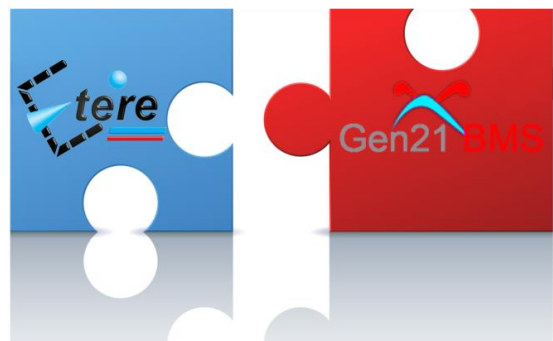


Etere

a consistent system

GEN21:

A web service integration
for a strategic
communication flow



June 2014

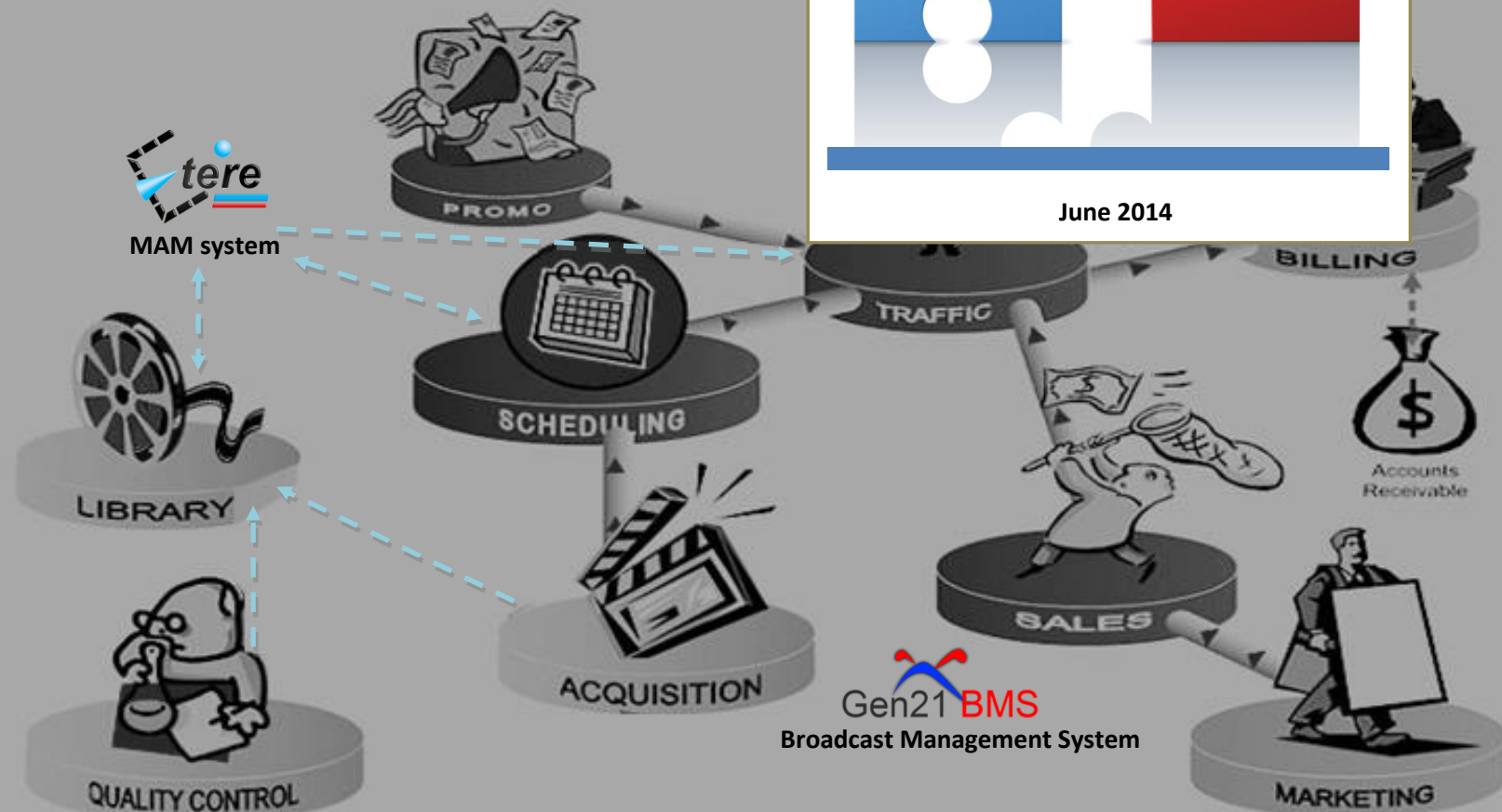


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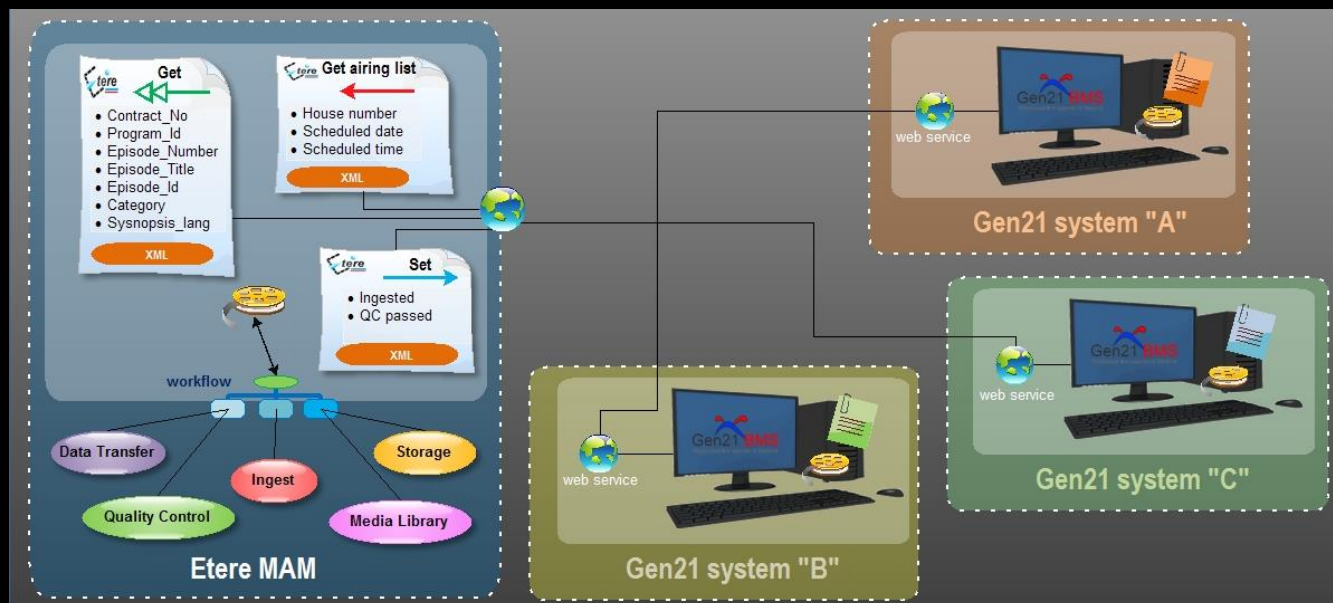
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▼ 1. INTRODUCTION

Gen21 is an established suite of software packages that streamline television and other media operations by providing a wide range of features and functionality comprising Broadcast Management System, Content Management System, Subscriber Management system, Business Intelligence, amongst others.

The approach of **Etere** to integrate major solutions widely used in the broadcast market forms part of the company's philosophy to facilitate and also automate the workflow of its customers; **Etere** integration capabilities make overall systems more efficient and functional.

Etere has successfully integrated **Gen21** to provide users with an automated operations environment able to streamline the overall broadcast system in which MAM and Scheduling systems interact. As usual, Etere has included Gen21 integration on its workflow management to allow users to freely create custom workflows able to retrieve and also send key assets information between Etere and Gen21 systems, just as shown below:



This paper provides an insight into the smooth integration between Etere and Gen21, putting a focus on the features that will make of this capability a key step for Gen21 users to achieve a consistent level of productivity and efficiency.

▼ 2. DESCRIPTION

The **Etere's** capability to interface third-party systems has been extended to **Gen21**; the integration is based on the methods available in the web service provided by **Gen21** for communicating with other solutions. Etere has implemented a series of workflow actions able to interact with **Gen21** to get and set assets data based on the methods supported by the Gen21 web services.

This key integration will allow users that use **Etere** (e.g. to manage their asset media) and **Gen21** (e.g. to schedule said assets in on-air playlists) to use both systems under a rock-solid integrated framework where all important data is shared and synchronized by automatic workflows. The main characteristics of the integration have been highlighted in the list below:

Key features

- ✓ **Workflow-based** management for an easy and automated integration
- ✓ **Read** data from Gen21 including assets info such as title, duration, type and expiry date.
- ✓ **Write** data to Gen21 on assets properties including ingested status and broadcast allowance.
- ✓ **Schedule** and update assets on the Etere airing playlists according to Gen21 changes.

Matching between assets of Etere and Gen21 systems is performed through the Etere “**code**” and the Gen21 “**house number**”, thus establishing a unique correspondence between both systems that will allow Etere to perform all read and write operations with the maximum of accuracy and reliability.

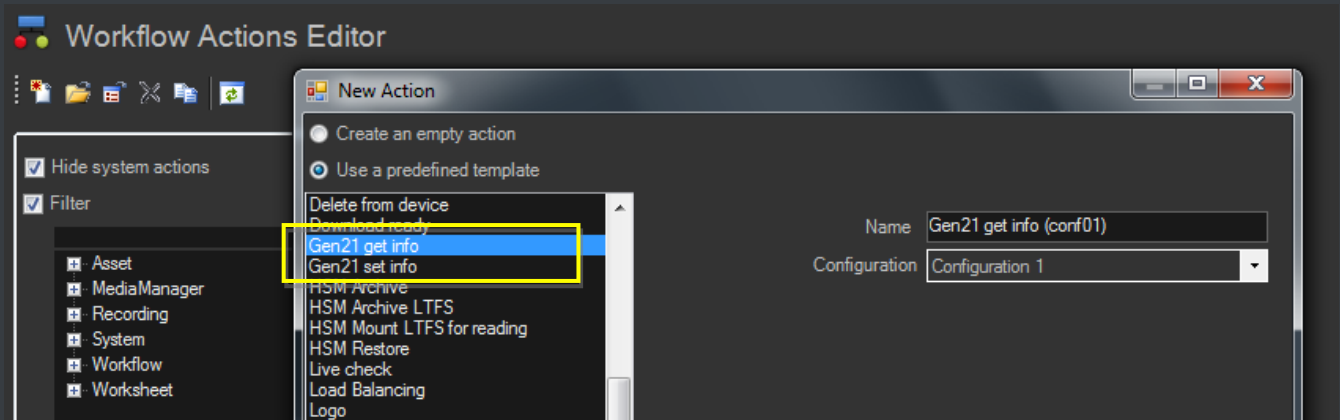
The integration of Etere with Gen21 systems is based on the methods supported by **Gen21 Inventory Interface Web Services**; said service makes available the following methods for integration:

GEN21 supported methods	
GetInventoryInfo	Retrieve asset's data from Gen21 including type, duration, SOM, EOM, expiry date, etc.
InventoryUpdateStatus	Update asset's ingested status and quality control result on Gen21.
InventoryUpdateLocation	Update asset's location on Gen21 including its storage path.
InventoryUpdateSegmentation	Update asset's EDL on Gen21 including SOM and EOM.
GetInventoryForAiring	Retrieve scheduled assets from Gen21 including dates, times, etc.
GetNewInventory	Retrieve assets from Gen21 including types and house number.

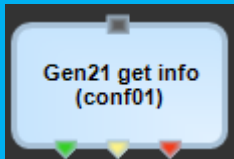
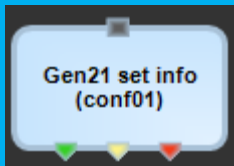
In future, more fields will be added to the get and set functions to increase the integration capabilities with Gen 21 systems.

▼ 2.1. Workflow management

Etere has made available two templates for creating an unlimited number of workflow actions to get and set information from/to a remote Gen21 system:



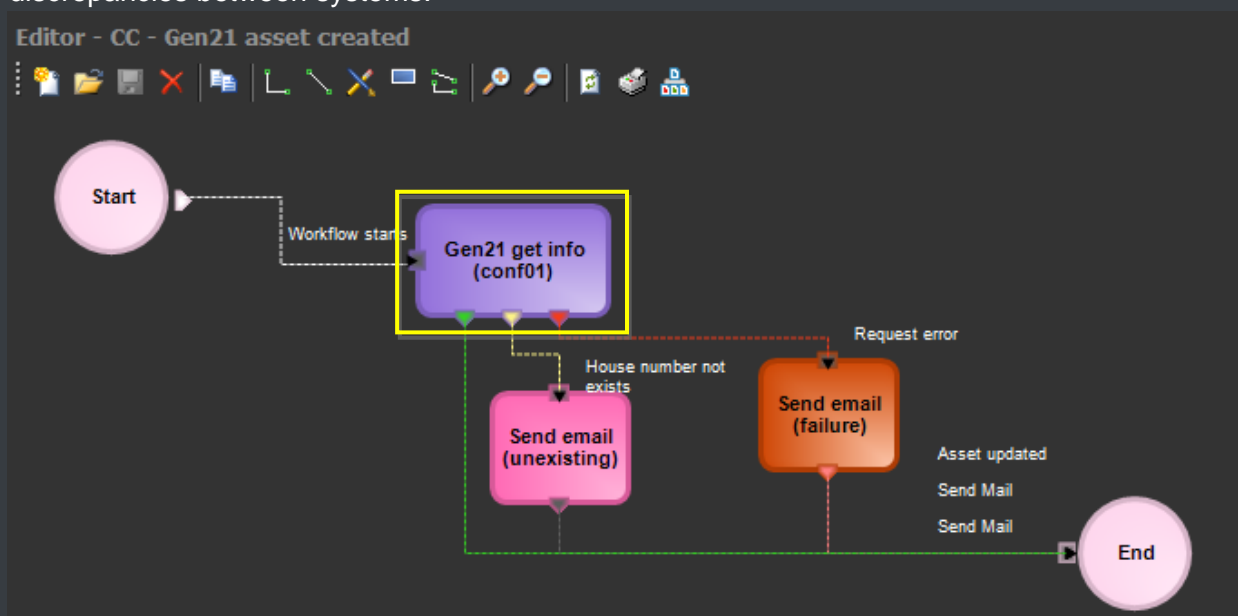
The “**Gen21 get info**” and “**Gen21 set info**” templates will allow generating the following workflow actions, specific for different Gen21 systems:

Workflow actions															
Action	Description	Outputs													
<div>Gen21 Get Info</div> <div></div>	Updates the SMPTE metadata managed by Etere for Gen21 assets , reading from the Gen21 system the information below:														
	<table><tr><td>Contract_No</td></tr><tr><td>Program_Id</td></tr><tr><td>Episode_Number</td></tr><tr><td>Episode_Title</td></tr><tr><td>Episode_Id</td></tr><tr><td>Category</td></tr><tr><td>Synopsis_lang</td></tr></table>	Contract_No	Program_Id	Episode_Number	Episode_Title	Episode_Id	Category	Synopsis_lang	<table><tr><td>Updated</td><td>Asset information has been successfully updated.</td></tr><tr><td>Not exist</td><td>The asset was not found in the Gen21 system.</td></tr><tr><td>Error</td><td>Unable to complete, probably due to a connection error.</td></tr></table>	Updated	Asset information has been successfully updated.	Not exist	The asset was not found in the Gen21 system.	Error	Unable to complete, probably due to a connection error.
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	Program_Id														
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Episode_Id															
Category															
Synopsis_lang															
Updated	Asset information has been successfully updated.														
Not exist	The asset was not found in the Gen21 system.														
Error	Unable to complete, probably due to a connection error.														
<div>Gen21 Set Info</div> <div></div>	Updates the Gen21 system with information read from the Etere system including the flags below:														
	<table><tr><td>Ingested</td></tr><tr><td>Ok to broadcast (i.e. QC Passed)</td></tr></table>	Ingested	Ok to broadcast (i.e. QC Passed)	<table><tr><td>Updated</td><td>Asset information has been successfully updated.</td></tr><tr><td>Not exist</td><td>The asset was not found in the Gen21 system.</td></tr><tr><td>Error</td><td>Unable to complete, probably due to a connection error.</td></tr></table>	Updated	Asset information has been successfully updated.	Not exist	The asset was not found in the Gen21 system.	Error	Unable to complete, probably due to a connection error.					
	Ingested														
	Ok to broadcast (i.e. QC Passed)														
Updated	Asset information has been successfully updated.														
Not exist	The asset was not found in the Gen21 system.														
Error	Unable to complete, probably due to a connection error.														

▼ 2.2. Automatic updates

Gen 21 set and **Gen21 get** actions can be freely and easily included in **workflows** to, for example, automatically extend performed changes to **integrated Gen21 systems** with the maximum of reliability achieved only through the use of **Etere workflows**. Etere supports defining **custom workflows** to be automatically launched when specific functions are executed:

- **Asset is created:** Every time an asset is created in Etere, a workflow will automatically **GET** its data from the **Gen21** integrated system, thus avoiding wasteful insertions and data discrepancies between systems:



As shown in the figure below, Etere allows setting workflows to be launched, either manually or automatically, when assets of a certain type are created:

Workflow designer

Editor - CC - Gen21 asset created

Workflow status

- ☒ Automatic start
- ☒ Online
- ☒ Rule assigned

Action filter

☐ Expand all

Action list

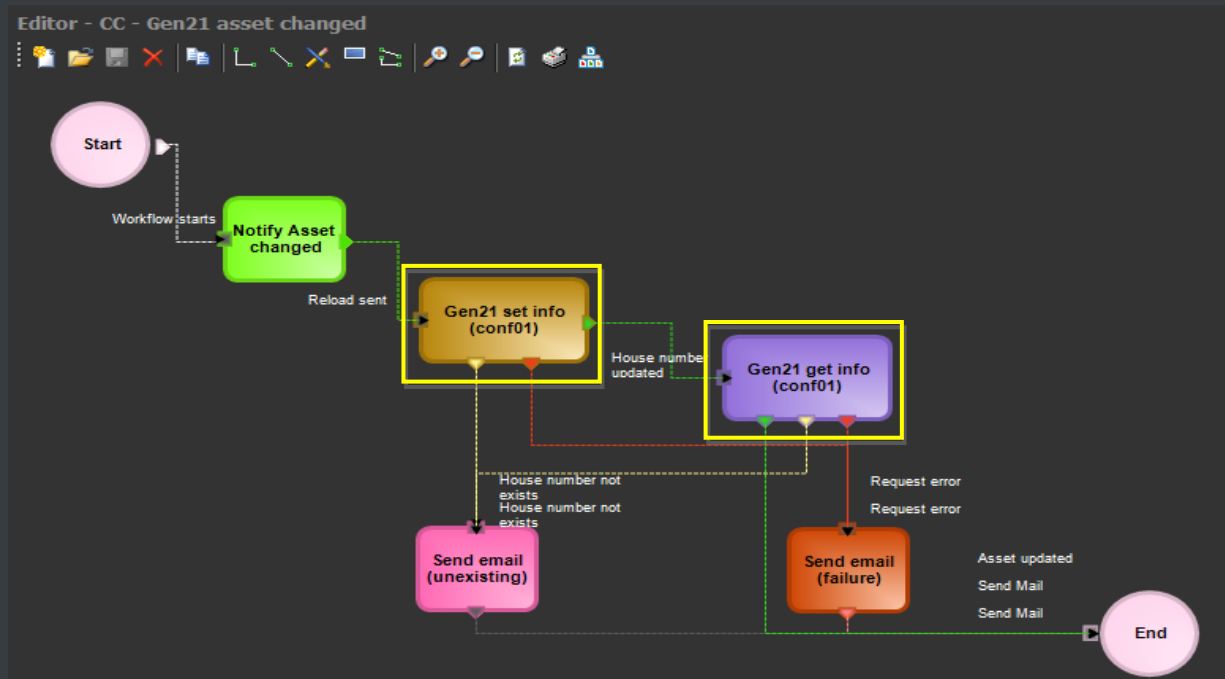
- ☒ Asset
- ☒ MediaManager

Workflow asset rule

Options: ☒ Only selected ☐ All without selected ☐ View system types

Code	Description
<input checked="" type="checkbox"/> ANIM	Audience shows
<input type="checkbox"/> TRCK	Audio Tracks
<input checked="" type="checkbox"/> XPRO	Cross-station promotion
<input checked="" type="checkbox"/> NEWS	Current events
<input checked="" type="checkbox"/> DOCU	Documentary

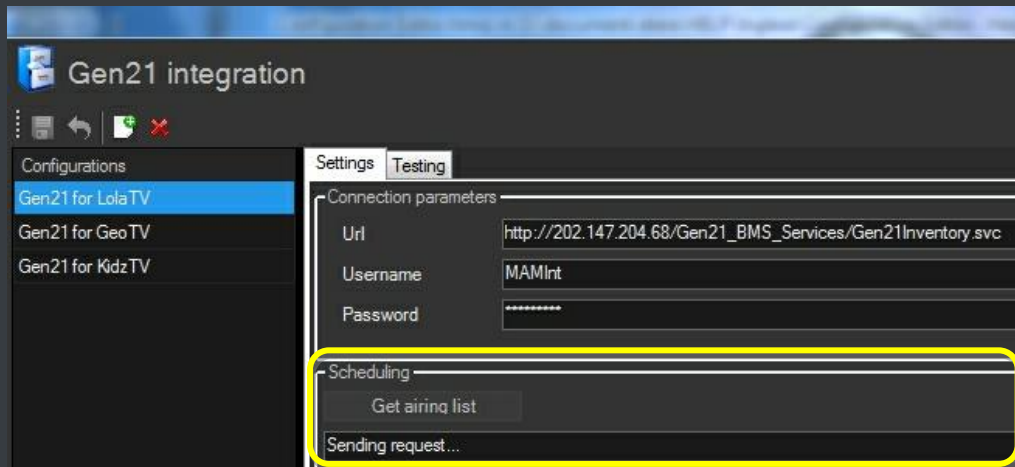
- **Asset is modified:** Every time an asset is modified in Etere (e.g. a new media is ingested, a metadata field is compiled, its broadcast status is changed, etc.) a workflow will automatically **SET** the up-to-date information into the **Gen21** integrated system, performing also a **GET** function to update the Etere system to keep both systems aligned:



Etere allows setting workflows to complement specific operations such as the modification of an asset; use a custom workflow to be automatically launched when any asset is modified:

Default workflows			
Operation	Workflow	*All stations	*If workflow is running
After a streaming ingest	CC - Audio and Logo setup		*Ask for confirmation
After a Tapeless upload	CC - WebRtpOrganize		*Ask for confirmation
After a video file import	CC - QualitySet (Manual)	▣	*Force workflow reset
After an Etereweb upload	CC - WebRtpOrganize	▣	*Ask for confirmation
After an ingest operation	MM - XCOD MXF to WMV		*Ask for confirmation
Asset is modified	CC - Gen21 asset changed	▣	*Operation allowed
Conforming	MM - CONFORMING	▣	*Operation allowed
Multiplatform ingest	CC - Multiplatform ingest		

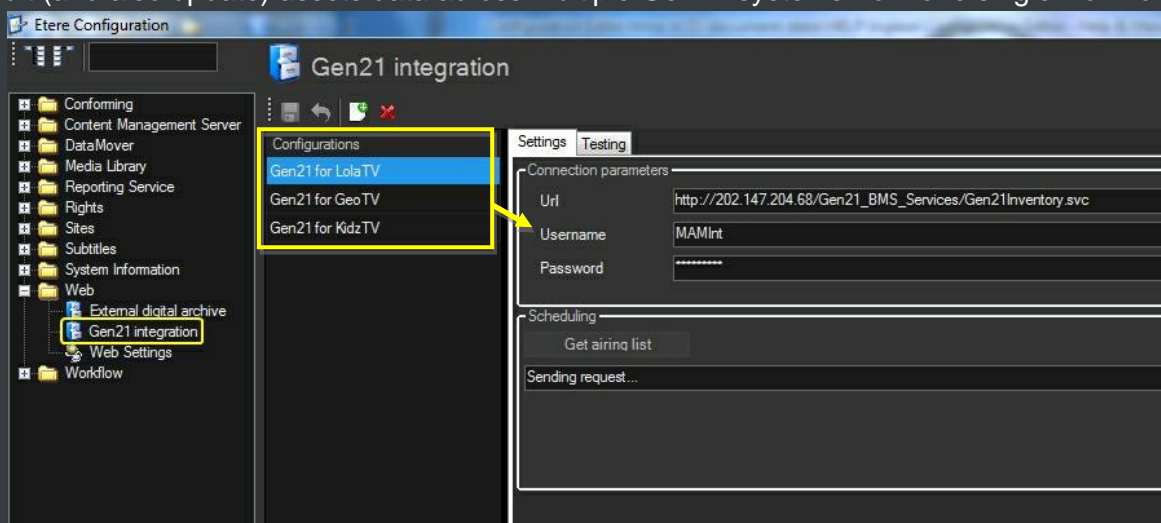
- **Asset is scheduled:** An SQL job automatically reads (e.g. once a day at 02:00:00) the assets scheduled in **Gen21 airing lists** for the current station (e.g. channel 01), inserting all found performances in Etere playlists, this, following the following criteria:



- ✓ Assets are inserted into a **special scheduling level** rather than in the main one
- ✓ Only assets existing in the Etere system are inserted in playlists
- ✓ Existing asset performances are removed before the insertion
- ✓ Assets are inserted in playlists starting at the midnight (00:00:00)

▼ 2.3. Multiple systems

Etere allows configuring an unlimited number of **Gen21** web services, thus making it possible to consult (and also update) assets data across multiple Gen21 systems from one single workflow:



The configuration section allows specifying, for each system, the access parameters (URL, username and password) required for connecting and interacting with **Gen21 systems**.

▼ 2.4. Automatic import

Besides the workflow integration, Etere already has the ability to automatically get information from **Gen21 systems** through the following **import functions**:

Import	Description						
<div><div>IMPORT\CUSTOM\GEN21XML</div><div><div>ImportParametersErrors</div><div><div><div><div><div><input type="checkbox"/> Always update LIVE</div><div><input type="checkbox"/> Delete events not present in the file</div><div><input type="checkbox"/> Assign same scheduled time for adjacent types</div><div><input checked="" type="checkbox"/> Import the actual duration if the asset is ingested</div><div><input checked="" type="checkbox"/> Always update the asset</div><div><input type="checkbox"/> Import events queueing them</div><div><input type="checkbox"/> Send notification to EtAlign and finish the import</div><div><input type="checkbox"/> Ignore ReconcileKey</div></div><div>Import on daily scheduling</div><div>Minutes of shift60</div></div><div>Import into the level 701, if within 'n' hours before the On-Air</div><div>0Hours (0=do not manage)</div><div>Import filename</div><div>GEOyyyyymmdd_HHMMSS.xml</div><div>It is possible to define the first characters of the file</div><div>Save Parameters</div></div><div>0%</div></div></div></div>	<p>Read an XML file to retrieve information related to assets scheduled on playlists coming from Gen21 systems.</p> <p>This function updates the following assets properties:</p> <table><tr><td>Duration</td></tr><tr><td>SOM</td></tr><tr><td>EOM</td></tr><tr><td>Type</td></tr><tr><td>Description</td></tr><tr><td>EDL</td></tr></table>	Duration	SOM	EOM	Type	Description	EDL
Duration							
SOM							
EOM							
Type							
Description							
EDL							
<div><div>IMPORT\CUSTOM\GEN21INGESTLISTXML</div><div><div>ImportErrors</div><div><div>Parameters</div><div><div>Path to create temporary XML files from WebService</div><div>D:\MyStorage\My FTP Server\Path for import\Scheduling\GEN21\</div></div><div><div>Gen21 integration settings</div><div>4 - Gen21 for GeoTV</div><div>WF to launch for new assets</div><div>150 - Gen21 asset created</div></div><div><div>Level in which to import</div><div>Real schedule</div><div>Save Parameters</div></div><div>Import</div></div><div>0%</div></div></div>	<p>Establishes a connection with the Gen21 web service and retrieve all information related to the events scheduled on playlists but not yet ingested.</p> <p>This function allows importing assets into different levels and launching workflows for imported assets.</p>						

Import functions support updating different **asset properties** including:

METADATA DICTIONARY	Metadata	Description
IDENTIFIERS & LOCATORS	Contract_No	Number of the contract under which the asset is managed
ADMINISTRATION	Program_Id	ID of the asset in the Gen21 system
INTERPRETIVE	Episode_Number	Number of the episode
PARAMETRIC	Episode_Title	Title of the episode
PROCESS	Episode_Id	ID of the episode
RELATIONAL	Category	Category of the episode
SPATIO-TEMPORAL	Synopsis_lang	Synopsis of the episode
USER ORGANISATION REGIS		
USER ORGANISATION REGIS		
EXPERIMENTAL METADATA		
ETERE		
GEN21		
Contract_No		
Program_Id		
Episode_Number		
Episode_Title		
Episode_ID		
Category		
Synopsis_lang		
LOCAL		
WORLDWIDE		

▼ 2.5. Easy testing

A dedicated "**Testing**" section allows users to quickly check the **working status** of the functions integrated by Etere, Gen21 supported functions tests includes:

Settings

Testing

URL check

CONNECTING...

House No

23154

Ingest

QC pass

Channel

GetInventoryInfo

InventoryUpdateStatus

InventoryUpdateSegmentatio

GetInventoryForAiring

Function	Description
[GetInventoryInfo]	Return content information of the asset matching the House No. Notice that one media/house number might have multiple media content.
[InventoryUpdateStatus]	Update the Ingest and QC Pass status of the asset
[InventoryUpdateSegmentation]	Update the EDL marks of an asset
[GetInventoryForAiring]	Returns the scheduling status of the asset on a certain channel

▼ 3. KEY BENEFITS

The tight integration between **ETERE** and **GEN21** will provides customers with a series of advantages derived from the automation of operations:

- ✓ **Integration**, of non-linear editing systems to allow direct access to archive through a web interface empowered with the highest security standards
- ✓ **Efficiency**, achieved by reducing manual operations between systems, allowing to define them in advance into automatic preset workflows
- ✓ **Accuracy**, on all phases to reduce the risk of mistakes when matching assets and writing data
- ✓ **Scalability**, to increase the number of integrated systems without altering the workflow complexity, minimizing operational overheads
- ✓ **Flexibility**, on interfacing any Gen21 system enabled with web services capabilities
- ✓ **Reliability**, derived from the use of streamlined workflows provided with detailed logs for tracking the overall and individual functioning of the system
- ✓ **Security**, across all operations thanks to the use of usernames and passwords during the execution of integrated operations
- ✓ **Usability**, improvements thanks to the user-friendly interface that permits designing integrated workflows with few clicks

Etere: a consistent system!

Etere is an international leader in the media market. Etere develops and distributes a wide range of high technology software for broadcasting and media businesses. With more than 20 years of experience, Etere provides powerful, flexible, cost-effective, high-performance, end-to-end media solutions. Etere is the only company worldwide that can offer you a solution to all your media needs in one single package.

Etere is the only solution 100% workflow based for all broadcast and media environments. It's a common framework where there is real-time sharing of all the data among several applications to manage all media business requirements. The workflow approach allows a fully customized design with edge performances.

From its headquarters in Tolentino, Italy, Etere guarantees the best after-sales support service on the market with engineers ready to give professional assistance 24 hours a day, 7 days a week. The service includes voice, email, VPN and VoIP with unlimited calls and connection time, and a pro-active system to help diagnose problems before they appear.

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