TECHNICAL REFERENCE

IPDirector Remote Installer

Version 8.03 | May 2023

Corporate
+32 4 361 7000

North & Latin America
+1 973 575 7811

Asia & Pacific
+852 2914 2501

Other regional offices
evs.com/contact/offices

→ evs.com

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ICONOGRAPHY

	Note		Tip		Warning

What's New?

In the Technical Reference, the icon NEW ! has been added next to the text 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 8.03 are listed below.

Workgroup configuration

Logsheets

Settings linked to logsheets have been grouped in a new tab.

An option allows you to associate a logsheet with a selected ingest rather than record trains. So, logs will only be linked to the selected ingest.

- See section "Logsheet Parameters" on page 68.

Licensing

Possibility to work with the Sentinel licensing system or with XSecure.

- See section "DB Parameters" on page 75.

Playlists

An option allows you to automatically link clips with the same VarID as soon as one of the clips is added to a ganged playlist.

- See section "Playlist Configuration" on page 138.

Integration of Director's Cut with Cerebrum

Possibility to use Cerebrum with Director's Cut.

- See section "Director’s Cut Configuration" on page 155.

MediaCeption Solution

Only the relevant workstation services are displayed.

- See section "Overview of the Remote Installer Window" on page 20.

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.

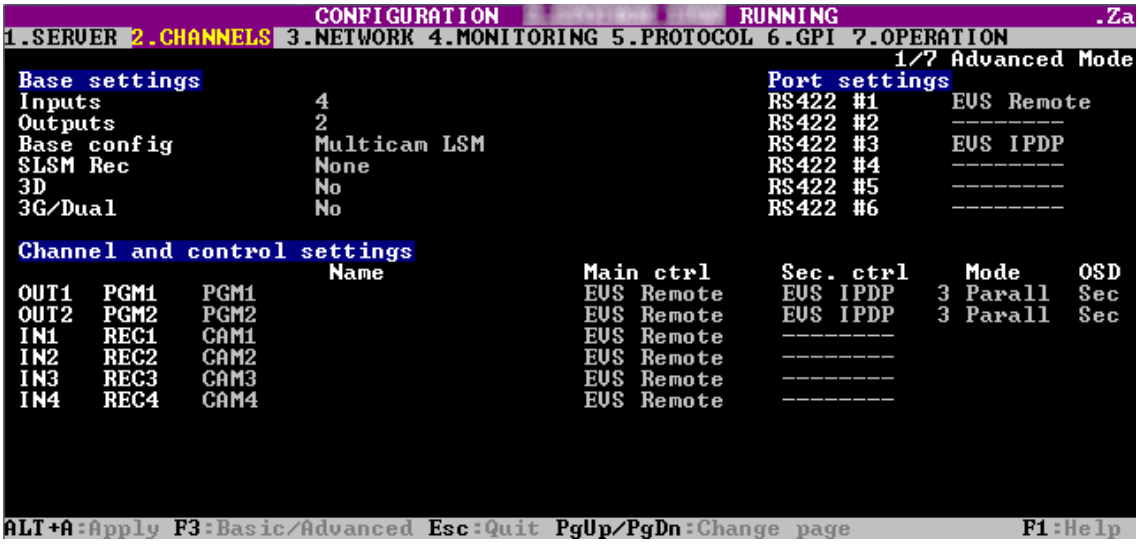
In the case of several IPDirector workstations connected through an GigE network with a single station connected to an EVS server, all channels of the connected server can be controlled by any workstation. See section "Multiple IPDirector Workstations and One Server" on page 3.

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.



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

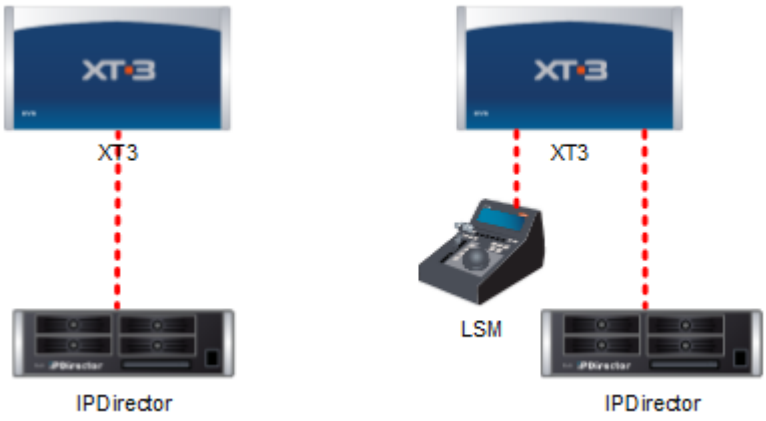
Since Multicam 11, the channel configuration can be changed while the Multicam application is running. Press **SHIFT** + **F2** to access the Multicam Configuration window.

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

See section "Setup of Server for Use with IPDirector " on page 5 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.

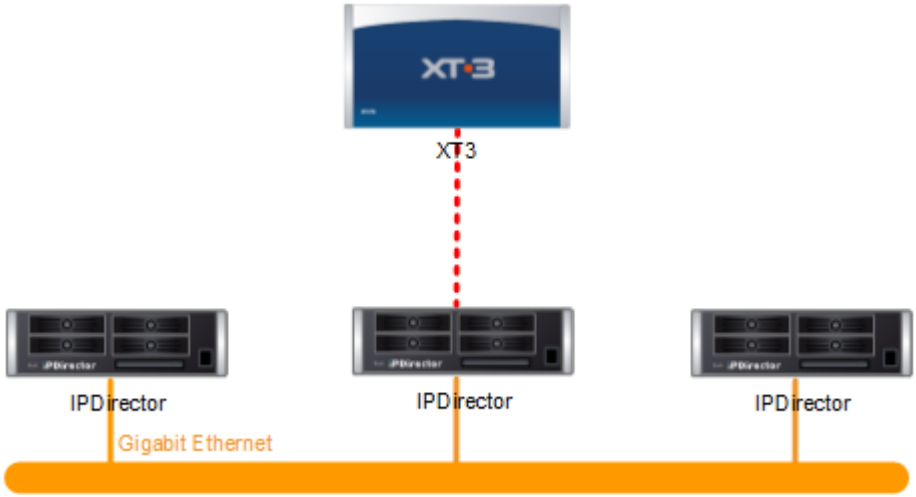


IPDP Spotbox mode provides all of the functionality of IPDirector to a single server and allows control of all of the server channels from IPDirector or third party devices, but no control from an LSM remote panel.

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

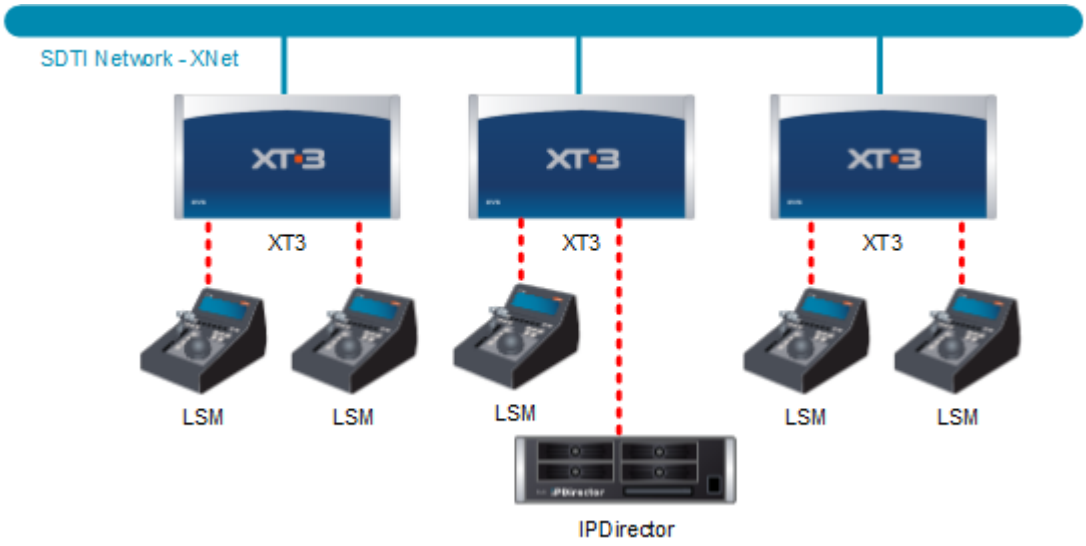
Several IPDirector workstations can be inter-connected via Ethernet and with only one station of IPDirector which has a connection via an RS-422 with a server. Any of the IPDirector workstations can thus control the channels of the connected server, and access and manipulate the database of the single 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

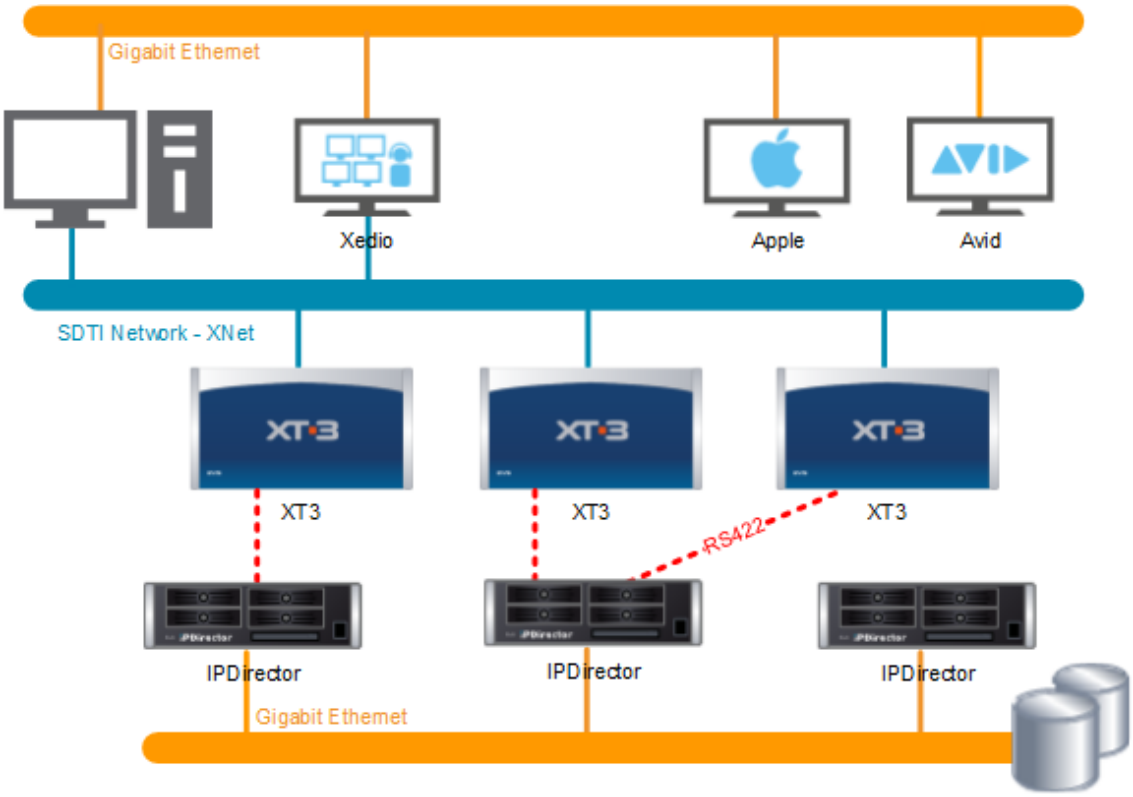
Several servers can be connected on an XNet with only one station of IPDirector which has a connection via an RS-422 with a single server.

All the media on an XNet 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-VIA 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.

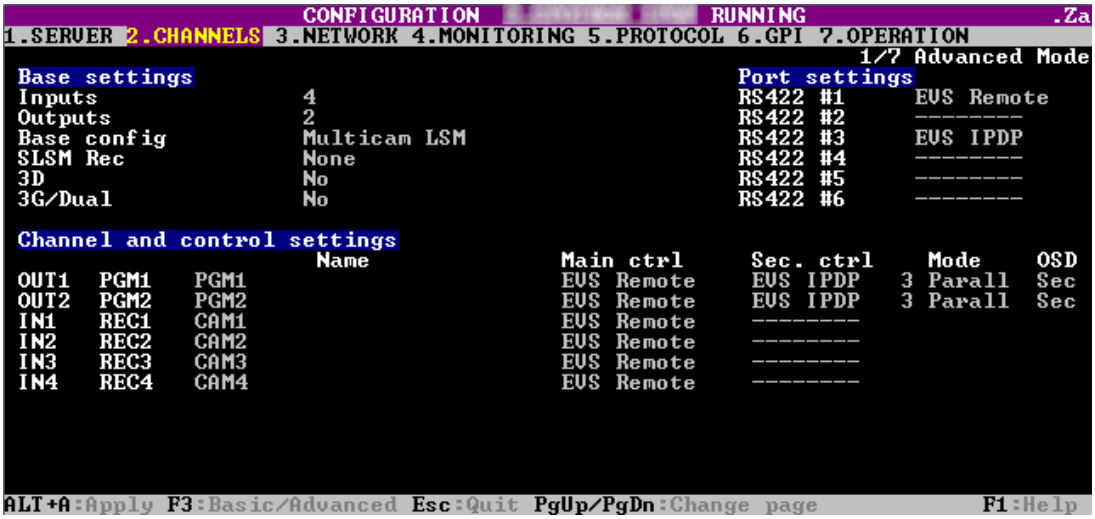
Since Multicam 11, the configuration of server serial port connections and the assignment of secondary device control (SONY BVW75, VDCP, ODETICS ...) to the channels can be defined from the Multicam Configuration window (Channels tab) before starting the Multicam application (press **F8**) or while the 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):

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



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.

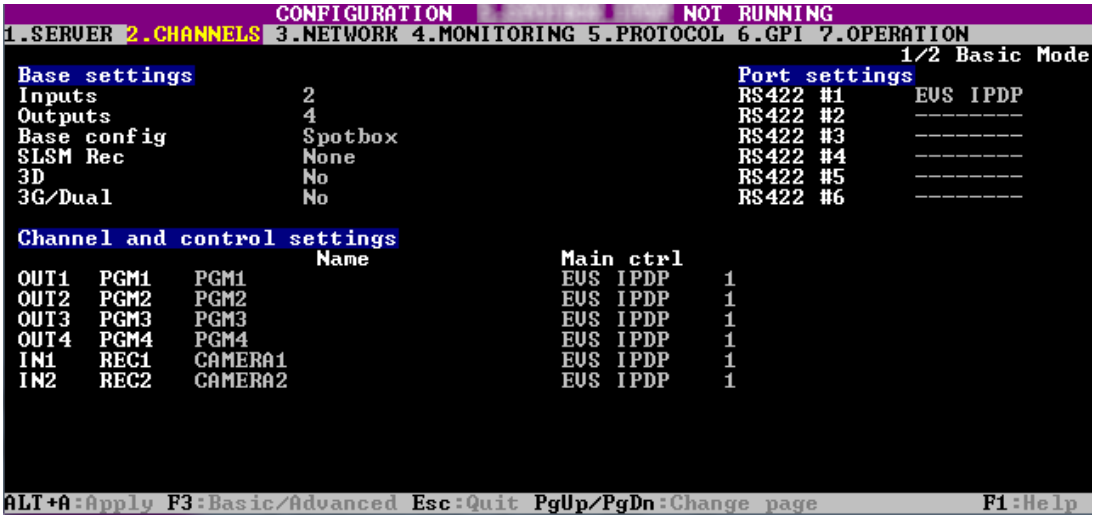
The particularities of that mode are:

- 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.

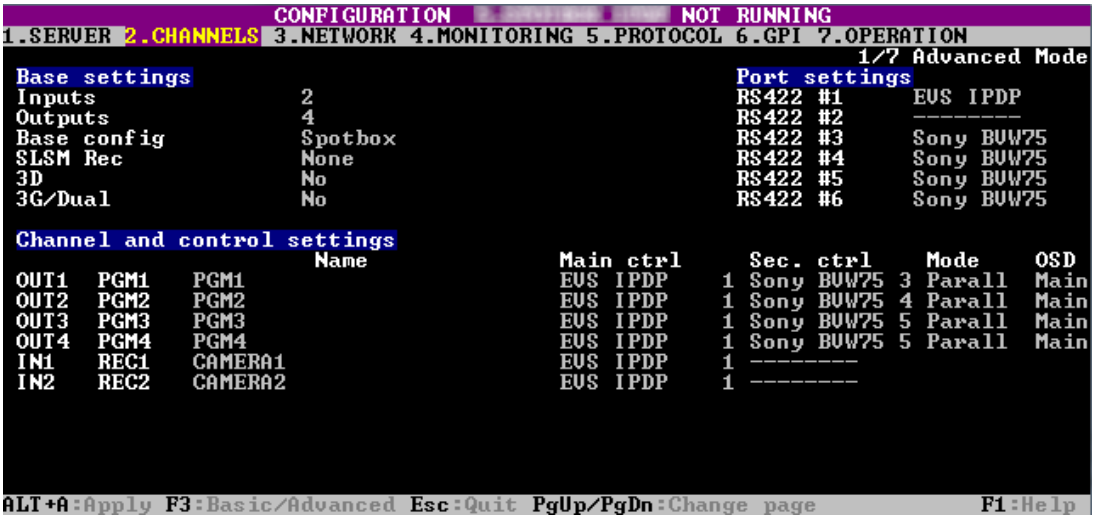
1.3.4. IPDP Spotbox Mode

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):



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



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

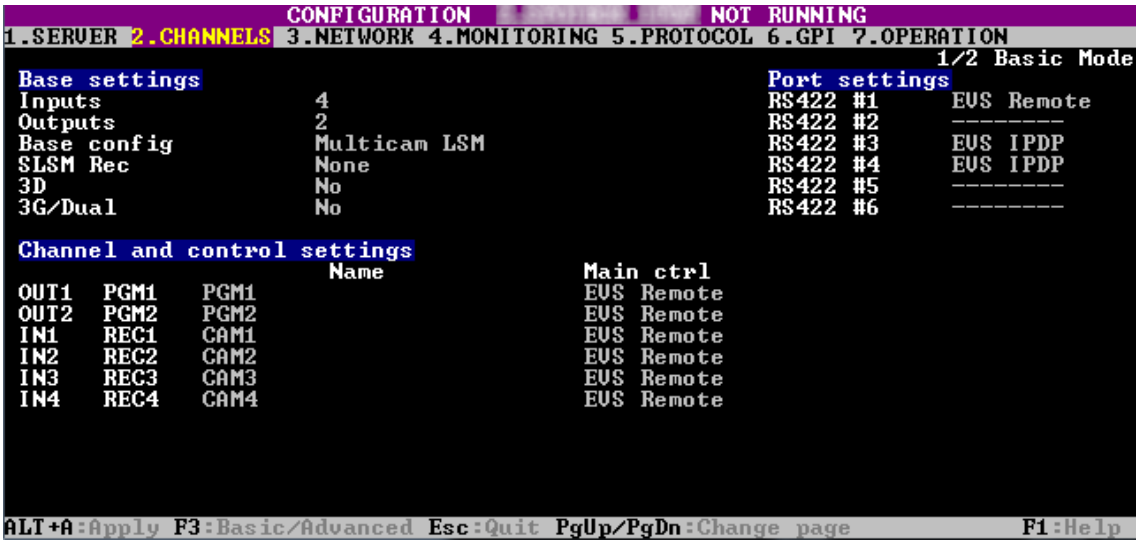
Introduction

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.

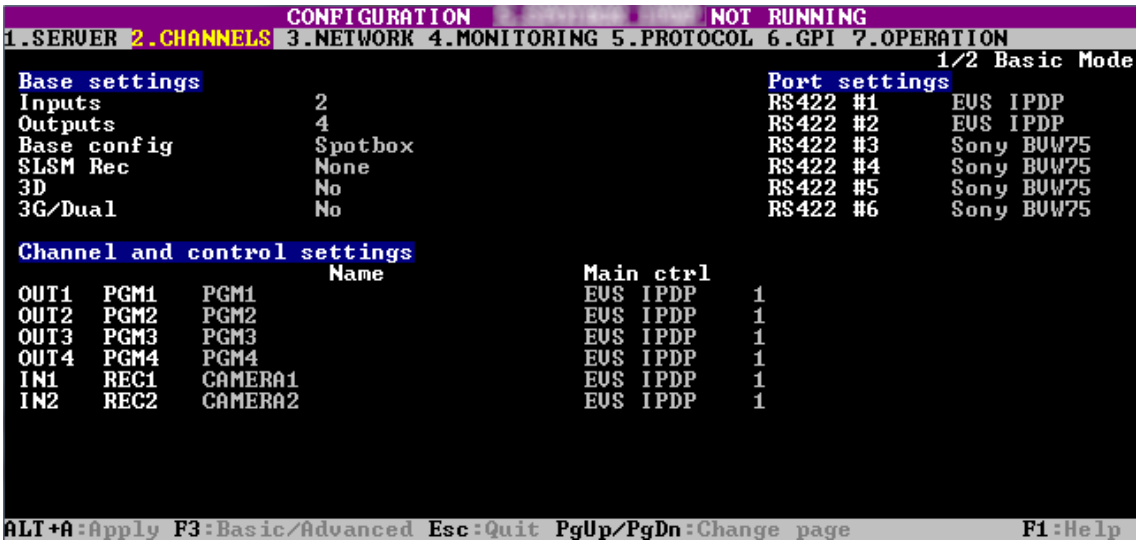


At startup, the server will connect the IPDirector with the lowest local machine number.

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.



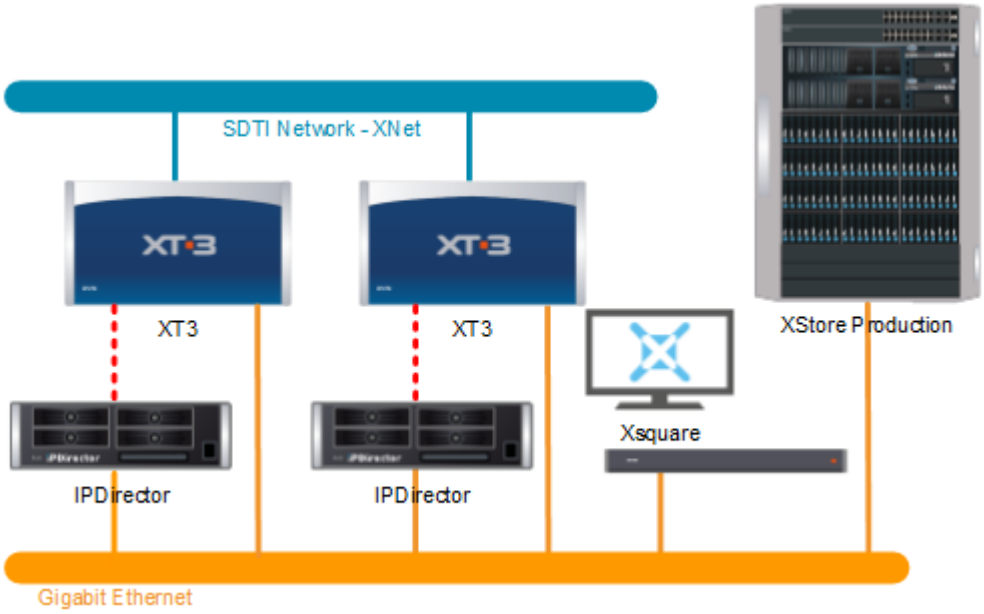
At startup, the server will connect the IPDirector with the lowest local machine number.

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.

> 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

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 Network tab:

3. Set IP Address, Subnet Mask and Default Gateway
4. 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 71 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 Remote Installer is made of a service and a configuration application.

The service automatically starts with Windows at workstation startup. The green icon on the Windows taskbar shows that it is working.

The configuration application (the GUI), can be run from the Windows taskbar.

It allows any administrator to remotely manage (configure, start, stop...) all IPDirector workstations on the network. It requires Windows admin rights and IPDirector admin rights.

It can only be run on one workstation at a time for editing. It can also be run in a Read Only mode, which allows the administrator to open the Remote Installer on several workstations at a 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.

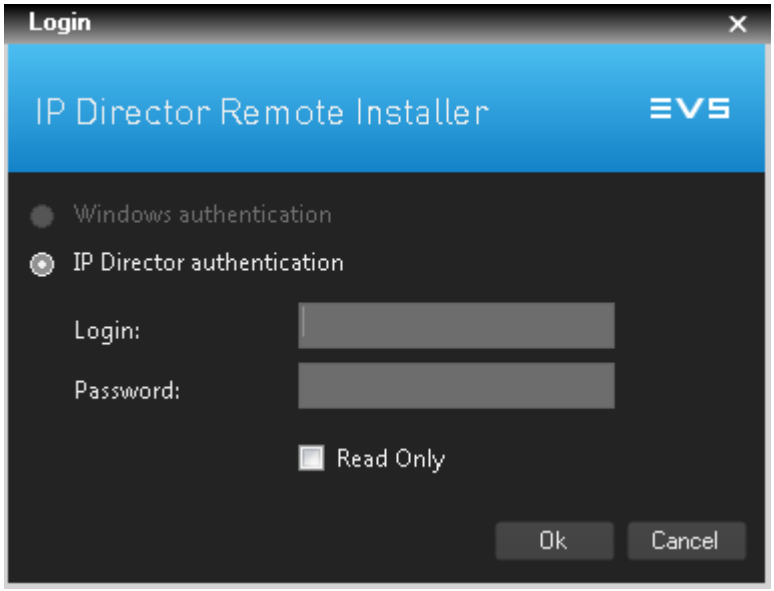
How to Open the Remote Installer

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 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 open where you have to enter your access codes. Go to next step 3.



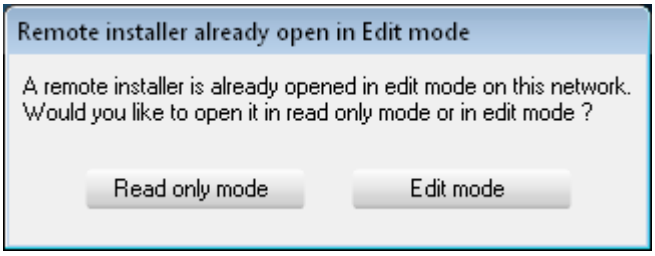
This parameter is set in Configure > General. See section "General Section" on page 64.

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.

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

The Remote Installer icon on the Windows taskbar turns to .

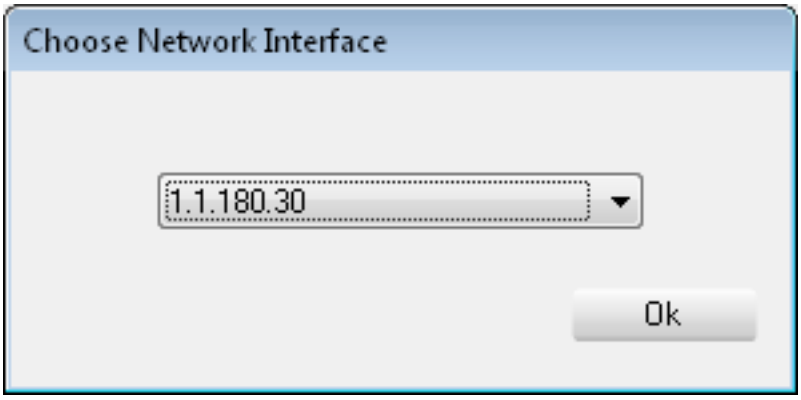
Once started, you can see all the workstations belonging to the network. See section "Overview of the Remote Installer Window" on page 20 for a description of the window areas.

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.



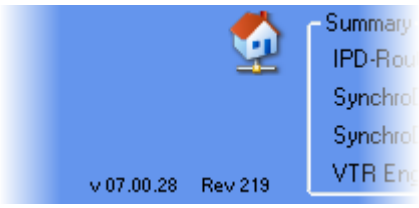
Ethernet Frame Size

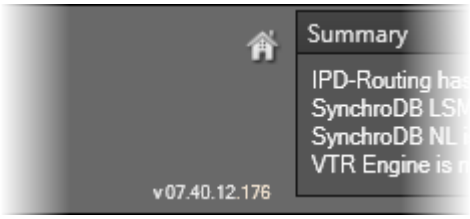
In order to work properly, all IPDirector workstations connected to the network must be set to **the same Ethernet frame size**.

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

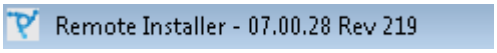
Remote Installer Version

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



or


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:



or

Solving Potential Issues

No Valid Database has been Restored

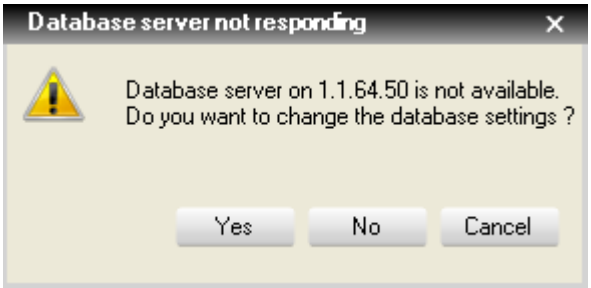
If no valid database has been restored, the administrator/evs login/password will not work.

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 50 for more information.

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 40.

- 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 10.129.59.41 (example of IP address)

  See section "Upgrading the Database" on page 45.

Database Conflict

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

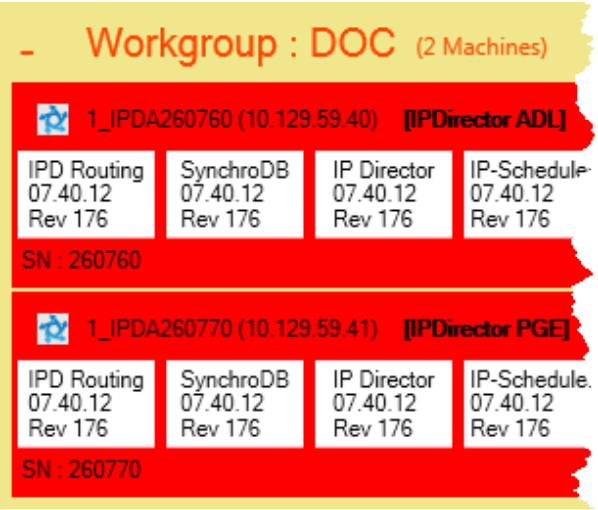
Database conflict on this WorkGroup

See section "Resolving a Database Conflict" on page 40.

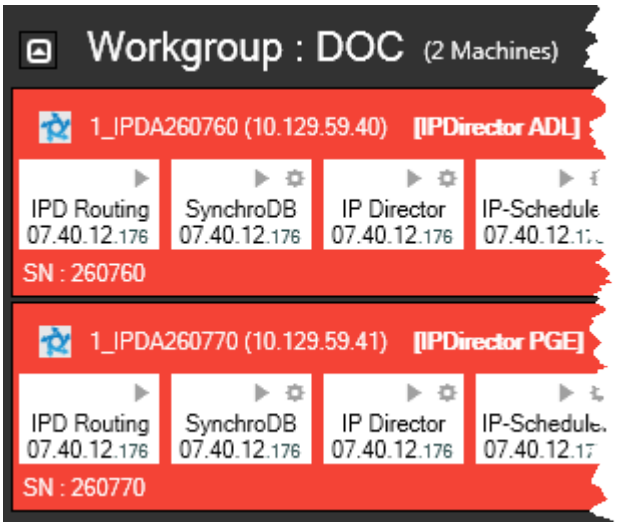
Workstations Network Number Conflict

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

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



or



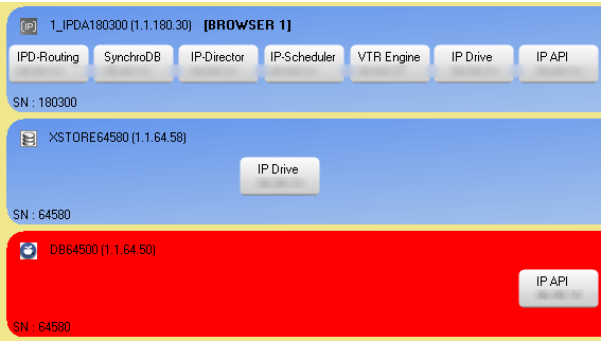
On the Status bar, at the lower right corner of the window, the **NumUser** status is red as well.

NumUser

See section "Setting Network Information for the Workstation " on page 51.

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:

See section "Configuring Serial Number" on page 55.

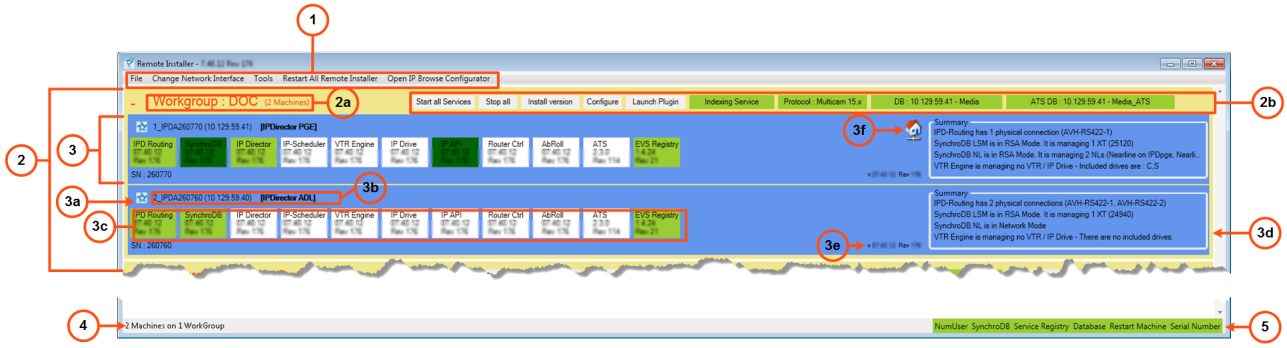
2.2. User Interface

2.2.1. Overview of the Remote Installer Window

Illustration

The Remote Installer window can be presented according to two themes selected from the File menu. It contains the areas highlighted on the following screenshots.

Classic Theme



Dark Theme

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 22 and section "Configuring IPBrowse" on page 241.

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 25.

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, managing the Indexing Service.

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

   See section "Workgroup Toolbar" on page 26.

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 30.

A contextual menu is available by right-clicking the workstation colored area. See section "Workstation Contextual Menu" on page 33.

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 square. See section "Introduction" on page 162.

   Depending on the workstation type, the number of services varies.

   A contextual menu is available by right-clicking each service. See section "Managing Services" on page 162.

   The background color of each button gives an indication on its status and role.

NEW !

In the MediaCeption Signature solution with IPD-VIA as PAM Core, when the dedicated installer has been used and the communication with IPD-VIA has been configured from the IPD-VIA tab (see section "IPD-VIA" on page 157), the workstation services appear as follows:

d. **Summary**: this area provides information about:

Number and type of serial ports configured

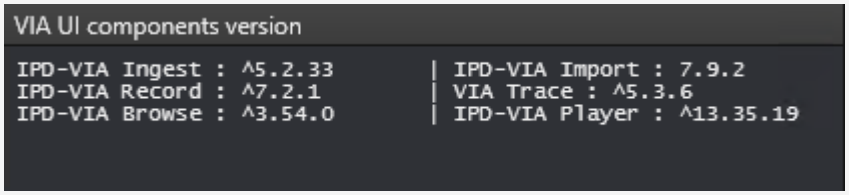
Working mode of SynchroDB to manage server(s), number and name of server(s).

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.

When the **Show VIA UI Components Version** option is selected under the Tools menu, the Summary section of the Remote Installer is replaced by the list of the VIA UI components installed on each workstation, displaying their respective versions:



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 the following options:

Theme

Gives the choice between a Classic theme and a Dark theme (default).

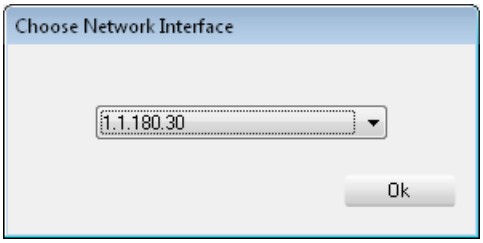
See section "Overview of the Remote Installer Window" on page 20 for an overview of the different themes and the different sections of the manual for a description of the user interface elements.

Exit

Exits 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.

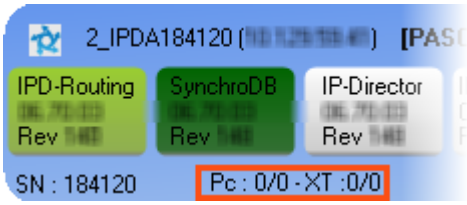
> This option appears only if several network interfaces are enabled and connected on the workstation.
>
> In the event of WAN connections, this network interface can have an impact on functions.

Tools

The Tools menu provides the following options:

Monitoring Information

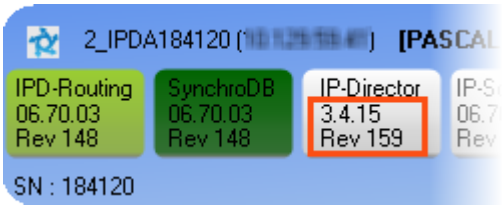
Displays Monitoring Information on each IPDirector workstation when the services (SynchroDB, IP-Routing) are started.



Show Software Player Version

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

Example for version 6.70:



Show Filters

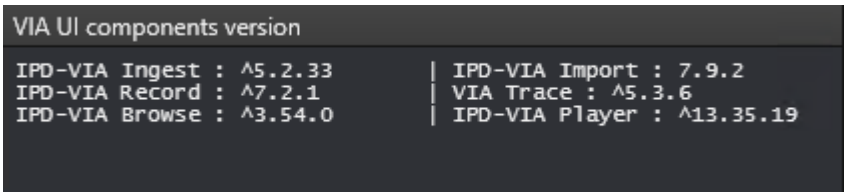
Displays a Filter area under the Menu bar from which you can filter the workstations based on

- a criteria entered in a Filter field
- machines to be restarted
- errors or conflicts
- started services

Show VIA UI Components Version

Displays the version of each VIA component instead of the Summary area for each workstation.

Example::



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 241.

2.2.3. Workgroup

Workgroup Contextual Menu

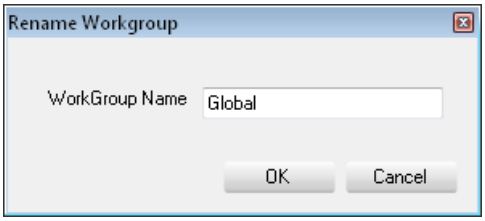
A contextual menu is available when right-clicking the Workgroup name.

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.

> 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 215.

Clear Host files (network with DNS Server)

See section "Populating Hosts Files" on page 215.

Get All EVS Logs (Via EVS Reporter)

The EVS Reporter tool is used to grab EVS logs from all the workstation members of the workgroup.

You will have to select the Log destination folder. The filename of the log file will be defined by the EVS Reporter tool.

See section "Managing Logs" on page 211.

Get All IPDirector Logs

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

See section "Managing Logs" on page 211.

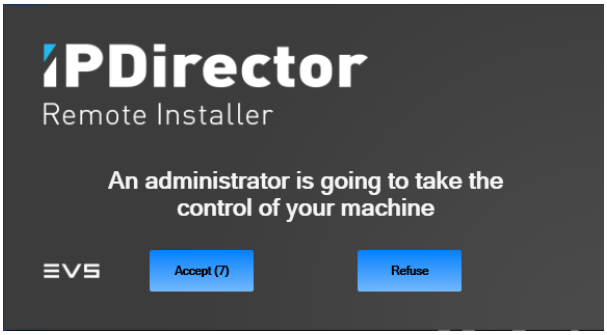
Clear All IPDirector Logs

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

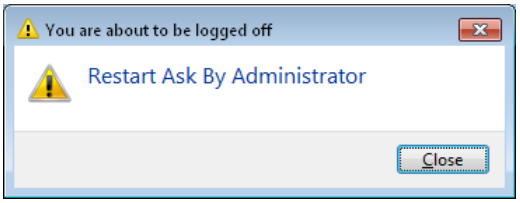
Restart All Machines

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.



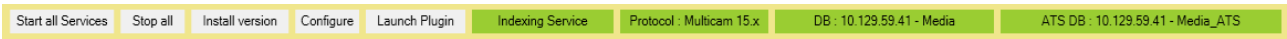
Once this message is displayed, users cannot stop the system shutdown command. Please quickly save all work in progress and log off.

Then, the complete Restart All Machine sequences may take more than 30 seconds to begin on distant stations.

Workgroup Toolbar

Workgroup Information and Operations 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.



or

Start All Services

Clicking the **Start all Services** or button starts all services on all IPDirector workstations of the workgroup. This means:

- the "mandatory" IPD-Routing and SynchroDB services
- the Remote Installer services set to **Auto Start**. This can be IP-Scheduler, VTR Engine, IP Drive, IP API, Router Control, AbRoll, ATS and EVS Registry.
- the Indexing Service components set to **Auto Start**.

Start All IPDirector and Services

This option is available when right-clicking the **Start All Services** button.

It starts all the services as described for the **Start All Services** option, and all the IPDirector of the workgroup.

The IPDirector login screen is displayed when the workstation is not integrated into an Active Directory domain.

Stop All

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

Install Version

Clicking the **Install Version** or 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 38 and "Installing IPBrowse or IPClipLogger from the Remote Installer" on page 238.

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.

> 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 36.

Deploy Patch

Used to send a patch (a DLL or a zip of DLL) on all the workstations of the workgroup.

The former DLL file will be renamed in "filename.dll.bak". If a bak file already exists, it will not be replaced by a new one.

Deploy VIA UI component

This option is used with the MediaCeption Signature solution, when only the IPD-VIA components must be updated. This will deploy the update on all the workstations of the workgroup.

The deployment package is a .zip file. It is saved under `C:\Program Files (x86)\EVS Broadcast Equipment\IP-Director\IP-Director\CurrentVersion\evs-via-ui-ipd`.

Configure

Clicking the **Configure** or button displays the Edit Workgroup window to configure all the workstations of the workgroup.

See section "Configuring the Workgroup Parameters" on page 62.

Launch Plugin

Clicking the **Launch Plugin** or 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:

  Indexing Service all services are stopped.

  Indexing Service a component displays a warning/error

  Indexing Service a component displays a missing redundancy

  Indexing Service a component needs to be started; missing components

  Indexing Service 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.

Protocol : Multicam 15.x is displayed when all the services are stopped and therefore version compatibility cannot be checked.

Protocol : Multicam 15.x is displayed when all the services are started and all the EVS servers have the Multicam version selected via **Configure**.

Protocol : Multicam14_... 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 39.

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 255

A left click displays ATS database information.

Workgroup Information and Operations in Read-Only Mode

Only information about the workgroup is available in Read-only mode.

or

A **View Config**, or , button gives access to a read-only view of the Edit Workgroup window, usually accessed from the **Configure** button.

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

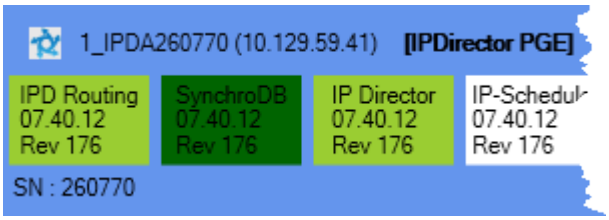
Workstation Status Color Code

Color codes on the workstation lines give indication on the workstation status.

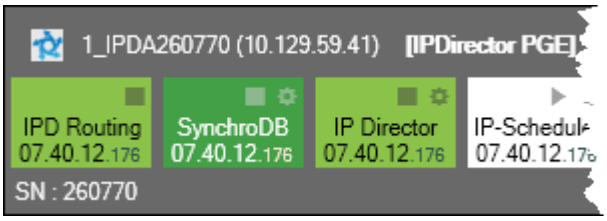
No Warning

The machine has the same version as the first workstation in the list and no conflict has been detected.

Classic theme



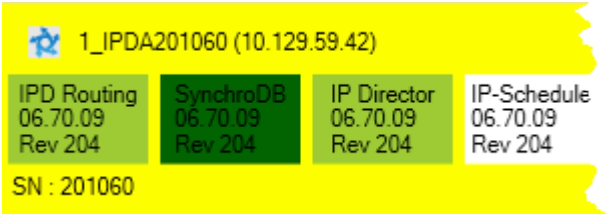
Dark theme



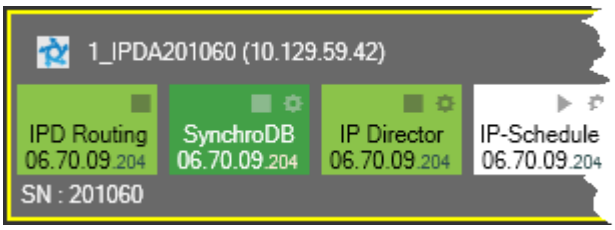
Incompatible Versions on the Workstation

Some IPDirector software components have incompatible versions or some workstations do not have the same version installed.

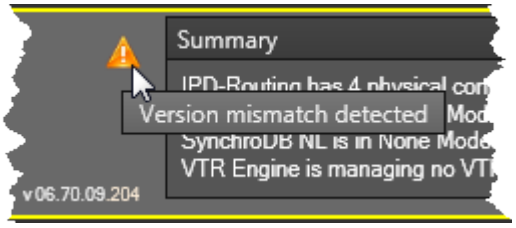
Classic theme



Dark theme



with a warning sign and a tooltip:

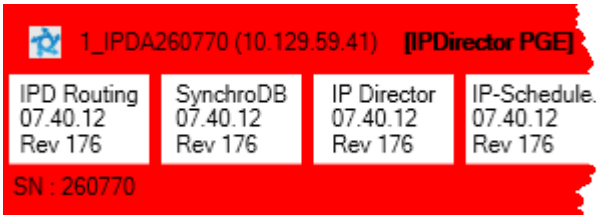


Conflict in Configuration Settings

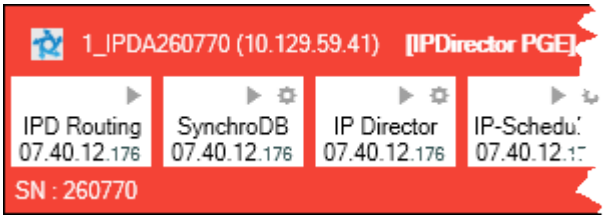
A conflict has been detected in the configuration settings, for example:

- SynchroDB server management. See section "Configuring SynchroDB" on page 170.
- local machine number. See section "Setting Network Information for the Workstation " on page 51.
- DB configuration. See section "Resolving a Database Conflict" on page 40.
- no serial number defined. See section "Configuring Serial Number" on page 55.

Classic theme

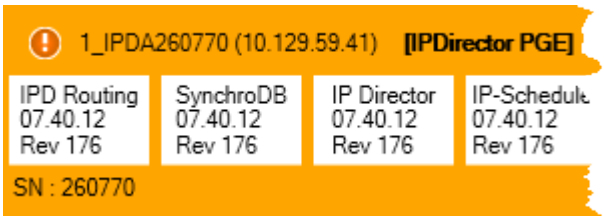


Dark theme

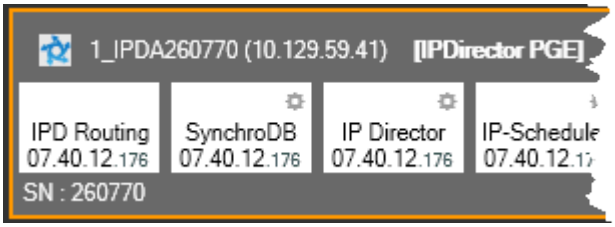


Restart Needed

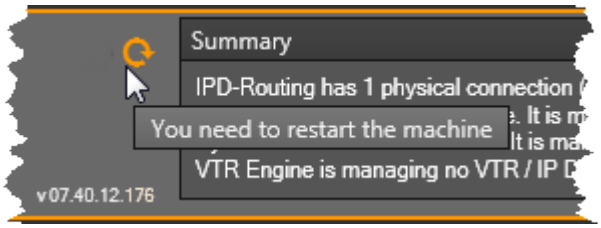
Classic theme



Dark theme



with a dedicated icon and a tooltip:



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 Services

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, AbRoll, ATS and EVS Registry.
- the Indexing Service components set to **Auto Start**.

See section "Starting Services" on page 165.

Stop All

Stops all services, the Indexing services and IPDirector on the selected workstation.

See section "Stopping Services" on page 167.

Send Version

Sends 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 38.

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 36.

Send Patch

Used to send a patch (a DLL or a zip of DLL) on a specific workstation.

The former DLL file will be renamed in "filename.dll.bak". If a bak file already exists, it will not be replaced by a new one.

Send VIA UI Component

This option is used with the MediaCeption Signature solution, when only the IPD-VIA components must be updated. This will deploy the update on a specific workstation.

The deployment package is a .zip file. It is saved under `C:\Program Files (x86)\EVS Broadcast Equipment\IP-Director\IP-Director\CurrentVersion\evs-via-ui-ipd`.

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 50.

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 51.

Configure Serial Communication

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

See section "Configuring the Serial Ports" on page 52.

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 55.

Configure Auto Logoff

Used to set the level of management of the Auto Logoff function (workstation vs users). When it is set at the workstation level, the period of inactivity before which the user will be logged off from the current workstation is configured with this option.

See section "Configuring the Auto Logoff Setting" on page 59.

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 (Via EVS Reporter)

The EVS Reporter tool is used to grab EVS logs from one workstation on the network.

You will have to select the Log destination folder. The filename of the log file will be defined by the EVS Reporter tool.

See section "Managing Logs" on page 211.

Get IPDirector Logs

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

See section "Managing Logs" on page 211.

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.

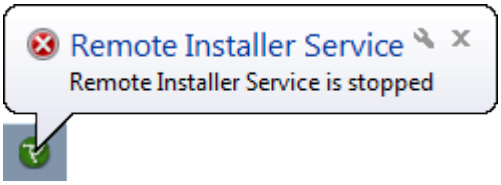
Once this window is displayed, users cannot stop the system shutdown command. Please quickly save all work in progress and log off.

Then, the Restart Machine sequence may take more than 30 seconds to begin.

Restart Remote Installer

This remote process allows restarting the Remote Installer service on a specific workstation.

The distant workstation displays a tooltip on the Windows taskbar.



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 219.

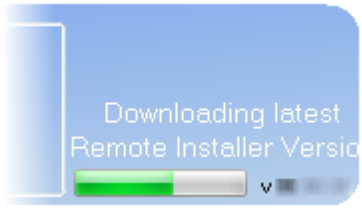
2.3. Installing a Remote Installer Version on Other Workstations

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.

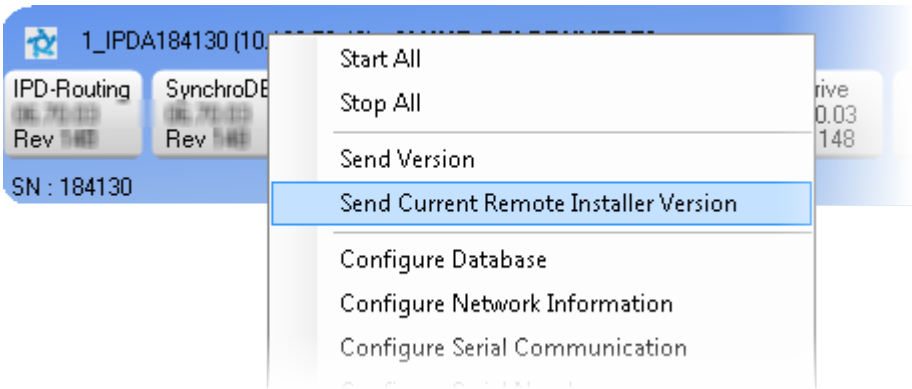


3. Wait until all progress bars have finished.

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.

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

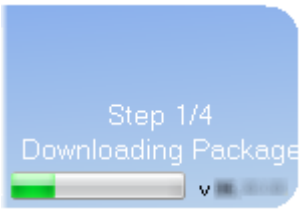
1. Make sure the Remote Installer version has been installed on every workstation.
2. Stop running services on all the workstations of the workgroup by clicking **Stop all**.
3. Click the **Install Version** button and select **Install Package** from the menu.

   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 45.

Red

This indicates a database conflict within the workgroup.

See section "Resolving a Database Conflict" on page 40.

2.5.2. Resolving a Database Conflict

Context of Use

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

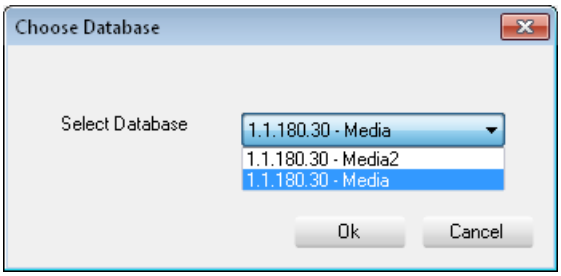
This is the case when one or several workstations point to another database.

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

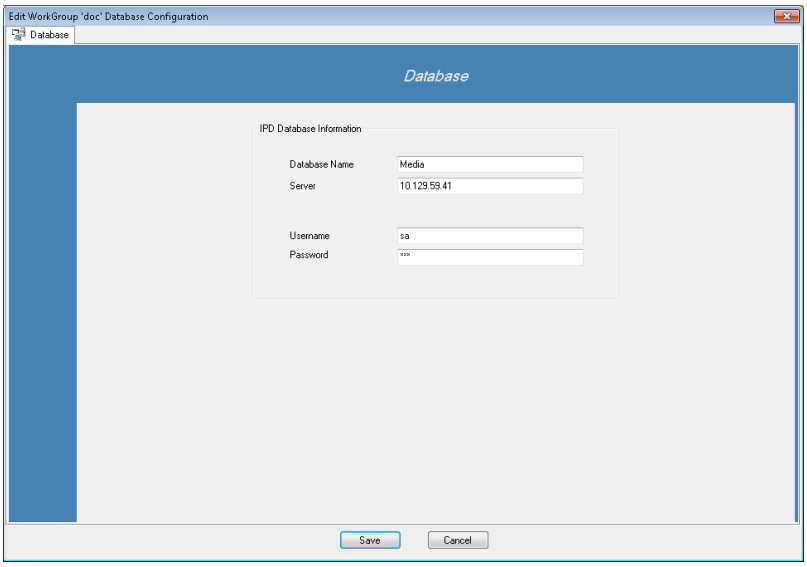
This address cannot be kept as a valid workgroup database address if the workgroup contains more than one workstation. Only one database on one workstation must be chosen for the workgroup.

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.

(example of IP address)

How to Check the Database Configuration

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

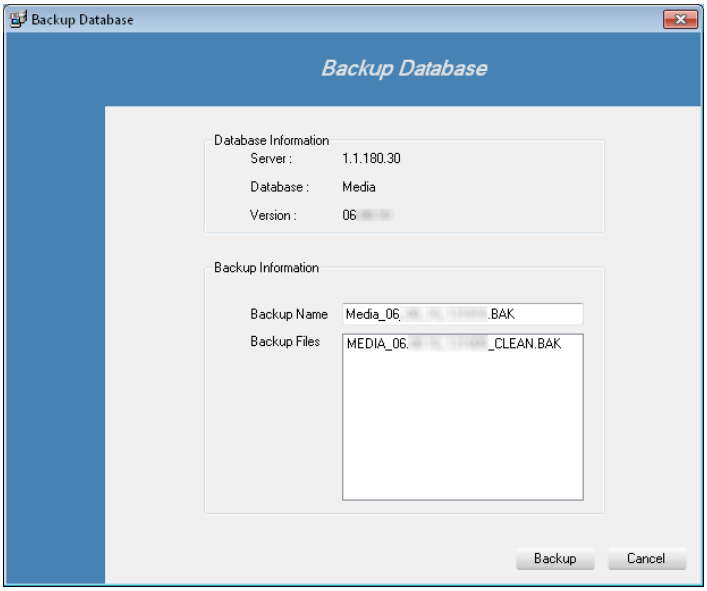
The Database Configuration window opens.

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 40.

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.

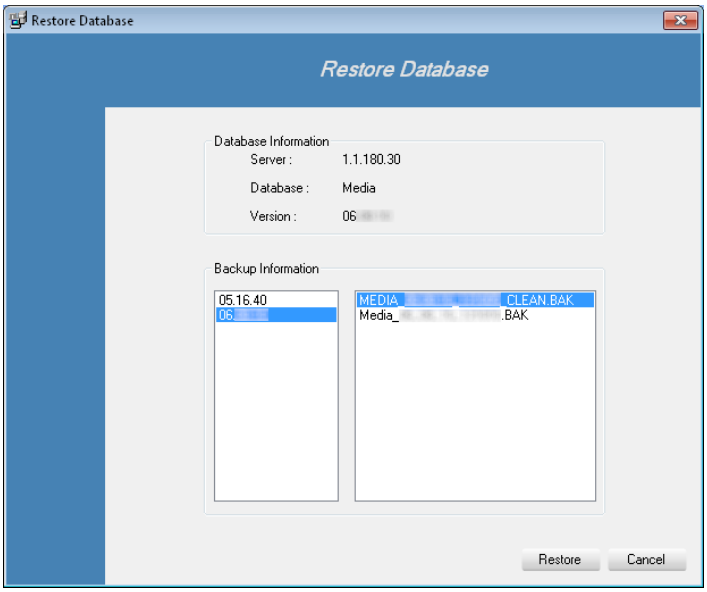
The backup file is created on the workstation were the backup function is performed and is stored in the C:\Program Files (x86)\EVS Broadcast Equipment\IPDirector\Database folder.

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 40.

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.

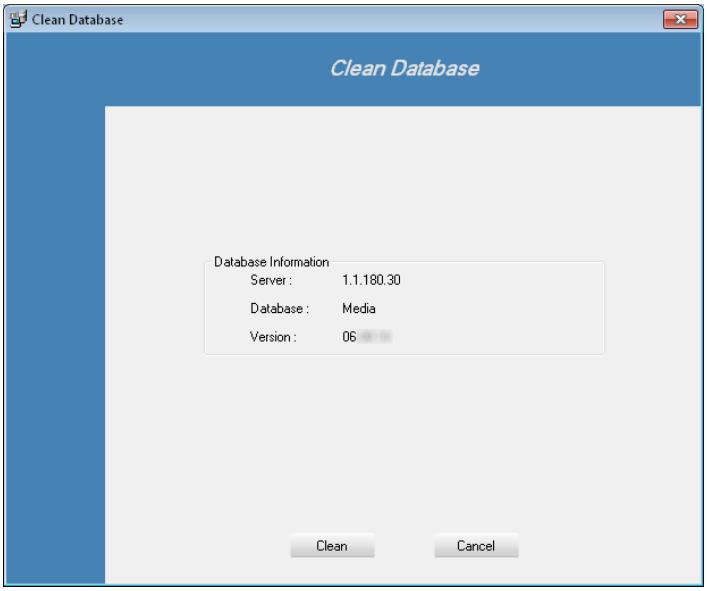
2.5.6. Cleaning the Database

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 40.

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.

(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.

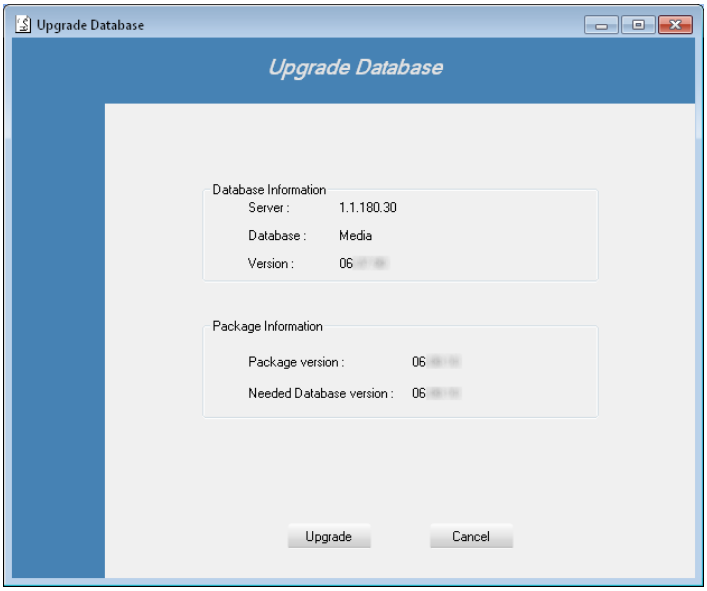
How to Upgrade the Database

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.



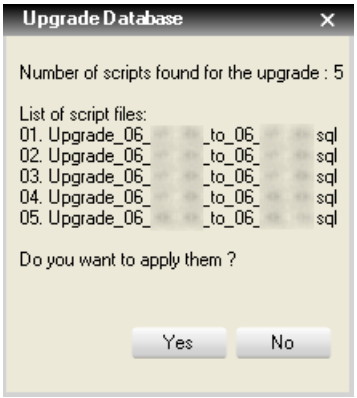
4. Check the Database Information parameters.

   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 40.

5. Click the **Upgrade** button if Database Information parameters displayed are correct.

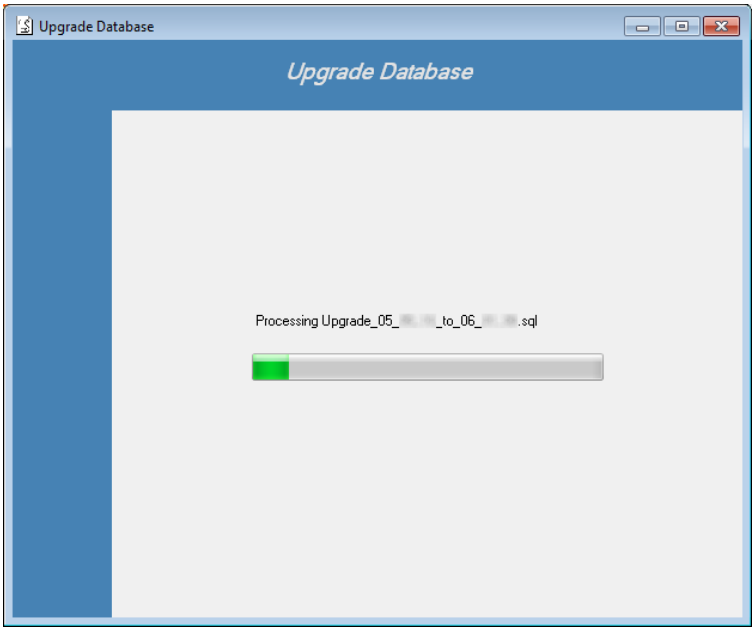
   A window pops up with the list of scripts to be applied.

   Example:

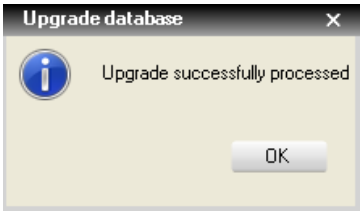


6. Click **Yes** to start the upgrade.

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

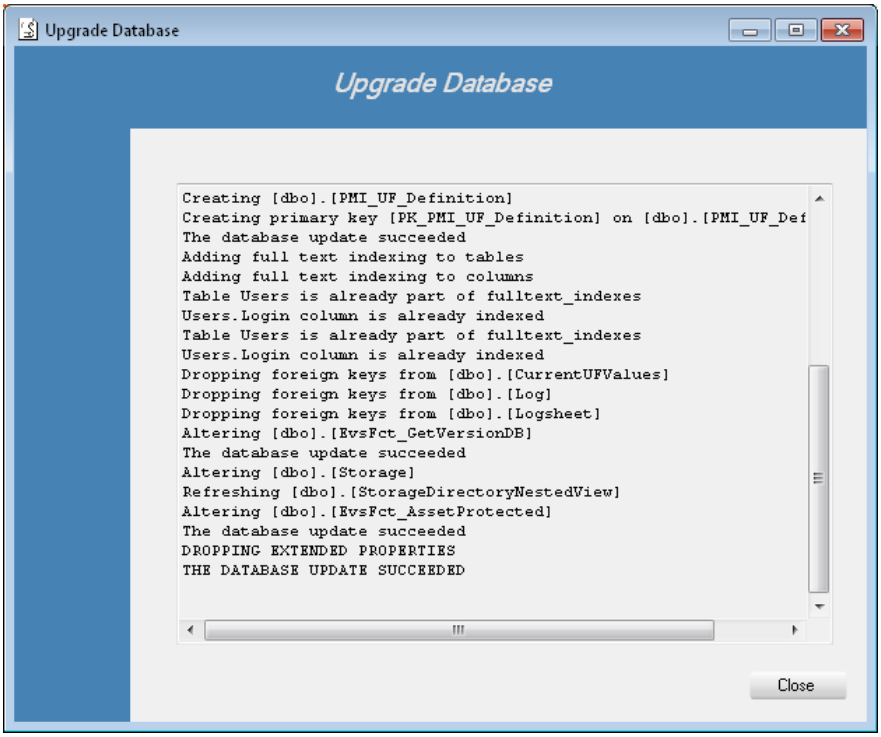


   When the upgrade is done, the system tells you it has been successfully processed:



7. 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 45.

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

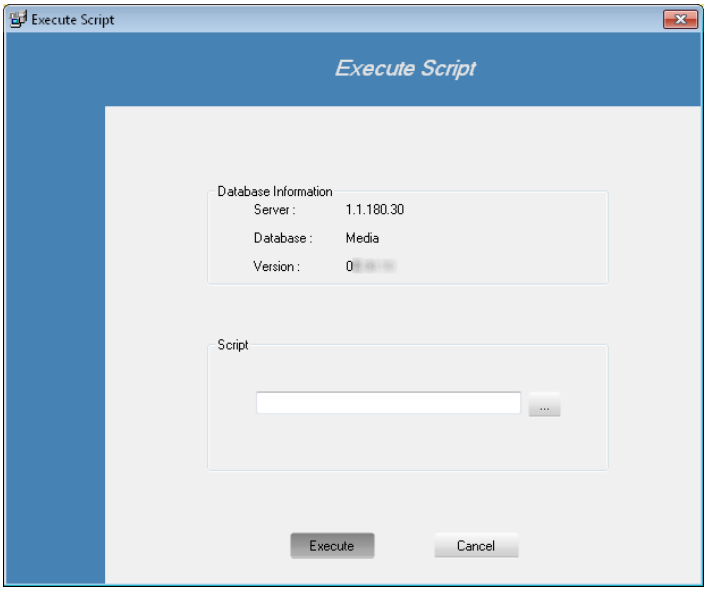
Before executing any script, be sure your SQL server engine is running on your database server.

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 40.

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

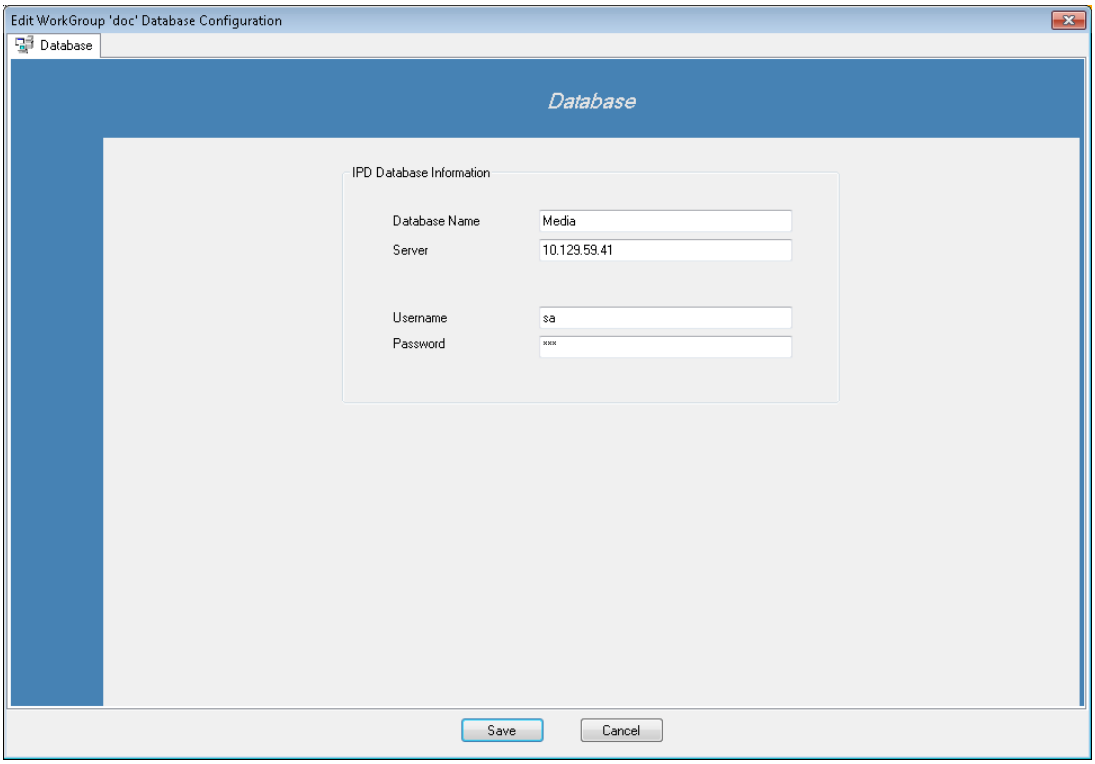
This step is used to edit the database configuration on a specific workstation.

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:



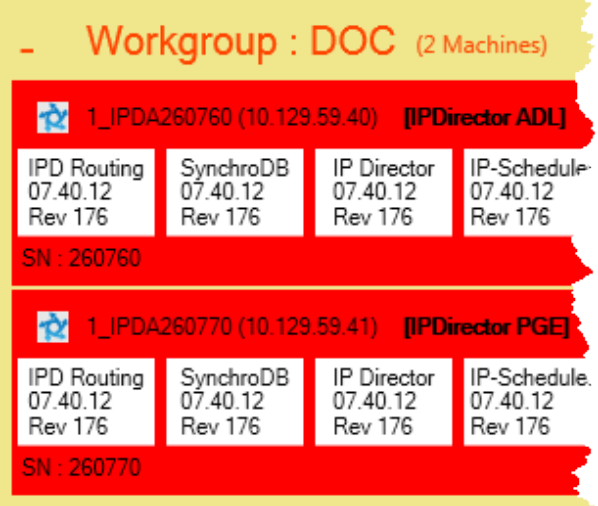
4. Modify the Server name (Computer Name or IP address) to specify your new database containing a valid Login/Password.

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 theses workstations is red.

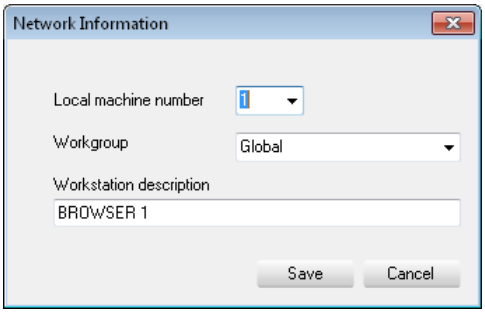


On the Status bar, at the lower right corner of the window, the **NumUser** status is red as well.

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.

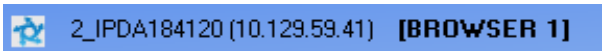
5. From the **Workgroup** field, select the Workgroup the workstation belongs to.

   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 25.

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.

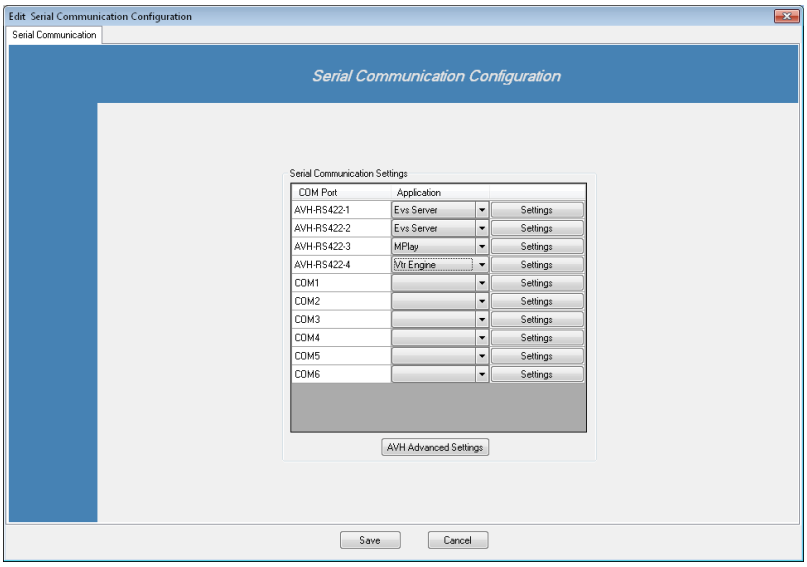
  The **Router Control** option is displayed provided that a router has been configured and the Router Ctrl service has been configured. It automatically appears next to the right port as soon as it is selected from the Edit [Workstation] Router Control Management window. See section "Defining the Workstation Responsible for the Control of the Router" on page 248.

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

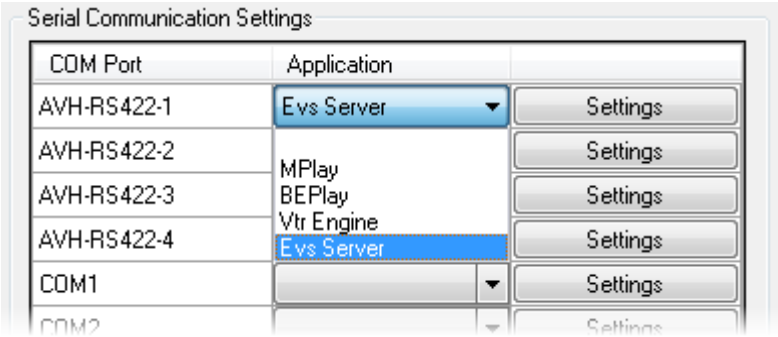
How to Configure Serial Communication

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

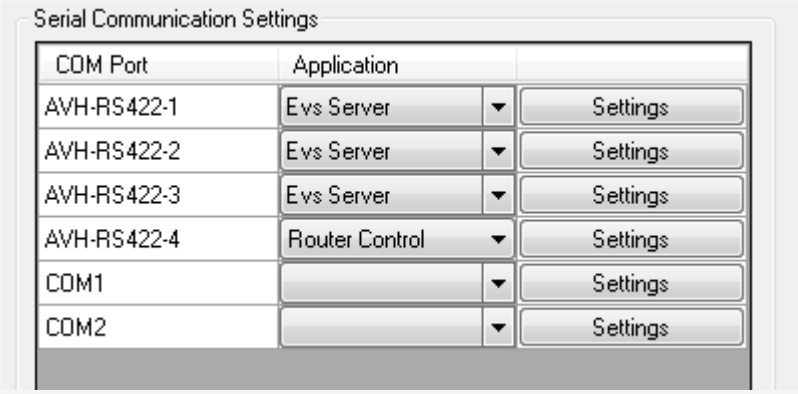
   The Serial Communication Configuration window is displayed:



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



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 248.



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.

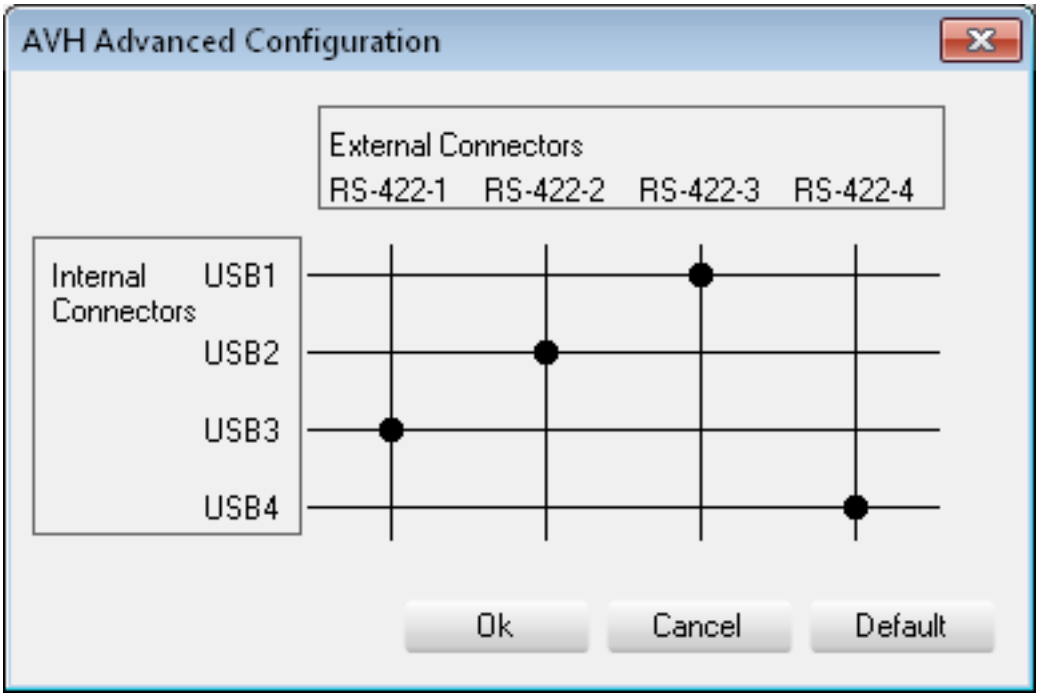
Default Recorder: Select the server Default Recorder connected to the VTR. The VITC of this recorder is taken for ingests.

Advanced Settings:

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

7. 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**.

8. Click **OK**.
9. Click **Save** from the Serial Communication Configuration window.

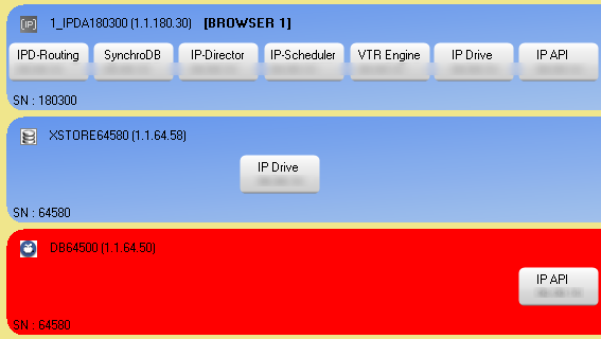
2.6.4. Configuring Serial Number

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.

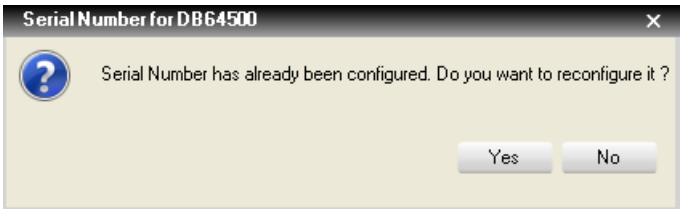


On the Status bar, at the lower right corner of the window, the **Serial Number** status is red as well:

Serial Number

How to Configure Serial Number

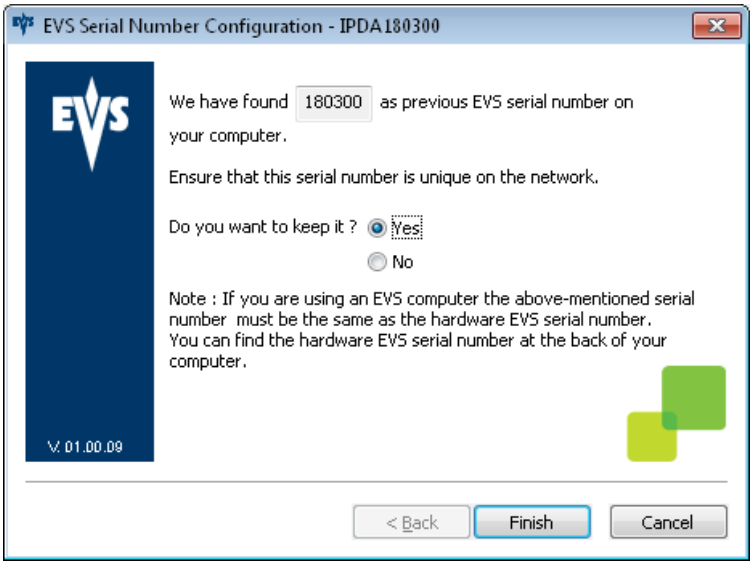
1. Right-click the Workstation name.
2. Select **Configure Serial Number** from the contextual menu.
   - If a Serial Number is already defined, trying to configure it again displays a pop-up window:

     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:

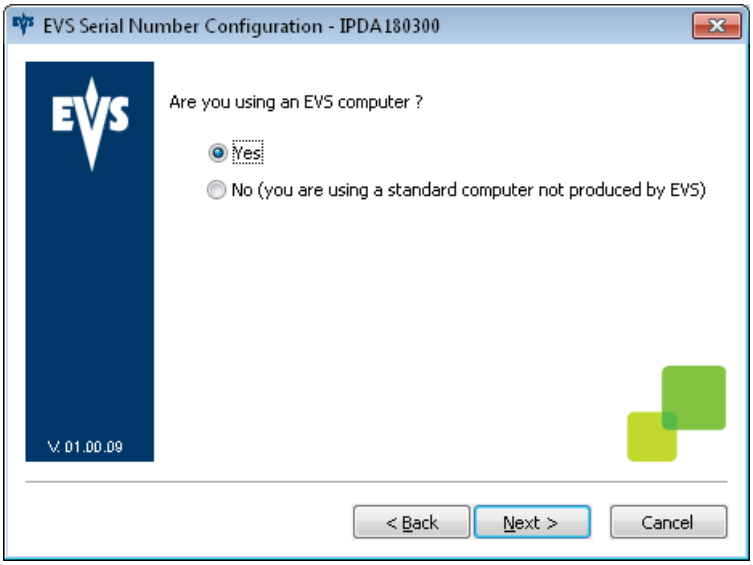


a. Check the serial number

b. Keep the default value **Yes**

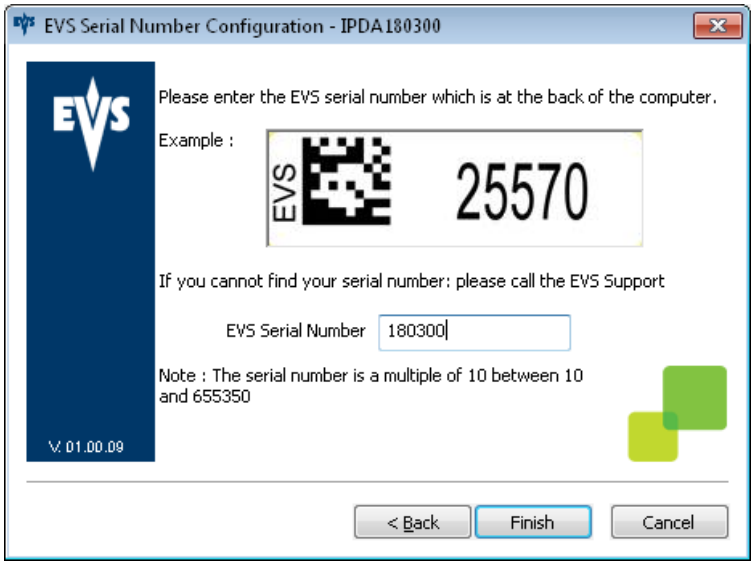
c. Click **Finish**.

- 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**

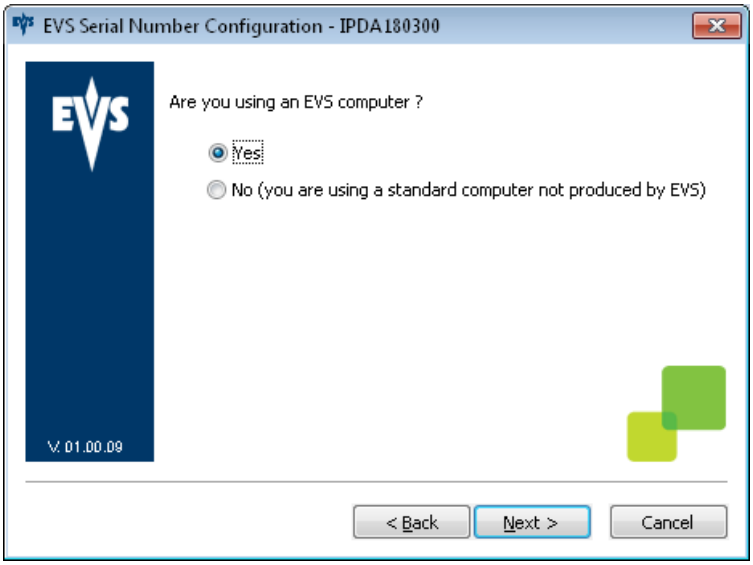
b. Click **Next**.



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.

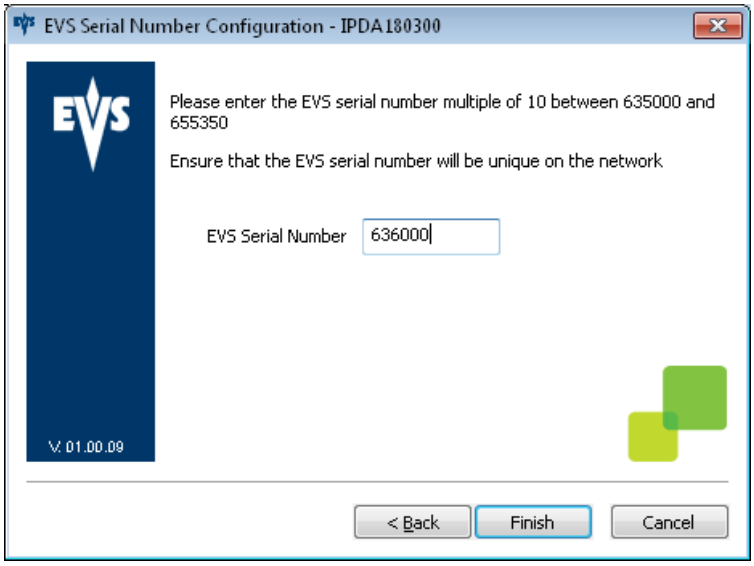
d. Click **Finish**.

- 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.

2.6.5. Configuring the Auto Logoff Setting

Context of Use

The Auto logoff parameter can be set at the workstation level or at the users level.

When both have been defined, the setting per workstation will take over the auto logoff management.

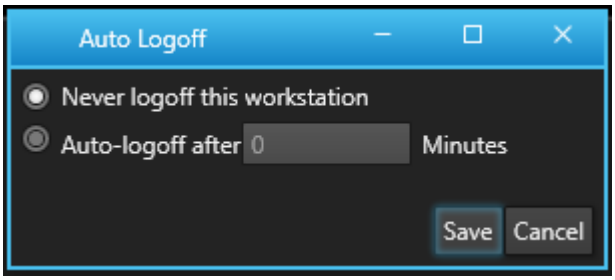
The configuration of the Auto logoff setting at the workstation level is done from the Remote Installer.

The configuration of the Auto logoff setting at the users level is done from the User Manager.

How to Configure the Auto Logoff Setting at the Workstation Level

1. Right-click the workstation.
2. Select **Configure Auto Logoff** from the contextual menu.

   The Auto Logoff window opens:



3. Set the Auto Logoff in one of the following ways.
   - To keep the Auto Logoff parameter set at the users level,

     Select **Never logoff this workstation**.

     This is the option selected by default on each workstation.

     Then, the setting from the User Manager will be taken into account.
   - To set the Auto Logoff parameter per workstation:

     1. Click the following radio button

.

     2. In the field, enter the period of inactivity after which the Auto logoff will happen for this workstation.

     Possible values: from **0** (Auto log off per workstation enabled but the user will never be logged off even if inactive) to **720** minutes (maximum period of inactivity before the user be logged off from this workstation).

     3. Click **Save**.

Summary of the Possible Options for Auto Logoff

Auto Logoff	Remote Installer configuration	User Manager configuration	Behavior
at users level, same period for all the users	Never logoff this workstation	Global + [0] minutes	The users will never be logged off.
	Never logoff this workstation	Global + [1-720] minutes	The users will be logged off after same period of inactivity [1-720] minutes.

Auto Logoff	Remote Installer configuration	User Manager configuration	Behavior
at the users level, period customized by user	Never logoff this workstation	User + [0-720] minutes (period can be changed by each user from General Settings in)	each user will be logged off after user-defined period [0=never to 720] minutes.
at the workstation level	Auto-logoff after 0 Minutes	Global or User + [0-720] minutes	the user logged on this workstation will never be logged off.
	Auto-logoff after 720 Minutes (from [1-720] minutes)	Global or User + [0-720] minutes	the user logged on this workstation will be logged off after [1-720] minutes of inactivity as defined in Remote Installer.

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 40.

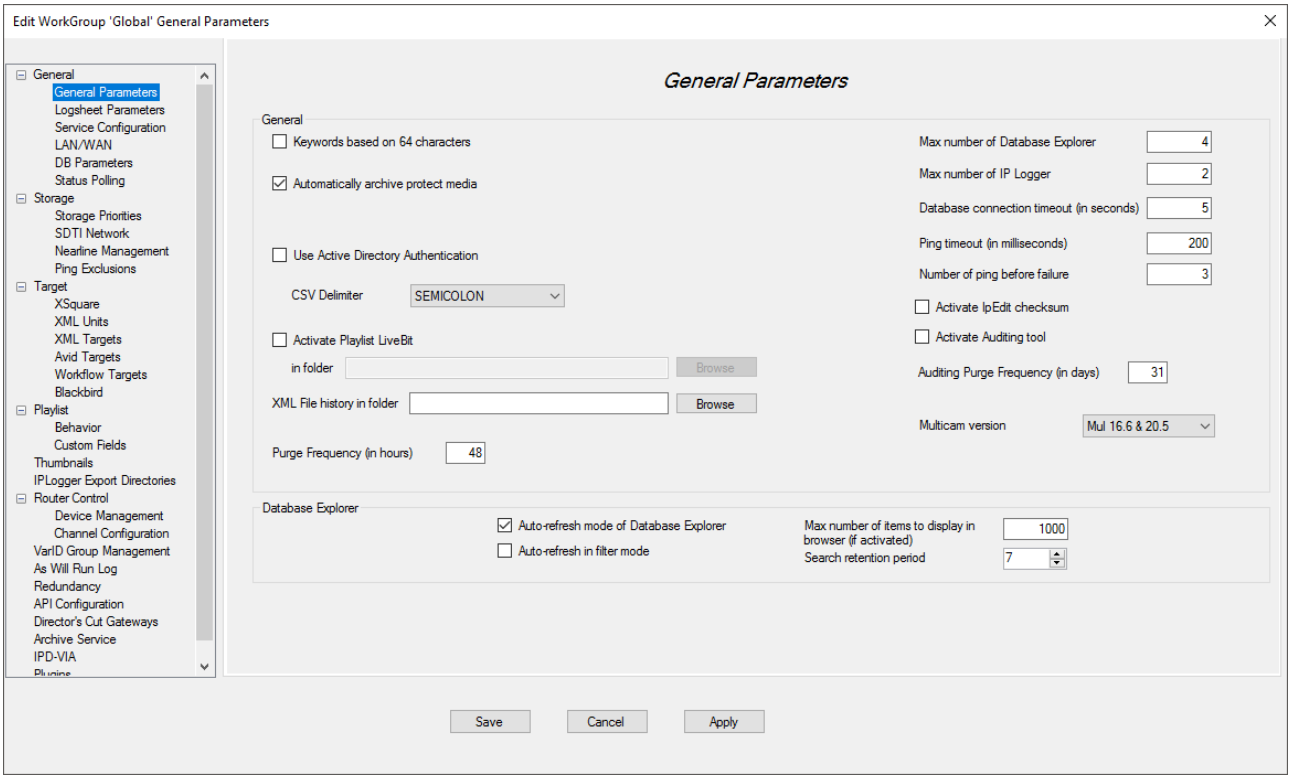
The Edit Workgroup window provides a series of tabs for the configuration of various parameters:

- **General**
  - **General Parameters**: parameter configuration used by the application.
  - **Logsheet Parameters**
  - **Services Configuration** defines the user used for logging services.
  - **LAN/WAN** configuration (for advanced network configuration).
  - **DB Parameters**
  - **Status Polling**
- **Storage**
  - **Storage Priorities** configuration used by the target engine and the software player.
  - **SDTI Network** configuration (logical server network creation).
  - **Near Line Management** configuration (defines static directories managed on the network).
  - **Ping Exclusions**: used to list all the IP addresses or hostnames that must be excluded from ping calls.
- **Target**
  - **Xsquare**: used to connect to VIA Xsquare, retrieve the list of VIA Xsquare targets from IPDirector applications and set a default template for backup to nearline/restore to XT operations.
  - **XML Units** defines which VIA Xsquare workstations will manage the transfer to targets defined from the Remote Installer.
  - **XML Targets** configuration (standard Send to, AVID TM export, Clean Edit export, server export and Final Cut Pro export).
  - **Avid Targets**: used to configure the Avid targets based on VIA Xsquare templates. Avid catalogs will be available as stream targets from the Channel Explorer and the Ingest Scheduler.

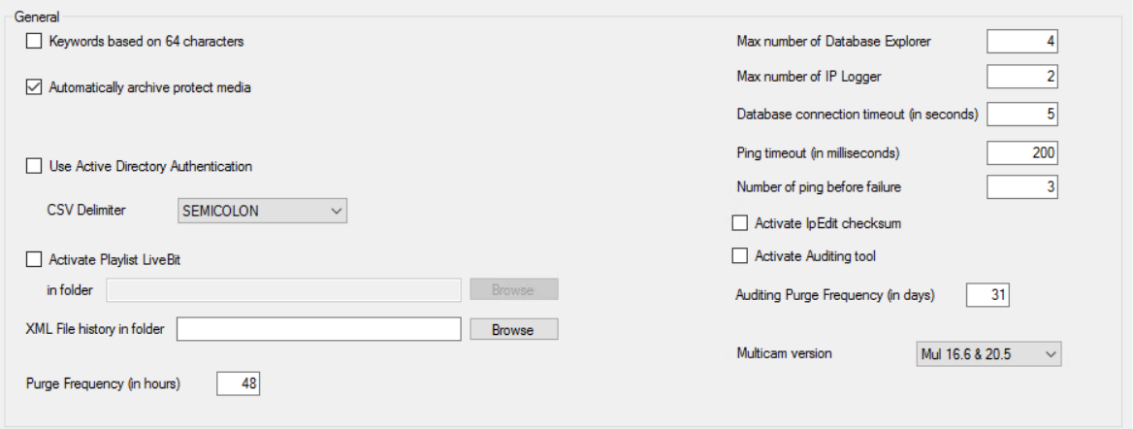
  - **Workflow Targets**: used to connect to a workflow engine and to define workflow targets which will be available from the IPDirector interface, based on workflow definition files stored on the workflow engine.
  - **Blackbird**: used to configure the parameters required for the integration of IPDirector with Blackbird, used for cloud editing.
- **Playlist**
  - **Behavior**
  - **Custom Fields** configuration (defines 6 headers of the playlist element metadata).
- **Thumbnails** configuration (defines the automatic thumbnail creation).
- **IP Logger Export Directories**: settings linked to Third Party logging export.
- **Router Control**
  - **Device Management**: used to declare the router to control. See section "Declaring the Router" on page 247.
  - **Channel Configuration**: 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 251.
- **VarID Group Management** configuration (organizes servers in varID groups).
- **As Will Run Log** configuration (defines PGM monitored and folder for the production playlist logging).
- **Redundancy** configuration (defines master/slave servers for IpEdit and Edit to Air).
- **API Configuration** (defines general parameters used by all the IP API services).
- **Director's Cut Gateways** configuration (defines the gateways to be managed).
- **Archive Service**: used to enable the archive process in IPDirector and to configure the archive system parameters and the archive database information. See section "Configuring the Archive Management Parameters" on page 252.
- **IPD-VIA**: used to configure the parameters required for used to configure the integration of IPD-VIA and IPDirector in the MediaCeption Signature solution.
- **Plugins**: used to configure the plugins which can be used from the IPDirector user interface and which involve a URL. See section "Plugin Management" on page 159.

2.7.2. General Parameters Configuration

Overview of the General Parameters Tab



General Section



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 with the logs. (No keyword synchronization between the IPDirector and the servers).

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

> 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.

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

> 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

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

Default value: disable.

Auditing Purge Frequency

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

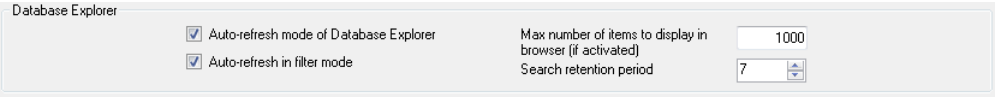
Default value: 31

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



Auto-refresh Mode of the Database Explorer

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

This also automatically refreshes the IPBrowse Bins pane.

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.

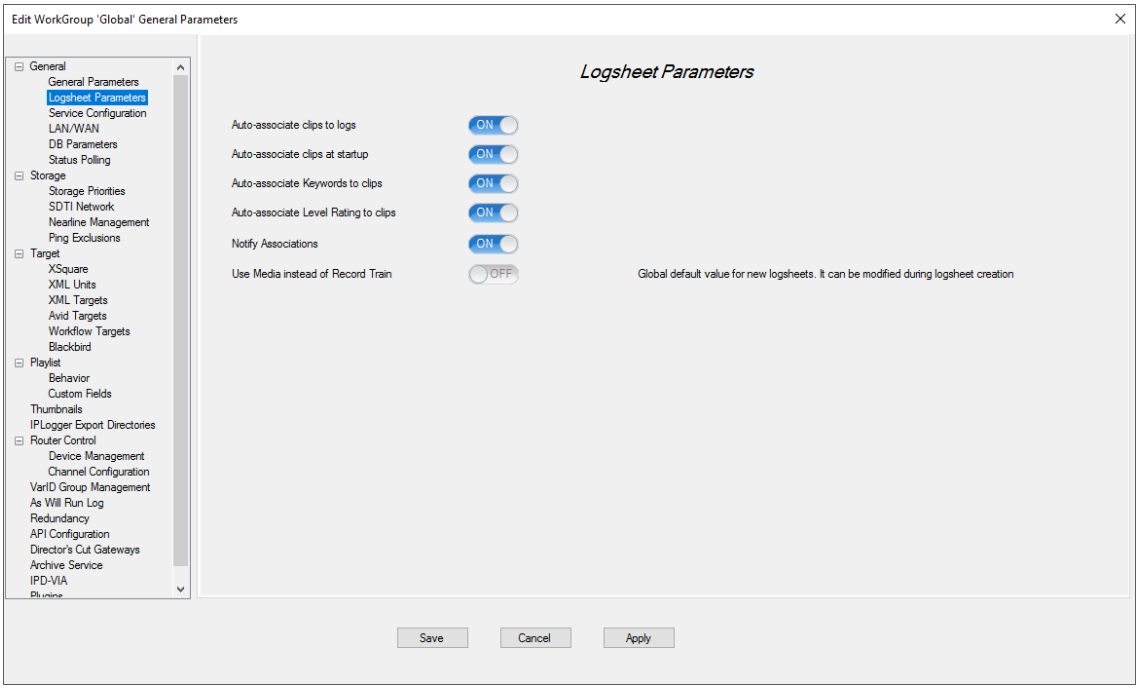
Default value: 1000

Search retention period

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

Default value: 7 (One week)

2.7.3. Logsheet Parameters



Auto-associate clips to logs

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

Default value: **ON**.

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: **ON**.

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: **ON**.

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: **ON**.

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: **ON**.

NEW ! **Use Media Instead of Record Train**

If this option is selected, when an ingest is associated with a logsheet from Ingest Scheduler, logs created from IPLogger will only be linked to the selected ingests and not to the record trains.

Therefore, in case of overlapping ingests, the logs will only refer to the ingest you are interested in and not to all the ingests.

Default value: **OFF**.

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.

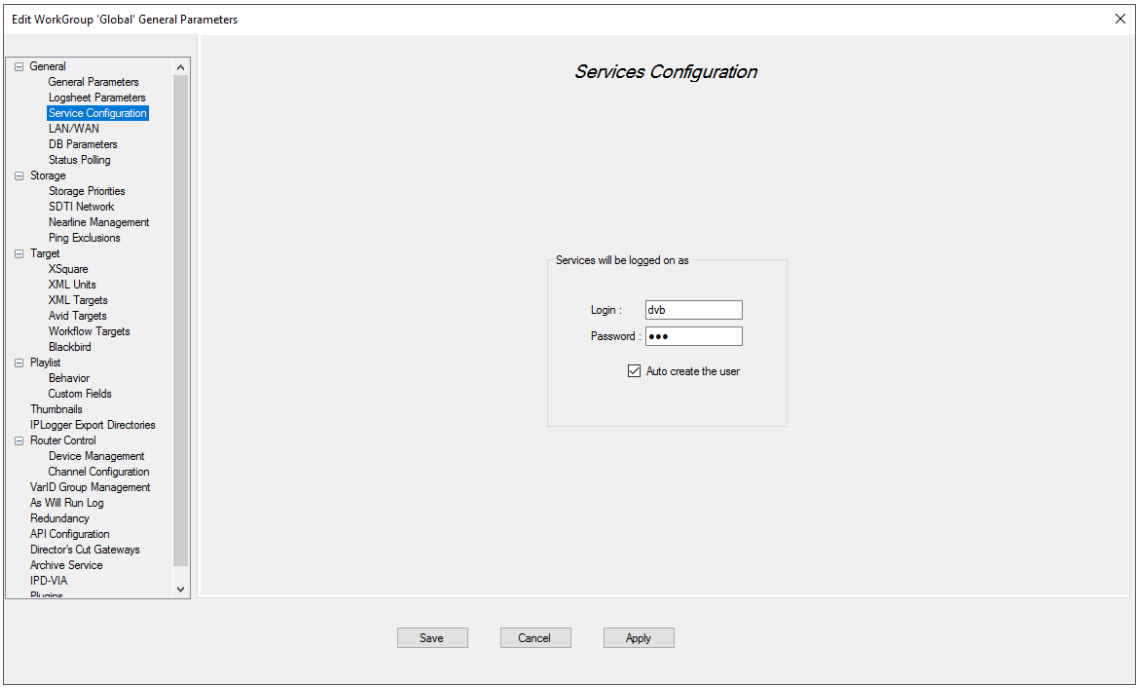
2.7.4. Services Configuration

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)

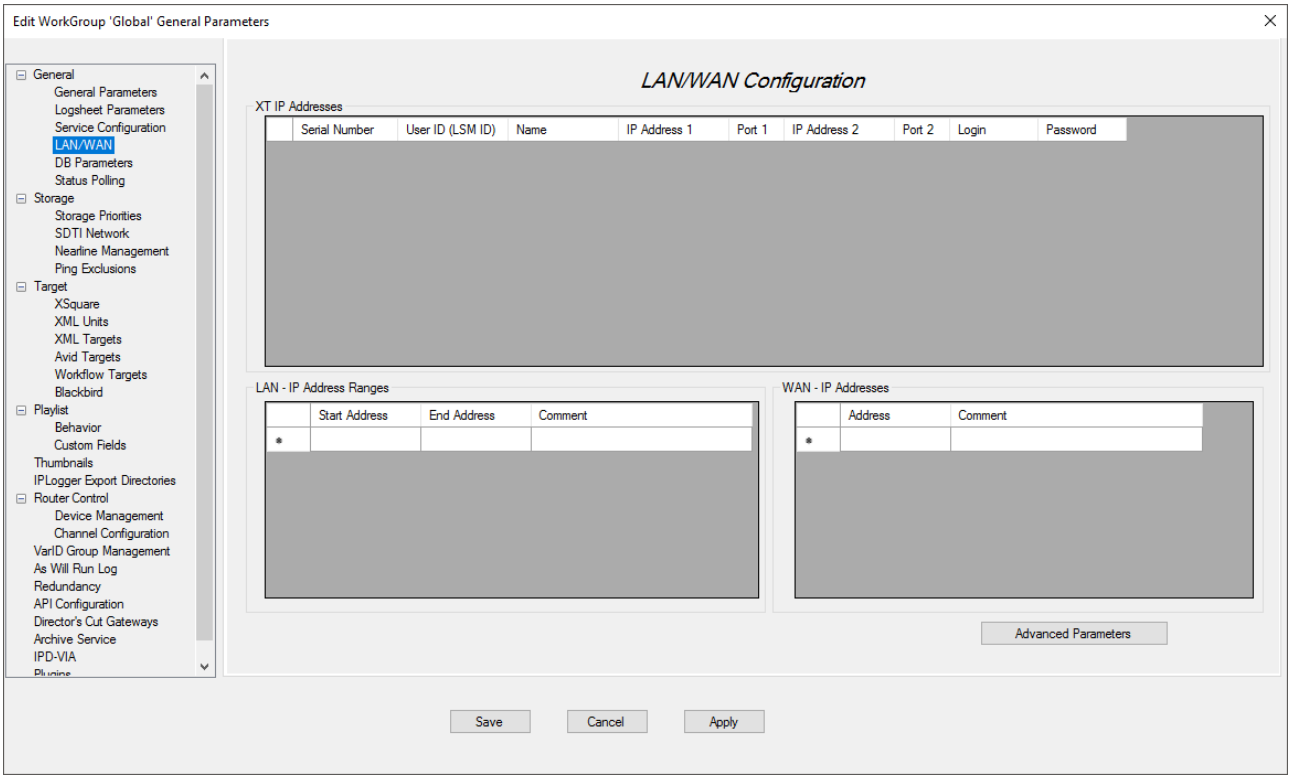
Auto create the user

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.

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

2.7.5. 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.

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.

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.

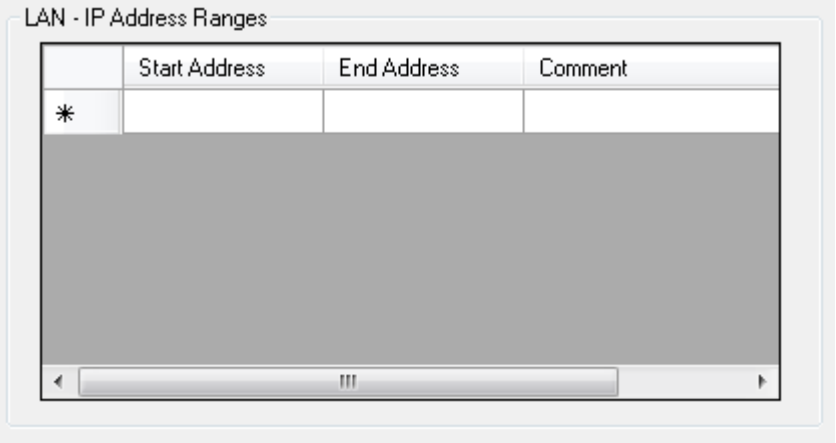
Please refer to the Server Software Technical reference manual.

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)



WAN – IP Addresses

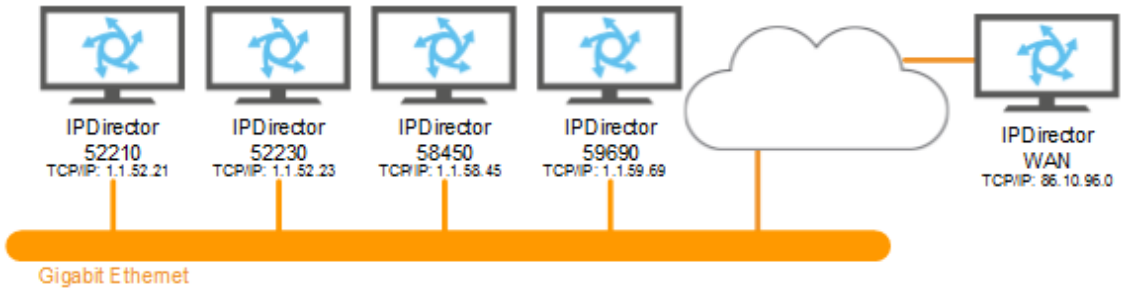
Local IPDirector workstations (LAN) communicate by Unicast with the distant IPDirector workstation(s) defined in the WAN section.

Default value: (blank)

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..

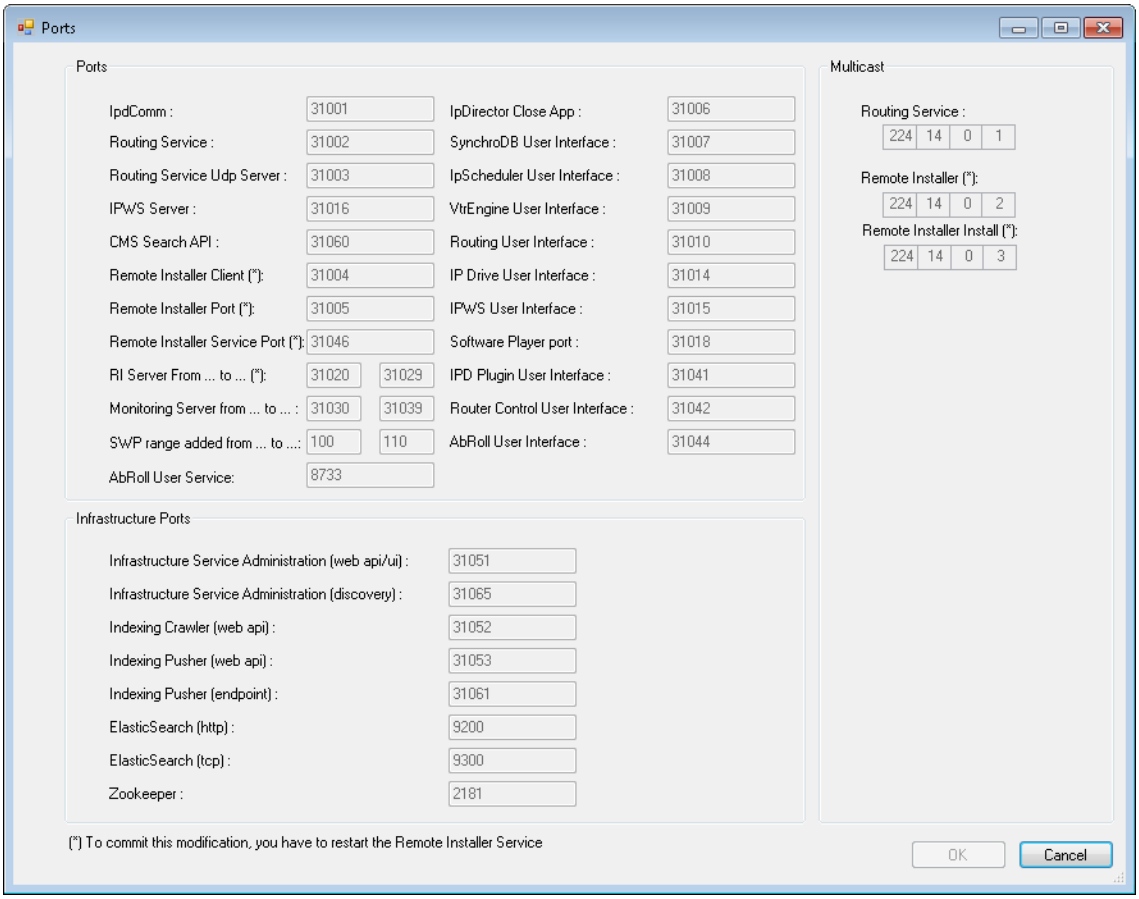
For example:

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

Ports	Default Values
IpdComm:	31001
Routing Service:	31002

Ports	Default Values
Routing Service Udp Server:	31003
IPWS Server	31016
CMS Search API	31060
Remote Installer Client (*):	31004
Remote Installer Port (*):	31005
Remote Installer Service Port (*):	31046
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

Infrastructure Ports	Default Values
ElasticSearch (tcp)	9300
Zookeeper	2181

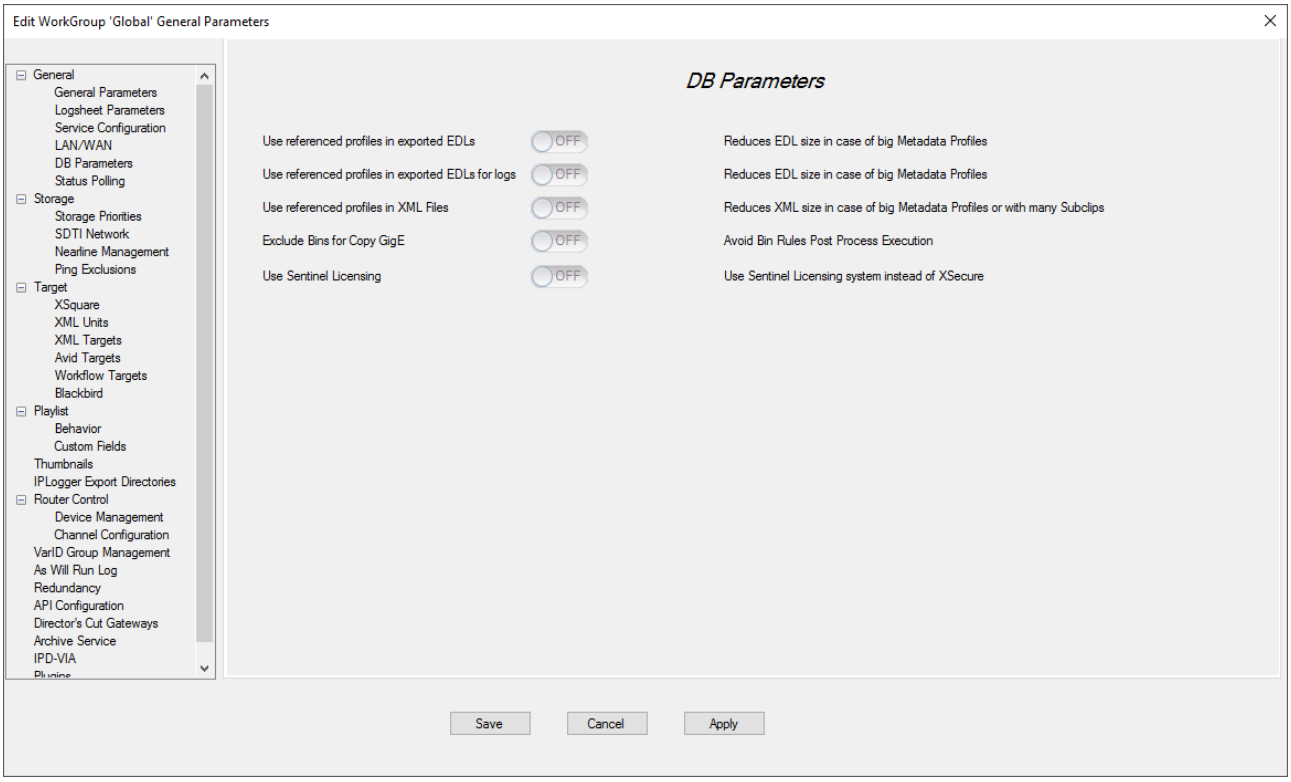
Multicast	Default Values
Routing Service	224.14.0.1
Remote Installer (*)	224.14.0.2
Remote Installer Install (*)	224.14.0.3

Inside the LAN, IPDirector workstations communicate by multicast.

(*): To commit these modifications, the Remote Installer service must be restarted.

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.

2.7.6. DB Parameters



Use referenced profiles in exported EDLs

This setting reduces the EDL size in case of big metadata profiles.

Use referenced profiles in exported EDLs for logs

This setting reduces the EDL size in case of big metadata profiles.

Use referenced profiles in XML files

This setting reduces the size of XML files in case of big metadata profiles or with many sub-clips.

Exclude bins for Copy GigE

When set to ON, this setting avoids post-process execution of bin rules.

NEW !

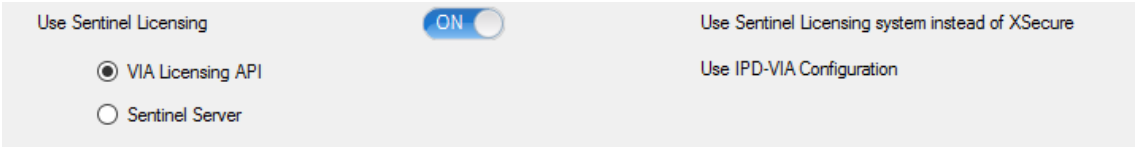
Use Sentinel Licensing

This setting defines whether you work with the XSecure licensing system (setting OFF) or with the Sentinel / VIA Licensing system (setting ON).

When the **Use Sentinel Licensing** parameter is selected, additional fields are displayed.

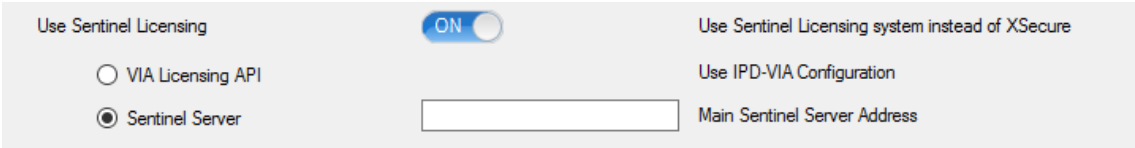
VIA Licensing API

In the MediaCeption Signature solution with IPD-VIA as PAM Core, this option is automatically selected. So, the system connects to the IP address of the IPD-VIA sentinel licensing server configured as described in section "IPD-VIA" on page 157.



Sentinel Server

This setting is selected when your IPDirector system works with a Sentinel licensing server rather than XSecure.

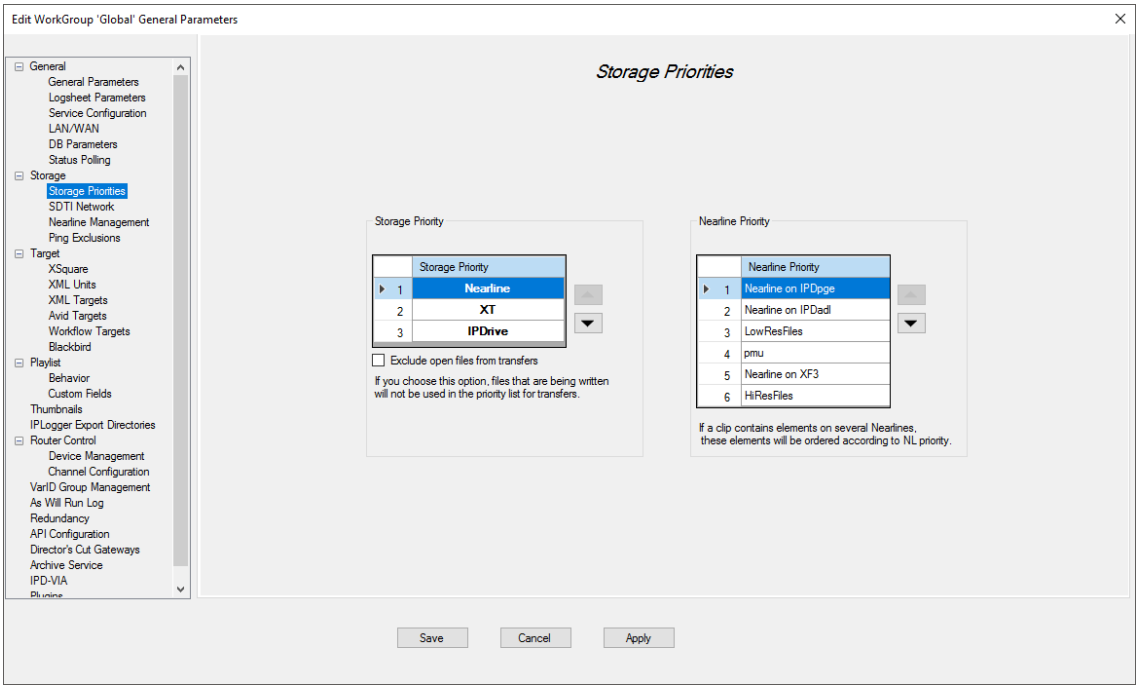


In this field, enter the IP address of the server hosting the Sentinel licenses.

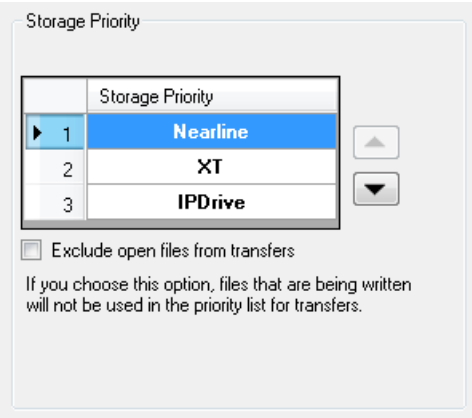
2.7.7. Storage Priorities Configuration

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.

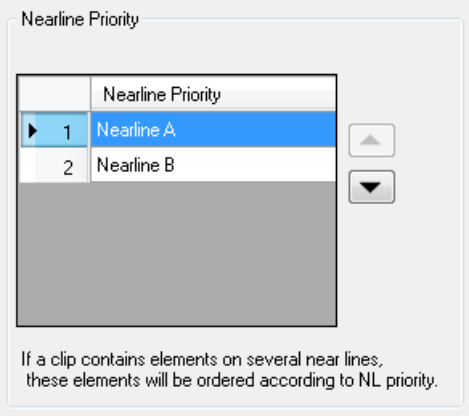
If **XT** is set to priority 1, the high resolution XT clip is backed up to the target or nearline.

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.

2.7.8. SDTI Network Configuration

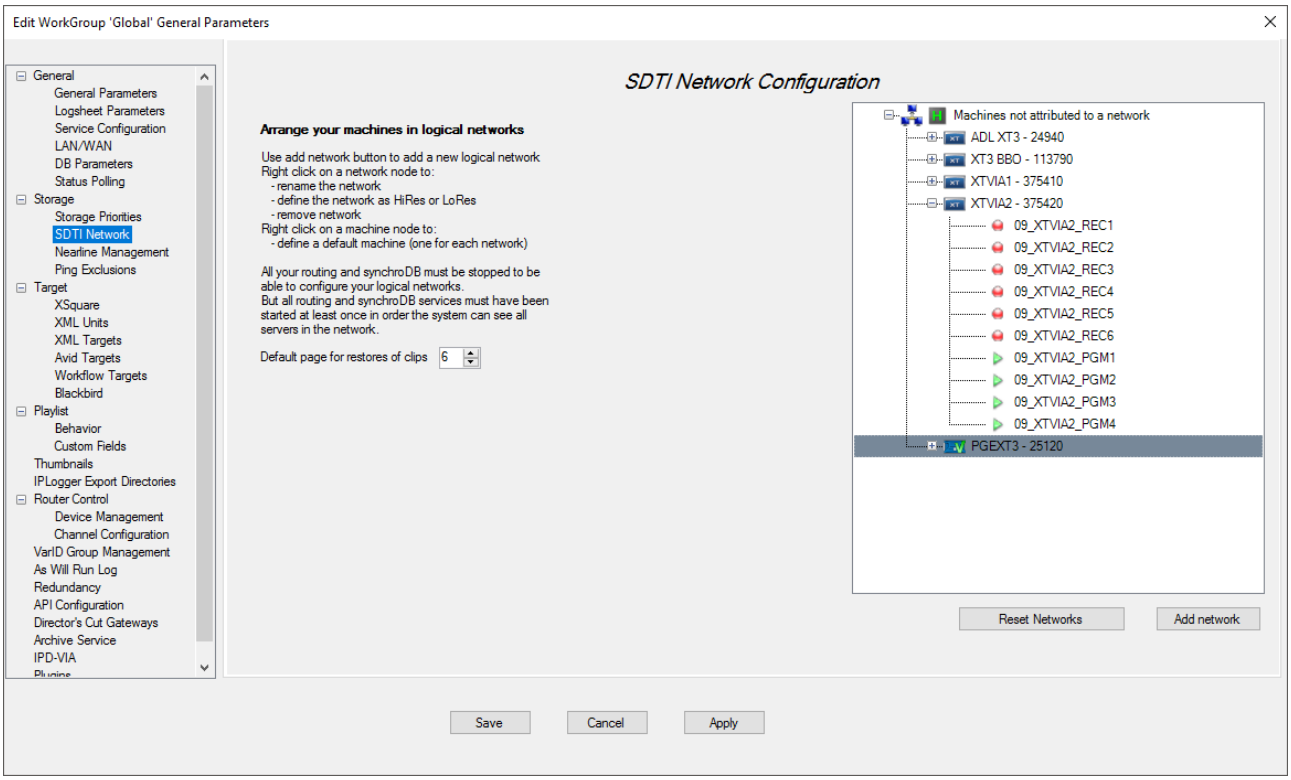
Purpose

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 81 for details.

Overview of the SDTI Network Tab

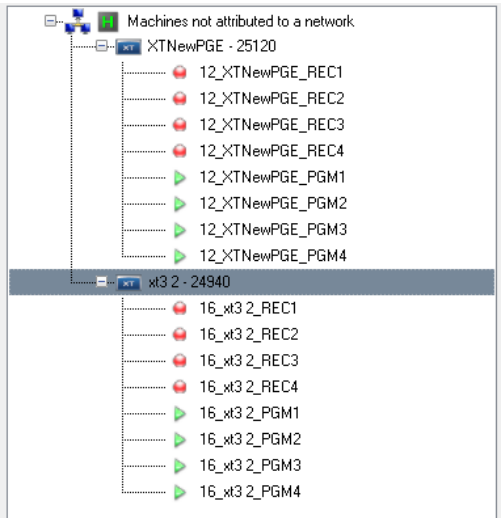


All Services (IPD-Routing, SynchroDB, IPDirector, IP-Scheduler, VTR Engine, IP Drive, IP API and Router Control) must be stopped to visualize this tab.

However, the services (IPD-Routing and SynchroDB) must have been started once before to list the servers within the IPDirector database.

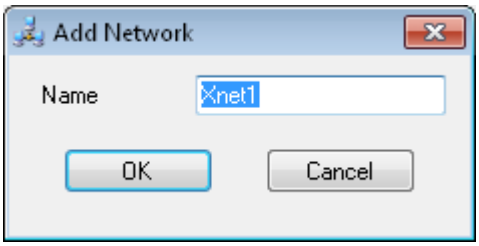
How to Add a Network

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

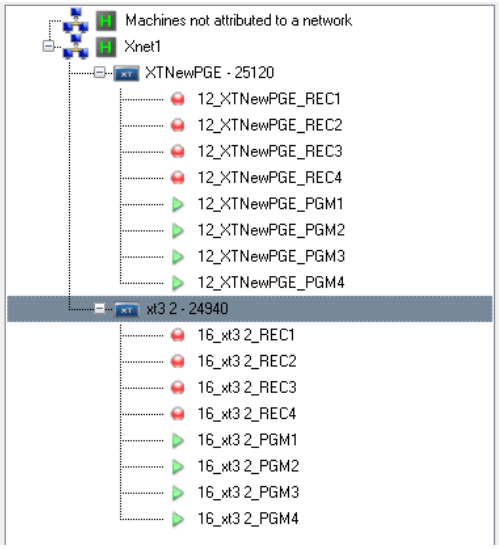


1. Click the **Add Network** button:

   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 6

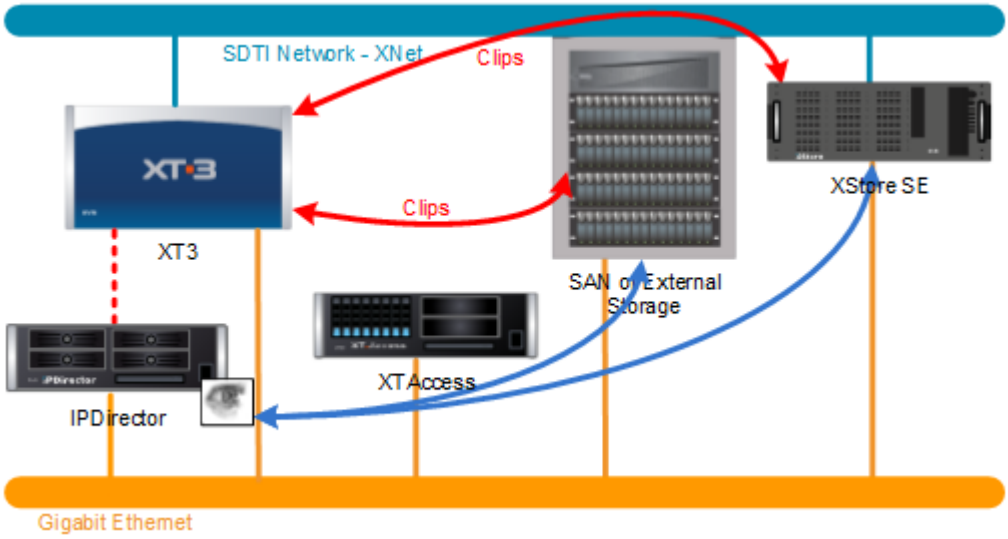
2.7.9. Nearline Management Configuration

Introduction

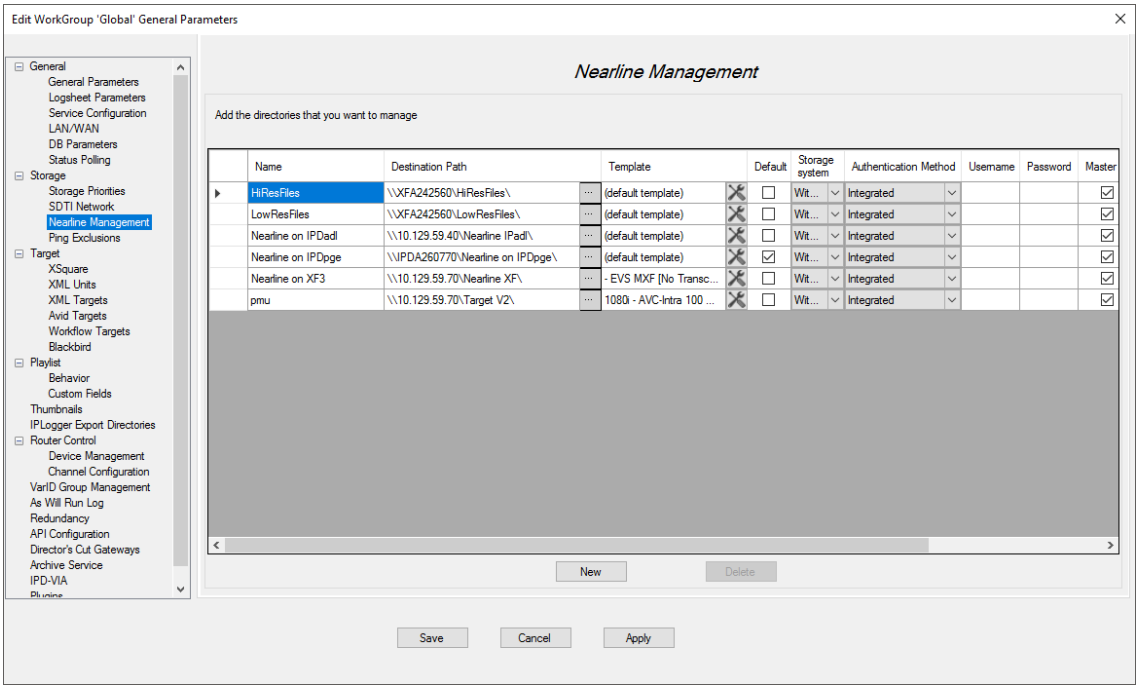
Purpose

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.



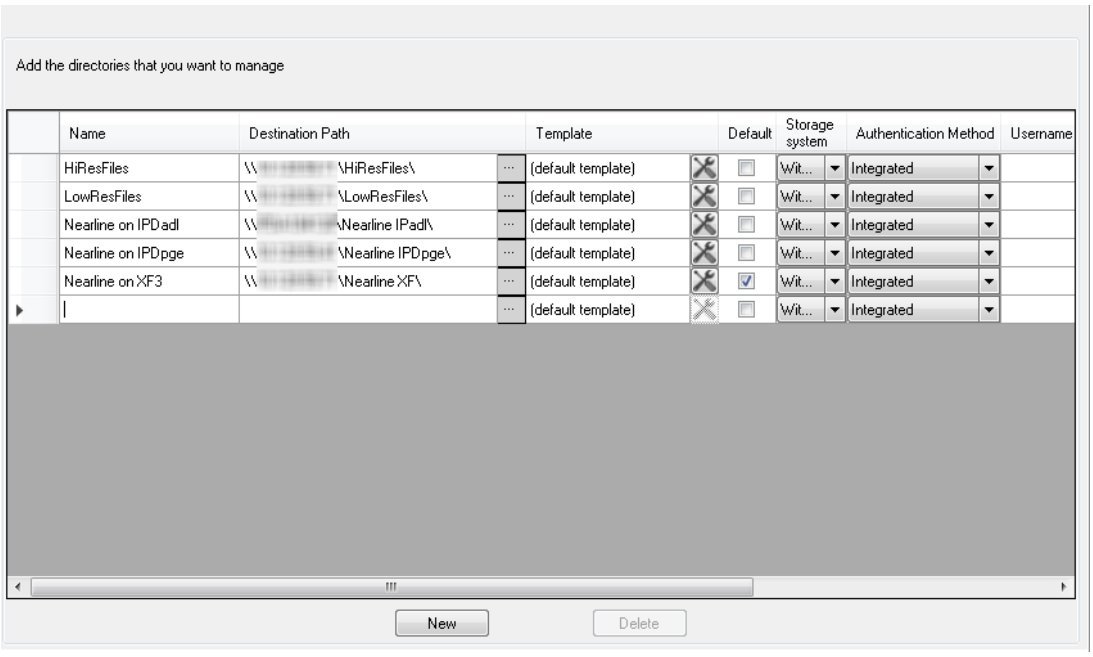
Overview of the Nearline Management Tab



Creating a New Nearline Directory

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

   A new line is added to 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.

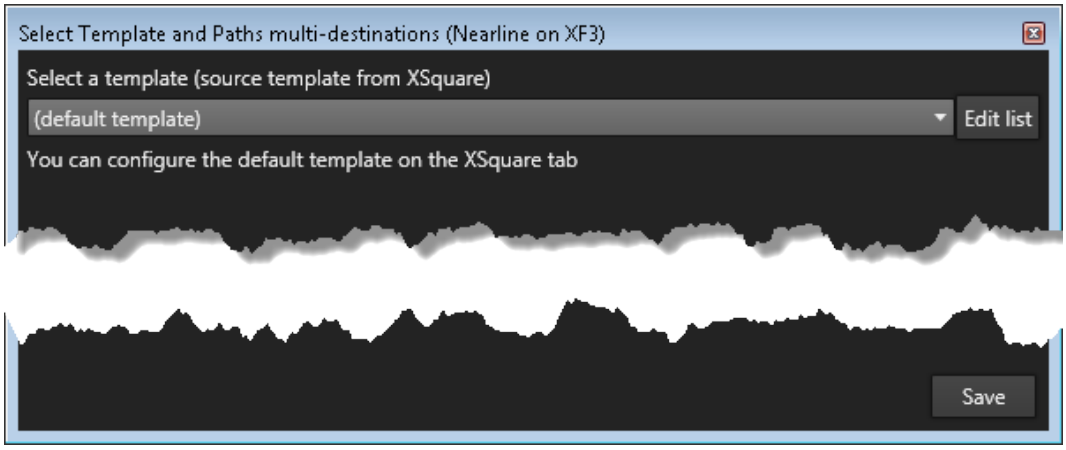
> Only UNC DNS name or IP address path are valid. (Ex: \\MachineName\Target\, \\1.1.1.100\Target\)
>
> No local path is valid.

> 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.

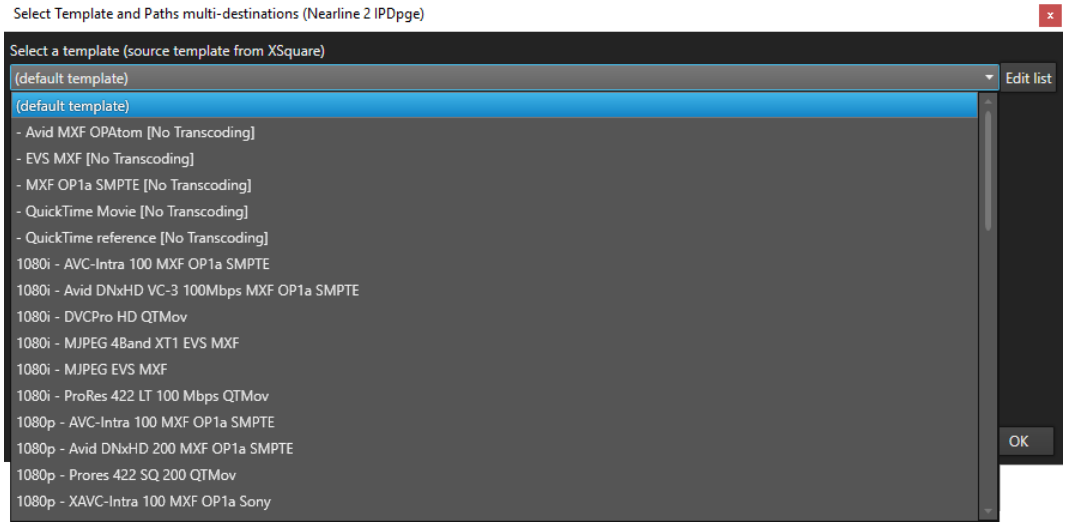
4. Select an Xsquare template that will be used for backup to / restore from nearline operations. This can be:
   - the template selected as default template from the Xsquare tab (see section "Xsquare Parameters Definition" on page 91). Then, go to step 7.
   - another Xsquare template: proceed with steps a to e below.

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

   The Select Template and Paths Multi-Destinations window opens:

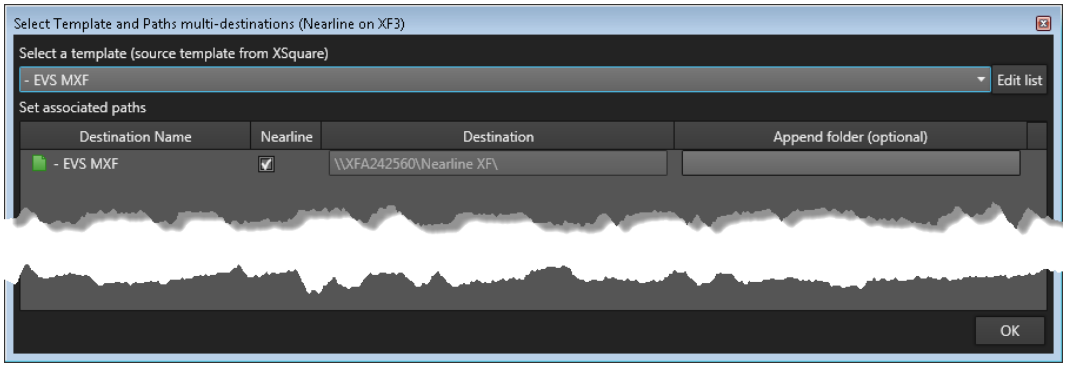


b. Click the arrow next to the **Template** field to display the list of available templates:

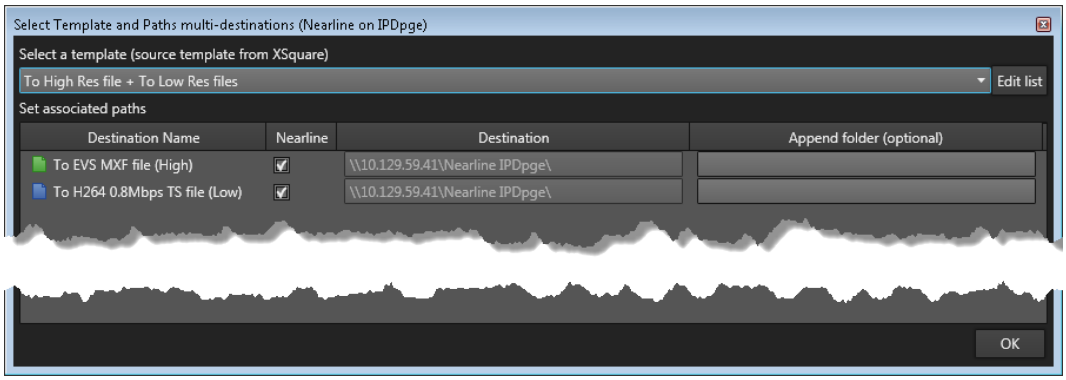


c. Select a template.

The selected template is listed in the window, as well as the nearline destination path:

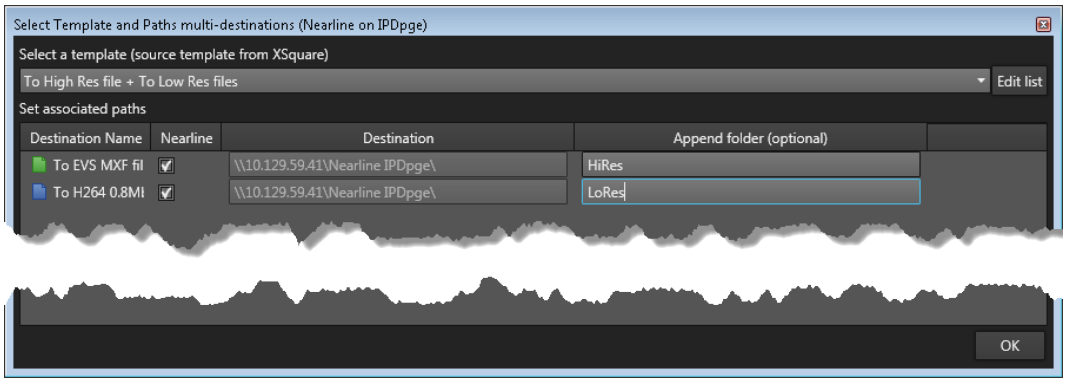


In case of a multi destinations template, several lines are displayed:



d. (optional) If you want to send the files to a sub-folder, enter the sub-folder name in the **Append folder** field.

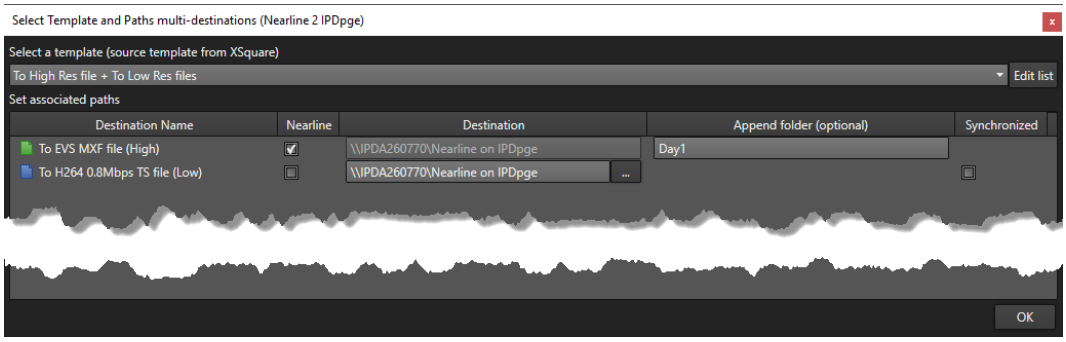
In case of a multi destinations template, ilf you want to send a hi-res file and its corresponding lo-res file to distinct folders, enter the folder names in the **Append folder** fields.



e. In case of a multi destinations template, to synchronize the backup to nearline operations to one or several destinations,

1. In the Nearline column, only keep selected the nearline the settings of which will be applied to one or several destinations.

A **Synchronize** checkbox becomes available.



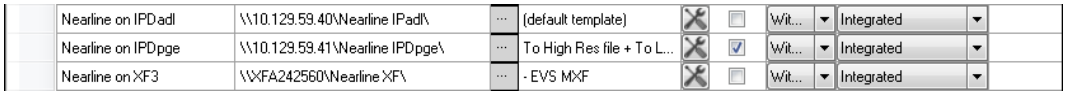
2. Select the **Synchronize** option.

The lo-res nearline will then follow the same path hierarchy than the one defined for the hi-res nearline. The Append folder will be taken into account as well.

The folders will be created as soon as a clip will be backed up to the selected nearline.

f. Click **OK**.

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



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.

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.

> 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.

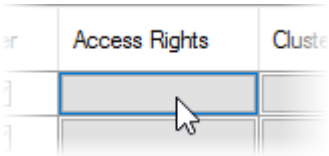
   If the authentication method is set to **Integrated**, the password is not taken into account.
10. (optional) Select the **Master** option to generate and update XML Metadata files on the nearline.
    - If selected, the clip metadata are updated on the nearline.
    - If cleared, the clip metadata are modified in the IPDirector database only.

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

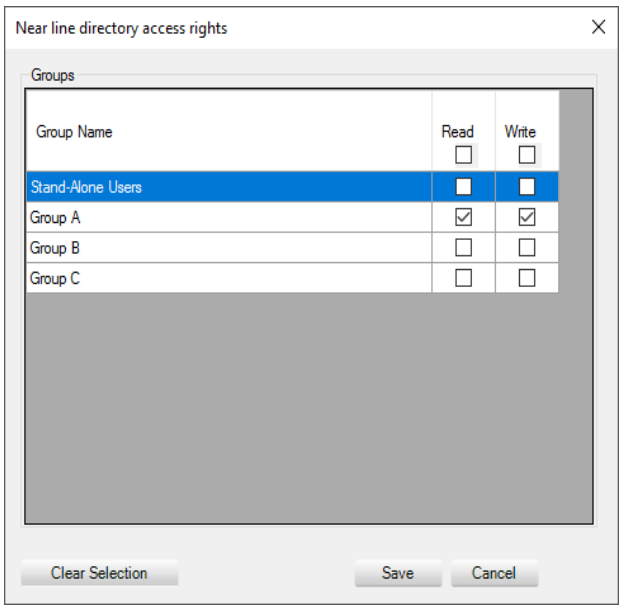
11. Set the access rights to the nearline directory.

    Groups and user rights must have been defined from the User Manager application.

    a. Click in the **Access Rights** cell on the nearline line



    The Nearline Directory Access Rights window opens.



    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).

- Select / clear the **Read** or **Write** checkbox at the top of the list to select / unselect all the groups at once.
- Click the **Clear Selection** button to clear all checked boxes.

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

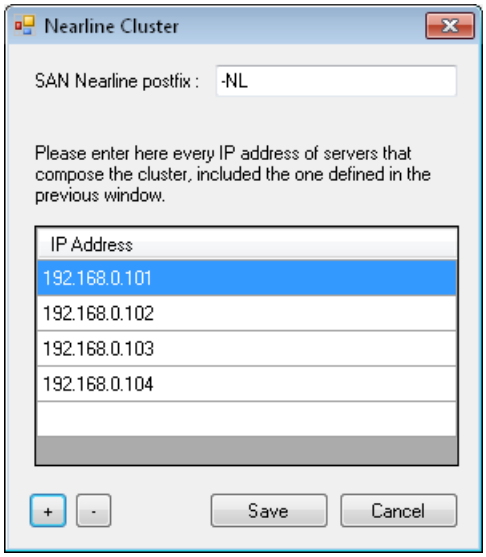
12. (optional) Define the Cluster configuration

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.

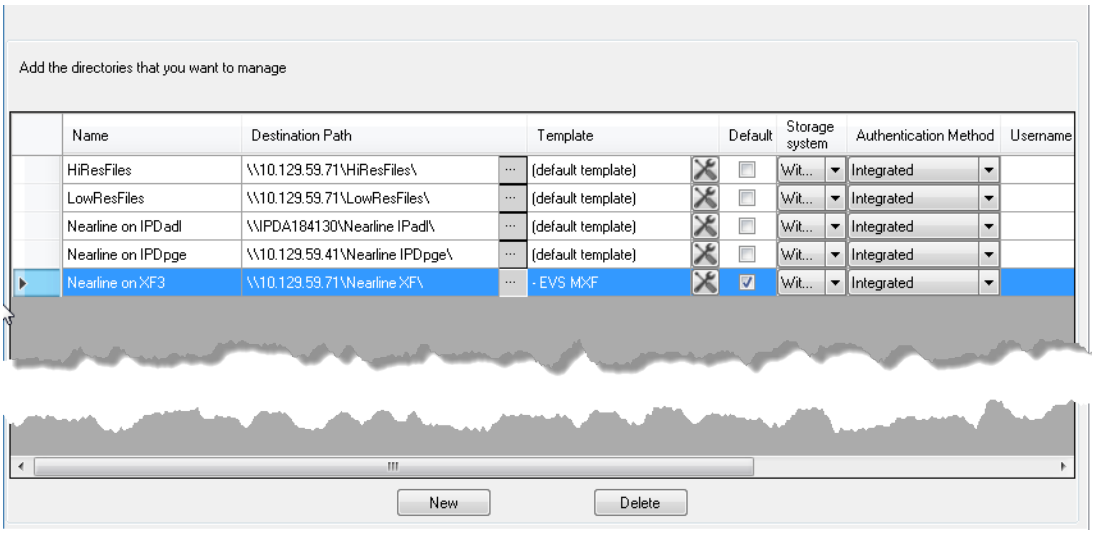
f. To delete a line, select it and click -.

g. Click **Save**.

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

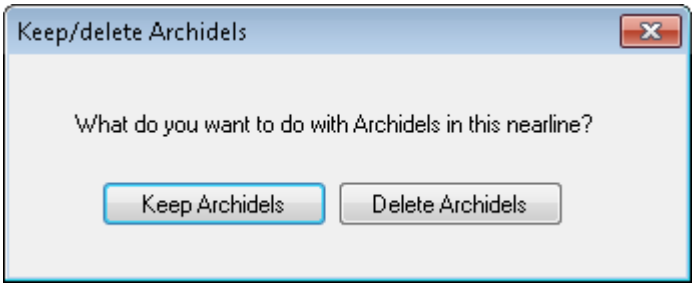
Deleting a Nearline Directory

1. Click on the nearline line to select it.



2. Click the **Delete** button.

   The Keep / Delete Archidel window opens:

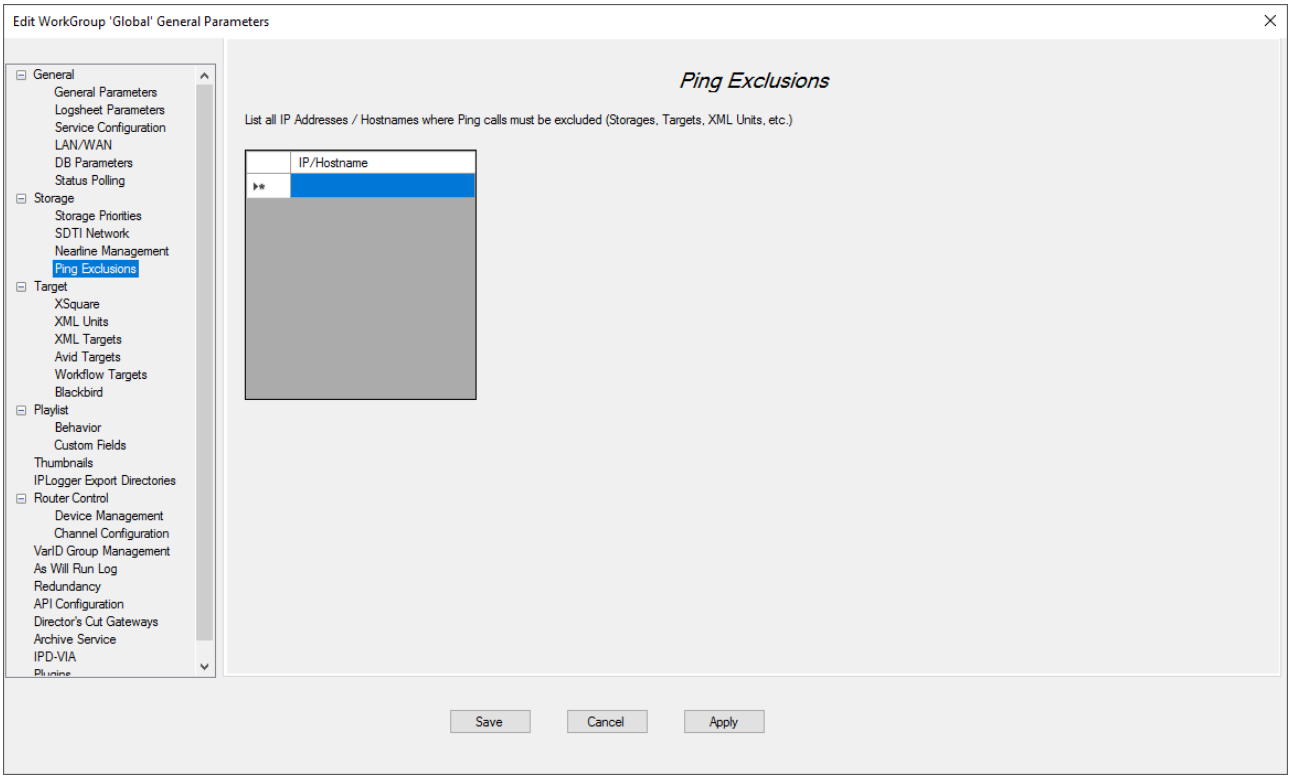


3. Click one of the buttons:
   - **Keep Archidels**: the reference to the nearline files which have been archived by the HSM on the tape library will be kept. This allows a future restore on nearline in case the nearline storage is made available again later on, or a restore on another nearline.
  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

2.7.10. Ping Exclusions

From this tab, you can list all the IP addresses or hostnames that must be excluded from ping calls.

This can be useful when there is a problem during a failover of an XStore component.



2.7.11. Xsquare Parameters Definition

Context of Use

Targets defined in VIA Xsquare, also called SOAP jobs, are available in IPDirector to send media items to (send to (VIA 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 VIA Xsquare templates.

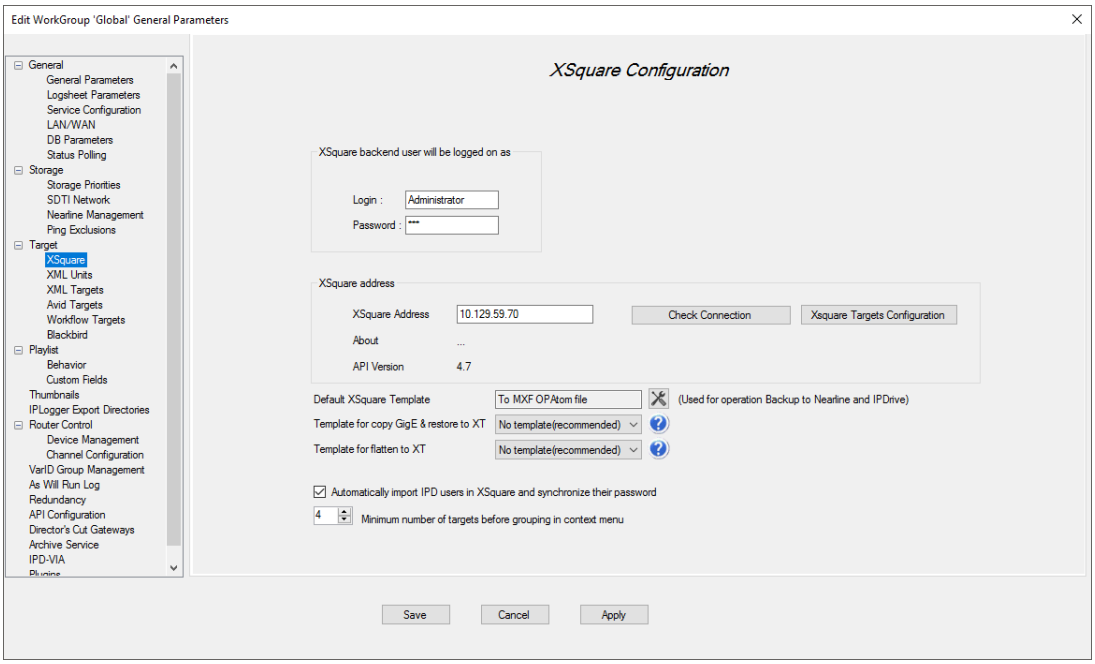
All these operations are possible provided that VIA Xsquare has been declared in the Remote Installer and that it is reachable.

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

The nearline configuration, with the selection of an VIA Xsquare template, is described in section "Nearline Management Configuration" on page 81. The configuration of the IPDrive service, with the selection of an VIA Xsquare template, is described in section "Configuring IP Drive" on page 183. The selection of a default template is done from the VIA Xsquare tab.

How to Set VIA 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 VIA Xsquare in the **Xsquare Address** field.
5. Check the connection with VIA Xsquare by clicking the **Check Connection** button.

   The result is written in the **About** field.

   The **API version** information shows the required VIA Xsquare API version. It is written in DB and cannot be edited.

6. (optional) To edit the Xsquare targets set from Xsquare, click the **Xsquare Targets Configuration** button.

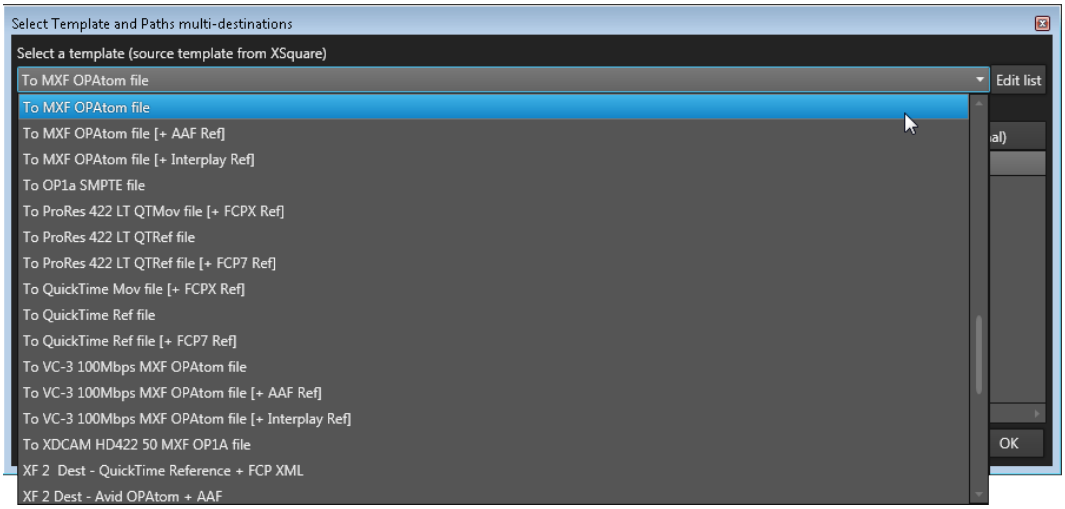
   The VIA Xsquare Targets Browser window opens and displays the list of Xsquare targets pre-defined in VIA Xsquare and published to the user currently logged in the Remote Installer.

7. Select a VIA 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.

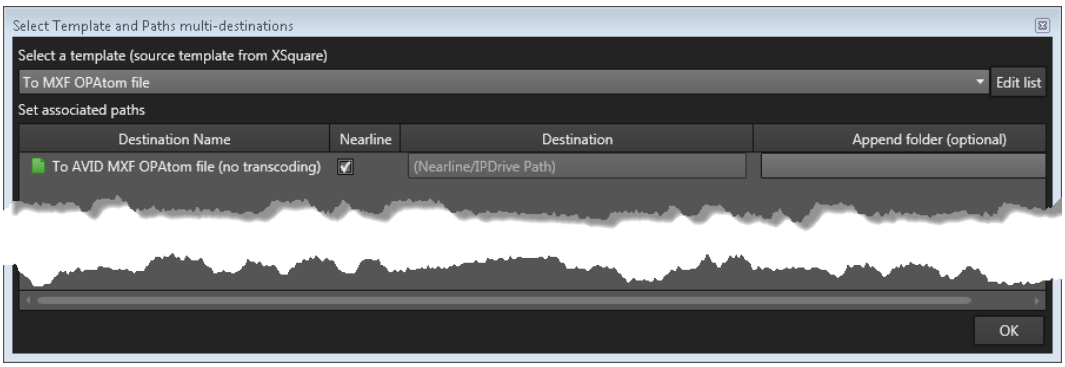
      The Select Template and Paths Multi-Destinations window opens.

   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:

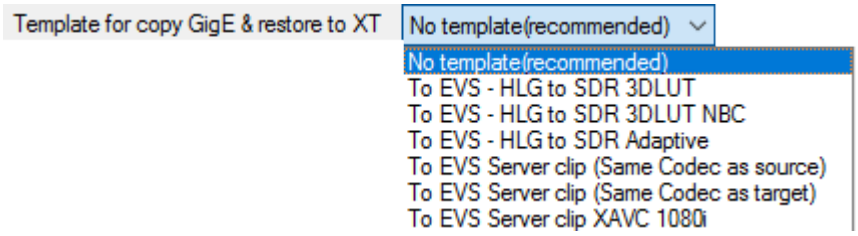


   d. Click **Save**.

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

> 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 81) or in the IPDrive configuration of the local workstation (see section "Configuring IP Drive" on page 183).

8. Select a VIA 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.
9. Select a VIA Xsquare template that will be used for flatten to XT operations.
   a. Click the arrow next to the **Template for flatten to XT** field to display the list of available templates.
   b. Select a template.
10. (optional) Select the **Automatically import IPD users in Xsquare and synchronize their password** option so that user names and passwords created in IPDirector User Manager are automatically imported into VIA Xsquare when a user logs in to IPDirector.

    The user automatically belongs to the **Xsquare users** group in VIA Xsquare and has visibility on the targets published to that group.

    In case a user changes the IPDirector password, this will be updated in Xsquare upon logging in to IPDirector.

    By default, the option is cleared.
11. Set the parameter **Minimum number of targets before grouping in contextual menu**.

    When the number of VIA Xsquare targets reaches this setting, targets will be grouped in a sub-menu in the Send to menu of the Database Explorer.

    Default value: 4

    Minimum value: 2

Constraints for the Configuration of Targets in VIA Xsquare

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

Creation of VIA Xsquare Roles

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

- A VIA 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 VIA Xsquare Groups

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

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

Creation of VIA Xsquare Users

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

- This step must be done if the **Automatically import IPD users in Xsquare and synchronize their password** option is not selected.

  Users must be created in VIA Xsquare, so each IPDirector user has a VIA Xsquare account with the same access codes (login/username and password) in both applications.
- The VIA 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 VIA Xsquare.

Publication of Targets

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

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

2.7.12. XML Unit Configuration

Introduction

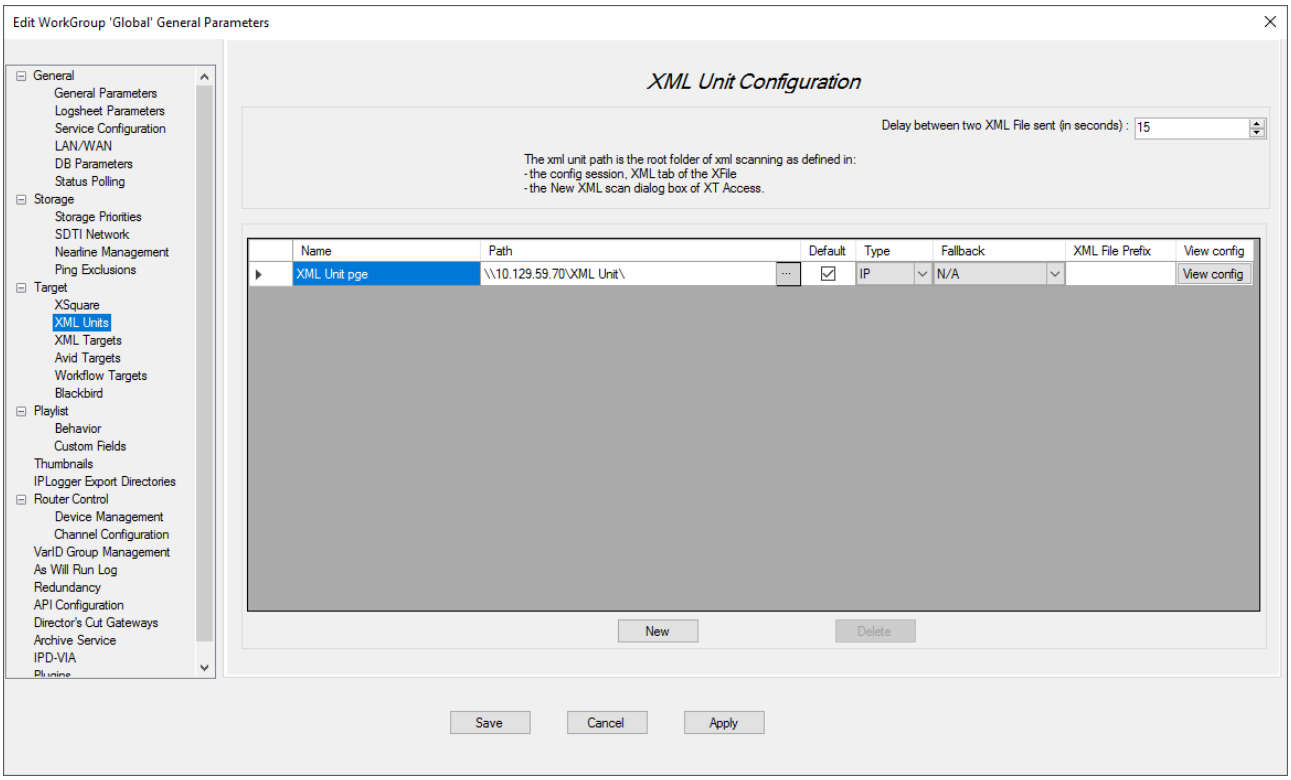
Purpose of XML Unit

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.

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.

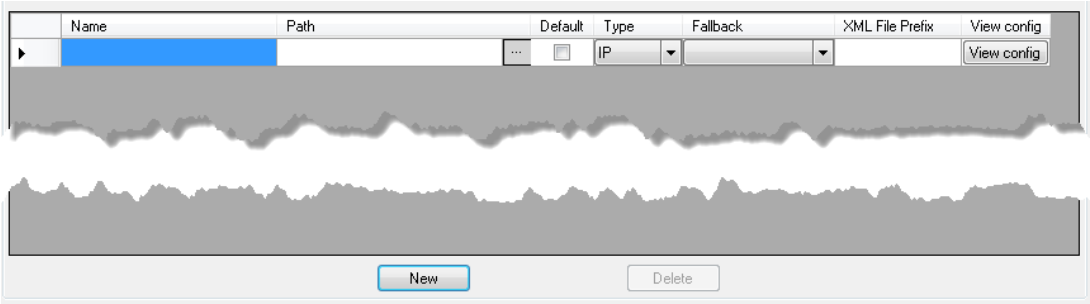
A XML unit (type SDTI) is an XML folder located on one XF workstation where all XML files (corresponding to a backup request, a clip export to a CleanEdit, AVID system, FCP system or Nearline) will be sent.

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.

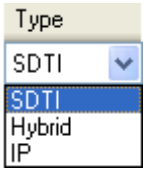
3. Click the **Browse** button ... in the **Path** column to select the folder where the XML files will be sent.

   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.

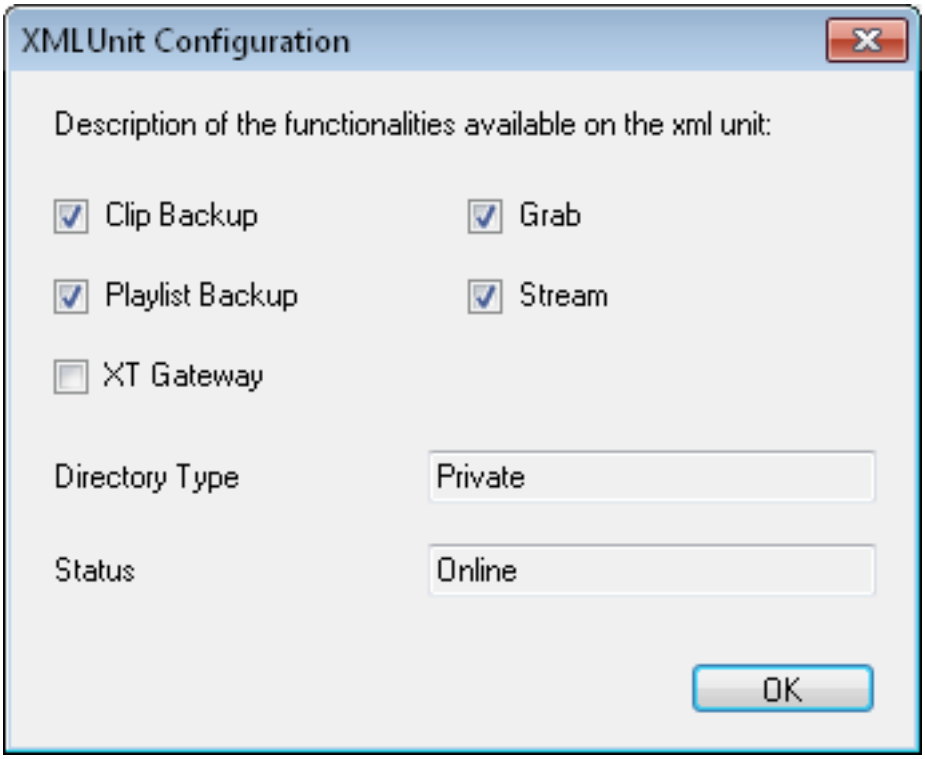
     Please refer to the Xsquare user manual.

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).

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

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 98 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.

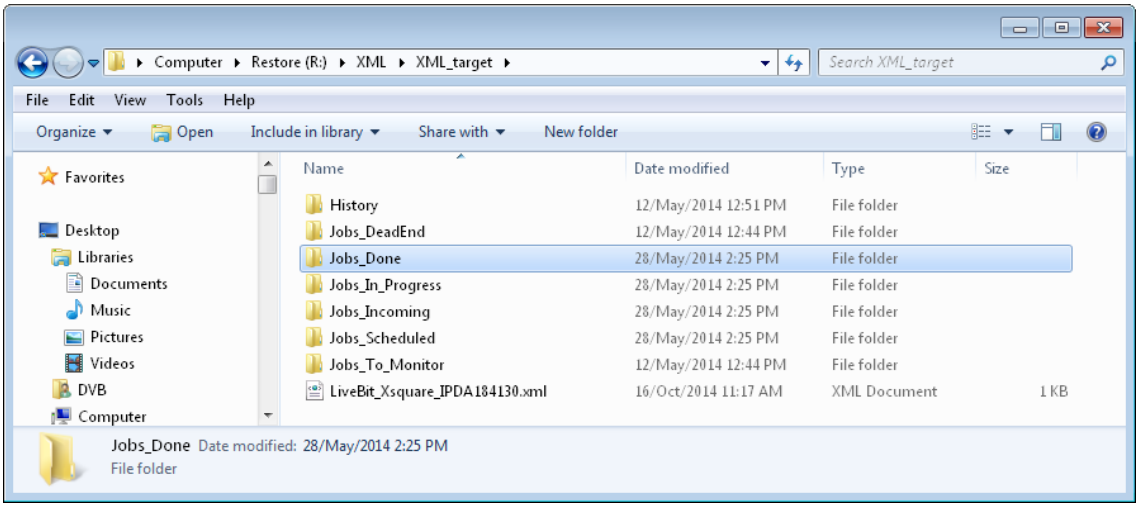
What is the XML Unit LiveBit?

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

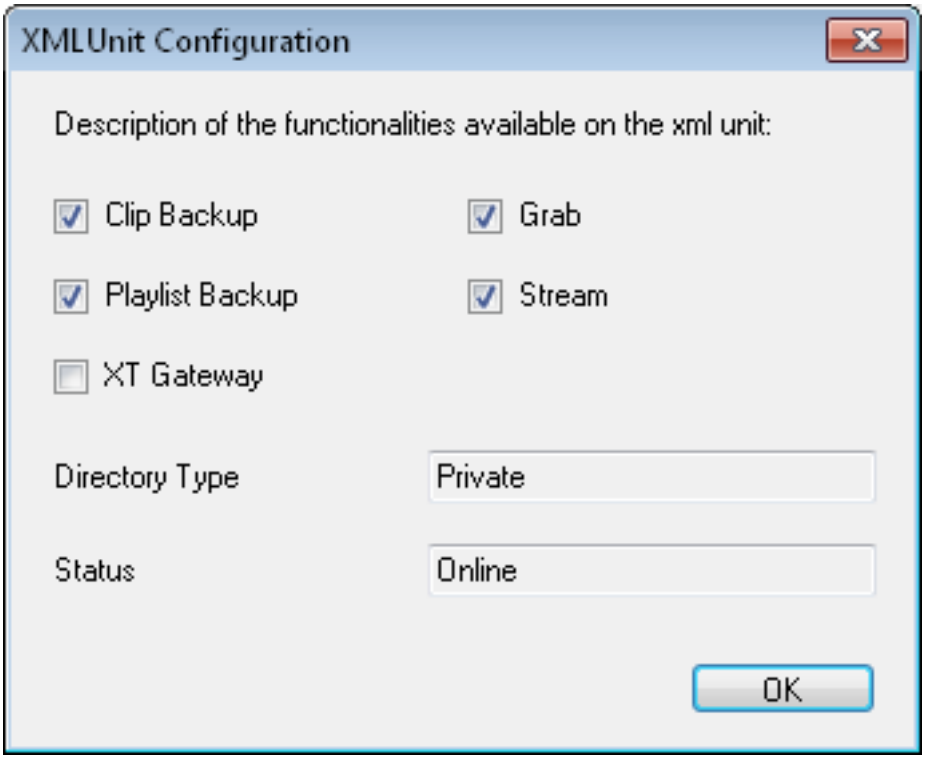
This file is refreshed every 30 seconds and updates its status and capabilities.

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:

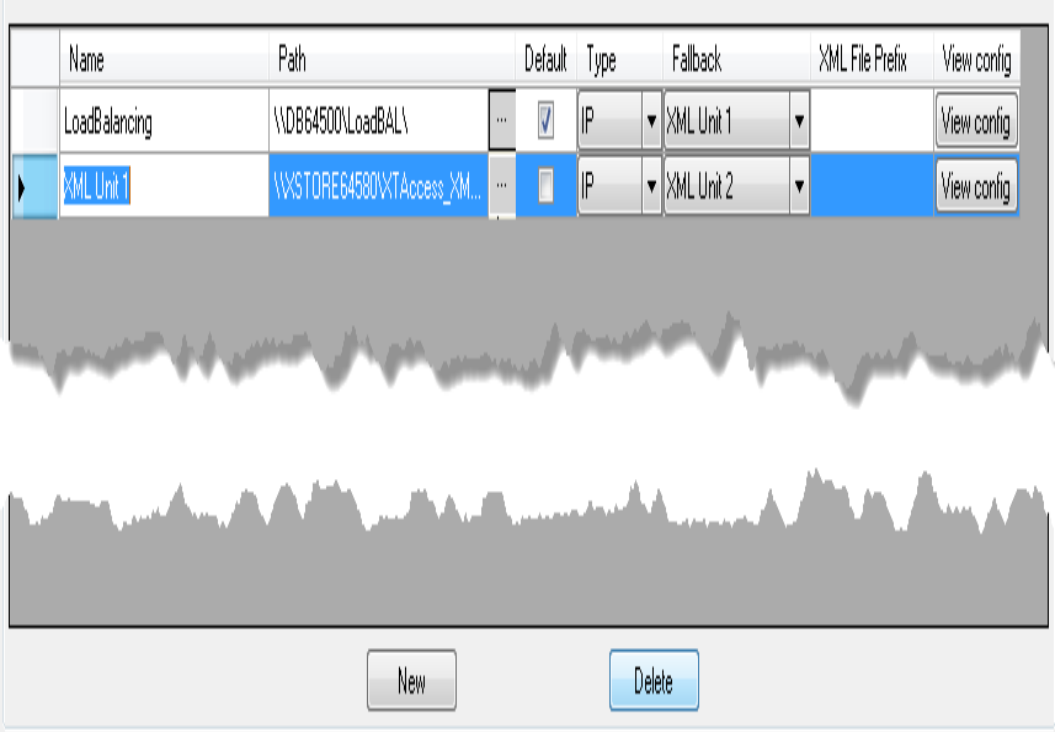


The status is **Online** or **Offline** and the Directory Type is **Private** or **Load Balancing**. The functionalities available on the XML Unit are shown with selected boxes.

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.

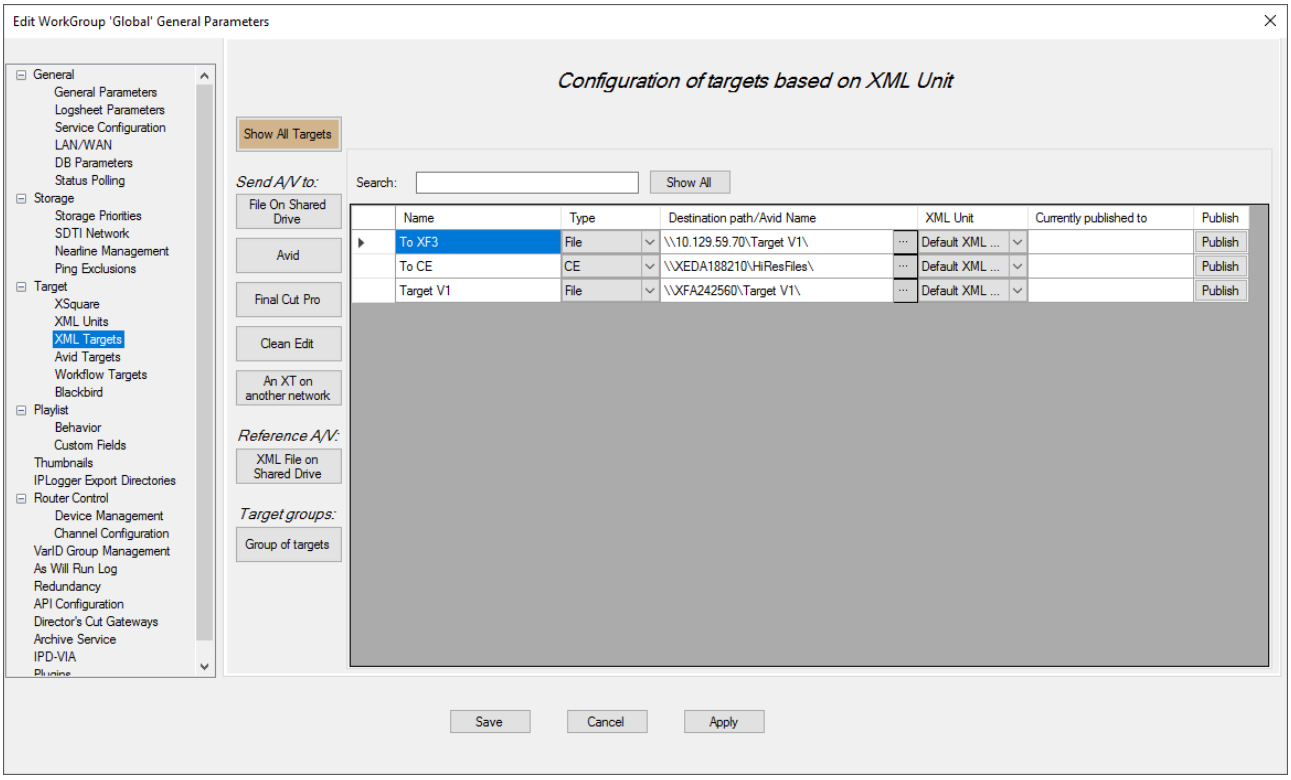
   b. Click **No** to keep the XML Unit line and abort the delete order.

2.7.13. XML Targets Configuration

Overview of the XML Targets Tab

This tab is used to configure all the different targets based on XML unit from the same place.

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



Show All Targets

Displays all configured XML 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.

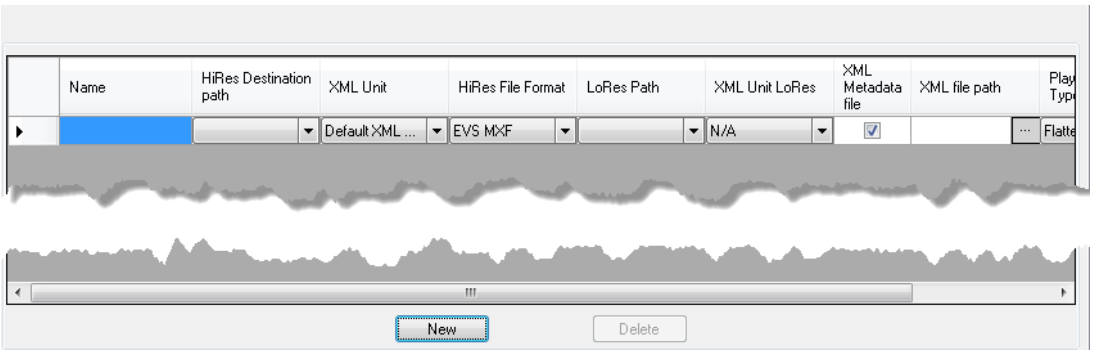
Click the **File on Shared Drive** button on the left to access the File on Shared Drive configuration parameters.

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.

> 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.

> 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.

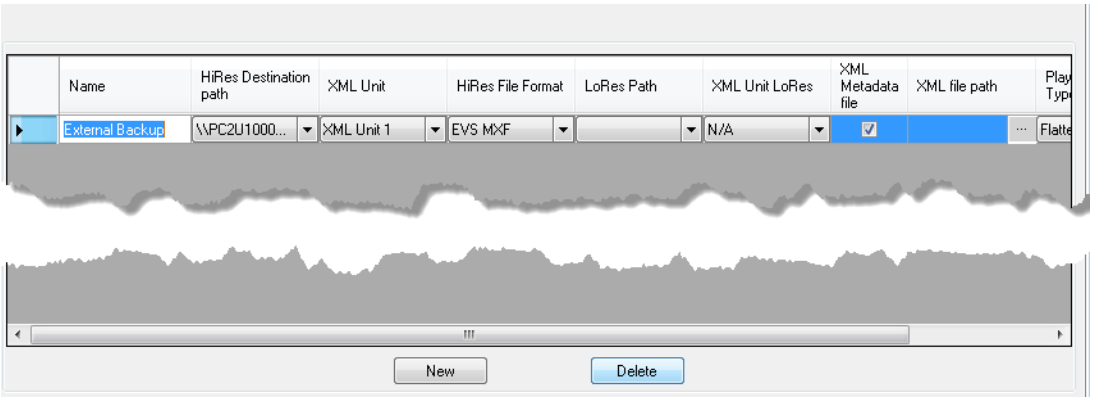
9. Select the backup type of the playlist:

- 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.



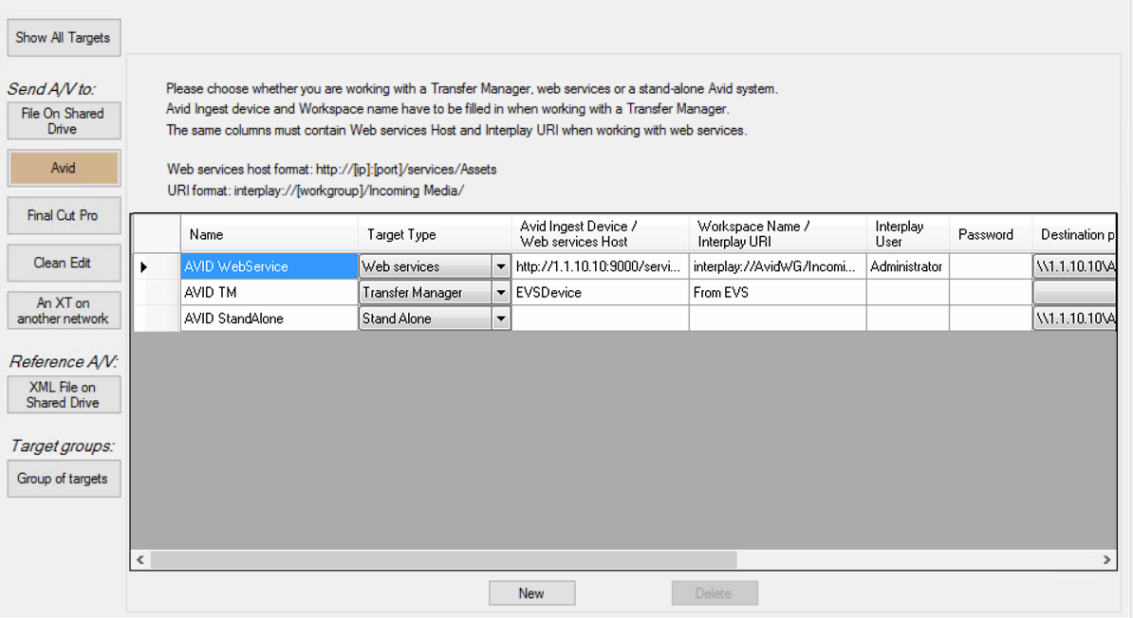
2. Click the **Delete** button.

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:

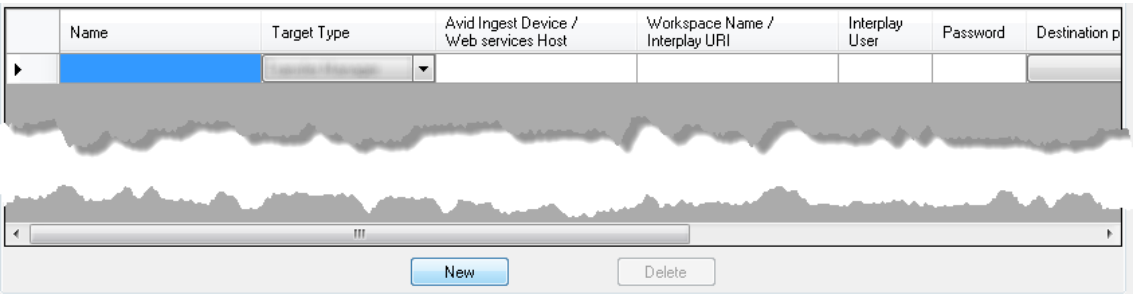
- The AVID Transfer Manager
- The AVID Webservices (allows sending playlists and timelines)
- The AVID StandAlone (without checking to an AVID Interplay)

XML Unit creation is required before configuring any AVID target.

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.

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.

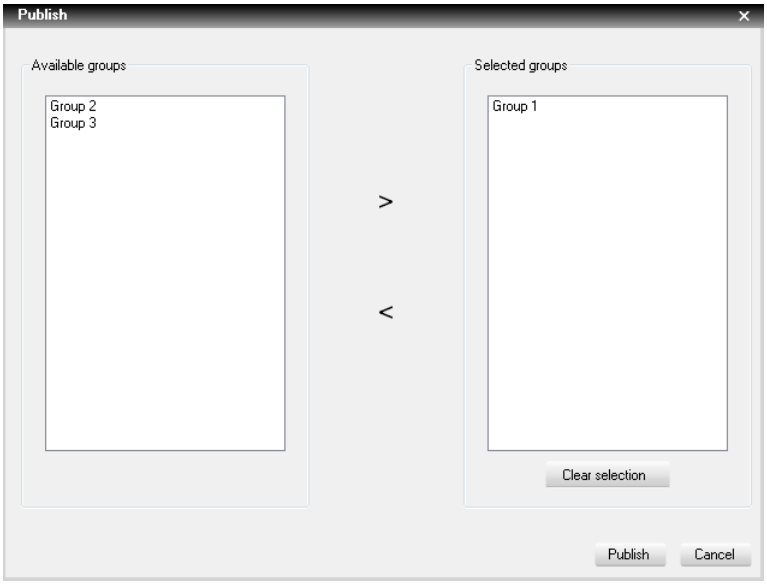
Playlist Backup Type:

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.

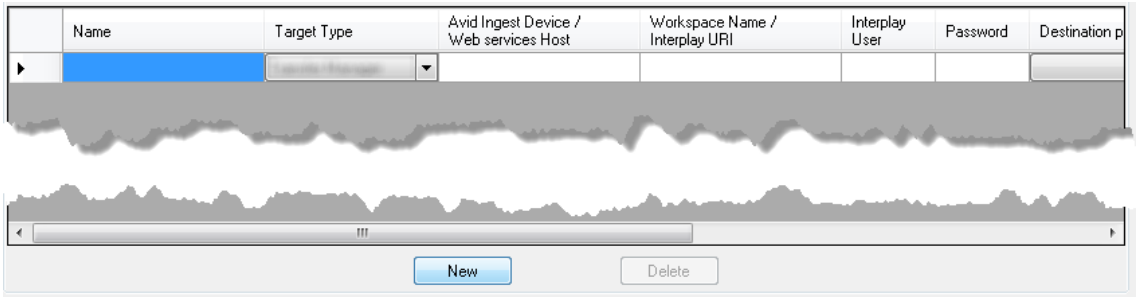
Publish:

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

[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 OPAtom files are saved on the AVID Storage.

Default: \\[ip]\Avid Mediafiles\

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

The destination path should match with the Avid MXF OPAtom 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.

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.

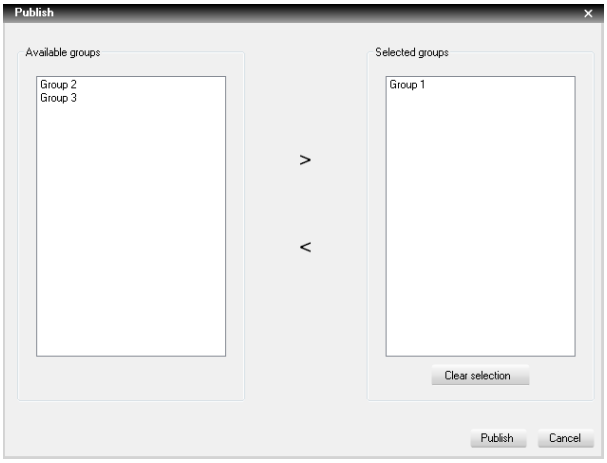
Playlist Backup Type:

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.

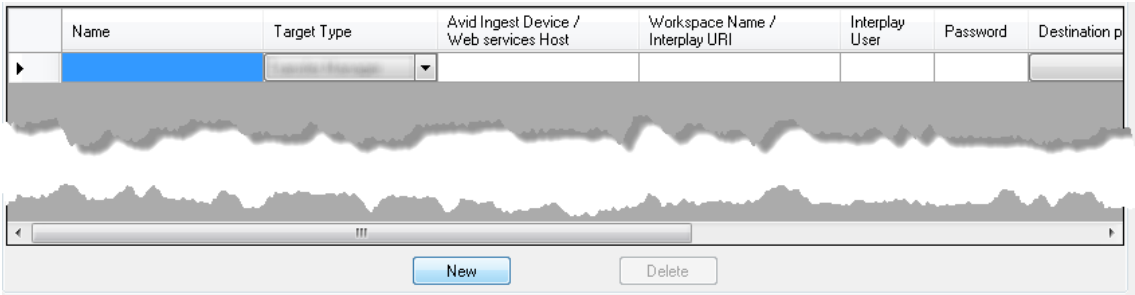
Publish:

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 OPAtom files are saved on the AVID Storage.

Default: \\[ip]\Avid Mediafiles\

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

The destination path should match with the Avid MXF OPAtom 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.

> 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.

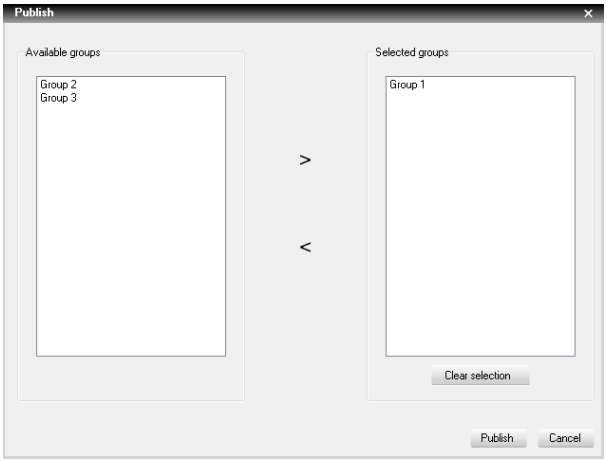
Playlist Backup Type:

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.

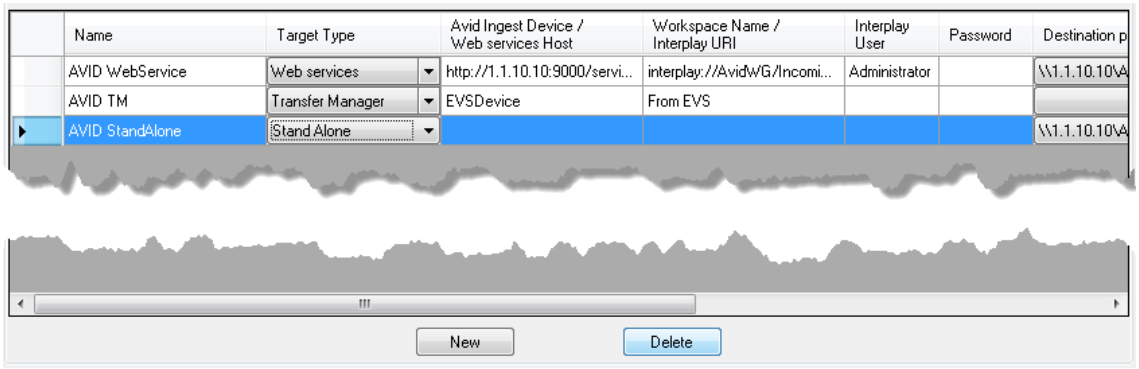
Publish:

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.

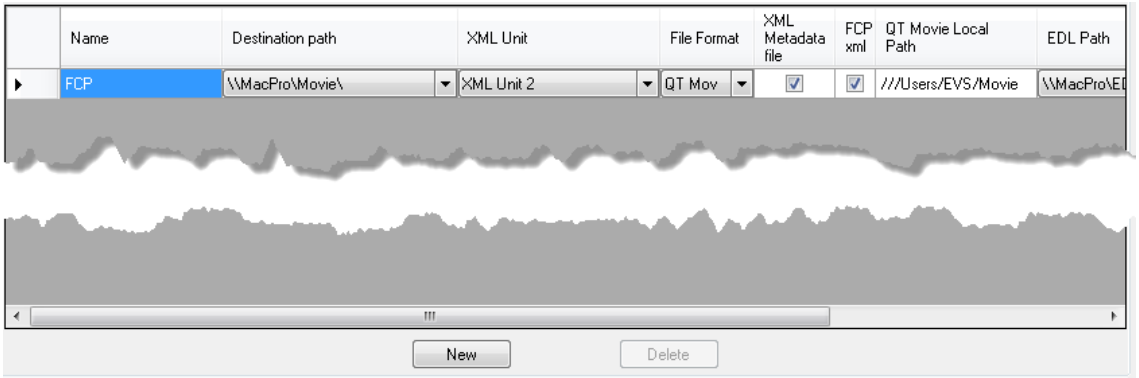
Once all AVID targets are configured, click on the **Apply** button before configuring another target type.

Final Cup 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.

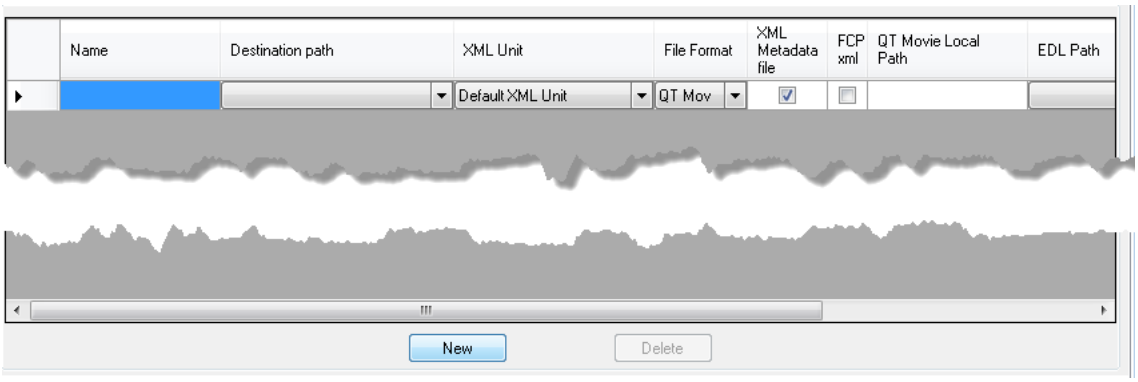
Click the **Final Cut Pro** button in the left menu:



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.

> 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.

> 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.

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.

Only UNC DNS name or IP address path are valid. (Ex: \\MachineName\Target\, \\1.1.1.100\Target\)

No local paths are valid.

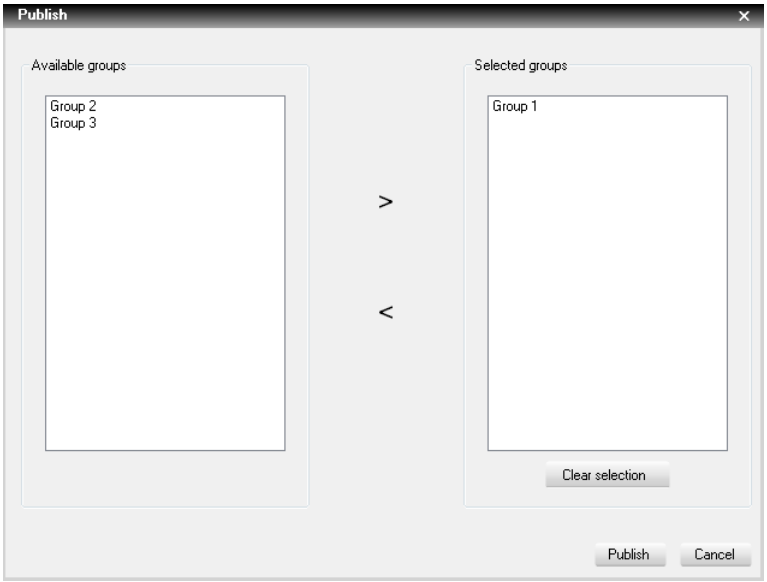
Playlist Backup Type:

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.

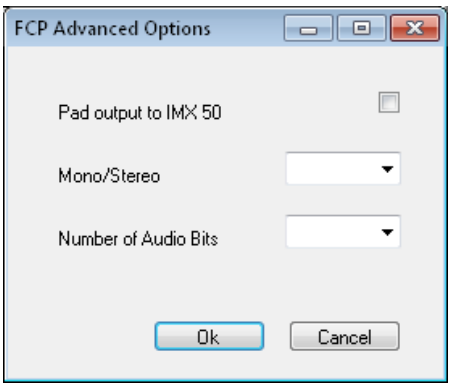
Publish:

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:

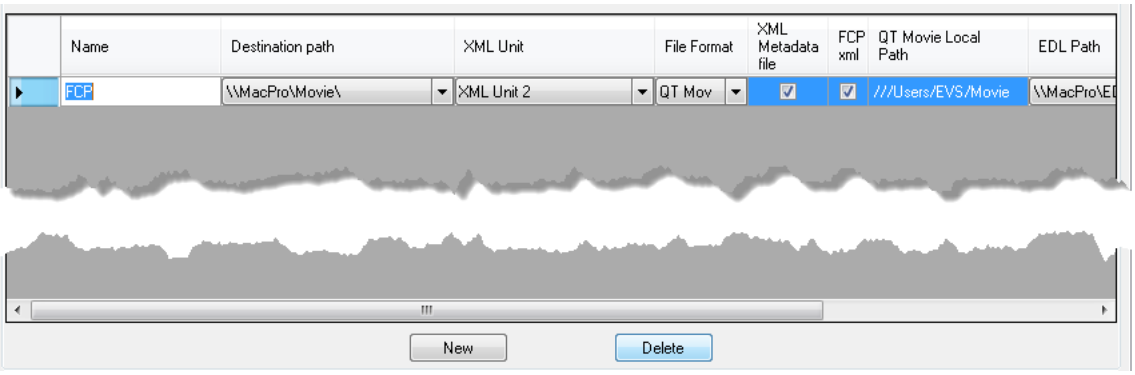
If the setting is blank, the original audio configuration is not affected.

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.

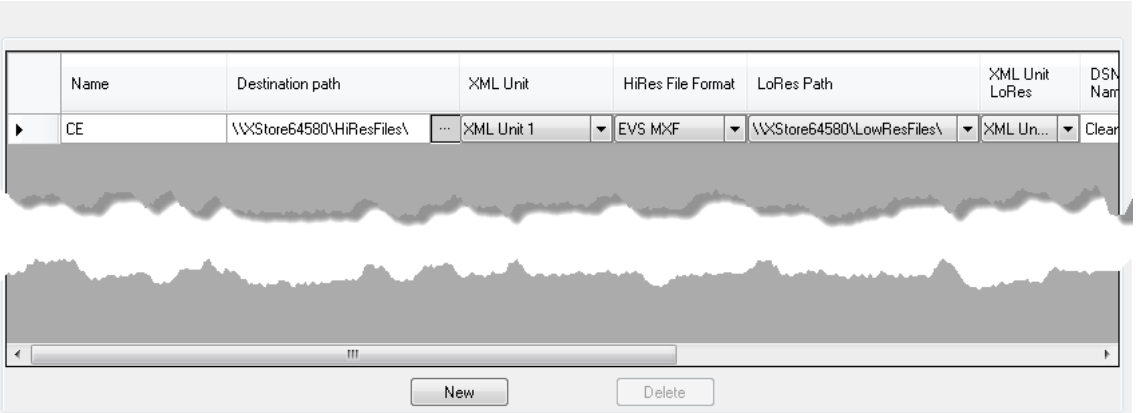
Once all FCP targets are configured, click on the **Apply** button before configuring another target type.

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.

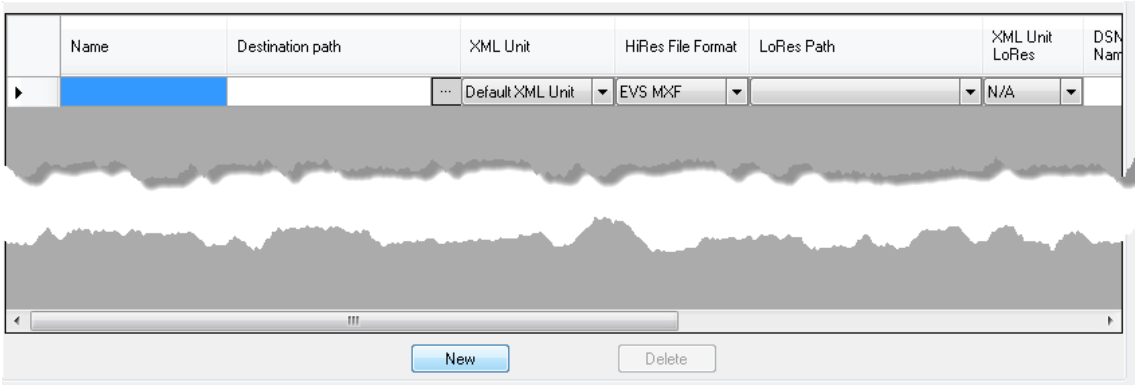
Click the **CleanEdit** button in the left menu:



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.

> 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 OPAtom, 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.

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.

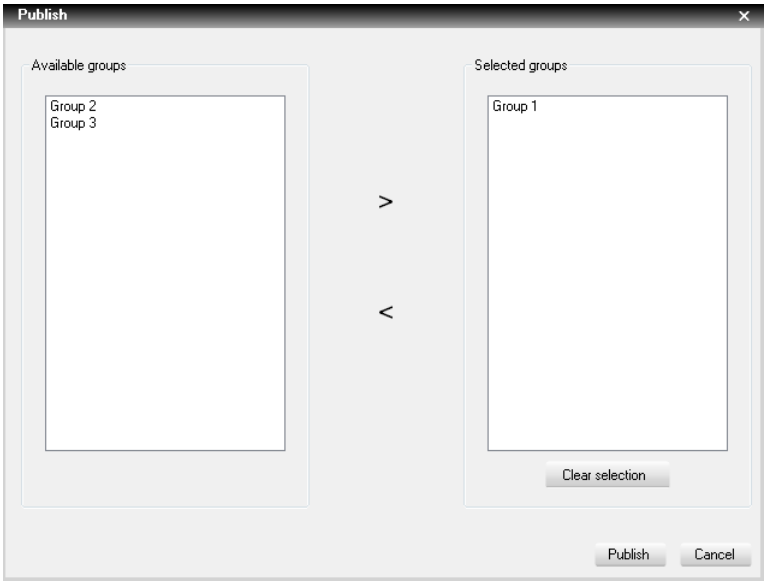
Playlist Backup Type:

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)

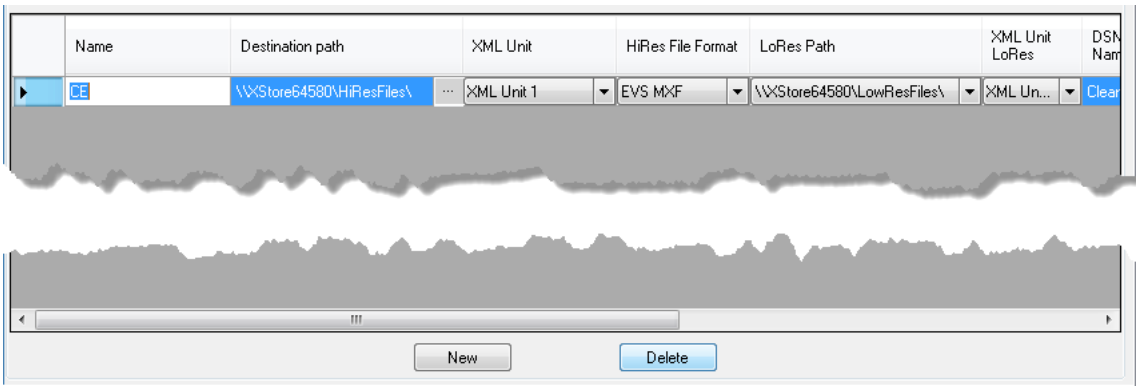
Publish:

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.

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

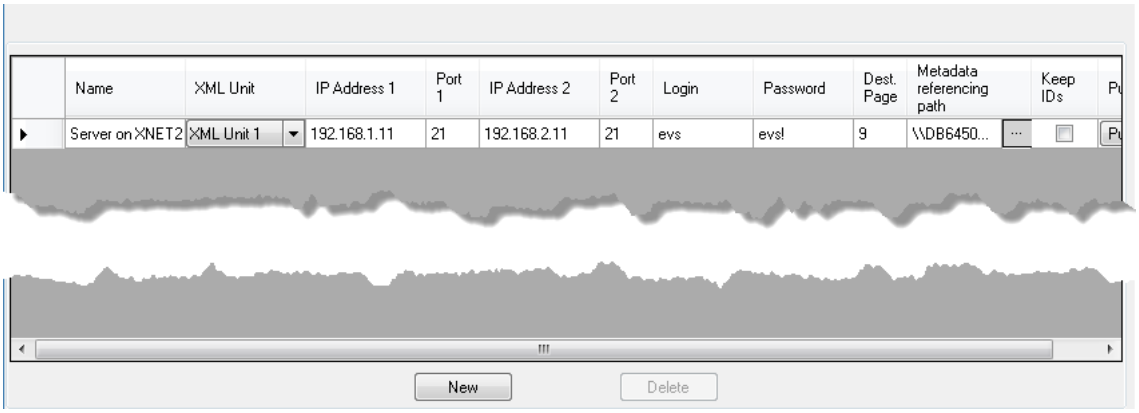
An XT on Another Network Configuration

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.

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.

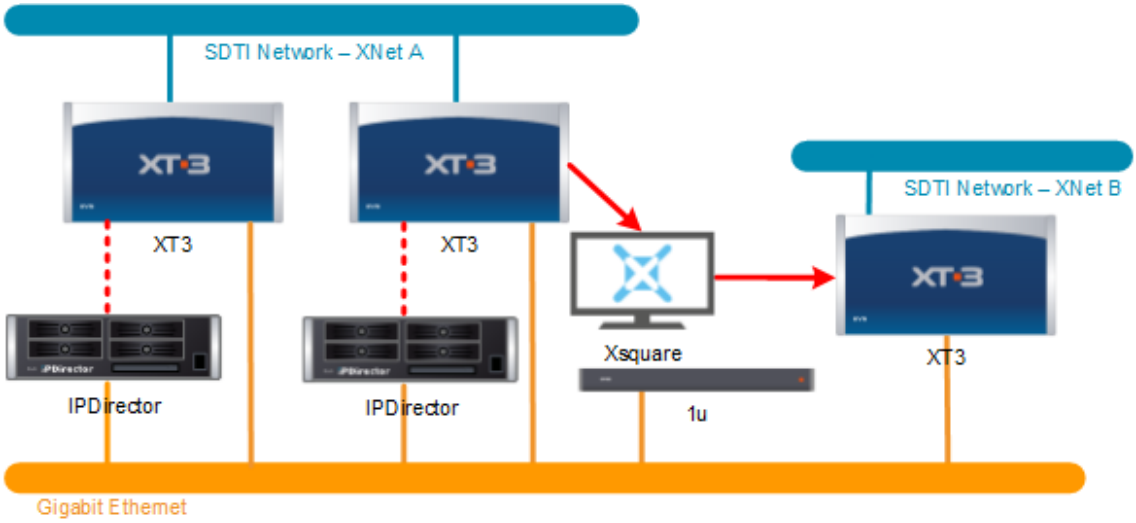


Clips can be transferred from an SDTI network to another one using a TCP/IP Network, even if this second SDTI network is not connected to IPDirector.

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.

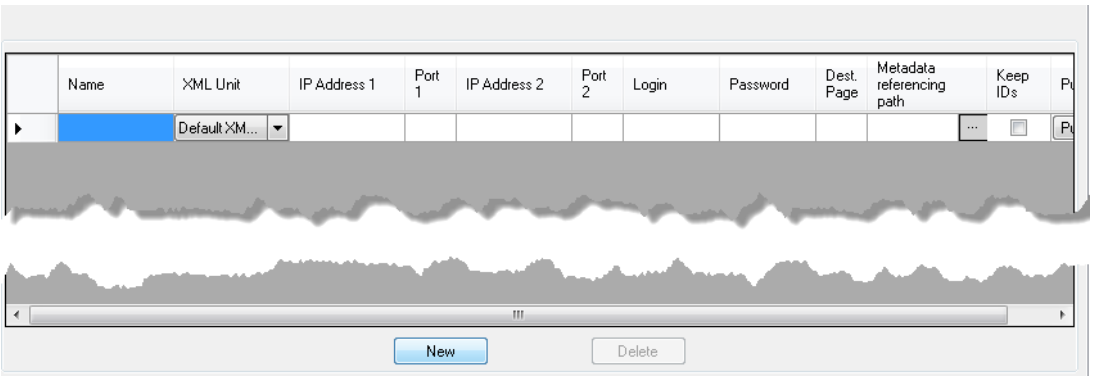
Please refer to the Xsquare and Multicam Manuals for more information.



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!

> 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.

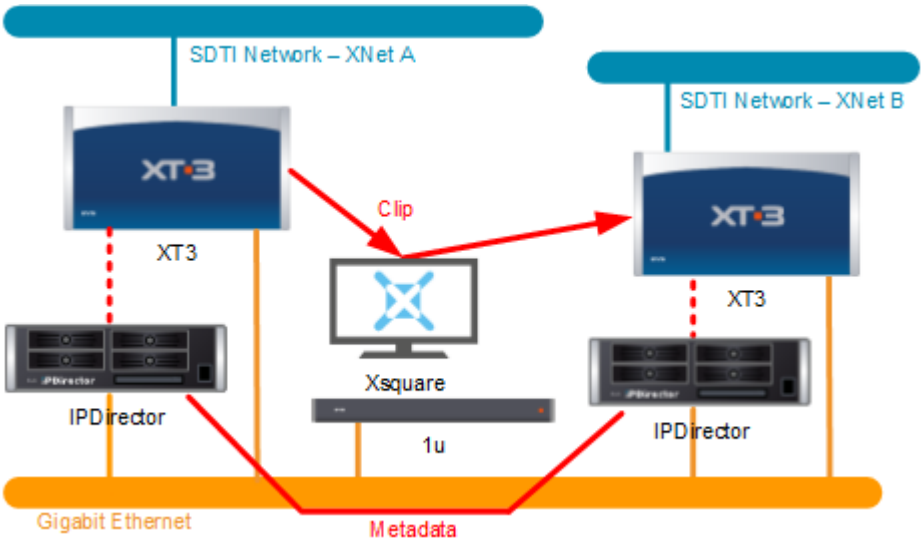
10. In the Dest. Page column, specify a destination page on the target server to receive exported clips.

    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.



A dedicated job must be added within the IP-Scheduler on the target workgroup.

See section "Configuring IP-Scheduler" on page 177 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.

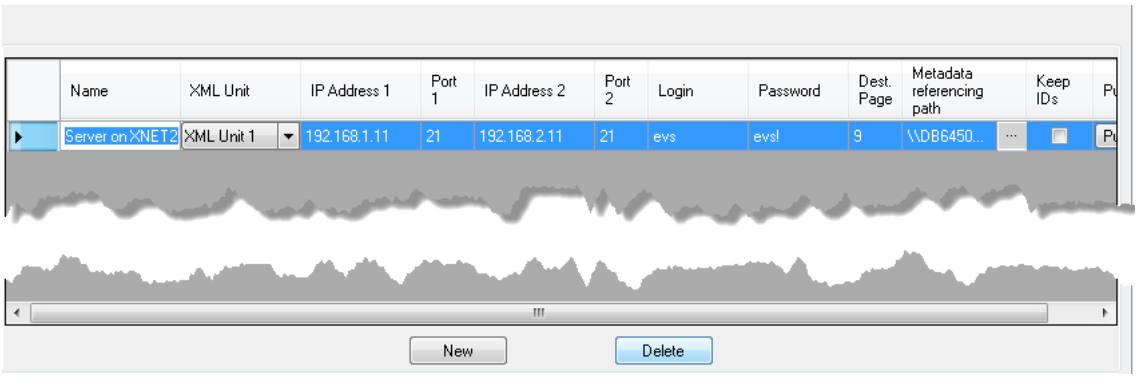
    c. Click the arrow **>** to push group(s) to the right side.

    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.



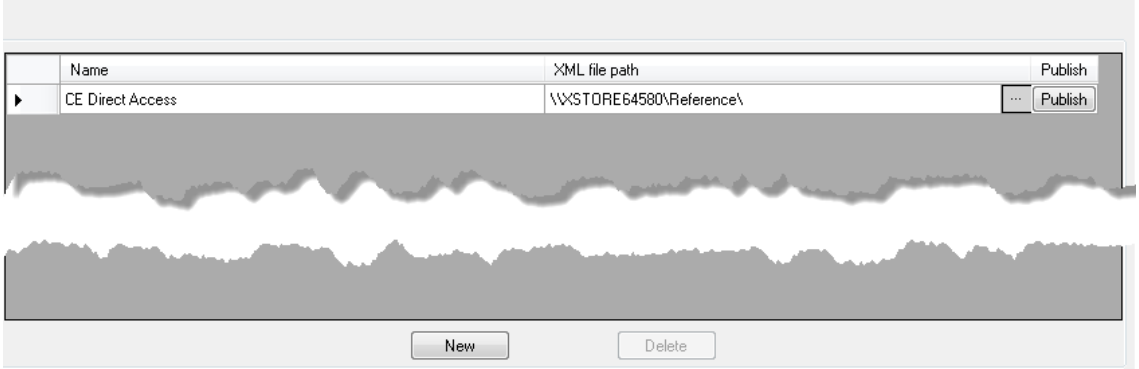
2. Click the **Delete** button.

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.

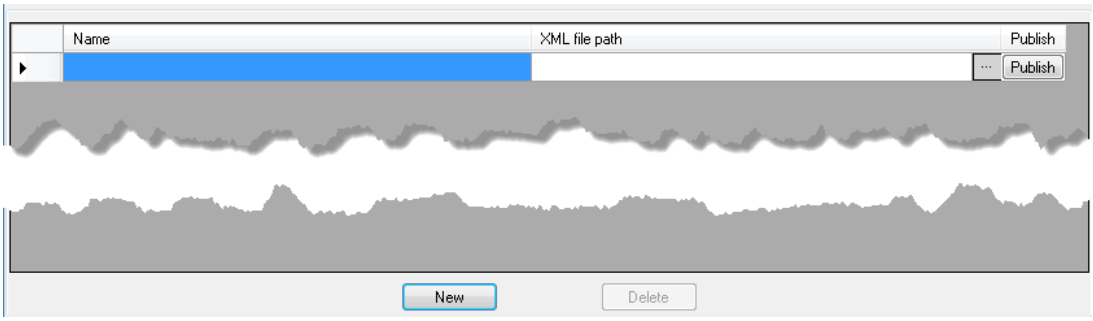


This kind of target is mainly used to send clip information on a system which is able to grab the clip by itself from the Server Network (XNet) or through the Server Gigabit Network.

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.

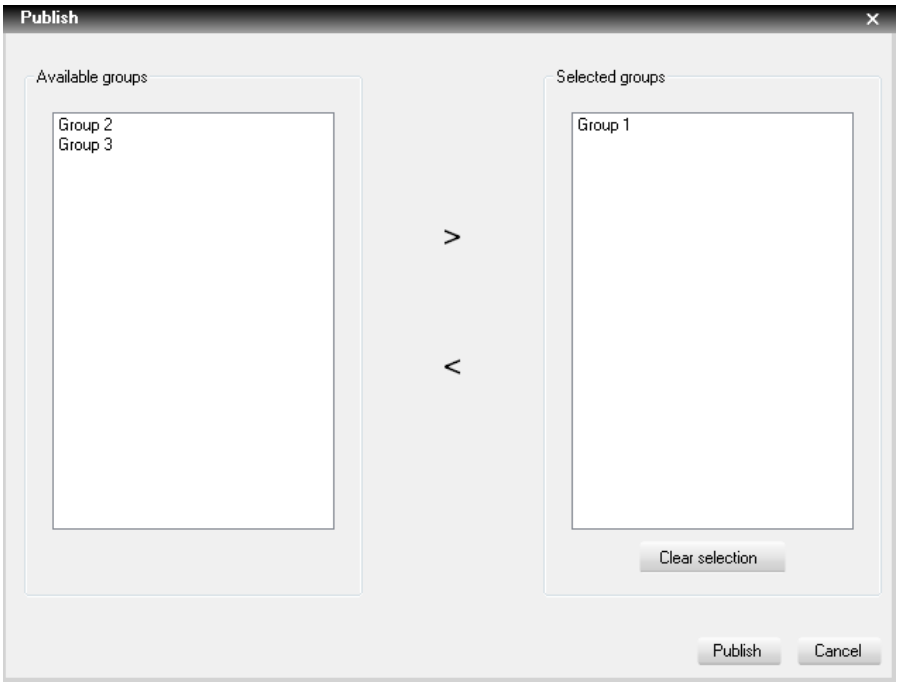
   Be sure this folder is shared with full access rights.

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.

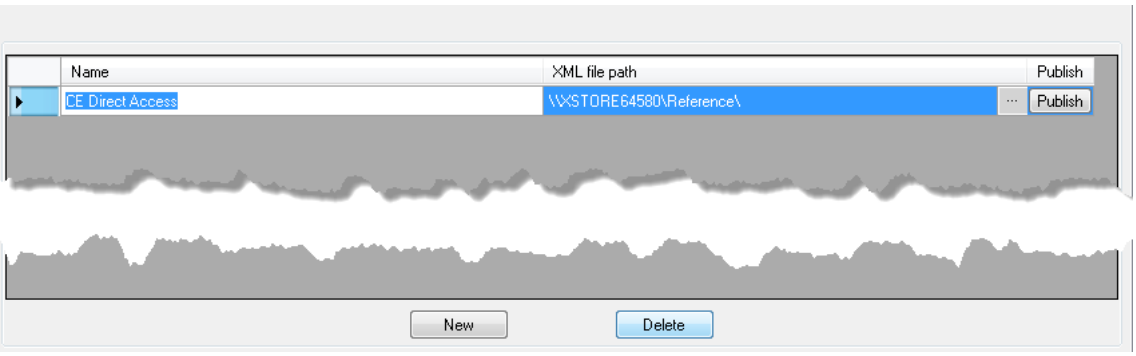


      Groups are created in the User Manager application (see User Manager manual).

   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.

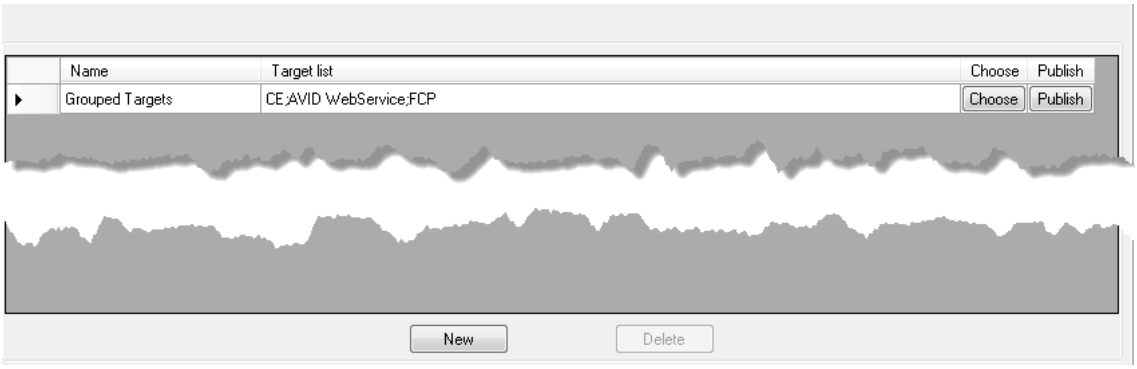
Group of Targets Configuration

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 king 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:

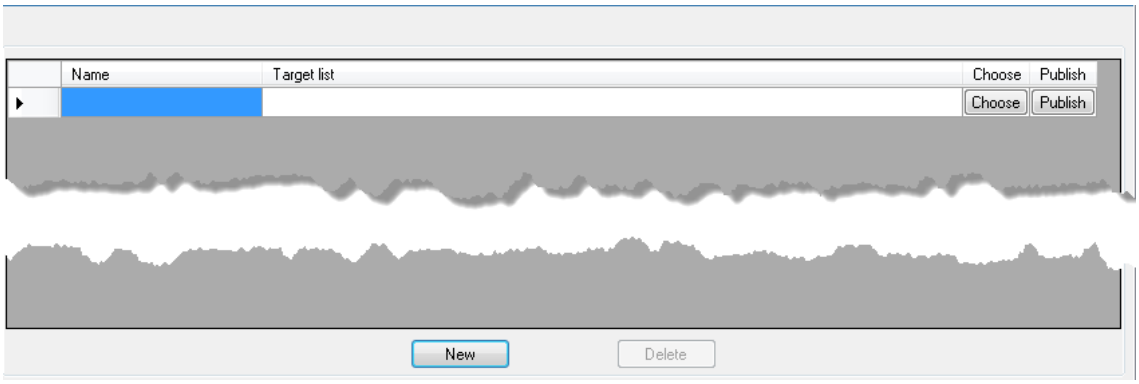


This kind of target is a list of previously defined targets. It allows, in one operation for the IPDirector operator, to send clips to several targets.

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.

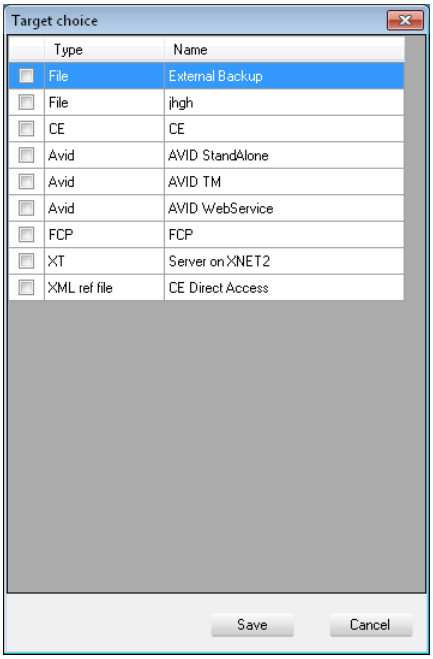
Target list:

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

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

Choose:

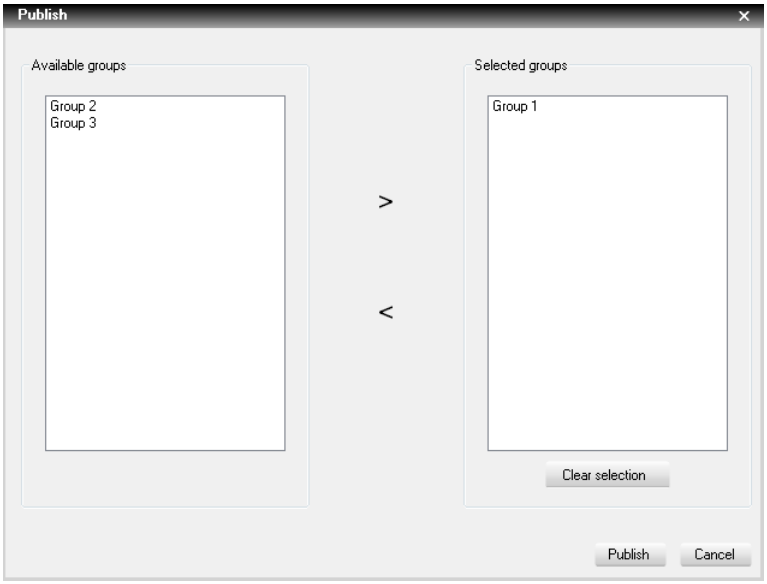
Clicking the **Choose** button opens a pop-up window:



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

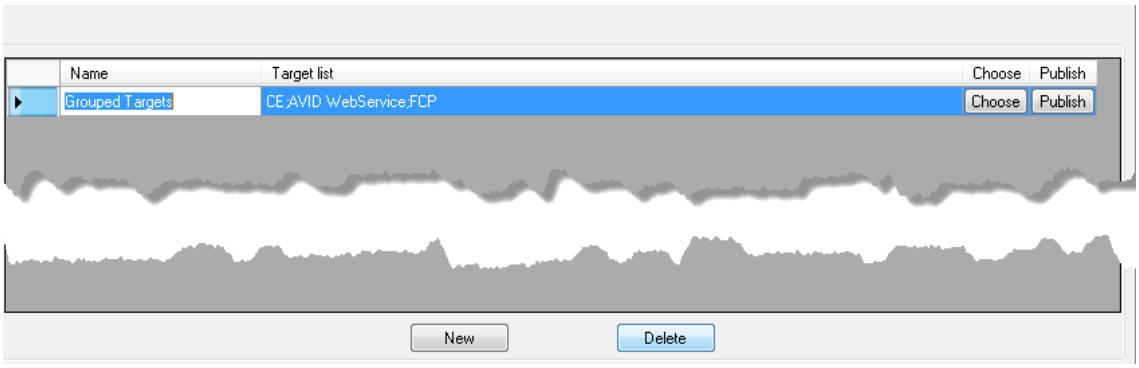
Publish:

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.

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

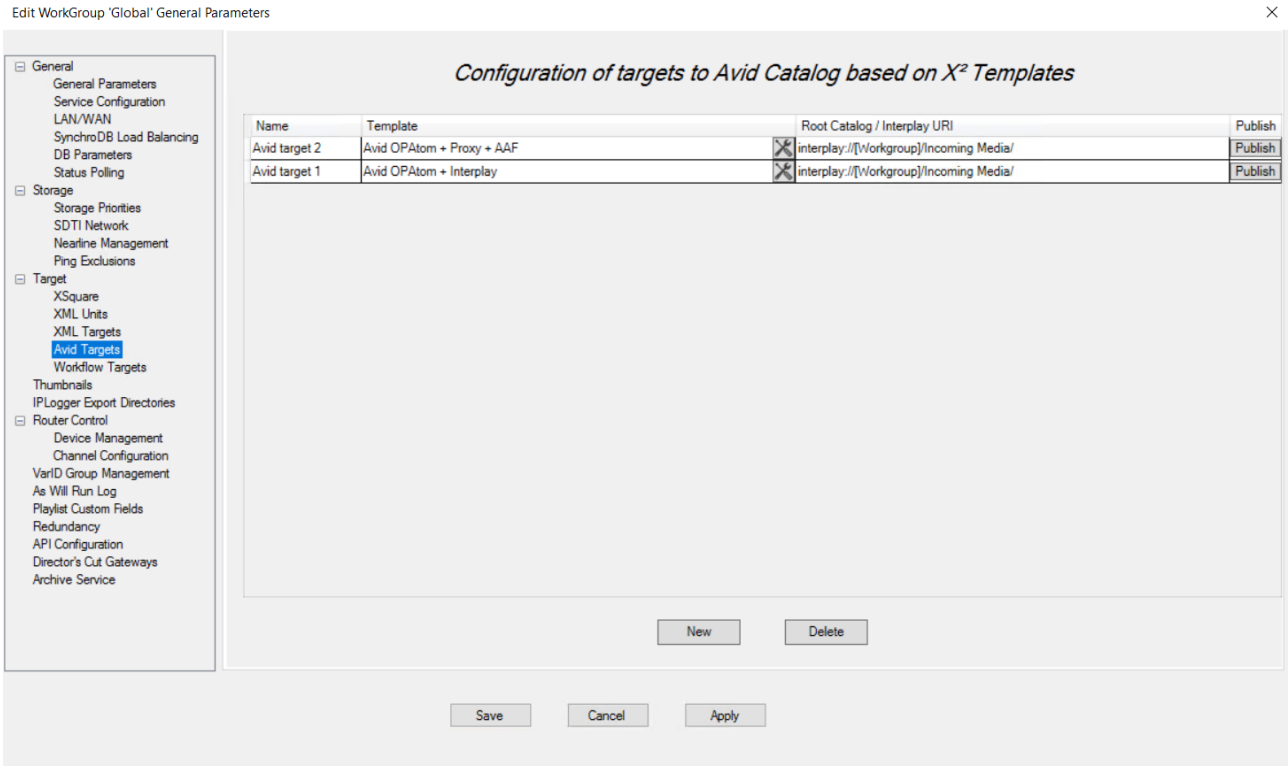
If you click the **Show All Targets** button, a target summary is displayed.

2.7.14. Avid Targets Configuration

Overview of the Avid Targets Tab

This tab is used to configure the Avid targets based on Xsquare templates.

Then, Avid catalogs will be available as stream targets from the Channel Explorer and the Ingest Scheduler.



Prerequisites

- Xsquare Templates for Avid must have been configured in the Xsquare application (Interplay IP address and credentials).
- The Xsquare IP address must have been provided in the Xsquare tab.
- The Interplay Avid Agent must be started on the workstation from which transfers to Avid will be done.

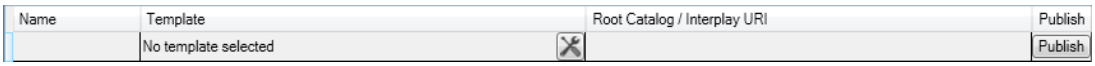
Limitation

- Only one root catalog can be set per target, even in case of a multi destinations template.

How to Create an Avid Target Based on an Xsquare Template

1. Click the **New** button.

   The following line is displayed:



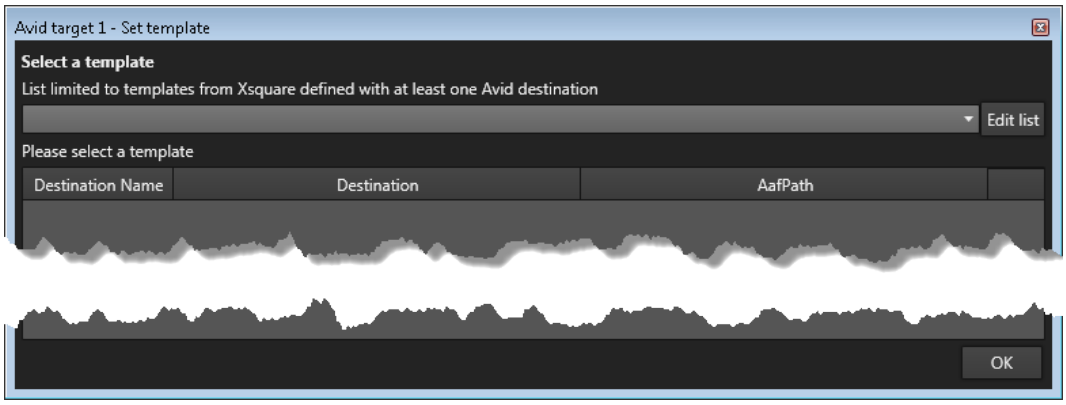
2. In the **Name** field, enter a name for the target.

   This name will appear in the IPDirector interface.

3. Select an Xsquare template that will be used for the 'Stream to Avid catalog target' operations.

   a. Click the button.

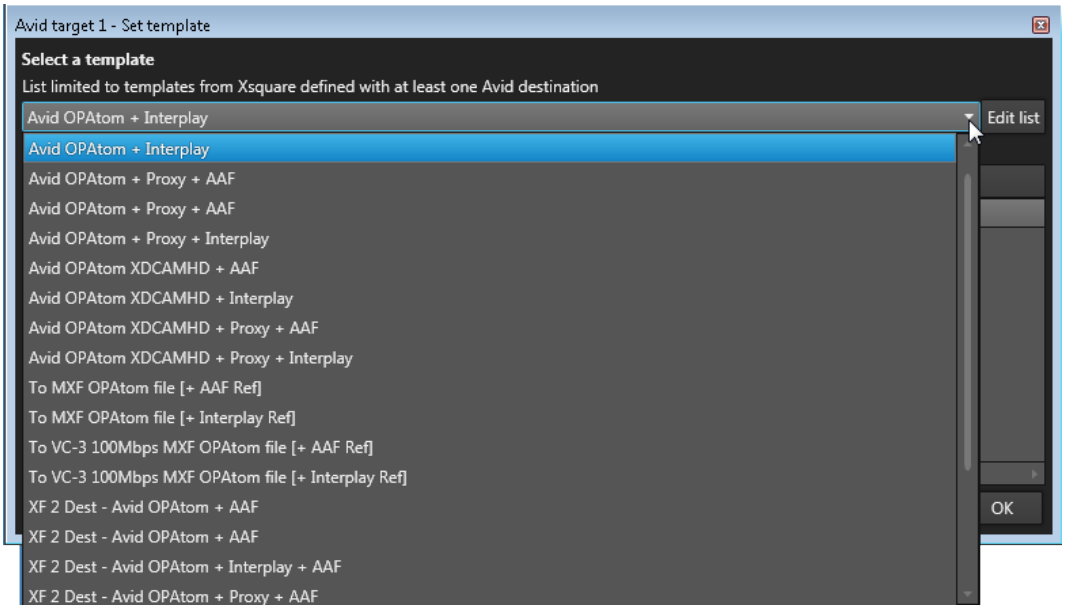
      The [target name] - Set Template window opens:



   b. (optional) To edit an Xsquare template, click the **Edit list** button.

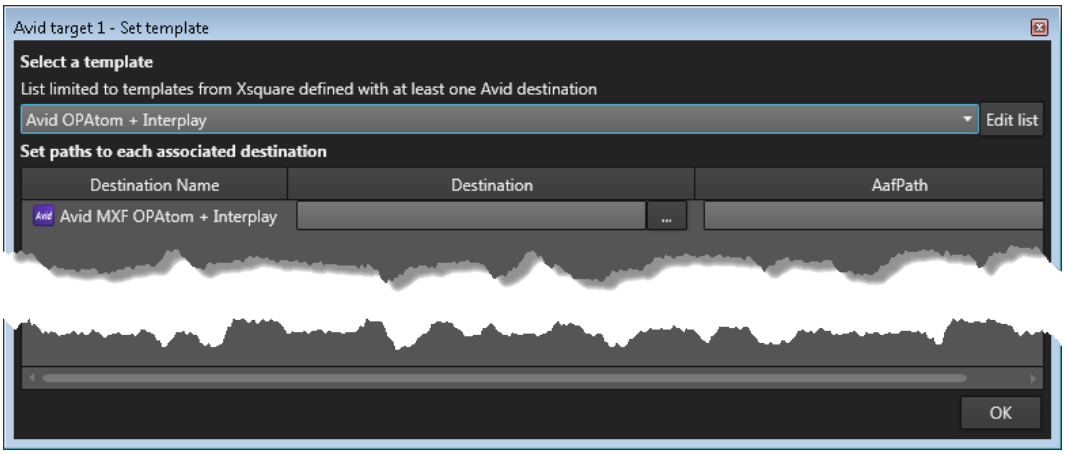
      The Xsquare Template Browser window opens from which you can edit a template and save it under another name. Refer to the Xsquare user manual for more information.

c. Click the arrow next to the **Select a template** field to display the list of Xsquare templates with at least one Avid destination:

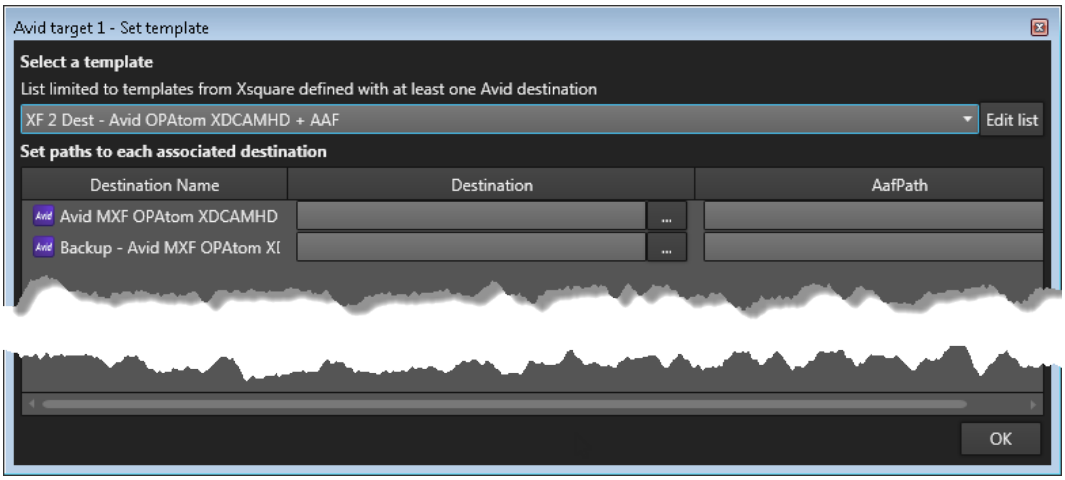


d. Select a template.

The selected template is listed in the window:



In case of a multi destinations template, several lines are displayed:



e. In the **Destination** field, enter the destination path where the OPAtom files will be saved on the AVID Storage.

f. (optional) If you want to transfer the MXF OPAtom metadata files to a different destination, enter the path in the **AafPath** field. Otherwise, they will be sent to the same destination as the media files.

g. Click **OK**.

4. In the **Root Catalog / Interplay URL** field, enter the path where the clip/playlist will be seen in Interplay DB.

   This field can be automatically filled with the information set in the Xsquare template.

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

   where [workgroup] is the AVID workgroup target.

   Only one root catalog can be set per target, even in case of a multi destinations template.

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

   a. Click the **Publish** button.

      The Publish window opens and lists the groups created in the User Manager application (see User Manager manual).

   b. Select group(s) from the Available Groups column.

   c. Click the arrow **>** to push group(s) to the Selected Groups column.

   d. Click the **Publish** button.

2.7.15. Workflow Target Configuration

Context of Use

A Workflow Engine is integrated with IPDirector to enable more complex workflows, such as the archive/restore process to/from an Amazon S3, or the publication of media items (clips, playlists) to one or several social media (Facebook, Youtube, Twitter) or to a generic Content Management System.

For the configuration of the S3 archiving process, see section "Configuring the Archive Parameters" on page 255.

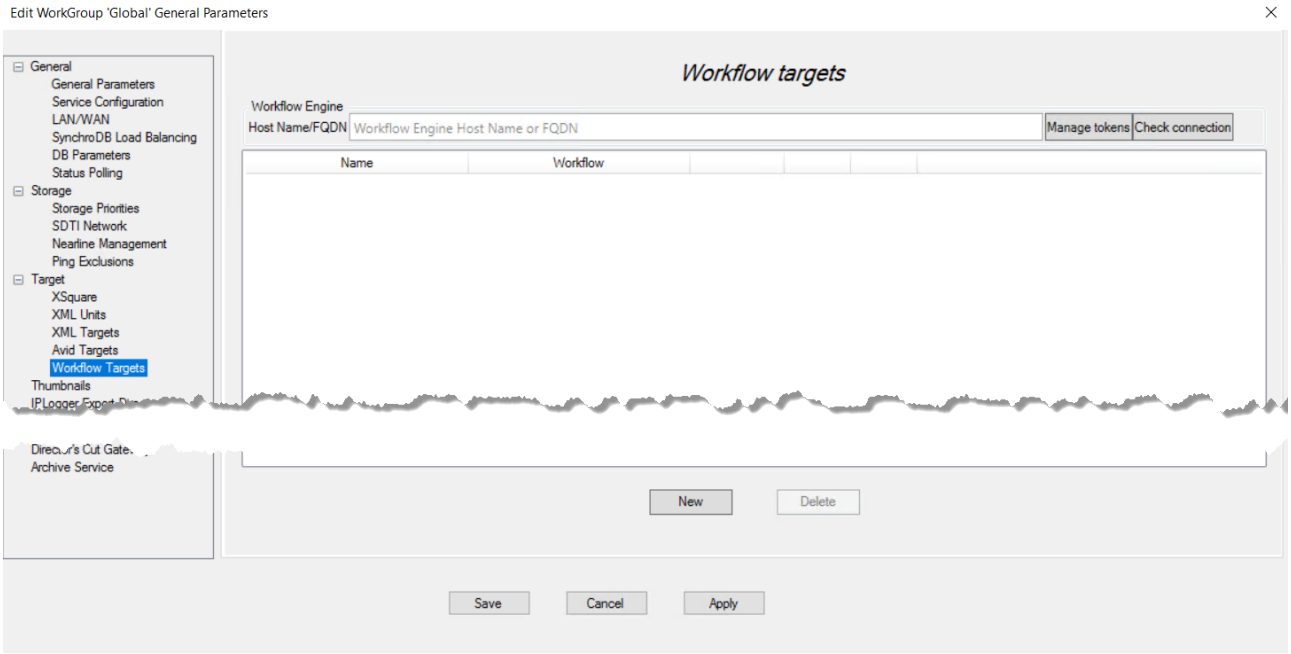
The workflow definition is the blueprint of your workflow. It lists and defines the different tasks within the workflow and specifies how these are linked to each other and in which order they have to be executed. It also describes the input parameters of the workflow and the input and output parameters of each task.

The workflow definition files are stored on the Workflow Engine.

Workflow targets are configured from the Remote Installer and can be used from the IPDirector interface such as any other target. Selecting a workflow target will trigger the execution of the workflow. The selected media items will then go through the process defined in the workflow definition file.

Overview of the Workflow Target Tab

This tab is used to configure the Workflow targets that will be available from the IPDirector interface.



Prerequisites for Workflow Targets

- A workflow engine must have been installed on a standalone IPDirector workstation or a dedicated management EVS machine. Refer to the VIA Flow for IPDirector installation and configuration manual.
- Tokens have been created in case authorization is required to send items on a platform used in a workflow. They can also be managed via the **Manage Tokens** button.
- See the PUBLIS Add-On for IPDirector installation and configuration manual for additional prerequisites needed for the creation and use of workflow targets.

- All the workflow targets created with a previous version of PUBLISH Add-On for IPDirector must be deleted before creating new workflow targets.

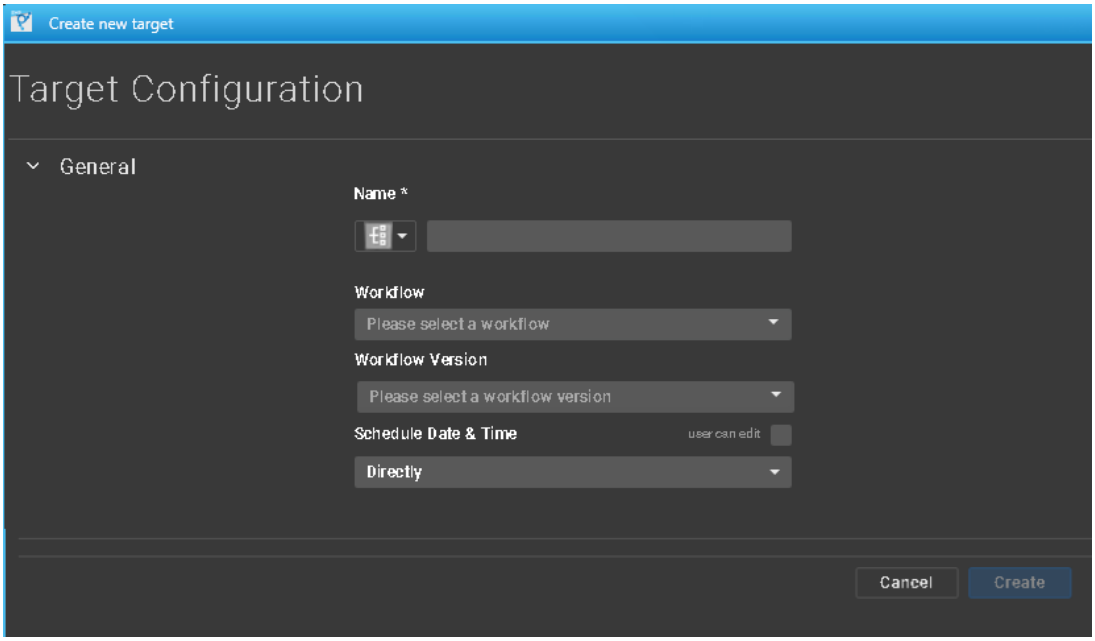
How to Create a Workflow Target

1. In the **Host Name/FQDN** (Full Qualified Domain Name) field, enter the name of the machine hosting the VIA Flow you want to use, followed by the domain recognized by the certificate.
2. Check the connection with the workflow engine by clicking the **Check Connection** button.

   The result is displayed next to the **Check Connection** button. It should be .

3. Click the **New** button.

   The Create New Target window opens.



> You can also quickly create a workflow target by copying an existing workflow target and all its parameters.
>
> 1. Click the **Copy** button next to the workflow target to be copied.
>
> A new workflow target is created and all the parameter fields are pre-filled.
>
> 2. Click the **Configure** button next to the new workflow target and edit the parameters as described hereafter.

3. Select the picture to be associated with your workflow target. This picture will appear in IPDirector.

   This can be a picture corresponding to the social media you want to use (, ,), a generic picture for a generic workflow target (CMS) , or a picture for the workflow target to multi-destinations ( ). But you can also upload another picture.

4. Enter a name for the workflow target in the **Name** field. This name will appear in IPDirector.
5. Select the workflow that will be executed.
   a. Click the **Workflow** field.

      A menu shows the list of workflow definitions which are available from the selected VIA Flow.

   b. Select a workflow.

      The Create New Target window expands and display the list of parameters from the selected workflow.

6. (optional) Select another version of the workflow. By default the "Last Published" version is selected.

7. Set the schedule date and time for the workflow to be run. By default, Directly is selected.
   - **Directly** (default): the workflow will run immediately when selected from the IPDirector interface.
   - **Today at**: a **Time** field will be displayed.

     Click on it and select a time.

     The workflow will be scheduled and start at the selected time.
   - **Next day at**: a **Time** field will be displayed.

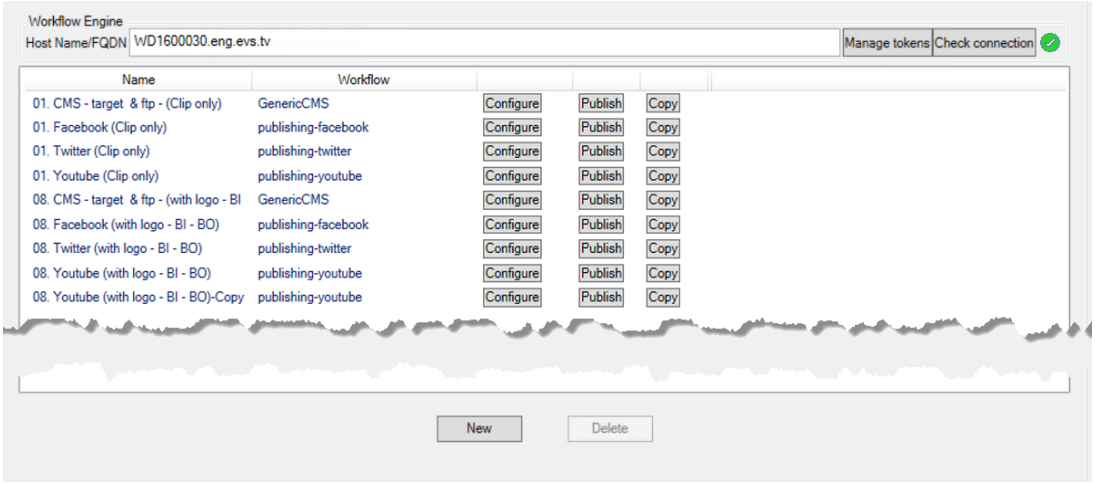
     Click on it and select a time.

     The workflow will be scheduled and start at the selected time the day after.
   - **Date and Time**: a **Date** field and a **Time** field will be displayed.

     Click on them and select a date and a time.

     The workflow will be scheduled and start at the selected date and time.
8. Configure the workflow parameters. Refer to the PUBLISH Add-On for IPDirector installation and configuration manual for more details on each parameter..
9. Define which parameters could be edited from the IPDirector interface when a user will send an item to the workflow target.
   - If the checkbox next to a parameter is ticked (user can edit ☑), the user will be allowed to modify the parameter value from the IPDirector interface before executing the workflow.
   - If the checkbox next to a parameter is not ticked (user can edit ☐), the user will not be allowed to modify the parameter value from the IPDirector interface before executing the workflow.
10. Click **Create**.

    The workflow target is displayed on the Workflow Target tab. It will be available from the IPDirector interface.



11. Publish the workflow target to groups which need visibility to it:
    a. Click the **Publish** button.

       The Publish window opens and lists the groups created in the User Manager application (see User Manager manual).
    b. Select group(s) from the Available Groups column.
    c. Click the arrow **>** to push group(s) to the Selected Groups column.
    d. Click the **Publish** button.

How to Update a Workflow Target

1. Select the workflow target from the list.
2. Click **Configure**.

   The Configure Target window, similar to the Create New Target window, opens.
3. Do the requested changes.
4. Click **Save**.

How to Delete a Workflow Target

1. Select the workflow target from the list.
2. Click **Delete**.

2.7.16. Blackbird Target Configuration

Context of Use

Blackbird is a cloud editing system which can be integrated with IPDirector.

From the IPDirector Database Explorer, a **Send to Blackbird** option is available to send clips or growing clips present in a bin to Blackbird. Actually, they are sent to an IPDirector nearline mounted on a Blackbird Edge server. Then, they are then transcoded to a Blackbird proxy and referenced in the Blackbird cloud.

Once the editor has created an edit in the Blackbird cloud and renders it, an EDL file is sent back to the Blackbird Edge server. An hi-res edit is rendered from the EDL and dropped in the IPDirector nearline.

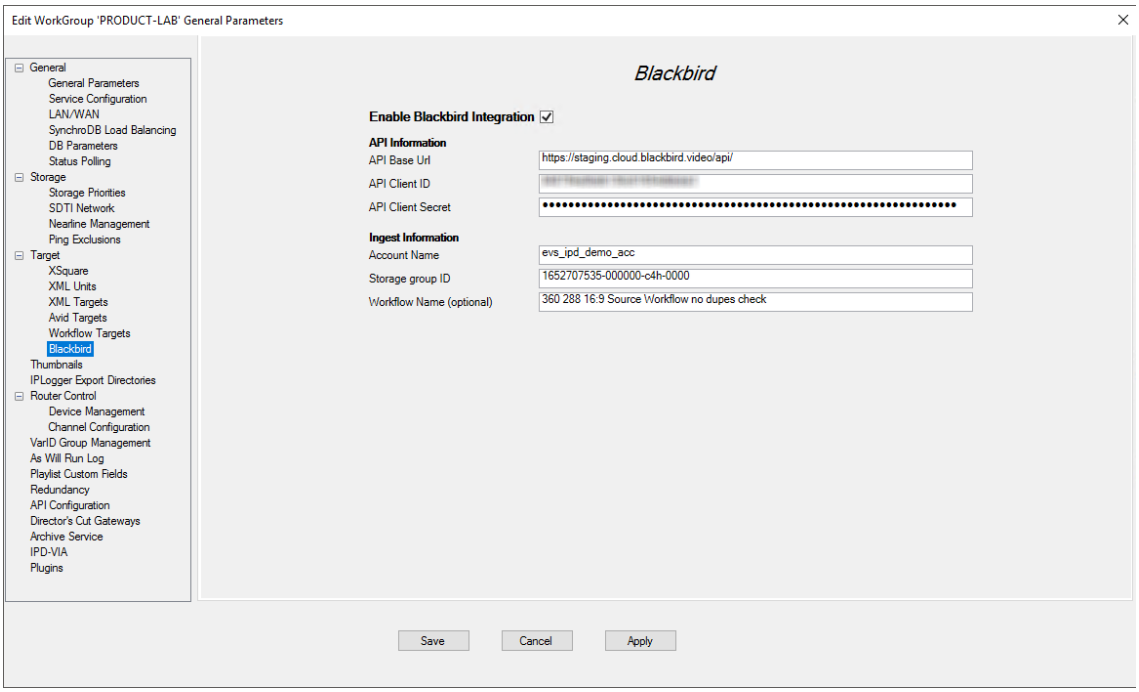
Some configuration must be done from the Blackbird tab in the Remote Installer.

Prerequisites

- An IPDirector nearline must have been mounted on a Blackbird Edge server which has access to the nearline files.

- The username in Blackbird matches the username of the IPDirector operator that has editing rights.

Overview of the Blackbird Tab



Enable Blackbird Integration

Select this option to enable the Blackbird integration with IPDirector.

API Information

Enter the information to be able to communicate with Blackbird.

API Base Url

URL path to connect to the Blackbird cloud.

API Client ID

API ID on the Blackbird cloud.

API Client Secret

Password for identification to the API on the Blackbird cloud.

Ingest Information

Enter the information of the Blackbird account that will be used with IPDirector.

Account Name

Account name for the connection to the Blackbird tool.

Storage group ID

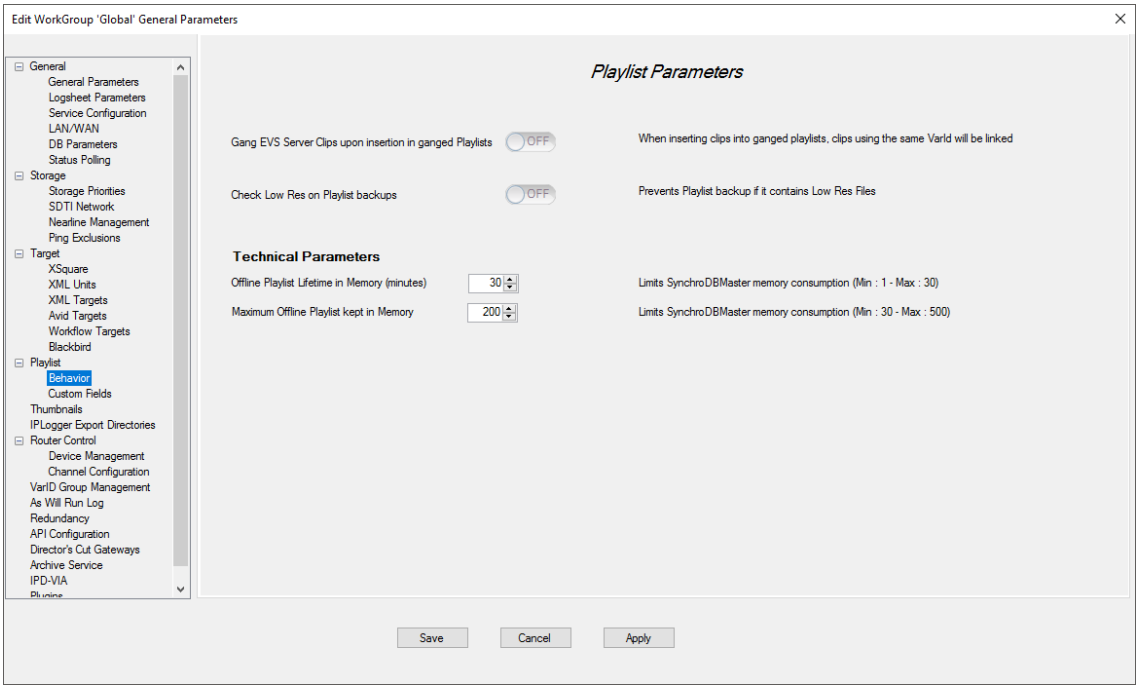
Storage name of the IPDirector nearline mounted the Edge server.

Workflow Name (optional)

Name of the Blackbird workflow to be used for transfers to Blackbird.

2.7.17. Playlist Configuration

Behavior Tab



NEW !

Gang EVS Server Clips upon Insertion in Ganged Playlists

This setting is used to automatically link clips with the same VarID as soon as one of the clips is added to a ganged playlist.

Check Low Res on Playlist Backups

When set to ON, this setting prevents playlist backup if it contains lo-res files.

Offline Playlist Lifetime in Memory (minutes)

This parameter sets the period of time, in minutes, the Master SynchroDB must keep an offline playlist in memory.

Possible values: 1 - 30. The default value is 30.

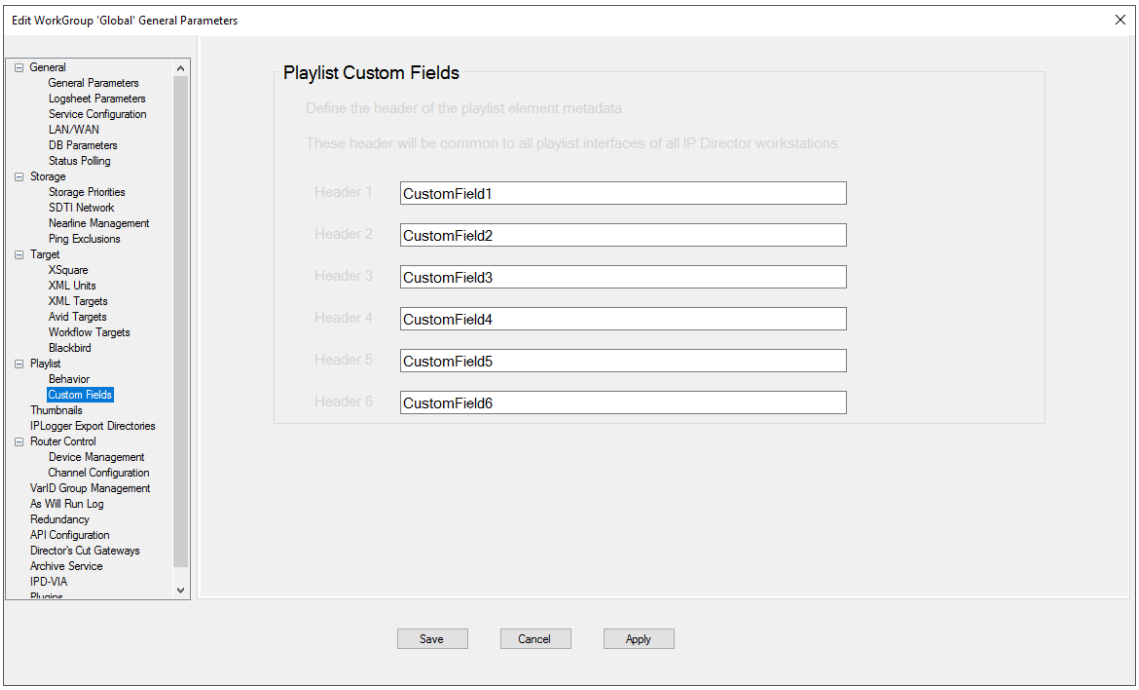
Maximum Offline Playlist kept in Memory

This parameter sets the number of offline playlists kept in memory.

Possible values: 30 - 500. The default value is 200.

Custom Fields Tab

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.

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

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

2.7.18. Thumbnails and Grab Configuration

Introduction

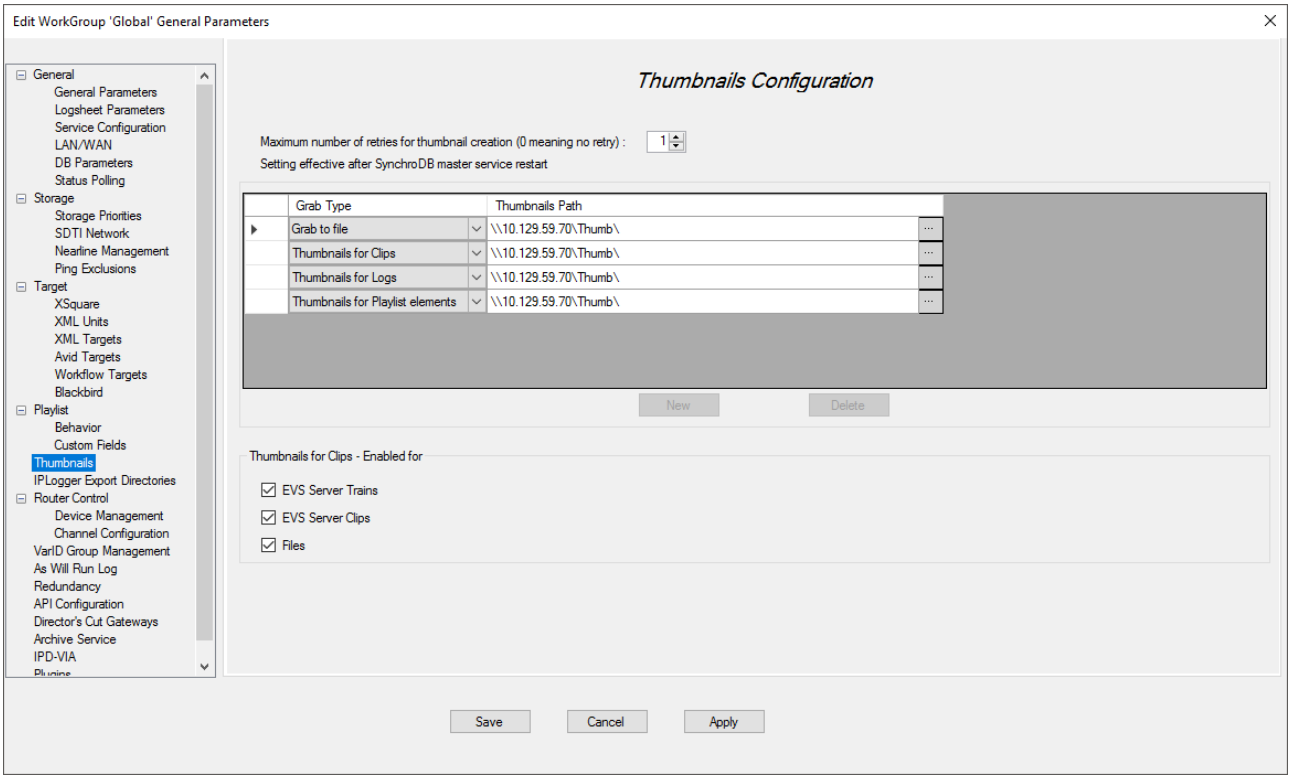
Purpose

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.

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/trains/files, logs and playlists. One configuration line is needed for each grab type.

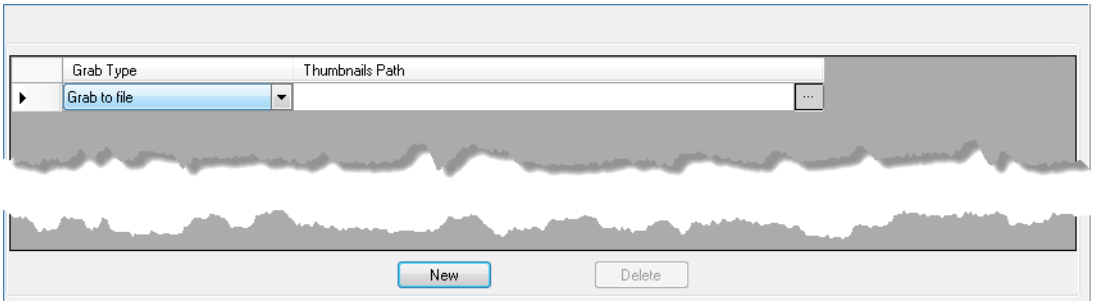
Maximum 4 lines of configuration can be added in this tab.

1. For the thumbnails for clips or logs, set the **Maximum number of retries for thumbnail creation**. The default value is 5.

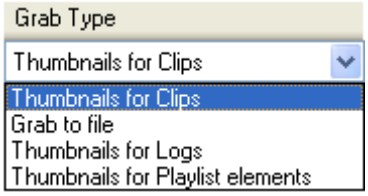
   It can be set to 0 if you do not want any retry to be processed.

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

   A new line is added in the unit list.



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



   Only one type of each grab type can be defined.

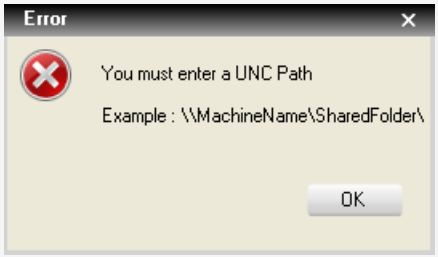
   - **Thumbnails for Clips** to send thumbnail requests for clips.
   - **Grab to file** to send grab requests.
   - **Thumbnails for Logs** to send log thumbnail requests.
   - **Thumbnails for Playlist elements** to send thumbnail requests for playlist elements.

4. 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.

> 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.

> 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:

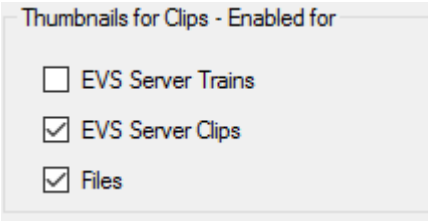


Be sure this folder is shared with full access rights. EVS recommends this directory should be located on the database server in the \thumbnails directory.

5. From the Thumbnails for Clips area, select the elements for which you want thumbnails to be created when the **Thumbnails for Clips** type has been configured.

   Thumbnails can be created for trains and/or clips and/or files.

   This may help to reduce the required bandwith and not to overload the system.

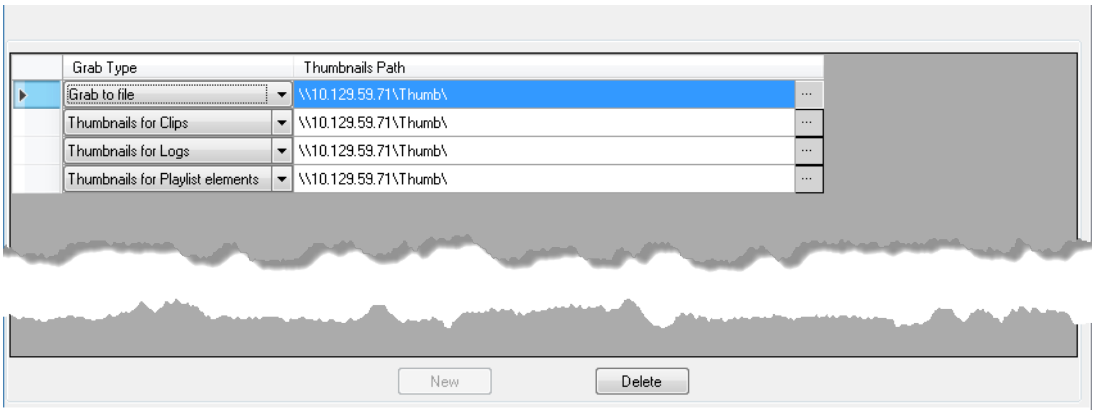


Thumbnail and Grab paths are global to all IPDirector workstations on the network. They should only be defined once and can be defined from any workstation.

6. 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.

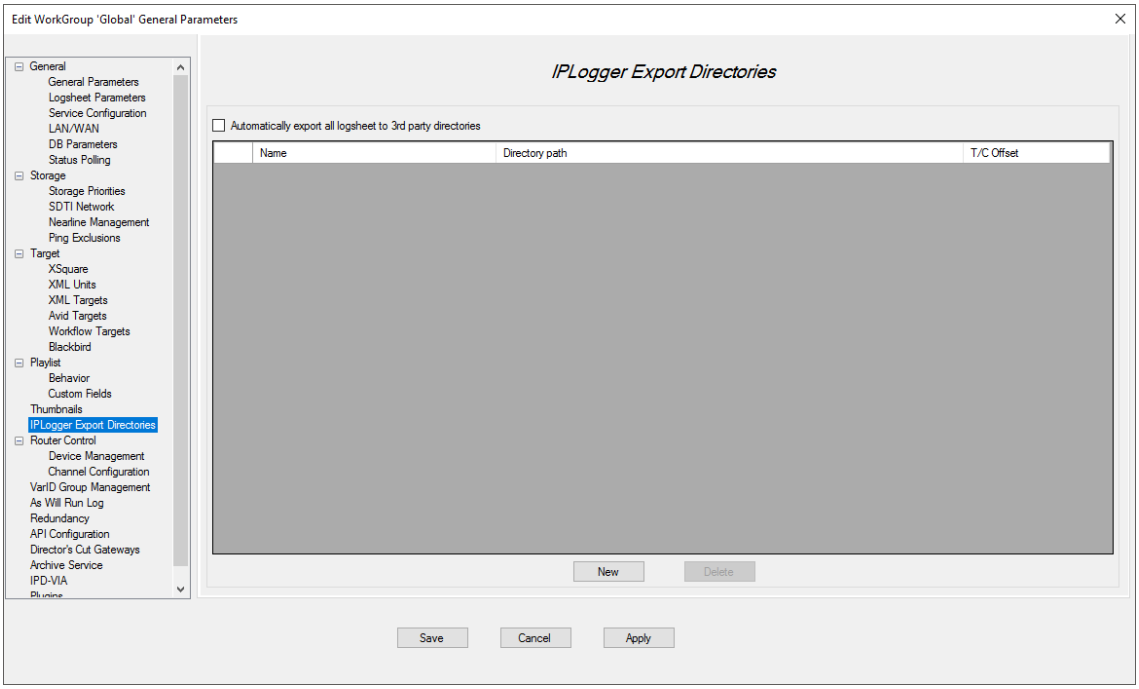
The unit is deleted.

2.7.19. 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 IPLogger Directories 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.

This setting can only be changed once the IPDirector and the IP API services are stopped.

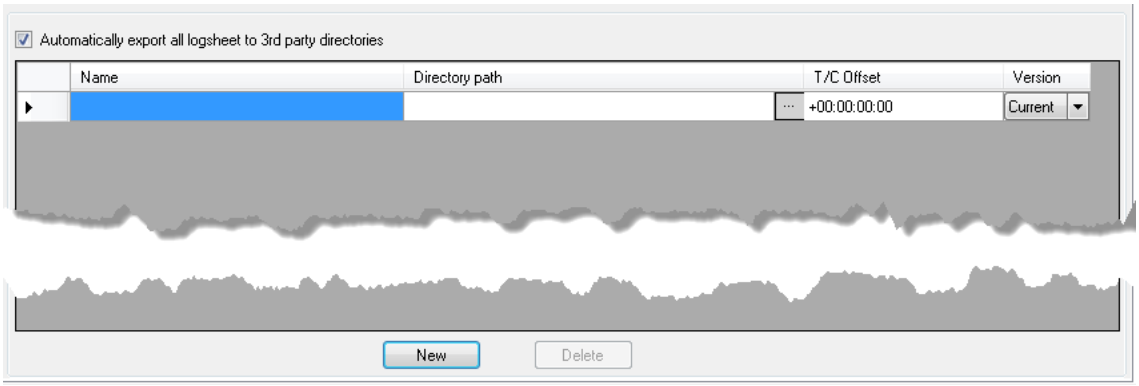
If this option is cleared and the Export Destination Directory is defined, the IPDirector operator manually decides which logsheet will be exported. During the logsheet creation, this option is available inside the Step 1 of its properties. Once the logsheet creation is completed, the option cannot be changed.

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

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.

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

> 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)

> 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**.

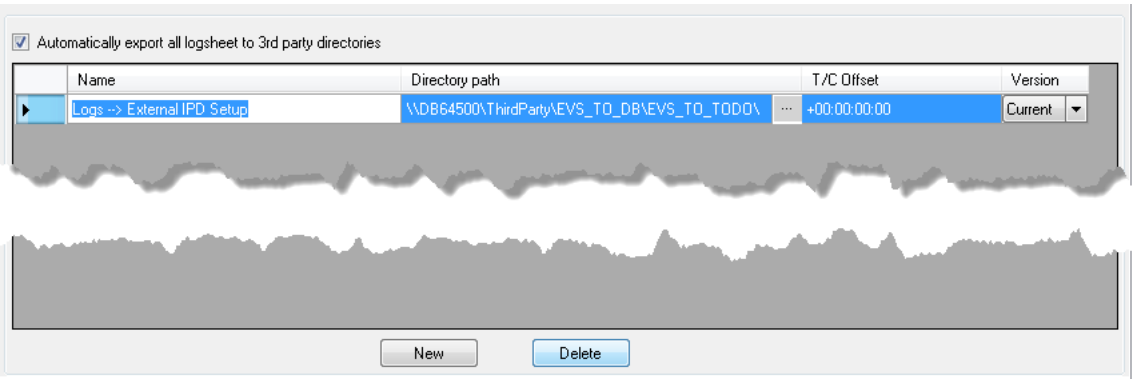
For an IPDirector V5 destination setup, it is strongly recommended to select **Current**.

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.

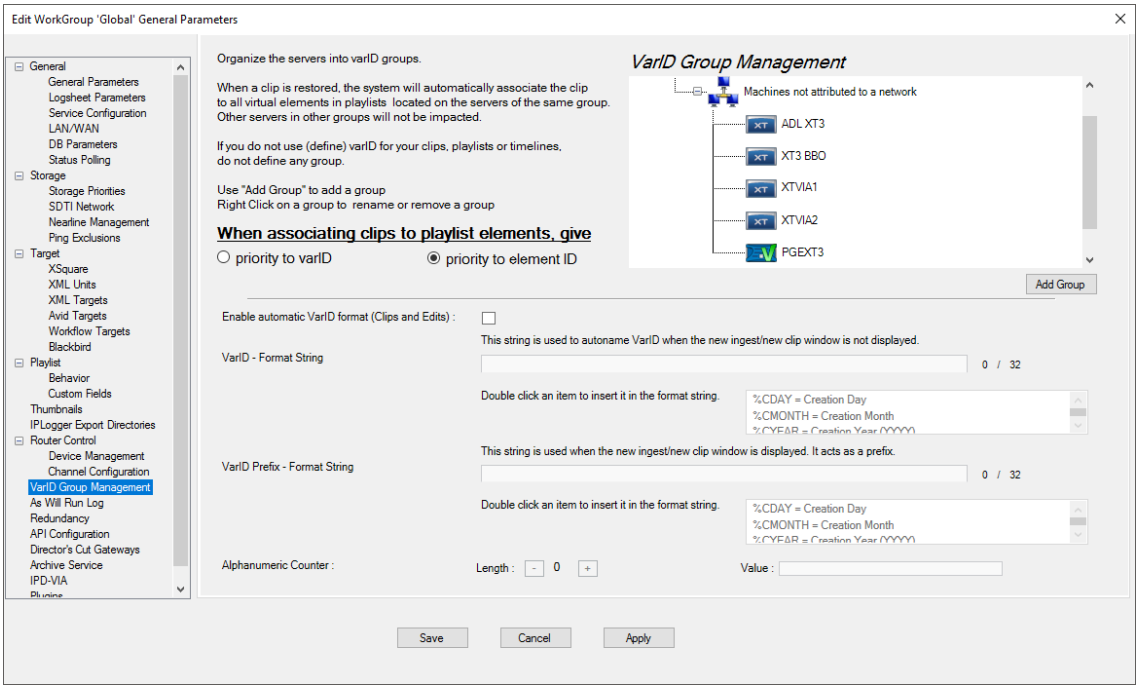
Once all directories are configured, click on the **Apply** button before configuring another tab.

2.7.20. 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 VarID Management tab.



When associating clips with playlist elements, give:

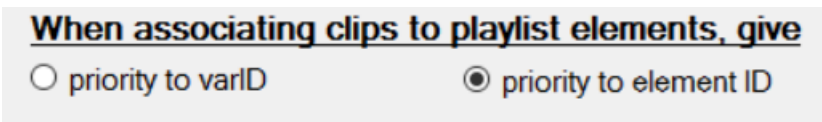
- Priority to VarID

  The engine replaces distant clips in playlists by local clips regarding the VarID inside one of the defined groups.

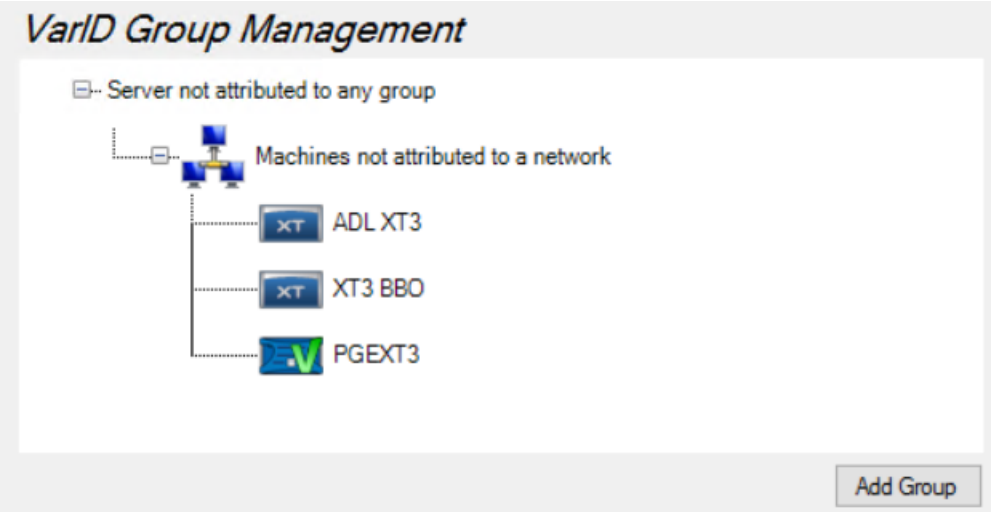
- Priority to element ID

  The engine gives priority to the element ID within playlists when replacing a virtual element by a clip. VarID is no more used.

  This mode is the default behavior.



Define VarID Groups



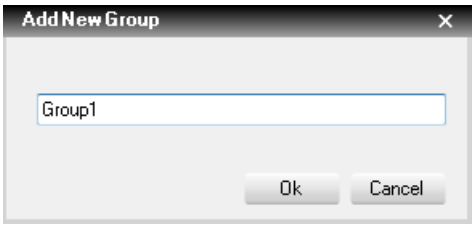
This zone is used for create and manage VarID groups.

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 as belonging to the same VarID group.

How to Create a New VarID Group?

1. Click the **Add Group** button.

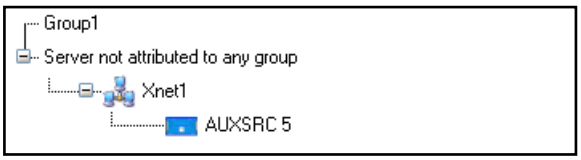
   This window pops up:



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

How to Insert a Server in a VarID Group?

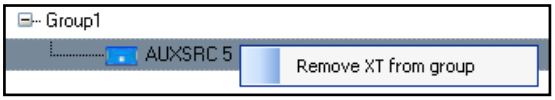
1. Open the logical network branches to display the servers.
2. Select the server and drag & drop it on the VarID group name.



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?

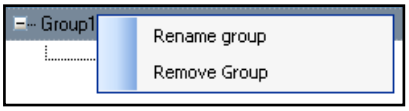
1. Right-click on the server name.
2. Select **Remove XT from group**.



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

How to Rename a Group?

1. Right click the group name.
2. Select **Rename group**

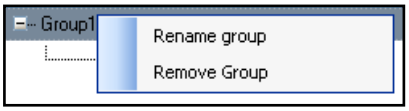


A window pops up.

3. Edit the name.
4. Click **OK**.

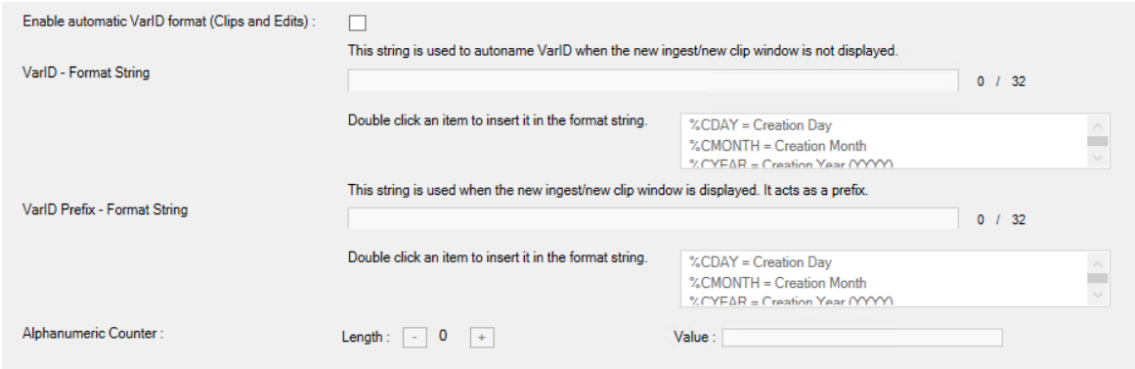
How to Remove a group?

1. Right click the group name.
2. Select **Remove group**



The group is no more displayed and all servers are brought back to their original places.

Automatic VarID Format (Clips and Edits)



Enable Automatic VarID Format (Clips and Edits)

When this parameter is selected, the format defined in the **VarID Format String** and in the **VarID Prefix Format String** fields will be applied for the generation of the clips and edits VarID.

This applies to:

- clips created from IPDirector, IPD Xedio Plugin.
- clips referenced from the nearline (no xml file or xml without VarID information).
- edits created from IPMOSBrowser if no rule for VarID generation has been defined in IPMOSGateway.

  If VarID generation rule has been defined in IPMOSGateway, it will be taken into account.
- clip created from IPBrowse.

VarID Format String

This field is used to define a format string for the VarID of clips and edits.

VarID Prefix Format String

This field is used to define a format string for the prefix for the VarID when the New Ingest or the New Clip window is displayed. So, the VarID will begin with the same set of characters.

Regular expressions supported:

- %CDAY: Creation Day ("DD")
- %CMONTH: Creation Month ("MM")
- %CYEAR: Creation Year ("YYYY" eg : 2020)
- %CYY: NEW Creation Year ("YY" eg : 20 for 2020)
- %ACOUNTER: Alphanumeric Counter

  Length: Min 2 / Max 20

  Value: eg : AAA (Upper Case forced)

How to Define a Format String

To add an item to the format string,

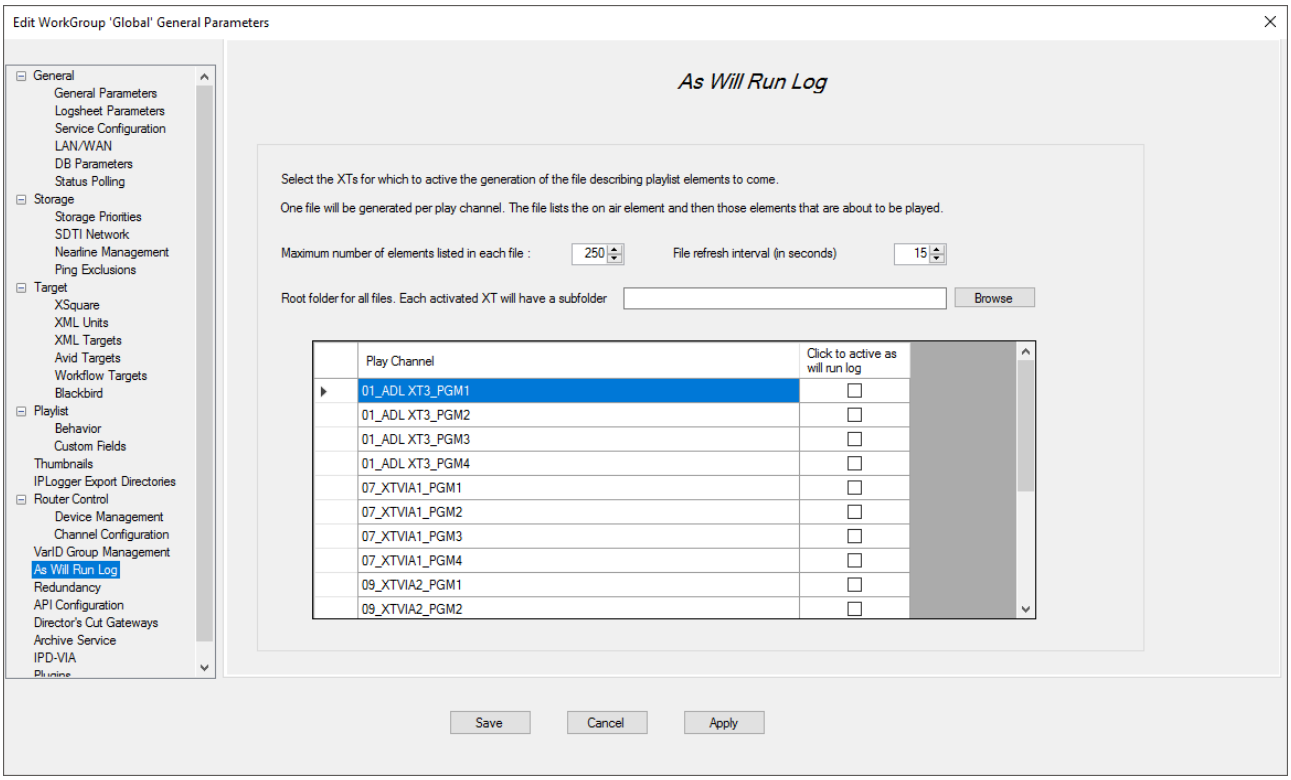
1. Double-click the item from the list.
2. Repeat step 1 to add other items.

2.7.21. 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.

> 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	☑
	22_XT[2] 2_PGM2	☐

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

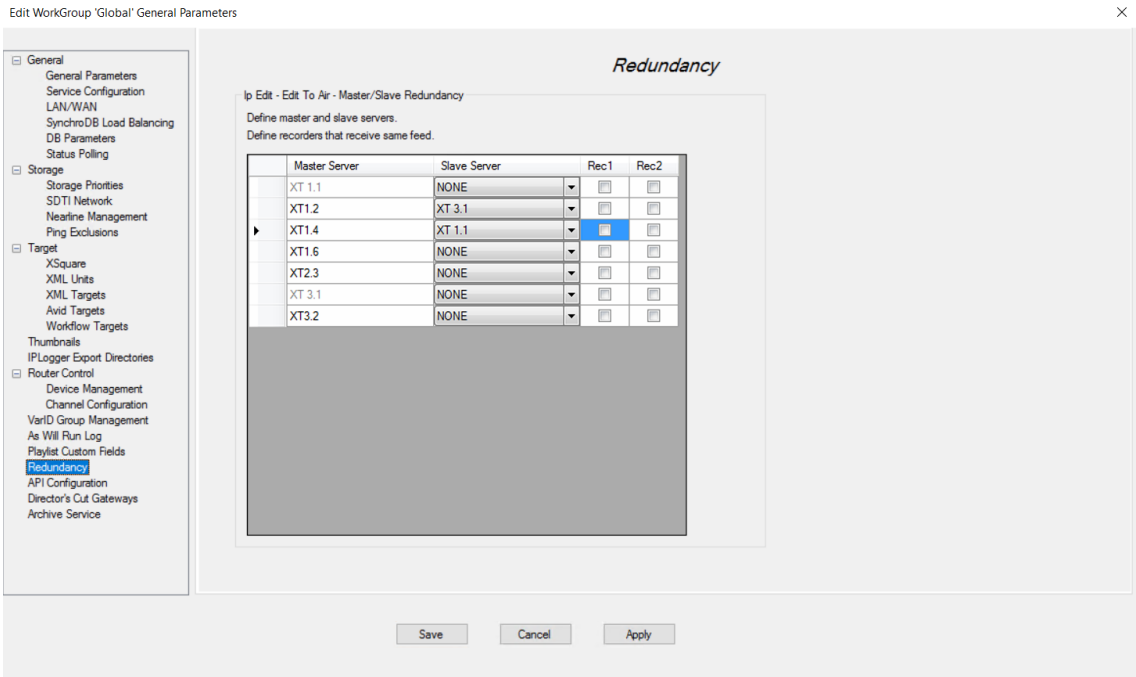
2.7.22. Redundancy Configuration

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).

> 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.

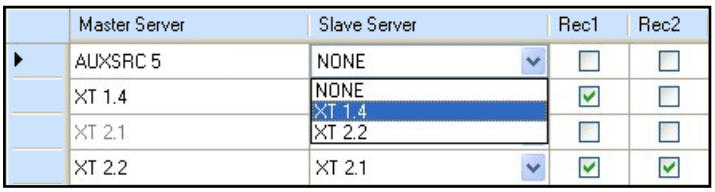
- Rec1&2:

  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.



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.

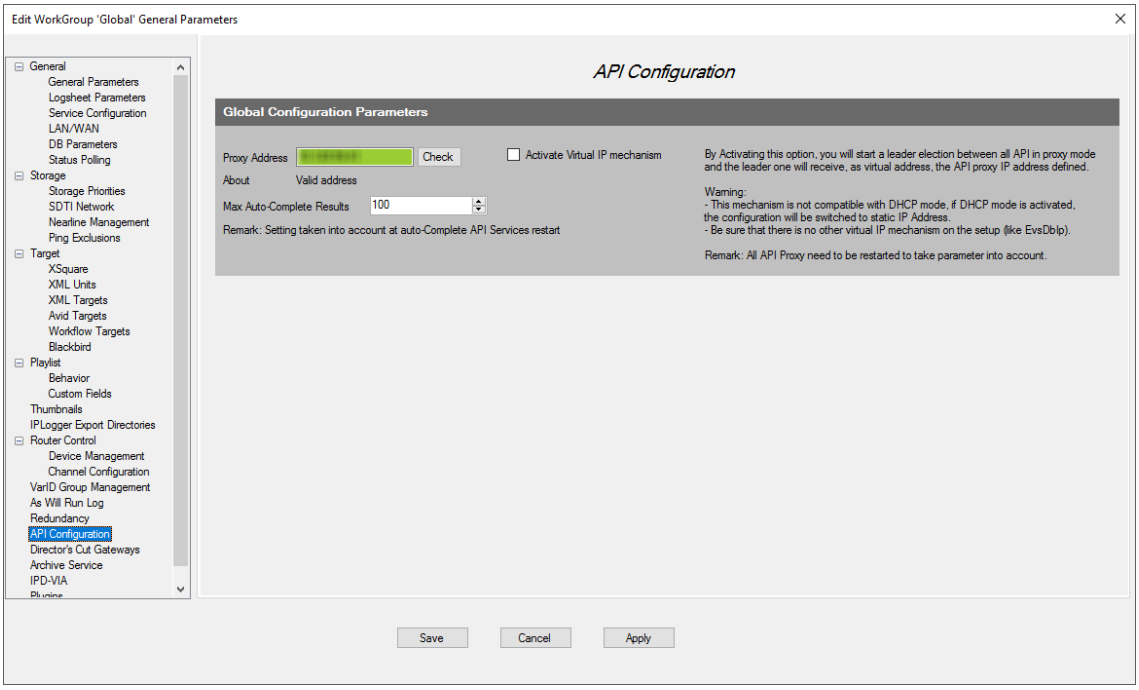
How to unassign a slave server from a master server?

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

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

2.7.23. API Configuration

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



Global Configuration Parameters

Proxy Address

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.

Max Auto-Complete Results

This value defines the maximum number of proposals to be displayed by the autocomplete service when a search string is entered in a search field.

Maximum value: 100.

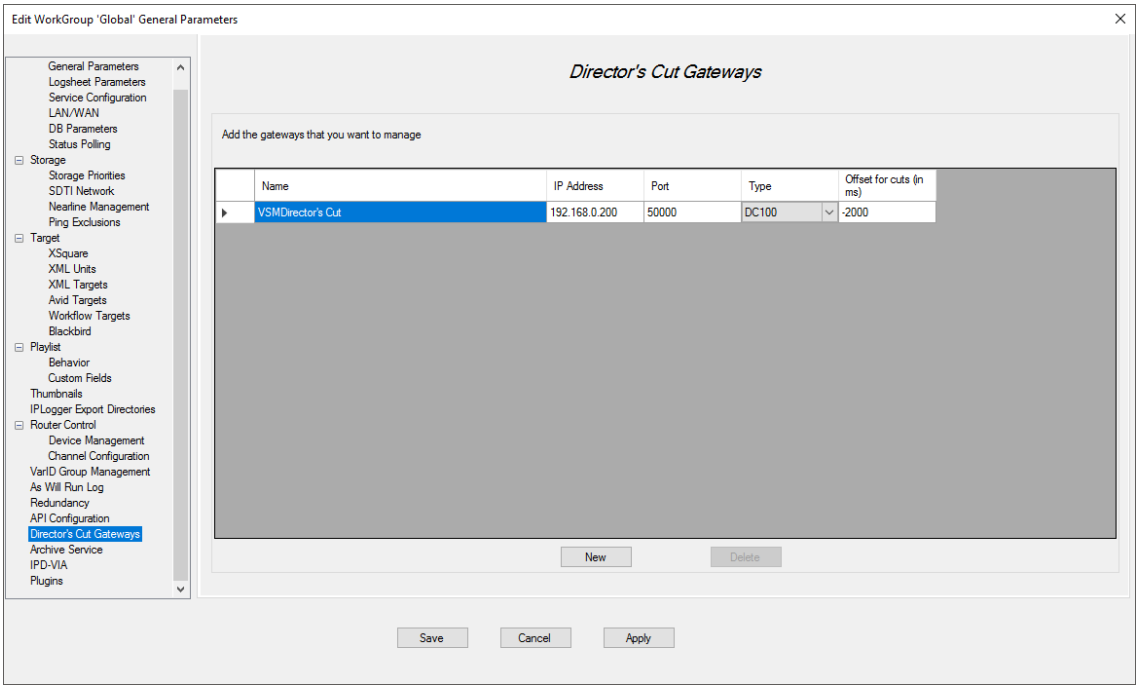
Once the IP-API settings are configured, click on the **Apply** button before configuring another tab.

2.7.24. Director's Cut Configuration

Introduction

NEW !

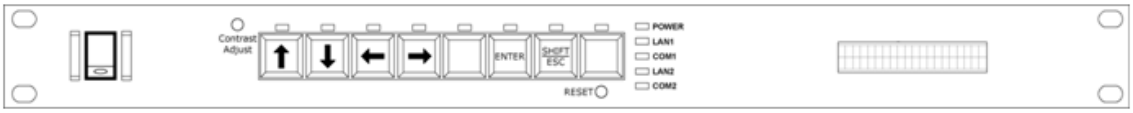
This tab is used to configure the Director's Cut Gateway (DC-100), Cerebrum or a VSM system (broadcast control and monitoring system), which will enable IPDirector to work with all the switchers supported by the VSM.



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.

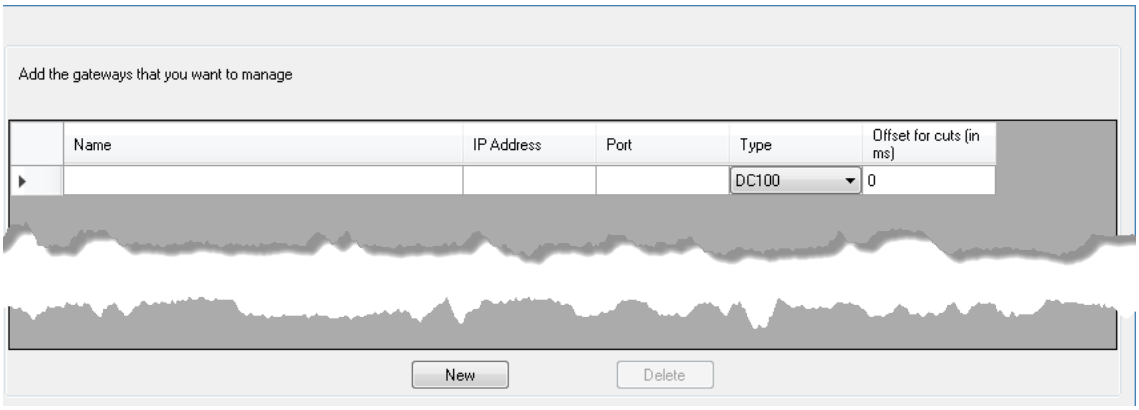


The Switcher Gateway can be monitored from the Monitoring Management tool. See section "Overview of the Monitoring Management Window" on page 192.

Adding a New Gateway

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 gateway (DC-100, VSM or Cerebrum) in the **IP Adress** column.

   In case of a DC-100, this address is set on the LCD screen of the DC-100 and requires a restart of the unit.

NEW !

4. Enter the port number of the gateway (DC-100, VSM or Cerebrum) in the Port column.

   In case of a DC-100, 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.

NEW !

> The port must be unique between all the configured gateways.

5. Select the gateway type:
   - **DC-100**
   - **VSM**
   - Cerebrum

NEW !

6. (optional) Set an offset value for the cuts to reduce or cancel the offset generated by the communication between the switcher, the gateway and the EVS system.

   Default value: 0 ms.

   The value must be negative with a maximum of 4 digits.

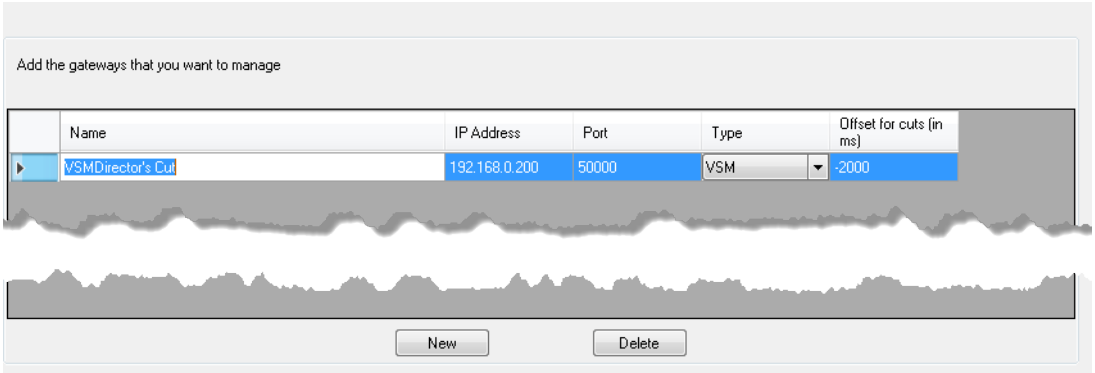
7. Click **Save** to validate the whole IPDirector configuration.

NEW !

Please refer to the DC-100 User Guide to configure the gateway unit or to the Cerebrum user manual.

Deleting a Gateway

1. Click on the line header to select it.



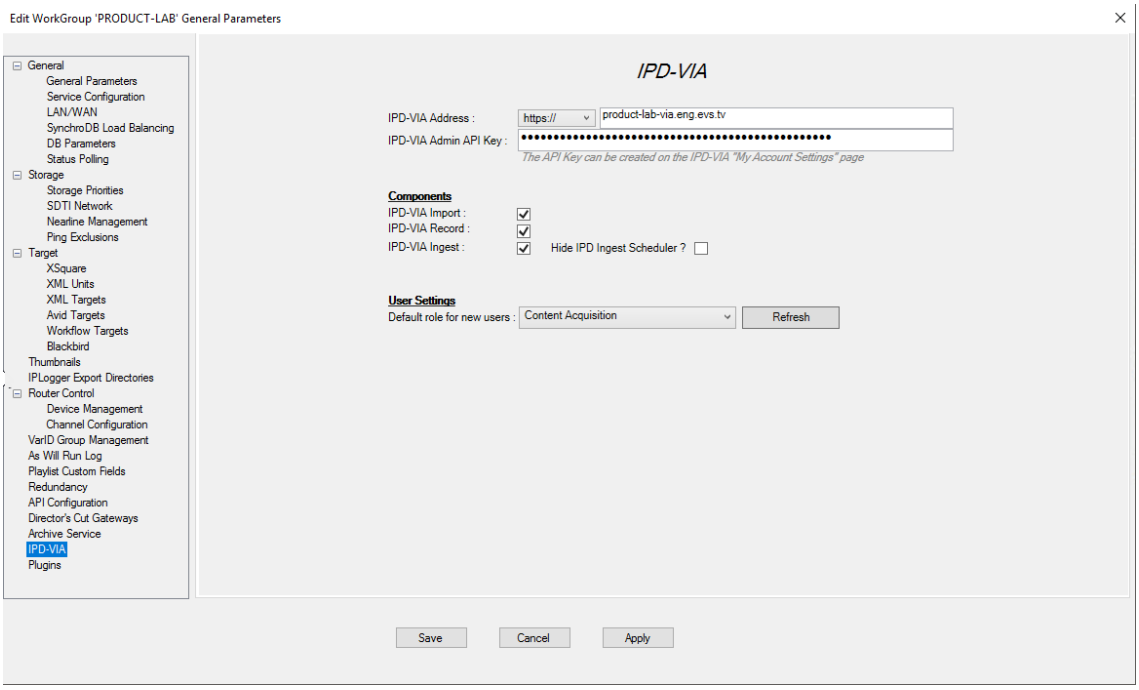
2. Click on the **Delete** button.

2.7.25. IPD-VIA

Overview of the IPD-VIA Tab

In the MediaCeption Signature solution, some IPD-VIA apps are integrated into the IPDirector user interface.

This tab is used to configure the communication between IPD-VIA and IPDirector, to choose the IPD-VIA apps available from IPDirector, and to set the default role that will be assigned to new users.



IPD-VIA Address

Enter the address of the workstation hosting IPD-VIA

IPD-VIA Admin API Key

Paste here the API key that you will have generated and copied from the IPD-VIA settings.

This is used by IPDirector to display and use IPD-VIA apps.

Components

IPD-VIA import, IPD-VIA Record and/or IPD-VIA Ingest

Select the IPD-VIA apps that will be available by default from the IPDirector interface for all the users. Would this needs to be adapted per user, this must be done from the IPD-VIA settings.

Hide IPD Ingest Scheduler:

When you use IPD-VIA Ingest, you can choose to hide IPD Ingest Scheduler from the IPDirector interface.

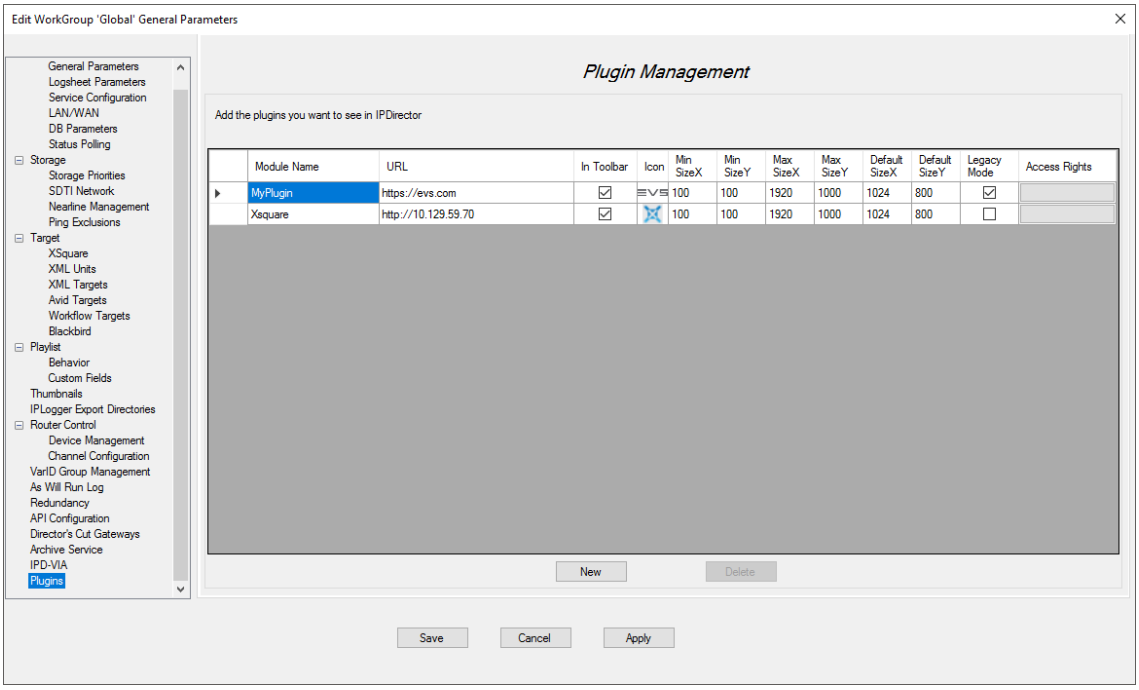
User Settings

This setting defines the default role that new users will get once they log in IPD-VIA. Would this role must change afterwards, this will be edited from IPD-VIA.

The menu lists all the roles defined in IPD-VIA.

2.7.26. Plugin Management

This tab is used to configure the plugins which can be used from the IPDirector user interface and which involve a URL.



Module Name

Enter the plugin name as it will appear in IPDirector.

URL

Enter the plugin address.

In toolbar

Select the check box if you want the plugin to be available from the IPDirector toolbar.

Clear the check box if you do not want the plugin to be available from the IPDirector toolbar.

Icon

Click in the cell to browse and select an image to associate with the plugin name in the interface.

Min Size X

Enter the minimum width of the plugin window.

Min Size Y

Enter the minimum height of the plugin window.

Max Size X

Enter the maximum width of the plugin window.

Max Size Y

Enter the maximum height of the plugin window.

Default Size X

Enter the default width of the plugin window.

Default Size Y

Enter the default height of the plugin window.

Legacy Mode

Select the check box if you want the plugin to open in Internet Explorer.

Clear the check box if you want the plugin to open in Edge.

Access Rights

Select the groups who will have access to the plugin.

- No group selected: no visibility for any user/group (except Admin users).
- Group(s) selected: visibility limited to selected groups.

See also the Plugins Management section in the General Functions user manual.

2.7.27. Plugin - Import IPD Users in Xsquare

Context of Use

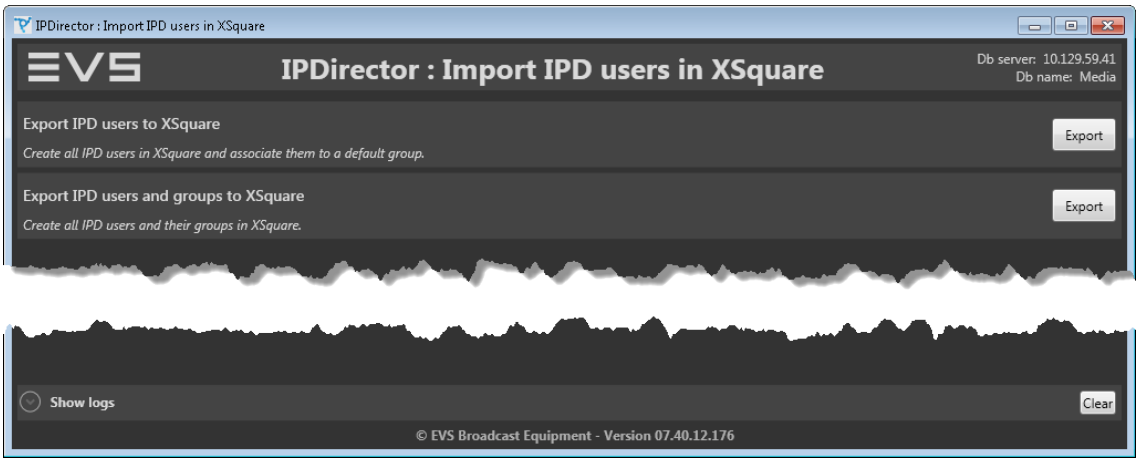
This plugin is designed to import the IPDirector users created in IPDirector User Manager into Xsquare, with or without the groups they belong to.

You can access it by clicking the **Launch Plugin** / button and then clicking **Launch** next to **IPDirector - Import IPD users in Xsquare**.

The following users should never be modified to ensure that this works properly:

- administrator,
- the credentials entered in the Xsquare tab for connection to Xsquare. See section "Xsquare Parameters Definition" on page 91.

Possible Options



Export IPD users to Xsquare

This option creates all the IPDirector users in Xsquare, provided that they do not exist yet. Users already present in Xsquare are not modified.

The same temporary password is associated with all the users imported in Xsquare. As soon as a user logs in to IPDirector with the credentials set in User Manager, the password will be updated in Xsquare.

All the users imported in Xsquare are assigned to the same group: Xsquare users. Then, an Xsquare administrator will have to assign imported users to groups and publish targets to groups.

Export IPD users and groups to Xsquare

This option creates all the IPDirector users in Xsquare, provided that they do not exist yet. Users already present in Xsquare are not modified.

The same temporary password is associated with all the users imported in Xsquare. As soon as a user logs in to IPDirector with the credentials set in User Manager, the password will be updated in Xsquare.

The IPDirector groups the imported users belong to are imported as well in Xsquare with the following naming convention: IPDirector_[Name of the group].

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.

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.

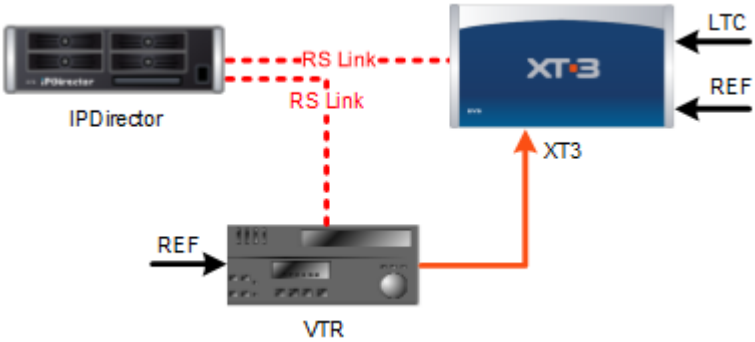
IP-Scheduler Service

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 170 and "Nearline Management Configuration" on page 81.

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.

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 230.

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 248 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 252.

EVS Registry

This service is used to register the AS and ATS services.

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.

2.8.2. Starting Services

Prerequisites

SynchroDB and IPDirector services must have been configured before start.

Manually Starting a Service

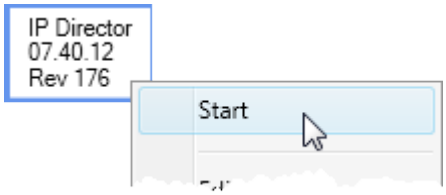
Any service can be individually and manually started on a workstation in one of the following ways:

- Use the start option of the workstation **Service**:
  - With the Classic theme, right-click the corresponding **Service** box and select **Start** from the contextual menu.

  - With the Dark theme, click the button on the **Service**.
- 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:

- Use the start option of the workstation **Service**:
  - With the Classic theme, right-click the **IPDirector** box and select **Start** from the contextual menu.



  - With the Dark theme, click the button on the **IPDirector** square.
- 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.

> 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.

Automatically Starting a Service

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 of the Workgroup

- Click the **Start All Services** or button on the workgroup toolbar.

This starts the following services on the workgroup:

- the "mandatory" IPD-Routing and SynchroDB services
- the Remote Installer services set to **Auto Start**. This can be IP-Scheduler, VTR Engine, IP Drive, IP API, Router Control, AbRoll, ATS and EVS Registry.
- the Indexing Service components set to **Auto Start**.

How to Start "All" Services of a Workstation

- Right-click a workstation area and select **Start All Services** from the contextual menu.

This starts the following services on the workstation:

- the "mandatory" IPD-Routing and SynchroDB services
- the Remote Installer services set to **Auto Start**. This can be IP-Scheduler, VTR Engine, IP Drive, IP API, Router Control, AbRoll, ATS and EVS Registry.
- the Indexing Service components set to **Auto Start**.

How to Start IPDirector and all the Services

1. Right-click the **Start All Services** or button on a workgroup.
2. Select the **Start All IPDirector and Services** option.

This starts IPDirector and all the services started with the **Start All Services** option.

How to Start All Indexing Services

Indexing Services can be started from the Indexing Service window. Refer to section "Managing and Monitoring the Indexing Service" on page 193.

They can also be started from the main Remote Installer window:

1. Right-click the **Indexing Service** button of the workgroup from the main Remote Installer window.
2. Select the **Start all Indexing Services** option.

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.

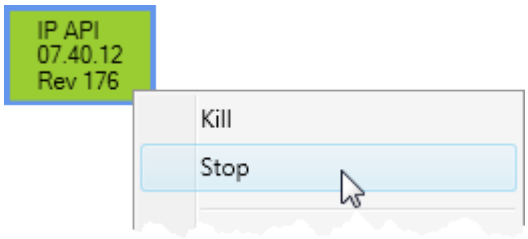
The **Stop** option will close properly the IPDirector application, the running services and the Indexing Services.

The **Kill** option will stop the IPDirector process. The **Kill** option must be used as a last resort if the service cannot be stopped.

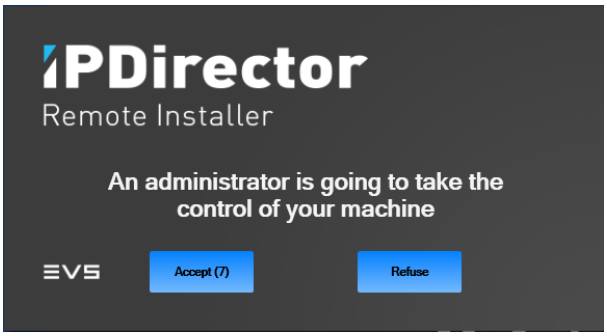
Stopping one or Several Services

1. Any service can be manually stopped on a workstation in one of the following ways:
   - Use the stop option of the workstation **Service**:

     With the Classic theme, right-click the corresponding **Service** box and select **Stop** from the contextual menu.

     With the Dark theme, click the button on the **Service**.
   - 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** or 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.

Stopping Indexing Services

Indexing Services can be stopped from the Indexing Service window. Refer to section "Managing and Monitoring the Indexing Service" on page 193.

They can also be stopped from the main Remote Installer window:

1. Right-click the **Indexing Service** button of the workgroup from the main Remote Installer window.
2. Select the **Stop all Indexing Services** option.

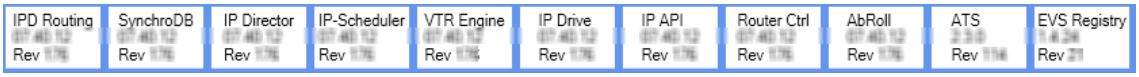
Killing Services

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** box corresponding to a service of the workgroup and select **Kill** from the contextual menu.

Display of Services Stopped

When a service is stopped, its box has a white background.



or

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 51.
- The Serial Communication must have been configured. See section "Configuring the Serial Ports" on page 52.

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.

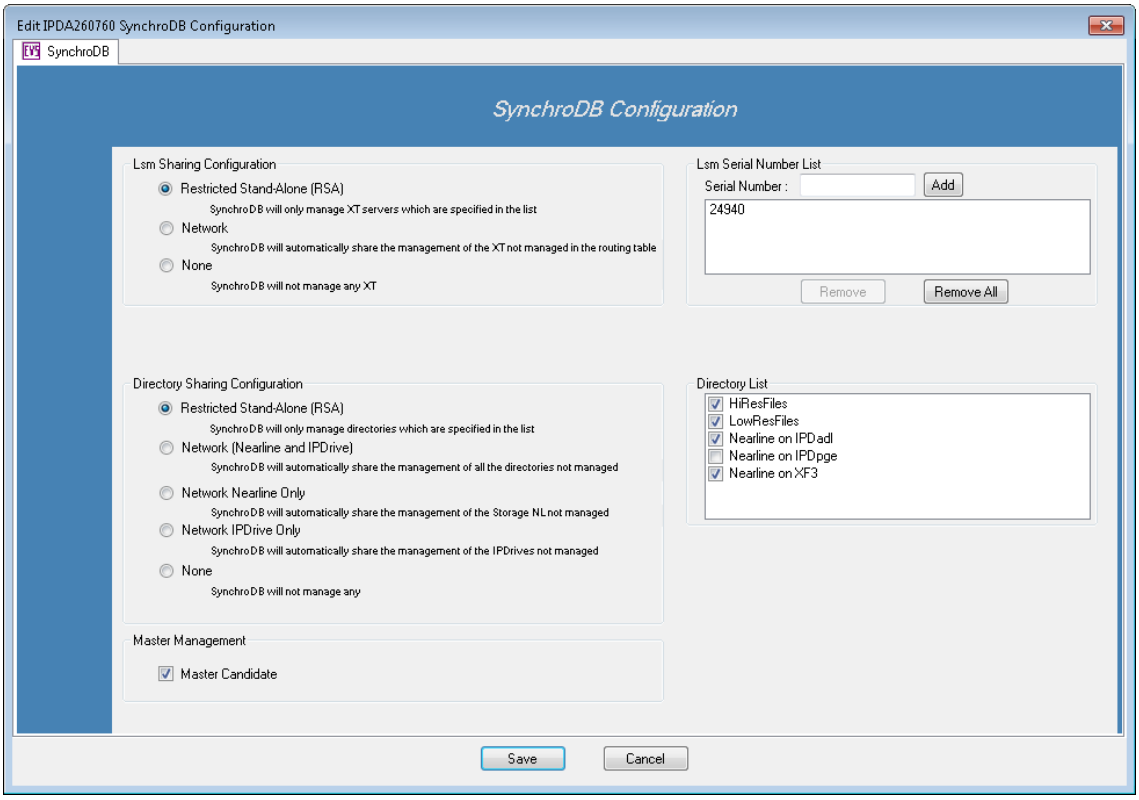
To open the SynchroDB Configuration window in Edit/Configuration mode,

1. Make sure the SynchroDB service is stopped.
2. With the Classic theme:
   a. Right-click the **SynchroDB** box.
   b. Select **Edit Config** from the contextual menu.

   With the Dark theme,

   - Click the button on the service box.

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.

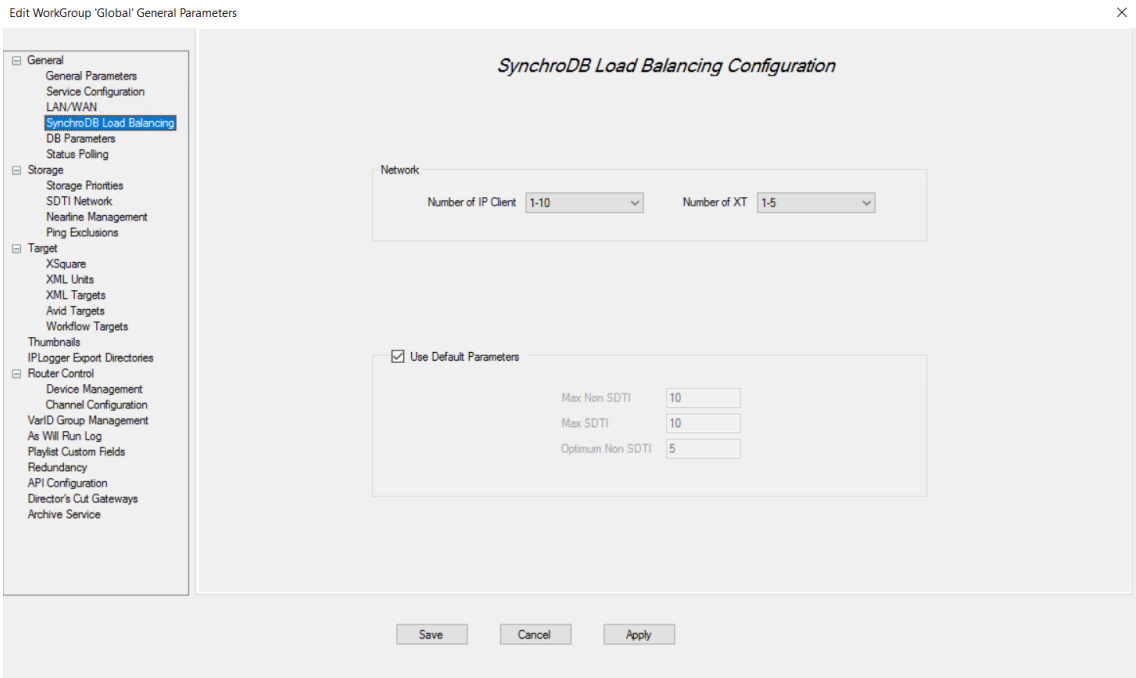
If the XNet network is already running, a convenient place to gather all the server serial numbers is from the **SHIFT + F4** screen on any of the Multicam user VGA stations.

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 1.



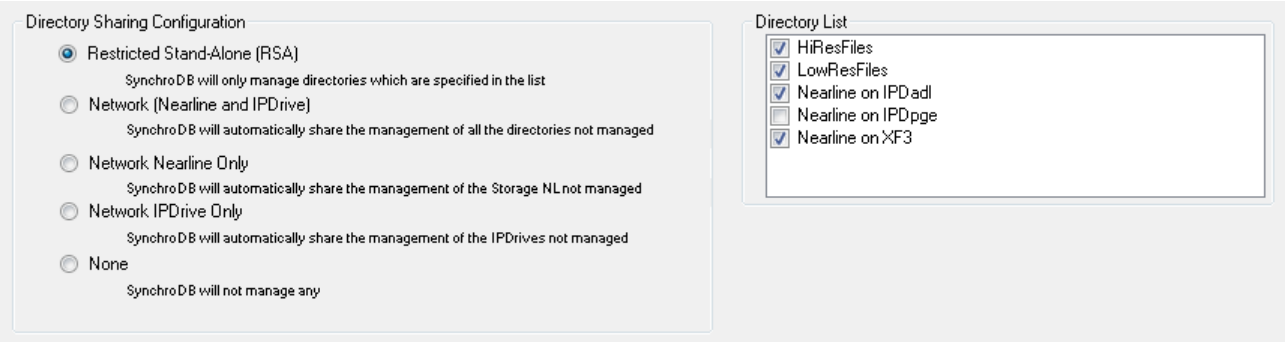
In the case of a complete SynchroDB management using the network mode, you need to set the basics parameters comparing to your setup size.

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



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 81.

Network Nearline and IPDrive

Use this option to automatically assume the management of Nearline directories and IPDrives amongst different SynchroDB. This is mainly used for managing new drives detected by the IP Drive service.

See section "Configuring IP Drive" on page 183.

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.

Network Nearline only

Use this option to manage only the nearline directories.

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.

Network IPDrives only

Use this option to manage only the IPDrives.

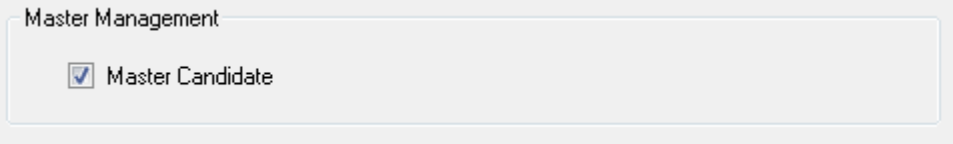
If a SynchroDB of one workstation stops, another SynchroDB can take the duties and manage the IPDrives which were originally managed by the SynchroDB that has stopped.

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



Only one SynchroDB manages jobs in a workgroup: the SynchroDB running with the Master role.

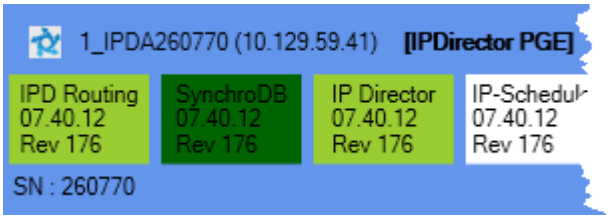
It is mandatory to declare at least one SynchroDB as a Master Candidate even if it is a standalone workstation. This workstation may consume more CPU resources.

Declaring more than one SynchroDB as a Master Candidate is allowed and brings you failover functionality. Then, the SynchroDB with the lowest routing number assumes the Master role.

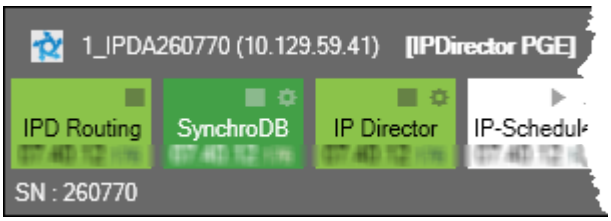
The SynchroDB with the Master role manages the following jobs:

- 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.



or



Configuring IPDirector Service

Assigning a Channel to a Video Display

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.

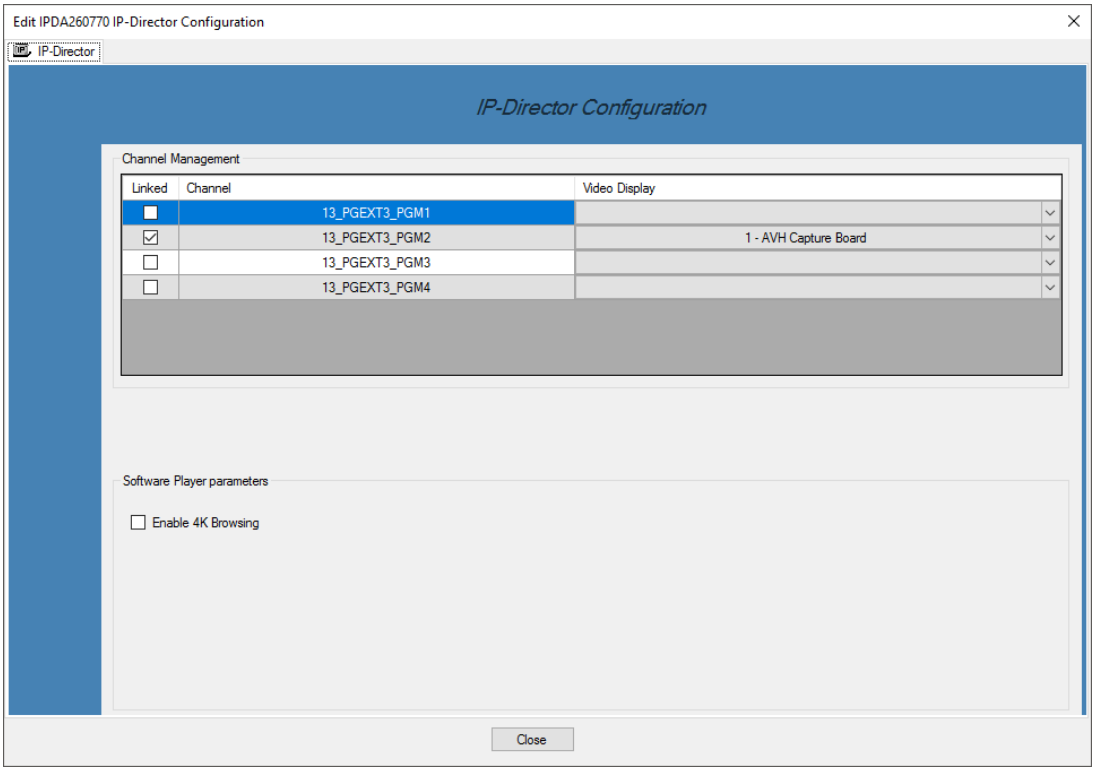
How to Assign a Channel to a Video Display

1. With the Classic theme:
   a. Right-click the **IPDirector Service** box on the Workstation area.
   b. Select **Edit Config** from the contextual menu.

   With the Dark theme,

   - Click the button on the service box.

The IPDirector Configuration window opens:



2. Select the box in the **Linked** column corresponding to the player channel you want to link to the video display.
3. Select which video display device it must be linked to from the drop down list in the **Video Display** column.

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.

4. Click **Save**.
5. Repeat steps 1 to 5 for all IPDirector workstations as these parameters are local to the IPDirector workstation.

Enabling 4K Browsing

Context of Use

4K media need sufficient resources to be properly processed.

An option is available to enable 4K values to be taken into account. When the option is not selected, HD values are taken into account for browsing.

It is not recommnded to browse 4K media on management workstation.

Software and Hardware Requirements

The following consitions must be met to be able to browse 4K media.

- The workstation must have at least 16 GB RAM.
- At least Windows 10 must be used.

How to Enable 4K Browsing

1. With the Classic theme:
   a. Right-click the **IPDirector Service** box on the Workstation area.
   b. Select **Edit Config** from the contextual menu.

   With the Dark theme,

   - Click the button on the service box.

   The IPDirector Configuration window opens.
2. Tick the **Enable 4K Browsing** option.
3. Click **Save**.

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** box 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

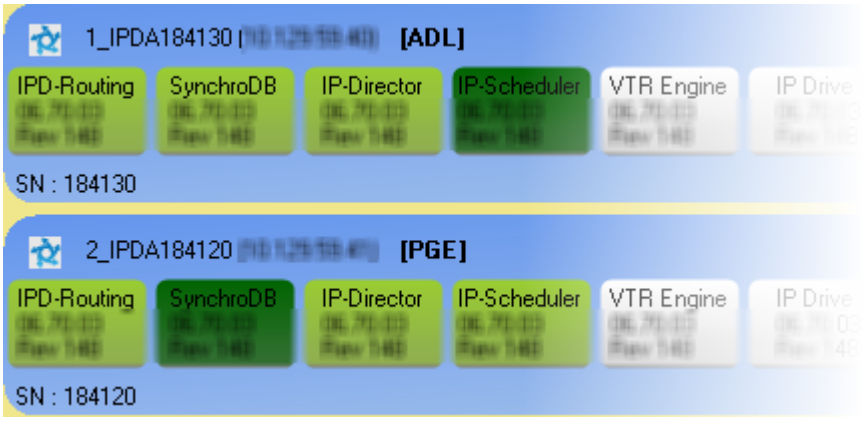
If only one IP-Scheduler service is started in the workgroup, it automatically runs as Master.

When more than one IP-Scheduler are started on a workgroup, the service with the lowest routing number takes the Master role.

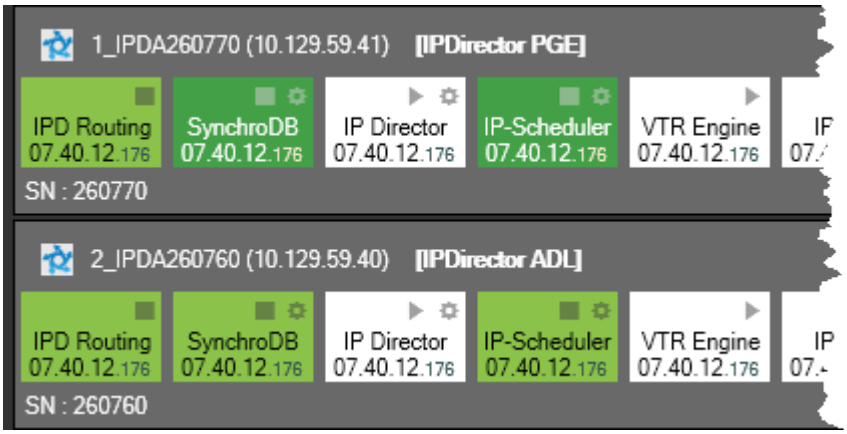
In case the Master stops working, the slave IP-Scheduler with the lowest routing number takes the Master role in the workgroup.

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.



or



IP-Scheduler Configuration Window

The IP-Scheduler service is configured from the IP-Scheduler Configuration window.

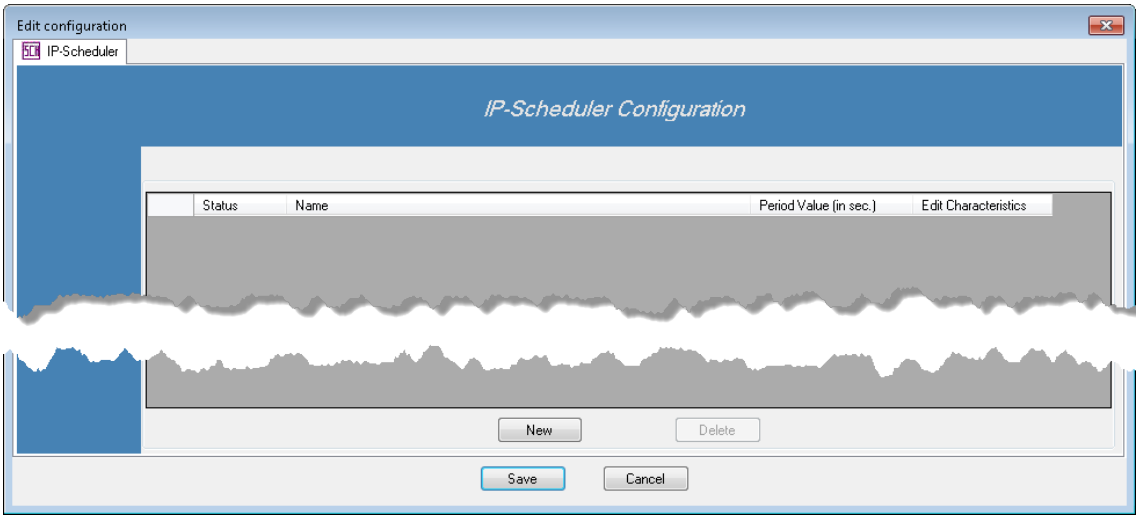
To open the IP-Scheduler Configuration window in Edit/Configuration mode,

1. Make sure the IP-Scheduler service is stopped.
2. With the Classic theme:
   a. Right-click the **IP-Scheduler** box.
   b. Select **Edit Config** from the contextual menu.

With the Dark theme,

- Click the ⚙ button on the service box.

The IP-Scheduler Configuration window opens:

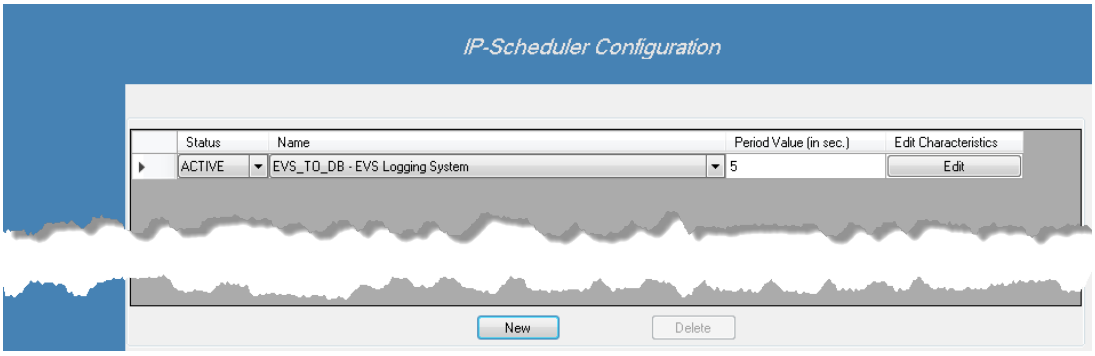


Adding a Job

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
   - 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.

   Enter a value in the Period Value column.

   Default value: 5 seconds

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.

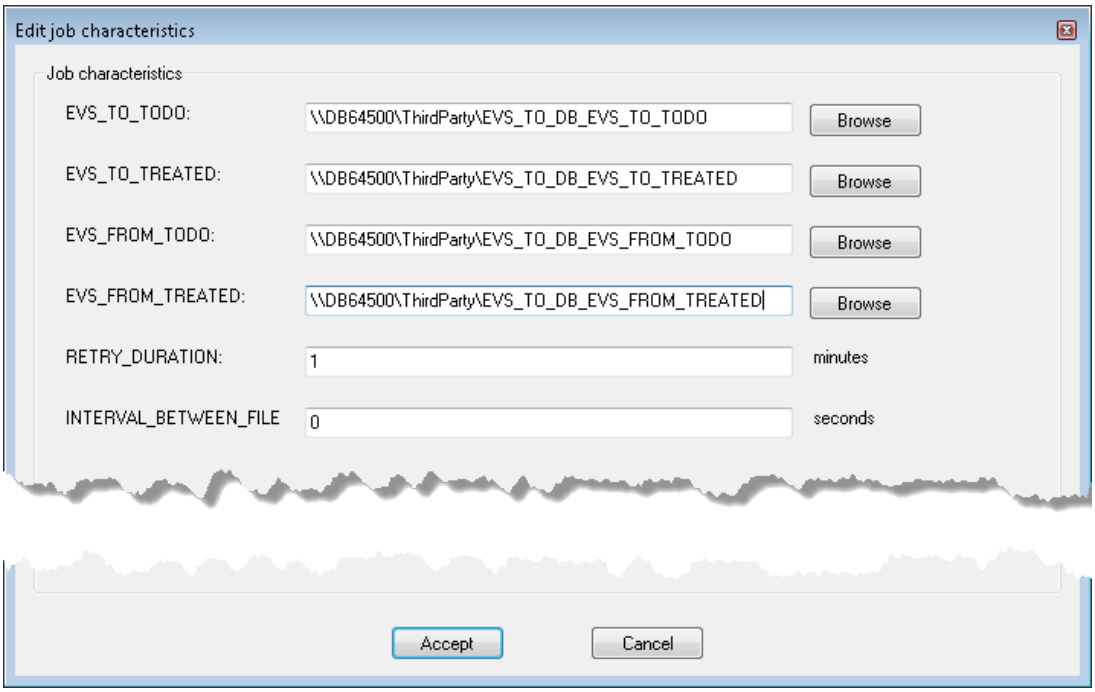
   - For EVS_TO_DB – EVS Logging System, go to step 6.
   - For MoveFileTo – Move every files to another directory, go to step 7.

6. EVS_TO_DB – EVS Logging System.

   This type of job runs when the IPDirector is interfaced with 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.

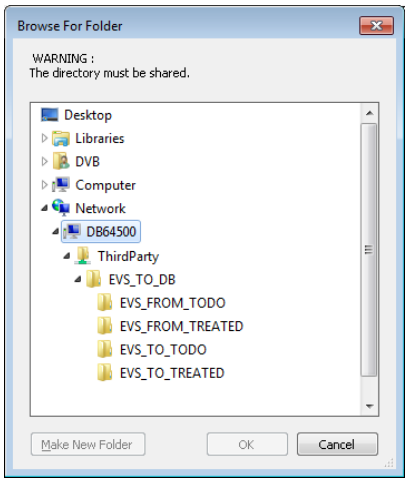


   The IP Scheduler will poll on the EVS_TO_TODO directory to find all jobs (XML files corresponding to logsheets, logs and/or keyword grids) which must still be treated, and insert the corresponding data in its database. When the EVS system has treated the job, the XML file will be moved into the EVS_TO_TREATED 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.

   a. Click the **Browse** buttons in front of the characteristics to define the corresponding directories.

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



The directories must be shared with full access control.

b. Set the **Retry Duration**.

   Default value: 1 minute.

c. Set the **Interval Between File**.

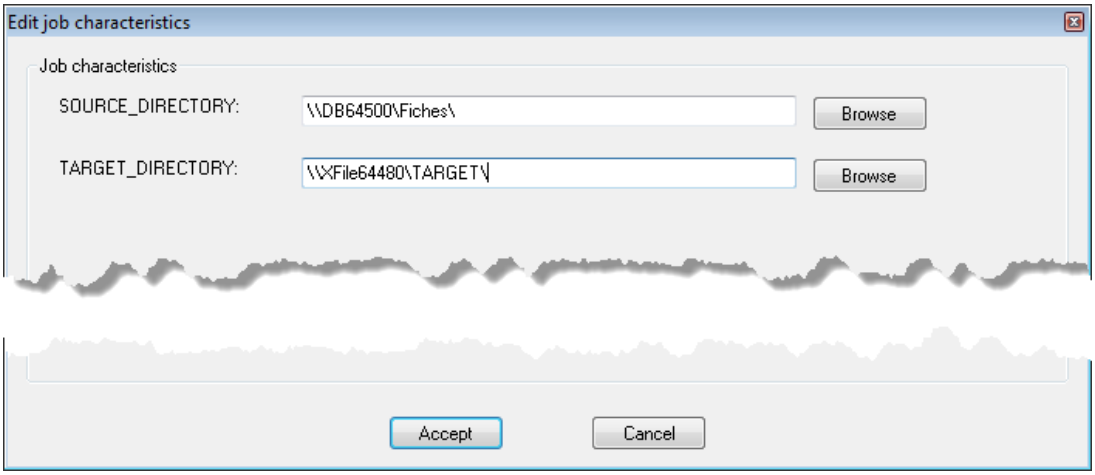
   This parameter is used to define a time interval between the process of the XML file related to a clip creation and the XML file related to the logsheet creation and clip protection. This is to avoid an error in case the second one is processed before the first one is not done yet.

   Default value: 0 seconds.

d. Click **Accept** to validate the new job characteristics.

7. MoveFileTo – Move every files to another directory.

   This job is used to zip the content of a source folder and move the zipped file to another destination directory.



a. Click the **Browse** buttons next to the characteristics to define the corresponding directories.

   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.

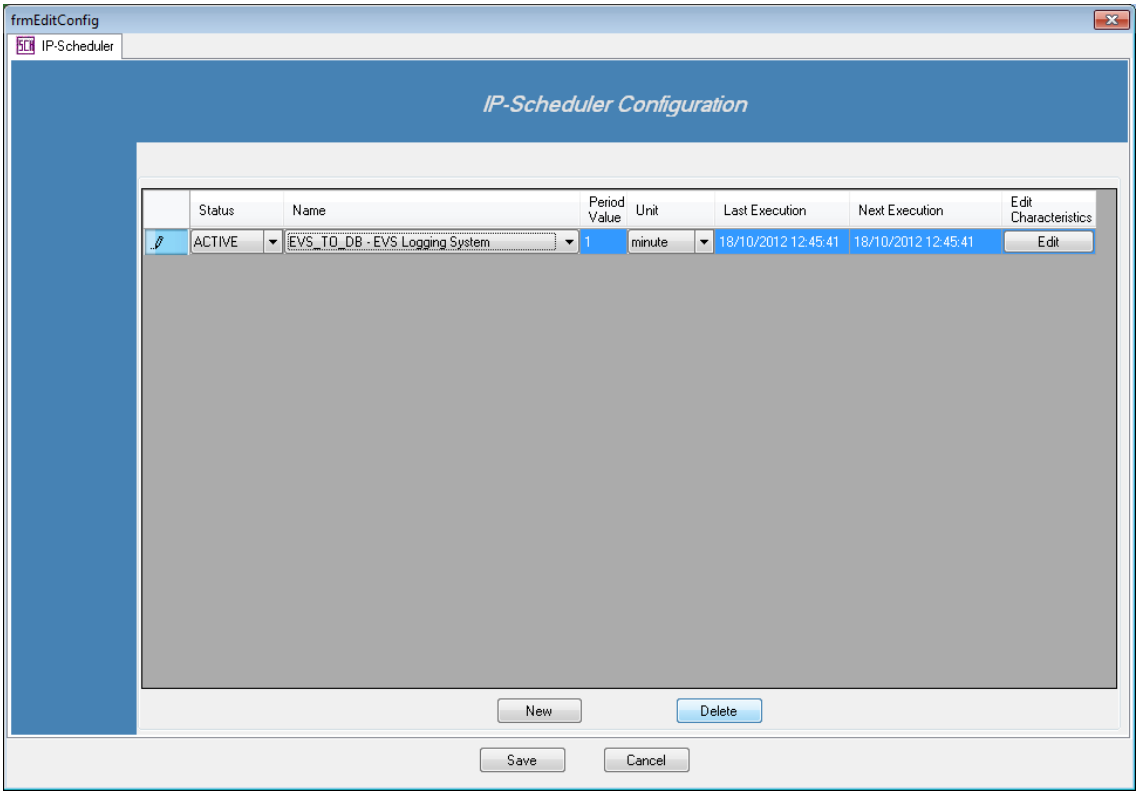
> The directories must be shared with full access control.

b. Click **Accept** to validate the job characteristics.

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 52.
- The SynchroDB and IP-Scheduler services must have been configured. See sections "Configuring SynchroDB" on page 170 and "Configuring IP-Scheduler" on page 177.
- 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 52.

- The SynchroDB and IP-Scheduler services must have been configured. See sections "Configuring SynchroDB" on page 170 and "Configuring IP-Scheduler" on page 177.
- 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.

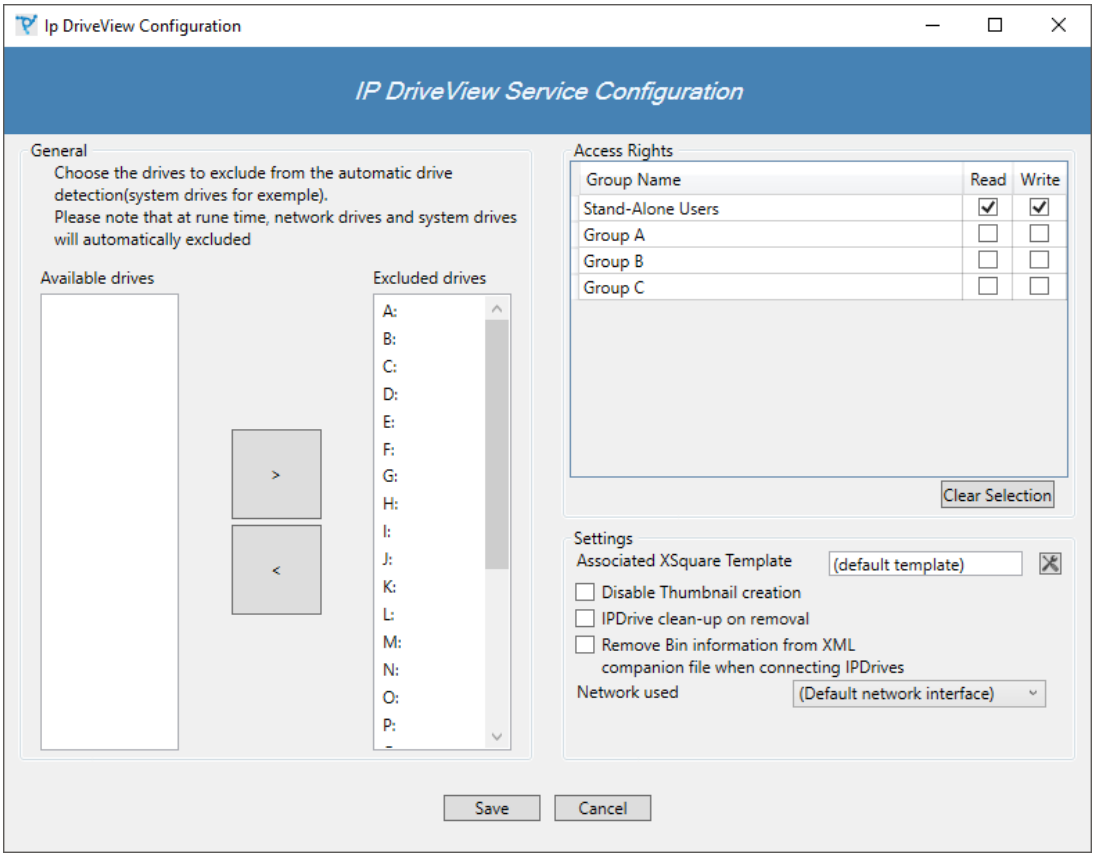
To open the IP Drive Configuration window in Edit/Configuration mode,

1. Make sure the IP Drive service is stopped.
2. With the Classic theme:
   a. Right-click the **IP Drive** box.
   b. Select **Edit Config** from the contextual menu.

   With the Dark theme,

   - Click the button on the service box.

   The IP Drive Configuration window opens:



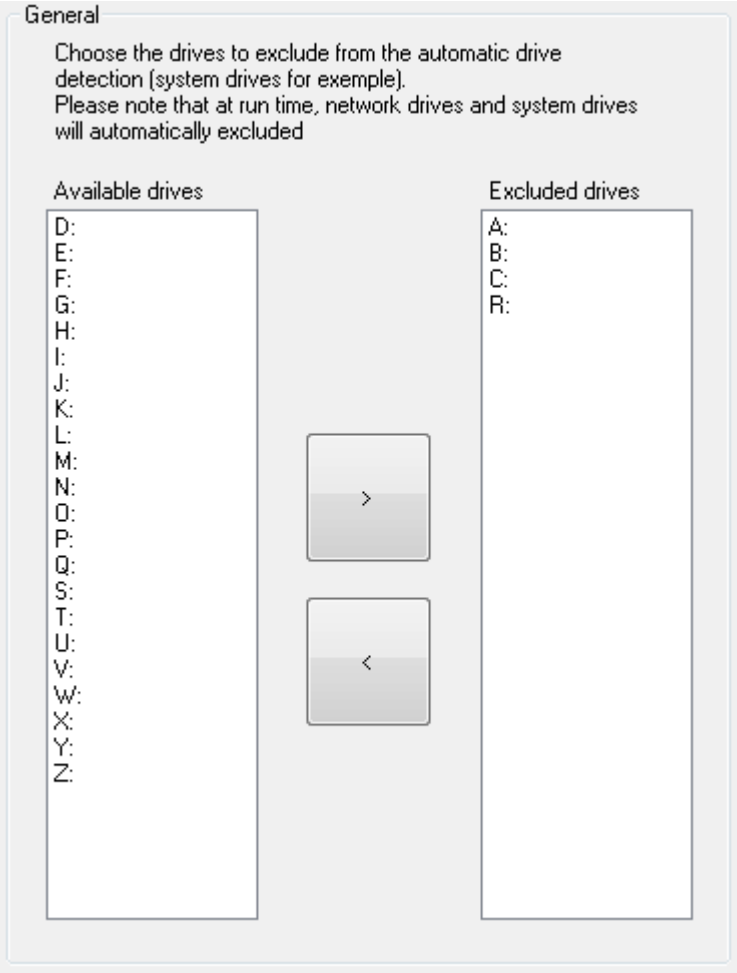
   See the sections below for a description of all the window areas.

3. (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).



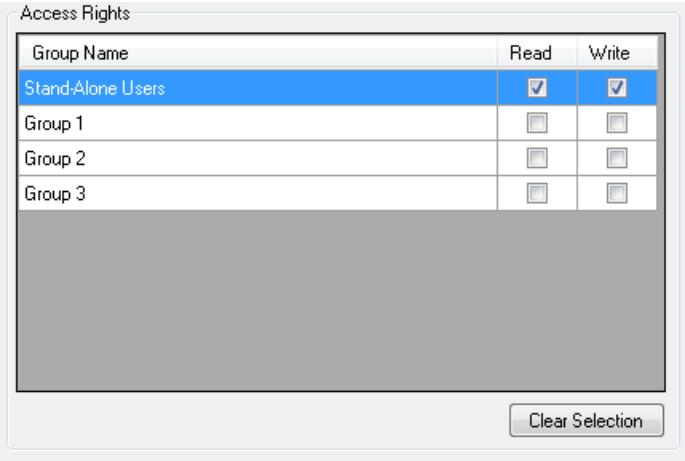
Select the letter in the Available drives list to be excluded from the detection and click **>** to add it in the Excluded drives list (most EVS hardware will recommend excluding at least C:System, R:Restore and floppy A: / B: drives).

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.



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

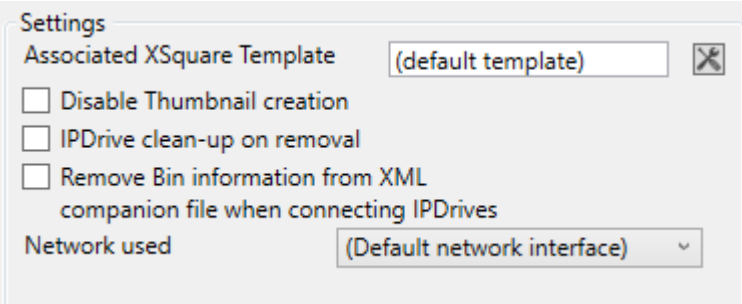
Selecting a Write box allows performing a backup of the clips from a server to a drive (Reading is automatically allowed).

> 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

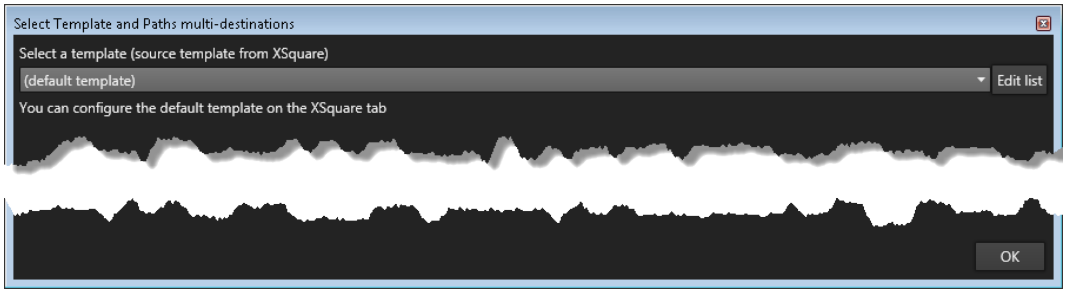


Associated Xsquare Template

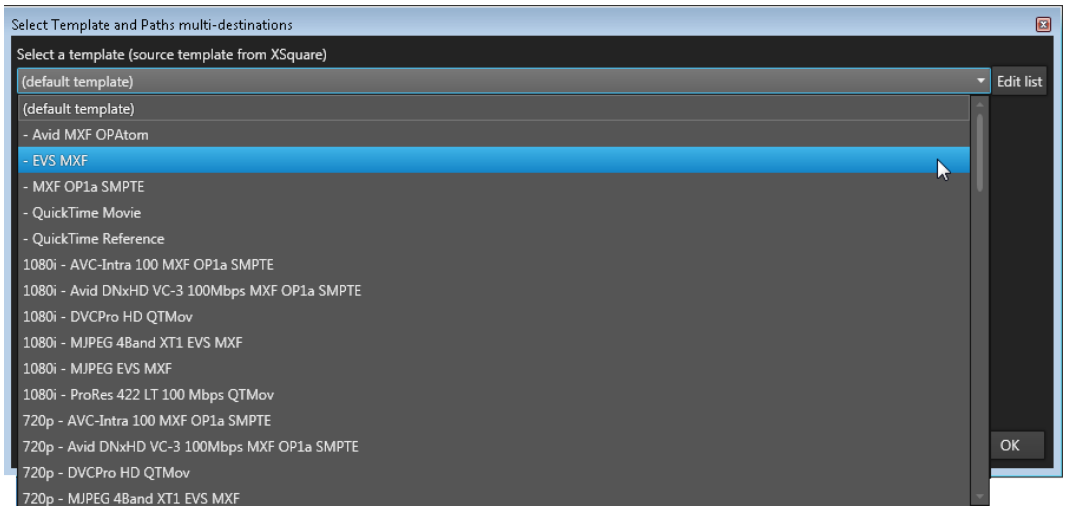
1. Select an Xsquare template that will be used for backup to / restore from nearline (IP Drive) operations. This can be:
   - the template selected as default template from the Xsquare tab (see section "Xsquare Parameters Definition" on page 91). Then, go to step **7.**
   - another Xsquare template: proceed with step **a.** to **e.** below.

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

   The Select Template and Paths Multi-Destinations window opens:

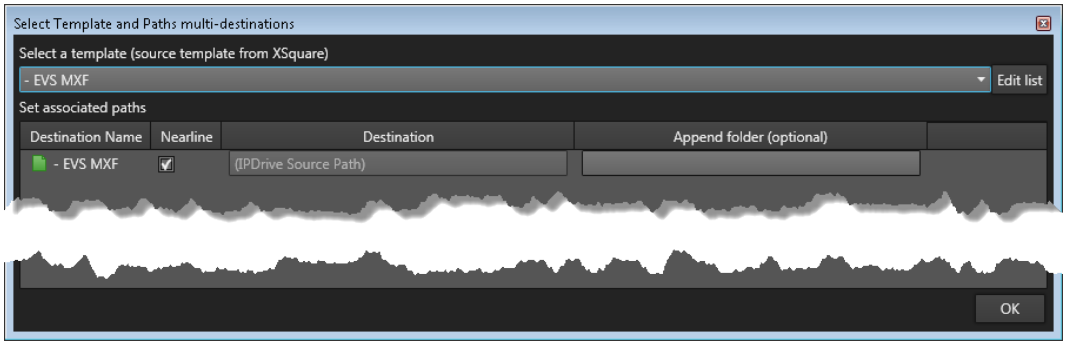


   b. Click the arrow next to the **Template** field to display the list of available templates:



   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:

Disable Thumbnail Creation

This option is used to disable the creation of thumbnails for the IPDrive elements.

If the checkbox is selected, the thumbnail will only be created when the IPDrive clip is added into a playlist or when the **Recreate all thumbnails** option is selected from the IPDirector Tools menu.

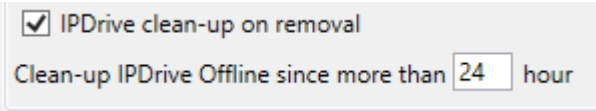
If the checkbox is cleared (default), the thumbnails for the IPDrive elements will always be created.

IPDrive Clean-up on Removal

This option is used to remove any reference to the elements stored on the IPDrive after the IPDrive as been removed.

1. Select this option.

   The following field is displayed:



2. Enter the time (hours) after which the IPDrive elements seen as offline will be cleaned.

Remove Bin Information

This option is used to remove any information about bin which could come from the XML companion file when an IPDrive is plugged.

If the checkbox is selected, media will be imported from IPDrive without the bin metadata.

Network Used for Transfer

This option allows you to select the network which will be used for transfer when IPDrive is detected.

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 52.
- The SynchroDB, IP-Scheduler and IP Drive services must have been configured. See sections "Configuring SynchroDB" on page 170 "Configuring IP-Scheduler" on page 177. and "Configuring IP Drive" on page 183.

- 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.

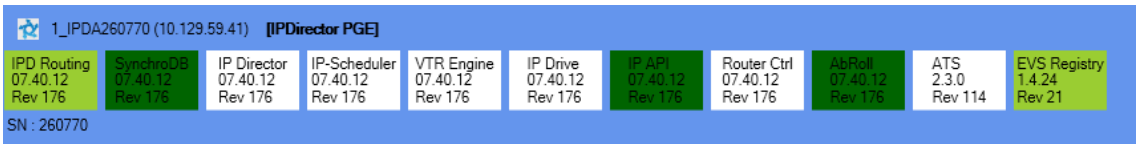
Master Role

The IP API with the lowest routing number takes the Master role.

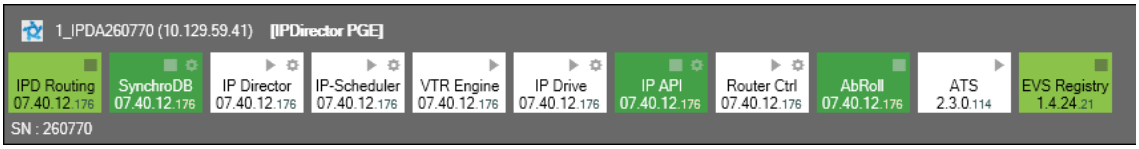
This IP API is in charge of the API Notifications and usually consumes a lot of memory.

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.



or



IP API Configuration Window

The IP API service is configured from the IP API Configuration window.

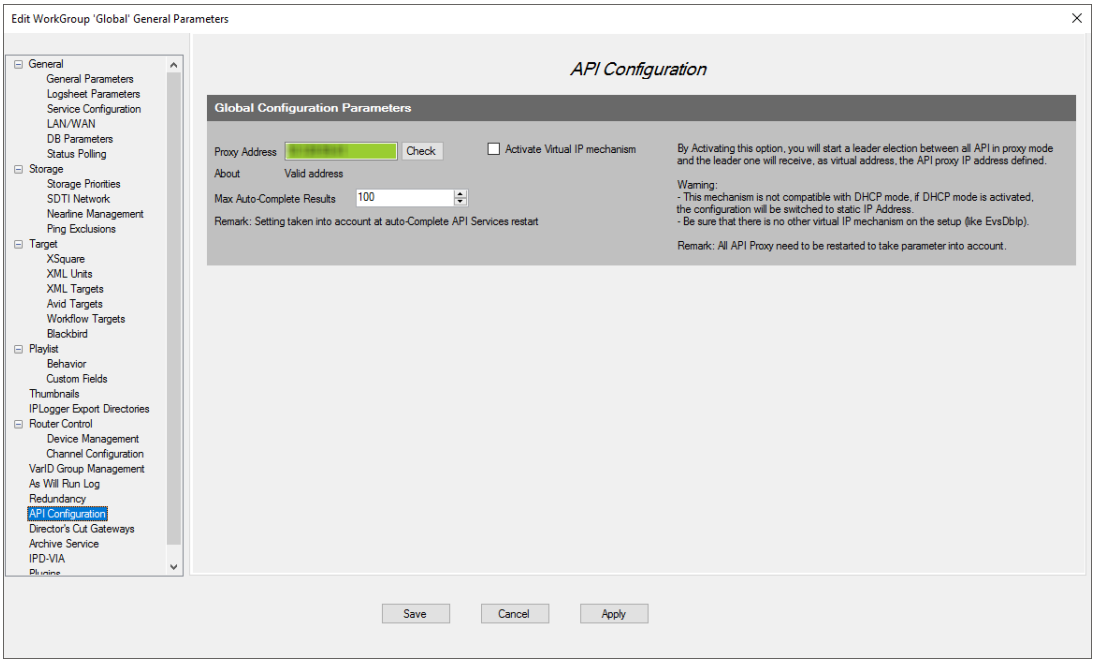
To open the IP API Configuration window in Edit/Configuration mode,

1. Make sure the IP API service is stopped.
2. With the Classic theme:
   a. Right-click the **IP API** box.
   b. Select **Edit Config** from the contextual menu.

   With the Dark theme,

   - Click the button on the service box.

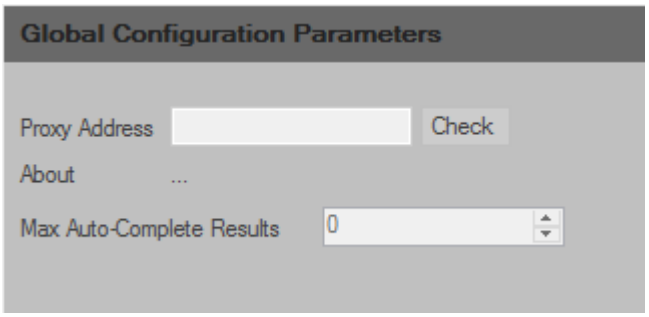
   The IP API Configuration window opens:



See the sections below for a description of all the window areas.

3. Repeat previous steps for all IPDirector workstations as these parameters are local to the IPDirector workstation.

Global Configuration Parameters



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 "API Configuration" on page 154.

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.

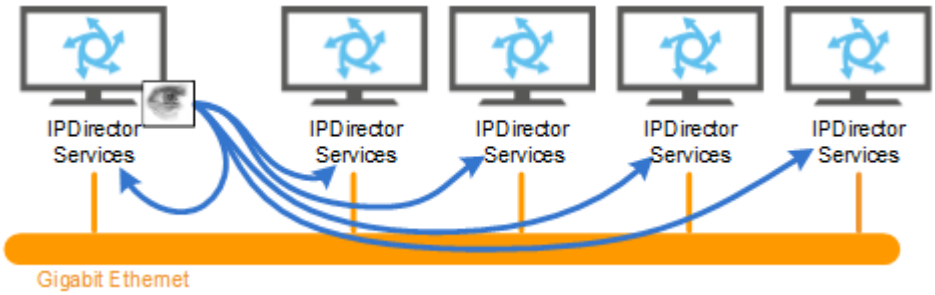
In case an AB Roll service with a lower routing number starts afterward, the first one remains Master. If the Master stops or fails, the AB Roll service with the lowest routing number will then take the Master role.

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.



The monitoring interfaces are designed for technical assistance. The delivered information is dedicated to skill users in contact with the EVS support staff.

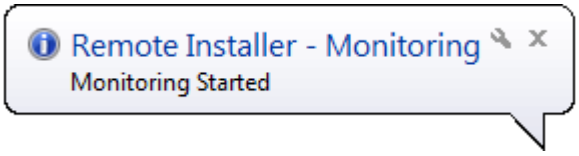
Starting the Monitoring Management Tools

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 192.

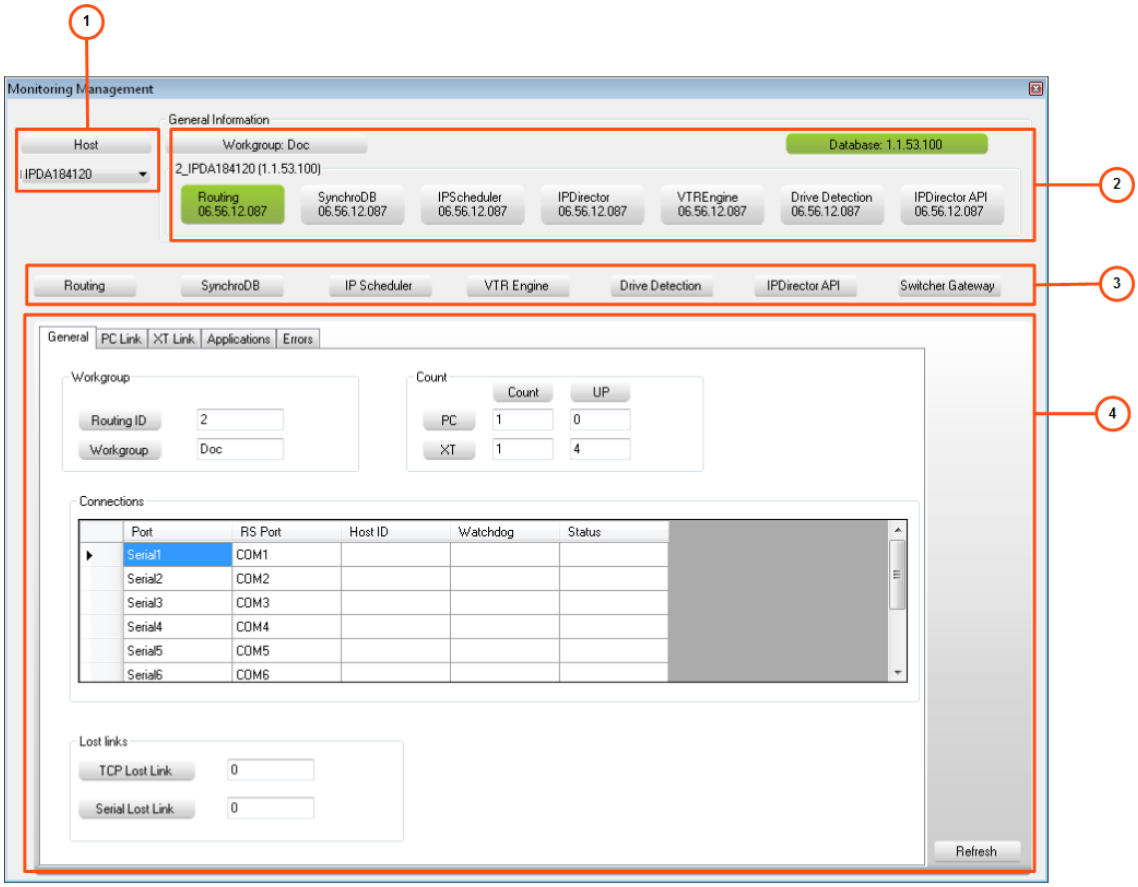
Advanced Monitoring Manager tool

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

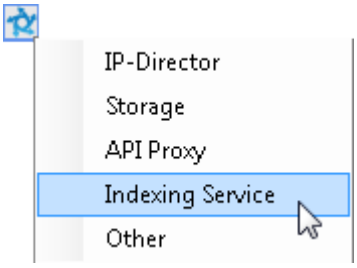
Introduction

The Indexing Service is a system used by the API to perform searches and to synchronize a SQL DB with an ElasticSearch DB.

It 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 194.

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 section "Workgroup Toolbar" on page 26 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 if 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

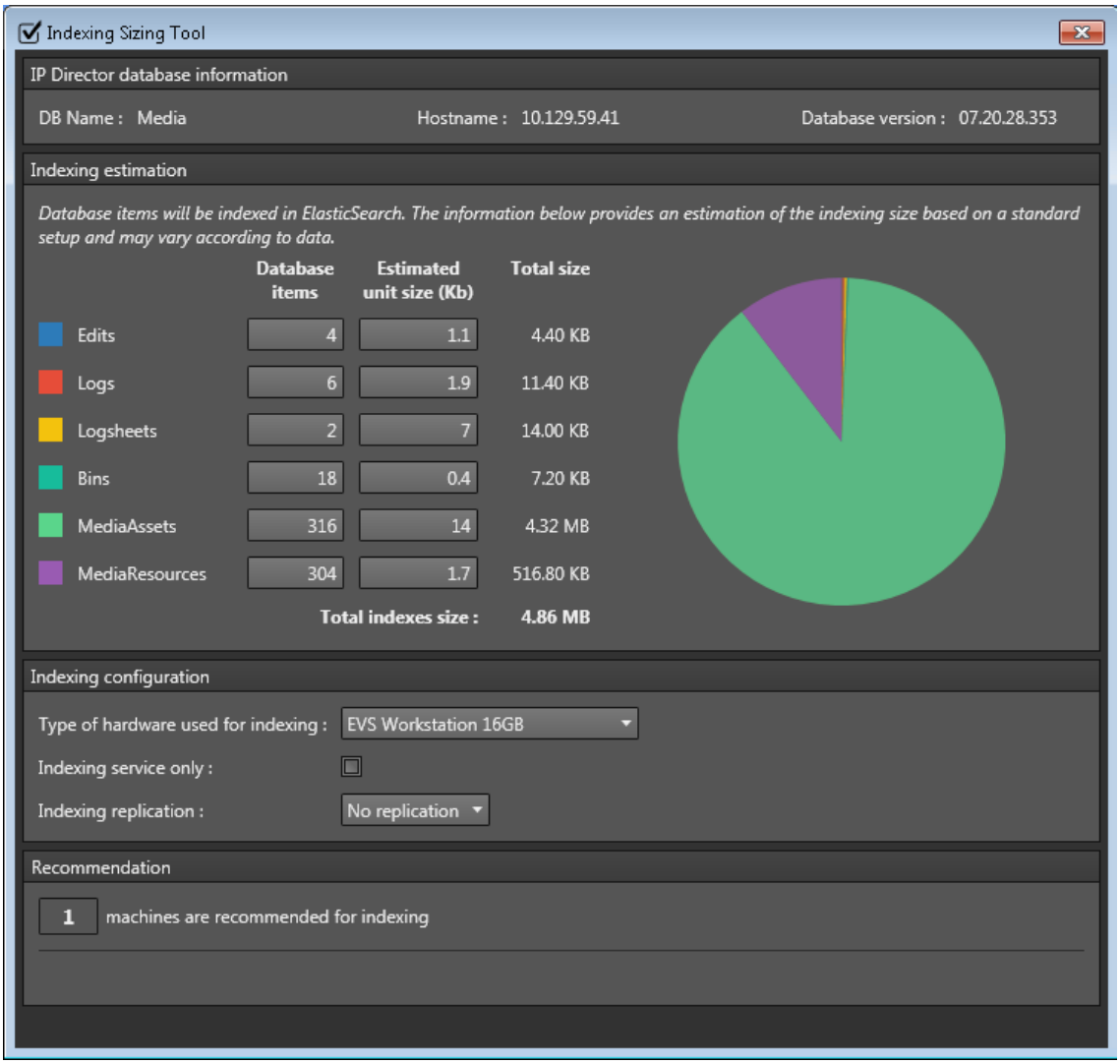
A tool is available to provide guidelines about the recommended number of machines to be used for indexing ElasticSearch based on your setup.

Overview

To open the tool,

1. Right-click the **Indexing Service** button of the workgroup from the main Remote Installer window.
2. Select the **Indexing Setup Sizing Tool** option.

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 "Workgroup Settings" on page 200 for more details about this parameter.

Recommendation

This area gives you the recommended number of machines based on the parameters above.

Overview of the IPDirector Indexing Service Window

How to Access the IPDirector Indexing Service Window

To access the IPDirector Indexing Service window,

- Click the **Indexing Service** button of the workgroup

.

Illustration

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.

Area Description

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 26.
- 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 to control and to monitor the workgroup IS components. See section "Workgroup and Workstation Toolbar Options" on page 198.

Search and Filter Options (1c)

This area provides several options to perform searches among the list of workstations or to filter the list based on started IS services. Buttons are available to start or stop specifoc services among the filtered list of workstations.

See section "Search and Filters Options" on page 205.

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.

The color code for the status icons is given at the bottom of the window.

Workstation Toolbar (2c)

The toolbar provides a series of buttons to control and to monitor the workgroup IS components. See section "Workgroup and Workstation Toolbar Options" on page 198.

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	**Start** button: starts the IS service component. The button switches to the **Stop** button.
Stop	**Stop** button: stops the IS service component. The button switches to the **Start** button.

Key (3)

This area provides the explanation of the different status colors and the different icons which can be displayed.

Workgroup and Workstation Toolbar Options

Workgroup Options

The toolbar is located on the top of a workgroup area.

The following table gives a description of the buttons available from the toolbar.

Button	Description
Start all	Starts all the workstation IS services set to **Auto Start**. On machines configured "without index", only ElasticSearch starts (see section "Workstation Settings" on page 204).
Stop all	Stops all the workgroup IS services.
	Warning button. In case of warning, the number of alerts is displayed next to the **Warning** button and a warning message is available. 1 APPSRVA248520 : Disk usage has reached a major threshold : 76% See section "Potential Issues and Warnings" on page 208
	This button gives access to the About window with information about the Indexing Service version number and support phone numbers.
Settings	Workgroup **Settings** button: when the IS workgroup monitoring information is displayed, this toggle button gives access to the IS workgroup settings. See section "Workgroup Settings" on page 200.
Monitoring	Workgroup **Monitoring** button: when the IS workgroup settings are displayed, this toggle button gives access to the IS workgroup monitoring information.

Workstation Options

The following buttons are available for each workstation.

Button	Description
Start all	Starts all the workstation IS services, even those not set to **Auto Start**. On machines configured "without index", only ElasticSearch starts (see section "Workstation Settings" on page 204).
Stop all	Stops all the IS services on the workstation.
Settings	Workstation **Settings** button: when the IS workstation monitoring information is displayed, this toggle button gives access to the IS workstation settings.
Monitoring	Workstation **Monitoring** button: when the IS workstation settings are displayed, this toggle button gives access to the IS workstation monitoring information.

Workgroup Settings

How to Access the Settings

To access the different settings, click the

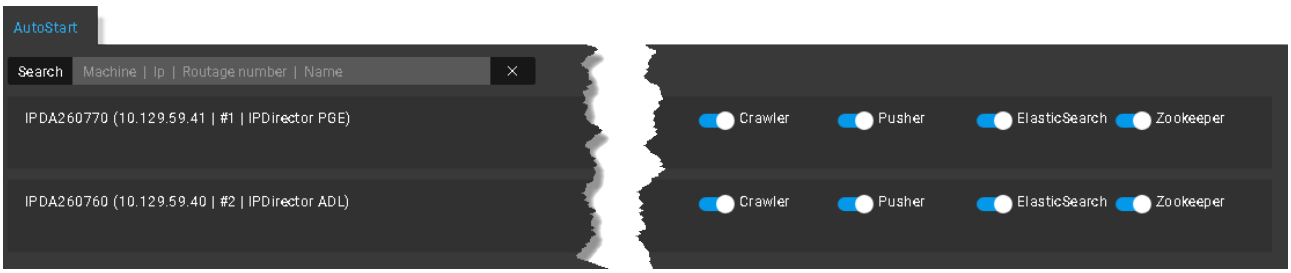
button.

Three tabs are available to set the workgroup parameters.

To exit the Settings display and go back to the IS components monitoring, click the

button.

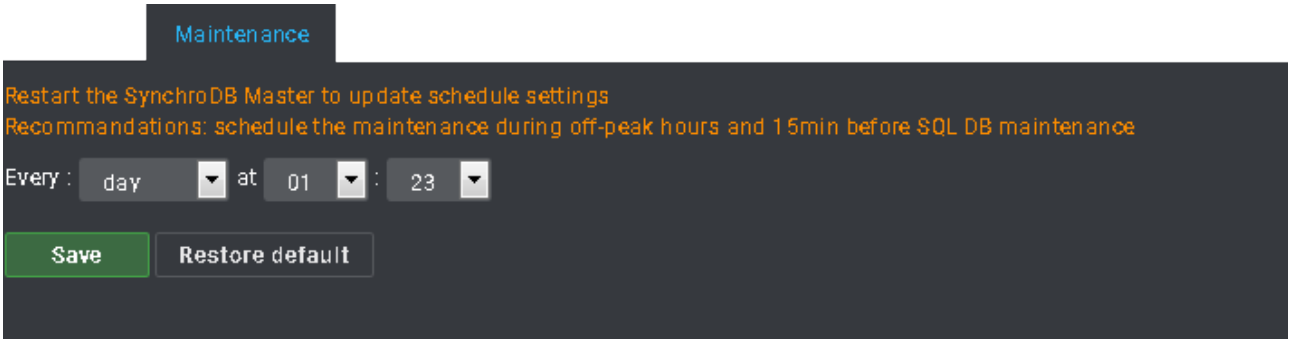
AutoStart Tab



From this tab, you can enable or disable the AutoStart option for each IS component individually.

The IS services set to **Auto Start** are automatically started.

Maintenance Tab



From this tab, you set the frequency of the ElasticSearch maintenance jobs.

Default value: **Everay day at 01:23**.

1. Select the frequency in the **Every** field.

   Possible values: **minute**, **hour**, **day**, **week**.

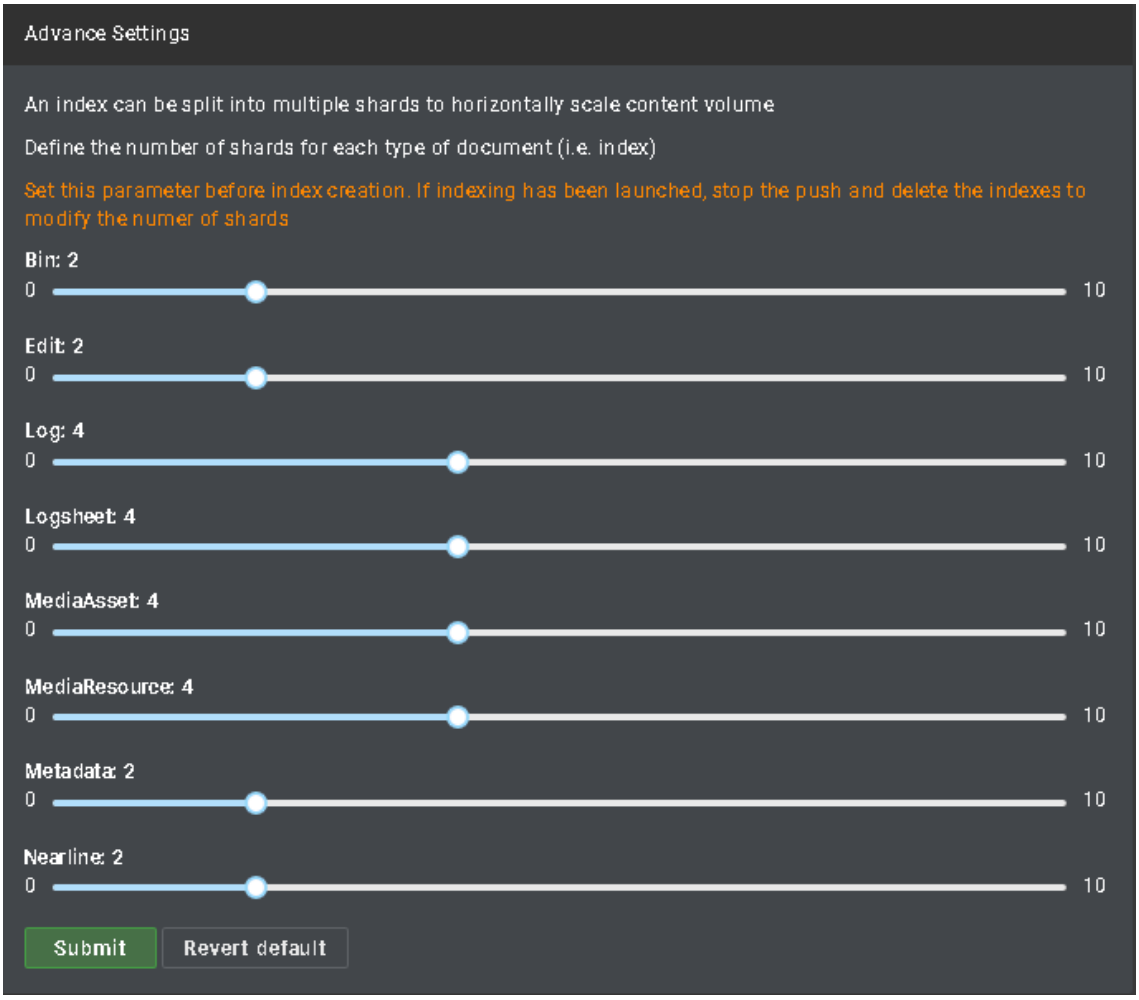
2. Select the time.
3. Click **Save**.

Restart the Master SynchroDB service when your modification has been saved to take the new schedule into account.

The **Restore default** button can be used to restore settings from the current tab to the default ones, if needed.

ElasticSearch Settings Tab

Advanced Settings Sub-Tab



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.

It is recommend to keep the default values, or to modify these values under EVS support advice.

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.

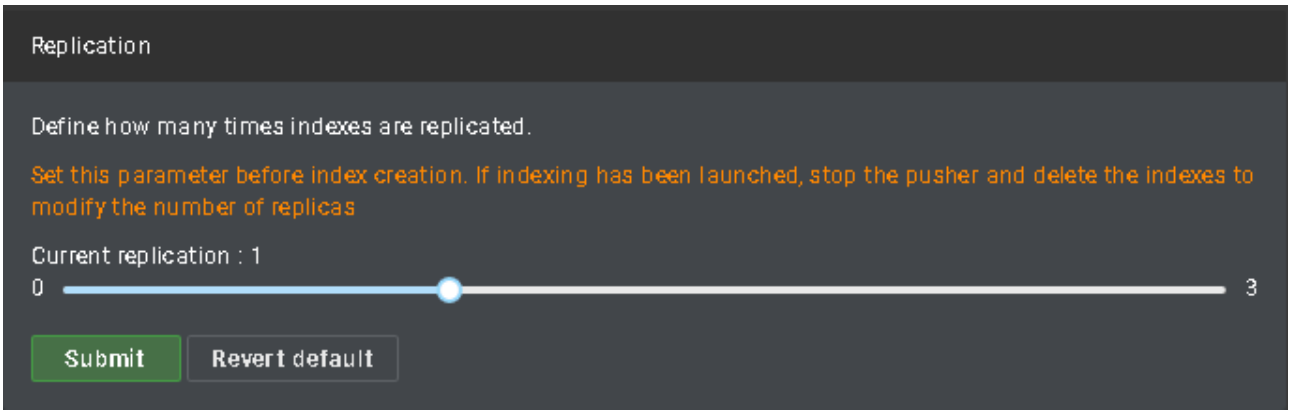
If the index creation has started yet, first follow steps 1 to 3. Otherwise, go to step 4.

1. Stop the Pusher service but keep the ElasticSearch service running on the workstations indexed with ElasticSearch.
2. In the Delete Index sub-tab, click **Delete**.
3. Wait until a message 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 bullet over each bar.

   Possible values: [**1**- **10**].
5. Click **Submit**.

The **Restore default** button can be used to restore settings from the current tab to the default ones, if needed.

Replication Sub-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), **3**.

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 Delete Index sub-tab, click **Delete**.

3. Wait until a message 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 bullet over the Replicas bar.

When all the services will be restarted, the indexation will be completed with the number of replica set.

Thesaurus File Sub-Tab

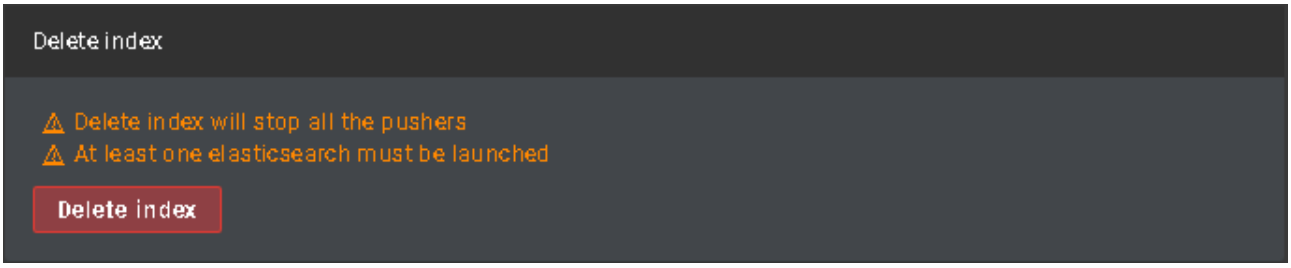
This tab gives the possibility to upload a new synonyms file or a thesaurus file.

You will be allowed to work with one single file (.txt) at a time.

1. From the Thesaurus File tab, click the **Browse** button.

   The File Upload window opens.
2. Browse to the file to upload.
3. Click **Open**.
4. Click **Submit** in the Thesaurus File tab.

Delete Index Sub-Tab

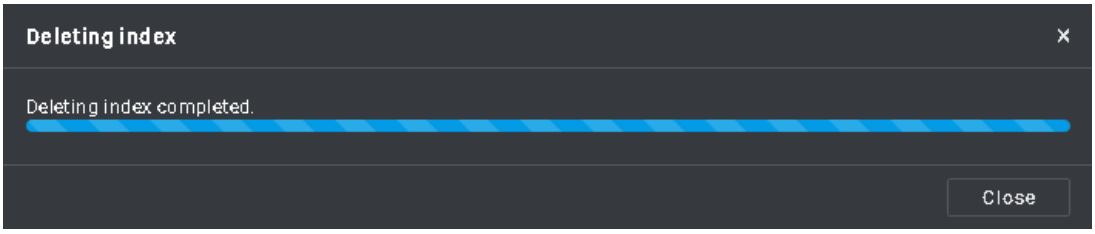


This tab gives the possibility to delete the index. This must be used cautiously.

The operation will stop all the Pusher services on the workstations indexed with ElasticSearch. ElasticSearch service must be running on the indexed workstations.

1. In the Delete Index tab, click **Delete**.

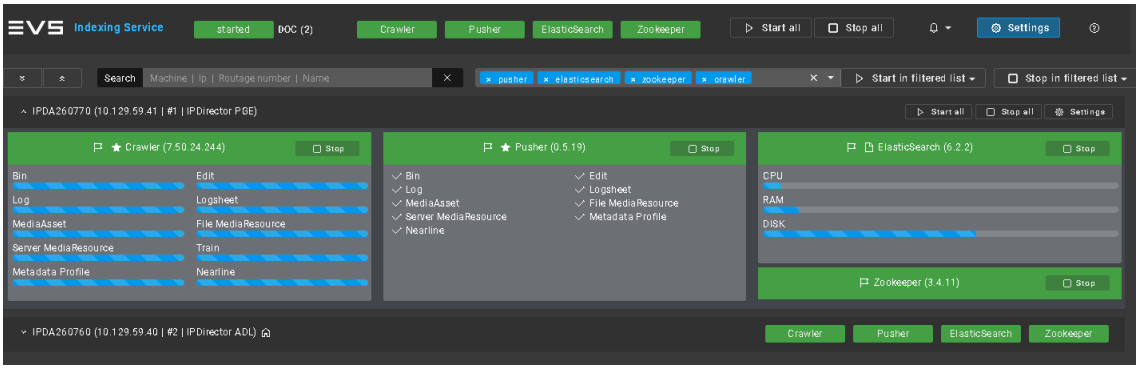
2. Wait until a message is displayed to confirm that the index has been deleted.



3. Click **Close**.

   All the services restart.

Then, the ElasticSearch service rebuilds the index when it is started.



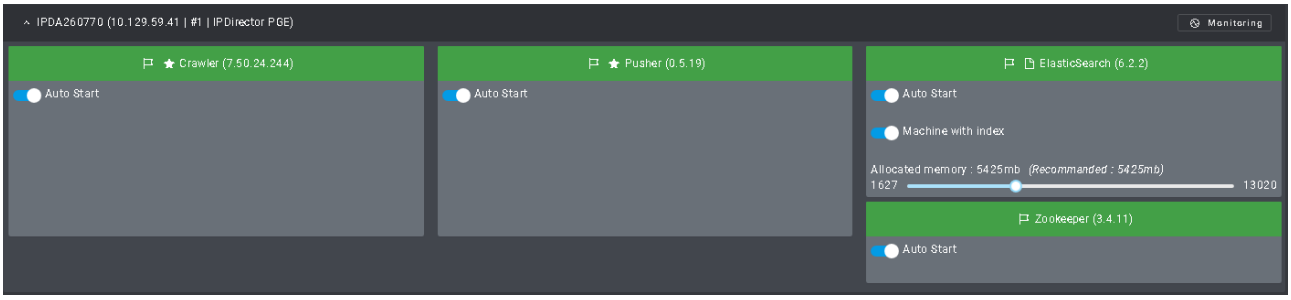
Workstation Settings

How to Access the Settings

To access the workstation settings, click the

button above the corresponding workstation.

Settings display as follows:



To exit the Settings display and go back to the IS components monitoring for the workstation, click the

button above the corresponding workstation.

Auto Start

From this view, you can enable or disable the AutoStart option for each IS component individually.

The IS services set to **Auto Start** are automatically started.

ElasticSearch Settings

Machine with Index

This parameter is only available for the ElasticSearch component.

By default, it is enabled. So, ElasticSearch is indexed on all the workstations.

You may want to index ElasticSearch on 2 workstations and use a third machine as witness in case one of the indexed machines falls. ElasticSearch will be installed on it but not indexed. Then, the **Machine with Index** parameter must be disabled on the machine used as witness.

Allocated Memory

This parameter is only available for the ElasticSearch component.

It corresponds to the proportion of RAM used.

> ⚠ Do no modify the default value.

Search and Filters Options

Expand Workstations List Button

Click the button to expand all nodes and display the services for all the workstations of the workgroup.

Collapse Workstations List Button

Click the button to collapse all nodes and hide the services for all the workstations of the workgroup.

Search Field

To restrict the list of workstations displayed, enter a search string in the **Search** field.

IS Components Filters

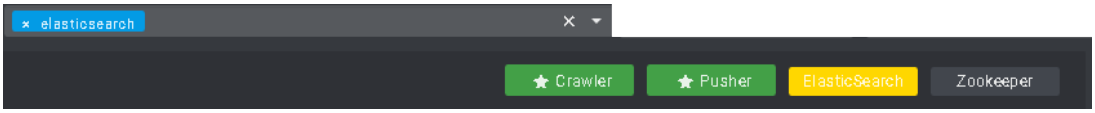
This area allows you to filter the list of workstations based on one or several IS components which are started on the workstations.

By default, all the components are selected and the list displays all the workstations with at least one component started.

To remove filters and filter the workstations on a single IS component,

- Click the cross next to all the other IS services and keep, for example, the ES filter.

  Only the workstations with ES started is displayed:



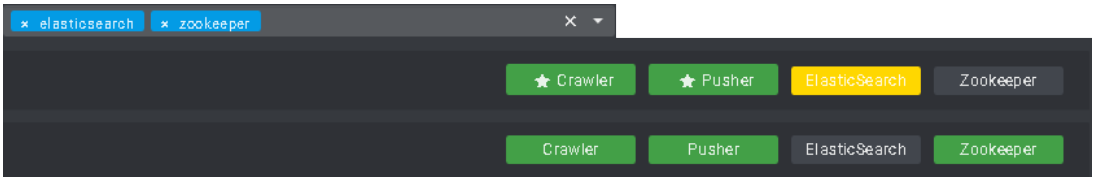
To add filters and filter the workstations on a single IS component,

1. Click the arrow next to the Filter field.

   The list of non-applied filters is displayed:

2. Select the IS service on which you want to apply a filter, for example Zookeeper.

   The search returns the list of workstations with one service OR the other started.



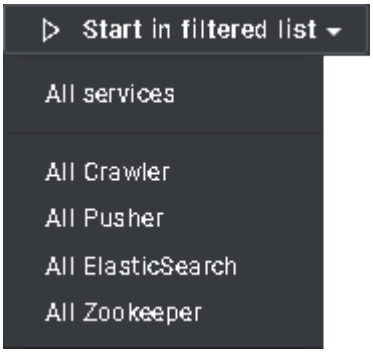
Start in Filtered List Button and Menu

This option is used to start all the IS services or some of them on the workstations from the list currently filtered and displayed.

1. Click the

button.

   A menu displays the following options:



2. Select an option from the menu.

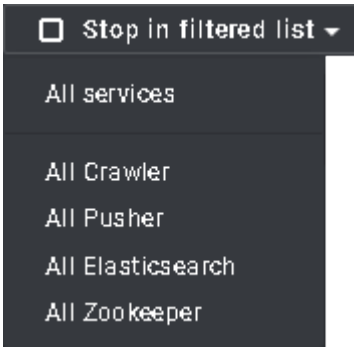
Stop in Filtered List Button and Menu

This option is used to stop all the IS services or some of them on the workstations from the list currently filtered and displayed.

1. Click the

button.

   A menu displays the following options:



2. Select an option from the menu.

Potential Issues and Warnings

Log File

Everytime an alert is raised, this can be retrieved in the following log file: `C:\EVSLogs\IP-Director\IndexingService\Administration\Indexing.Administration.MachineError.log`

ES RAM Usage or Disk Space Usage over the Threshold

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

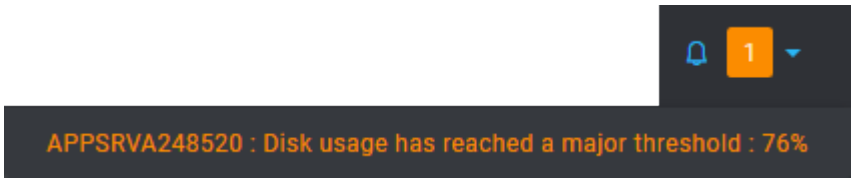
The default threshold are:

- Major: 70%
- Critical: 80%

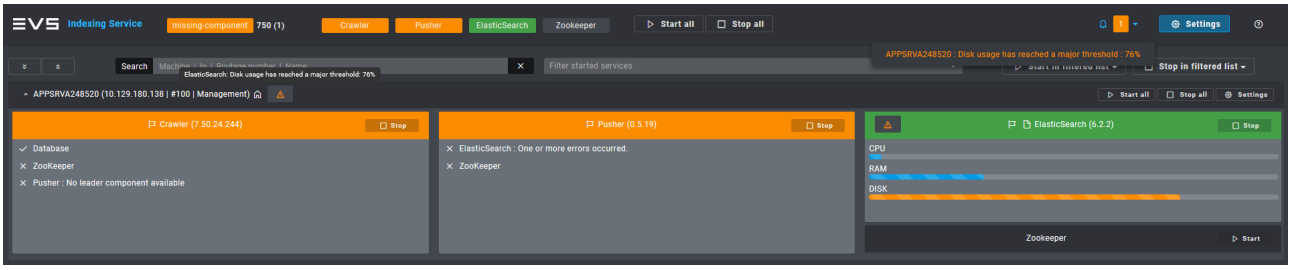
The default threshold values cannot be modified.

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:
  - The number of alerts is displayed next to the **Warning** button on an orange background. Click on it to see the warning message.



  - An orange **Warning** icon is also displayed next to the workstation name and next to the ElasticSearch component. A tooltip is available when hovering over the icon.



- 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:
  - The number of alerts is displayed next to the **Warning** button on a red background. Click on it to see the warning message.
  - A red **Warning** icon is also displayed next to the workstation name and next to the ElasticSearch component. A tooltip is available when hovering over the icon.

  In that case, the Crawler and the Pusher components are paused until the value falls back below the critical threshold.

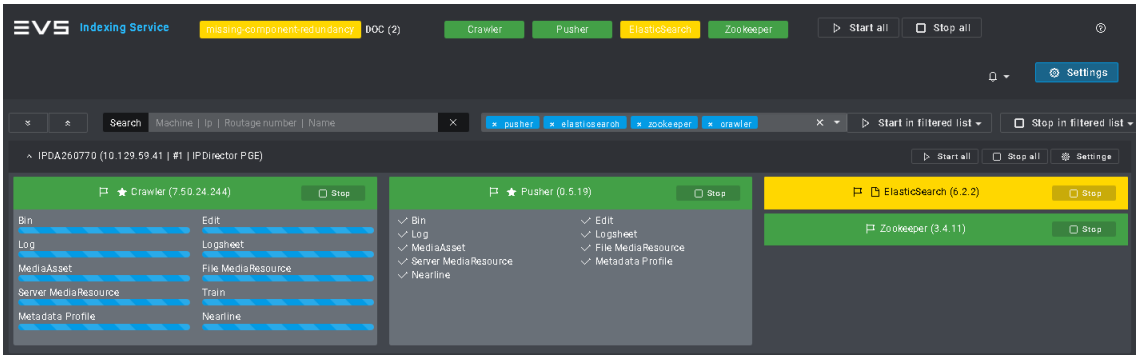
> If the crawler and the pusher services are paused, the synchronization between LivePAM DB and ES is interrupted. This means that the results of the last operations (creation, update, delete) are not indexed in ElasticSearch, and then the search does not provide a right view of LivePAM DB.

Other Warnings

ES Does not Work Properly

If there is a disk space problem or if a cluster does not start, the ES component will be red.

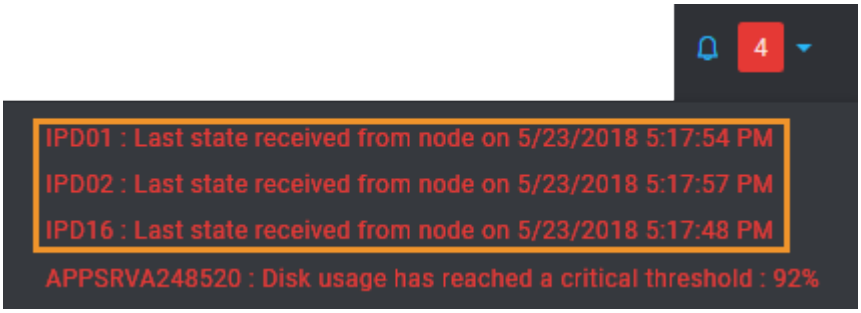
If another workstation ensures replication, the ES component will be yellow.



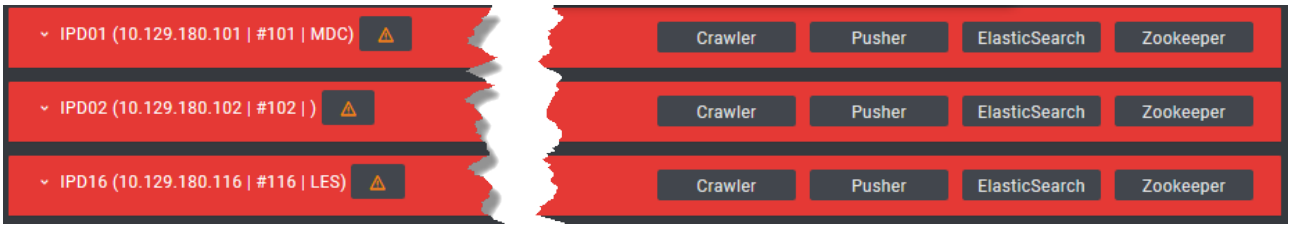
Disconnected Workstation

In case of workstations which cannot communicate anymore,

- The number of alerts is displayed next to the **Warning** icon on a red background. Click on it to see the warning message.



- The whole workstation is displayed on a red background:



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. This allows remote processes to grab logs and create a zipped file of logs which could then be sent to appropriate support people.

Options are available from the Workstation contextual menu and from the Workgroup contextual menu to grab the logs either from a specific workstation or from each workstation member of the workgroup.

Different options are available to grab logs from the entire EVSLogs folder, or to specifically collect the logs related to IPDirector.

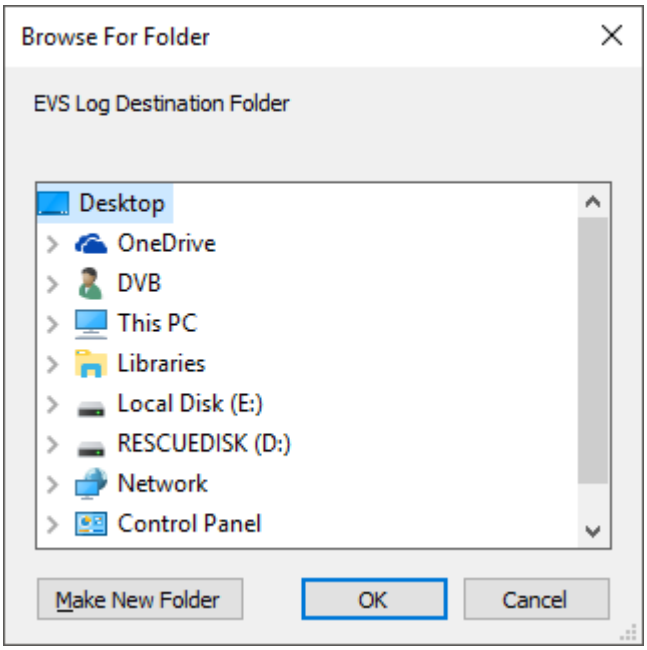
The collection of EVS logs is managed by the EVS Reporter tool.

The collection of IPDirector logs is managed by the Remote Installer.

Getting EVS Logs

Getting Workgroup EVS Logs

1. Right-click the Workgroup name.
2. Select **Get All EVS Logs (Via EVS Reporter)** from the contextual menu.
3. Select a destination folder where the zip files will be created.



4. Click **OK**.

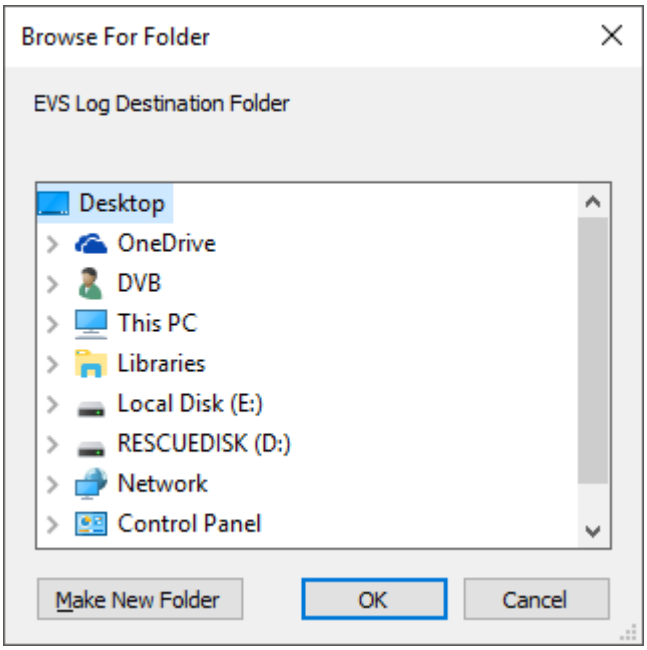
5. Wait for the creation of zipped files on each workstation by the EVS Reporter tool. A progress bar is displayed per workstation.

6. Collect the zip files created in the destination folder. The filename of the zip file is managed by the EVS Reporter tool.

   For example: EVSreport_20190107_170343177_(7HF3)_SN260770_IPDA260770.

Getting Workstation EVS Logs

1. Right-click the Workstation name.
2. Select **Get EVS Logs (Via EVS Reporter)** 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 by the EVS Reporter tool. A progress bar is displayed per workstation.

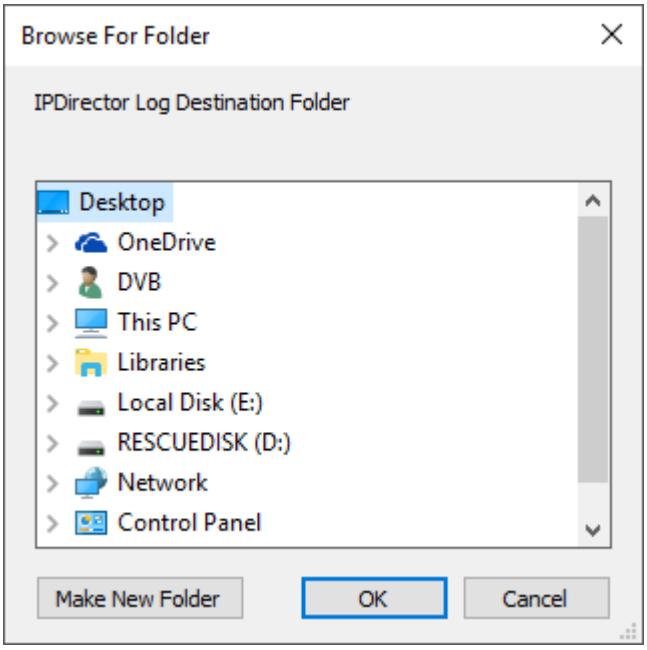
6. Collect the zip files created in the destination folder. The filename of the zip file is managed by the EVS Reporter tool.

   For example: EVSreport_20190107_170343177_(7HF3)_SN260770_IPDA260770.

Getting IPDirector Logs

Getting Workgroup IPDirector Logs

1. Right-click the Workgroup name.
2. Select **Get All IPDirector Logs** from the contextual menu.
3. Select a destination folder where the zip files will be created.



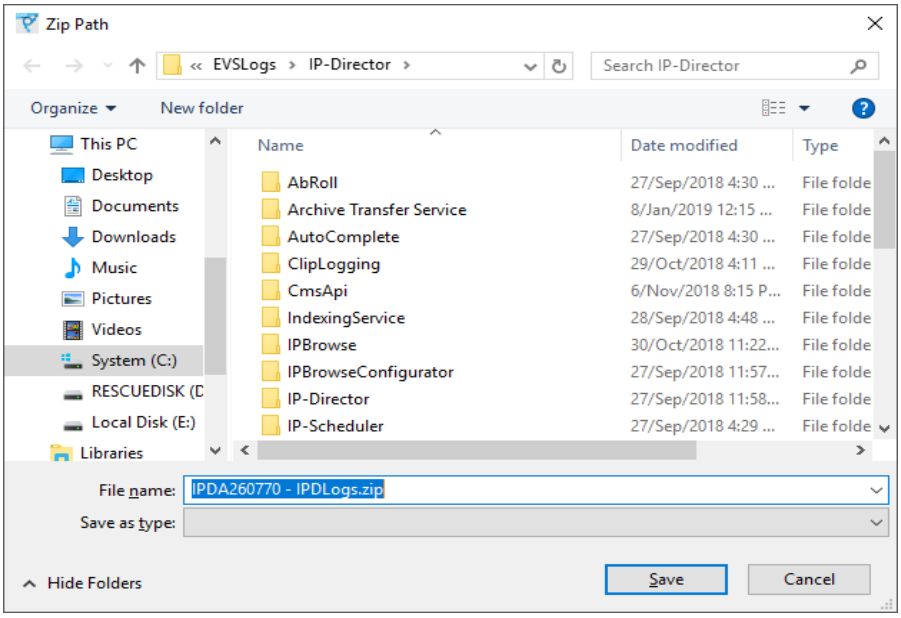
4. Click **OK**.
5. Wait for the creation of zipped files on each workstation. A progress bar is displayed per workstation.

6. Collect the zip files created in the destination folder. The zip files created are named **IPDAXXXXXX – IPDLogs.zip** (XXXXX is the workstation serial number).

Getting Workstation IPDirector Logs

1. Right-click the Workstation name.
2. Select **Get IPDirector Logs** from the contextual menu.

3. Select a destination folder where the zip files will be created.



4. Wait for the creation of zipped file. A progress bar is displayed.

5. Collect the zip file created in the destination folder. The zip file created is named **IPDAXXXXXX – IPDLogs.zip** (XXXXX is the workstation serial number).

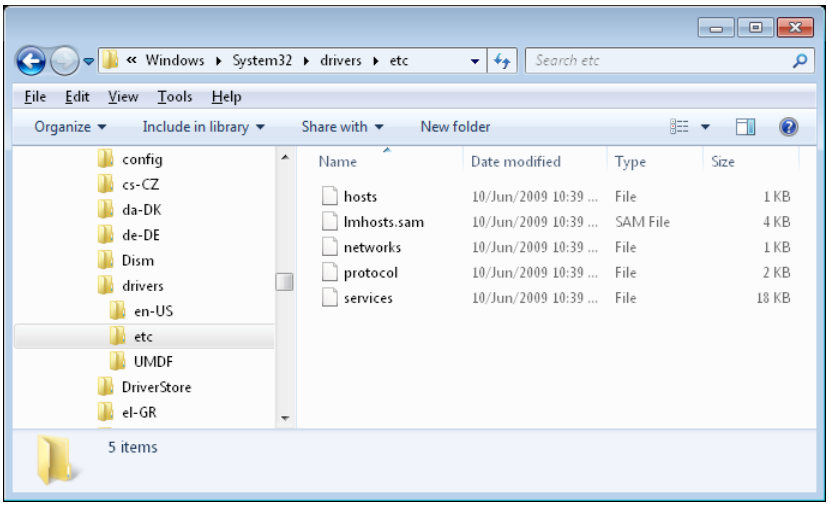
2.11. Populating Hosts Files

2.11.1. Introduction

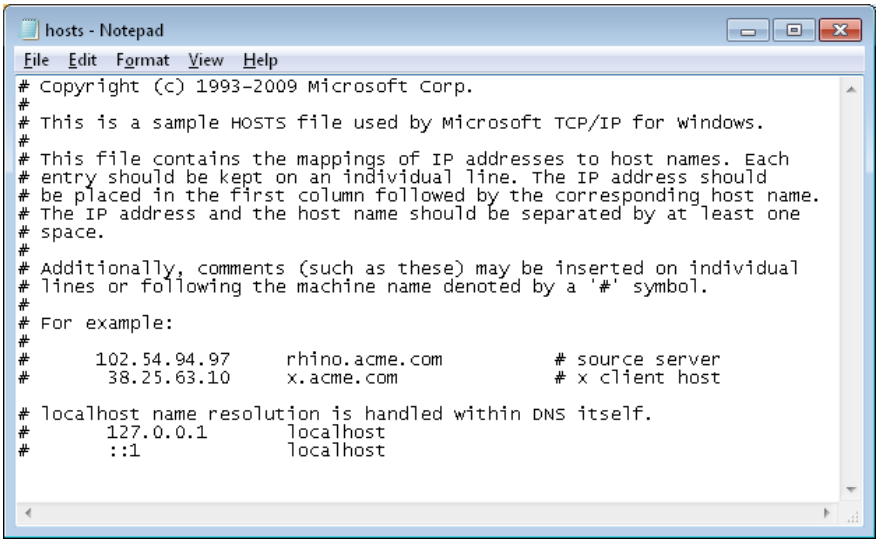
The **Populate Hosts Files** feature reduces IPDirector latencies due to LAN communications without DNS management.

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:



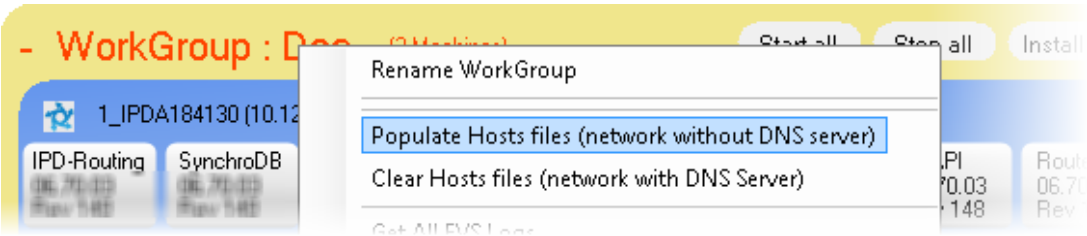
The entries (127.0.0.1 / ::1 local host) are written by default in this file.

Windows first consults this local file cache before sending its request to the DNS Sever. Without DNS Server or Hosts files, Windows introduces latencies inside our application when trying to resolve hostnames.

2.11.2. Populate New Hosts Files

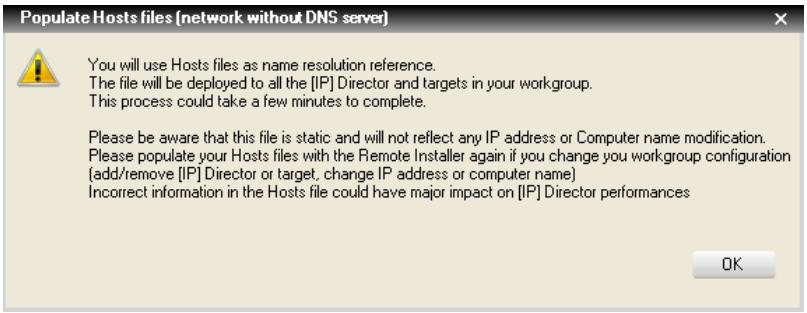
There is a feature within Remote Installer that helps you to create and populate a common HOSTS file on all the IPDirector workstations, Databases or Targets used inside the IPDirector workgroup.

1. In the Remote Installer, right-click on the Workgroup name.



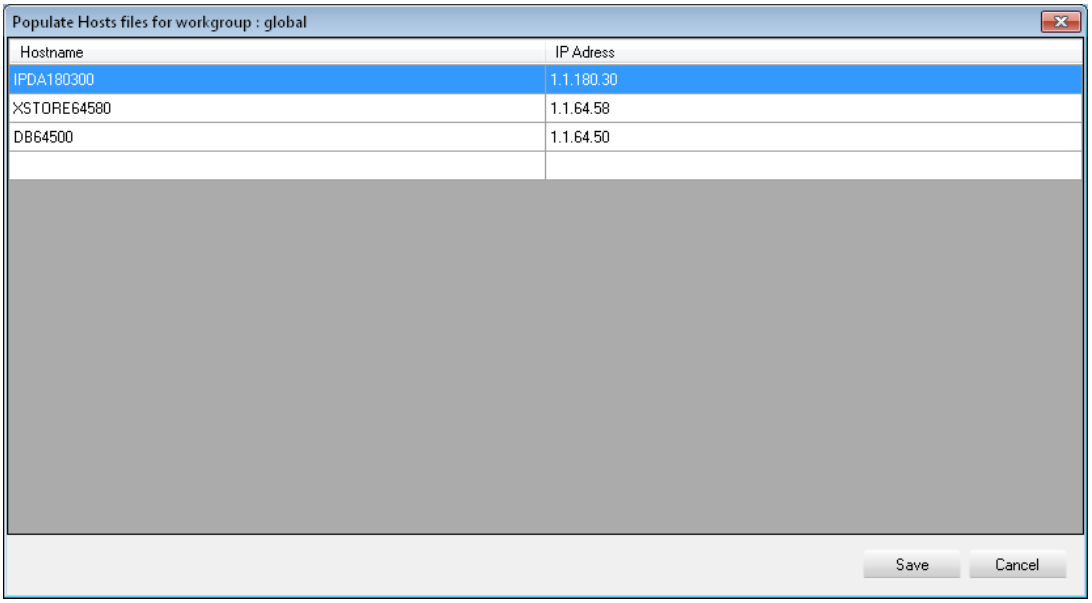
2. Select **Populate Hosts files (network without DNS server)** from the menu.

   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.

Manual entries are allowed:

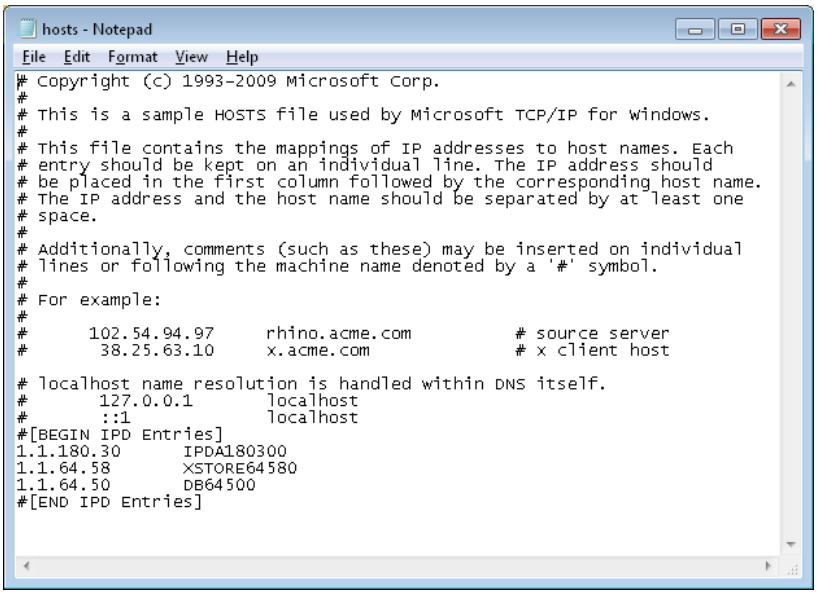
Enter the hostname (computer name), the IP Address is automatically resolved.

Enter the IP address, the hostname is automatically resolved.

Enter both hostname and IP address.

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:



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.

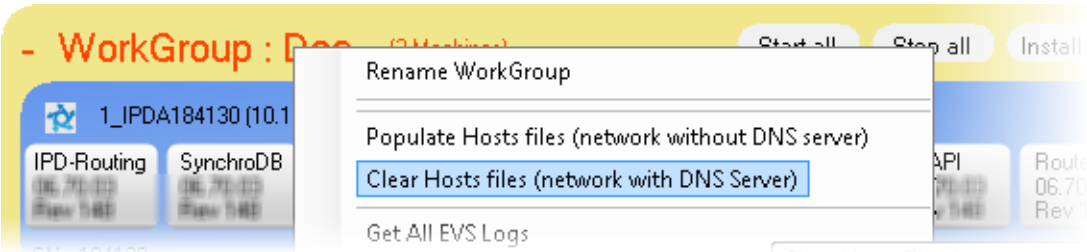
These entries can also include database, target computer, or third Party computer present in the workgroup configuration.

Some Antivirus programs and settings block the ability to propagate the Host file to all workstations.

2.11.3. Clear Populated Hosts Files

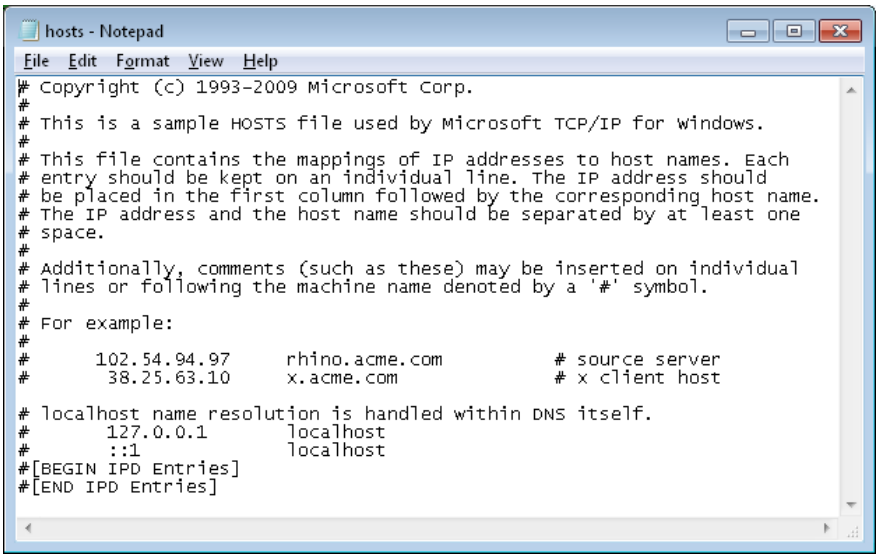
If a DNS Server is installed on your network, the HOSTS files must be cleared.

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.

It is strongly recommended to clear the HOSTS files before dismantling your setup.

2.12. Remotely Accessing a Workstation

Context of Use

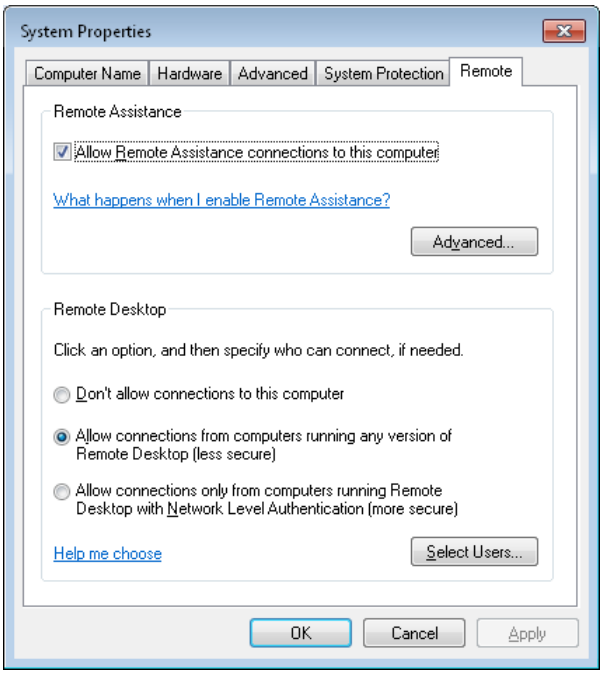
An option is available to use the Remote Desktop Protocol included in the Windows OS and display the screen of another computer on your own screen. The program allows you to use your mouse and keyboard to control the other computer remotely.

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.

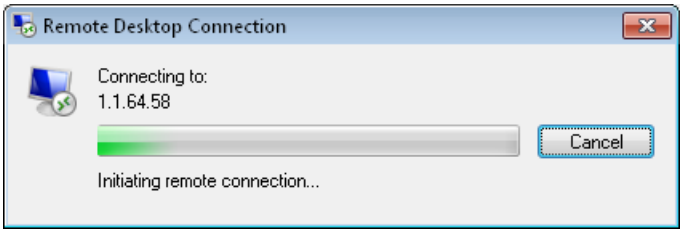
1. Click **[WIN]**+**[Pause/Break]** to open the System window.
2. Go to the **Advanced system settings** and select the Remote tab to check the configuration:



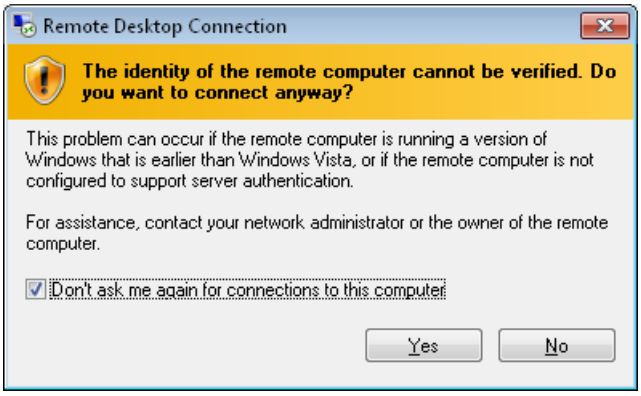
How to Remotely Access a Workstation

1. Right-click the Workstation name of the workstation you want to remotely access.
2. Select **Remote Desktop** from the contextual menu.

3. Wait for connecting the distant IPDirector workstation:

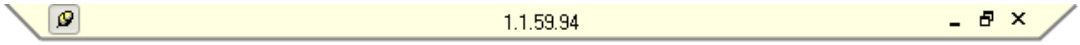


4. The first time you connect from an IPDirector Station Windows 7 to an IPDirector with another OS, the following window may be displayed:

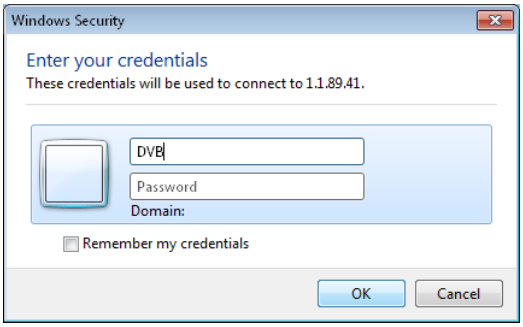


Select the **Do not ask me again for connections to this computer** option and the message will not be displayed next time.

Your screen turns black and a tab appears at the top of your desktop:



5. In the Log On window, enter DVB as User name, no password and click **OK**.

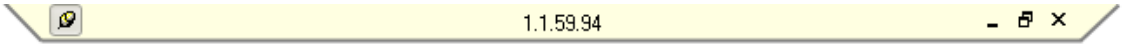


EVS workstations are delivered with DVB/(no password) as a default user.

If you installed IPDirector on non-EVS hardware, use the custom user name and password.

The distant desktop is open on the local one.

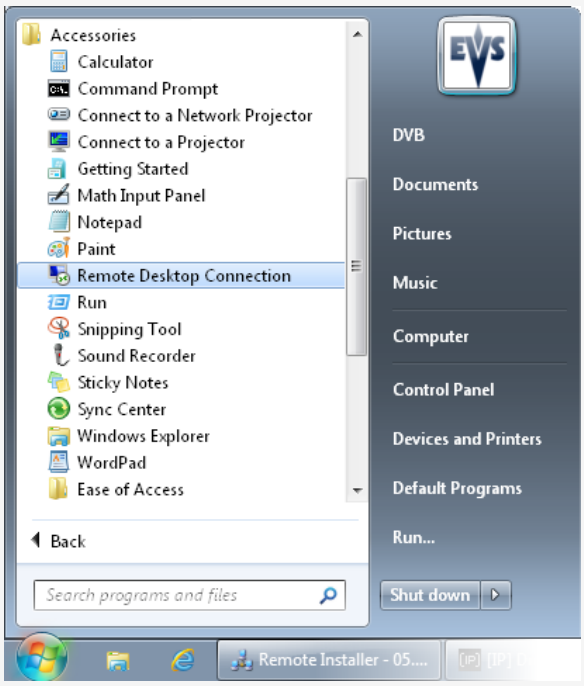
To close the connection, click **Close** on the top tab:



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.

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)

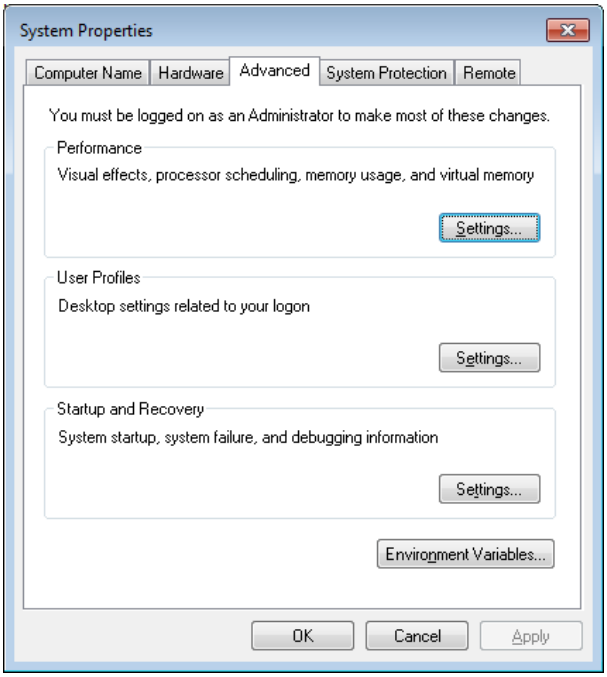
On EVS IPDirector workstations, the size of the virtual memory is at least 1.5 times the amount of physical memory. This value is set manually in the Ghost image and must be extended when memory modules are added. The automatic management of the paging file size is forbidden on IPDirector workstations.

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).

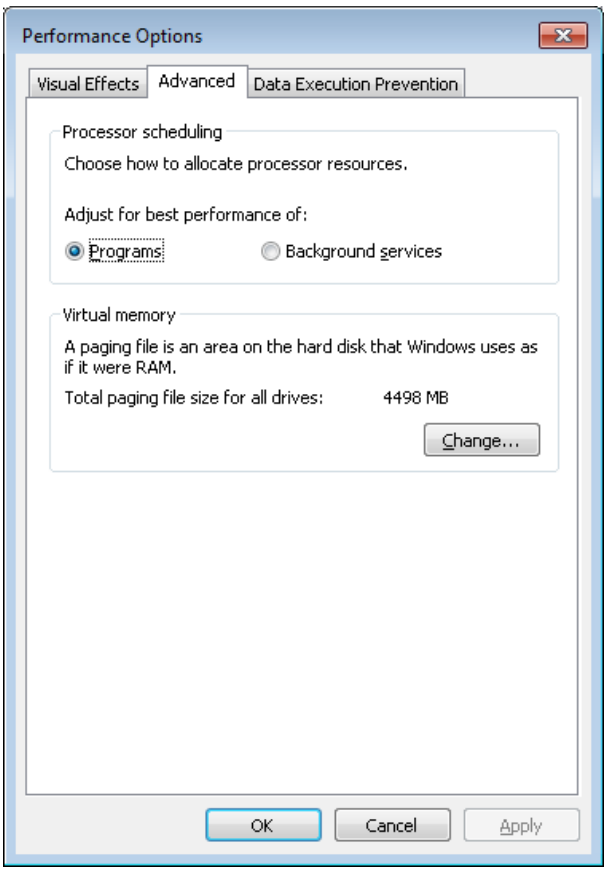
On Windows 7 and Window 10: Open the System Properties window (WIN+Pause), select in the left menu **Advanced System >Settings**.

Select the Advanced tab.



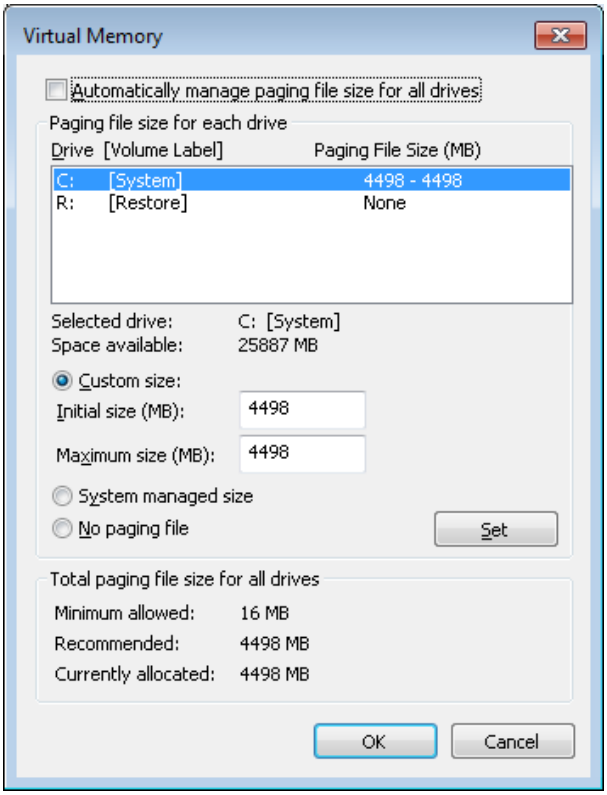
In the Performance zone, click on the **Settings** button.

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.

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.

> 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

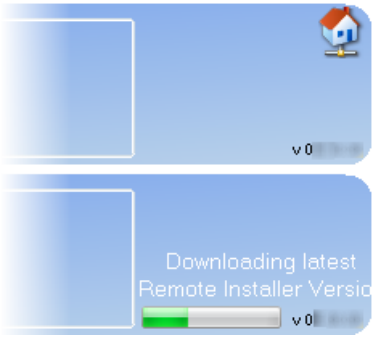
   As the Remote Installer is a tool which deploys version remotely over the network, it should be first updated in order to have its own new features.

   See section "Installing the Remote Installer" on page 226.

2. Start the Remote Installer in Edit Mode

   See section "Starting the Remote Installer Application" on page 13.

   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 36.

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 38.

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 15 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 10.129.59.41 (example of IP address)

   See section "Upgrading the Database" on page 45.

   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 43.

Installing the Remote Installer

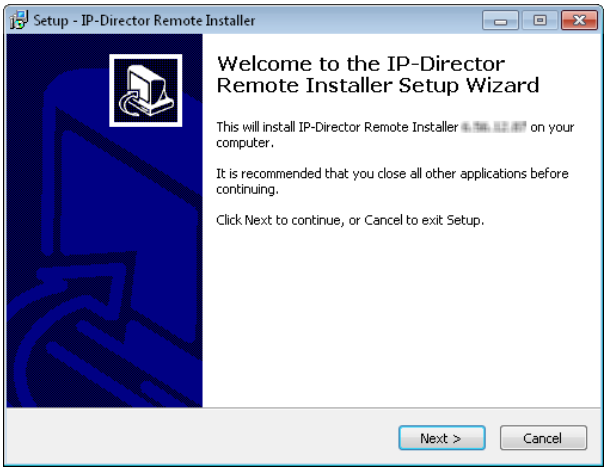
The installer can be downloaded from our EVS website support section or from the EVS FTP site. Please contact the EVS support staff for details.

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.

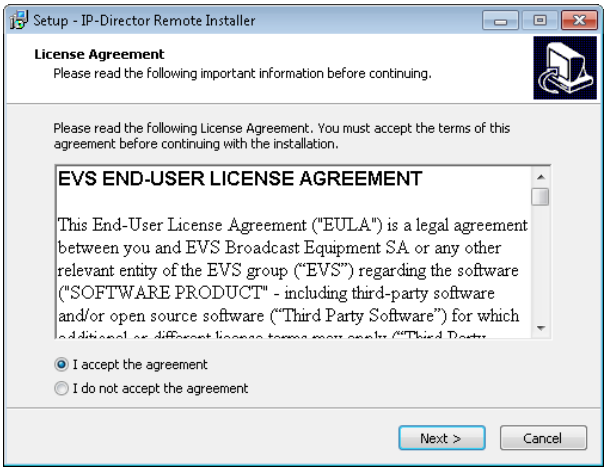
1. Unzip the provided archive C:\Install Software\IPDirector.
2. Make sure the Routing and SynchroDB services are stopped.
3. Double-click the Setup.exe file.

   The Setup IPDirector Remote Installer wizard opens.

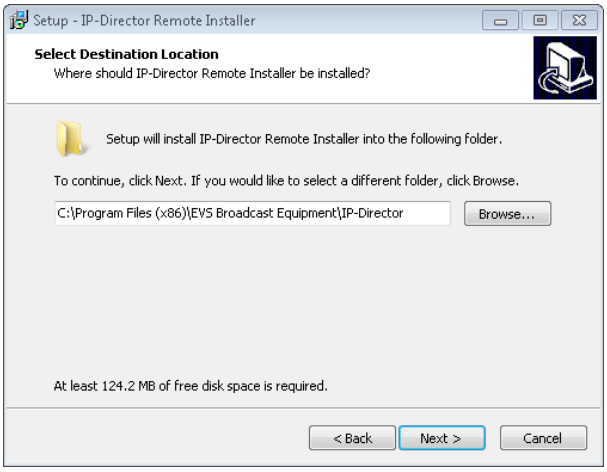
4. From the Welcome window, click **Next**.



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`:

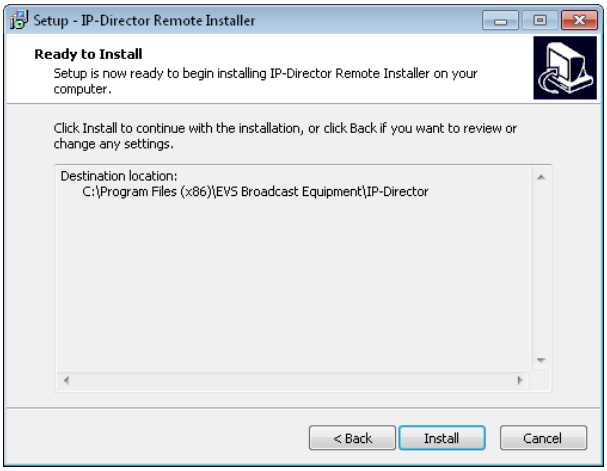


   a. (optional) Click **Browse** and select another destination directory to install the new software application.

   b. Click **Next**.

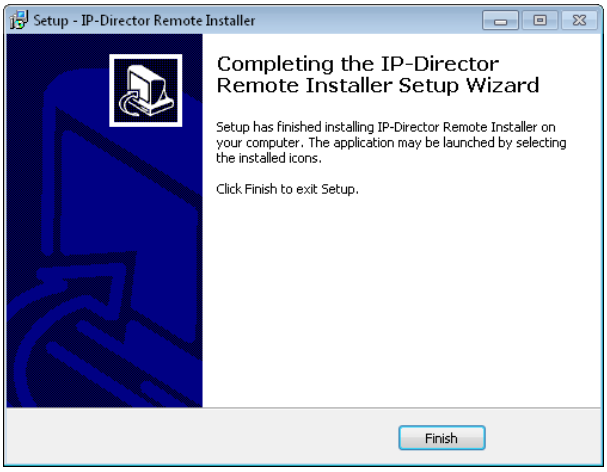
      If the folder does not exist yet, you will be prompted to create it.

7. In the Ready to Install window, click **Install**.



8. Wait until the installation is complete.

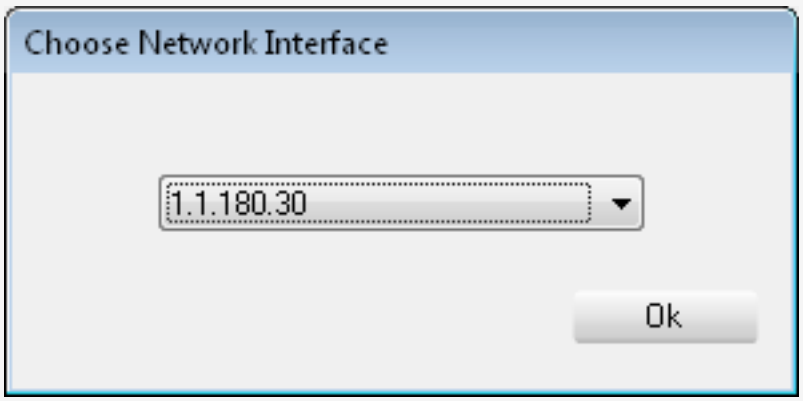
   The following window will then open:



   Click **Finish** to exit the installation wizard.

Services icons are available from the Windows taskbar.

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



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.

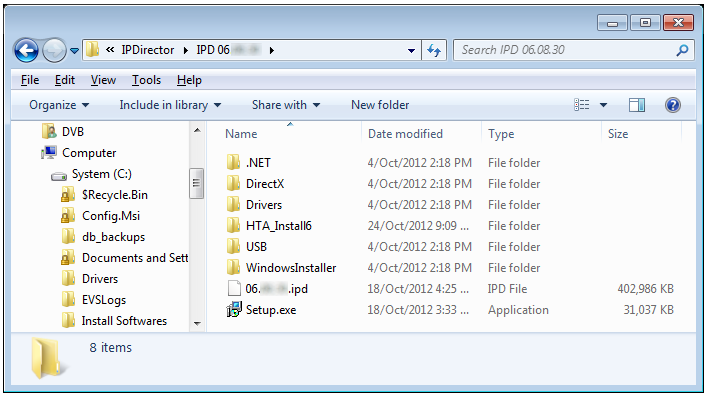
- An API Proxy service on a Database or a non-IPDirector workstation.

  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.

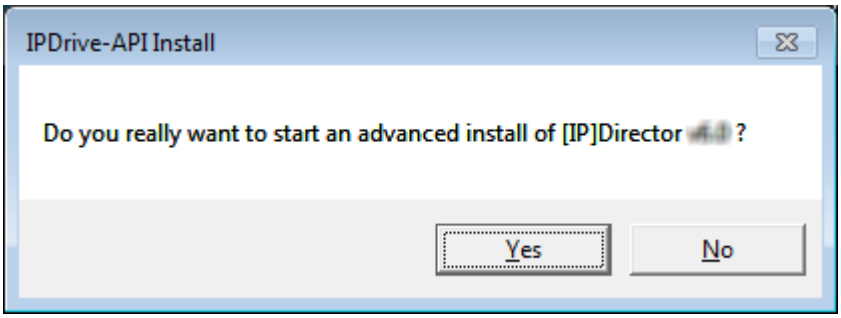


2. Double-click the IPDirector_[VNr]_Setup.hta file.

   The Installer window is displayed.

3. Click on **Install IPDirector [VNr] without SQL Express**

   The confirmation window pops up:

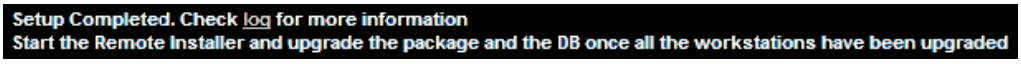


4. Click **Yes**.

   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:



6. Click **Exit** to close the tool.
7. Delete the User Manager and IPDirector icons created on the desktop.

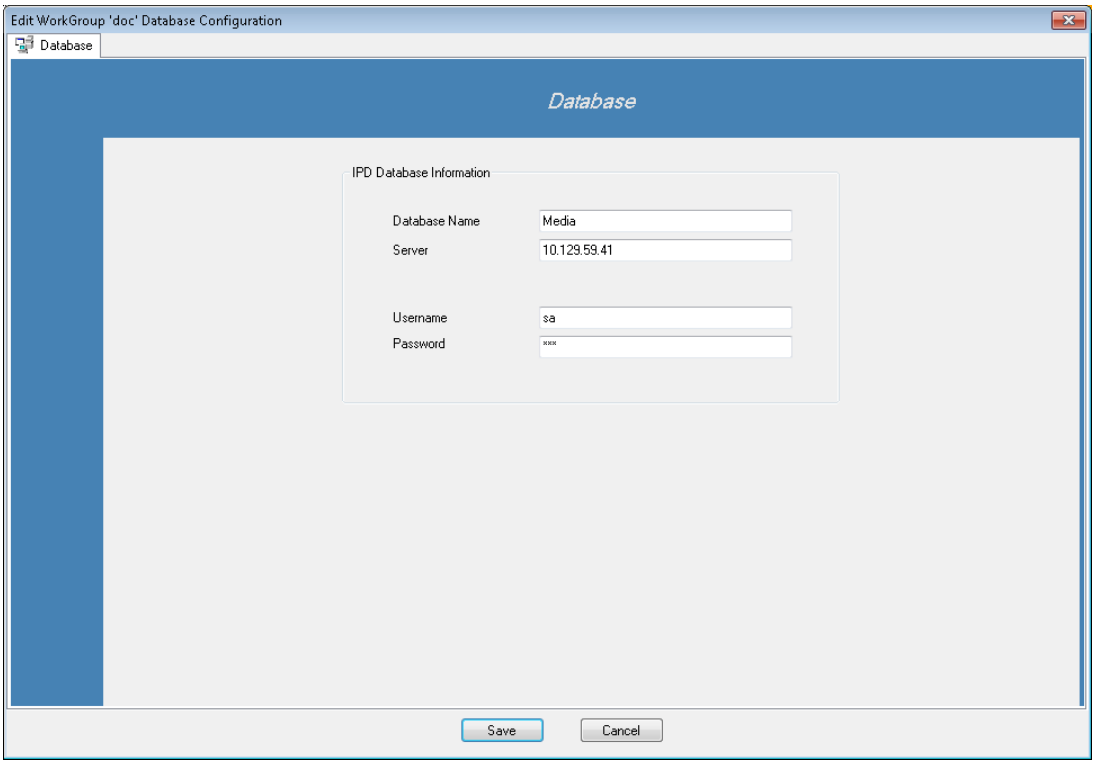
2.14.3. Starting the Remote Installer

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**.

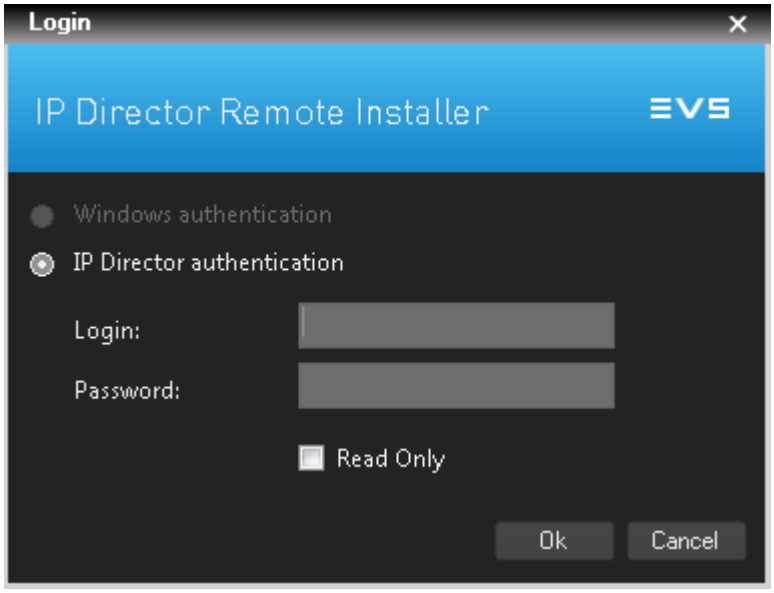
   The Database Configuration window opens:



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.

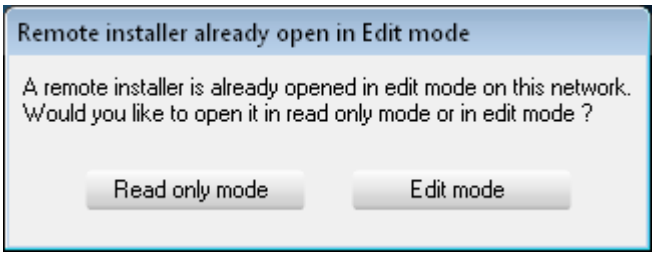


The **Authentication Mode** option is set in Configure > General. See section "General Section" on page 64.

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.

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

The Remote Installer icon on the Windows taskbar turns to .

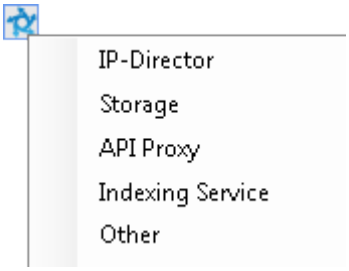
Once started, you can see all the workstations belonging to the network.

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**.

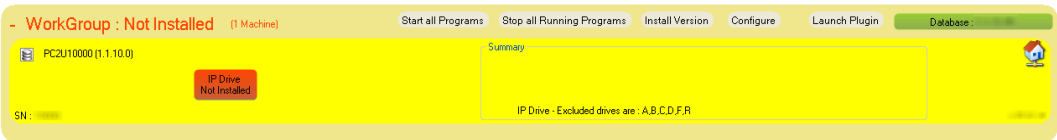
For example here: There is one IPDirector V6 workstation in a Global workgroup. You are installing a standard workstation with an IP Drive or an API Proxy.

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.



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)

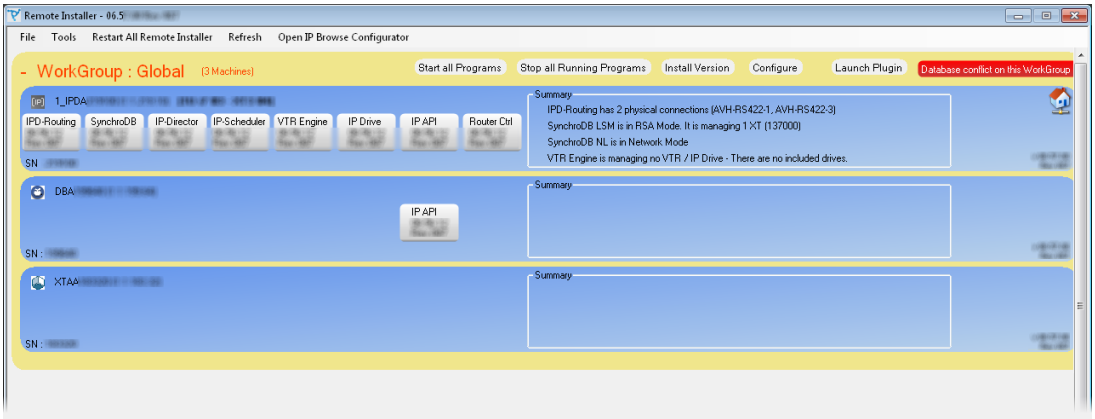
2.14.5. Installing Package

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 33 (**Send Version** option).
   - Click **Install Version** in the Workgroup (Not Installed) menu and select **Install Package**.

     See section "Installing IPDirector Package" on page 38.

   The workstation joins the Global workgroup by default and creates a Database conflict.



This screenshot has been taken with a previous version of IPDirector. 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 20). 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 50.
4. (optional) To put the workstation into another workgroup, right click the workstation area and select **Configure Network Information** from the contextual menu.

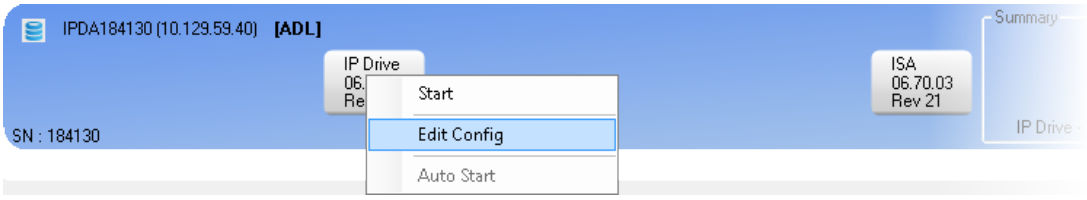
   See section "Setting Network Information for the Workstation " on page 51.

   Then, reconfigure once again the database settings to match the workgroup settings.

   See section "Setting the Database Information" on page 50.

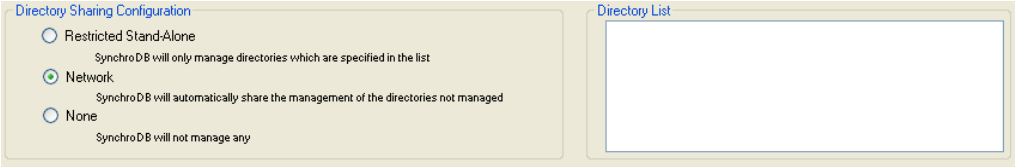
2.14.6. Configuring IP Drive Workstations

1. Right click on the IP Drive service and select **Edit Config** from the contextual menu.



   The IP Drive Service Configuration window opens.

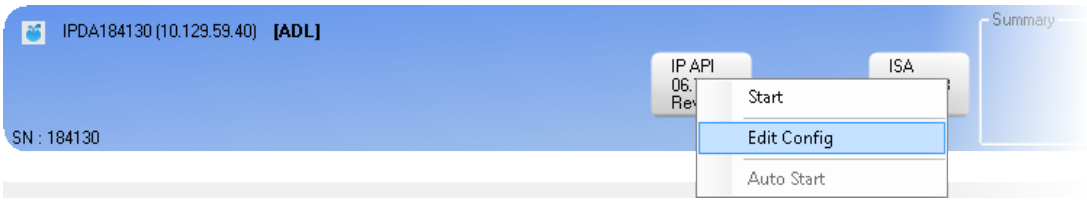
2. Configure the IP Drive service as described in section "Configuring IP Drive" on page 183, then click **Save**.
3. (optional) Set the **Auto Start** option to make the service automatically start:
   a. Right-click the **Service** button
   b. Select **Auto Start** from the contextual menu.
4. Start the IP Drive service as described in section "Starting Services" on page 165.
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.



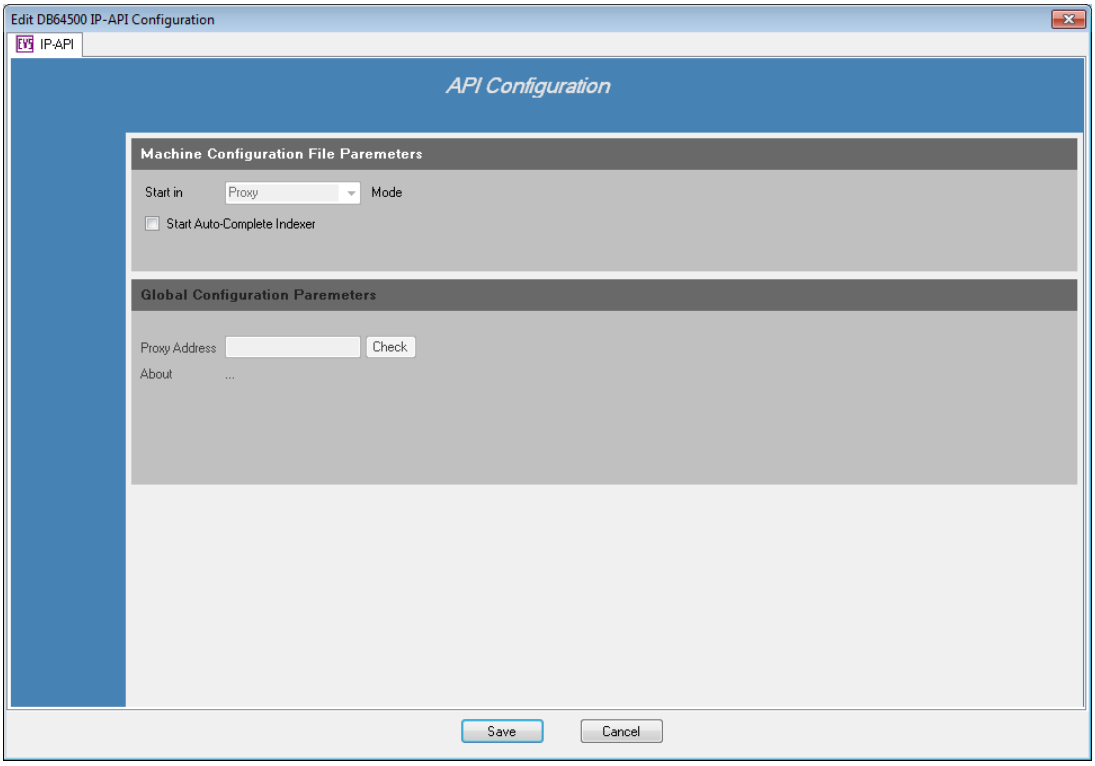
   See section "Configuring SynchroDB" on page 170.

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 165.

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 IPDirector 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 238.

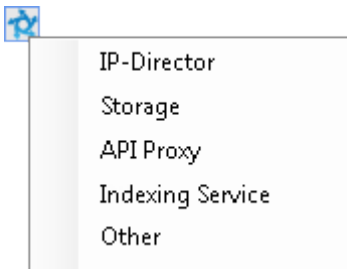
Installing IPBrowse or IPClipLogger from the Remote Installer

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 36.
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:

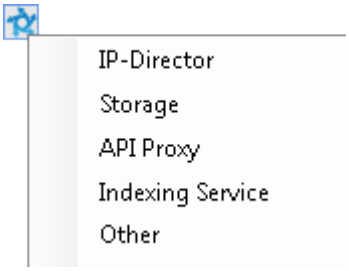
   - Click the **Workstation** icon and select **IPDirector**.



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

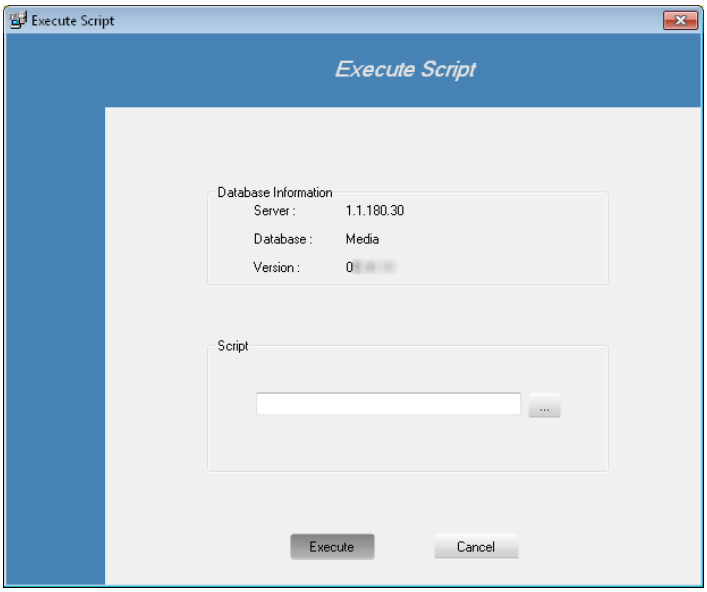
IPBrowse Modes

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.
2. Select **Execute Script**.

   The Execute Script window opens.



3. Click the **Browse** button ... to display the list of available scripts.
4. 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.
5. Click **Execute**.

   A warning message will ask for confirmation.

6. 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.

> A configuration already exists by default in the database. This default configuration is displayed when the tool is opened for the first time.

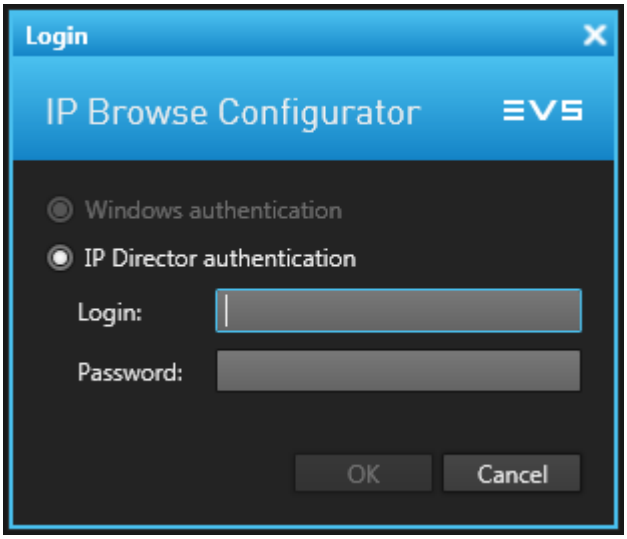
> The IPBrowse configurator always connects and applies settings to the workgroup database where the Remote Installer is launched.
>
> Always launch the Configurator tool from an IPDirector station member of the same IPDirector - IPBrowse workgroup.

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:



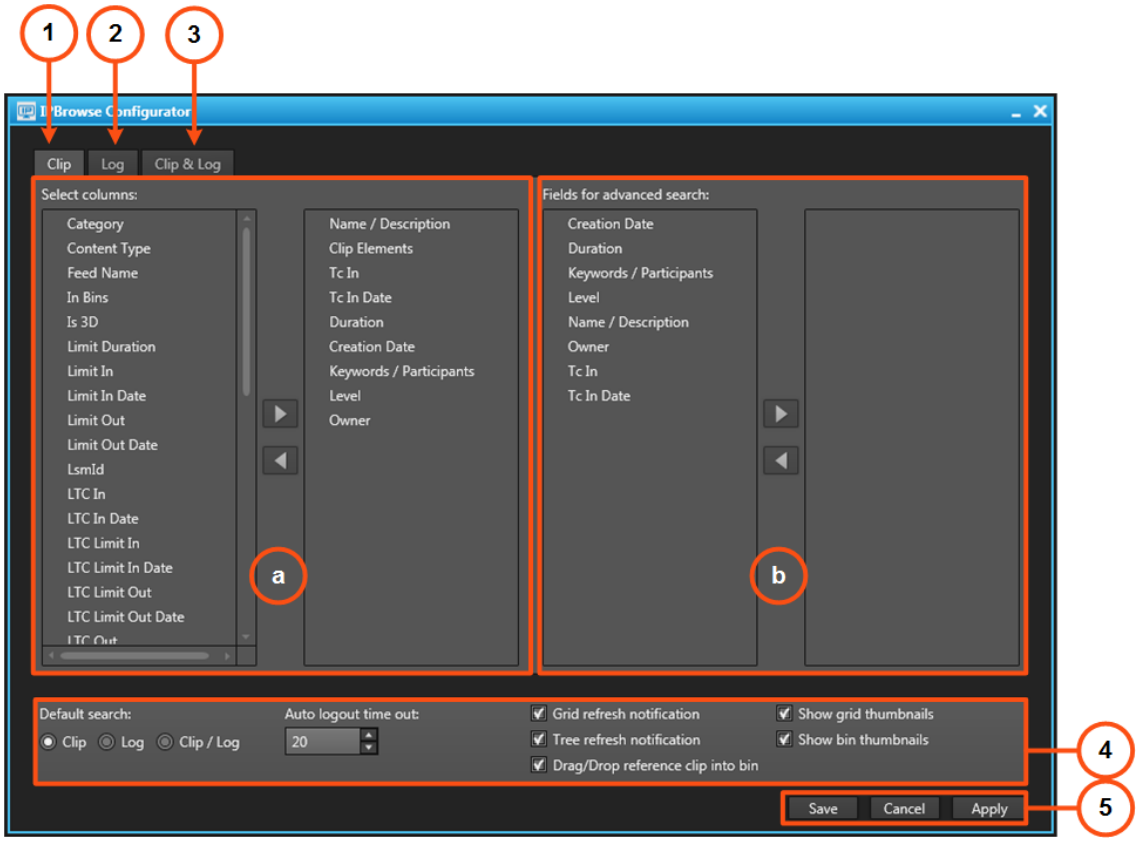
In order to access to the IPBrowse configuration stored in the IPDirector database, credentials must be entered. Only administrator users can log in the tool.

Overview of the IPBrowse Configurator Tool

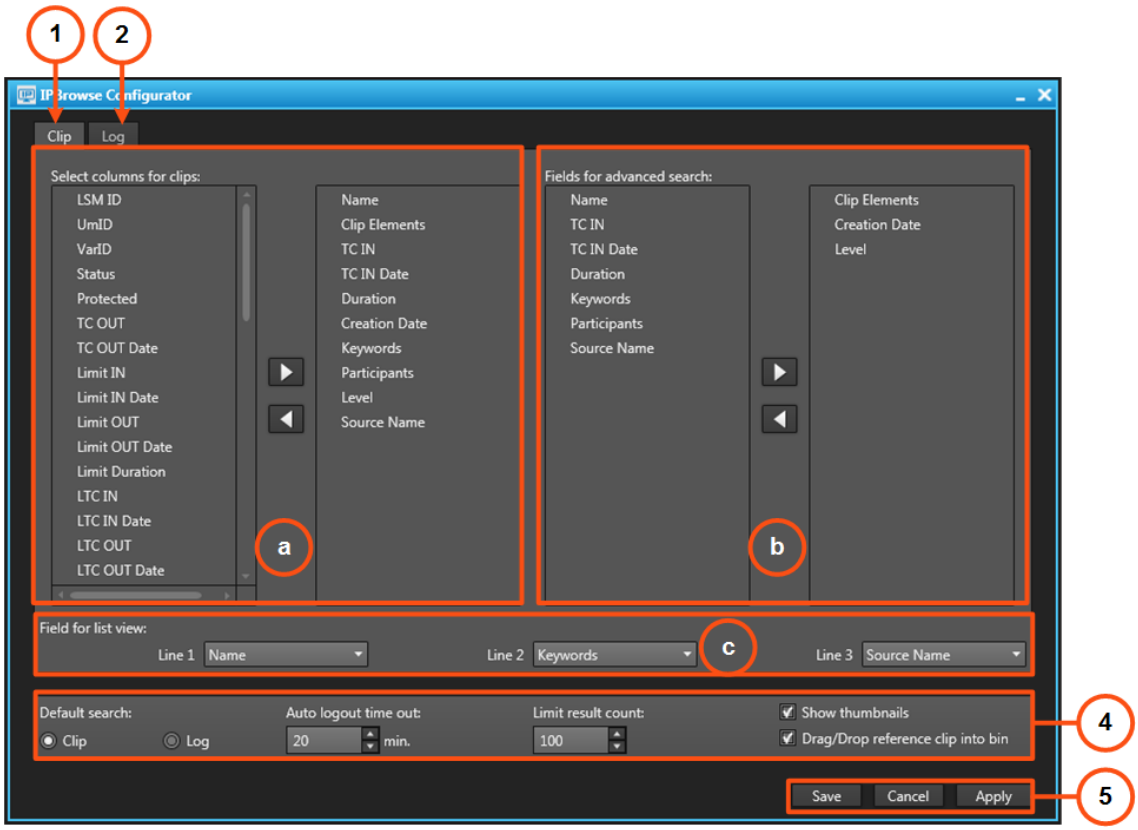
Illustration

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.

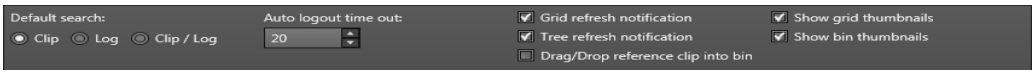
Fields for List View (c)

This area is only available when the Indexing Service mode is disabled.

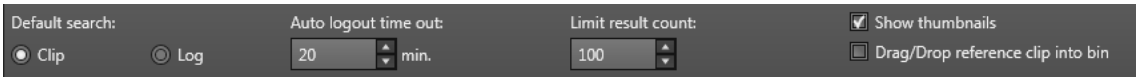
It is used to select the metadata displayed by default in the IPBrowse window when the Elements list is selected, either for clips or for logs.

Settings zone (4)

Indexing Service Mode Enabled



Indexing Service Mode Disabled



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**

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:

- **Selected** (default): when a clip is sent unchanged to a bin, a reference to the original clip is created in the bin.
- **Cleared**: when a clip is sent unchanged to a bin, a new clip is created.

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:

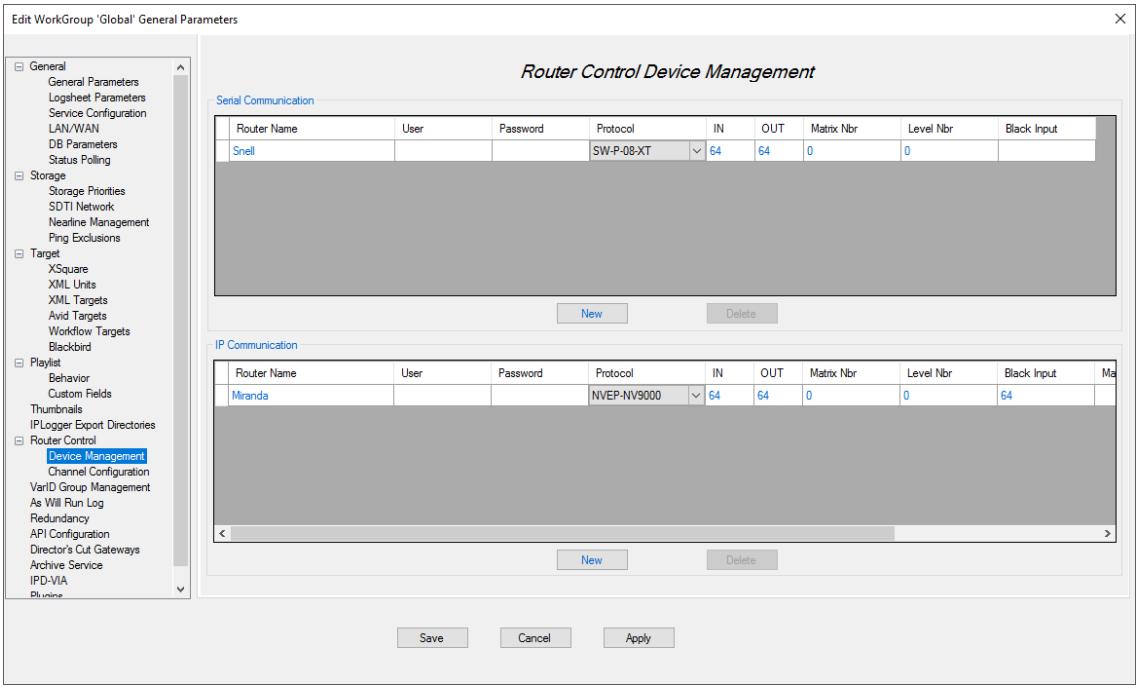
- Miranda NV9000
- Probel SW-P-08
- Jupiter ES-Switch

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 247.
- To automatically start the Router Ctrl service with the IPDirector application, select **Auto Start** from the **Router Ctrl** button contextual menu.

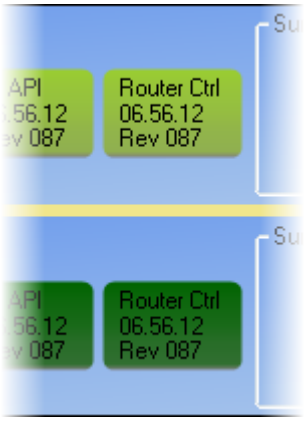
Master Role

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.

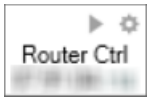
Declaring more than one Router Ctrl service as a Master Candidate is allowed and brings you failover functionality. Then, the Router Ctrl service with the lowest routing number assume the Master role.

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. Click the **Edit Config** icon on the **Router Ctrl** service button 

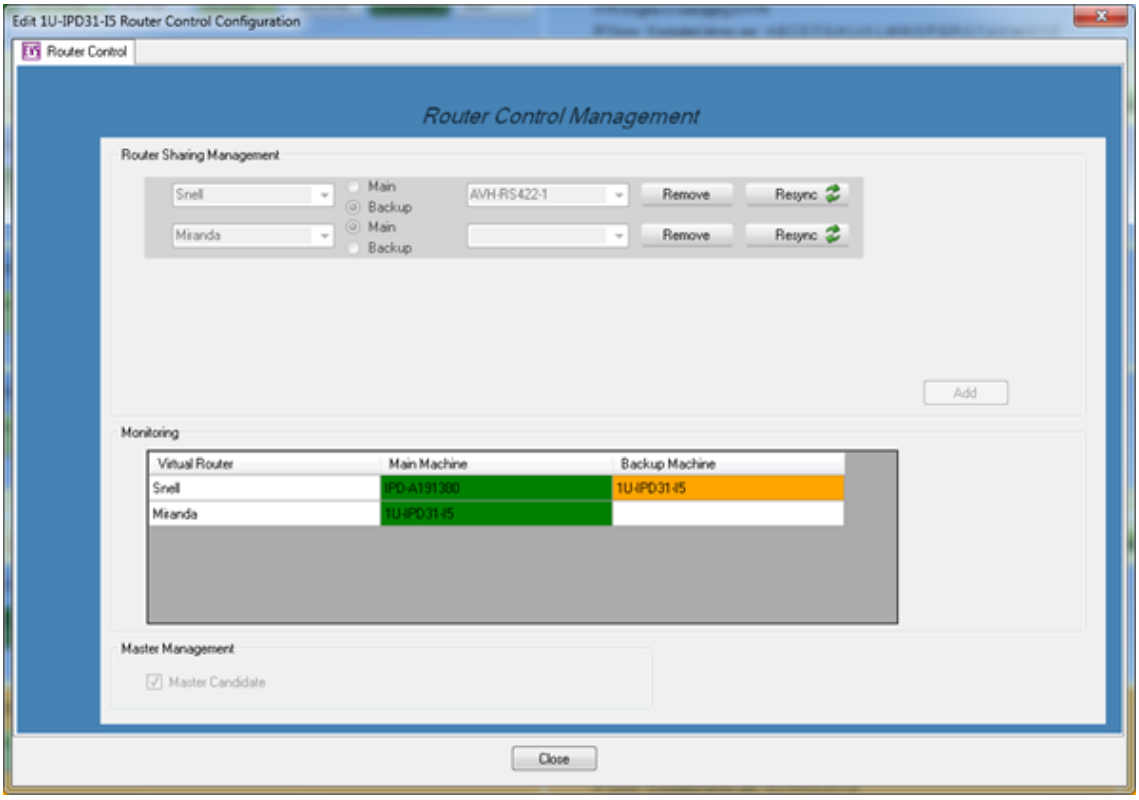
of the workstation controlling the router.

   The Router Control Management window opens.

2. 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**.
3. Repeat previous steps for each workstation controlling a router.
4. Select **Master Candidate**, from the Master Management area, for the workstation service in charge of coordination.

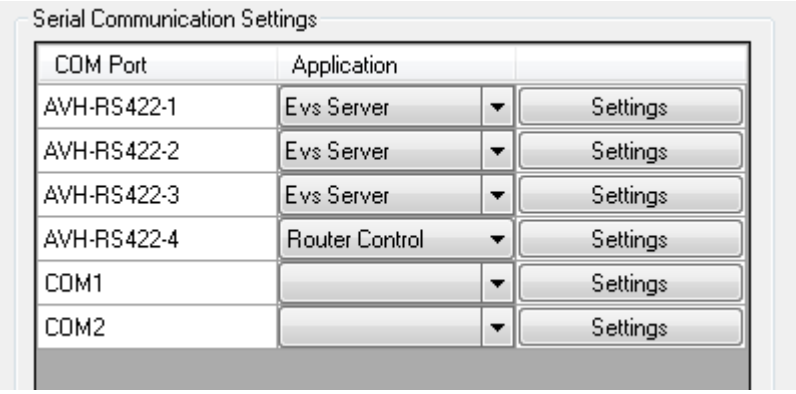
The Monitoring area automatically displays the connection status between all the routers and the workstations.



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 52.

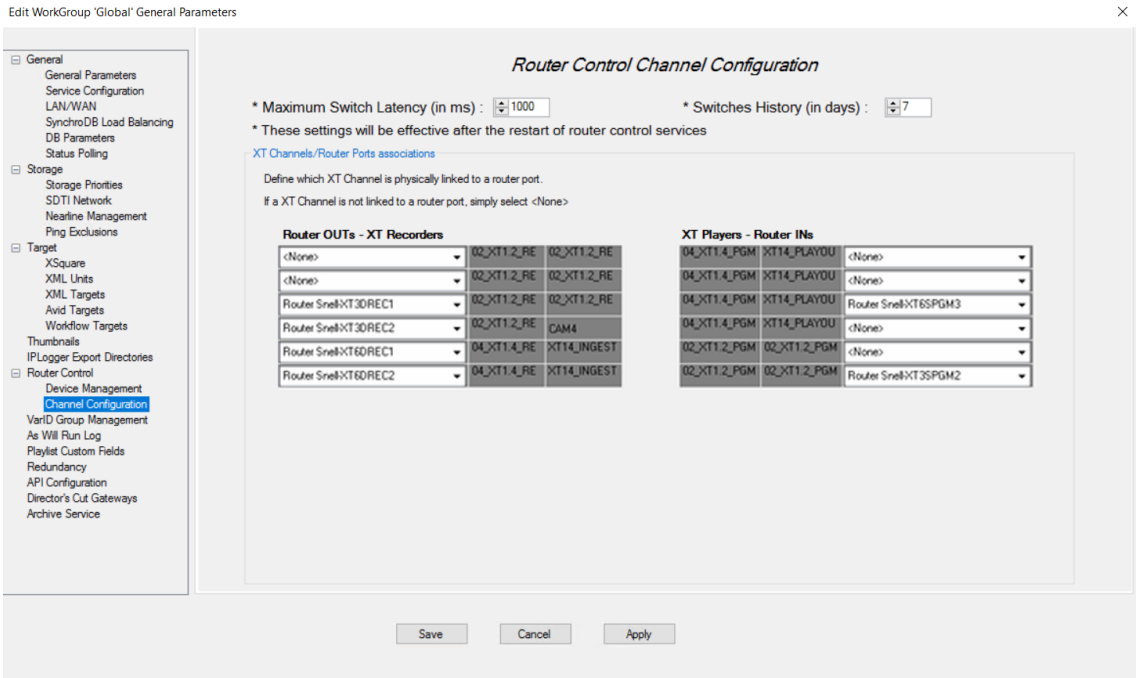


2.16.4. Configuring the Physical Connections between a Router and a Server

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 247 and "Defining the Workstation Responsible for the Control of the Router" on page 248.

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.

> ⚠ 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

Archive HSM Systems

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. This is configured from the Archive Service tab of the Remote Installer.

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.

Amazon S3 System and Wasabi Cloud Storage

The archive / restore process to/from Amazon S3 or Wasabi Cloud Storage is managed by the Archive Add-On for IPDirector based on VIA Flow.

Closed files are archived from a nearline storage or files are restored (full restore) to a nearline storage.

VIA Flow for IPDirector and the Archive Add-On for IPDirector must have been installed. The connection to the cloud requires authentication through access and secret keys.

The configuration is done from the Archive Service tab of the Remote Installer.

2.17.2. Managing the ATS Service

About the ATS Service

When no archiving system is used, or when it is based on Amazon S3 or Wasabi Cloud Storage, the ATS service can be disabled.

When you use an HSM as archiving system, the ATS service must be enabled by workstation.

The ATS service is displayed as a Service button on each workstation area.

It can be manually or automatically started, stopped or killed, as described in sections "Starting Services" on page 165 and "Stopping Services" on page 167.

The first ATS service started on a workgroup takes the Master role.

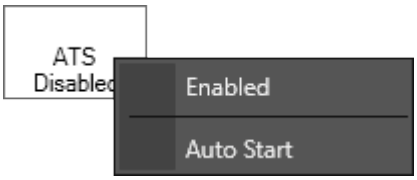
If the Master stops or fails, the ATS service which had started after the Master will take the Master role.

The Master role is clearly identified with a dark green status within the Remote Installer:

How to Enable the ATS Service

This step is used to enable the archiving process in IPDirector when it is based on a HSM system.

1. Right-click the **ATS** box.
2. Select **Enabled** from the contextual menu.



The service is enabled

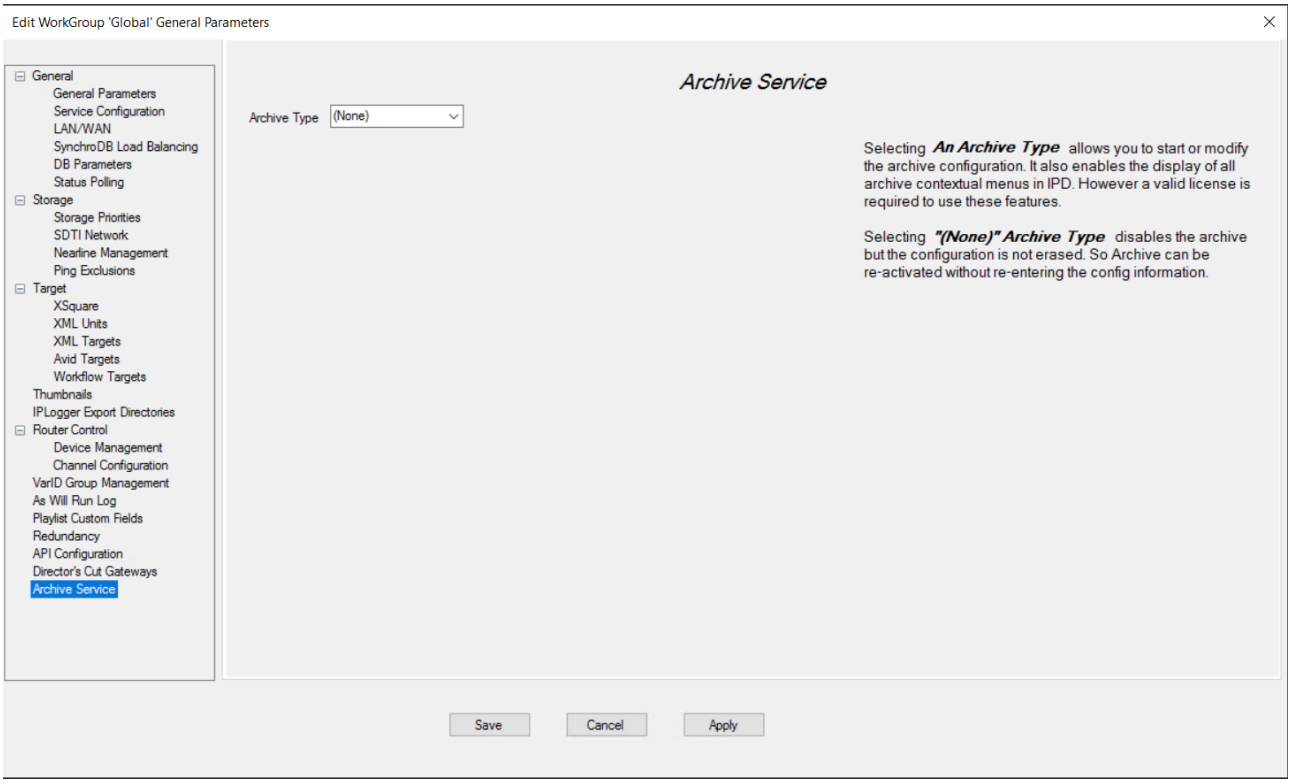
.

2.17.3. Configuring the Archive Parameters

Accessing the Archive Service Tab

To access the Archive Service window:

1. Make sure all running programs are stopped (**Stop all**).
2. Do in one of the following:
   - Click the **ATS DB** button, at the top right corner of the Remote Installer window, or
   - Click the **Configure** or button from the workgroup toolbar, and select the Archive Service tab.



Configuring the Archive Parameters for DIVA or SGL

When hosting ATS database on EVS Mirrored DB servers, the following actions must be applied after creation:

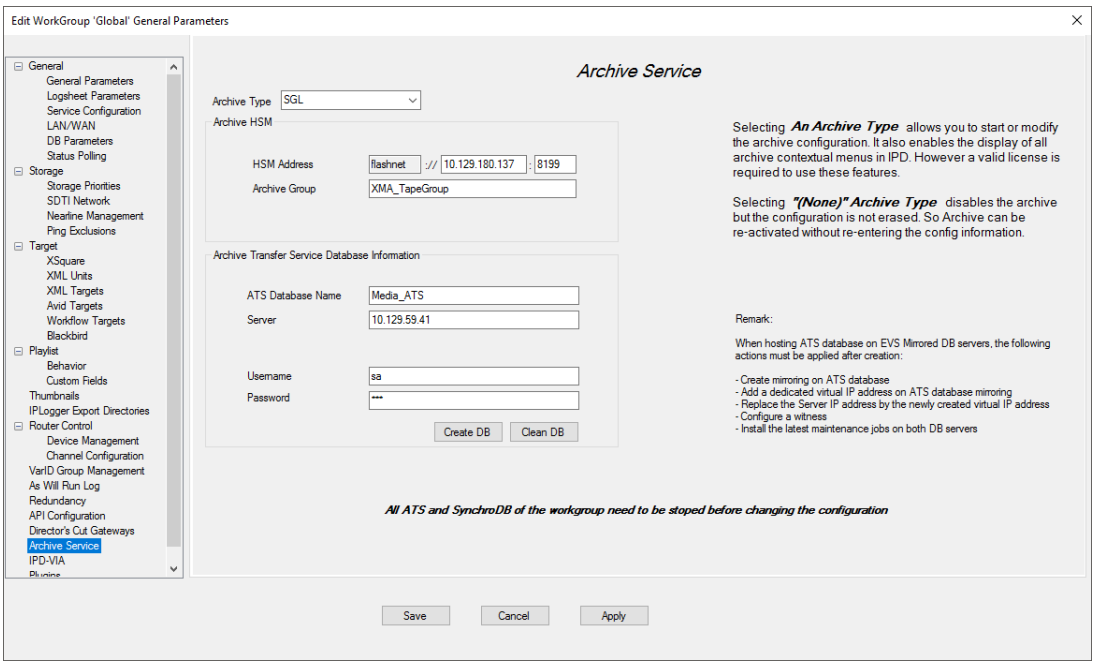
- Create mirroring on ATS database
- Add a dedicated virtual IP address on ATS database mirroring
- Replace the Server IP address by the newly created virtual IP address
- Configure a witness
- Install the latest maintenance jobs on both DB servers

How to Configure the Archive Parameters

To configure your ATS parameters and create the ATS database from the Archive Service window,

1. From the **Archive Type** menu, select the **DIVA** or the **SGL** option.

   The fields become available.



2. 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

3. 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.

4. In the **ATS Database Name** field, enter the name of the ATS database.

5. In the **Server** field, enter the IP address of the machine hosting the ATS database.

6. In the **Username** and **Password** fields, respectively enter the username and password for the ATS database.

7. Click **Create DB** to create the ATS database on the selected workstation.

8. Click **Save**.

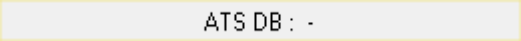
The **ATS DB** button appears on the top right of the window if it was not yet displayed.

ATS Database Status

The background color of the **ATS DB** button gives indication on the ATS database status. It is only displayed when the ATS service has been enabled and the Archive parameters have been configured.

White

The archiving process has been enabled but the ATS database information has not been configured yet.



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.

Green

The archiving process is enabled and the ATS database configuration was successful.

Orange

The archiving process is enabled but the ATS database is not the right version.

Right-click the **ATS DB button** and select **Upgrade** to upgrade the ATS DB scripts.

Configuring the Archive Parameters for Amazon S3 or Wasabi Cloud Storage

Prerequisites

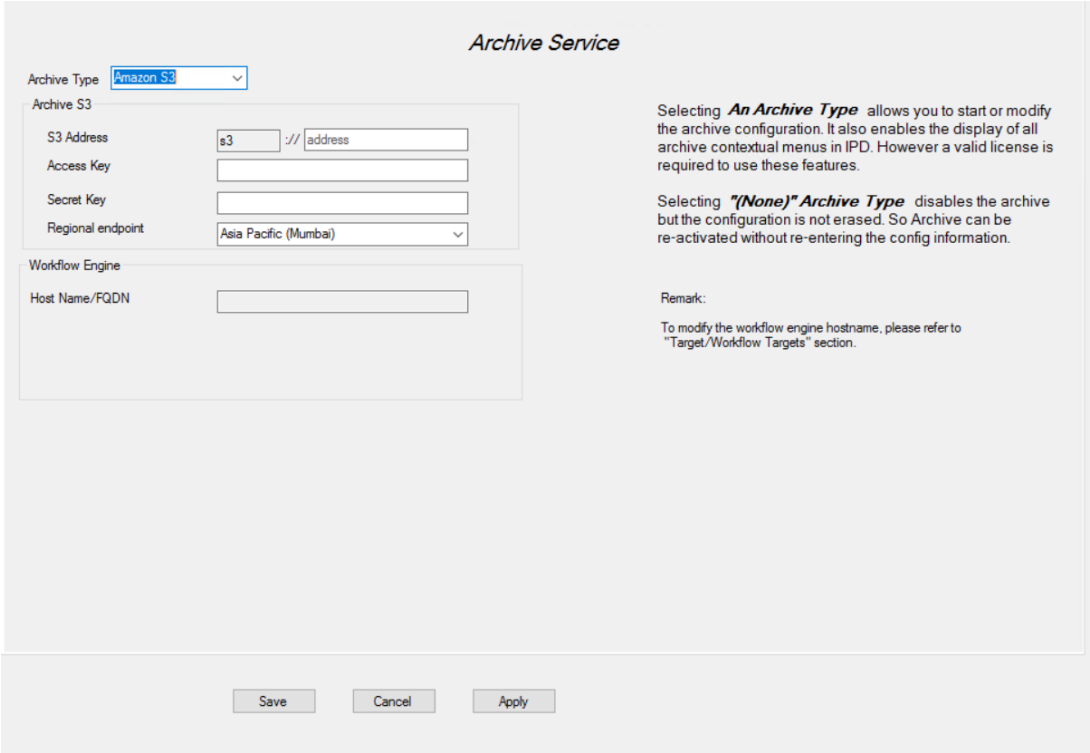
- Install VIA Flow for IPDirector and ARCHIVE Add-on for IPDirector.
- Configure the workflow engine from the Workflow Target Configuration tab. See section "Workflow Target Configuration" on page 131.

How to Configure the Archive Parameters

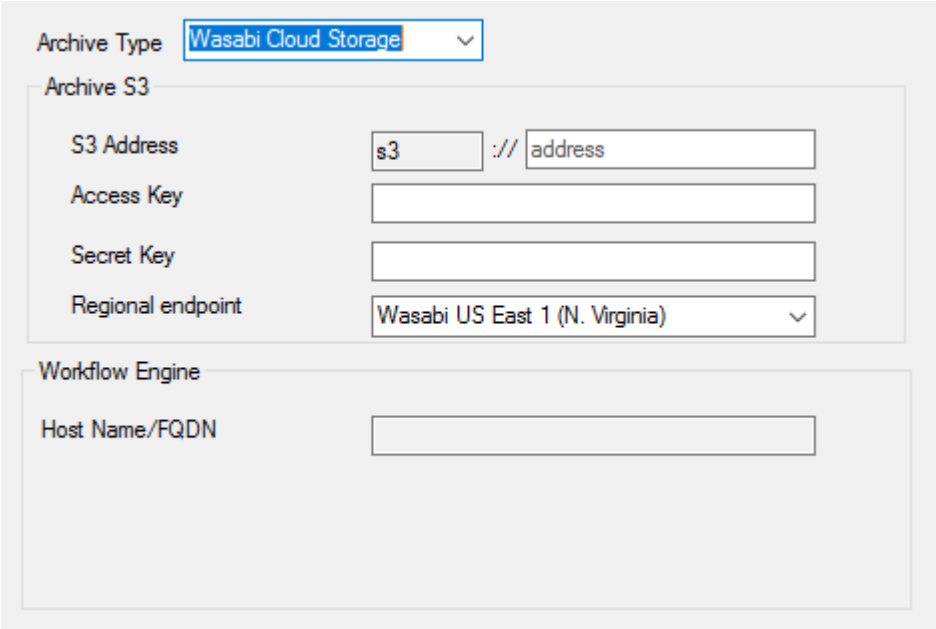
In the Archive Service window,

1. From the **Archive Type** menu, select the **Amazon S3** or the **Wasabi Cloud Storage** option.

   The fields become available.



or



2. Fill in the fields as follows:
   - **S3 Address**: S3://[bucket-name]/[path]

     where bucket-name is the name of the bucket in the S3 archiving system

     where path is the tree inside the bucket.
   - **Access Key**: access key used to authenticate on the server.
   - **Secret Key**: secret key used to authenticate on the server.
   - **Regional endpoint**: regional endpoint that you use to make your requests.
   - **Workflow Engine Hostname/FQDN** (read-only): the workflow engine is configured in the Workflow Target Configuration tab.
3. Click **Save**.

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)

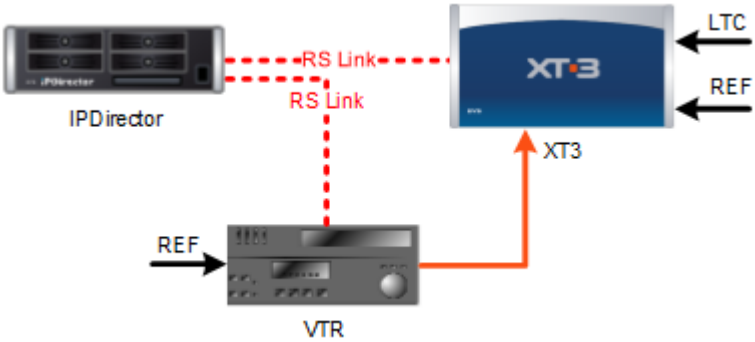
The procedure shows technical configuration steps. For operational information, please refer to the IPDirector User Manual.

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.

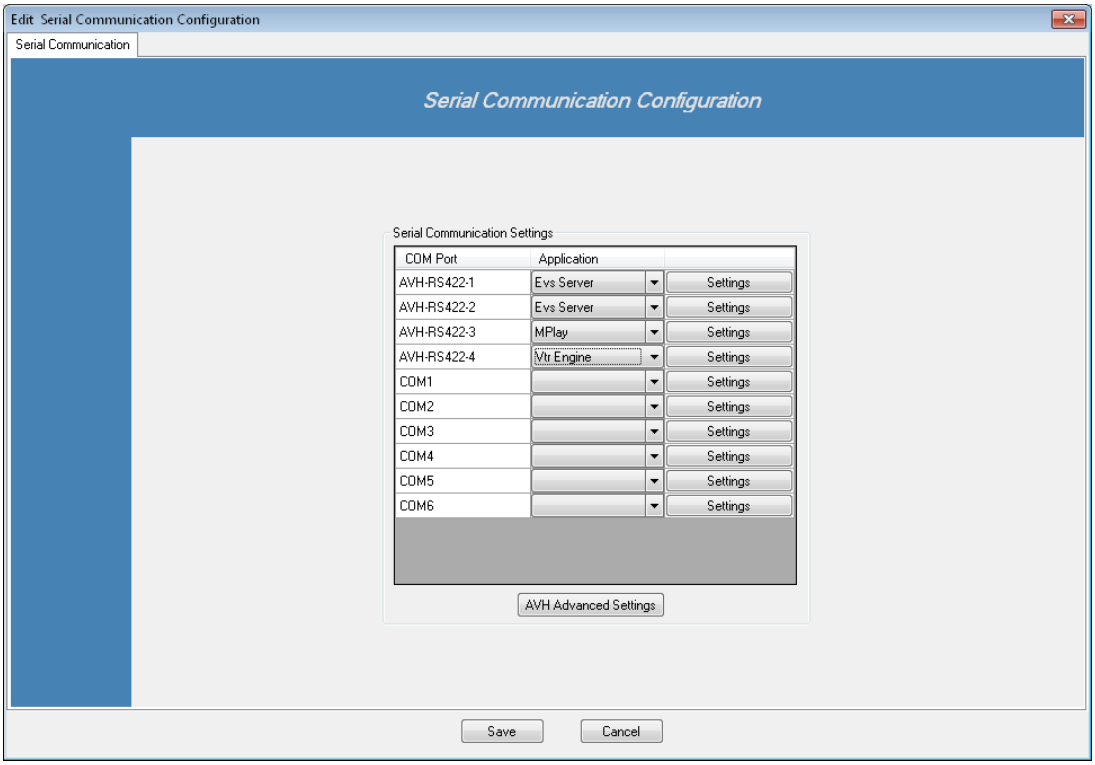


2.18.3. IPD Parameters (Remote Installer)

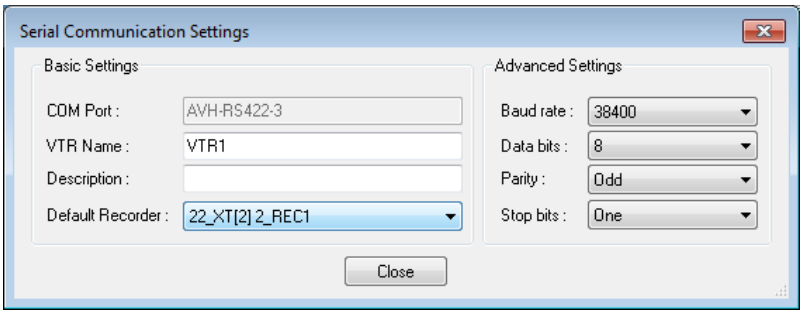
To configure the serial link used for the VTR control:

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.

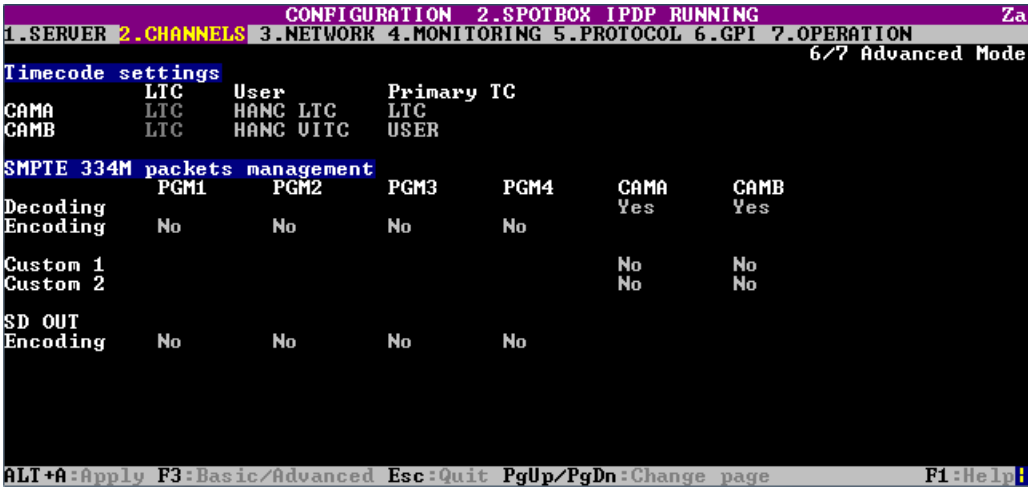
   Try first with the default parameters. Please refer to the Technical VTR manual for more information.

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 F3 to display Advanced Mode, use Page Down 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.

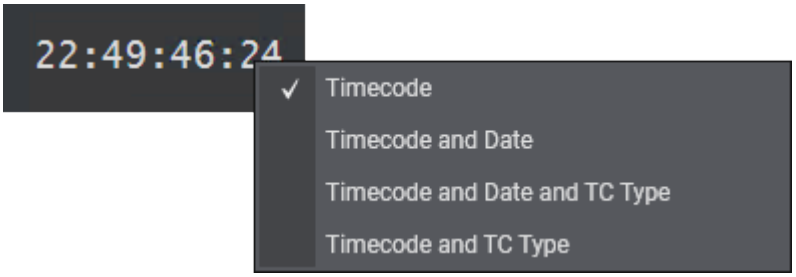
> It is **mandatory** to fill the USER TC table with the wanted embedded VITC Timecode (HANC LTC or HANC VITC for HD).

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.

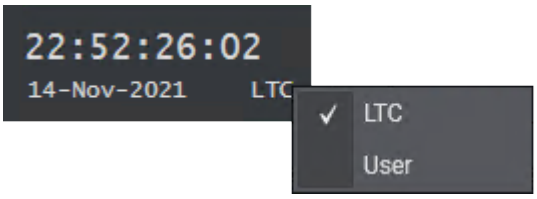
1. Right-click the **Timecode** field.

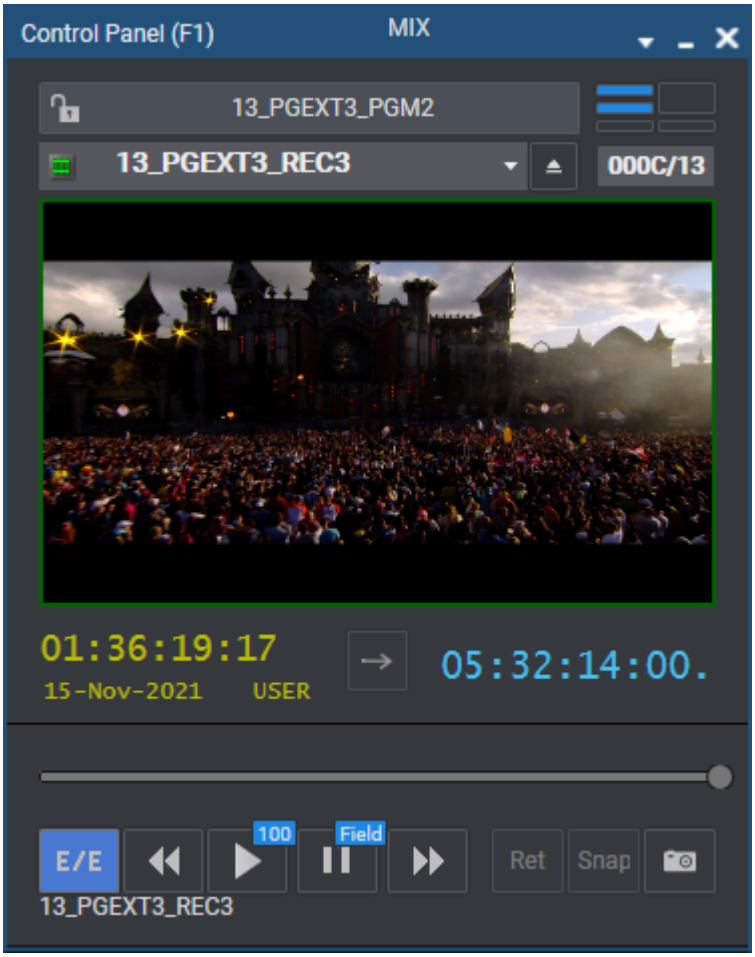
   A contextual menu with the following options is displayed:



   - Timecode
   - Timecode and Date
   - Timecode and Date and TC Type
   - Timecode and TC Type

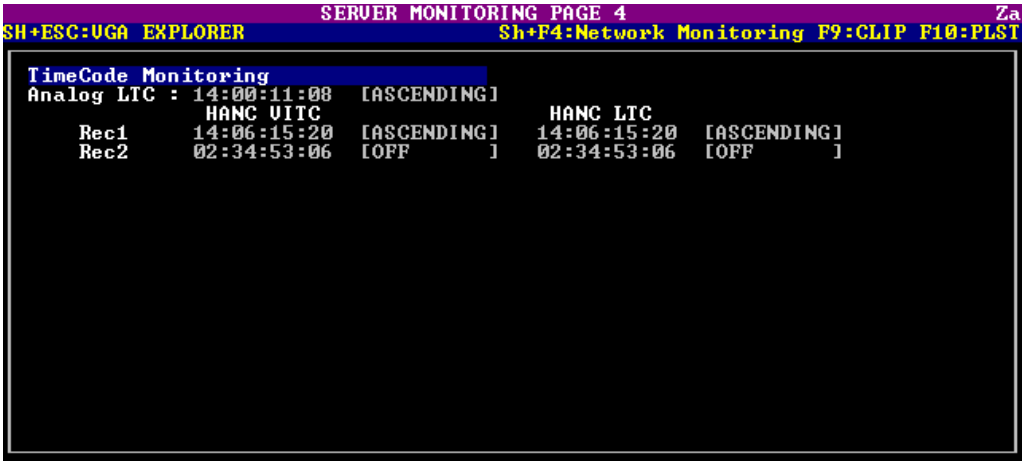
2. Select one of the last two options to display the TC Type.
3. When the TC type is displayed, right-clicking it in the **TC Type** field allows to shift from one TC type to the other (**LTC** or **user**).





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 Page Down once to display the Server Monitoring PAGE 4. This monitoring page displays all running Timecodes for all the recorders of the server.



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.

The TAPE must be recorded with a continuous VITC (HANC LTC or HANC VITC for HD).

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:

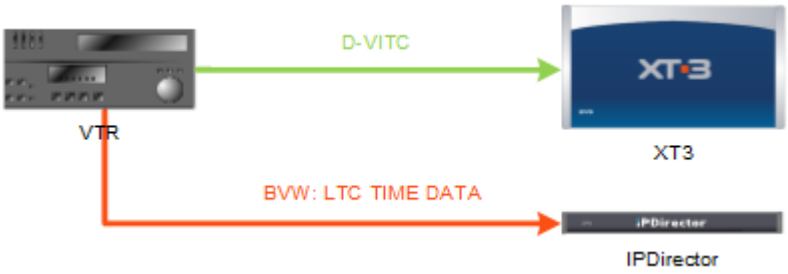
- Timer1
- LTC
- VITC

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.

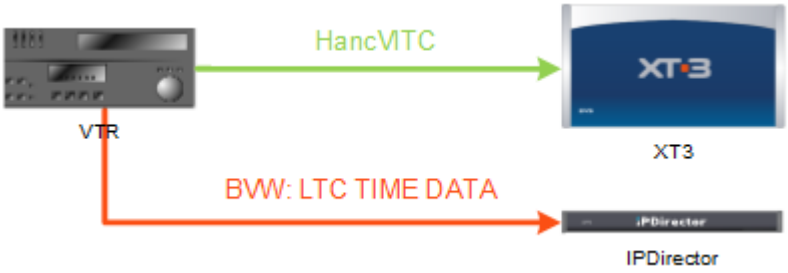


EVS Server Recorder settings:

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.

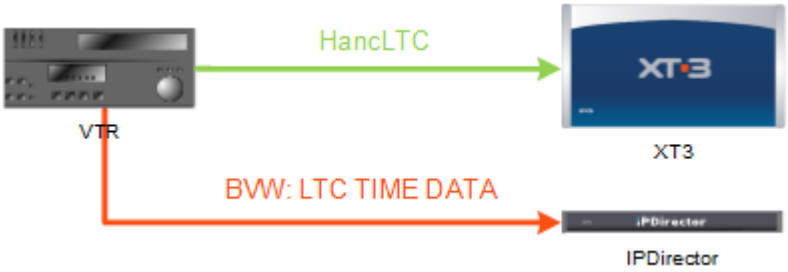


EVS Server Recorder settings:

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

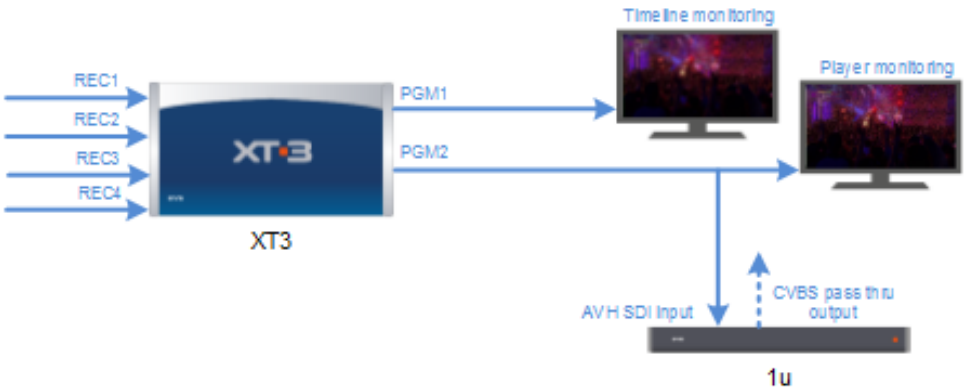
3.1. IPEdit Connectivity

3.1.1. Purpose

The aim of this chapter is to give the basic outline of an IPEdit setup connected with audio/video external devices.

3.1.2. Video Connectivity

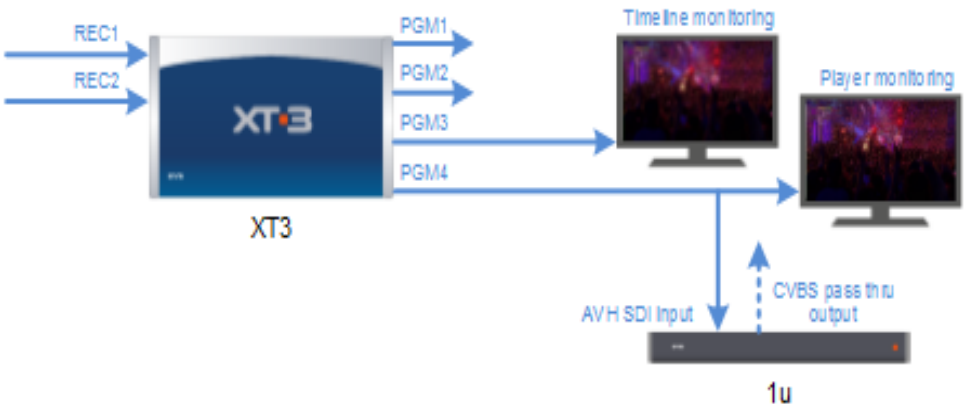
IPEdit controlling PGM1/2



- 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.

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.

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

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.

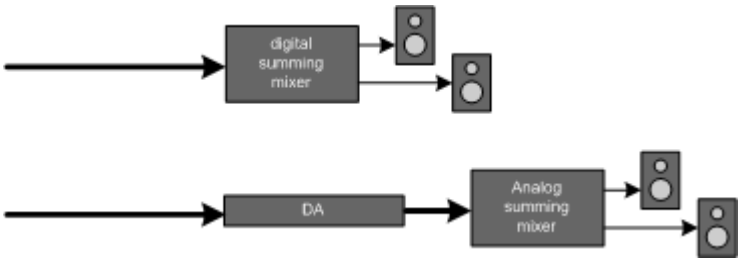
There is no need to manage all audio outputs of both the Timeline and Preview channel only one output set of channels is needed, as internal routing will output the relevant audio to these connectors.

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.

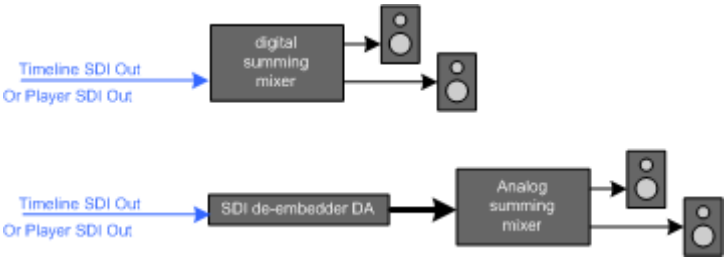
AES



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.

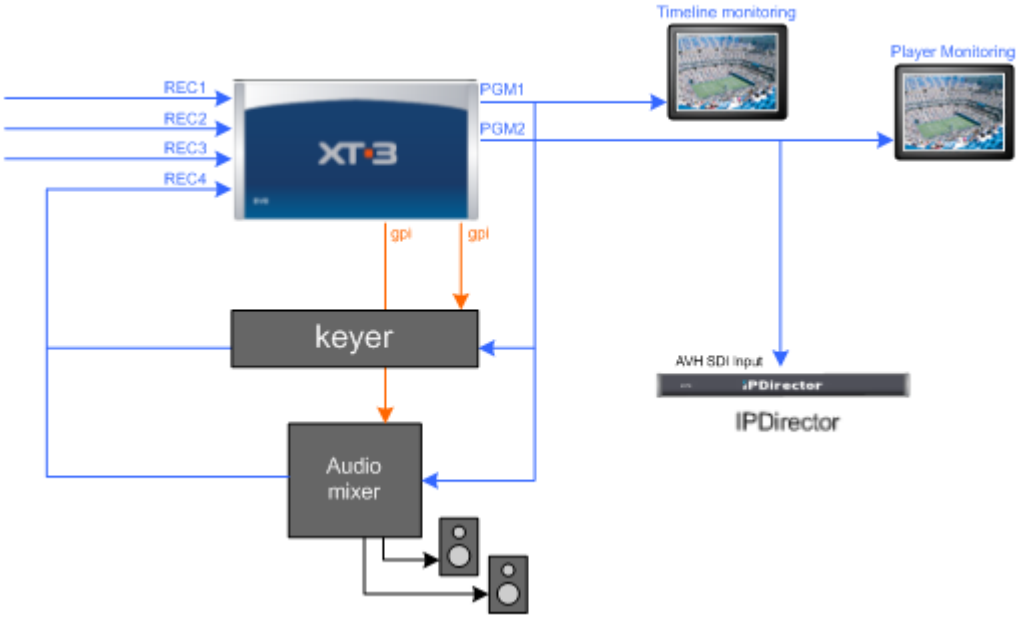
SDI signal must be connected to a digital mixer or audio monitor (or analog mixer using desembedder/AD converter).

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.

The GPI connection is made directly to the server, and NOT to the IPDirector hardware itself.

3.2.2. Reminder – GPI connections on Server

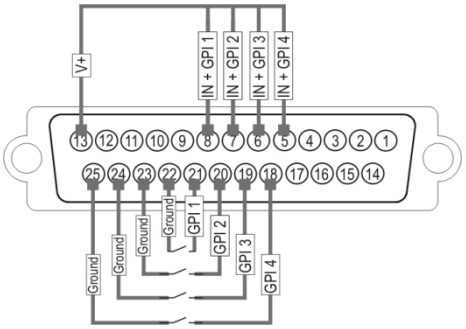
GP In Connections

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



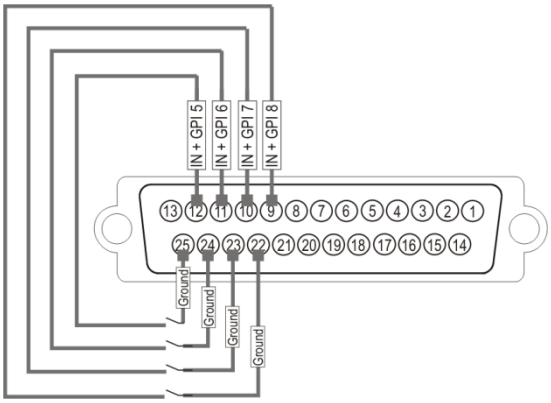
Specifications

- 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
  - imax= 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:
  - Vin< 0.8 Volts -> opto OFF
  - Vin> 2.2 Volts @ 2 mA -> opto ON
  - Vin max (without external resistor) = 15 Volts

TTL Inputs (GP In 5, 6, 7, 8)

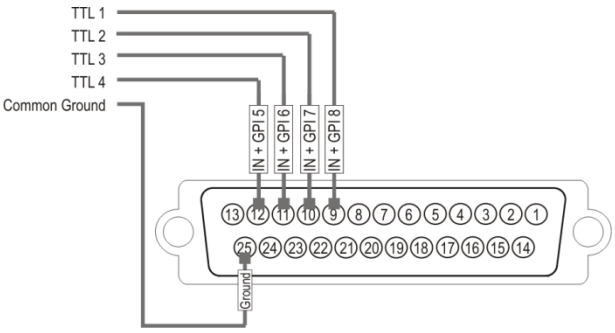
Relay Inputs Pin-Out



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 Vi < 1.5 Volt (U12 = 74HC245)
- high level Vi > 3.5 Volt (U12 = 74HC245)
- optional TTL compatible level (U12 = 74HCT245)

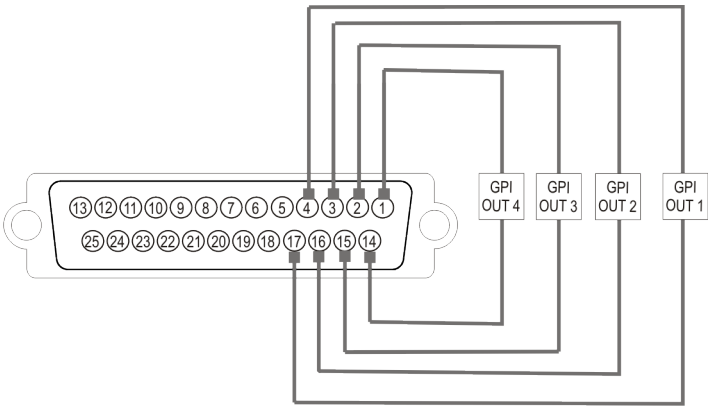
GP Out Connections

Relay Isolated Outputs (GP Out 1, 2, 3, 4)

Pin-Out

The user can define the functions, types and settings associated with the GPI outs in the following applications:

- Setup menu of the Remote Panel
- IP Director settings (GPI and Auxiliary Track tab)

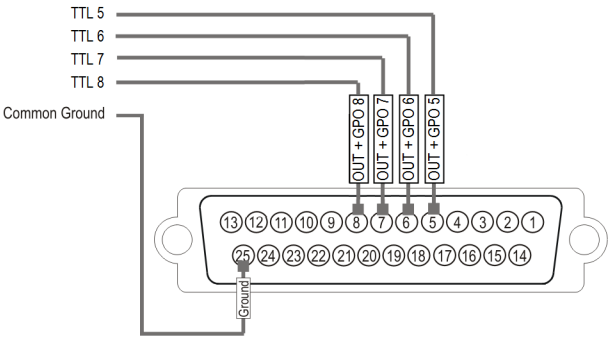


Specifications

- 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 Vi < 1.5 Volt (U12 = 74HC245)
- high level Vi > 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
                                                                    1/1
 GPI Settings                                          TALLY
 TTL GPIs set as GPIs In                               Tally No
                                                       Add Clip to PL 99
 GPIs IN                                               Clips guardbands 000 sec
 #    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
                                                                    1/1
 GPI Settings                                          TALLY
 TTL GPIs set as GPIs Out                              Tally No
                                                       Add Clip to PL 99
 GPIs IN                                               Clips guardbands 000 sec
 #    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.

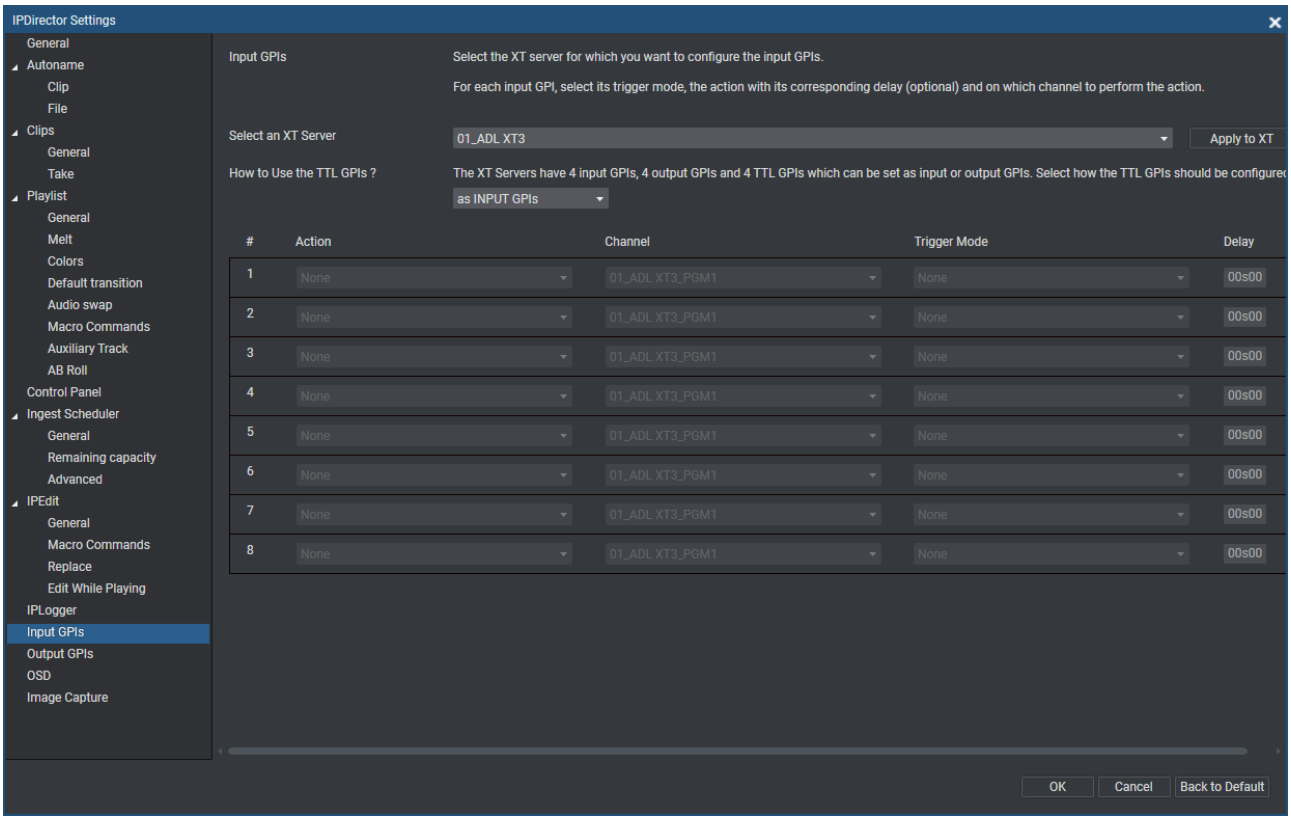
Specify **EVS IPDP** in the Channel/Device column and the IPDP port number on the wished GPI channels (Functions can be defined within the IPD interface)

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.

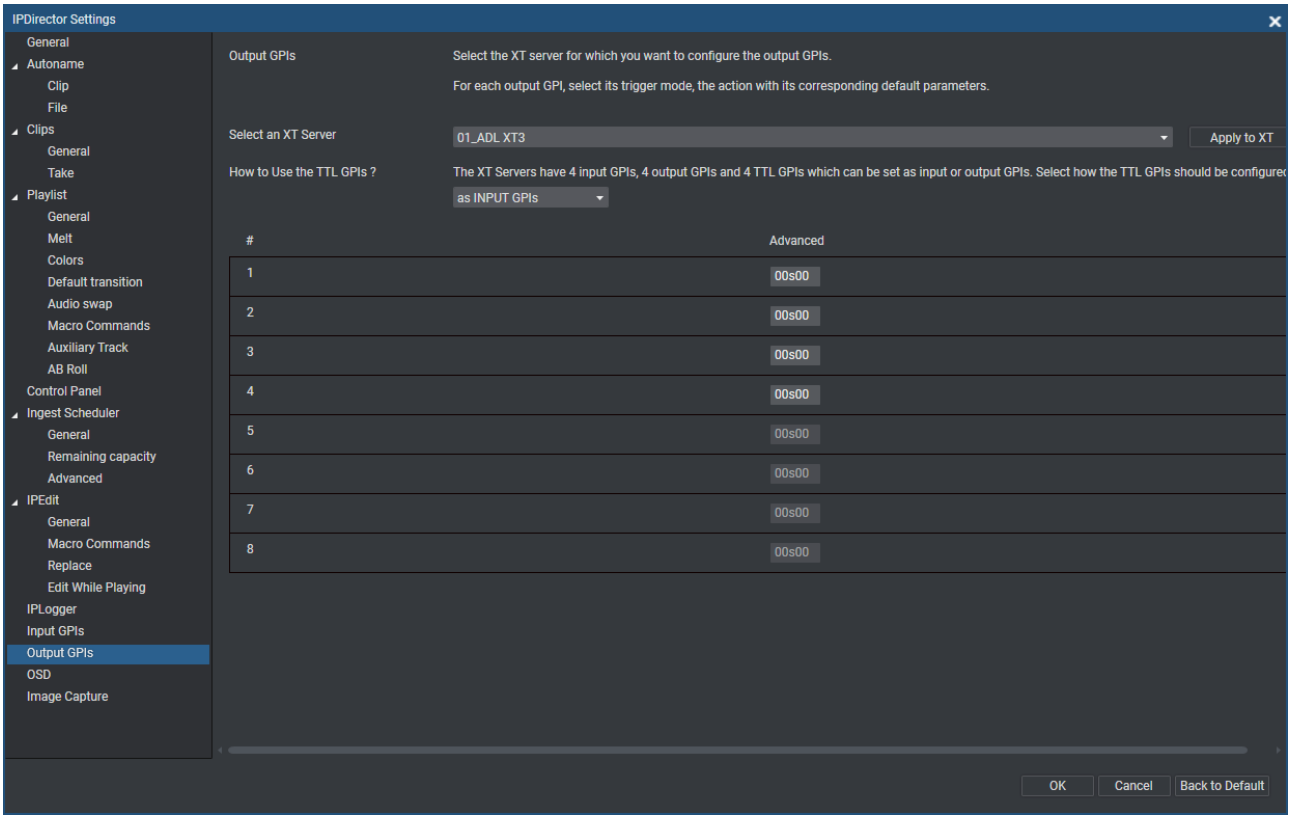
INPUT GPI Configuration Pane:

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)

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.

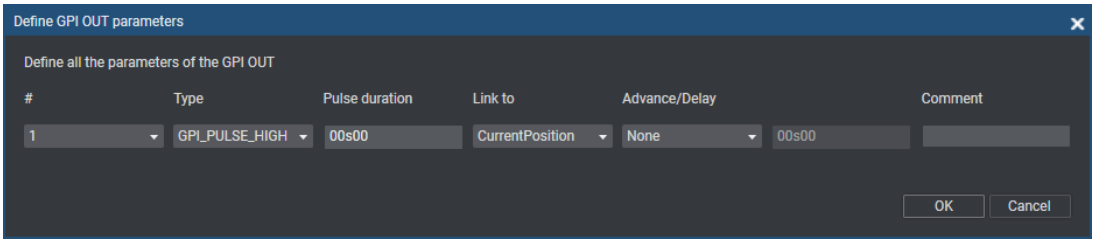
If the TTL GPIs are defined as GPIs OUT, the last four GPIs IN are grayed out.

OUTPUT GPI Configuration Pane:

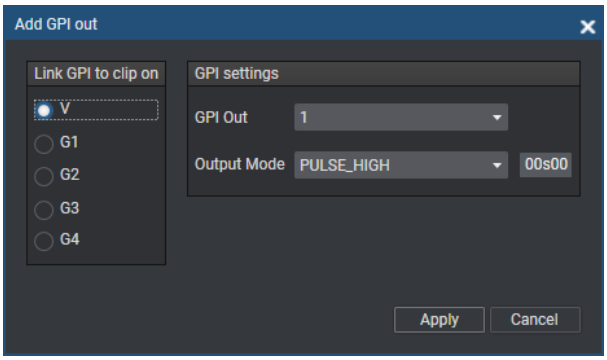
The OUTPUT GPIs are signals that are sent by the GPI from a server under the control of the IPDirector. Eight GPI OUT commands can be sent from a server (if the TTL GPIs are defined as GPIs OUT)

For each OUTPUT GPI, the output mode is now configured within:

- The playlist panel (Insert TAG) or the playlist macro commands (Tools/Settings):



- The IPEdit or the IPEdit Macro commands (Tools/Settings):



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.

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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