



Xsquare Suite 2.02.51

Release Note

January 2014 / 2.0

The screenshot displays the Xsquare Suite dashboard with the following modules:

- Monitoring**
 - Jobs
 - EVS Servers
- Job Initiators**
 - Targets SOAP jobs
 - ScanFolders
 - ScanXML instructions XML jobs
- Configuration**
 - Orchestration
 - Job Templates
 - Encoders / Wrappers profiles
 - Icons Manager
- Administration**
 - Users & Access
 - Roles
 - Groups

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LIST OF DOCUMENTS

Release notes

- **Xsquare_ReleaseNote_v2.02.51.pdf** : Release note of Xsquare Suite 2.02
- **XTAccess_Codecs_2.02.pdf**: List of codecs & wrappers compatible with XTAccess for wrapping, decoding and encoding

UserMan

- **Xsquare_InstallMan_v2.02.pdf** : document which explains how install Xsquare
- **Xsquare_Userman_v2.02.pdf**: user manual for Xsquare. Actually this the PDF format of the Xsquare 2.02 online help available directly in the Xsquare interface

TechDoc

- **How to migrate from XTAccess to Xsquare.pdf**: document which explains how to migrate from XTAccess to Xsquare. This document is only available on request. Please contact support@evs.com for more information.
- **Xsquare Automatic redundancy system.pdf**: document which explains how to create a redundancy system with Xsquare. This document is only available on request. Please contact support@evs.com for more information.
- **How to create an Adobe Target.docx**: document which explains how to create an adobe target with IPD.

API

- **Xsquare API documentation**: this document is only available on request. Please contact commonblocks@evs.com for more information.

There is no XTAccess release note. The XTAccess release note is included inside this release note.

EVS COMPLIANCE MATRIX

- Multicam 12.02
- IPD 6.40

Please contact commonblocks@evs.com for more information.

SOFTWARE INSTALLATION

See Installation Manual for details of the installation procedure.

XSQUARE SUITE

Xsquare is distributed within a complete package called "Xsquare Suite". Xsquare Suite consists of Xsquare itself, plus a family of EVS applications, as well as prerequisite Third-parties software.

We strongly recommend using this package of software and keeping the version united with the package.

EVS software included in the Xsquare Suite	Version
Notification Center	2 .1.10
Authentication Service	2.2.42 (new version since the 2.1 release)
Xsquare	2.2.51 (new version since the 2.1 release)
Xsecure Manager	1.1.5
Common SNMP Agent	101.0.12
XTAccess	2.02.14 (new version since the 2.1 release)
XTGateway	2.5.4 (new version since the 2.1 release)
AssociationTool	2.2.11 (new version since the 2.1 release)
Maintenance Plans	1.6.0

Other software included in the Xsquare suite	Version
Bonjour Service	2.0.2
.NET framework 4.0	4.0.30319
SQL Server Express	9.0.4035
Silverlight	5.1.20513 (new version since the 2.1 release)
VC Redist	10.0.40219

OPERATING SYSTEM COMPLIANCE

Xsquare is compatible with:

- Windows XP (not recommended)
- Windows 2003 Server 32 bits
- Windows 2003 Server 64 bits (this OS is not compatible with XTAccess)
- Windows 7 32 bits
- **Windows 7 64 bits (default OS)**
- Windows Server 2008 R2 SP1 64 bits

For the 64 bit OS, Xsquare will run as a 32 bits application.

The Framework .NET 2.0 is mandatory to install Xsquare. The framework .NET 2.0 is not included in the Xsquare installer suite.

WINDOWS FIREWALL

The installer will open these IP Ports on the Windows firewall
On Xsquare device (opened by Xsquare setup):

- 9001 : NC observer
- 9002 : JobService
- 9003 : ConfigService
- 9004 : ProxyService
- +
- 8998 : Internal Xsquare ScanXML service
- 8999 : Internal Xsquare ScanFolder service
- +
- 50000 : TCP for the LinX connection management
- 50100 to 50108 : UDP for the LinX exchanges of commands

On XTAccess device:

- 9000 : For XTAccess (opened by the XTAccess setup)
- 9005 : XTA config (opened by the XTAccess setup)
- 9010 : Authentication service (opened by the Xsquare setup)
- 48888 : NotificationCenter (opened by the NotificationCenter setup)

Note: It is not possible to modify those port numbers

BROADCAST ROUTING

Your router must also support packet broadcast and multicast routing on these ports

- 5353: for the Apple Bonjour Protocol
- 50000 to 50002: for the LinX Protocol
- 50100 to 50108: for the LinX Protocol

HARDWARE: WHERE CAN I INSTALL XSQUARE?

The minimum system requirement for XTAcess and Xsquare is:

- Workstation or server
- CPU Intel i5
- 2GB RAM
- GigE board
- VGA 1024x768
- At least 2GB free on the hard disk
- SQL 2005 or 2008

The hardware requirement (CPU and Memory) is directly linked to the number of XTAcess devices managed by Xsquare and the number of opened monitoring windows. Please contact EVS support to design the hardware to be used for Xsquare based on your workflow.

XSQUARE SUITE STANDALONE

- XTAcess and Xsquare can run on the same computer, but if XTAcess performs transcoding jobs, Xsquare may be slower than expected. If Xsquare is used to manage more than 4 XTAcess devices (Orchestrator), we strongly recommend using a specific computer to run Xsquare (The EVS App Server)
- If you want to use Xsquare with redundancy system for the DB: you will have to use the EVS DB 3U or 2U hardware (the DB can be shared with IPD see below).

XSQUARE SUITE ON IPDIRECTOR HARDWARE OR IPDIRECTOR DB

- Xsquare/XTAcess and IPD 6.0 can be installed on the same computer with the IPDirector. In this case: we recommend using XTAcess to process a maximum of 2 jobs without transcoding at the same time, possibly with thumbnails.
- As Xsquare uses the same redundancy mechanism than IPD: It is possible to install Xsquare on the same DB than the IPD DB. But please first contact the EVS Support to check if the DB will be powerful enough.
- If Xsquare has to process more than 1 job every 2 seconds : we strongly recommend using the new EVS DB hardware with more than 4 GB of memory (DBS3-2D)

INTEL NETWORK BOARD DRIVER

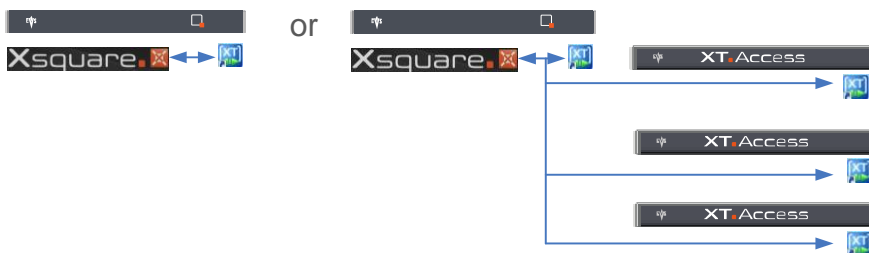
If you are using a network board with the Intel chipset 82574 on your XTAcess/Xsquare Hardware (this is the default network board chipset on EVS XTAcess hardware): we recommend upgrading the Intel driver to the version 18.1 or above.

LICENSES

XSQUARE

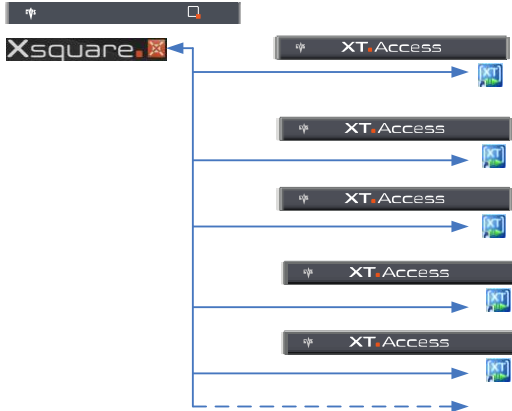
NO XSECURE LICENSE

If you use Xsquare in standalone or to manage maximum 4 XTAccess devices, you will not need any Xsecure license.



XSECURE LICENSE

If you use Xsquare to manage **between 5 and 19 XTAccess** devices, you will need one Xsecure license (Application: 130 – Xsquare | module: 10-Base Package).



If you use Xsquare to manage **more than 19 XTAccess devices**, you will need one Xsecure license (Application: 130 – Xsquare | module: 20-Unilimited Engines).

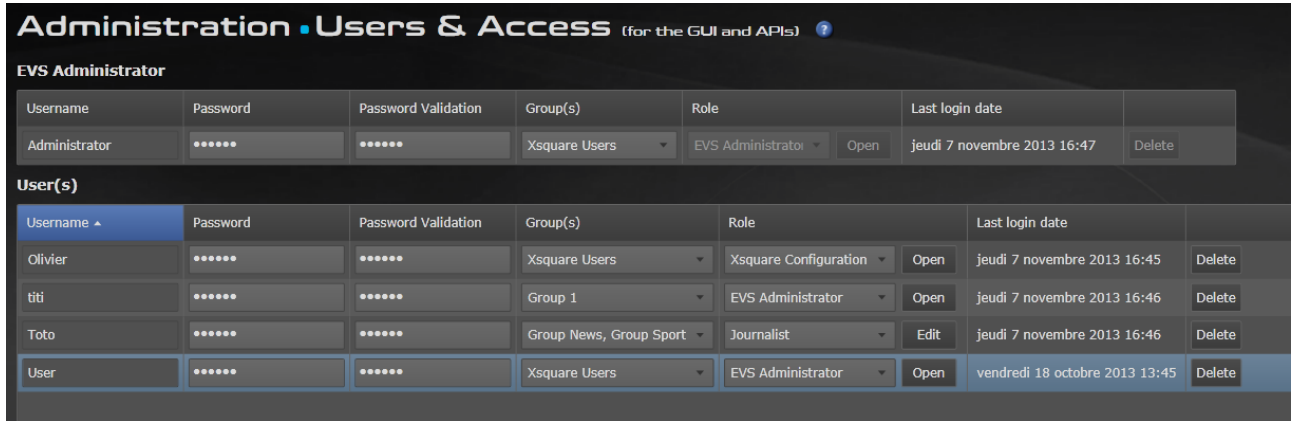
XTACCESS

For XTAccess: Xsecure license is necessary if you want to transcode your source files or clips. Xsecure license is also necessary for the rendering of EDL (playlist or timeline)

NEW FEATURES OF THE XSQUARE 2.02

USER RIGHTS

USERS AND ACCESS



The screenshot shows the 'Administration - Users & Access' interface. It features two tables for user management. The first table, titled 'EVS Administrator', shows a single user entry. The second table, titled 'User(s)', shows a list of users with their details and actions.

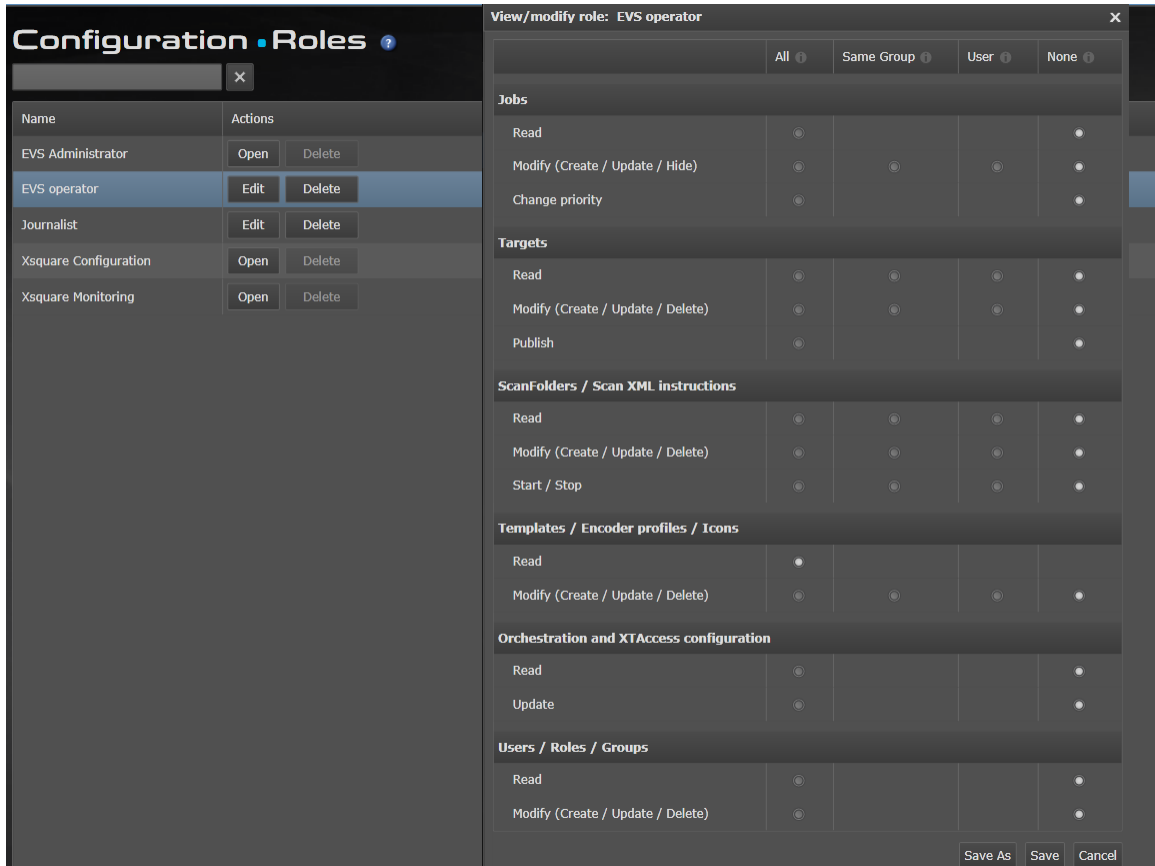
Username	Password	Password Validation	Group(s)	Role		Last login date	
Administrator	*****	*****	Xsquare Users	EVS Administrator	Open	jeudi 7 novembre 2013 16:47	Delete

Username	Password	Password Validation	Group(s)	Role		Last login date	
Olivier	*****	*****	Xsquare Users	Xsquare Configuration	Open	jeudi 7 novembre 2013 16:45	Delete
titi	*****	*****	Group 1	EVS Administrator	Open	jeudi 7 novembre 2013 16:46	Delete
Toto	*****	*****	Group News, Group Sport	Journalist	Edit	jeudi 7 novembre 2013 16:46	Delete
User	*****	*****	Xsquare Users	EVS Administrator	Open	vendredi 18 octobre 2013 13:45	Delete

The Users and Access window allows administrators to perform the following actions:

- create users
- manage the user's credentials (compulsory)
- assign a role to a user (compulsory)
- include a user into one or several groups (optional)

ROLES



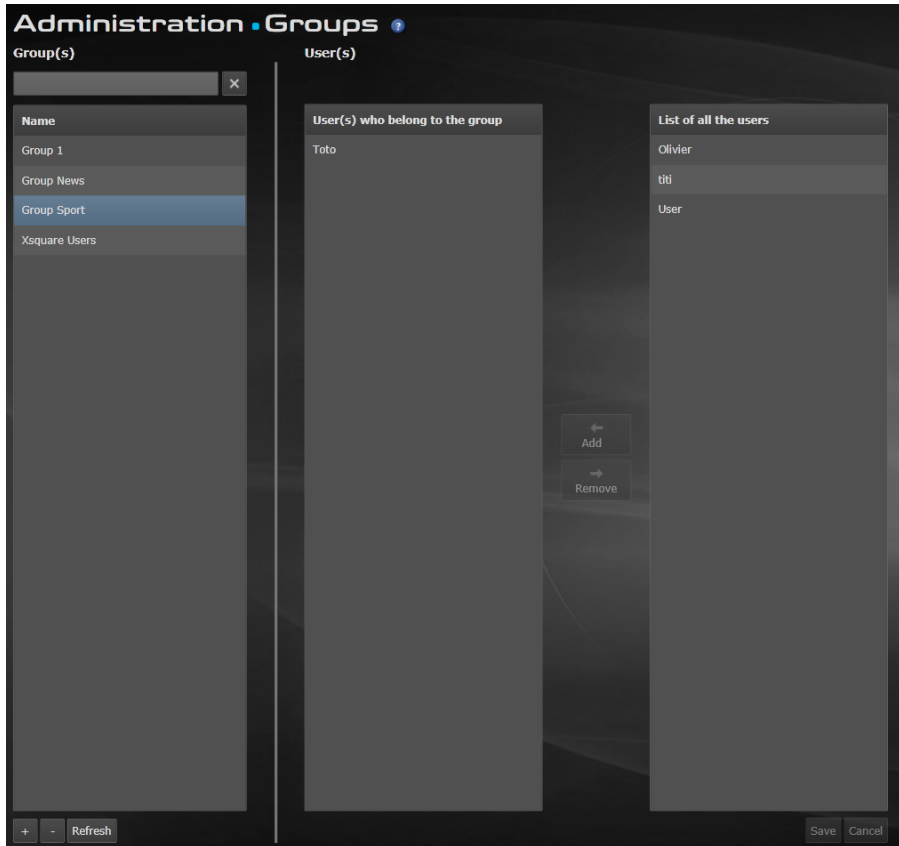
The Roles window allows administrators to view and manage roles, which can then be granted to users in the Users & Access window.

A role consists of a set of rights to perform actions or view content in Xsquare.

When a given right is granted, it can be granted:

- for all Xsquare elements associated to the right
- for the elements created by the groups the user belongs to
- for the elements created by the user him/herself

GROUPS



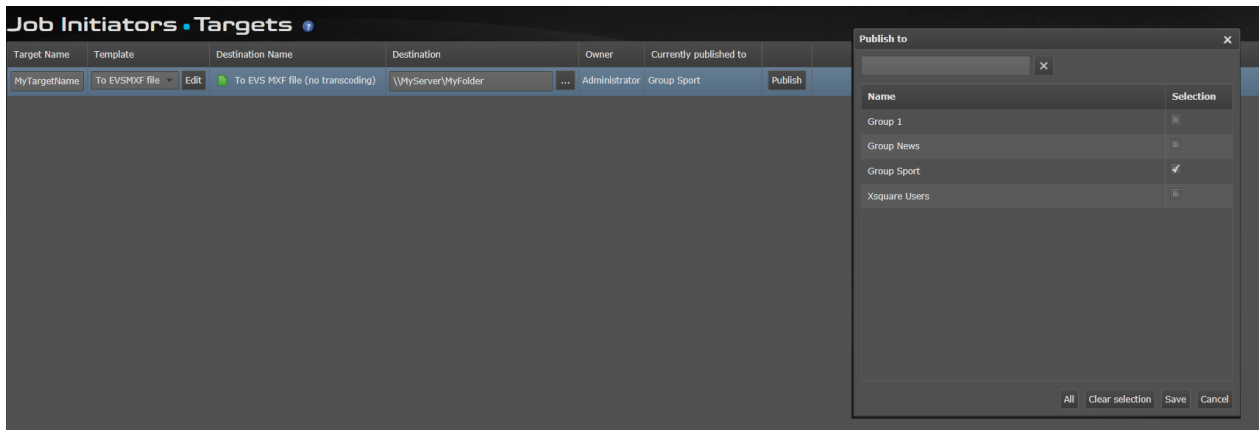
The Groups window allows administrators to view and manage groups of users.

When Xsquare is not integrated with Active Directory, the groups are created in the Groups window, and users are then assigned to the created groups.

When Xsquare is integrated with Active Directory, the groups are created in Xsquare with exactly the same name as the corresponding AD groups. Once the groups are defined in Xsquare, users are automatically assigned to the groups they belong to in Active Directory. The actual user assignment is therefore not performed in Xsquare.

For this reason, the Groups window will be slightly different whether Xsquare is integrated with Active Directory, or not.

PUBLISH



By publishing a target, a user can share the target with users who would otherwise not be able to see the given target thanks to their user rights only.

Depending solely on their rights, users can indeed see and modify their own targets, and possibly targets created by other users belonging to their group(s). They cannot see or edit targets created by users who do not belong to their group(s).

If you have the right to publish a target, you will see the following elements in the Target window:

- a Publish button for each target
- the group(s) each target is currently published to.

AD INTEGRATION

CONFIGURATION

Xsquare can be integrated to Active Directory for managing users and groups.

In this case, you have to configure Xsquare as explained below before you open the application:

1. In a text editor, open the file Authentication.exe.config located in C:\Program Files\Evs Broadcast Equipment\Authentication,
2. Under the appSettings element, in the add element, set the value attribute to "ActiveDirectory".

```

21  —></connectionStrings>
22  —><appSettings>
23  —>—><add key="AuthenticationMode" value="ActiveDirectory"/>
24  —></appSettings>

```

3. Save and close the file.
4. Launch the Xsquare services monitoring tool and restart all services

RULES

- Default rules: A windows AD group will be considered as a role or group in Xsquare
 - **Windows AD Group = Xsquare role**

An AD Group will be linked to Xsquare role defined in Xsquare (the link will be done by the name) i.e. The AD group “Journalist” will be linked to the role “Journalist” in Xsquare. The role “Journalist” will have user-rights
If a windows user is added to the “Journalist” windows group, he will automatically inherit the user-rights of the “Journalist” Xsquare role.
 - **Windows AD Group = Xsquare group**

A windows group can also be linked to a Xsquare group. (the link will be done by the name) i.e. The AD group “Sport” will be linked to the group “Sport” in Xsquare.

If a windows user is added to the “Sport” windows group, he will automatically inherit the visibility of the “Sport” Xsquare group.
- Xsquare synchronisation with AD
 - Xsquare service will synchronise all its users with Active directory :
 - Automatically every 30 minutes
 - After each modifications of Xsquare roles (new roles or roles removed)
 - If the Xsquare administrator clicks on “Force synchronisation with Active Directory” in the user Xsquare window
 - The user information will be synchronised after each login in Xsquare

LIMITATIONS

- Xsquare group and role cannot have the same name
- A user can be member of only one AD group used in the EVS application as application role i.e. a user cannot be member of 2 AD groups used in Xsquare (Journalist + Playout operator) as roles
Only one AD group will be taken by the application to be linked to the Xsquare role. (**The first in the alphabetical order**)
However, the user can belong to multiple AD groups if they are linked to Xsquare groups (visibility groups)
- Active Directory unknown: If the user belongs to AD groups but none of them correspond to Xsquare role: the user will not be able to access Xsquare web interface. A popup will be display to ask the user to enter a valid user/Password
- Xsquare will work only in one mode (local authentication or AD authentication). It will not be possible to mix both in the same setup except the local administrator user which will work in the two modes.

SOURCE SELECTION

There is one new column “State” in the EVS Servers windows

EVS SDTI Network name	Serial number	Giga address 1	Giga address 2	MTPC address	Version	State
	20720	192.168.102.102	172.22.51.2	172.22.51.202	11.1.74	Discovered
53.120	46610	172.22.53.120	11.1.1.4	172.22.53.128	11.2.48	Discovered
CDL M12	48680	172.22.51.9	192.168.45.10	172.22.51.209	12.2.42	Discovered
MDH	112770	172.22.51.20	192.168.53.10	172.22.51.220	12.2.42	Discovered
xt51.34	92580	172.22.51.34	1.1.67.34	172.22.51.234	11.2.69	Discovered
CDL M12x	109940	172.22.51.10	192.168.10.154	172.22.51.210	12.2.42	Discovered
51.3	35490	172.22.51.103	172.23.51.103	172.22.51.203	11.2.68	Discovered
51.1	14210	172.22.51.1	172.23.51.101	172.22.51.201	12.2.37	Discovered
	20140	172.22.51.5	1.1.66.101	172.22.51.205	11.1.74	Discovered
CDL M11	29090	172.22.51.8	192.168.12.10	172.22.51.208	11.2.68	Discovered

This new state column displays the connection status between the EVS server and Xsquare.

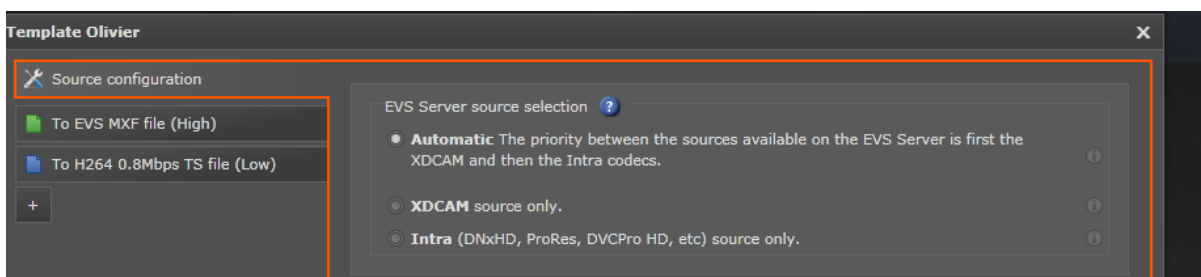
The following statuses are possible:

- **Discovered:** Xsquare has discovered the EVS server but is has not received a job with a source from this XT.
- **Connected:** Xsquare has received one job with a source from this EVS server and has validated the connection. In this case the option Automatic for the source selection will work
- **Disconnected:** Xsquare has received one job with a source from this EVS server but the LinX connection has been lost. In this case the option Automatic for the source selection will not work. The Intra codec will be always selected by Xsquare

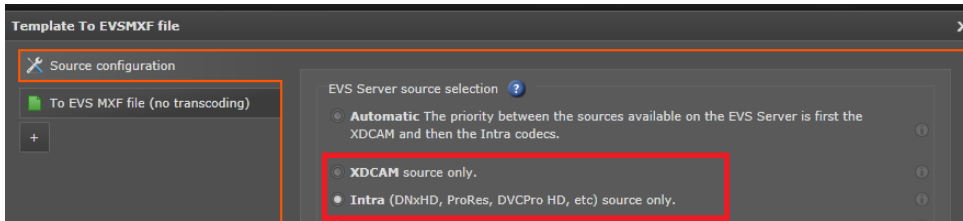
Reminder: Xsquare & MTPC card on XT connected are mandatory

RULES FOR THE SOURCE SELECTION (XDCAM OR INTRA)

Xsquare will automatically elect the right source to transfer from the EVS Servers which are in dual codec (XDCAM/Intra) mode. But it is possible to force this source selection (see screenshot).

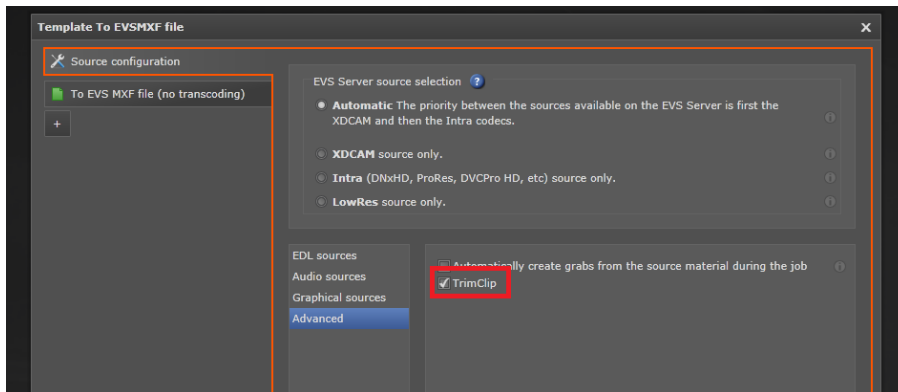


- By default (**Automatic**) Xsquare will always select the XDCAM source if the XDCAM source is available. If the XDCAM clip source is not present on the EVS Server : Xsquare will select the Intra clip
- If the user forces the source selection in the Xsquare Template (**XDCAM** or **Intra**): Xsquare will not verify that the source exists on the EVS Server. The verification will be done only when the job arrives in XTAccess. If the source selected is not present on the EVS Server: The job will failed.

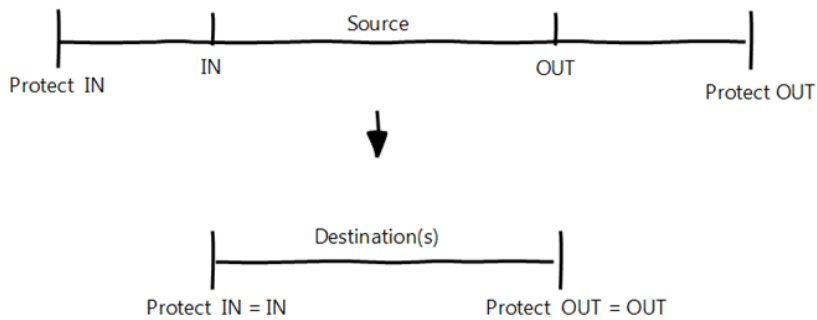


- If Xsquare receives a job from an EVS Server which it doesn't know (not in its EVS Server list) : It will automatically force the INTRA format as source
- The versions of Multicam before the version M12 will never been seen "connected" in the list. Actually Xsquare will never try to validate the connection. There is no source selection in this case

TRIM CLIP



This option allows trimming the source media. Actually the destination Protect IN will be equal to the source IN and the destination Protect OUT will be equal to Source OUT. So the guardband will not be transferred

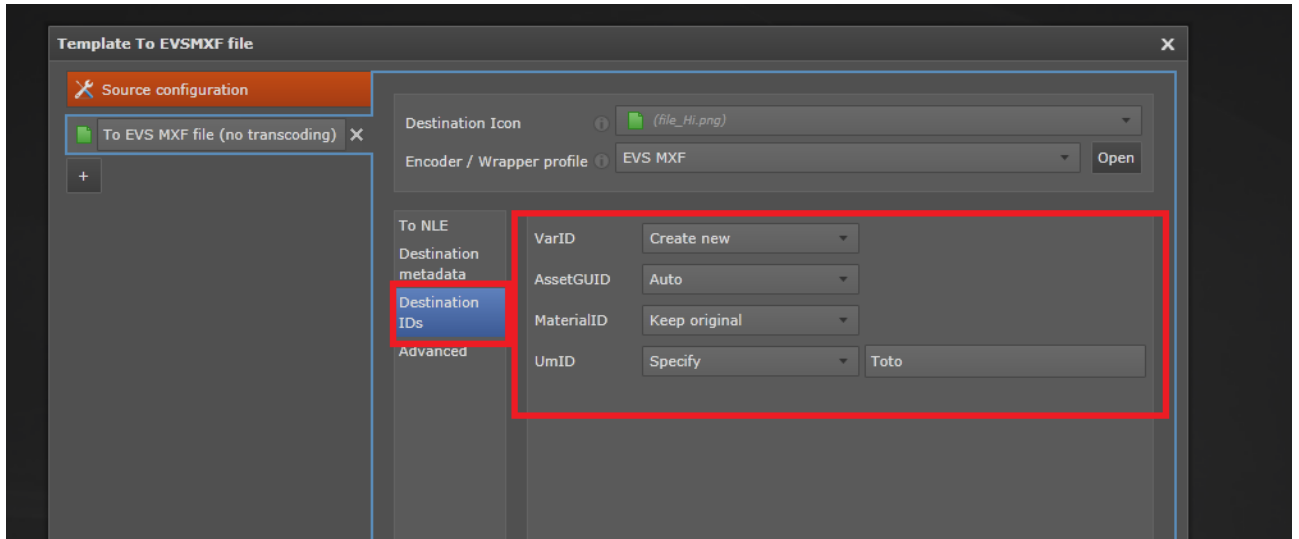


If the boundaries are already defined in the soap job this option will have no effect.

If you want to use this option with IPDirector or XML Jobs, please contact commonblocks@evs.com

IDS OPTION

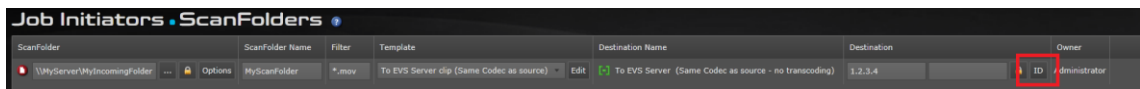
You can now specify 4 different modes to handle the IDs in the Xsquare template



- Auto: Keep or generate random ID depending on the job
- Create new: a new random ID will be generated
- Keep original: assign the ID of the source media to the destination media. If there's no source ID, a new one is generated
- Specify : specify the ID to set to the destination media

Remarks:

- The “ID” configuration in the Scan Folder section is used in priority before this section.

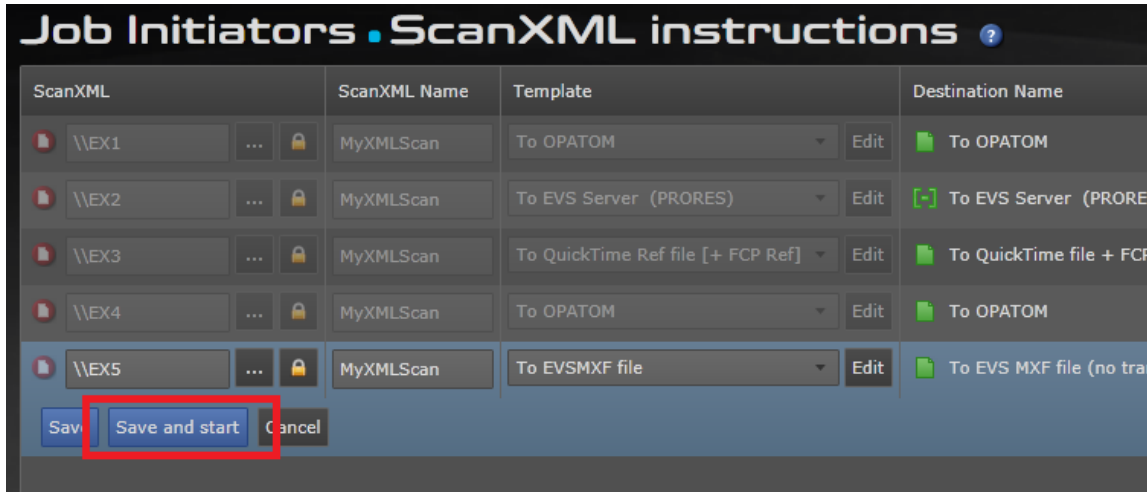


- If the IDs are already defined in the soap job this option will have no effect.
- In XML job V1: The IDs mode can be modified only for the first destination. All the others destinations will be forced to the IDs mode option “Same as first dest”

If you want to use this option with IPDirector or XML Jobs, please contact commonblocks@evs.com

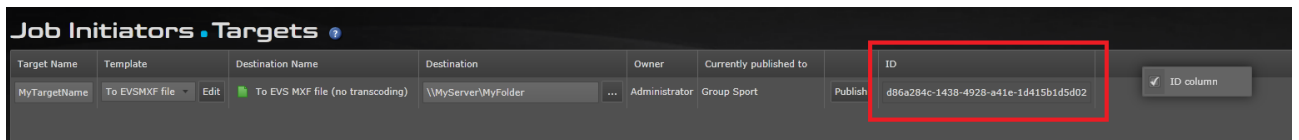
SAVE AND START

It is now possible to directly save and start in one click a ScanFolder or ScanXML



DISPLAY GUID

It is now possible to display the GUID of the SOAP Targets in the Xsquare interface



BUGS CORRECTION SINCE XSQUARE RELEASE 2.01

- #85120 : Popup asking S/N during Xsquare Installation in /SILENT mode
- #84517: no processing device in EVS XML jobs_done with EDL Parser Error status in XTA

GENERAL XSQUARE LIMITATIONS

ASSOCIATION TOOL

- To be able to associate XTAccess to Xsquare: they must be on the same VLAN. If Xsquare and XTAccess are on different VLAN: the Broadcast packets must be routed by the switch between the VLANs
- XTAccess and Xsquare hostname must follow the DNS naming convention and contain only the ASCII letters 'a' through 'z' (in a case-insensitive manner), the digits '0' through '9', and the hyphen ('-')
- The Apple Bonjour protocol (used to discover the XTAccess and Xsquare) must be started before Xsquare and XTAccess

XSQUARE SERVICE MONITORING TOOL

- On Windows 7 64 bits, to be able to use the Xsquare Monitoring tool and restart services: it could be necessary to modify these parameters
Run -> gpedit.msc -> Computer Configuration -> Windows settings -> Security settings -> Local Policies -> Security Options
 - User Account Control : Behavior of the elevation prompt for administrators in Admin Approval Mode : Prompt for credentials -> Elevate without prompting
 - User Account Control : Run all administrators in Admin Approval Mode : Enable -> Disable
 - User Account Control : Switch to the secure desktop when prompting for elevation: Enable -> Disable

XSQUARE JOBS AND TEMPLATES

- The multi-destinations are available for all the jobs except for the Avid Transfer Engine jobs. It is impossible to create jobs to Avid Transfer Engine with more than one destination ;
- It is impossible to create more than one NLE referencing per destination ;
- It is possible to reference up to two destinations to Xedio ;
- The EVS Server MTPC network board must be connected to the Network to use the auto codec detection mechanism ;
- To use the auto codec detection : it is necessary to have XTAccess Xsecure licenses ;

- The auto codec detection will be run every 30 seconds on the network ;
- The compulsory and keep partial parameters are not available for the EDL+Clips job. The EDL+Clips job will always use compulsory = true and keep partial = false. So if the EDL+Clip job is canceled or fails : XTAccess will delete all the files created ;
- The retry of the job is done with the information of the original job. If the user changes the template used in the job: the new template will not be used in the retry job except if Xsquare has rebooted between the original job and the retry.

XSQUARE SCAN XML

- The Scan XML source must be a shared folder on the network (UNC path) and the Scan XML service must have Read/Write access on it ;
- No new features will be added in the XMLJobs v1 protocol.
The new features will only be available via Jobs v2 and/or templates.
- Previously, XTAccess allowed to use the same XML scan folder setting (XML unit) for the job to XT and to Files. Now, with Xsquare, users will have to create two watch folders with two different templates or define no Xsquare template. So the default XML unit of IPD must be correctly configured in Xsquare
- Xsquare will not support anymore the old IPDirectorClipInfos tag in the EVS Metadata.
- It is impossible to access different UNC path from the same computer with different Windows User. The Xsquare computer can access another computer with only one user.
- Due to the total new implementation of the ScanXML service, there might be slight differences of behaviors between Xsquare and XTAccess ScanXML. For example, if a required element is missing in a Job v1 (or its value is incorrect), XTAccess may use default value, while Xsquare may reject the job. If you plan to switch from XTAccess ScanXML to Xsquare ScanXML, we strongly recommend testing your XML Job files to ensure the differences of behaviors are not blocking.
- The tag <Job_Src_Field_Nb> is not supported anymore.
- The <Job_Src_Field_TC> value must represent a timecode less than 24 hours. If it's not the case, please use timecodes with dates (Job_Src_Field_DTC)
- XML jobs of grab are rejected if a template is associated to the scanXml. Grab XML job must be used without template in Xsquare.
- It is recommended not to exceed 40 xml units in Xsquare.

We know that since Xsquare is used in conjunction with IPDirector, there is a tendency to define one xml unit per IPDirector target instead of pointing several targets to the same xml unit. While this might seem like good practice, a high number of xml units will put a lot of stress on both Xsquare and IPDirector. If you really need to define more than 40 xml units, please contact commonblocks@evs.com

XSQUARE SCANFOLDER

- The scan folder source must be a shared folder on the network (UNC Path) and the Scan Folder service must have Read/Write access on it.
- If you want to be sure that the local XTAccess of the source watch folder will execute the job, you will have to create a Removable cluster
- It is impossible to access different UNC path from the same computer with different Windows User. The Xsquare computer can access another computer with only one user.

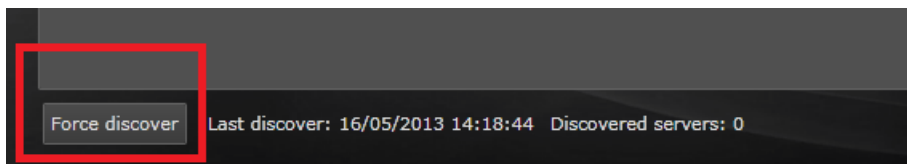
- The move job if the scanfolder job is failed will not work if the source file is still growing

XTACCESS CONFIGURATION THOUGH XSQUARE

- XTGateway will be configured by default to be able to do 4 operations of playlist rendering at the same time. It will be impossible to change this configuration from Xsquare. The modification of the XTGateway configuration must be done manually on each XTGateway in the configuration window.
- The user will still have to install and configure manually the EVS AVID Tools for the integration with the Avid Transfer Manager. Xsquare will not manage the AVID TMclient.ini file.
- The following parameters will not be available in the Xsquare configuration interface. So, if necessary, these parameters will have to be configured manually on each XTAccess (registry keys).
 - Max Log size In MB (Default 2)
 - IP Retry (Default 12)
 - IP Retry timeout (Default 5000)
 - Enable Retry (Default 1)
 - MinFieldsToWriteBeforeRefInCEDB (Default 1000)

GENERAL LIMITATION AND INSTALLATION

- Xsquare could take up to 5 minutes to detect a new EVS server on the network. So we recommend forcing manually Xsquare to discover the EVS servers after each modification (example: EVS Server reboot) on the setup.



- With SQL Express 2005: The Xsquare DB is limited to 4GB. It is not the case on SQL Server;
- The Xsquare installation could take time (20 minutes) and ask for reboot if SQL express and the .NET frameworks are not already installed on the computer.
- The SQL Express installer could ask to close the Xsquare suite setup. In this case you can ignore the error and continue the installation
- If you create several XTAccess with the same ghost: it is necessary to remove this registry key (HKEY_CURRENT_USER\Software\EVS Broadcast Equipment\XTAccess\XTAccessUUID) in the original ghost. This Key is created automatically at the first boot of XTAccess and must be unique.
- The web interface is only compatible with all Internet browsers compatibles with Silverlight except Google chrome on Apple OS
- It is not possible to downgrade Xsquare. The upgrade is supported but not the downgrade. If you want to downgrade: you will have to delete completely the Xsquare DB.

SQL SERVER

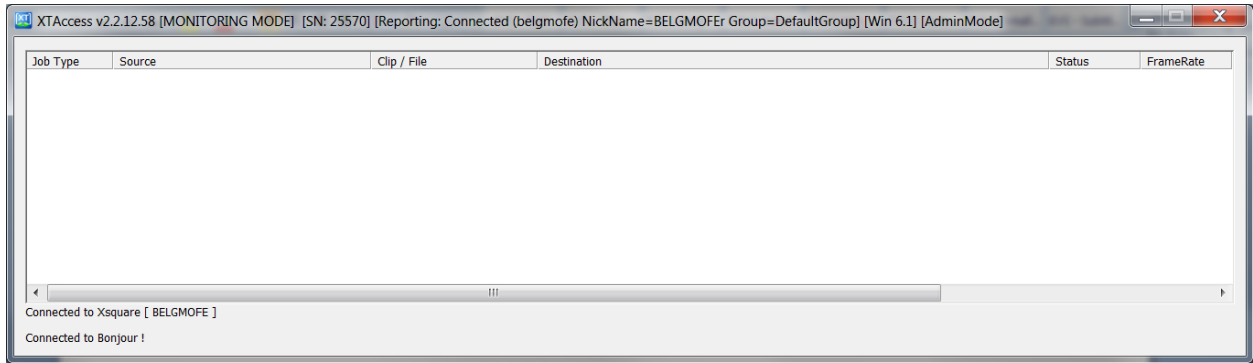
When SQL Server is already installed before Xsquare Suite install, it is possible that it is not well configured (especially when it comes from Visual Studio in dev machines). Some steps may or may not be required.

- **Make sure the Windows service is well configured:** In services.msc, the service "SQL Server (SQLEXPRESS)" or "SQL Server (MSSQLSERVER)" or other instance name should have Startup Type "Automatic" and be Started.
- **Sometimes SQL Server Management studio is not installed.** This is not required but it is very useful for debug/management. TODO : add links to SQL Server Management studio installer (32/64 and 2005/2008R2).
- **SQL Server is not listening on network interfaces**
 - Open Start Menu\Programs\Microsoft SQL Server 2008 R2\SQL Server Configuration Manager
 - Open SQL Server Network Configuration -> Protocols for SQLEXPRESS (or other instance name) -> TCP/IP
 - Make sure Enabled has Yes, Listen All has Yes.
 - In IP Addresses, make sure all required IPs have Active = Yes, Enabled = Yes and IP Adress is right (sometimes it is wrong).
 - You have to restart the service "SQL Server (SQLEXPRESS)" or similar.
- **Make sure Mixed mode is activated (Windows + sa/evs authentication) :** If you have SQL Server Management Studio, go to instance properties -> Security -> SQL Server and Windows Authentication mode then restart SQL Server service. From <http://www.mssqltips.com/sqlservertip/1441/correct-the-sql-server-authentication-mode-in-the-windows-registry/> :
- **Make sure "sa" account is activated**

Note : Xsquare, NC, and Authentication installers may do this step for you if they can connect using Windows Authentication.

 - Open SQL Server Management Studio, connect SQL instance using Windows Authentication.
 - Open <instance>->Security ->Logins -> sa -> Properties.
 - Set "evs" in password and confirm password.
 - In Status, make sure Permission is "Grant" and Login is "Enabled".
 - After pressing OK, you have to restart SQL Server service.

NEW FEATURES OF XTACCESS 2.02



XDCAM HD WORKFLOW

BACKUP

- **Source XT** : clip or train
- **Destination File Formats** :
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits). In this case it is recommended to use EVS Server in 8 audio channels.
 - QuickTime Movies with up to 16 audios (not QuickTime Reference).
 - MXF OPAAtom Avid with up to 16 audios (only for Avid integration, no restore available).
- **Features** :
 - Growing or closed clip
 - Source choice :
 - Automatic :
 - XDCAM HD by default.
 - If XDCAM HD not available, Intra is selected
 - Choice by application : Intra or XDCAM

RESTORE

- **Source File Formats**
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits).
 - MXF OP1a SMPTE (8 audios 16 bits).
 - MXF OP1a Omneon.
 - QuickTime Movies (not QuickTime Reference).
 - MXF OPAAtom Avid is not supported.
- **Destination clip on XT**

- XDCAM HD Clip if XT is in XDCAM Only.
- Intra clip only (via transcoding with auto codec detection) if XT is on Intra + XDCAM.
- **Features**
 - Open while source file creation capability with MXF OP1a RDD9

XDCAM HD FILES REWRAP

- **Source File Formats :**
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - MXF OP1a Omneon
 - QuickTime Movies (not QuickTime Reference)
- **Destination File Formats :**
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - QuickTime Movies (not QuickTime Reference)
 - MXF OPAAtom Avid (only for Avid integration)
- **Features :**
 - Transcoding capability (ex: XDCAM HD to DNxHD).
 - Open while source file creation capability :
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)

EDL RENDER WITH XDCAM SOURCE

- **Source XT :**
 - Source can be Intra or XDCAM HD depending on the source selection.
- **Source File Formats :**
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - QuickTime Movies
- **Destination XT clip :**
 - Intra clip only (via transcoding with auto codec detection)
- **Destination File Formats :**
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - QuickTime Movies (not QuickTime Reference)
 - MXF OPAAtom Avid (only for Avid integration)
- **Features :**
 - Growing or closed source clip
 - Open while source file creation capability :
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - **Full Transcoding only (no smart rendering)**
 - **This means all consolidations need a full transcoding even without any effect or the same codec XDCAM as source or destination.**

EDL EXPORT

- **Source XT :**

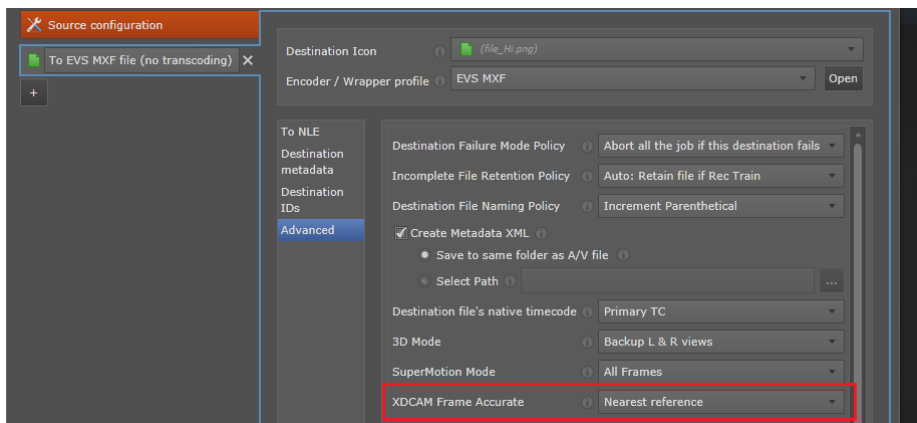
O. Fettweis	13-janv.-14
File name Xsquare Suite_ReleaseNote_v2.02.51.docx	Page 24 of 36

- **Source** : clip or train
- **Source File Formats** :
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - QuickTime Movies
- **Destination File Formats** :
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - QuickTime Movies (not QuickTime Reference)
 - MXF OPAtom Avid (only for Avid integration)
- **Features** :
 - Growing or closed source clip
 - Open while source file creation capability :
 - MXF OP1a RDD9 (Sony format with 8 audios 24 bits)
 - Referencing :
 - EDL archive
 - Post Production (Avid, FCP7, Adobe PPro) – see Post Production document
 - Sequence EDL (EVS EDL, AAF, XML) generated at the end of the export process

XDCAM HD FRAME ACCURATE

This option allows you to configure how XTAcess will handle the ProtectIN/ProtectOUT limits in case of source XDCAM.

- **Nearest reference (default value)**: Same frames before and/or after the ProtectIN/ProtectOUT might be processed depending on the XDCAM GOP structure in order to avoid transcoding GOPs.
- **Accurate**: The destination(s) will have exactly the right ProtectIN/ProtectOUT point. The source XDCAM media will be completely transcoded (this is useful for the 3rd party destination like web destination)



Remarks : This option is automatically the same for all the destinations.

XDCAM HD WOKFLOW LIMITATIONS

- Features not supported in XDCAM:
 - SLSM, HyperMotion, 1080p, 3D
 - Smart rendering XDCAM without transcoding (PL/TL render)
 - This means all consolidations need a full transcoding even without any effect or the same codec XDCAM as source or destination.
- XDCAM files or clips not frame accurate (see XDCAM HD FRAME ACCURATE section) which start at 00:00:00:00 cannot be used in EDL
- It is not possible to define the filename for the XDCAM Avid MXF OPATOM file
- It is impossible to update a backup of train in XDCAM Avid MXF OPATOM file in these situations
 - If the initial duration was < 2h and the update > 2h
 - If the initial duration was >2h and the update > that the initial duration

	No update job	With update job < 2 h	With update job > 2 h
Initial duration < 2h	OK	OK	NOK
Initial duration > 2h	OK	OK	OK if update job < initial duration NOK if update job > initial duration

- XTAccess uses the Avid AMT SDK to write H264 and XDCAM OPATOM files. There are two Avid windows registry keys which can be modified to improve the writing performance. By default XTAccess initializes these registry keys with these values but it is possible to modify them depends on the topology project.

On windows 64 bits:

HKEY_LOCAL_MACHINE\SOFTWAREWow6432Node\Avid Technology\GenericHelper\MXF\

- "BufferSize"="524288"
- "ReadBufferSize"="16777216"

On windows 32 bits:

HKEY_LOCAL_MACHINE\SOFTWARE\Avid Technology\GenericHelper\MXF

- "BufferSize"="524288"
- "ReadBufferSize"="16777216"

Valid values are 512 kB, 1 MB, 2 MB, 4 MB, 8 MB or 16 MB.

1080P VIDEO CODECS

SUPPORTED VIDEO CODECS

- AVC-Intra Class 100 (220Mbps@1080p50/59.94).
- Avid DNxHD:
 - Avid DNxHD 220x (365Mbps@1080p50 / 440Mbps@1080p59.94) 10bit video depth.
 - Avid DNxHD 220 (365Mbps@1080p50 / 440Mbps@1080p59.94) 8bit video depth.
 - Avid DNxHD 145 (240Mbps@1080p50 / 290Mbps@1080p59.94) 8bit video depth.

BACKUP TO FILE

- **Source clip on XT:**
 - AVC Intra Class 100.
 - Avid DNxHD.
- **Destination file formats:**
 - EVS MXF
 - MXF OP1a.
 - QT Movie.
 - QT Reference.

RESTORE TO EVS SERVER

- **Source file formats:**
 - EVS MXF
 - MXF OP1a.
 - QT Movie.
 - QT Reference.
- **Destination clip on XT:**
 - AVC Intra Class 100.
 - Avid DNxHD.
- **Open while source file creation capability:**
 - MXF OP1a.
 - QT Reference.

EDL RENDER (PLR) / EDL EXPORT (PLE)

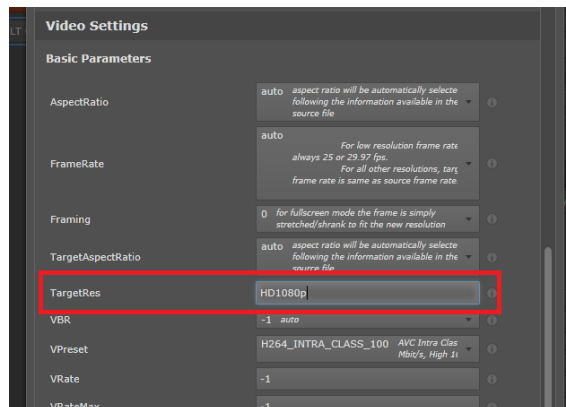
- **Source clip on XT:**
 - AVC Intra Class 100.
 - Avid DNxHD.
- **Source file formats:**
 - AVC Intra Class 100.
 - EVS MXF
 - MXF OP1a.
 - QT Movie.
 - QT Reference.
 - Avid DNxHD.
 - EVS MXF
 - MXF OP1a.
 - QT Movie.
 - QT Reference.
- **Destination clip on XT:**
 - AVC Intra Class 100.
 - Avid DNxHD.

- **Destination file formats:**
 - EVS MXF
 - MXF OP1a.
 - QT Movie.
 - QT Reference.

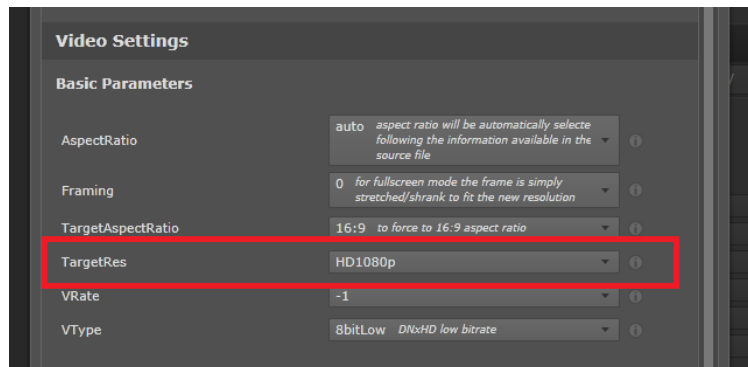
FEATURES

- Transcode AVC-Intra 1080p <-> Avid DNxHD 1080p allowed.
- Transcode 1080i <-> 1080p allowed. The Target resolution must be defined in the encoder profile

AVC-INTRA



DNxHD



- Transcode 720P <-> 1080p allowed.
- It is possible to generate LoRes (H.264 or MPEG-1 EVS Proxy) from 1080p content.
- Partial Backup/Restore.
- XTAccess doesn't support the Backup/Restore/Rewrap in ProRes 1080P
- Interoperability with Adobe Premiere (Avid MediaComposer and FinalCutPro 1080P workflows are not available for the moment)

MISCELLANEOUS

- Integration of MainConcept SDK 9.7.
- Support Avid Interplay 2.7 and Interplay 3.0 through the Webservices. Please refer to the EVS Avid Tools release note for the Transfer Manager integration workflow.
- Support XDCAM HD MXF OP1a files with 8 audios in 16 bit.

BUGS CORRECTION SINCE XTACCESS 2.01

- #86308: QT files created by XTA 2.1 cannot be played in Quicktime Player X
- #86778: Audio corrupted when processing H264 MP4 files in Xsquare 2.1 /XTA 2.1
- #85115: Encoder DLL Error while trying to render Cut/Mix effect from IPD To Avid
- #85176: Decoder exception while trying to grab on a clip in MJPEG SD PAL
- #84702: Dump XTA when transcoding XDCAM 422 to XDCAM 422 OPAAtom

GENERAL XTACCESS LIMITATIONS

OPERATING SYSTEM

- It is necessary to set the UAC to the lower level to use XTAccess on Windows 7
- We requirement to deactivate the "Areo" mode on windows 7 and Server 2008
- XTAccess is not compatible with Windows Server 2003 64 bits

NLE SETTINGS

- General :
 - Export PL/TL: EVS recommends opening the FCP EDL (XML) or Avid EDL (AAF) only when all the child backups are done. Otherwise the NLE (Apple FCP or Avid Media Composer) will not update the growing media in their timelines.
 - The EVS metadata present in the EDL exported from a PL/TL are the metadata of the original clip and not the metadata of the backupped file which could be different (new Varld, new duration, new In point, etc)
- Adobe NLE :
 - The XMP metadata file doesn't support complex XML structure. So some EVS metadata are not available in the XMP metadata file
- FCP NLE :
 - The delay between the EVS XT server Live and first picture available in FinalCutPro 7 is +- 15 seconds (tests done in DVCPRO HD NTSC and IMX NTSC)
 - XTAccess supports only FCP 7 with the version 5 of the FCP XML.
 - FCP X is not supported.
 - The Matrix of metadata for FCP is only working for the clips metadata, not for the EDL.
- Avid NLE :
 - XTAccess is not anymore compatible with Avid TM version before the version 2.5
 - It is impossible to update a backup of train in Avid XDCAM OPATOM and Avid H264 proxy in these situations (no problem with the others codecs/wrappers) :
 - If the initial duration was < 2h and the update > 2h
 - If the initial duration was >2h and the update > that the initial duration
 - It is impossible to define the filename for the Avid XDCAM OPATOM and Avid H264 proxy files. The filename will be automatically an Avid GUID.
 - XTAccess uses the Avid AMT SDK to write H264 and XDCAM OPATOM files. There are two Avid windows registry keys which can be modified to improve the writing performance. By default XTAccess initializes theses registry keys with these values but it is possible to modify them depends on the topology project.

On windows 64 bits:

HKEY_LOCAL_MACHINE\SOFTWAREWow6432Node\Avid
Technology\GenericHelper\MXF\

- "BufferSize"="524288"
- "ReadBufferSize"="16777216"

On windows 32 bits:

HKEY_LOCAL_MACHINE\SOFTWARE\Avid Technology\GenericHelper\MXF

- "BufferSize"="524288"
- "ReadBufferSize"="16777216"

Valid values are 512 kB, 1 MB, 2 MB, 4 MB, 8 MB or 16 MB.

- The delay between the EVS XT server Live and first picture available in MediaComposer is +- 20 seconds for the video and +- 30 seconds for the audio (tests done in DVCPRO HD NTSC and IMX NTSC)
- When browsing a growing EWC media, sometimes Media Composer displays "FILE_OTHER" instead of the video. The file must be refreshed by double clicking on the clip in Media Composer bin.
- Message "PMM_INSUFFICIENT_MEDIA" in Media Composer when a media is updated and stretched: the duration is longer than the original one. It is not possible to increase the duration of a media sent to Avid. Note: reducing the duration of the media is OK (see limitation below anyway).
- When updating the duration of the media in Interplay with a shorter duration, the new short out is correctly updated but you need to delete the clip from the Media Composer bin and re-import the media from Interplay in order to place the short out anchor in the right location in the viewer. Limitation of Avid Media Composer
- #35613: It is only possible to use the <General_Infos> and <Clips_Infos> XML tags in the Avid Tape.

TRANSCODING

- XTAccess doesn't support job which starts with a bottom field. In the job the TC In must always be a Top field
- We recommend doing maximum two transcodings in AVC-intra at the same time otherwise memory overflow could append. Please, contact EVS support to limit the Max Transcoding Job
- #23834: it is necessary to configure the target resolution to 720P to do rendering of playlist in progressive mode.
- #35675: IMX 30, IMX 40 and IMX 50 are considered as different codec for XTAccess. So the smartrendering is not working between these IMX Bitrates.

BACKUP

- Growing clips without out point are not supported by XTAccess.

- If the backup paths are not exactly the same (for example: C:\Video\Toto.mxf is different than \\Xstore60170\Video\Toto.mxf) the XTAcess auto incrementation “(1) (2) (3) etc ..” of the filename is not working. We recommend to use %GUID in the file name format string in IPD to be sure that there will never be two times the same file created simultaneously by XTAcess
- #31464: XTAcess doesn't create FCP.XML file in case of backup of 3D clips
- XTAcess doesn't reference OPAAtom files in Avid Interplay in case of backup of 3D clips
- # 37057: %TCINDATE and %TCOUTDATE FileNameFormatString option don't work for the rewrap jobs.

RENDERING

- We recommend doing a maximum of two renderings of playlist in AVC-Intra 100 at the same time otherwise memory overflow could happen.
- #36164: XTAcess can use a lot of memory to decode QT files due to the QT structure
- #38861: XTAcess will not render the audio of one element SLSM “All Frames” in an EDL
- #39025: The EDL rendering in DNxHD with a no video element as first element is not working

MAC PRO OS 10.9 (MAVERICKS)

- Issues were reported while transferring media to/from Mac OS X Mavericks (typically, “Encoder DLL Error”). This version of Mac OS X supports the SMB2 file transfer protocol that was introduced by Microsoft in Windows Vista in 2006, and later improved on Windows 7. It was reported that Apple SMB2 support was not fully compliant with the Microsoft implementation and we can reasonably expect Apple patches to solve this situation.
- In the meantime, it's it strongly recommended to disable SMB2 on the client machine, and force using SMB by running the following commands and then restarting Windows:

```
sc.exe config lanmanworkstation depend= bowser/mrxsmb10/lsi  
sc.exe config mrxsmb20 start= disabled
```

MISCELLANEOUS

- Unicode & ASCII extended: Transfer of Unicode metadata to Avid Transfer Manager is not supported.
- In case of backup of trains, <XT_Creation_Time> tags are based on XTAcess workstation date and time, not on XT date and time.
- It is not allowed to open, edit or process a file stored in an XTAcess Scan folder. XTAcess will not be able to access the file and could generate errors.

- Backup File Name Format String: XTAccess is not able to handle special characters like the “\ / : * ? , ; » < > |” in a string.
- Progress current TC in IPD is not available for the Copy XT to XT and with the Avid transfer. The progress bar is available.
- In Hi-Lo mode: you need to use %VCodec or %GUID to do the difference between the two backedup clips and XML
- %K1,%K2, etc take the XT keyword with maximum 12 characters and not the IPD Keyword with 64 characters
- If the backup / rewrap fails because the target becomes unreachable (i.e. network failure), the incomplete a/v file CANNOT be deleted.

INTERNATIONAL CHARACTER SUPPORT (ICS)

EVS METADATA

Xsquare manages all the EVS Metadata sources in UTF-8. The EVS metadata defined in the XML jobs and EVS.XML metadata file must be encoded in UTF8 (this is the case for the EVS client like IPDirector). UTF8 is a variable-width encoding that can represent every character in the Unicode character set (included Chinese, Russian, etc). So all the EVS metadata can be defined in different language apart from the EVS Umid which must be defined in ASCII

These input data are then translated in different encoding format depends on the destination.

Here is a list of the main Xsquare/XTAccess destinations and their supported encoding format

Destination	Encoding format
AVID Interplay with the Webservices	UTF-8
Avid AAF	UTF-16
FCP XML	UTF-8
Adobe XMP	UTF-8
EVS.XML and EDL	UTF-8

- If the destination uses the same encoding format that EVS: there is not translation
- If the destination uses a different encoding format: XTAccess will translate the metadata in the destination format
- The client application which read the destination must be able to display correctly the UTF-8 character
- XTAccess supports only the common simplified Chinese character. The extended Chinese characters could not be supported. Anyway extended Chinese character are not common and used in the computer world

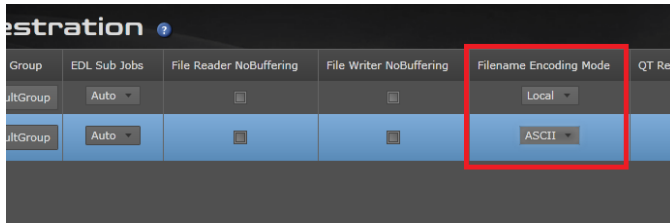
FILENAME

READ

XTAccess can read (as source file in a job or as source file in a scanfolder) all the files which are encoded in the local code page of Windows.

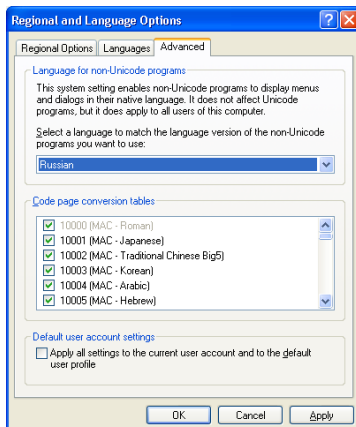
WRITE

XAccess can write files with filename in ASCII or in the same language than the local windows codepage. This option is available inside the Xsquare Configuration



Local Mode (default value)

If you select Local as Filename Encoding Mode: XAccess will only use the characters available in the local Windows code page.



So the information from the job which is in UTF8 will be translated in the local Windows code Page to build correctly the filename.

Example

If the media source is called “été” in French and the filenameformatstring is defined as %name: XAccess will name the file été.mxf only if the Windows Local page is in French.

Limitations

- Some wrappers can be written only in ASCII like the Avid OPAtom MXF and QT ref format.
- These character are not allowed by Windows and so will be replace by space: `\.*?"/<>`

- It is necessary to have the same local code page on all the EVS computer

Ascii Mode

If you select ASCII as Filename Encoding Mode: XTAcess will only use the 128 characters available in the ASCII format. The ascii format is mainly based on the English Alphabet.

If after processing of the job: the file must contain character which are not present in the ASCII standard: XTAcess will name the file: UNICODE

Example:

If the media source is called "été" and the FileNameFormatString is defined as %name: XTAcess will name the file UNICODE.mxf