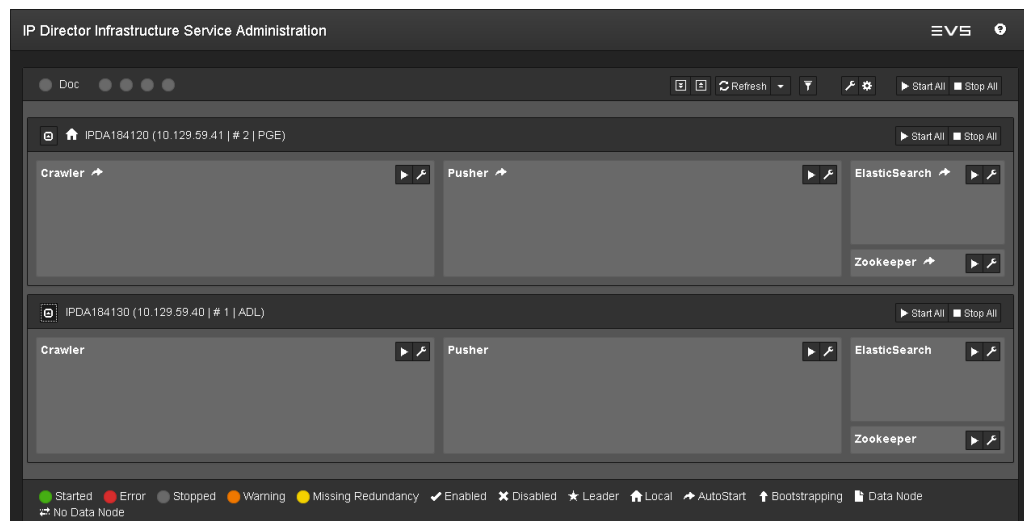
- The **ISA** service must be started on at least one workstation to be able to access the IPDirector Indexing Service Administration interface.
- The **ISA** service of a workstation must be started to be able to manage and monitor the Indexing Service components for this workstation from the web interface.

How to Access the IPDirector Indexing Service Window

To access the IPDirector Indexing Service window,

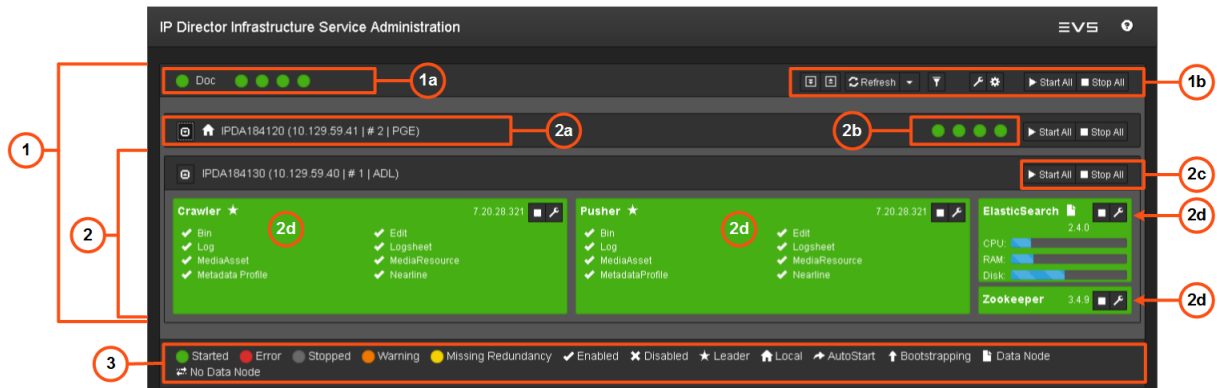
- Click the **Indexing Service** button of the workgroup **Indexing Service**.

When no component of the Indexing Service is started yet, the IPDirector Indexing Service window looks as follows:



Overview of the IPDirector Indexing Service Window

The IPDirector Indexing Service window has a display similar to the main Remote Installer window. Each workstation is represented by a separate line and the different workstations are grouped under their respective workgroup.



Workgroup (1)

Workgroup Information (1a)

From left to right:

- Global status icon for all the IS services of the workgroup.
This status is communicated to the Remote Installer and displayed with the same color code on the workgroup **Indexing Service** button. See section "Workgroup Toolbar" on page 23.
- Workgroup name
- Overall status icon for the Crawler service(s) from the workgroup
- Overall status icon for the Pusher service(s) from the workgroup
- Overall status icon for the ElasticSearch service(s) from the workgroup
- Overall status icon for the Zookeeper service(s) from the workgroup

The color code for the status icons is given at the bottom of the window.

Workgroup Toolbar (1b)

The toolbar provides a series of buttons and menus options. See section "Workgroup Toolbar Options" on page 179.

Workstation (2)

Workstation Information (2a)

Name, IP address and an optional description for the workstation.

Status for the Workstation IS Services (2b)

This information is only displayed when the workstation line is collapsed.





These icons represent the status for the workstation IS components.

From left to right: Crawler, Pusher, ElasticSearch and Zookeeper.

The color code for the status icons is given at the bottom of the window.

Workstation Toolbar (2c)




The following buttons are available for each workstation.

Button	Description
 Start All	Starts all the IS services set to Automatic Startup on the workstation.
 Stop All	Stops all the IS services on the workstation.

Indexing Service Components (2d)

Each Indexing Service component is represented by a colored box. The color corresponds to the status of the component. The color code meaning is given at the bottom of the window.

The following buttons are available for each component.

Button	Description
	Start Component button: starts the IS service component. The button switches to the Stop Component button.
	Stop Component button: stops the IS service component. The button switches to the Start Component button.
	Configure Component Settings button: gives access to the settings (Automatic Startup ,...) for the component. See section "Settings" on page 182.



Key (3)



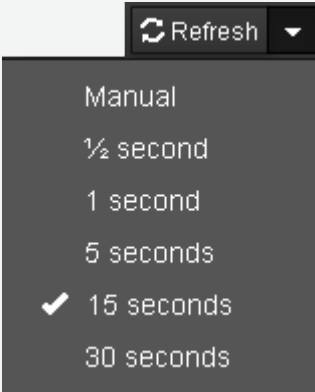





This area provides the explanation of the different status colors and the different icons which can be displayed.

Workgroup Toolbar Options

The toolbar is located on the top right corner of a workgroup area.

The following table gives a description of the buttons available from the toolbar.

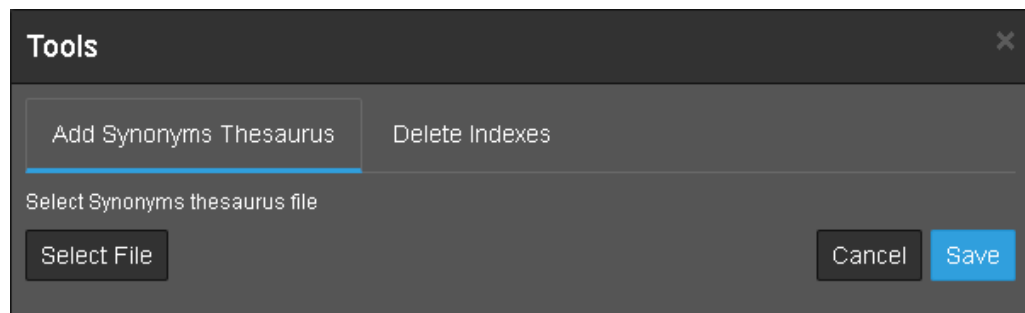
Button	Description
	Expands all nodes to display the services for all the workstations of the workgroup.
	Collapses all nodes to hide the services for all the workstations of the workgroup.

Button	Description
 Refresh	Refreshes the workgroup state on the interface.
	Displays a menu with various Refresh speed values: 
	Filter IS Activated Nodes button: hides, or displays, the workstations whose IS services are not started.
	Tools button: gives access to the Tools window. See section "Settings" on page 182.
	Configure IS Workgroup Settings button: gives access to the Settings window to configure the IS workgroup settings. See section "Settings" on page 182.
	Starts all the workgroup IS services set to Automatic Startup .
	Stops all the workgroup IS services.

Workgroup Tools Window

The Tools window opens when you click the **Tools** button  of a workgroup.

Add Synonyms Thesaurus tab



This tab gives the possibility to upload a new synonyms file or a thesaurus file.

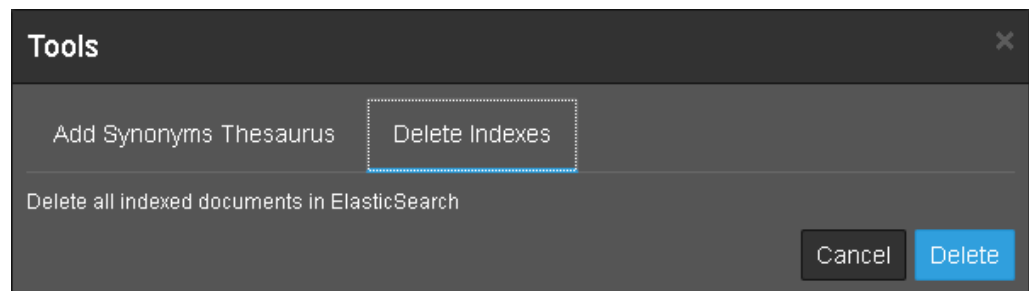
You will be allowed to work with a single file (.txt) at a time.

1. From the Add Synonyms Thesaurus tab, click the **Select File** button.

The File Upload window opens.

2. Browse to the file to upload.
3. Click **Open**.
4. Click **Open** in the Add Synonyms Thesaurus tab.

Delete Indexes tab




This tab gives the possibility to delete the index. This must be used cautiously.

1. Stop the Pusher service but keep the ElasticSearch service running on the workstations indexed with ElasticSearch.
2. In the Delete Indexes tab, click **Delete**.
3. Wait until a green status is displayed to confirm that the index has been deleted.
4. Stop the services.
5. Restart all the services.

Then, the ElasticSearch service rebuilds the index when it is started.

Settings

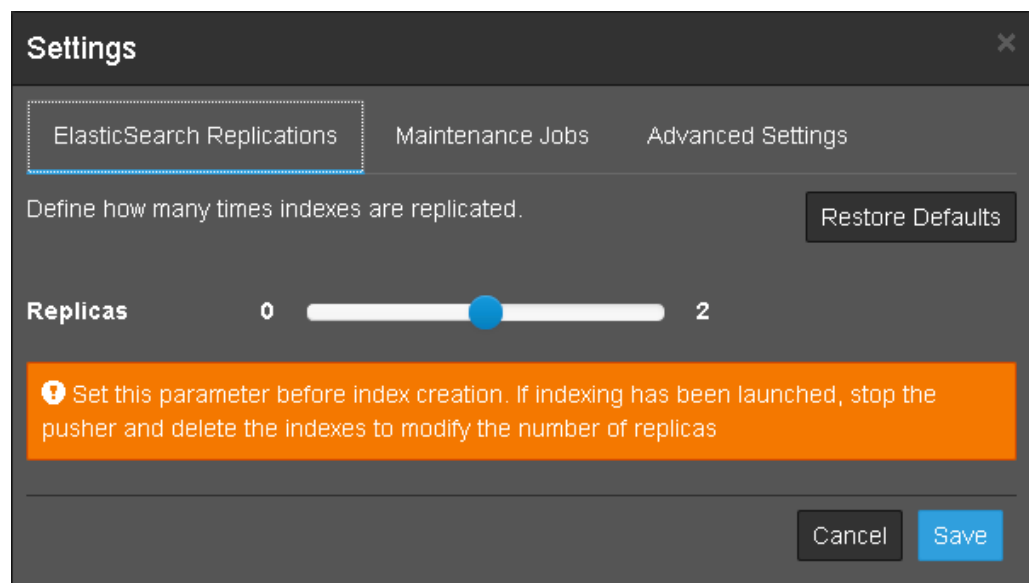
Workgroup Settings Window

The Settings window opens when you click the  button of a workgroup.

Three tabs are available to set workgroup parameters. Each one has its own **Restore** button to restore settings from the current tab to the default one, if needed.

Once you have set all the workgroup parameters, click **Save**.

ElasticSearch Replications tab



From this tab, you set the number of ElasticSearch replications, for redundancy purpose.

Possible values: **0** (no redundancy: ElasticSearch indexed once), **1** (simple redundancy: ElasticSearch indexed twice), **2** (double redundancy: ElasticSearch indexed three times).



WARNING

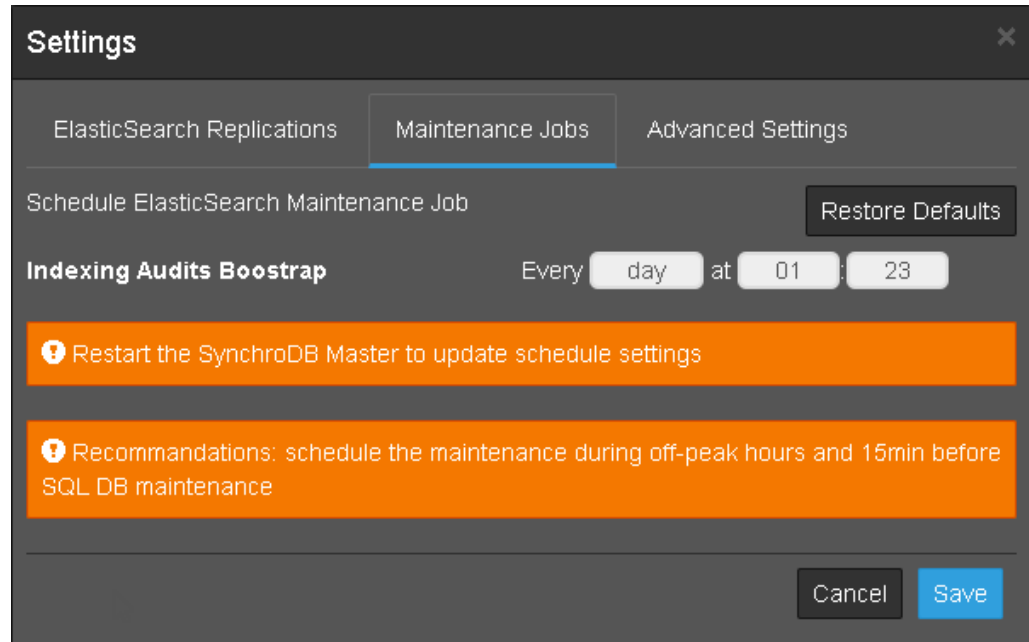
This parameter must be set before index creation.

If the index creation has started yet, first follow steps 1 to 3. Otherwise, go to step 4.

1. Stop the Pusher service but keep the ElasticSearch service running on the workstations indexed with ElasticSearch.
2. In the Tools window > Delete Indexes tab, click **Delete**. See section "Workgroup Tools Window" on page 180.
3. Wait until a green status is displayed to confirm that the index has been deleted.
4. Set the number of replicas by clicking on the Replicas bar or by dragging the blue bullet over the Replicas bar.

When all the services will be are restarted, the indexation will be completed with the number of replica set.

Maintenance Jobs tab



The screenshot shows the 'Settings' window with the 'Maintenance Jobs' tab selected. The window has a dark theme. At the top, there are three tabs: 'ElasticSearch Replications', 'Maintenance Jobs' (which is highlighted with a blue underline), and 'Advanced Settings'. Below the tabs, the text 'Schedule ElasticSearch Maintenance Job' is displayed. To the right of this text is a 'Restore Defaults' button. Below this, the 'Indexing Audits Bootstrap' section is visible, showing 'Every' followed by a dropdown menu set to 'day', 'at' followed by two input fields set to '01' and '23'. Below these settings are two orange warning boxes. The first box contains an exclamation mark icon and the text 'Restart the SynchroDB Master to update schedule settings'. The second box contains an exclamation mark icon and the text 'Recommendations: schedule the maintenance during off-peak hours and 15min before SQL DB maintenance'. At the bottom right of the window are 'Cancel' and 'Save' buttons.

From this tab, you set the frequency of the ElasticSearch maintenance jobs.

Default value: **Every day at 01:23**.

Possible values: **minute, hour, day, week**.



WARNING

Restart the Master SynchroDB service when your modification has been saved to take the new schedule into account.

Advanced Settings tab

Settings

ElasticSearch Replications Maintenance Jobs **Advanced Settings**

ElasticSearch shards Restore Defaults

An index can be split into multiple **shards** to horizontally scale content volume

Define the number of shards for each type of document (i.e. index)

Document Type	Min	Current Value	Max
Bin	1	1	10
Edit	1	1	10
Log	1	5	10
Logsheet	1	5	10
MediaAsset	1	5	10
MediaResource	1	5	10
Metadata	1	1	10
Nearline	1	1	10

Warning: Set this parameter before index creation. If indexing has been launched, stop the push and delete the indexes to modify the number of shards

Cancel Save

From this tab, you set the number of shards the index for each media item will be split into. This is particularly useful in case of big database.

Possible values: [1- 10]

It is recommend to keep the default values, or to modify these values under EVS support advice.



NOTE

MediaAsset corresponds to the definition of a clip in the IPDirector user manual. A clip is a logical entity that contains A/V media and can include several physical resources (XT clips and/or files).

MediaResource corresponds to the definition of a nearline file in the IPDirector user manual.

A nearline file is a XT clip which has been sent, for backup purpose, to a physical storage used as nearline, such as IP drive (or XF drive).


**WARNING**

These parameters must be set before index creation.

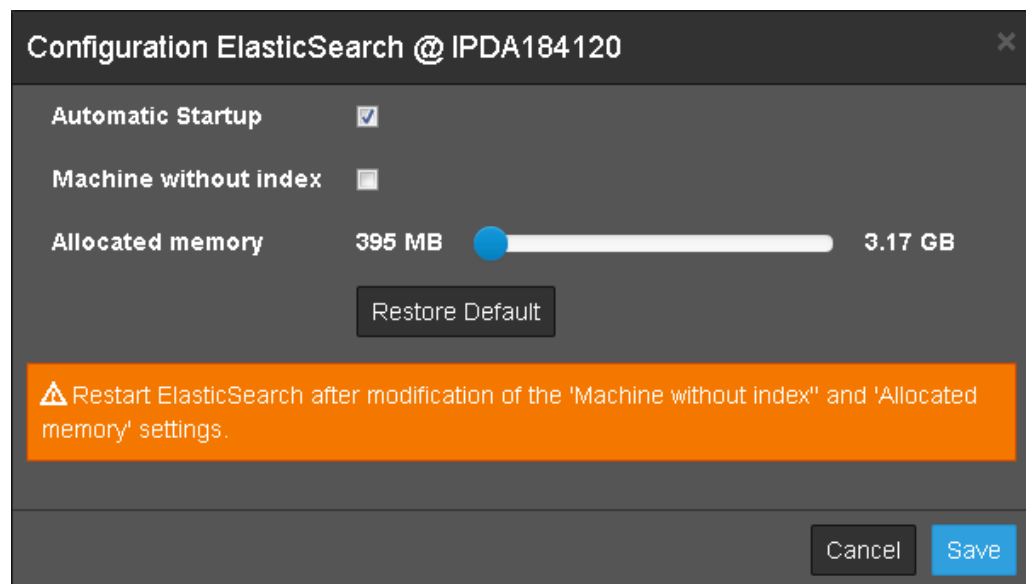
If the index creation has started yet, first follow steps 1 to 3. Otherwise, go to step 4.

1. Stop the Pusher service but keep the ElasticSearch service running on the workstations indexed with ElasticSearch.
2. In the Tools window > Delete Indexes tab, click **Delete**. See section "Workgroup Tools Window" on page 180.
3. Wait until a green status is displayed to confirm that the index has been deleted.
4. Set the number of shards by clicking on each bar or by dragging the blue bullet over each bar.

Configuration Window for Individual Component

The Configure [Component] window opens when you click the **Configure Component Settings** button  of a component from a workstation.

Once you have set all the configuration parameters for a component, click **Save**.



Automatic Startup

This parameter is available for each component.

The IS services set to **Automatic Startup** are automatically started when the **Start all** button is clicked from the Remote Installer interface.

Machine Without Index

This parameter is only available for the ElasticSearch component.

When ElasticSearch are indexed on 2 workstations, an third machine can be used as witness in case one of the indexed machines falls. ElasticSearch will be installed on it but not indexed.

The **Machine Without Index** parameter is used to declare which machine is used as witness.

By default, it is cleared.

Allocated Memory

This parameter is only available for the ElasticSearch component.

It corresponds to the proportion of RAM used.







WARNING

Do no modify the default value.

Potential Issues and Warnings

ES RAM Usage or Disk Space Usage over the Threshold

Warning Display

- If the ES RAM usage or the Disk space usage of the workstation reaches the threshold set as major for more than 30 seconds, the following warning information is displayed:
 - In the IPDirector Indexing Service Administration window, the percentage bar becomes orange and an orange warning icon  is displayed next to the workstation name.
 - In the Remote Installer main window, an orange warning icon  is displayed next to the Indexing Service button.
- If the ES RAM usage or the Disk space usage of the workstation reaches the threshold set as critical for more than 30 seconds, the following warning information is displayed:
 - In the IPDirector Indexing Service Administration window, the percentage bar becomes red and a red warning icon  is displayed next to the workstation name.
 - In the Remote Installer main window, a red warning icon  is displayed next to the Indexing Service button.

In that case, the Crawler and the Pusher components are paused until the value falls back below the critical threshold.



WARNING

If the crawler and the pusher services are paused, the synchronization between LivePAM DB and ES is interrupted. This means that the results of the last operations (creation, update, delete) are not indexed in ElasticSearch, and then the search does not provide a right view of LivePAM DB.

Default Threshold Values

ES RAM usage

The factory values for the default threshold are:

- Major: 80%
- Critical: 90%

The default threshold values cannot be modified.

Disk Space usage

The default threshold are:

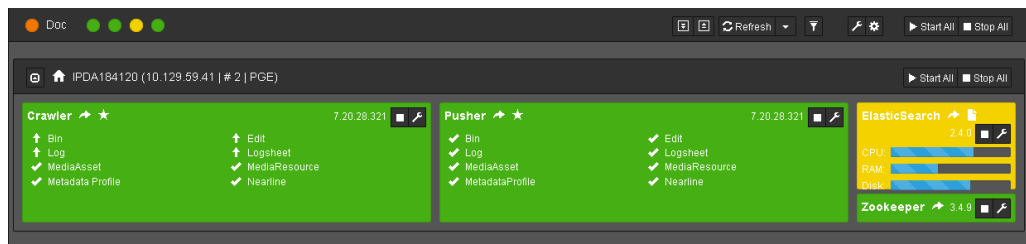
- Major: 70%
- Critical: 80%

The default threshold values cannot be modified.

ES do not Work Properly

If there is a disk space problem or if a cluster does not start, the ES component will be red.

If another workstation ensures replication, the ES component will be yellow.



2.10. Managing Logs

Introduction

As soon as an IPDirector service is started on a workstation, the EVSLogs folder is created on the system disk root and shared on the network with full access rights.

Options are available from the Workstation contextual menu and from the Workgroup contextual menu to manage EVS logs and IPD logs either from a specific workstation or from all the workstations of a workgroup.

The procedures describing how to get EVS logs or IPD logs are detailed hereafter. See section "Workstation Contextual Menu" on page 27 and "Workgroup Contextual Menu" on page 21 for additional options: viewing IPD logs and clearing IPD logs.

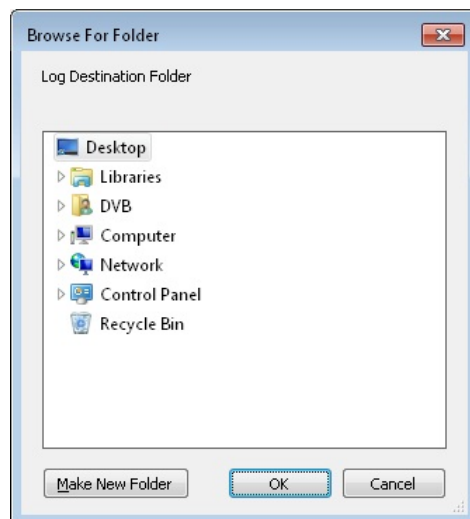
Getting Workgroup EVS Logs

It is possible to grab technical logs from all workstation members of the workgroup.

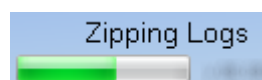
Starting any IPDirector services create the EVSLogs folder on the system disk root. This folder is shared on the network with full access rights to allow this grabbing logs feature.

This remote process grabs and zips the complete EVS log folder on each workstation member of the workgroup.

1. Right-click the Workgroup name.
2. Select **Get All EVS Logs** from the contextual menu.
3. Select a destination folder where the zip files will be created.



4. Click **OK**.
5. Wait for the creation of zipped files on each workstation. A progress bar is displayed per workstation.



6. Collect the zip files created in the destination folder. The zip files created are named **IPDAXXXXXX – EVSLogs.zip** (XXXXXX is the workstation serial number)

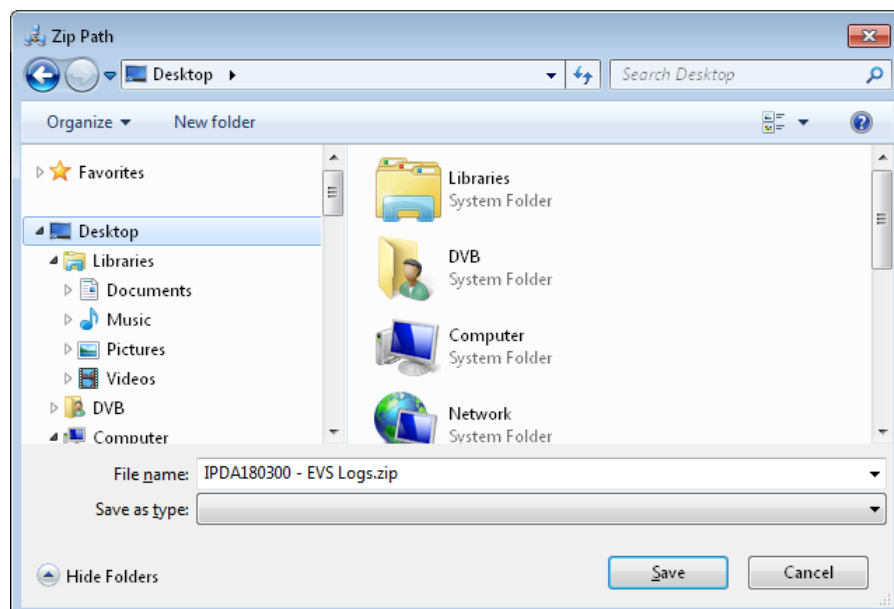
Getting Workstation EVS Logs

It is possible to grab technical logs from one workstation on the network.

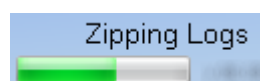
Starting any IPDirector services create the EVSLogs folder on the system disk root. This folder is shared on the network with full access rights to allow this grabbing logs feature.

This remote process grabs and zips the complete EVS log folder on a specific workstation.

1. Right-click the Workstation name.
2. Select **Get EVS Logs** from the contextual menu.
3. Select a destination folder where the zip files will be created.



4. Wait for the creation of zipped files. A progress bar is displayed.



5. Collect the zip files created in the destination folder. The zip files created are named **IPDAXXXXXX – EVSLogs.zip** (XXXXXX is the workstation serial number)

Getting IPDirector Logs

It is possible to grab IPDirector logs from one workstation on the network, or from all workstation members of the workgroup.

Follow the same procedures as described above, but select the **Get All IPDirector Logs** to get workgroup EVS logs or **Get IPDirector Logs** to get workstation EVS logs.

The created zipped file is named **IPDAXXXXXX – IPDLogs.zip**.

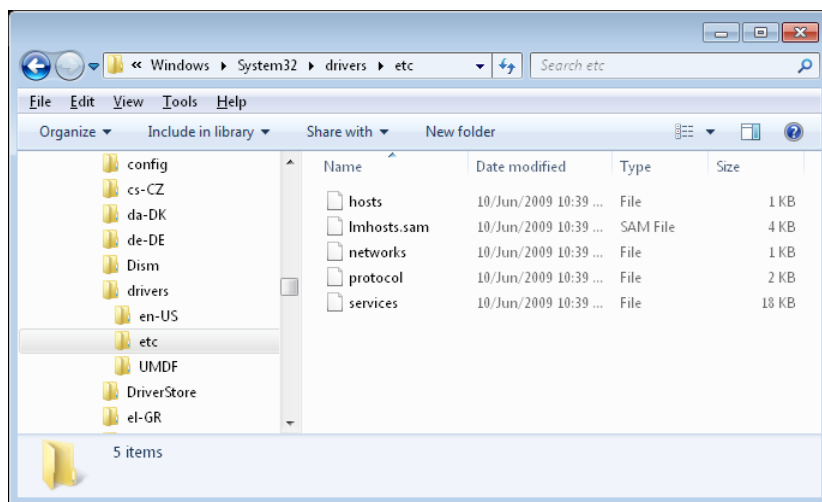
2.11. Populating Hosts Files

2.11.1. Introduction

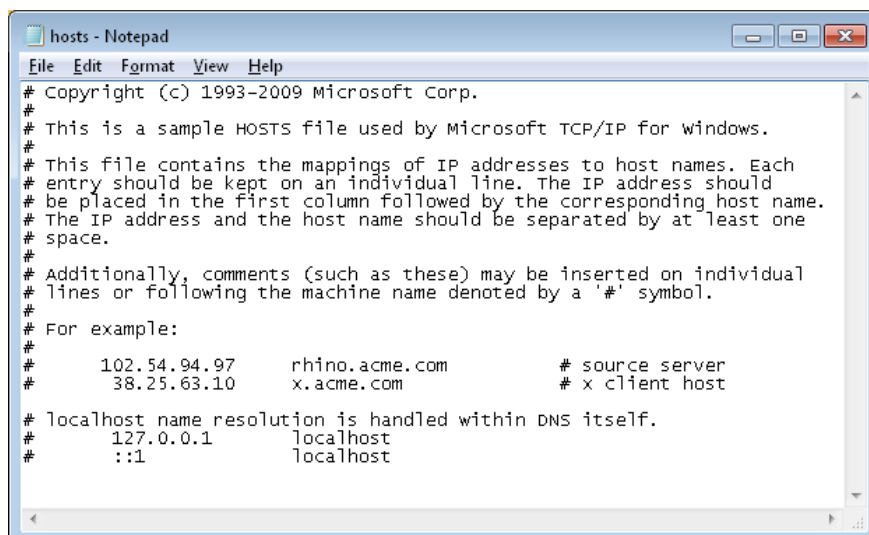
The **Populate Hosts Files** feature reduces IPDirector latencies due to LAN communications without DNS management.

IPDirector needs quick responses in name resolution. When a DNS sever is not installed on your network, the easiest way to configure the correspondence between Computer Names and IP Addresses is to edit the HOSTS file inside your operating system.

The HOSTS file is located in C:\Windows\system32\drivers\etc



The Windows original HOSTS file can be opened with Notepad.exe:



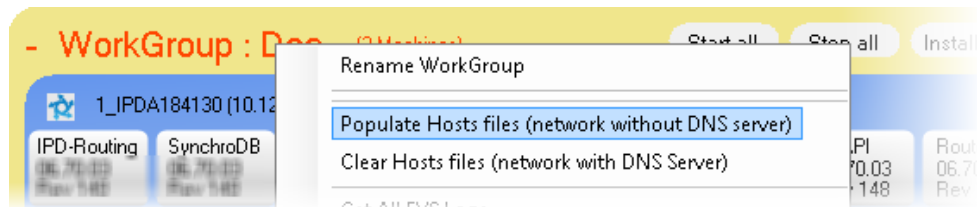
The entries (127.0.0.1 / ::1 local host) are written by default in this file.

Windows first consults this local file cache before sending its request to the DNS Server. Without DNS Server or Hosts files, Windows introduces latencies inside our application when trying to resolve hostnames.

2.11.2. Populate New Hosts Files

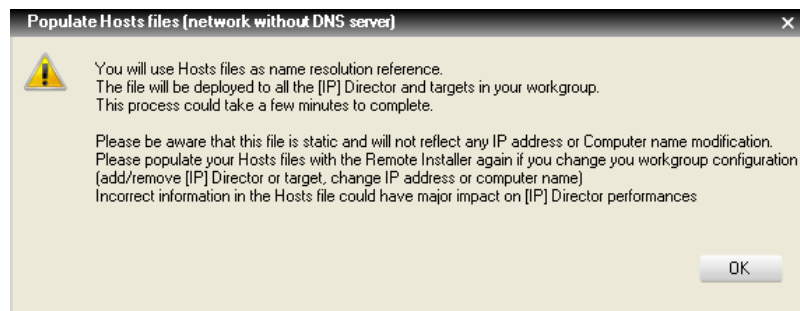
There is a feature within Remote Installer that helps you to create and populate a common HOSTS file on all the IPDirector workstations, Databases or Targets used inside the IPDirector workgroup.

1. In the Remote Installer, right-click on the Workgroup name.



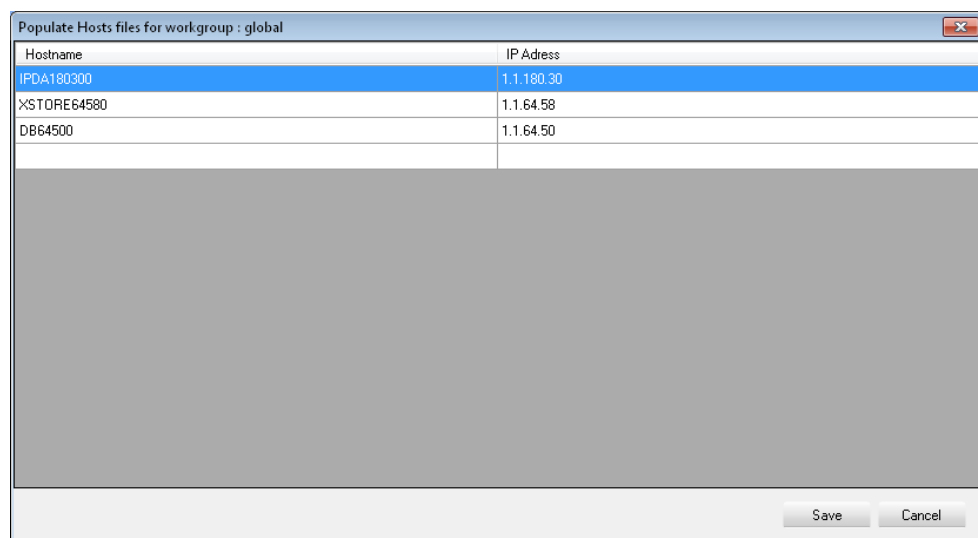
2. Select **Populate Hosts files (network without DNS server)** from the menu.

A popup window appears:



3. Click **OK**.

The following window opens:



A list is automatically created including all workstations belonging to your Workgroup. This process could take a few minutes to complete.

4. Click **Save** to populate the HOSTS file.

**NOTE**

Manual entries are allowed:

Enter the hostname (computer name), the IP Address is automatically resolved.

Enter the IP address, the hostname is automatically resolved.

Enter both hostname and IP address.

**NOTE**

If using a Mirrored database, the Virtual address will be populated into the list, but may not resolve a hostname. This is OK to leave blank as the virtual will never be used via a hostname lookup.

After population, the IPDirector, SQL Databases and devices will have the same HOSTS file showing the new common entries:

```

hosts - Notepad
File Edit Format View Help
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97       rhino.acme.com          # source server
#       38.25.63.10       x.acme.com             # x client host
#
# localhost name resolution is handled within DNS itself.
#
#       127.0.0.1         localhost
#       ::1              localhost
#
# [BEGIN IPD Entries]
1.1.180.30      IPDA180300
1.1.64.58      XSTORE64580
1.1.64.50      DB64500
# [END IPD Entries]

```

**NOTE**

Entries done by the Remote Installer are inserted between these two tags: # [BEGIN IPD Entries] - # [END IPD Entries]. This section allows for replacement and deletion of this group by the remote installer at a later time.

These entries can also include database, target computer, or third Party computer present in the workgroup configuration.

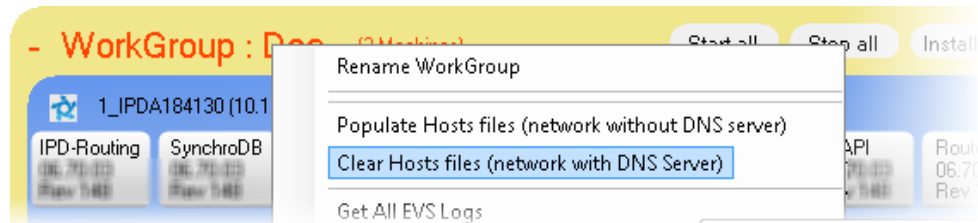
**NOTE**

Some Antivirus programs and settings block the ability to propagate the Host file to all workstations.

2.11.3. Clear Populated Hosts Files

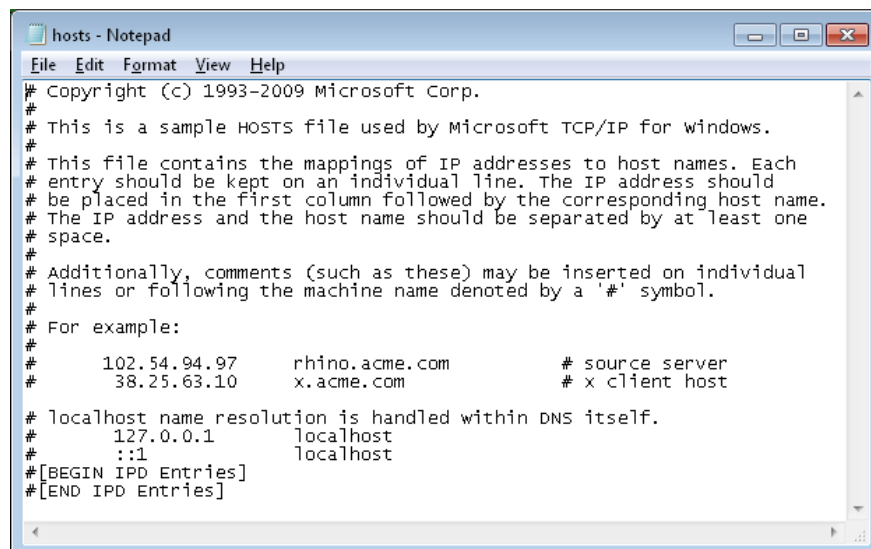
If a DNS Server is installed on your network, the HOSTS files must be cleared.

1. In the Remote Installer, right-click on the Workgroup name.



2. Select **Clear Hosts files (network with DNS server)** to remove IPDirector entries inside the workstation HOSTS files.

All HOSTS Files are cleared:



All entries inserted between tags `# [BEGIN IPD Entries]` - `# [END IPD Entries]` are deleted. If you insert manual entries in your HOSTS files for other IT application, write them outside the IPD Entries tags.



WARNING

It is strongly recommended to clear the HOSTS files before dismantling your setup.

2.12. Remotely Accessing a Workstation

Context of Use

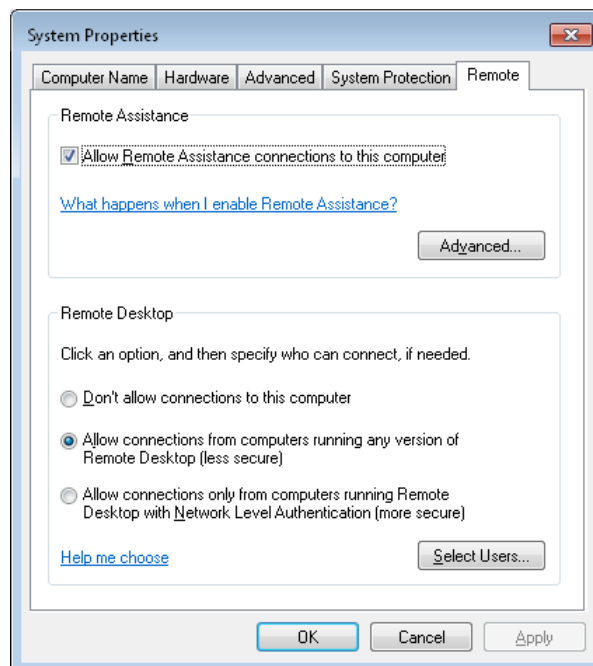
An option is available to use the Remote Desktop Protocol included in the Windows OS and display the screen of another computer on your own screen. The program allows you to use your mouse and keyboard to control the other computer remotely.

The Remote Desktop feature is not a viewer. It switches off the Windows session on the distant workstation to open it on the local one.

How to Check the Workstation Configuration for Remote Connections

The distant workstation must be configured to accept Remote connections. Our IPDirector stations are delivered with this option enable.

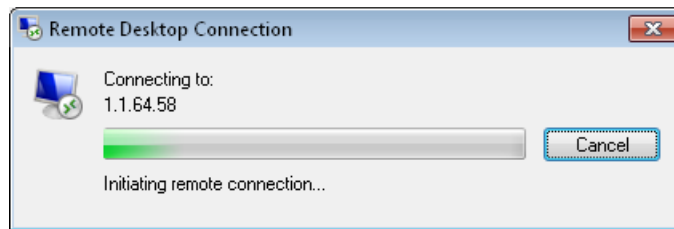
1. Click **[WIN]+[Pause/Break]** to open the System window.
2. Go to the **Advanced system settings** and select the Remote tab to check the configuration:



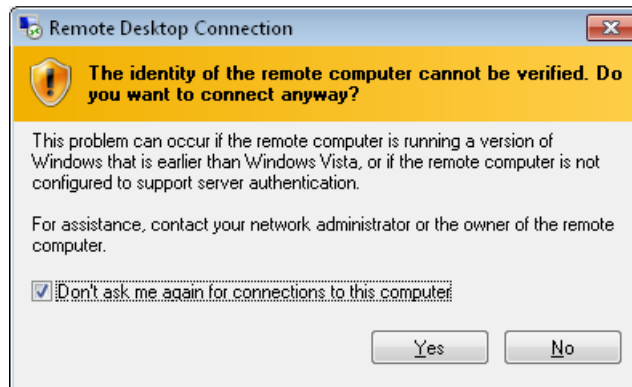
How to Remotely Access a Workstation

1. Right-click the Workstation name of the workstation you want to remotely access.
2. Select **Remote Desktop** from the contextual menu.

- Wait for connecting the distant IPDirector workstation:

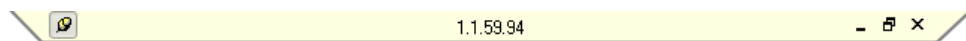


- The first time you connect from an IPDirector Station Windows 7 to an IPDirector with another OS, the following window may be displayed:



Select the **Do not ask me again for connections to this computer** option and the message will not be displayed next time.

Your screen turns black and a tab appears at the top of your desktop:



- In the Log On window, enter DVB as User name, no password and click **OK**.

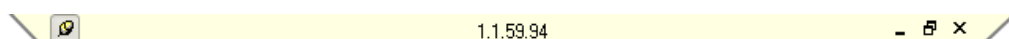


NOTE

EVS workstations are delivered with DVB/(no password) as a default user. If you installed IPDirector on non-EVS hardware, use the custom user name and password.

The distant desktop is open on the local one.

To close the connection, click **Close** on the top tab:

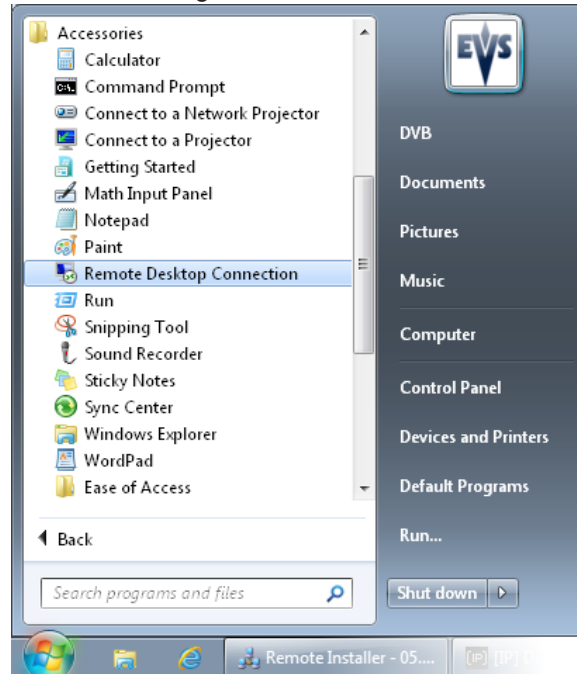


**NOTE**

This Remote Desktop feature can be used on any Windows based workstation, even if IPDirector is not installed.

The connection can be launched from the Windows start menu.

Select Start/Programs/Accessories/Remote Desktop Connection



2.13. Upgrade Operations

2.13.1. Upgrading the IPDirector Physical Memory

Hardware Upgrade

Minimum 8 GB recommended; 16 GB when the Indexing Service is running on the workstation.

Please contact EVS staff to obtain the proper RAM dedicated for the owned hardware.



NOTE

Avoid mixing different RAM manufacturer, speed or bandwidth.

Software Upgrade

Memory Test

Once the Hardware Upgrade is done, a memory test is highly recommended. Even if all new memory modules are tested, the RAM should be tested on its motherboard.

The memtest+86 can be launched from any EVS USB Key provided with the EVS workstation. Please contact the EVS Support Staff to obtain one if lost or download it from our website www.evs.com (download/technical area, Third Party Software package)

The memory test must run more than one pass in order to properly test the freshly installed memory modules.

Virtual Memory (Paging File)

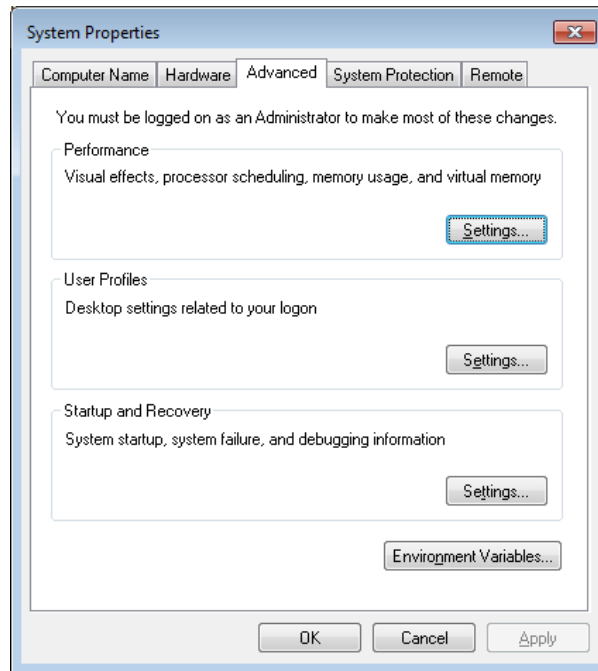
On EVS IPDirector workstations, the size of the virtual memory is at least 1.5 times the amount of physical memory. This value is set manually in the Ghost image and must be extended when memory modules are added. The automatic management of the paging file size is forbidden on IPDirector workstations.

Typically, the previous 1GB memory required a 1536Mo paging file size. Now, the 2GB memory requires at least 3GB of virtual memory, the 4GB memory requires 6GB,...

On Windows XP: Open the System Properties window (WIN+Pause).

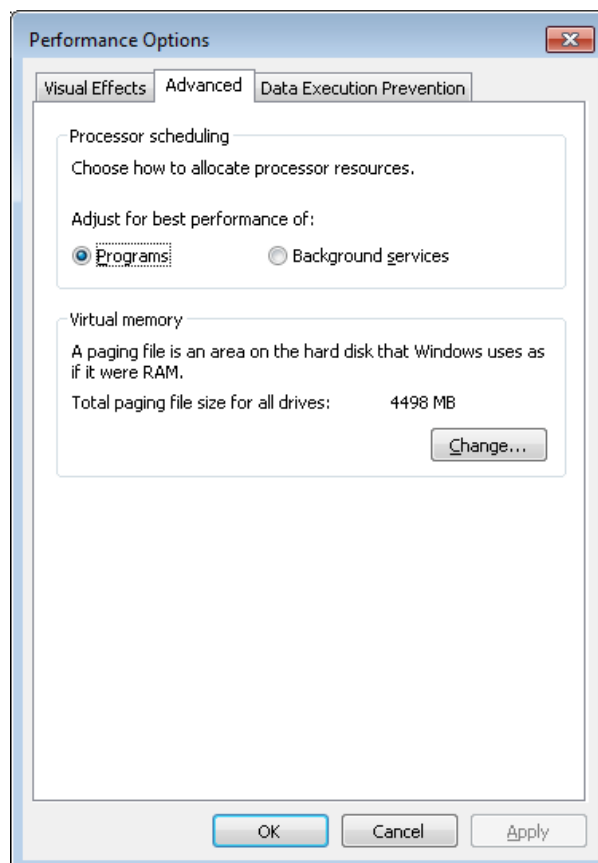
On Windows 7 and Window 10: Open the System Properties window (WIN+Pause), select in the left menu **Advanced System >Settings**.

Select the Advanced tab.



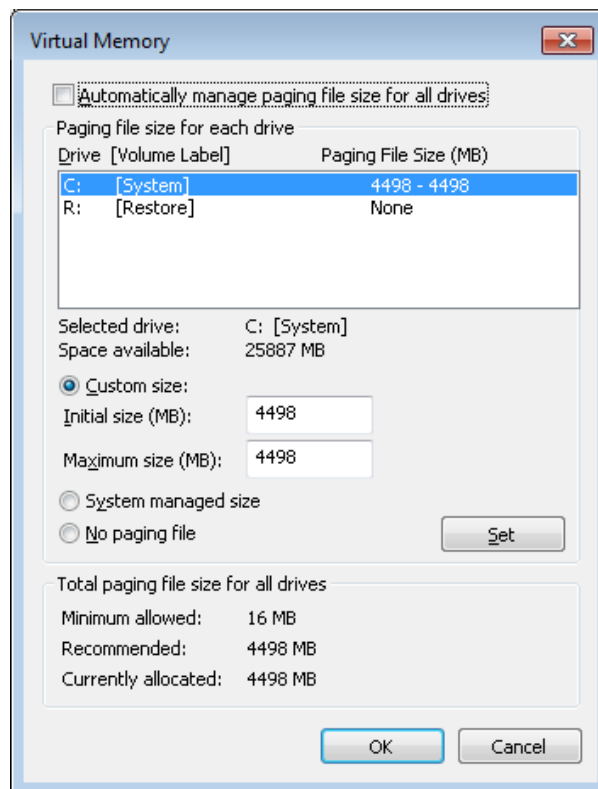
In the Performance zone, click on the **Settings** button.

The Performance Options window pops up. Select the Advanced tab.



In the Virtual memory zone, check the size of the paging file and click the **Change** button if it must be changed.

The Virtual Memory window is displayed:



Select the **Drive C: [System]** line (if not selected by default)

The recommended size by Windows shows an ideal size of 1.5 time the amount of RAM.

Choose the **Custom size** option and copy/paste the Recommended size into the **Initial size** and **Maximum size** fields.

Click the **Set** button.

Close the Virtual Memory, Performance Options and the System Properties windows by clicking **OK**.

Finally, restart the computer.



NOTE

The paging file has to be configured on the System partition (C:) only. The Restore partition and other storage disks cannot host a paging file.

2.13.2. Upgrading the Remote Installer, IPDirector and Database Versions

Overview and Prerequisites

From version 7.20 of IPDirector, .NET462 and SHA256 (used for certificate verification) must be installed prior to installing or upgrading the entire IPDirector package.

When a previous version of the Remote Installer is already present on the workstation, .NET462 and SHA256 will be installed from the Remote Installer via the .NET462_SHA256.ipd file.

Otherwise, .NET462 and SHA256 will be installed by executing the .NET462_SHA256.exe file.

**WARNING**

Afterwards, the workstation will automatically restart.

Then, you will have to install, or upgrade, the new version of the Remote Installer by executing the Setup.exe file.

Finally, you will install, or upgrade, the IPDirector package from the Remote Installer via the .ipd file.

Steps for the Upgrade of Remote Installer, IPDirector and Database Versions

The upgrade procedure of the Remote Installer and the IPDirector package is made of the following steps:

1. Install Remote Installer

As the Remote Installer is a tool which deploys version remotely over the network, it should be first updated in order to have its own new features.

See section "Installing the Remote Installer" on page 201.

2. Start the Remote Installer in Edit Mode

See section "Starting the Remote Installer Application" on page 12.

A few seconds after the Remote Installer is started, all outdated workstations are detected and the Remote Installer is automatically deployed from this workstation to the other workstations in the workgroup.



After upgrade, the distant updated workstations restart and disappear a few seconds from the Remote Installer list.

There is a possibility to install the current Remote Installer Version on each workstation separately or manually if a station failed to upgrade automatically. See section "Installing a Remote Installer Version on Other Workstations" on page 30.



3. Upgrade the IPDirector package

Once all workstations have restarted, are listed again and the serial numbers are defined, the IPDirector package can now be upgraded.

See section "Installing IPDirector Package" on page 32.

4. Define the settings of each workstation

If the workstations were fresh installed or cleaned, the settings of each workstation have to be entered before upgrading the database. Otherwise, skip this step.

See section "Making Checks and Solving Issues" on page 14 in case warnings are displayed.

5. Upgrade the Database

The database version must be compatible with the installed IPDirector version. If it is not the case, the **Database** button is orange and the database version must be upgraded.

Wrong DB version on 1.1.180.30 (example of IP address)

See section "Upgrading the Database" on page 39.

Restore a Clean Database

If the content of the database does not need to be kept. Skip the upgrade process and restore a clean database.

See section "Restoring the Database" on page 37.

Installing the Remote Installer

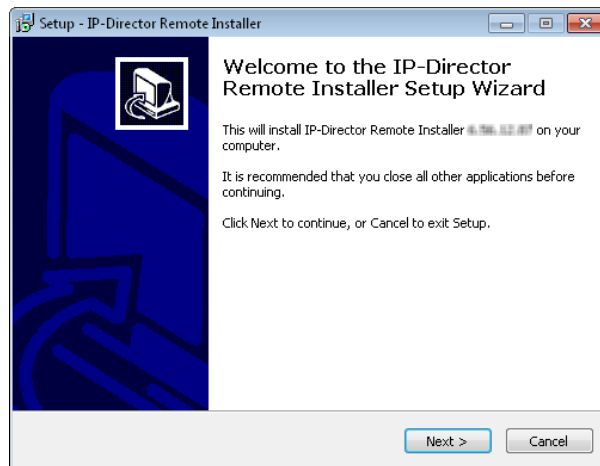
The installer can be downloaded from our EVS website support section or from the EVS FTP site. Please contact the EVS support staff for details.

It is no more required to manually uninstall the Remote Installer before installing a new version as this step is automatically done when executing Setup.exe.

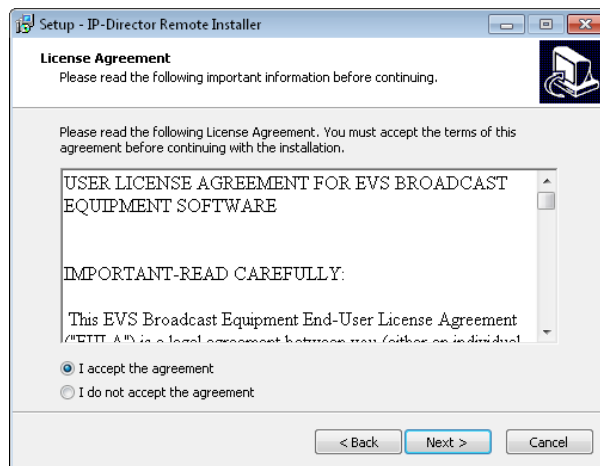
1. Unzip the provided archive C:\Install Software\IPDirector.
2. Make sure the Routing and SynchroDB services are stopped.
3. Double-click the Setup.exe file.

The Setup IPDirector Remote Installer wizard opens.

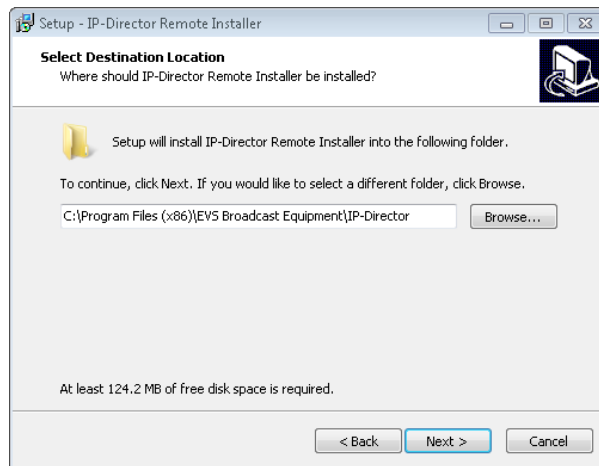
4. From the Welcome window, click **Next**.



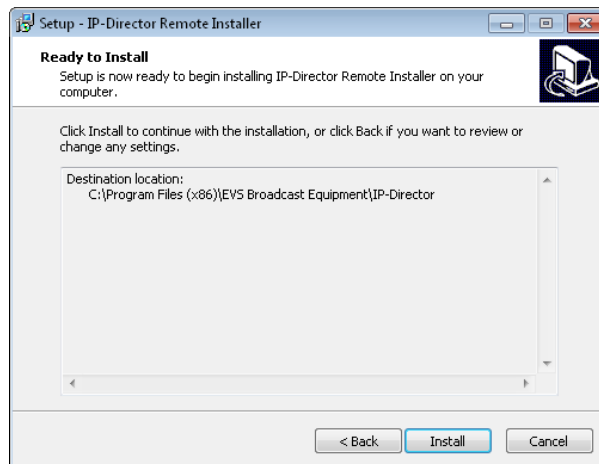
5. From the License Agreement window, select **I accept the agreement** and click **Next**.



6. In the Select Destination Location window, the installer proposes a default path for the installation C:\Program Files (x86)\EVS Broadcast Equipment\IP-Director:



- a. (optional) Click **Browse** and select another destination directory to install the new software application.
- b. Click **Next**.
- If the folder does not exist yet, you will be prompted to create it.
7. In the Ready to Install window, click **Install**.



2.14. Installing and Configuring IP Drive and API Proxy

2.14.1. Purpose

The aim of this procedure is to describe step by step how to install:

- An IP Drive service on an Xsquare or a non-IPDirector workstation.

IPDirector manages the Nearline directories on a network. It can also manage removable hard drives plugged in a workstation. As this workstation might not be an IPDirector, it is mandatory to install the IP-Drive service on all workstations managing drives.

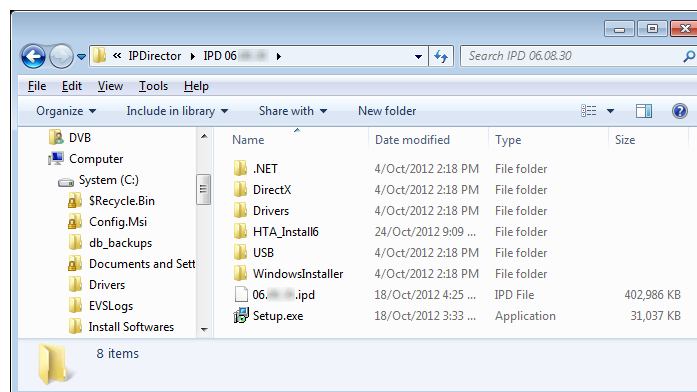
- An API Proxy service on a Database or a non-IPDirector workstation.

A Web Service Proxy can be installed on a gateway server. This Proxy function adds load balancing and redundancy capabilities to the IPDirector IPWS API. Databases are perfectly designed for this role, especially with its virtual IP address on redundant systems.

2.14.2. Installing the Remote Installer

The installer can be downloaded from our EVS website support section or from the EVS FTP site. Please contact the EVS support staff for details.

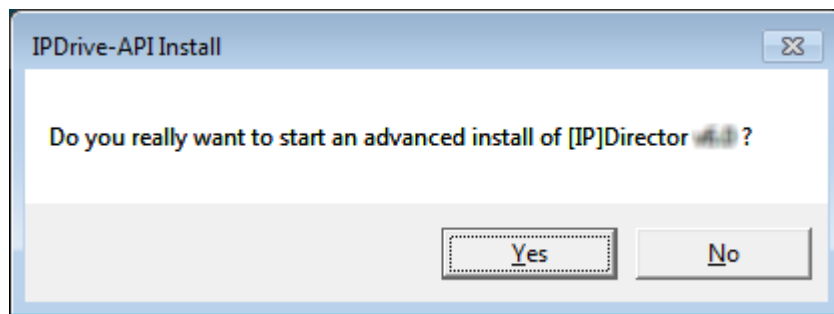
1. Download and copy the IPDirector setup, package and HTA Install on local drive into both C: and R: partitions in the Install Softwares folder.



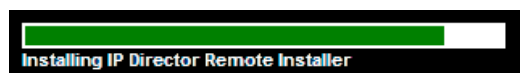
2. Double-click the IPDirector_[VNr]_Setup.hta file.
The Installer window is displayed.



3. Click on **Install IPDirector [VNr] without SQL Express**
The confirmation window pops up:



4. Click **Yes**.
A progress at the bottom of the window shows a real-time status.




5. Wait until the installation is complete.
Once finished, the following message is displayed:

Setup Completed. Check [log](#) for more information
Start the Remote Installer and upgrade the package and the DB once all the workstations have been upgraded

6. Click **Exit** to close the tool.
7. Delete the User Manager and IPDirector icons created on the desktop.

2.14.3. Starting the Remote Installer

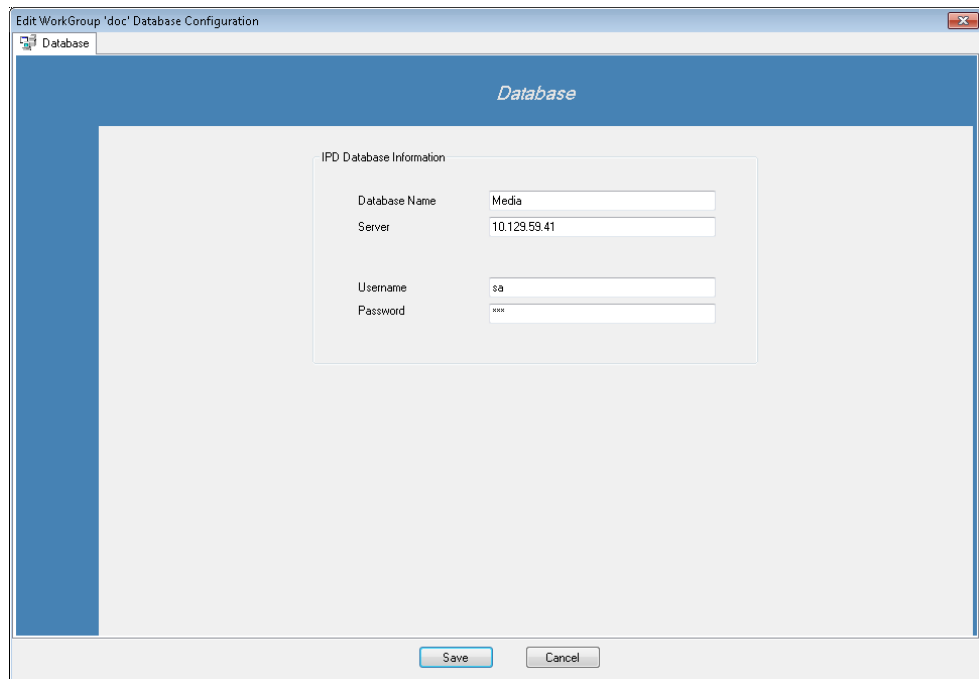
To open the Remote Installer locally on the Storage Unit, proceed as follows:

1. Right-click the  icon from the Windows taskbar.
2. Select **Open Configurator** from the menu.

A message appears asking you to configure the DB settings.

3. Click **Yes**.

The Database Configuration window opens:



The screenshot shows a window titled "Edit WorkGroup 'doc' Database Configuration". Inside, there's a tab labeled "Database". The main area is titled "Database" and contains a section "IPD Database Information" with the following fields:

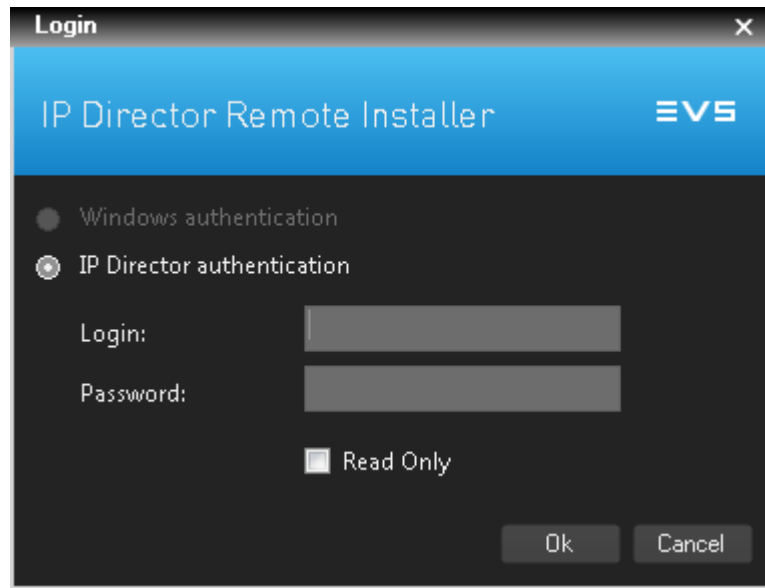
IPD Database Information	
Database Name	Media
Server	10.129.59.41
Username	sa
Password	xxx

At the bottom of the window, there are "Save" and "Cancel" buttons.

4. Enter the IPDirector DB name and IP Address and click **Save**.
 - The workstation may be integrated into an Active Directory domain. In this case, the Remote Installer will automatically open without requesting additional access codes when the user starts it.

The user groups the user belongs to in the Windows domain is linked to a profile in the User Manager. This determines the set of user rights and user settings the user will have in the application. See the User Manager Technical Reference for more information.

- If the workstation is not integrated into an Active Directory domain, a login screen will display. Go to next step.



The **Authentication Mode** option is set in Configure > General. See section "General Section" on page 55.

5. Enter a login and password.



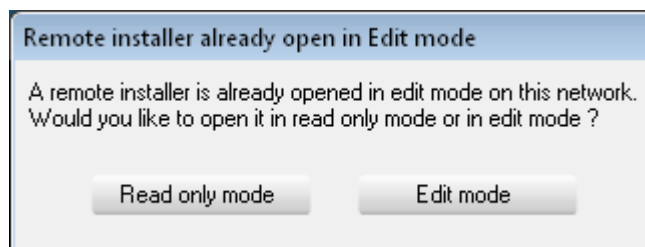
NOTE FOR THE ADMINISTRATOR

If you are the administrator and if you log on for the first time, you must use the following login and password (case sensitive):

Login: administrator

Password: evs

6. (optional) Select **Read Only** to open an instance of the Remote Installer in Read-only mode. This avoids closing a Remote Installer which would already be opened in Edit mode on the network. The Remote Installer opened in Read Only mode gives a limited access. The settings cannot be edited, only viewed.
7. Click **OK**.
8. If you did not select **Read Only** while the Remote Installer is already open on another workstation, a warning message is displayed:



- Click the **Read Only mode** button to open the Remote Installer in Read-only mode.
- Click the **Edit mode** button to close the distant Remote Installer and open the Remote Installer in Edit mode on the current workstation.

**WARNING**

The user currently logged on the distant workstation will not be informed.

The Remote Installer icon on the Windows taskbar turns to .

Once started, you can see all the workstations belonging to the network.

2.14.4. Setting the Workstation Type

The workstation appears in yellow, without any workgroup installed. All the services appear in red as **Not installed**.

For example here: There is one IPDirector V6 workstation in a Global workgroup. You are installing a standard workstation with an IP Drive or an API Proxy.

1. Right click on the **Workstation Type** icon on the top left corner of the Workstation area
2. Select **Storage** or **API Proxy** from the contextual menu.



IP-Director
Storage
API Proxy
Indexing Service
Other

The icon changes from  to  (for Storage) or  (for API Proxy).

- All IPD modules are hidden except IP Drive (for Storage)



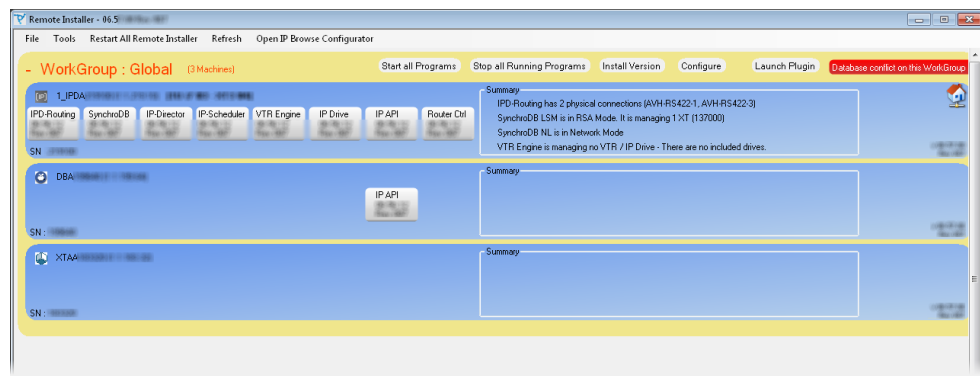
- All IPD modules are hidden except IP API (for API Proxy)



2.14.5. Installing Package

1. Install the IPDirector package in one of the following ways:
 - Right click the Workstation area to open the contextual menu and send a package of IPDirector.
See section "Workstation Contextual Menu" on page 27 (**Send Version** option).
 - Click **Install Version** in the Workgroup (Not Installed) menu and select **Install Package**.
See section "Installing IPDirector Package" on page 32.

The workstation joins the Global workgroup by default and creates a Database conflict.



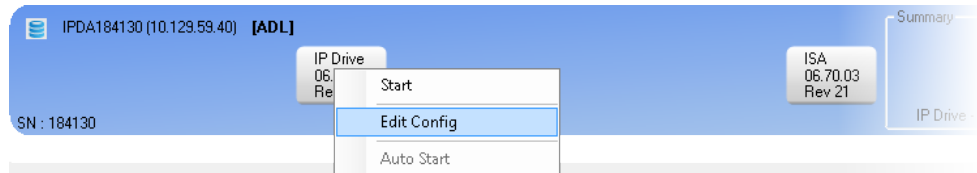
NOTE

This screenshot has been taken with a previous version of Remote Installer. The information displayed in the Summary area, the version number area and the workgroup toolbar has slightly changed and is not reflected here (see section "Overview of the Remote Installer Window" on page 18). However, the screenshot is accurate regarding the steps described in the current procedure.

2. (optional) Click **Refresh** in the main menu if the workstation appears yellow after installing the package.
3. Right click the workstation area and select **Configure Database** from the contextual menu.
See section "Setting the Database Information" on page 43.
4. (optional) To put the workstation into another workgroup, right click the workstation area and select **Configure Network Information** from the contextual menu.
See section "Setting Network Information for the Workstation " on page 44.
Then, reconfigure once again the database settings to match the workgroup settings.
See section "Setting the Database Information" on page 43.

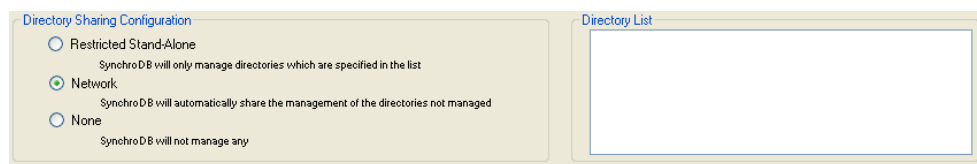
2.14.6. Configuring IP Drive Workstations

1. Right click on the IP Drive service and select **Edit Config** from the contextual menu.



The IP Drive Service Configuration window opens.

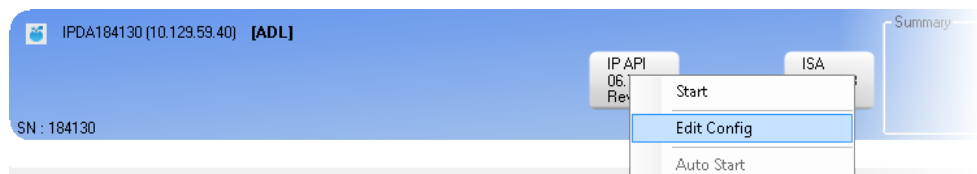
2. Configure the IP Drive service as described in section "Configuring IP Drive" on page 163, then click **Save**.
3. (optional) Set the **Auto Start** option to make the service automatically start:
 - a. Right-click the **Service** button
 - b. Select **Auto Start** from the contextual menu.
4. Start the IP Drive service as described in section "Starting Services" on page 147.
5. Make sure that at least one of the workstations in your workgroup has the Directory Sharing Configuration parameter for the SynchroDB service set to Network Mode.



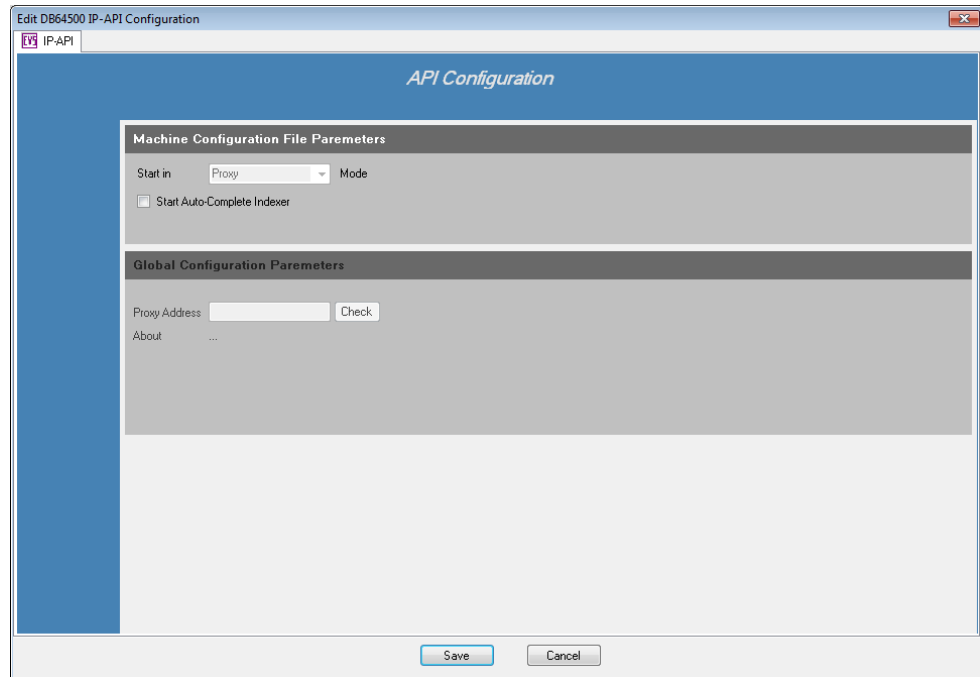
See section "Configuring SynchroDB" on page 151.

2.14.7. Configuring API Proxy Workstations

1. Right click on the IP API service and select **Edit Config** from the contextual menu.



The IP API Configuration window opens. No configuration is needed. Starting mode is already defined in Proxy.



2. Click **Save**.
3. (optional) Set the **Auto Start** option to make the service automatically start:
 - a. Right-click the **Service** button
 - b. Select **Auto Start** from the contextual menu.
4. Start the IP API service as described in section "Starting Services" on page 147.

2.15. Installing IPBrowse or IPClipLogger and Configuring IPBrowse

2.15.1. Installing IPBrowse or IPClipLogger

Possible Ways of Installation

IPBrowse and IPClipLogger are stand-alone applications based on the IPDirector framework.

Each of them is self contained and do not require the deployment of the whole IP Director package.

They are mostly aimed at running on corporate desktop PCs where a traditional Remote Installer installation might not be possible. So, an installer is available for each application. This installer can be run in Silent or VerySilent mode for an easy corporate deployment. Refer to the IPBrowse and the IPClipLogger user manuals.

It is however possible to install any of these stand-alone applications from the Remote Installer, would it be on a workstation hosting IPDirector or not. See section "Installing IPBrowse or IPClipLogger from the Remote Installer" on page 213.

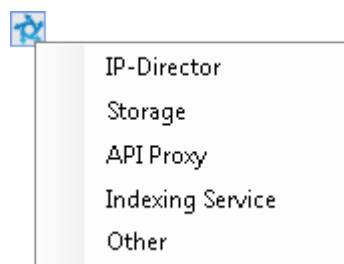
Installing IPBrowse or IPClipLogger from the Remote Installer

The IPBrowse and IPClipLogger packages (.ipd) are available for deployment from the Remote Installer.

1. First install the Remote Installer on all the machines. See section "Installing a Remote Installer Version on Other Workstations" on page 30.
2. Configure the Remote Installer.
3. Define the workgroups and set the workstations as follows, according to the setup required.

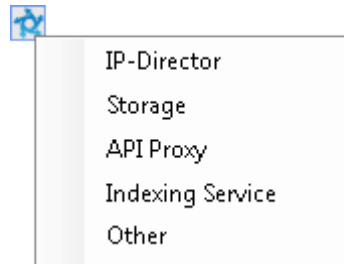
Setup where IPDirector and the small apps will be deployed on the same workstation:

- Click the **Workstation** icon and select **IPDirector**.



Setup where only small app(s) will be installed on the workstation, and not the IPDirector package:

- a. All small apps workstations must be in a workgroup different than the IPDirector workgroup. This workgroup must point to the same database as the main IPDirector workgroup.
- b. For the workstation hosting the small app, click the **Workstation** icon and select **Other**.



Setup where some workstations need to have only IPClipLogger and others only IPBrowse:

- a. Each small app must be in a separate workgroup. Each workgroup must point to the same database as the main IPDirector workgroup.
 - b. For each workstation hosting a small app, click the **Workstation** icon and select **Other**.
4. Install the package in one of the following ways:

To install the package on all the workstations of the workgroup:

- a. Stop running services.
- b. Click the **Install Version** button.
- c. Select **Install Package**.
- d. Browse to the directory where the IPBrowse or IPClipLogger .ipd file is located

The Remote Installer begins to install the package on all workstations of type IPDirector and Other.

To install a package on a single workstation (IPDirector type or Other type):

- a. Right-click the workstation area (blue).
- b. Select **Send Version**.
- c. Browse to the directory where the IPBrowse or IPClipLogger .ipd file is located.

It is not necessary to stop services prior to install a small app on a single machine.

Example for IPBrowse installed on a workstation:



2.15.2. Selecting the IPBrowse Mode

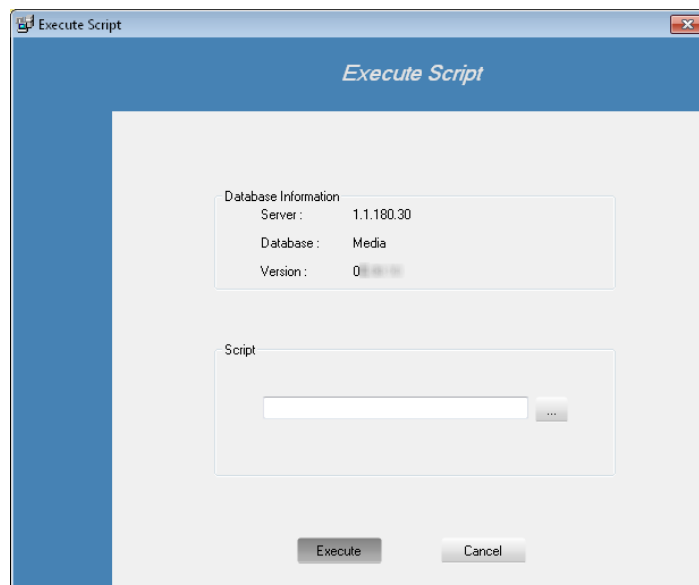
NEW ! IPBrowse Modes


IPBrowse can be used with or without the Indexing Service. This is set from the Remote Installer, by executing a script dedicated to the desired mode.

How to Enable or Disable the Indexing Service Mode for IPBrowse

1. Right-click the **Database** button in the workgroup toolbar.

The Execute Script window opens.



2. Click the **Browse** button  to display the list of available scripts.
3. From the `C:\Program Files (x86)\EVS Broadcast Equipment\IP-Director\Scripts` folder:
 - a. Select one of the following script files:
 - IPBrowseWithIndexingService_Disable: to work without the Indexing Service
 - IPBrowseWithIndexingService_Enable: to work with the Indexing Service
 - b. Click **Open**.

The selected script is displayed in the **Script** field of the Execute Script window.

4. Click **Execute**.

A warning message will ask for confirmation.

5. Click **Yes** to execute the script.

A message will tell you that the script has been successfully executed.

2.15.3. Configuring IPBrowse

Introduction

The IPBrowse Configurator tool is designed to configure the IPBrowse interface for client stations.

The configuration relates to the selection of columns displayed in the Elements grid, to the Advanced Search fields displayed by default, and other display settings.

The IPBrowse application does not allow users to select the columns to display like the Database Explorer does it in IPDirector.



NOTE

A configuration already exists by default in the database. This default configuration is displayed when the tool is opened for the first time.




WARNING

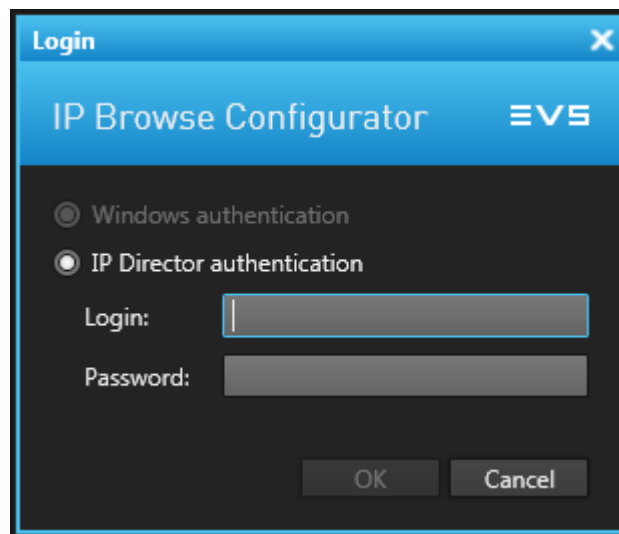
The IPBrowse configurator always connects and applies settings to the workgroup database where the Remote Installer is launched. Always launch the Configurator tool from an IPDirector station member of the same IPDirector - IPBrowse workgroup.

Opening the IPBrowse Configurator Tool

There are two ways for opening the configuration tool:

- From the Windows taskbar
 - a. Right-click the Remote Installer icon  from the Windows taskbar.
 - b. Select **Open IPBrowse Configurator** from the contextual menu.
- From the Remote Installer menu bar
 - Click the **Open IPBrowse Configurator** button

The login window pops up:



In order to access to the IPBrowse configuration stored in the IPDirector database, credentials must be entered. Only administrator users can log in the tool.

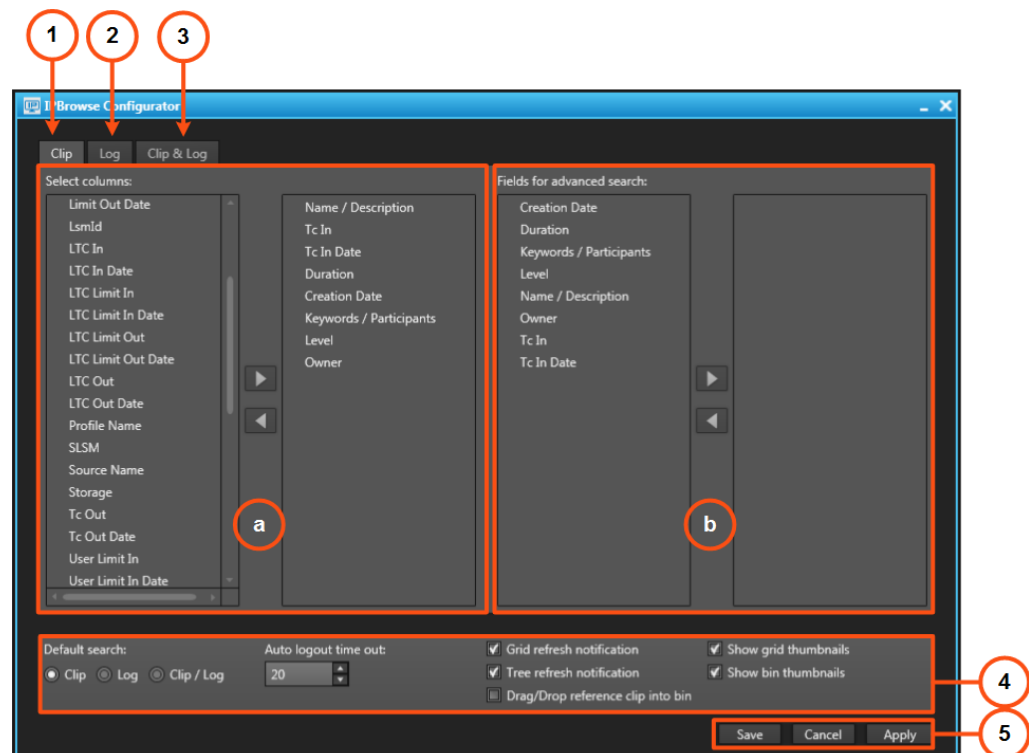
Overview of the IPBrowse Configurator Tool

Illustration

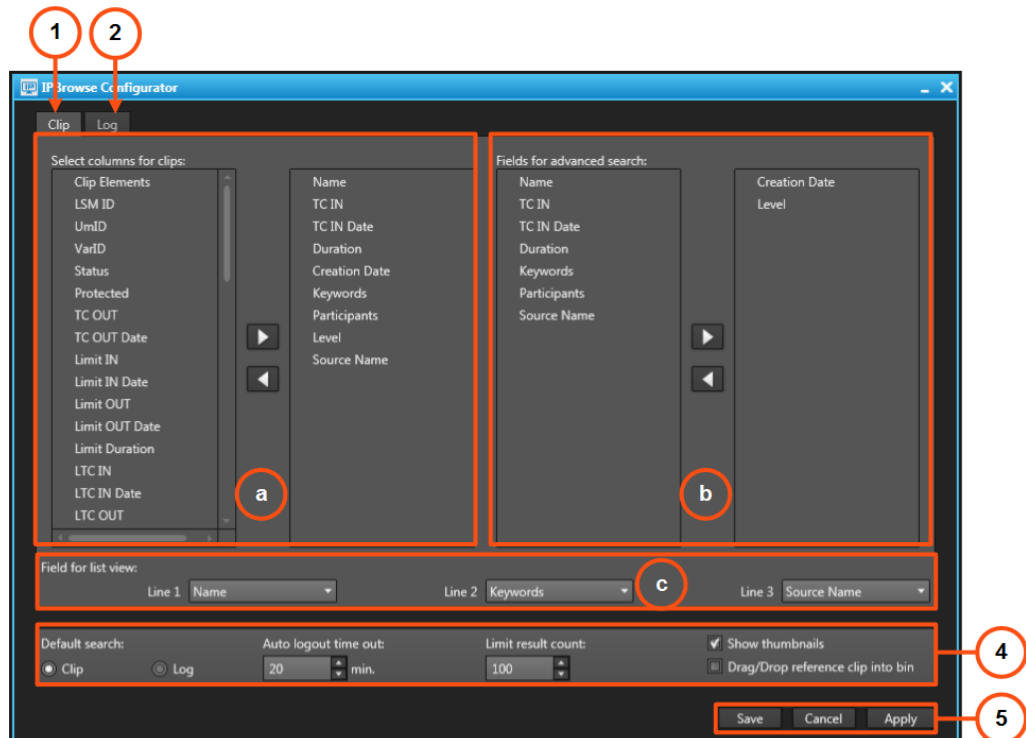
NEW !

Depending on whether the Indexing Service mode has been enabled or disabled for IPBrowse, the IPBrowse Configurator window will slightly differ.

Indexing Service Mode Enabled



Indexing Service Mode Disabled



Clip tab (1), Log tab (2) and/or Clip & Log tab (3)

Select Columns for Clips/Logs (a)

This area is used to select the columns to display in the Elements grid of the IPBrowse window.

If a column is not added to displayed column list, the IPBrowse user will not be able to see it. Thus, the user will only be allowed to organize the selected columns.

1. Select the tab corresponding to the type of Elements grid view you want to configure (clip, log or clip & log).
2. To select the column(s) you wish to add to the grid, do one of the following actions:
 - in the left part of the area, double-click the column(s) you wish to add to the view
 - select them in the left part of the area and click the right arrow.

Fields for Advanced Search (b)

This area is used to select the Advanced Search fields displayed by default on the IPBrowse window either for clips, for logs, or for the clips & logs view.

Nevertheless, the IPBrowse user will be able to select other fields to display in the IPBrowse Advanced Search pane.

1. Select the tab corresponding to the type of Elements grid view you want to configure (clip, log or clip & log).
2. To select the Advanced Search fields you wish to display by default, do one of the following actions:
 - in the left part of the area, double-click the name(s) of the fields you wish to add to the Advanced Search pane,
 - select them in the left part of the area and click the right arrow.

Fields for List View (c)

This area is only available when the Indexing Service mode is disabled.

It is used to select the metadata displayed by default in the IPBrowse window when the Elements list is selected, either for clips or for logs.

NEW !

Settings zone (4)

Indexing Service Mode Enabled

Default search:	Auto logout time out:	<input checked="" type="checkbox"/> Grid refresh notification	<input checked="" type="checkbox"/> Show grid thumbnails
<input checked="" type="radio"/> Clip <input type="radio"/> Log <input type="radio"/> Clip / Log	20	<input checked="" type="checkbox"/> Tree refresh notification	<input checked="" type="checkbox"/> Show bin thumbnails
		<input type="checkbox"/> Drag/Drop reference clip into bin	

Indexing Service Mode Disabled

Default search:	Auto logout time out:	Limit result count:	<input checked="" type="checkbox"/> Show thumbnails
<input checked="" type="radio"/> Clip <input type="radio"/> Log	20 min.	100	<input type="checkbox"/> Drag/Drop reference clip into bin

Parameters

Default search:

This option defines the type of items (All Clips, Logs or Clips & Logs) displayed by default in the IPBrowse window when opening the client IPBrowse software.

Clip / Log is only available when the Indexing Service mode is enabled.

Default value: **Clip**

Auto logout time out:

This option defines the number of minutes without activity before automatically logging off the user.

Default value: **20 min**

Grid Refresh notification

This parameter is only available when the Indexing Service mode is enabled.

If the **Grid Refresh Notification** option is selected, an icon will be displayed on the **Refresh** button at the top of the IPBrowse Elements grid to warn the users of the need of a

manual refresh: 

Tree Refresh notification

This parameter is only available when the Indexing Service mode is enabled.

If the **Tree Refresh Notification** option is selected, an icon will be displayed on the **Refresh** button at the top of the IPBrowse Tree view to warn the users of the need of a

manual refresh:



Show grid thumbnails:

This parameter is only available when the Indexing Service mode is enabled.

It is used to display the thumbnails in the Elements grid.

Default value: **Selected**

Show bin thumbnails:

This parameter is only available when the Indexing Service mode is enabled.

It is used to display the thumbnails in the Bins pane.

Default value: **Selected**

Limit Result Count:

This parameter is only available when the Indexing Service mode is disabled.

It defines the maximum number of items (Clips or logs) listed in each view. This setting reduces the impact of each search on the database performances.

Default value: **100 items**

Show thumbnails:

This parameter is only available when the Indexing Service mode is disabled.

It is used to display the thumbnails in the IPBrowse window.

Default value: **Selected**

NEW !

Drag/Drop reference clip into bin:

This parameter defines whether, when an existing clip is added into a bin without modifying its boundaries, a new clip is created or a reference is made to the original clip.

Default value: **Cleared**

Possible values:

- **Cleared** (default): when a clip is sent unchanged to a bin, a new clip is created.
- **Selected**: when a clip is sent unchanged to a bin, a reference to the original clip is created in the bin.

Saving the Configuration Buttons (5)

Save: records the configuration and exits the configurator.

Cancel: exits the configurator without saving changes.

Apply: records the configuration and keeps the configurator open.

2.16. Configuring a Router Control

2.16.1. Context of Use

Video routers can be used with IPDirector to increase the number of incoming feeds manageable by EVS server recorder channels and/or the number of output channels able to play out the media from a player channel, depending on the configuration of the installation.

The router ports must be physically connected to the server channels.

The configuration of the router control is done from the Remote Installer.

The supported routers are those working with one of the following protocols:

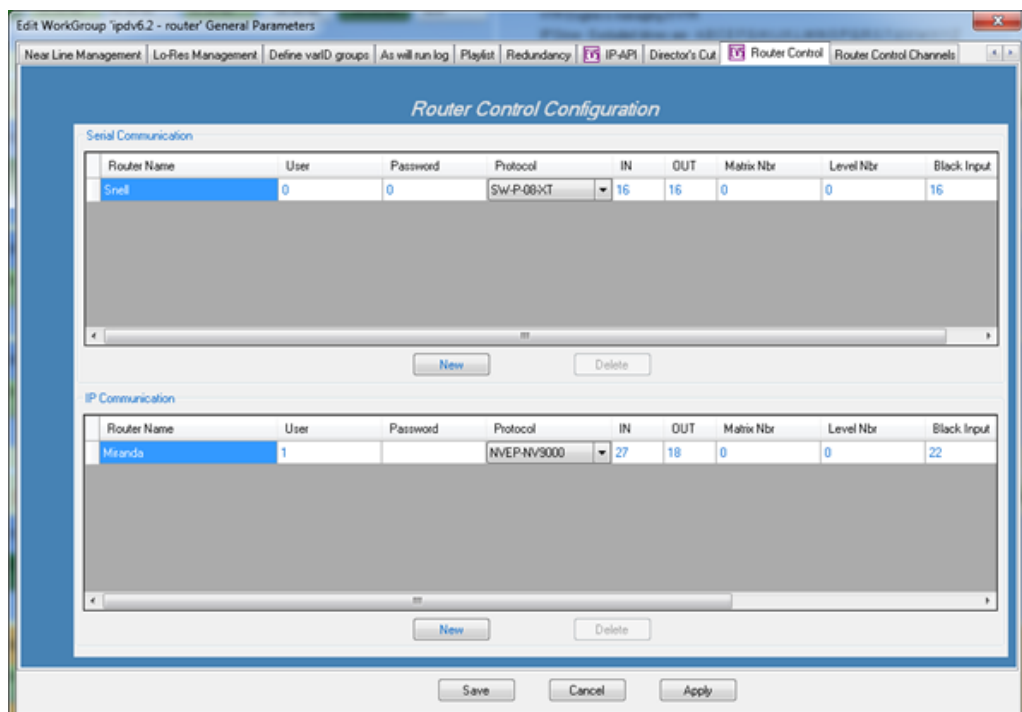
- Miranda NV9000
- Probel SW-P-08
- Jupiter ES-Switch

Nevertheless, rather than communicating directly with a router, it is possible to communicate with a VSM system (broadcast control and monitoring system). Then, IPDirector will be able to work with all the routers supported by the VSM.

2.16.2. Declaring the Router

This step is done from the Router Control tab of the Edit Workgroup window.

1. Click **Configure** to access the Edit Workgroup window.
2. Select the Router Control tab.
3. Click the **New** button from the Serial Communication area or from the IP Communication area, depending on the type of connection between the router and the workstation controlling it.
4. Enter a name for the router.
5. Select the protocol type:
 - Serial Communication: **SW-P-08-XT** (Probel) or **Jupiter ES-Switch**.
 - IP Communication: **NVEP-NV9000** for use with Miranda routers, or **SW-P-08 (VSM)** for use with a VSM system.



2.16.3. Defining the Workstation Responsible for the Control of the Router

Prerequisites

- The router devices must have been declared from the Router Control tab of the Edit Workgroup window. See section "Declaring the Router" on page 222.
- To automatically start the Router Ctrl service with the IPDirector application, select **Auto Start** from the **Router Ctrl** button contextual menu.

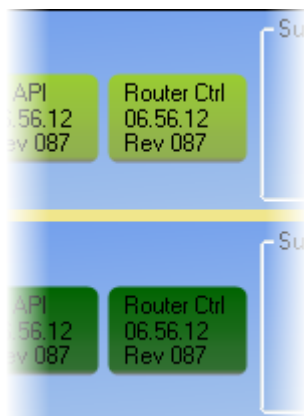
Master Role

Only one Router Ctrl service controls a router in a workgroup: the Router Ctrl service running with the Master role.

It is mandatory to declare at least one Router Ctrl service as a Master Candidate even if it is a standalone workstation. This workstation may consume more CPU resources.

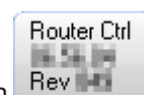
Declaring more than one Router Ctrl service as a Master Candidate is allowed and brings you failover functionality. Then, the Router Ctrl service with the lowest routing number assume the Master role.

The Master role is clearly identified with a dark green status within the Remote Installer.



How to Configure the Router Control Service

The Router Ctrl service is configured from the Router Control Management window.

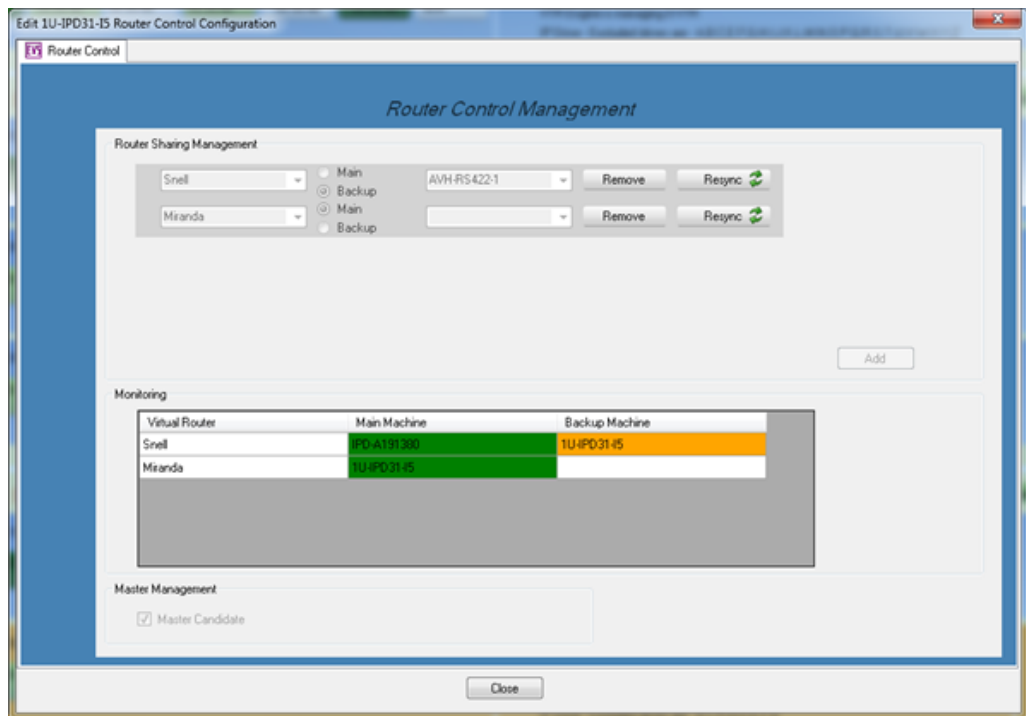


1. Right-click the **Router Ctrl** service button of the workstation controlling the router.
2. Select **Edit Config** from the contextual menu to open the Edit [Workstation] Router Control Management window.

The Router Control Management window opens.

3. For each router to control, from the Router Sharing Management area,
 - a. Select the Router name.
 - b. Set if it is used as main or backup.
 - c. Select the serial port of the workstation connected to the router.
This step only applies to routers connected to serial ports.
 - d. (optional) Click **Resync** if you need to resynchronize the router labels into the database.
 - e. Click **Add**.
4. Repeat previous steps for each workstation controlling a router.
5. Select **Master Candidate**, from the Master Management area, for the workstation service in charge of coordination.

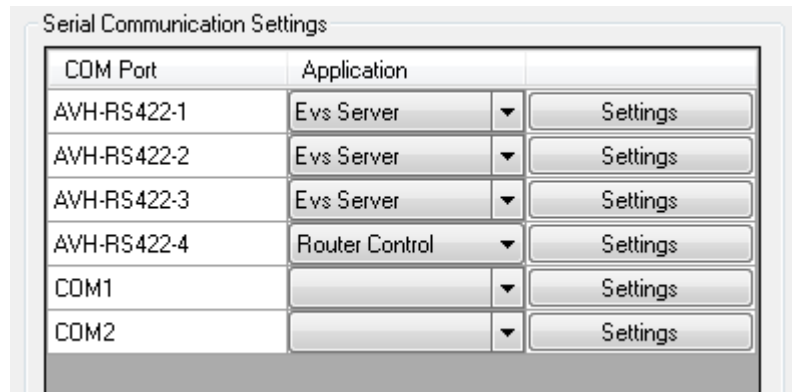
The Monitoring area automatically displays the connection status between all the routers and the workstations.



The background color of the workstation name is:

- green when it controls the corresponding router
- orange when the connection has been set but it does not have the control of the router
- red when there is a problem with the connection.

The serial port selected under Router Sharing Management is automatically associated with the **Router Control** option in the Serial Communication Configuration window. See section "Configuring the Serial Ports" on page 45.

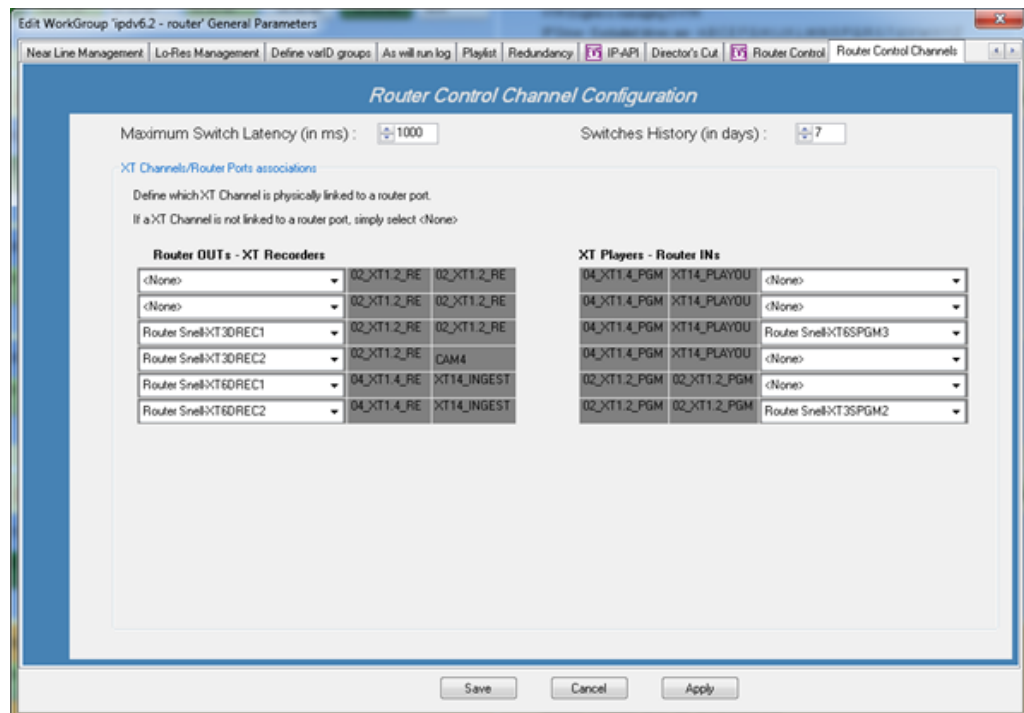


2.16.4. Configuring the Physical Connections between a Router and a Server

This step is done from the Router Control Channels tab of the Edit Workgroup window. Click **Configure** to access the Edit Workgroup window and then select the Router Control Channels tab.

The router devices must have been declared from the Router Control tab of the Edit Workgroup window and the Router Ctrl service must have been configured. See sections "Declaring the Router" on page 222 and "Defining the Workstation Responsible for the Control of the Router" on page 223.

1. For each router OUT port, select the server recorder channel it is physically connected to, if any.
2. For each router IN port, select the server player channel it is physically connected to, if any.



3. (optional) Set the Maximum Switch Latency.

When an ingest is scheduled in Ingest Scheduler application from a router IN port different than the port currently associated with the recorder channel, the system must switch to the right router IN port before recording the scheduled ingest.

The **Maximum Switch Latency** setting defines the period of time when the system will switch to the new IN port before the recording starts.

When using the Jupiter ES-Switch protocol, it is not allowed to change the association between a recorder channel and a router IN port during the recording of an ingest. This **Maximum Switch Latency** setting also defines the period of time during which the association is locked before and after the recording of the ingest.

Default value: 1000 ms.



WARNING

When using a VSM system, use a Maximum Switch Latency value of 5000 ms.

4. (optional) Set the Switches History.

Switches between router IN ports linked to a specific router OUT port are drawn in the Ingest Scheduler tracks.

The **Switches History** setting defines the period of time during which they will be kept.

Default value: 7 days.

2.17. Configuring the Archive Management Parameters

2.17.1. Archive and Restore Environment

Thanks to Archive services, IPDirector communicates with a third party hierarchical storage management system (HSM) and LTO tape library for files archiving from a nearline storage and files restoring to a nearline storage.

The HSM system can be Oracle DIVA Archive or SGL flashnet.

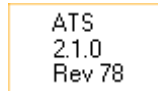
Several services are involved in the Archive and Restore to nearline process. They are started from the Remote Installer.

- AS, managed with the Synchro DB service, receives the requests from IPDirector and communicates with the ATS service. If it stops working, the job waits for the Master failover.
- ATS, individual service, receives the requests from the AS service and communicates with the HSM. If it stops working, the ATS service from another workstation will take the Master role. In such cases when different ATS services have been involved in a job processing, both workstations will be referenced in the Transfer Monitoring window.

A database is specifically dedicated to the ATS.

2.17.2. Managing the ATS Service

The ATS service is displayed as a Service button on each workstation area.



When no archiving system is used, this service does not have to be started.

It can be manually or automatically started, stopped or killed, as described in sections "Starting Services" on page 147 and "Stopping Services" on page 149.

There is no configuration required for the ATS service on each workstation.

The first ATS service started on a workgroup takes the Master role.

If the Master stops or fails, the ATS service started after it will take the Master role.

The Master role is clearly identified with a dark green status within the Remote Installer:



2.17.3. Configuring the Archive Parameters

Context of Use

This step is used to enable the archiving process in IPDirector and to configure the archiving system parameters and the archive database information.

When no archiving system is used, this does not have to be configured.

The Archive Service window can be accessed in one of the following ways:

- click the **ATS DB** button, at the top right corner of the Remote Installer window.
- click the **Configure** button from the workgroup toolbar, and select the Archive tab.



WARNING

When hosting ATS database on EVS Mirrored DB servers, the following actions must be applied after creation:

- Create mirroring on ATS database
- Add a dedicated virtual IP address on ATS database mirroring
- Replace the Server IP address by the newly created virtual IP address
- Configure a witness
- Install the latest maintenance jobs on both DB servers

How to Configure the Archive Parameters

To configure your ATS parameters and create the ATS database,

1. Make sure all running programs are stopped (**Stop all**)
2. Click the **ATS DB** button.

The Archive Service window opens:

3. Select the **Enable Archive in IPD** option.

The fields become available.

4. In the **HSM** field, enter the parameters of the storage management system (HSM) in the following format: [HSM provider]://[HSM IP address]:[HSM port].
Ex: flashnet://10.10.10.10:8199
5. In the **Archive Group** field, enter the name of the LTO tape library where your media items will be archived, as it is set in the HSM.
6. In the **ATS Database Name** field, enter the name of the ATS database.
7. In the **Server** field, enter the IP address of the machine hosting the ATS database.
8. In the **Username** and **Password** fields, respectively enter the username and password for the ATS database.
9. Click **Create DB** to create the ATS database on the selected workstation.
10. Click **Save**.

ATS Database Status

The background color of the **ATS DB** button gives indication on the ATS database status.

White

The archiving process is not enabled and the ATS database information has not been configured yet.

ATS DB : -

The ATS database information has been configured but the archiving process is not enabled.

ATS DB : 10.129.59.41 - Media_ATS

Red

The archiving process is enabled but the ATS database has not been installed yet on the local workstation, or on the workstation set as ATS DB server during the configuration.

ATS DB not installed

Green

The archiving process is enabled and the ATS database configuration was successful.

ATS DB : 10.129.59.41 - Media_ATS

Orange

The archiving process is enabled but the ATS database is not the right version.

Wrong ATS DB version on 10.129.59.41

Right-click the **ATS DB button** and select **Upgrade** to upgrade the ATS DB scripts.

2.18. Configuring a VTR Control

2.18.1. Purpose

The aim of this procedure is to describe how to configure a VTR Control.

Inside the IPDirector interface, a VTR Control Panel allows to control external VTRs serially linked to free RS422 ports on IPDirector workstations.

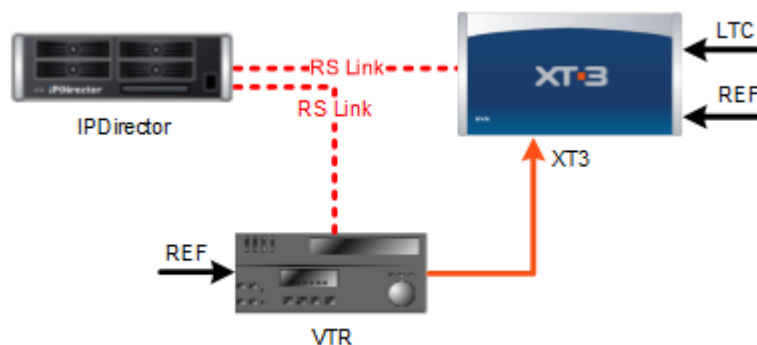
The features are:

- Remote (Shuttle, play, stop, rewind, forward, record, eject)
- Clip creation (Batch list, auto edit)

The procedure shows technical configuration steps. For operational information, please refer to the IPDirector User Manual.

2.18.2. Checklist

- Connect a serial link between an IPDirector workstation and the VTR.
Use an identical link as connecting a server with an IPDirector.
Plug this cable on a free serial port (AVH or MOXA port) on an IPDirector workstation.
On the other side, plug it in the serial remote port of the VTR (DB 9pins female connector).
- The ingesting server must receive a LTC Timecode from some source. **Free-run mode (on the EVS server) is not allowed.**
- Connect a video cable between a VTR SDI/HDSDI clean output and the server recorder channel ingesting the VTR feed.



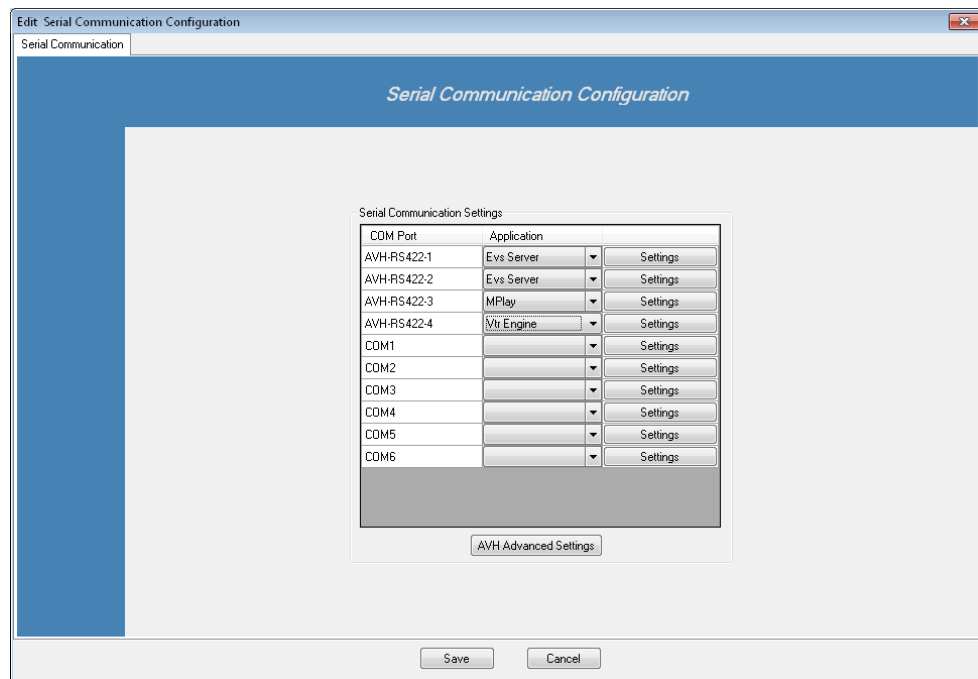
2.18.3. IPD Parameters (Remote Installer)

To configure the serial link used for the VTR control:

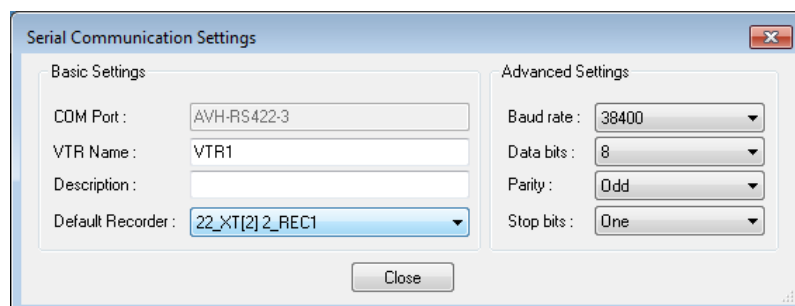
1. Open the Remote Installer.
2. Make sure services are turned off.

3. Right-click the workstation (Stop the service if it is running) to display the contextual menu and select **Configure Serial Communication**.

The Serial Communication Configuration window is displayed:





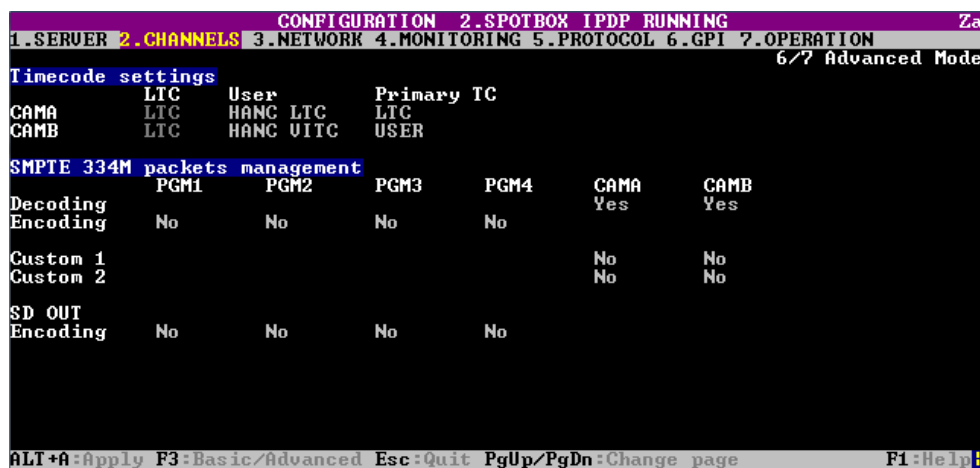
4. In the Application drop down list, select **Vtr Engine** for the workstation port connected to the VTR.
5. Click the **Settings** button to edit the Serial link characteristics.



- a. Enter a VTR name. This name will appear in the Channel Explorer.
- b. Description is not mandatory.
- c. Select the server recorder channel ingesting the VTR feed.
- d. Adjust the Advanced Settings corresponding with the VTR.
Try first with the default parameters. Please refer to the Technical VTR manual for more information.
- e. Click **Close** to save the settings.
6. Click **Save** in the Edit Serial Communication Configuration window.
7. Restart the VTR Engine service.

2.18.4. Server Parameters

- In the Multicam application, open the SHIFT+F2 menu on the server VGA screen, press  to display Advanced Mode, use  to reach the Timecode Settings:



Two TC tables are recorded. You can record VITC (HANC LTC or HANC VITC for HD) and LTC Timecode on the same recording train but in two different tables. The settings impact only the OSD display of the server recorder and player channels.



WARNING

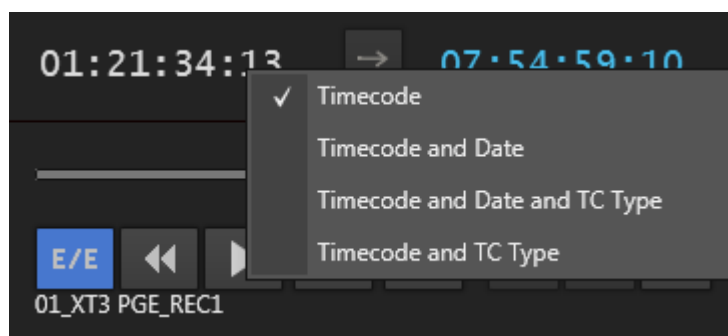
It is **mandatory** to fill the USER TC table with the wanted embedded VITC Timecode (HANC LTC or HANC VITC for HD).

The Time Code Settings can be edited to monitor the incoming VITC on the server OSD. If **Prim.TC** is set on USER and USER table records VITC (HANC LTC or HANC VITC for HD), the Incoming VITC (HANC LTC or HANC VITC for HD) is displayed on the OSD screen.

This choice can also be done from the Control Panel within the workspace of IPDirector.

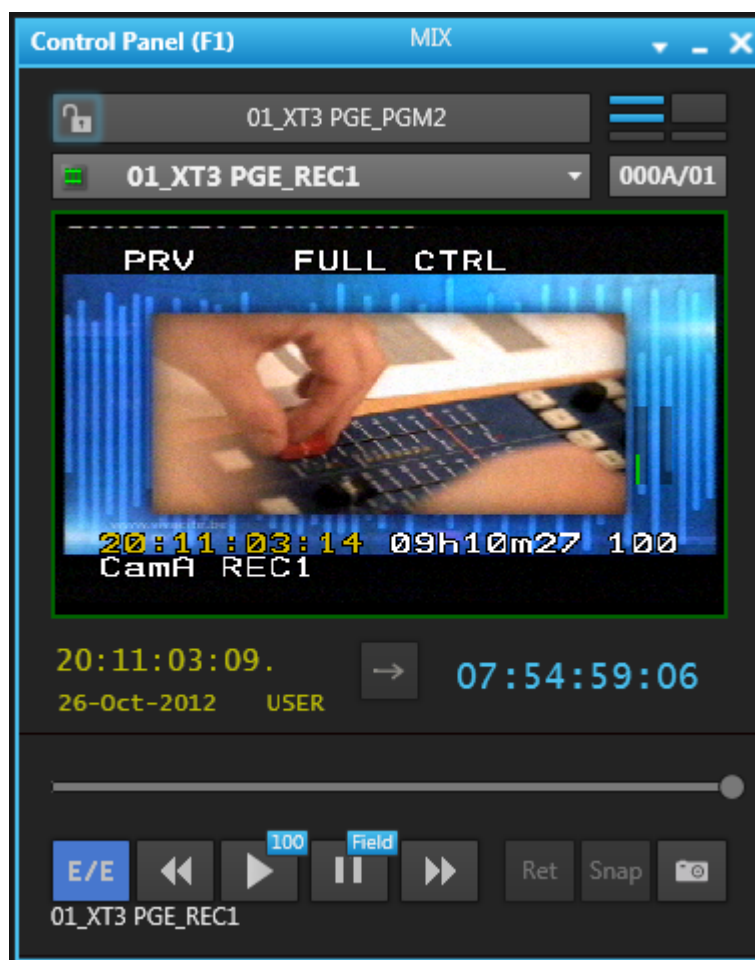
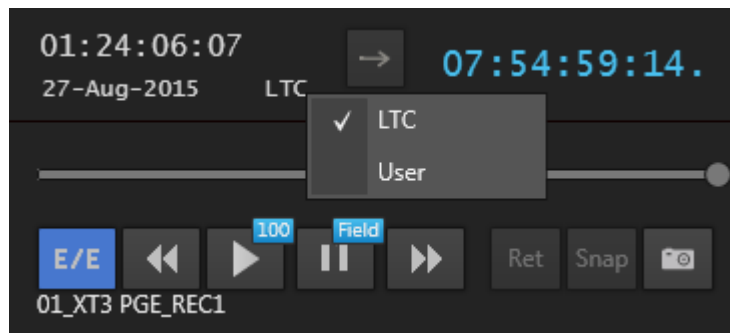
- Right-click the **Timecode** field.


A contextual menu with the following options is displayed:



- Timecode
- Timecode and Date

- Timecode and Date and TC Type
 - Timecode and TC Type
2. Select one of the two last options to display the TC Type.
 3. When the TC type is displayed, right-clicking it in the **TC Type** field allows to shift from one TC type to the other (**LTC** or **user**).



4. When the date is displayed, clicking it in the **Timecode** field opens a calendar for date selection.
- Press **SHIFT+F5** when the Multicam is running. Then press  once to display the Server Monitoring PAGE 4. This monitoring page displays all running Timecodes for all the recorders of the server.

```

SERVER MONITORING PAGE 4
SH+ESC:UGA EXPLORER Sh+F4:Network Monitoring F9:CLIP F10:PLST Za
TimeCode Monitoring
Analog LTC : 14:00:11:00 [ASCENDING]
HANC LTC
HANC VITC
Rec1 14:06:15:20 [ASCENDING] 14:06:15:20 [ASCENDING]
Rec2 02:34:53:06 [OFF] 1 02:34:53:06 [OFF] 1

```

The recorder channel which receives the video feed must have an ASCENDING status and growing Timecode on both **Analog LTC** and the **selected VITC (HANC LTC and/or HANC VITC)** lines.



NOTE

The TAPE must be recorded with a continuous VITC (HANC LTC or HANC VITC for HD).



NOTE

Check also the VTR is synchronized on the external video reference which must be the same as the server.

2.18.5. BVW Protocol Settings in the VTR

In the Sony BVW protocol, three timecode values are sent from a VTR serial port to the connected device:

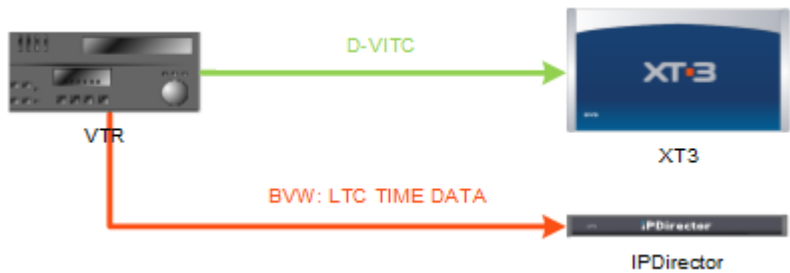
- Timer1
- LTC
- VITC

The IPDirector VTR engine only reads the BVW LTC timecode and considers it as the reference with the corresponding video recorder intra timecode. This ensure frame accurate clipping.

The IPDirector VTR engine does not read the BVW Timer1 or VITC from the BVW protocol.

SD (D-VITC)

The VTR must be set to send the tape D-VITC timecode as LTC on the BVW serial port.

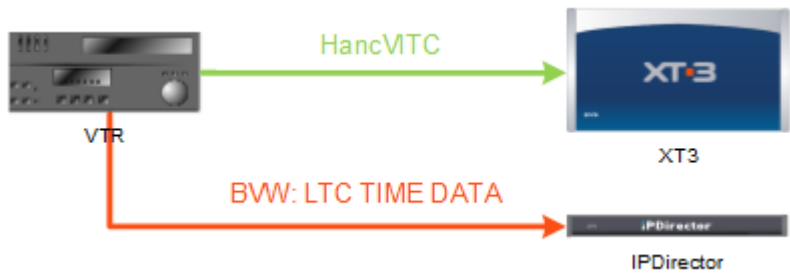


EVS Server Recorder settings:

RECORDER	
USER	PRIMARY
D-VITC	LTC

HD (HancVITC)

The VTR must be set to send the tape HancVITC timecode as LTC on the BVW serial port.

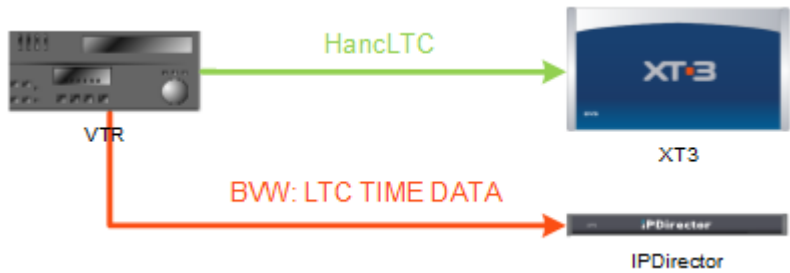


EVS Server Recorder settings:

RECORDER	
USER	PRIMARY
HancVITC	LTC

HD (HancLTC)

The VTR must be set to send the tape HancLTC timecode as LTC on the BVW serial port.



EVS Server Recorder settings:

RECORDER	
USER	PRIMARY
HancLTC	LTC

3. Miscellaneous

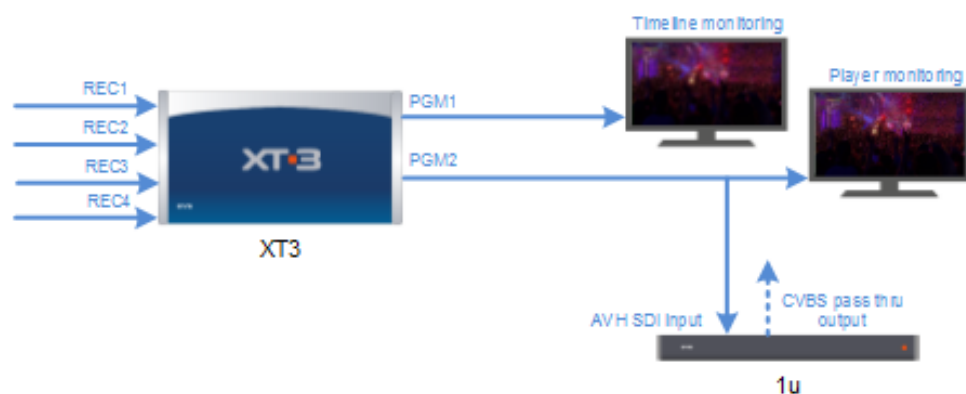
3.1. IEdit Connectivity

3.1.1. Purpose

The aim of this chapter is to give the basic outline of an IEdit setup connected with audio/video external devices.

3.1.2. Video Connectivity

IEdit controlling PGM1/2



- PGM1 is the timeline output.
- PGM2 is the preview player output.
- Output 1 Clean (PGM1) should be connected to the playout chain.
- Output 1 Character out (PGM1) should be connected to the timeline monitor.
- Output 2 Character out (PGM2) should be connected to the player preview monitor and IPDirector AVH Video Board.



NOTE

The AVH Board has a pass thru output in CVBS allowing connecting an analog monitor for player monitoring as well as a SDI output.

IPedit controlling PGM3/4



- PGM3 is the timeline output.
- PGM4 is the preview player output.
- Output 3 Clean (PGM3) should be connected to the playout chain.
- Output 3 Character out (PGM3) should be connected to the timeline monitor.
- Output 4 Character out (PGM4) should be connected to the player preview monitor and IPDirector AVH Video Board.



NOTE

The AVH Board has a pass thru output in CVBS allowing connecting an analog monitor for player monitoring as well as a SDI output.

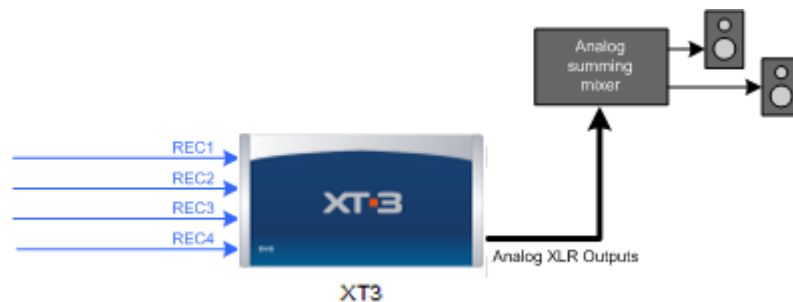
3.1.3. Audio Connectivity



NOTE

The IPedit mode has a unique audio management process. This process ensures that ALL audio coming out from the timeline PGM channel and preview player PGM channel are identical so you can choose from which PGM you will connect your audio monitoring system. There is no need to manage all audio outputs of both the Timeline and Preview channel only one output set of channels is needed, as internal routing will output the relevant audio to these connectors.

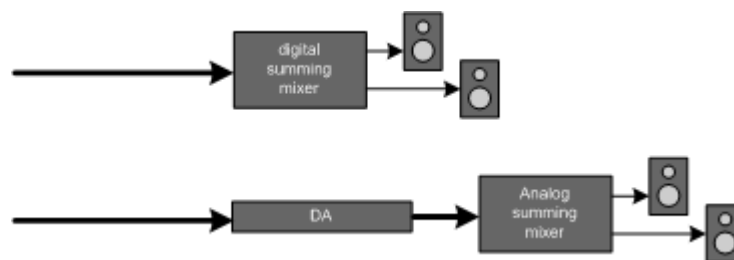
Analog



Timeline or Player PGM channel must be assigned to XLR Analog Output (A) in the AVCFG Server configuration.

Analog channels must be connected to your analog mixer or local monitoring device.

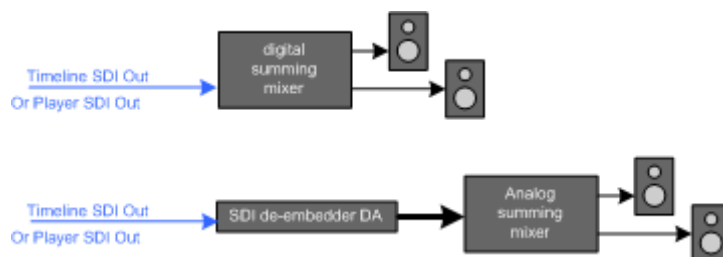
AES



Timeline or Player PGM channel must be assigned to Digital AES (D) Output in the AVCFG Server configuration.

AES channels must be connected to a digital mixer (or analog mixer using an A/D converter).

SDI (Embedded Audio)



Timeline or Player PGM channel must be assigned to Embedded Output (E) in the AVCFG Server configuration.

SDI signal must be connected to a digital mixer or audio monitor (or analog mixer using desembedder/AD converter).

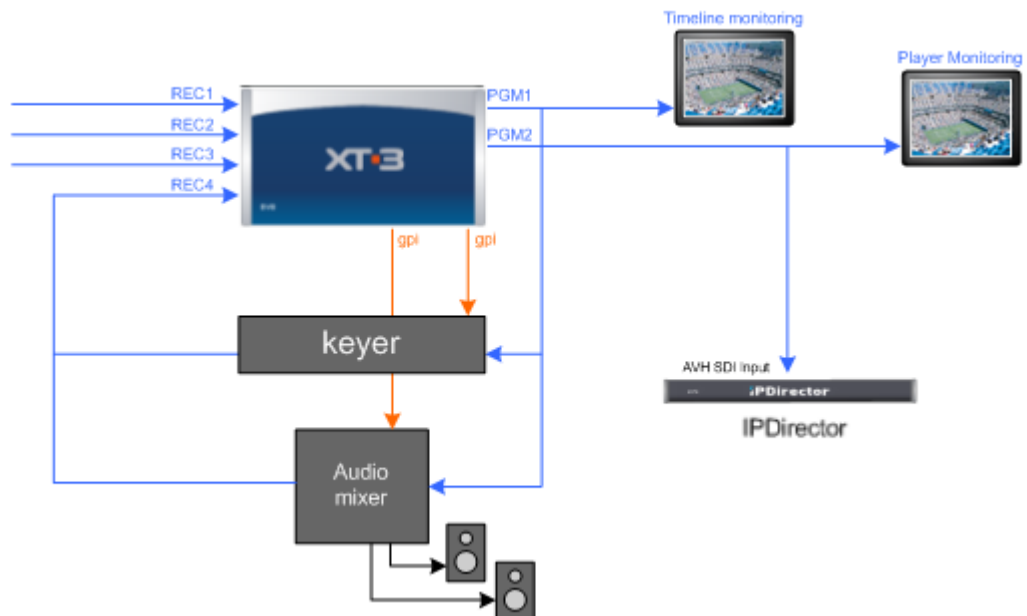
**NOTE**

When using audio embedded in SDI signal, the AVH Board on the IPDirector workstation integrates a desembedder/AD allowing a two tracks monitoring of the embedded signal on headphones or speakers. It will NOT decode from an HD-SDI signal.

Advance Setup

When using the IPEdit linear replace feature in order to add graphics coming from a downstream keyer or to add voice over audio effects, a dedicated record channel has to be connected to devices (keyer, mixer etc...). The incoming signal for these devices must be the Timeline channel.

Automatic control of these devices can be done using GPI.



3.2. Using GPI within IPDirector

3.2.1. Purpose

The aim of this procedure is to describe how to configure the GPI settings within IPDirector.



NOTE

The GPI connection is made directly to the server, and NOT to the IPDirector hardware itself.

3.2.2. Reminder – GPI connections on Server

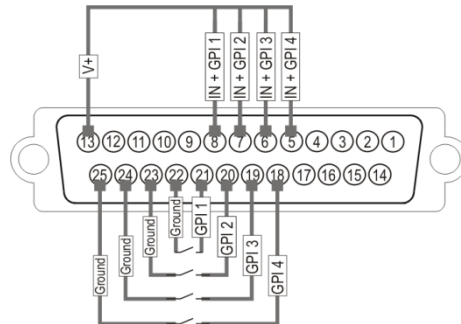
GP In Connections

GPI Triggers

The allocation of the server GPI triggers is performed in the Multicam Configuration window, in the GPI tab. See the Configuration manual for detailed information on allocating GPI triggers.

Opto isolated Inputs (GP In 1, 2, 3, 4)

Pin-Out



Specifications

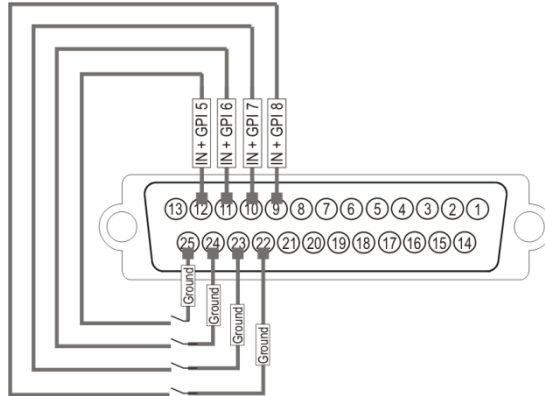
- The input consists in an opto diode (VF @ 1.1 Volt) in series with a 470 ohm resistor.
- Typical switching point @ 1.4 mA, for secure operation:
 - $i=0$ to 0.5 mA -> opto OFF
 - $i=2.5$ to 30 mA -> opto ON
 - $i_{max}= 30$ mA
- Direct connection to a TTL/CMOS signal possible (Pin opto - to GND and pin opto + to the TTL/CMOS signal).

Typical switching point @ 1.6 Volts, for secure operation:

- $V_{in} < 0.8$ Volts -> opto OFF
- $V_{in} > 2.2$ Volts @ 2 mA -> opto ON
- $V_{in max}$ (without external resistor) = 15 Volts

TTL Inputs (GP In 5, 6, 7, 8)

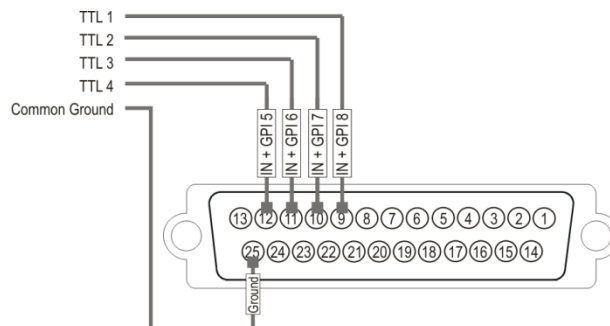
Relay Inputs Pin-Out



The relay must be connected between the ground and the corresponding TTL input on the DB-25.

TTL Inputs Pin-Out

Each TTL input on the DB-25 is directly connected to the pin of the TTL connector on the device triggering the GPI. The ground must be common between the DB-25 connector of the server and the external device.



Specifications

- each pin can be individually configured as an output or an input
- internal 4K7 pull up to +5 V
- low level $V_i < 1.5$ Volt (U12 = 74HC245)
- high level $V_i > 3.5$ Volt (U12 = 74HC245)
- optional TTL compatible level (U12 = 74HCT245)

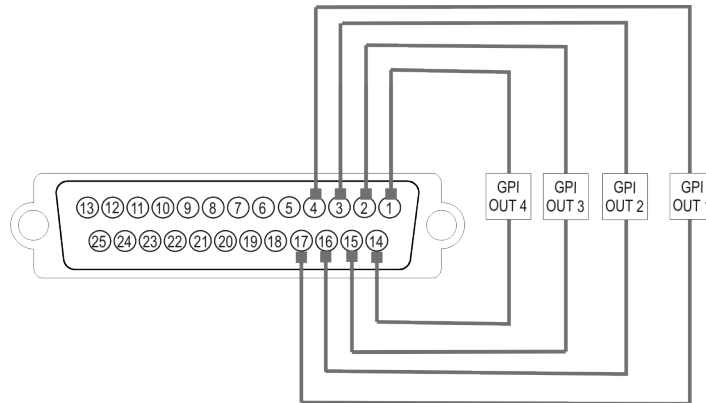
GP Out Connections

Relay Isolated Outputs (GP Out 1, 2, 3, 4)

Pin-Out

The user can define the functions, types and settings associated to the GPI outs in the following applications:

- Setup menu of the Remote Panel
- IP Director settings (GPI and Auxiliary Track tab)

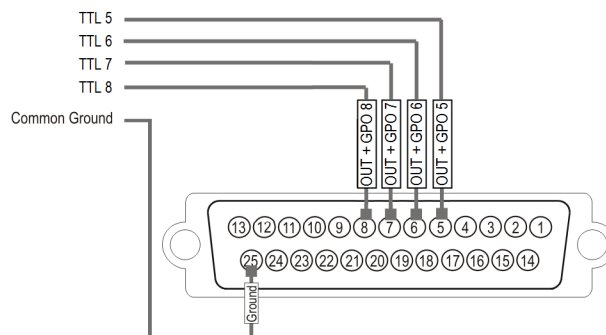


Specifications

- normally open contact (power off -> open)
- maximum 1 A
- maximum 50 Volts
- typical life time: 100.000.000 switchings

TTL Outputs (GP Out 5, 6, 7, 8)

Pin-Out



Specifications

- each pin can be individually configured as an output or an input
- internal 4K7 pull up to +5 V
- low level $V_i < 1.5$ Volt (U12 = 74HC245)
- high level $V_i > 3.5$ Volt (U12 = 74HC245)
- optional TTL compatible level (U12 = 74HCT245)

GPIO Connector Pin-Out

The following table lists the GPIO connector pin-out:

1	Relay Out 4	14	Relay Out 4
2	Relay Out 3	15	Relay Out 3
3	Relay Out 2	16	Relay Out 2
4	Relay Out 1	17	Relay Out 1
5	IN + opto 4	18	IN - opto 4
6	IN + opto 3	19	IN - opto 3
7	IN + opto 2	20	IN - opto 2
8	IN + opto 1	21	IN - opto 1
9	I/O TTL 8	22	GND (Return I/O 8)
10	I/O TTL 7	23	GND (Return I/O 7)
11	I/O TTL 6	24	GND (Return I/O 6)
12	I/O TTL 5	25	GND (Return I/O 5)
13	+ 5 V 50 mA max.		

3.2.3. Multicam Settings

When the Multicam is running on the server, press **SHIFT+F2**, TAB 6.GPI.

The TTL GPIs can be configured as GPIs IN or OUT.

8 GPIs In and 4 GPIs Out

Set the TTL GPIs as GPIs IN:

CONFIGURATION 9.LSM 4REC 2PLAY RUNNING									
1.SERVER 2.CHANNELS 3.NETWORK 4.MONITORING 5.PROTOCOL 6.GPI 7.OPERATION									
GPI Settings					TALLY				
TTL GPIs set as GPIs In					Tally No				
					Add Clip to PL 99				
					Clips guardbands 000 sec				
1/1									
GPIs IN									
#	Channel/Device	Port	Function	Delay					
1	EVS IPDP	03	-----	Disable					
2	EVS IPDP	03	-----	Disable					
3	EVS IPDP	03	-----	Disable					
4	EVS IPDP	03	-----	Disable					
5	EVS IPDP	03	-----	Disable					
6	EVS IPDP	03	-----	Disable					
7	EVS IPDP	03	-----	Disable					
8	EVS IPDP	03	-----	Disable					
GPIs OUT									
#	Function	Type	Advance	Pulse duration					
1	-----	-----	Disable	Disable					
2	-----	-----	Disable	Disable					
3	-----	-----	Disable	Disable					
4	-----	-----	Disable	Disable					
ALT+A:Apply F3:Basic/Advanced Esc:Quit PgUp/PgDn:Change page F1:Help									

4 GPIs In and 8 GPIs Out

Set the TTL GPIs as GPIs OUT:

CONFIGURATION 9.LSM 4REC 2PLAY RUNNING									
1.SERVER 2.CHANNELS 3.NETWORK 4.MONITORING 5.PROTOCOL 6.GPI 7.OPERATION									
GPI Settings					TALLY				
TTL GPIs set as GPIs Out					Tally No				
					Add Clip to PL 99				
					Clips guardbands 000 sec				
1/1									
GPIs IN									
#	Channel/Device	Port	Function	Delay					
1	EVS IPDP	03	-----	Disable					
2	EVS IPDP	03	-----	Disable					
3	EVS IPDP	03	-----	Disable					
4	EVS IPDP	03	-----	Disable					
GPIs OUT									
#	Function	Type	Advance	Pulse duration					
1	-----	-----	Disable	Disable					
2	-----	-----	Disable	Disable					
3	-----	-----	Disable	Disable					
4	-----	-----	Disable	Disable					
5	-----	-----	Disable	Disable					
6	-----	-----	Disable	Disable					
7	-----	-----	Disable	Disable					
8	-----	-----	Disable	Disable					
ALT+A:Apply F3:Basic/Advanced Esc:Quit PgUp/PgDn:Change page F1:Help									

Use the tab and arrow keys to edit all the GPI Settings.

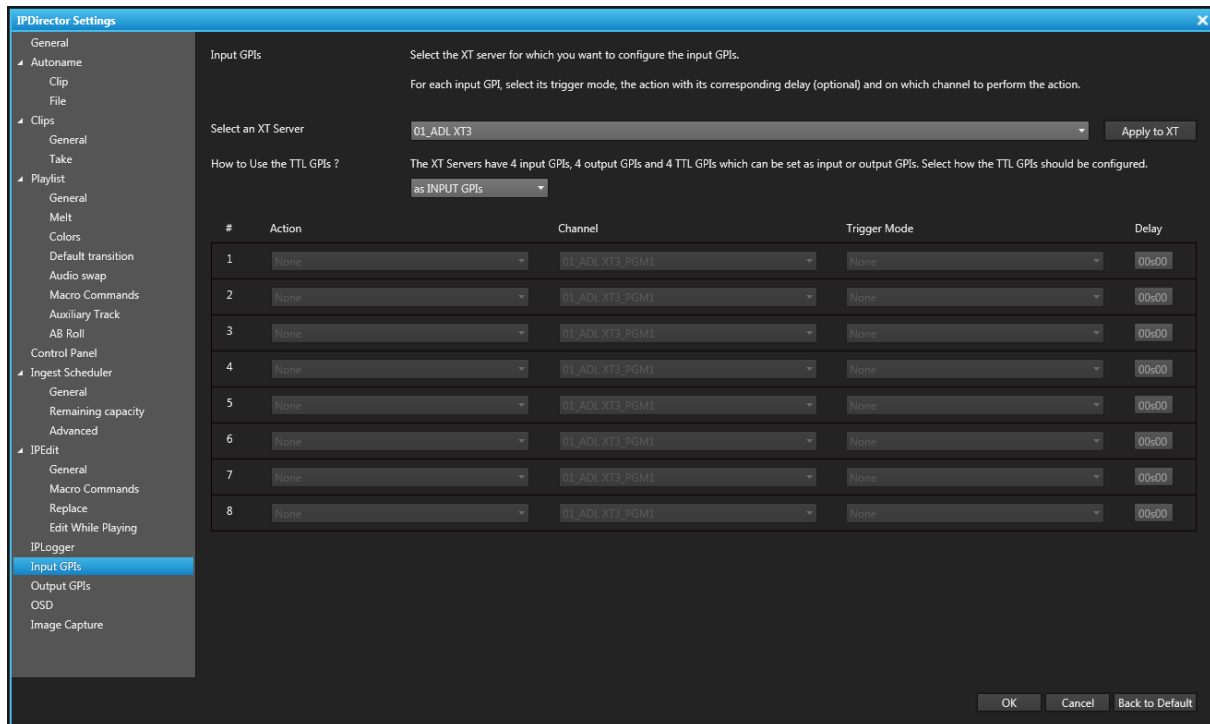
Specify **EVS IPDP** in the Channel/Device column and the IPDP port number on the wished GPI channels (Functions can be defined within the IPD interface)

Edit this page on all the server receiving GPI input signals.

3.2.4. IPDirector Settings

These settings are defined in the Input GPIs and Output GPIs tab available from the **Tools** > **Settings** menu.

Input GPIs



Select an XT server

Select here the server to be configured.

Click **Apply to XT** to send the GPI settings to the server.

How to use the TTL GPIs?

Define here the TTL GPIs usage if it was not done from the 6.GPI tab of the Multicam Configuration window.

If the TTL GPIs are defined as GPIs OUT, the last four GPI IN are grayed out.

INPUT GPI Configuration Pane:

For each INPUT GPI, the following information needs to be defined:

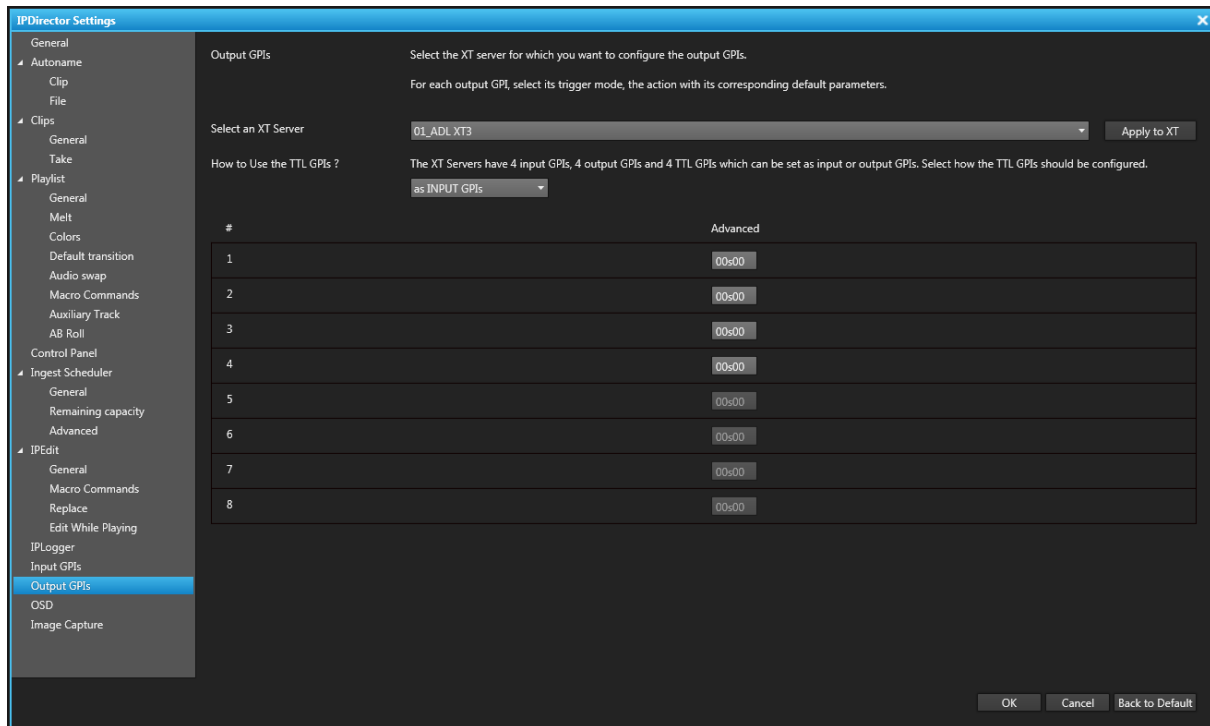
- The action triggered by the GPI key on the server.
- The player channel on which the action needs to be executed.
- The type of trigger signal sent by the GPI to the server.
- The delay of the trigger (now separated for each GPI)



NOTE

Only the GPI keys set up to be managed by IPDirector on the server can be configured in the INPUT GPI Configuration pane. The other ones will be greyed out.

Output GPIs



Select an XT server:

Select here the server to be configured.

Click **Apply to XT** to send the GPI settings to the server.

How to use the TTL GPIs?

Define here the TTL GPIs usage if it was not done from the 6.GPI tab of the Multicam Configuration window.

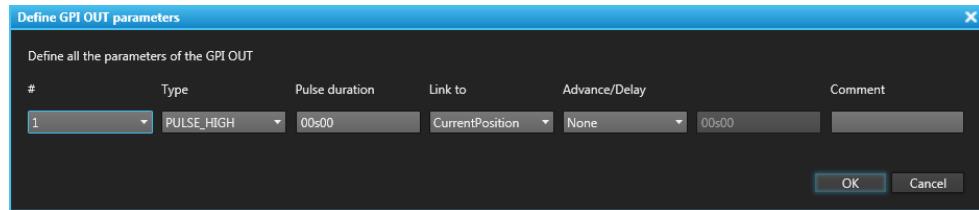
If the TTL GPIs are defined as GPIs OUT, the last four GPIs IN are grayed out.

OUTPUT GPI Configuration Pane:

The OUTPUT GPIs are signals that are sent by the GPI from a server under the control of the IPDirector. Eight GPI OUT commands can be sent from a server (if the TTL GPIs are defined as GPIs OUT)

For each OUTPUT GPI, the output mode is now configured within:

- The playlist panel (Insert TAG) or the playlist macro commands (Tools/Settings):

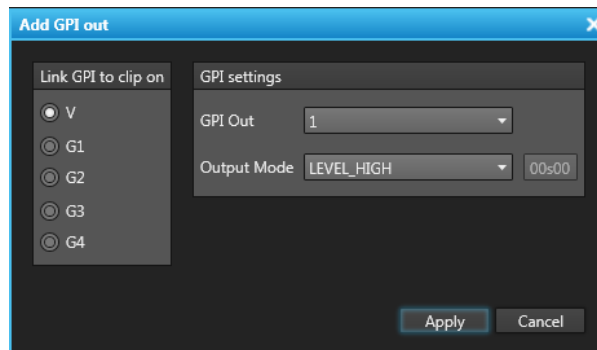


Define all the parameters of the GPI OUT

#	Type	Pulse duration	Link to	Advance/Delay	Comment
1	PULSE_HIGH	00s00	CurrentPosition	None	00s00

OK Cancel

- The IPEdit or the IPEdit Macro commands (Tools/Settings):



Link GPI to clip on

- ☒ V
- ☐ G1
- ☐ G2
- ☐ G3
- ☐ G4

GPI settings

GPI Out: 1

Output Mode: LEVEL_HIGH 00s00

Apply Cancel



NOTE

When you define a pulse signal, you also need to specify the pulse duration.

3.3. Creating and Reinstalling a Ghost of your System

The aim of this procedure is to describe how to create a ghost image of your system and how to restore your system with an existing image.

How to re-install your system with an existing image

1. Reboot the system on Bootable DVD or USB key (with IPD1U) that delivered with the original system. On IPD1U, modify Boot priority in the BIOS settings in order to boot on the USB key.
2. For USB key only, select **EVS Ghost Backup or Restore** in the menu.
3. In the ghost startup window, press **ENTER** to open the toolbar.
4. In the next window, select **Local / Partition / From Image** followed by **ENTER**.
5. In the next window, press the **TAB** key to select the Look in Area and open the list by pressing the **down arrow** key. Select the source drive: D fat drive (RESTORE) then **ENTER**.
6. Select the image file you want to restore then **ENTER**.
7. In the next window, select the Source partition #1 then **ENTER**.

8. In the next window, select the Destination drive #1 then **ENTER**. Press the **TAB** key to click the **OK** button, and then press **ENTER**.
9. In the next window, select the Destination partition #1 then **ENTER**. Press the **TAB** key to click the **OK** button, then press **ENTER**.
10. At the message Proceed with Partition Restore click **Yes** then press **ENTER**.
11. When the process is complete press **ENTER**. Click **Quit** then press **ENTER**, then click **Yes** and press **ENTER**.
12. Remove the USB key or DVD disk and reboot the system.

How to create a new ghost image of your system

1. Reboot the system on Bootable DVD or USB key (with IPD1U) that delivered with the original system. On IPD1U, modify Boot priority in the BIOS settings in order to boot on the USB key.
2. For USB key only, select **EVS Ghost Backup or Restore** in the menu.
3. In the ghost startup window, press **ENTER**.
4. In the next window, select **Local / Partition / To Image** then **ENTER**.
5. In the next window, select the Source drive, drive #1 then **ENTER**.
6. In the next window, select the Source partition #1 then **ENTER**. Press the **TAB** key to click the **OK** button, then **ENTER**.
7. In the next window, press the **TAB** key to select the Look in area and open it by pressing the down arrow key. Select the destination drive: D fat drive (RESTORE) then **ENTER**.
8. Press the **TAB** key to select the File name area then type the file name: IPD05XXXX (where 05XXXX is the current version number). It is also recommended to provide a description of the GHOST you are creating.
9. Press the **TAB** key to select **Save** then press **ENTER**.
10. Select **Compress high**, then **ENTER**.
11. At the message Proceed with partition image creation click **Yes** then press **ENTER**.
12. When the process is complete press **ENTER**. Click **Quit** then press **ENTER**, then **Yes** and **ENTER**.
13. Remove the USB key or DVD and reboot the system.



NOTE

All delivering systems have a R: RESTORE partition located on the system disk. This allows you to have an image file of the C: partition, and easily restore the complete XP operating system and IPDirector Software to the factory default state at any time.

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