telestream

AVID INTEGRATION GUIDE 2025.1

Vantage 8.1
+ Update Pack 5

Vantage 8.2
+ Update Pack 3

Live Capture 3.7

September 2025

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Electromagnetic Emissions: FCC Part 15 Subpart B, ICES-003, EN 55032, EN/BS 55024, EN/BS EN 55035, EN 61000-3-2, BS EN 61000-3-2, EN 61000-3-3, BS EN 61000-3-3, VCCI-CISPR 32, AS/NZS CISPR 32

Electromagnetic Immunity: EN 55035

Safety: IEC 62368-1, EN 62368-1, CSA C22.2 No. 62368-1-14, UL 62368-1

Additional Country Certifications: NOM, IRAM S-Mark

California Best Management Practices Regulations for Perchlorate Materials:
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Contact Telestream Customer Service for additional Regulatory Compliance certificates.

Obtaining Support | Information | Assistance

Here's how to contact Telestream for support, information, or assistance:

Resource	Contact Information
Telestream Technical Support Portal	Web Site: telestream.net > Support
Vantage Technical Support Portal	Web Site: telestream.net/telestream-support/vantage/support.htm Support Email: support@telestream.net Terms and times of support services vary, per the terms of your current service contract with Telestream.
Vantage Information, Assistance, FAQs, Forums, & Upgrades	Web Site: telestream.net/telestream-support/vantage/support.htm
General Contact Information	Web Site: telestream.net/company/contact-telestream.htm
Telestream, LLC	Web Site: telestream.net Sales and Marketing Email: info@telestream.net
International Distributor Support	Web Site: telestream.net See the Telestream site for your regional authorized Telestream distributor.
Telestream Technical Writers	Email: techwriter@telestream.net If you have comments or suggestions about improving this document, or other Telestream documents—or if you've discovered an error or omission, please email us.

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Introduction

This guide helps you, as a Telestream Vantage or Live Capture operator/manager, understand, implement, and utilize Vantage and Live Capture to perform media transcoding and other digital media workflows in conjunction with Avid's editorial and asset management products.

This chapter is an overview of how Vantage and Avid products interact for highly-effective media processing. Here, you'll gain an overview of how you export media from Avid into Vantage workflows for transcoding and other processing. You'll also learn how to import transcoded media from Vantage workflows back into Avid for editing. The remainder of the guide focuses on implementation and application details.

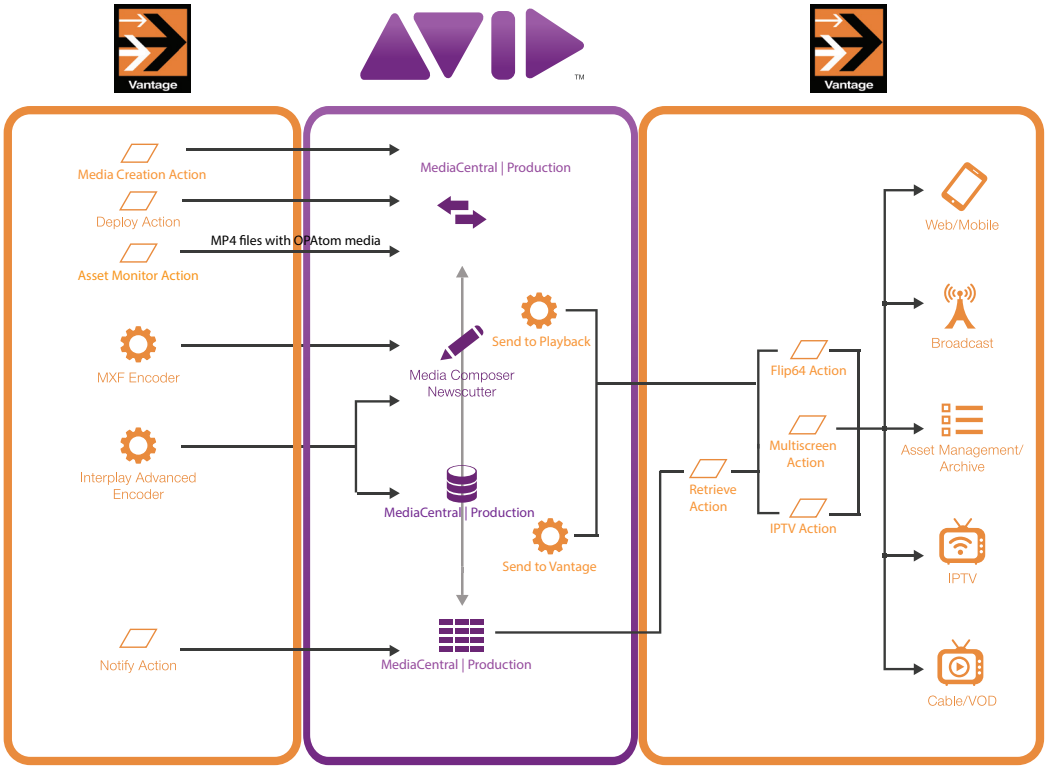
Topics

Note: This guide is written for video professionals who are familiar with using Vantage. To implement applications in Vantage, you should know how to create workflows and submit jobs. If you aren't familiar with Vantage, we suggest that you review the Vantage User's Guide and Vantage Domain Management Guide as needed.

Overview

Avid's editing and asset management products are used broadly throughout broadcast, sports, and entertainment to edit and produce high value media. As such, they are operated by highly-skilled creative staff, often located in premium facilities.

The comprehensive integration of Vantage with Avid's products enables significant gains in productivity for almost every type of Avid user, from small production houses to large broadcasters producing national news programs. These productivity gains are made possible by making file- based and live media export and import processes faster, more automated, and less reliant on operator action.



You can integrate Vantage directly into Avid media processes from standalone Avid Media Composer edit systems to MediaCentral | Production Management asset management systems. Both single and multiple resolution assets can easily be created to meet your requirements.

Note: In this guide, references to Avid Media Composer generally apply to Avid editors including Media Composer, Newscutter, and Symphony.
Certain Vantage actions (Notify, Media Creation & Asset Monitor) have control labels which may use the term *Interplay* in previous Avid versions. Avid's official product name is now *MediaCentral | Production Management*, or more briefly *Production,* both of which are used throughout this guide.
Throughout the guide, the terms Interplay and MediaCentral Production Management may be used broadly and interchangeably.

Also, in the context of this guide, the phrase *frame chase editing* is sometimes used to refer to Avid's *Edit While Ingest (EWI)* feature.

Avid Product Integration in Vantage

Telestream provides Avid product integration with Vantage for workflows utilizing these actions, all implemented in the Vantage Avid Service:

- The Asset Monitor action—see *Exporting Master Clips | Subclips | Sequences* and *Asset Monitor Action*.
- The Retrieve action—see *Ingesting Master Clips Directly into a Workflow* and *Configuring a Retrieve Action*.
- The Media Creation action—see *Generating and Ingesting Avid-Compatible MXF OP-Atom Media* and *Media Creation Action*.
- The AAF action—see *Edit While Ingest Workflow for Avid Media Composer* and *AAF Action*.

For supported components see the Telestream web site or contact Telestream support (see *Obtaining Support | Information | Assistance*).

Supported Avid Products and Implementations

You can integrate Vantage for media file processing with these Avid products:

- Avid MediaCentral products: MediaCentral | Production Management—Vantage seamlessly integrates directly with PAM for both import and export.
- Avid NEXIS—Avid's shared storage environment, a proprietary NAS device. The term *NEXIS* is used in this guide but ISIS is also supported. The terms NEXIS as used in this guide should not be confused with older Avid and Unity products.

You can also integrate Telestream's Live Capture with these Avid system implementations for near-real time streaming video processing:

- Stand-alone Avid editing systems with local storage
- Avid editing systems with network attached shared storage (for example, NEXIS)
- Avid editing systems with MediaCentral | Production Management.

Vantage and Live Capture are tested for Avid compatibility with new versions.

Note: Avid MediaCentral components installed with Avid editors must use the MediaCentral | Production Management version qualified with the editing system. These include Media Indexer, Interplay Access, and Interplay Framework.
For details, see *Avid Editing Application Compatibility with MediaCentral | Production Management Releases* in the Avid Knowledge Base.

Vantage Version Requirements

Using Avid integration features with Vantage requires these versions of Vantage software and components, listed in order of installation where necessary. Log in and download the Avid 2025.1 zip file from the support portal on the Telestream site: telestream.net > Support to obtain the Avid patch installers.

Vantage 8.1...

1. Vantage 8.1
2. Vantage 8.1 UP5
3. ComponentPac Avid.2025.1.307
4. Vantage 8.1 UP5 Avid Domain Patch
5. Vantage 8.1 UP5 Avid Service Patch
6. Flip64 2025.1
7. Post Producer ComponentPac 2023.1.0.188 or higher—for Send to Vantage

Vantage 8.2

1. Vantage 8.2
2. Vantage 8.2 UP3
3. ComponentPac: Avid.2025.1.307
4. Vantage 8.2 UP3 Avid Domain Patch
5. Vantage 8.2 UP3 Avid Service Patch
6. Vantage 8.2 UP3 Avid Notify Patch
7. Flip64 2025.1
8. Post Producer ComponentPac 2023.1.0.188 or higher—for Send to Vantage

Live Capture Version Requirements

Live Capture 3.6 or later

1. Vantage 8.1
2. Vantage 8.1 UP5
3. ComponentPac Avid.2025.1.307
4. Vantage 8.1 UP5 Avid Domain Patch
5. Vantage 8.1 UP5 Avid Service Patch
6. Flip64 2025.1
7. Post Producer ComponentPac 2023.1.0.188 or higher—for Send to Vantage

Contact your Telestream support team for details.

Vantage | Live Capture Licensing Requirements

Features for Avid interaction are enabled with specific Telestream licenses.

The Send to Vantage feature utilizes Compose and Conform actions, which are enabled by the Post Producer license.

Please contact your Telestream account manager or Telestream Customer Service (see *Obtaining Support | Information | Assistance*) for information about purchasing Vantage licenses.

Required Avid Components

These Avid components may be required for workflows communicating with MediaCentral | Production Management. Installation and configuration of Avid components is beyond the scope of this guide. They must be installed/configured by you (the customer) or an Avid representative:

- **Avid Interplay Web Services**—must be installed and configured. Current version is 2024.10.
- **Avid NEXIS Client Manager**—must be installed and configured on all Live Capture or Vantage domain servers that use Live Capture or Vantage actions to write to Avid shared storage and communicate with MediaCentral | Production Management.
- **AAF File Location or AAF Temp File Location**—see *Media Creation Action Configuration* for details.
- **MXF File Location**—For use with Media Creation action workflows, these files must be on an indexed Nexis Workspace.
- The workspace/directory must be indexed by the Avid Media Central Production Index Service.

Required Avid Information

Prior to designing and implementing Avid workflows in Vantage to access Interplay (MediaCentral | Production) systems, you (the customer or Avid representative) must have this information about each system:

- NEXIS username and password
- NEXIS workspace/directory
- Web Services host
- Web Services port
- Production Workgroup
- Production Username
- Production Password

Note: Always connect to MediaCentral | Production Management and Web Services using a fully-qualified DNS name, which is registered with Forward and Reverse look up tables in DNS.

Use these specifications to define Avid connections in the Vantage Domain Console for use in Media Creation and Asset Monitor workflows, or define them statically or dynamically via variables, directly in your workflows. See *Accessing MediaCentral | Production Management Systems*.

Network Adapters for Avid Shared Storage

You should equip Vantage domain servers being used with Avid shared storage with an Avid-approved network adapter. For a list of supported network adapters, see the Avid Knowledge Base article resources.avid.com/SupportFiles/attach/AvidNEXIS/AvidNEXIS_Network_Switch_Guide.pdf.

International Character Support

Vantage fully supports multi-byte characters. However, some third party components or interfaces used within Vantage do not.

These actions may impose practical limits when used in Vantage workflows:

- *AAF | Asset Monitor | Media Creation | Retrieve actions*—some Avid components may have restricted multi-byte character support, which may affect these actions. See associated Avid documentation for the latest information.
- *Notify | Deploy actions*—some Avid MediaCentral | Production Management components have restricted multi-byte character support, which affects how Notify and Deploy actions can interact with them.

MediaCentral | Production Management v2018.x and newer supports Unicode characters from the basic plane for asset and folder names as well as for content such as metadata or markers. This statement applies to Avid MediaCentral portfolio of products and does not include creative applications such as Avid Media Composer.

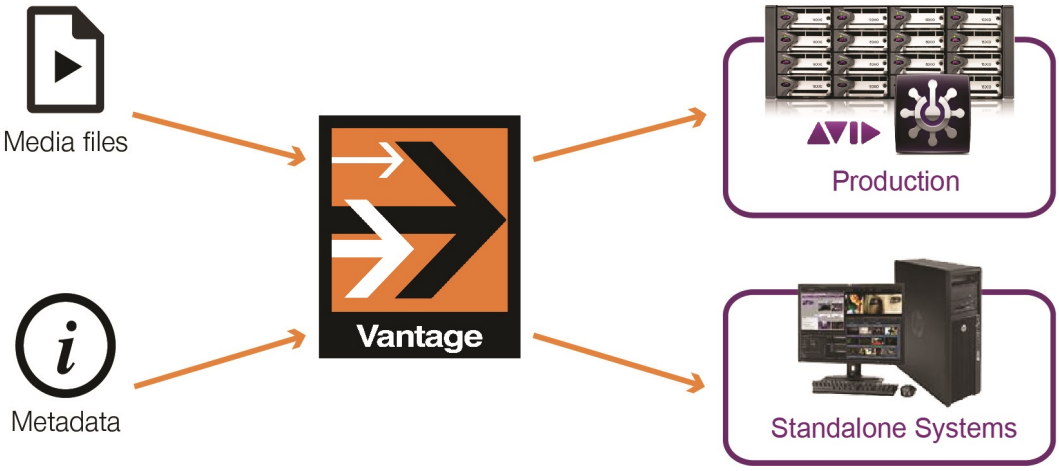
Unicode support is limited for file system objects and across platforms. Due to the complexity of consistently supporting Unicode file system objects across different platforms, Avid recommends avoiding non-English file system file and folder names. If your implementation cannot avoid this scenario, please make sure you fully test your solution in a complete MediaCentral production environment for all relevant use cases.

See these Avid publications for more details:

- Media Composer Documentation
- MediaCentral | Production Management v2023.x Documentation

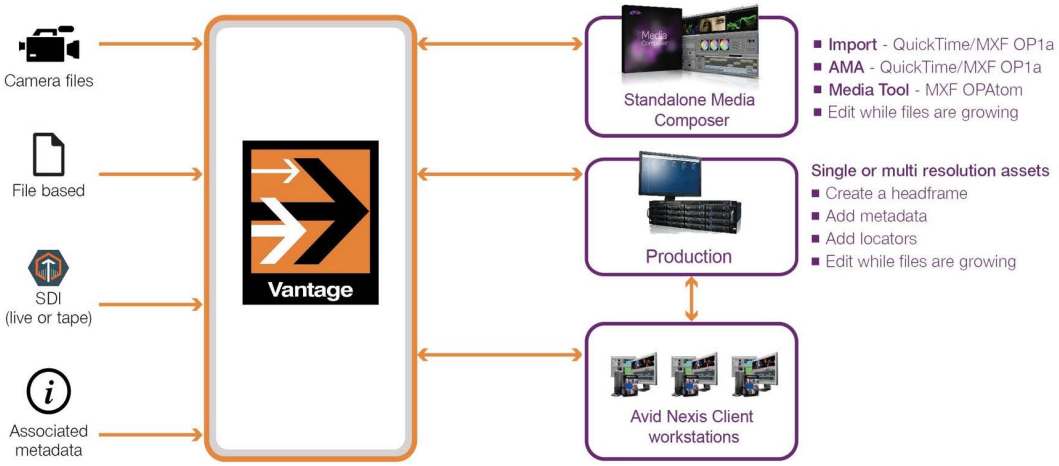
Vantage to Avid—Ingesting Encoded Media into Avid Systems

Media and its associated metadata arrives for processing in many ways and—in often unpredictable—formats. The challenge is keeping up with content arriving from news agency/wire feeds, bureau and stringer file deliveries, tapeless cameras, archive retrievals, and user-generated media and crowd sourcing, enabled by the ubiquitous cell phone.



Most source media requires transcoding for conversion to house standards. Media may also require aspect ratio, frame rate conversion, or other essence modifications.

Vantage offers unparalleled transcoding/re-wrapping functionality and quality for automated ingest of heterogeneous media files into Avid. Vantage offers a comprehensive set of codecs and components that you can combine and configure in workflows to solve your media transcoding challenges, making Vantage an excellent choice for automated transcoding of source media into Avid platforms.



Vantage Actions and Encoders for Avid Media Processing

You can implement these Vantage actions and encoders in Vantage workflows to implement your Avid-based media processing requirements:

Media Creation Action

You can ingest files generated by the Media Creation action to create single and multi-resolution assets for use in a MediaCentral | Production Management or Avid Media Composer environment:

- Media Composer Mode: For creating Avid-compatible AAF and MXF OP-Atom files including metadata written to storage for ingest into a Media Composer editor.
- Interplay Mode: For creating Avid-compatible AAF and MXF OP-Atom files and metadata that is written to Nexis storage and automatically be checked-into MediaCentral | Production Management.

Note: The Media Creation action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows. It does not perform decoding/encoding operations. For details, see *Generating and Ingesting Avid-Compatible MXF OP-Atom Media* and *Media Creation Action*.

Media Creation actions are executed by the Vantage Avid Service.

When ingesting media directly into a MediaCentral | Production Management system, assets can include integrated User Property, Asset Locators, Asset Restrictions, and Headframe creation.

Open Workflow mode is supported in both Interplay and Media Composer modes for ingest into Media Composer supporting Edit While Ingest editing; metadata insertion is supported while files are being processed in Vantage, enabling near-real-time editing.

MXF Encoder

The MXF encoder is implemented in the Flip64 action. The MXF encoder creates media that can be imported in to an Avid editorial environment.

Files created by the MXF encoder in a Generic OP1a, IMX (D10), or Sony XDCAM HD MXF containers can be added to an Avid bin using Avid's MXF AMA plug-in.

Ancillary data in source files can be preserved as an MXF (SMPTE 436M) data track. Avid's AMA MXF plug-in reads SMPTE 436M and places it in the clip's data track.

MOB ID Generator and Interplay Notifier

In Media Creation workflows, use the Notify action to perform these functions:

- Generate a MOB ID

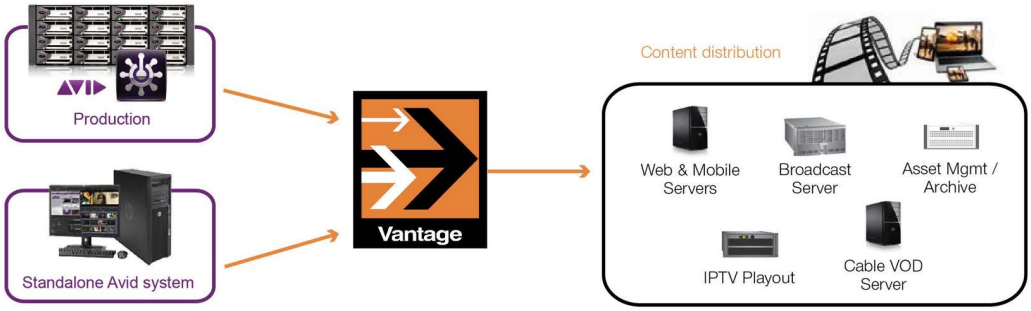
- Create a master clip for ingest into MediaCentral | Production Management (legacy function)
- Add metadata to a MediaCentral | Production Management clip
- Specify or create a MediaCentral | Production Management Folder for ingest. Specifies the name of an existing MediaCentral | Production Management Access folder to target or create a MediaCentral | Production Management virtual folder(s) that does not exist in the configured MediaCentral | Production Management Folder path.
- Extract clip metadata from the master asset for use in Vantage workflows
- Set a head frame in a MediaCentral | Production Management clip
- Copy an existing asset from one Interplay Folder to another, optionally with the same Master MOB ID
- Move a clip into MediaCentral | Production Management
- Delete a clip from MediaCentral | Production Management
- Check in a non-Avid asset such as a still image graphic file
- Rename a clip to modify asset name
- Check in an AAF file.

Avid to Vantage—Exporting Media to Vantage

Once an edit is complete, the finalized sequence is ready to be sent to a playout system, to syndication, or for online publication as quickly as possible.

Note: For implementation and configuration details, see *Performing Avid Media Production Operations*, *Media Creation Action* and *Configuring a Retrieve Action*.

Vantage workflows automate transcoding and delivery to your distribution platforms. For example, you can use Vantage workflows to automatically export MediaCentral | Production Management sequences and master clips into Vantage to create media in distribution platform formats for broadcast, cable/VOD, IPTV, online/mobile, and multi-screen viewing.



You can process Avid editorial output in Vantage workflows in a variety of ways. By exporting media directly to Vantage, you can easily automate the creation of all required file types.

Topics

- Automatically Exporting Sequences and Master Clips from MediaCentral | Production Management
- Exporting Master Clips by MOB ID
- Sending Playback Master Clips by MOB ID
- Transcoding Sequences Directly from Media Composer
- Processing Simplified AAF Files Exported from Media Composer
- PMR Processing | Matte/Key Effects on AAF Files

Automatically Exporting Sequences and Master Clips from MediaCentral | Production Management

Workflows using the Asset Monitor action monitor a virtual folder in MediaCentral | Production Management systems for both master clips and sequences to perform same-as-source-conversion, assembling the media as quickly as possible for processing by downstream Vantage actions in the workflow; typically production transcoding and related tasks.

The Asset Monitor action creates a proprietary MP4 reference file that references MXF OP-Atom files located on Avid shared storage for that asset and may also include additional transcoded media, as well as media samples for mixed format sequences. The MP4 reference file also includes ancillary data extracted from the MediaCentral | Production Management assets data track. Additionally, a metadata XML file containing the MediaCentral | Production Management asset's user metadata and MediaCentral | Production Management System data is generated. The MP4 reference file and associated XML file can then be processed by downstream Vantage actions for transcoding and metadata extraction. Creation of an AAF from an Avid asset is also supported.

Note: For implementation and application details, see *Exporting Master Clips | Subclips | Sequences*. For configuration details, see *Asset Monitor Action*.

Exporting Master Clips by MOB ID

Workflows using the Retrieve action initiate a job each time an Interplay MOB ID is submitted to this workflow. It retrieves the master clip identified by the MOB ID from the target Interplay system, and generates a Telestream MP4 reference file as the primary output. The Retrieve action will not successfully process an asset if it is in an Offline or partially Online state, because Vantage can not create an MPEG-4 Reference with missing Avid OP Atom media.

Note: The Retrieve action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows. It does not perform decoding/encoding operations. For details, see *Ingesting Master Clips Directly into a Workflow* and *Configuring a Retrieve Action*.

Retrieve actions are executed by the Vantage Avid Service.

Typical workflow functionality involves transcoding the MP4 file downstream in Flip64 or other transcoding action to produce the desired output format. Metadata and AAF are optional output files that are delivered as attachments.

The target workflow must start with a Receive origin action to enable it to receive the MOB ID - via a Forward action in another workflow, a manual job submission from Workflow Designer, or from an API-based external system.

Sending Playback Master Clips by MOB ID

Avid operators can use Media Composer's Send to Playback command to re-wrap Avid OP-Atom files into MXF or TIFO and export them to Live Play and register them in a playlist for playback. Operators can also use the Send To Playback command to export sequences directly to a Vantage watch folder for ingest by the associated workflow for processing.

To learn about installing, configuring and using Send to Playback in Media Composer, see *Exporting Sequences to Live Play | Vantage via Send to Playback*.

Transcoding Sequences Directly from Media Composer

The Send To Vantage feature is an optional suite of Vantage programs for Avid Media Composer that enables Avid editors to send sequences directly from Media Composer to an active Vantage workflow for processing.

The Conform action in Send to Vantage workflows renders media descriptor compositions (as defined in the Composition XML file which it is passed) with transition and image effects and graphic overlays and conformed audio, applying option filters as appropriate, encoding the output video in the specified format.

To learn about installing, configuring and using Send to Vantage in Media Composer, see *Starting Sequence Processing Jobs from Media Composer*.

Processing Simplified AAF Files Exported from Media Composer

You can export AAF files for flattened and mixed down sequences from Avid Media Composer for processing by Vantage workflows designed with Post Producer (Edit) Compose and Conform actions. The features of these actions were designed in collaboration with Avid to meet the requirements of processing simplified AAF files.

The Compose action configured with a Simple AAF composer parses the AAF files and the Conform action transcodes the video, processing audio and data track (D-Track) MXF OP-Atom media referenced in the file ingested from storage.

Note: See the Post Producer Developer's Guide on the Telestream web site for general information on using Post Producer in Vantage, and for detailed information about exporting Simple AAF files.

PMR Processing | Matte/Key Effects on AAF Files

The AAF action ingests an AAF file and performs various operations on the media in the MXF folder referenced in the AAF, as configured by you. Avid Media Composer utilizes Persistent Media Record (PMR) files for information about the online status of file Media Object information (MOB). Each PMR file provides an index in a form that an editor can

quickly load all the file MOBs and their associated media files in the media directory in which the PMR file resides.

You can also perform a Matte/Key effect on ingested files to use in Avid Media Composer, where you apply a Matte/Key effect on selected media using the clips.

In order to perform Open Workflow, Frame Chase (Edit While Capture) processing of Media Creation outputs, you must bind the AAF Path variable (created in an upstream Media Creation action) to the Input Source File Name field.

Note: See *Edit While Ingest Workflow for Avid Media Composer* and *AAF Action* for details.

Accessing MediaCentral | Production Management Systems

Asset Monitor and Media Creation actions are configured to interact with a specific MediaCentral | Production Management system. Identification may be manual—statically specifying a system which does not change on a job-by-job basis.

System identification can also be dynamic, where you use variables to identify the system at run time for each job that executes. This is preferable when you may be accessing one of many Avid systems in a single workflow, based on run-time metrics. Dynamic, variable-driven workflows often simplify workflow design and utilization.

Topics

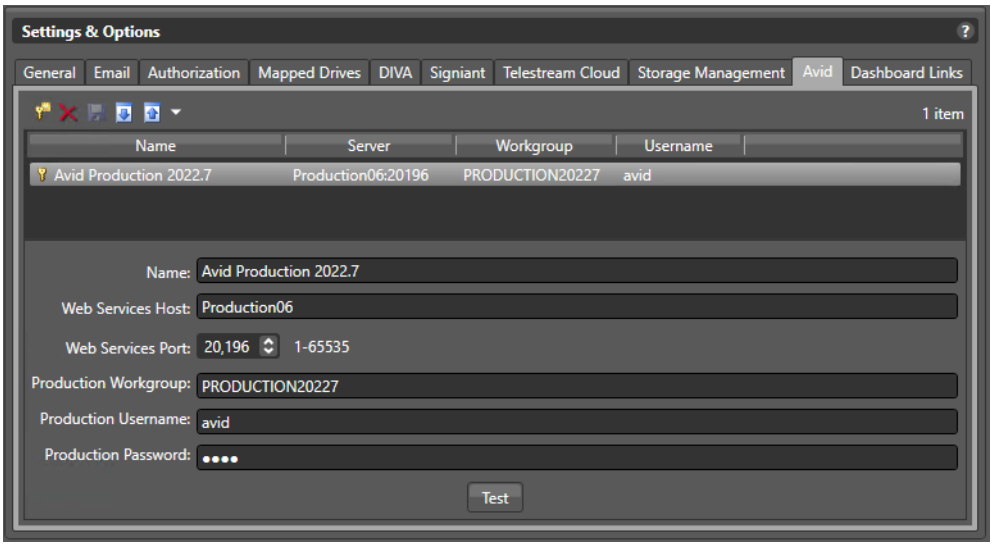
Specifying an Avid Interplay System Statically

Before you can configure an action with a static system, you should identify the Avid Interplay | MediaCentral Production Management systems you plan to use, and add them as connections in the Vantage Management Console. Optionally, Media Creation and Retrieve actions enable you to identify the Interplay system directly in the action.

When you use Avid connections to access different systems from a single workflow, the workflow must use Decide actions to examine an Avid server variable and branch to the appropriate branch, based on its value.

For each Interplay system connection you require, follow these steps:

1. Open the Vantage Management Console (VMC), select Settings & Options and display the Avid tab, where you can create and configure Avid connections:



2. Click the Add... button in the toolbar (or right-click in the table and select Add new setting), and configure these fields:
   - **a.** Name—enter a practical name for the Interplay server (for example, Interplay-Vantage Server).
   - **b.** Interplay Web Services Host—enter the domain name of the Interplay server.
   - **c.** Interplay Web Services Port—select or enter a port number (default 80).
   - **d.** Interplay Workgroup—enter the work group name.
   - **e.** Interplay Username—enter the user name expected by the Interplay server.
   - **f.** Interplay Password—enter the Interplay user's password.

   For details on configuring and managing Avid connections, click the **?** icon and read the Configuring Interplay Settings topic in the Domain Management Guide.
3. Click Test to confirm that Vantage can access the target server. If you have problems, determine the issue and retry.

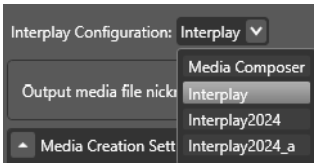
Workflow Designer adds these connections dynamically to the Interplay Configuration menu in the Media Creation action.

With your Avid connections created, return to Workflow Designer and continue with your Avid workflow implementation by selecting the Interplay system you are targeting in this action—selecting it from the Interplay Configuration menu, as shown below.

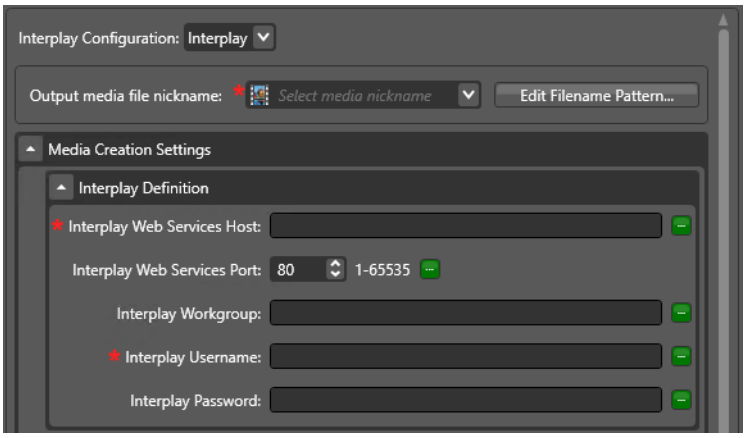
Specifying an Avid System Dynamically

To configure an action to interact with an Avid system dynamically—where the system may change on a job-by-job basis—follow these steps:

1. In the inspector's Interplay Configuration menu, select Interplay:



2. Open the Interplay Definition panel:



3. You can configure these controls with static values—so that it functions exactly the same as if you'd created an Avid connection and selected it—or, you can dynamically configure the control by clicking the green browse button, and selecting a variable that represents this control:
   a. Interplay Web Services Host—the domain name of the server.
   b. Interplay Web Services Port—the server's port number (default 80).
   c. Interplay Workgroup—the work group name.
   d. Interplay Username—an authorized user name for accessing the server.
   e. Interplay Password—the user's password.
   For more details on configuring Avid connections, click the **M** icon and read the help page.
4. Now, upstream of this action—in the origin action (Watch, Receive, etc.) or other action preceding this one—identify the variables bound to this action and set their values as appropriate for the target server for this job.

Note: For comprehensive information about variables, see Utilizing Variables in an Action, in the Workflow Designer User's Guide.

Best Practices and Tips

These practices and tips are not specific to Avid integration with Vantage but may assist in your creation of end-to-end workflows.

Graphic File Checkin Requirements

After performing a Graphic File Checkin in the Notify action, the file must be imported into Avid Media Composer, with the Do not resize smaller images control checked.

Avid Log Files

Log files for calls made to Avid web services are available in Vantage. To configure how log files are written, perform these steps:

- Navigate to *C:\Program Files (x86)\Telestream\Vantage\Components\Avid.XXXX.X.X.XX* (where *Avid.XXXX.X.X.XX* is Avid ComponentPac version*)*.
- Open *AvidCheckIn.exe.config* in a text editor and set these rule, then save:

```
<rules>
  <!-- Log levels are (Most restrictive to most Verbose): Off, Fatal, Error, Warn, Info, Debug, Trace -->
  <logger name="*" minlevel="Off" writeTo="logconsole" />
  <logger name="*" minlevel="Error" writeTo="logfile" />
</rules>
```

Default

```
<rules>
  <!-- Log levels are (Most restrictive to most Verbose): Off, Fatal, Error, Warn, Info, Debug, Trace -->
  <logger name="*" minlevel="Off" writeTo="logconsole" />
  <logger name="*" minlevel="Warn" writeTo="logfile" />
</rules>
```

Set for Logging

- Log files are written to *C:\Windows\System32\config\systemprofile\AppData\Roaming\Telestream\Logs* for user or support purposes.

Set Update Interval Setting in Media Composer

When using Open workflow mode and importing files into Avid Media Composer, the Update Interval setting must be set and the Media Composer application restarted.

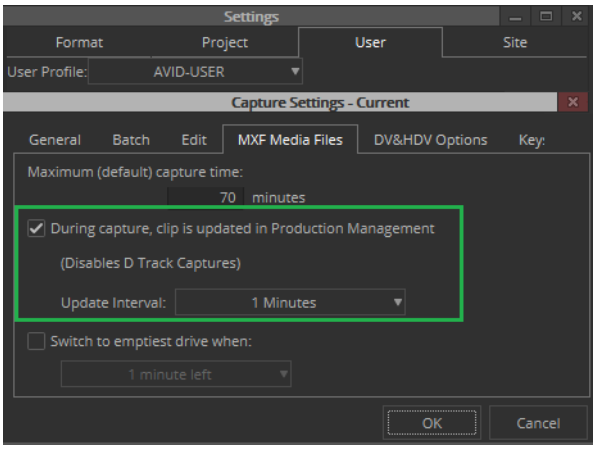
If the setting is not made the files show Media Offline in the player window and must be manually updated from Avid Production Management.

Using Media Composer

In Media Composer under File > Settings > User > Capture > MXF Media Files:

- Check the During capture, clip is updated in Production Management checkbox.
- Set Update Interval to 1 Minute (minimum update interval allowed).

- Restart Media Composer:



Exporting Master Clips | Subclips | Sequences

This chapter describes how the Asset Monitor action is implemented in Vantage, and how you can use it to export master clips, sequences, and subclips from MediaCentral | Production Management into Vantage workflows. Automatically exporting master clips, sequences, and subclips as they are added or modified is accomplished by workflows implemented with the Asset Monitor action.

Asset Monitor workflows are designed to quickly and efficiently generate a proprietary Telestream MP4 reference file (with video, audio and ANC data) plus an external metadata file for highly efficient processing by transcoding actions or other workflows.

Topics

Overview

The Asset Monitor action is executed by the Vantage Avid Service. It is unique in that (unlike most Vantage actions) it performs two tasks:

- Monitors a user-specified virtual folder on the target MediaCentral | Production Management database for new master clips, sequences, and subclips to export
- Creates a Telestream MP4 reference file that can be consumed by downstream Vantage actions in a workflow or other separate workflows.

The Asset Monitor action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows.

This action is an origin action and can only be used as the first action in a workflow; however, it may be the only action in a workflow. Asset Monitor actions run when the workflow is activated and during the active time frame, if specified. The Asset Monitor action initiates a job each time a new media asset is discovered and generates the specified output; then it passes control to the next action (if any) in the workflow or potentially, other workflows.

The Asset Monitor action does not require additional Telestream components installed in the Vantage domain. The Asset Monitor can be used instead of using Avid Media Composer exports or Send to Playback | Send to Vantage features from Media Composer.

Feature Summary

Here is a summary of the features of the Asset Monitor action:

- Queries for master clips, sequences, and sub clips; exports into Vantage and produces a Telestream-proprietary MP4 reference file for use in downstream actions.
- If a sequence's timeline contains gaps, the Asset Monitor action replaces the gaps with black frames and silent audio.
- Supports mixed essences
- Supports inclusion of a data track in output files
- Supports up to 16 channels of rendered audio
- Supports audio channel labeling (master clips ONLY)
- Can be used as a replacement for traditional file exports from MediaCentral | Production Management (such as QuickTime Reference or MXF OP1a).

Note: For best results, use an isolated Production Management folder for monitoring or use a sub-folder under your bin folder. All assets including the bin must be checked into MediaCentral | Production Management.

Limitations

Here is a summary of the limitations of the Asset Monitor action:

- Is not a Media Composer effects render engine
- Does not use Avid background services
- Does not support overlapping timelines
- Does not support audio-only assets
- Does not support AMA-linked media
- Has the same media render requirements as traditional file export methods
- Requires a fully flattened/rendered timeline. Supports audio and video effects when rendered within the sequence timeline
- Growing assets are ignored until they are complete
- Does not support multi-layer video sequences
- No sub-folder support—the Asset Monitor action does not recursively search sub-folders to a configured Interplay folder.

Avid Version Requirements

Vantage and Live Capture are continually tested for Avid compatibility as new versions become available. For details, see *Required Avid Components*.

Avid Media Composer Sequence Requirements

In order to export and properly process Avid media, the Avid sequence asset specifications must adhere to certain requirements. The Asset Monitor action processes three kinds of MediaCentral | Production Management assets—master clips, sequences, and subclips. Sequences may include:

- Timeline Gaps—during processing, gaps are filled with black frames/silent audio.
- Mixed formats (codecs/resolutions)—segments that differ from the format of the first segment are transcoded to the first segment's format and the samples are stored in the output MP4 reference files.
- Transition effects—transition effects must be rendered before exporting and submitting the asset to an Asset Monitor workflow.
- Segment effects—tracks that contain segment effects must be rendered before exporting the asset and submitting it to an Asset Monitor workflow.
- Multiple video layers—only one video layer is supported. Video layers must be flattened prior to exporting the asset and submitting it to an Asset Monitor workflow.

Note: Segment effect rendering is effective for most commonly used compositions but may not work as expected for highly complex sequences.

Processing Asset Types

Master Clip and Sequence Assets. When processing a multi-resolution asset from MediaCentral | Production Management, the largest media size is processed by default. This is not always the highest quality.

Note: When exporting growing media in the MediaCentral | Production Management folder being monitored, the Asset Monitor processes the asset when the asset is complete.

AAF File Generation

The AAF action can generate AAF files for use in other applications. For example, Edit While Ingest operations and file compositing for matte/key effects in Avid Media Composer.

Telestream MP4 Reference File Generation

The Asset Monitor action creates a Telestream MP4 reference file that references MXF OP-Atom files located on Avid shared storage for the asset and may also include additional transcoded media, and, for mixed format sequences, media samples. The MP4 reference file also includes ancillary data extracted from the MediaCentral | Production Management assets data track. Additionally, a metadata XML file containing the Production asset's user metadata and Production System data is generated. The MP4 reference file and XML file are passed to downstream actions in the workflow or to other workflows for transcoding and metadata extraction.

The Asset Monitor action treats the media format of the first segment of a sequence as the sequence's media format. The subsequent segments that differ in the format are transcoded to the sequence's format. The transcoded samples are stored in the MP4 output media.

Decoding Support

The Asset Monitor action can decode a wide array of Avid formats including sequences containing mixed video resolutions such as HD with SD or clips set to different codec types (such as XDCAM with DNxHD).

Note: ProRes video can be linked, but not imported.

Supported formats include:

AVC-Intra	AVC-Ultra Long GOP
DNxHD	DNxHR
DV	DVCPro

DVCProHD	IMX
JPEG 2000 (J2K)	XDCAM
XAVC	

Metadata Preservation

Most MediaCentral | Production Management systems have been developed with a specific and often complex Production schema for metadata storage and manipulation within a Production Workgroup, and contain asset-based metadata including custom user properties.

The metadata associated with an asset stored in the Production database is preserved by the Asset Monitor action within a metadata XML file. All ANC data contained in the asset's data track is also preserved in the MP4 reference file through Telestream extensions to the MP4 container (see *Using Telestream MP4 reference Files* for information on processing and playing of these files). When the file is passed downstream, the associated XML file is also transferred, making the metadata available for extraction and processing as required.

Note: User-defined metadata that includes control characters is rejected by the Asset Monitor. If control characters exist in your asset's user-defined metadata, they must either be removed or you must check Ignore User Defined Metadata when configuring the Asset Monitor. The error message "*AvidSvc Monitor: GetUserAttributes Errors for interplay://[avid wg]/: There is an error in XML document ([x], [y]); hexadecimal value 0x07, is an invalid character. Line [x], position [y]*" is generated in this situation.

Typical Applications

The Asset Monitor action collects the system and user attributes for each asset and stores them in the generated output file. The values for the custom user attributes defined for that Production workgroup are also collected. The attributes that do not have any value set are not inserted into the output file.

Here are two examples of how the Asset Monitor processes Avid assets:

- If the asset's media sequence consists entirely of clips using a single codec type of the same quality level (such as AVC Intra 1080i @ 29.97) then the action performs same-as-source-conversion. The resulting output is a reference file pointing directly to the asset's MXF OP-Atom files residing on Avid's shared storage. In this case, other Vantage actions will use the native Avid media files directly during further media processing.
- Commonly, however, Avid sequences contain mixed media timelines. For example, different resolutions or different codecs. In a mixed-mode asset, the Asset Monitor action selectively converts media segments to match the format and codec type used in the first segment of the sequence. Thus, the MP4 reference file contains media segments created from the non-conforming segments (those in a format

other than the one detected in the first clip) and direct references to the native Avid media files for the conforming segments (in the format of the first clip).

If a sequence's timeline contains gaps, the Asset Monitor action replaces the gaps with black frames and silent audio.

Using Telestream MP4 reference Files

Telestream-proprietary MP4 reference files generated by the Asset Monitor action are intended for process by Vantage encoding actions. They are not intended for playing. These files must have fully authenticated access to the media files located in the Avid shared storage.

Creating a Prototype Asset Monitor Workflow

The Asset Monitor action is an origin action—that is, it must be the first action in a workflow and may be the only action in a workflow. The Asset Monitor action is a dual-purpose action: It detects new or updated Avid media in MediaCentral | Production Management to export for processing, and initiates a job when detected. It generates a Telestream MP4 reference file and an XML file containing external metadata associated with the sequence or master clip.

These files are available to downstream actions or other downstream workflows for processing as appropriate (typically, production transcoding).

Here is a simple example:

In this workflow, three actions are implemented:

Asset Monitor—monitors a virtual folder in the target Production system for new sequences or master clips and initiates a job in Vantage to export the media. The source media is transcoded into an MP4 reference file and the associated metadata is inserted into an XML file.

Flip64—configured with an XDCAM encoder, the action creates a high-resolution file.

Deploy—configured to deliver the broadcast format high-resolution file to an external system, as configured by the workflow designer.

Configuring an Asset Monitor Action

Before this action can be configured, you must configure your Vantage domain to connect and interact with the MediaCentral | Production Management systems you are using. If you haven't already created at least one Avid MediaCentral | Production Management connection, perform that task now. See *Accessing MediaCentral | Production Management Systems* for details.

To configure an Asset Monitor action, follow these steps (Click **M** in the action inspector to view a detailed help topic):

1. Specify the Production system you plan to monitor, and configure the monitoring options as required.
2. Add Asset Monitor output format(s) and configure them for processing.
3. When you are done configuring this action, click Save.

Asset Monitor Settings

The Asset Monitor action monitors the specified Interplay folder and initiates a job each time a new or modified asset is discovered in Avid MediaCentral | Production Management since the last scan, and generates the specified format reference output, passing control to the next action (if any) in the workflow.

Asset Monitor actions are executed by the Vantage Avid Service.

The Asset Monitor action is an origin action, and can only be used as the first action in a workflow; however, it may be the *only* action in a workflow. Asset Monitor actions run when the workflow is activated and during the active time frame, if specified.

The Asset Monitor action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows.

It generates an Interplay metadata and/or Telestream proprietary MP4 media file from the new/modified input asset.

Note: When some or all media is offline, and only AAF Container and Interplay Metadata are configured to produce output files for an Interplay asset (master clips or sequences), the job will process and complete. However, if MPEG-4 Reference is selected, the job will fail because Vantage can not create an MPEG-4 reference file with missing Avid OP Atom media.

A wide variety of Avid formats are supported for decoding. Consult the Ingesting Master Clips | Subclips | Sequences chapter in the Avid Integration Guide for a complete list.

Before this action can be activated and used in a workflow, you must configure your Vantage domain for the MediaCentral | Production system(s) you are using. See *Adding a MediaCentral | Production Management System to Vantage*, below, for details.

Topics

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. The variable must have a value when this action executes. You can assign the value to the variable in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Avid Media Composer Sequence Requirements

In order for the Asset Monitor action to ingest and process Avid media, it must adhere to the following requirements:

The Asset Monitor action processes two kinds of Interplay assets - master clips and sequences. Sequences may have:

- Gaps in the timeline. During processing, gaps will be filled with black frames/silent audio.

- Mixed formats (codecs/resolutions). Segments that differ from the format of the first segment will be transcoded to the first segment's format and the samples will be stored in the output MP4.

- Transition effects. Transition effects must be rendered before submitting the asset to the Asset Monitor action.

- Segment effects. Tracks that contain segment effects must be rendered before submitting the asset.

Note: Segment effect rendering is effective for most commonly used compositions but may not work as expected for highly complex sequences.

Processing Asset Types

You can process Master Clip and Sequence assets as well as Master Clip assets.

Note: If the Asset Monitor is active and processing output as it is being written (frame chase editing | edit while ingest), occasionally the proxy file will be written first. As a result, his will be the file processed by the Asset Monitor. When ingesting growing media in the Avid Interplay folder being monitored, the Asset Monitor processes the asset only when it is complete. Files must be completed and closed prior to the Asset Monitor activation so that both the proxy and high-res are present.

MP4 File Generation

The Asset Monitor action creates a a Telestream proprietary MP4 media file for further Vantage processing, which references MXF OP-Atom files located on Avid shared storage for the asset and may also include additional transcoded media. The file also includes VANC data extracted from the Interplay asset's data track. In addition, a metadata XML file containing the Interplay asset's metadata is generated. The MP4 reference file and XML file are passed to downstream actions in the workflow or to other workflows for transcoding and metadata extraction.

Any system processing these MP4 files must have fully-authenticated access to the media files located in the Avid shared storage (ISIS/NEXIS).

MP4 files generated by the Asset Monitor action contain Telestream-proprietary extensions. Therefore, the following requirements apply:

- Vantage transcoding actions processing these files must use the Auto decoder for Flip64.

- For playback, Switch 4.0 or later is required and processes closed captions including other metadata in these files.

Adding MediaCentral | Production Management Connections to Vantage

Before this action can be activated and used in a workflow, you must add and configure an Interplay connection in your Vantage domain to communicate with each MediaCentral | Production Management system you are monitoring.

Note: The systems displayed in the Asset Monitor action Interplay Configuration menu re those that have been added to the Vantage Management Console.

To add an Interplay connection to Vantage and configure and test it, follow these steps:

1. Start the Vantage Management Console.
2. In Settings & Options, display the Interplay tab.

   Vantage displays the Interplay configuration panel where you create, configure, delete, import and export MediaCentral | Production Management system connections.

3. Create and configure a connection to the target system, providing the following information:
   - Connection Name
   - Interplay Web Services Host
   - Interplay Web Services Port
   - Interplay Workgroup
   - Interplay Username
   - Interplay Password.

   For more details on configuring and managing connections, click the ? icon to display the topic in the Vantage Domain Management Guide.
4. Click Test to confirm that Vantage can access the target MediaCentral | Production Management server. If you have problems, determine the issue and retry.

Configuration Overview

To configure an Asset Monitor action for your workflow, first specify the Interplay system you plan to monitor, and configure the monitoring options as required.

Note: The Interplay configurations listed are created by you in the Vantage Management Console.

Next, add your output(s) and configure them for processing.

When you are done configuring this action, click Save.

Configuration Details

Interplay Configuration. Specifies the target Interplay server for this workflow. When the workflow is activated, this list is dynamically generated from the Interplay systems identified in the Vantage domain. See *Adding a MediaCentral | Production Management System to Vantage* (above) for details.

Asset Monitor Settings

Interplay Folder. Specifies the full Interplay folder path for the output asset. For example: *`Incoming Media/Folder 1/Folder 2`*. The folder can be specified in the following ways: entering the folder path; clicking Browse and selecting an existing folder path; binding to a folder path variable.

Note: Interplay folder names are not case sensitive.

Master Clips. When checked, specifies that new master clips will be ingested for processing; otherwise they will be ignored. See Processing Asset Types below for more details.

Sequence Assets. When checked, specifies that new sequence assets will be ingested for processing; otherwise they will be ignored. See Processing Asset Types below for more details.

Ignore Custom User Attributes. Asset Monitor gathers all the asset metadata into a MediaCentral | Production Metadata output file, that includes system metadata, user metadata and contents of custom metadata fields defined for the MediaCentral | Production Workgroup, by default. When this option is checked, the custom metadata fields will be ignored. This option is used to address Interplay server issues involving control characters in the custom metadata.

Reprocess Assets on Modifications. When checked, assets that have been processed will be processed again when the asset is modified.

Persist Assets. When unchecked, processes all assets in a specified folder (conforming to other criteria, such as the last modified time of the asset being later than the date specified in Ignore Modifications Before) after each system/service restart.

When checked, saves the assets and their last-modified time stamps in persistent storage so they are not reprocessed after a system or service restart.

Track Deleted Assets. When checked, tracks assets that were deleted from an Interplay folder then added again later. Vantage will not reprocess the asset when the asset re-appears or if the Interplay service is restarted.

Process Incomplete Assets. When checked, processing an incomplete asset results in a failure for that asset. When unchecked (default), the asset will continue to be processed in subsequent scans.

Ignore Asset Online Status. When checked, ignores the online/offline status of an asset and processes the asset.

Process Partially Online Multi-Resolution Master Clip. When checked, processes the largest media size online resolution of a multi-resolution master clip track. When unchecked, the asset is always treated as having an offline track.

Asset Name Pattern. String supplied to Interplay for filtering the responses using a regular expression on the asset display name.

User Attribute Monitor. Monitors for changes to user attribute metadata from Interplay Access. If a change is detected, a new job will be triggered.

Note: Changing the attribute value to null (blank) or changes made while the service is not actively monitoring will not trigger a new job. When Track Deleted Asset is checked, moving the asset, modifying metadata, then moving the asset back to its original folder will trigger a new job.

Ignore Assets Created Before. Specifies a date in the past, beyond which no newly created assets should be ingested.

Ignore Modifications Before. Specifies a date in the past, beyond which no modified assets should be ingested.

Interplay Folder Scan Interval. Specifies the number of seconds (5-120) that should occur between scans.

Web Service Request Timeout. Specifies the maximum number of seconds (5-120) to wait for a response from the specified Interplay system before timing out.

Web Service Wait Per Request. Specifies the wait time for Web Service requests in milliseconds (0-120). Non-zero values disables HTTP persistence.

Generate Variables

Master MOB ID. When checked, specifies the text variable that contains the value of the master MOB ID for the ingested asset.

Source MOB ID. When checked, specify the text variable that contains the value of the Source MOB ID of the ingested asset, for use in downstream actions. The source MOB ID can be used to associate a high-res asset that is already in Production Management to link it to a Vantage/Flip64 proxy with the same MOB ID. The Source ID and Tape name are needed for Dynamic Relinking.

Tape (Source Package) Name. When checked, specify the text variable that contains the value of the tape name of the ingested asset, for use in downstream actions. The Source ID and Tape name are required for Dynamic Relinking.

Output Components

An Output component generates a file in the format specified, utilizing the ingested input file from the specified Interplay.

Output Toolbar Buttons

Up/Down Arrows. Moves the selected output up and down the set, for organization/readability purposes. Alternatively, use drag-and-drop: select a component and drag it to its new location in the set.

Plus Sign. Adds another output to this action. Click to select the type of output you want to add.

Deleting an Output

Delete. To delete an output, click the X icon immediately right of the nickname menu.

Adding and Configuring Outputs

Configure these controls:

Add Outputs. Add (using the Add button - Plus sign button - in the Output component toolbar) your outputs by format. Add one output for each file you plan to generate. Output formats include:

AAF - Create an AAF file of an Avid asset.

Interplay Metadata - A CML file containing the Interplay metadata associated with the asset. This file is intended to make metadata, along with the media files, available to Avid workflows. Asset restriction information for master clip assets is preserved in Interplay Metadata outputs.

Note: If you require the metadata file to have an XML extension instead of the default CML extension, select the output component to display the Container details panel in the details panel at the bottom. Click on the Browse button on the File Extension control and create a text variable, supplying the string 'xml' as the default value. This causes the file to use an XML extension instead of the default CML extension.

MPEG-4 Reference - A Telestream variant of an MPEG4 Reference file, intended for use in defining OP-Atom files for transcoding into the intended media file in a downstream action or workflow. Telestream MPEG-4 Reference files can be played in Switch.

Select the Output Location. Click Output Location and select from these choices:

- Available Vantage Store: Write the file to any available store, selected dynamically at run-time. Use this option typically when you only have one store, or when you are going to access and use the file by nickname in a downstream action - a transport or staging action, for example.

When you display the Vantage Folder Address Book, click the ? icon for more assistance. For more information on Vantage folder addresses, see the Vantage User Guide or the Vantage Domain Management Guide.

- *Vantage Store/Folder*: Write the file to a specific Vantage store or folder. Select from the list, or click the Browse button to display the Vantage Folder Address Book where you can create, edit, and manage your Vantage folder addresses.

When you display the Vantage Folder Address Book, click the ? icon for more assistance. For more information on Vantage folder addresses, see the Vantage User Guide or the Vantage Domain Management Guide.

- *Path*: Write the file to a specific Windows file system server and directory. Manually enter a Windows share (UNC path) or drive letter (not recommended on Vantage arrays) or click Browse to navigate and select the location. Or, click the green Browse button and select a variable which supplies the fully-qualified path.

Edit Filename Pattern. Displays the Filename Pattern Editor so that you can construct the exact filename pattern you require. Default: *Base Name*.

Click the insertion point in the text field and use the gear menu to select one or more tokens or multiple tokens of the same type to insert along with optional, static text fragments for the filename you are creating. You must specify a file extension. Drag tokens to re-arrange them; to delete a token, select and press Delete or right-click and select Delete.

Tokens:

- *Base Name*: Adds the Base Name (the portion of the filename excluding the period and the extension) of the input source file output filename to the output filename.

- *Variable*: Adds the value of the specified variable to the output filename. The Variable token is replaced by the value it holds when the action executes. The variable should be set prior to execution of this action. For example, if a Variable token named *ISCI* is given the value `12H4JA678`, wherever the ISCI variable token exists in the filename pattern it is replaced with `12H4JA678`.

- *Date*: Adds the date to the filename. Right-click the down-arrow to select the date format.

- *Time*: Select to add the time to the filename. Right-click the down-arrow to select the time format.

Select the Media Nickname. Click the menu to select the nickname (or enter it manually) for this new file.

Specify the Container File Extension. Select the output panel and specify the file extension for the selected wrapper, at the base of the right panel.

Ingesting Master Clips Directly into a Workflow

This chapter describes how the Retrieve action is implemented in Vantage, and how you can use it to start a job with a master clip's MOB ID, using it to provide Vantage access to its assets for transcoding or other processing.

Workflows can use the Retrieve action to quickly and efficiently generate a proprietary Telestream MP4 reference file (with video, audio and ANC data) plus an optional external metadata file and AAF file for processing by downstream actions or other workflows.

These workflow jobs are triggered via an API-based system or manually, via a Workorder or Receive action.

Topics

Overview

Workflows using a Retrieve action initiate a job each time an Interplay master clip's MOB ID is submitted to it and generating an MP4 reference file, plus optional metadata and AAF files. The Retrieve action makes the master clip's assets identified by the MOB ID from the target Interplay system accessible to the Vantage workflow. The Retrieve action can't process an asset if it is in an offline or partially online state, because Vantage can not create an MPEG-4 Reference with missing Avid OP Atom media.

Note: The Retrieve action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows. It does not perform decoding/encoding operations. For details, see *Ingesting Master Clips Directly into a Workflow* and *Configuring a Retrieve Action*.

Retrieve actions are executed by the Vantage Avid Service.

Typical workflow functionality involves transcoding the MP4 file downstream in Flip64 or other transcoding action to produce the desired output format. Metadata and AAF are optional output files that are delivered as attachments.

Feature Summary

Here is a summary of the features of the Retrieve action:

- Accepts a MOB ID via API or manual submission, makes the associated master file's assets accessible to downstream Vantage actions, and produces a Telestream-proprietary MP4 reference file for use in downstream actions
- Generates optional metadata file
- Produces optional AAF file.

Limitations

Here is a summary of the limitations of the Retrieve action:

- Only processes master files—can not process sequences or subclips
- Master file assets, metadata, and media must all be accessible—not partially or completely offline
- Can not execute in Open workflows

Avid Version Requirements

Vantage and Live Capture are continually tested for Avid compatibility as new versions become available. For details, see *Required Avid Components*.

Processing Asset Types

Master Clip. When processing a multi-resolution asset from MediaCentral | Production Management, the largest media size is processed by default. This is not always the highest quality.

AAF File Generation

The Retrieve action can optionally generate AAF files for use in other applications. For example, Edit While Ingest operations and file compositing for matte/key effects in Avid Media Composer.

Telestream MP4 Reference File Generation

The Retrieve action creates a Telestream MP4 reference file that references MXF OP-Atom files located on Avid shared storage for the asset and may also include additional transcoded media, and, for mixed format sequences, media samples. The MP4 reference file also includes ancillary data extracted from the MediaCentral | Production Management assets data track. Additionally, a metadata XML file containing the Production asset's user metadata and Production System data is generated. The MP4 reference file and XML file are passed to downstream actions in the workflow or to other workflows for transcoding and metadata extraction.

The Retrieve action treats the media format of the first segment of a sequence as the sequence's media format. The subsequent segments that differ in the format are transcoded to the sequence's format. The transcoded samples are stored in the MP4 output media.

Metadata Preservation

Most MediaCentral | Production Management systems have been developed with a specific and often complex Production schema for metadata storage and manipulation within a Production Workgroup, and contain asset-based metadata including custom user properties.

The metadata associated with an asset stored in the Production database is preserved by the Retrieve action within a metadata XML file. All ANC data contained in the asset's data track is also preserved in the MP4 reference file through Telestream extensions to the MP4 container (see *Using Telestream MP4 reference Files* for information on processing and playing of these files). When the file is passed downstream, the associated XML file is also transferred, making the metadata available for extraction and processing as required.

Using Telestream MP4 reference Files

Telestream-proprietary MP4 reference files generated by the Retrieve action may be processed by downstream Vantage encoding actions such as Flip64, and others. These files must have fully authenticated access to the media files located in the Avid shared storage.

Creating a Prototype Retrieve Action Workflow

Here is a prototype Retrieve action workflow depicting a typical use-case:

In this workflow, three actions are implemented:

Receive—The Receive action initiates a job when media is passed to it from a Forward action in another workflow, when a job is submitted via the Vantage SDK interface, or when a MOB ID is manually submitted to the workflow in Workflow Designer. This Receive action should be configured with a text variable to receive the MOB ID.

Note: For testing purposes, you can configure the Receive action to receive a media file (which is unused) in addition to the variable you've specified for the MOB ID, and in the Retrieve action, paste the MOB ID into the MOB ID control. Or, paste MOB ID directly into the variable as the default value.

Retrieve—configured to ingest the MOB ID via the specified variable from the Receive action and generate an MP4 file, with optional metadata and AAF file output.

Flip64—configured with an XDCAM encoder, the action creates a high-resolution file.

Configuring a Retrieve Action

The Retrieve action receives an AVID Interplay system master file's MOB ID. It retrieves the master clip identified by the MOB ID from the target Interplay system, and generates a Telestream MP4 reference file as the primary output. The Retrieve action can not process an asset if it is in an Offline or partially Online state, because Vantage can not create an MP4 Reference with missing Avid OP Atom media.

Retrieve actions are executed by the Vantage Avid Service.

Workflows using a Retrieve action may start with a Receive origin action configured with a variable to enable it to receive the MOB ID - from an API-based external system such as Media Composer, a Forward action in another workflow, a Workflow origin action, or a manual job submission in Workflow Designer.

The Retrieve action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows. The Retrieve action can not process assets that are sequences or subclips.

Typical workflow functionality involves transcoding the MP4 file downstream in Flip64 or other transcoding action to produce the desired output format. Metadata and AAF are optional output files that are delivered as attachments.

Before this action can be used in a workflow, you may configure your Vantage domain for the MediaCentral | Production system(s) you are using. See *Adding a MediaCentral | Production Management System to Vantage*, below, for details. Alternatively, you can define the target Interplay directly in the action.

Topics

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. The variable must have a value when this action executes. You can assign the value to the variable in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

MP4 File Generation

The Retrieve action creates a Telestream proprietary MP4 file that references MXF OP-Atom files located on Avid shared storage for the asset and may also include additional transcoded media. The file also includes VANC data extracted from the Interplay asset's data track. In addition, a metadata XML file containing the Interplay asset's metadata may be generated. The MP4 reference file (and XML metadata file and AAF file if

present) may be passed to downstream actions in the workflow or to other workflows for transcoding and metadata extraction.

Any system processing these MP4 files must have fully-authenticated access to the media files located in the Avid shared storage (ISIS/NEXIS).

MP4 files generated by the Retrieve action contain Telestream-proprietary extensions and are primarily for utilization within the Telestream ecosystem. Therefore, the following requirements apply:

- Vantage Flip64 actions processing these files must use the Auto decoder.

- For playback, Switch 4.0 or later is required and processes closed captions including other metadata in these files.

Adding MediaCentral | Production Management Connections to Vantage

To identify the target Interplay system, you can define it directly in the Retrieve action or you may add and configure an Interplay connection in your Vantage domain to communicate with each MediaCentral | Production Management system you are interacting with.

Note: The systems displayed in the Retrieve action Interplay Configuration menu are those that have been added to Vantage via the Vantage Management Console.

To add an Interplay connection to Vantage and configure and test it, follow these steps:

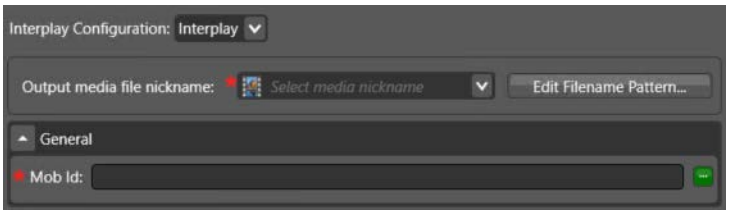
1. Start the Vantage Management Console.
2. In Settings & Options, display the Interplay tab.

   Vantage displays the Interplay configuration panel where you create, configure, delete, import and export MediaCentral | Production Management system connections.
3. Create and configure a connection to the target system, providing the following information:

   - Connection Name
   - Interplay Web Services Host
   - Interplay Web Services Port
   - Interplay Workgroup
   - Interplay Username
   - Interplay Password

   For more details on configuring and managing connections, click the ? icon to display the topic in the Vantage Domain Management Guide.

4. Click Test to confirm that Vantage can access the target MediaCentral | Production Management server. If you have problems, determine the issue and retry.



Configuration Details

Interplay Configuration

Interplay Configuration. Specifies Interplay | <<Specific user-specified Interplay systems>>. The specific Interplay systems menu items are dynamically generated from the MediaCentral | Production systems identified in the Vantage Management Console. See Adding MediaCentral | Production Management Systems to Vantage (above) for details.

Note: When you select a pre-defined Interplay system, the Interplay Settings panel (directly below the General panel) is hidden. If you select *Interplay*, the Interplay Settings panel displays and must be configured to identify the target system.

Configuring Output Media File Settings

Output Media File Nickname. Specifies the nickname associated with the MP4 output file for use in downstream actions.

Edit Filename Pattern. Opens the Filename Pattern Editor. Enter the complete filename or a portion of the filename, and use the menu on the right side to select one or more tokens to insert to create the exact filename pattern you require. You can drag and drop a token to change its order relative to other tokens, thus changing its location in the filename. Use the following tokens:

- *Base Name*. The name of the file, without the extension.

- *Variable*. You select the variable to use.

The *Variable* token is replaced by the value it holds when the action executes. The variable should be set prior to execution of this action. For example, if a variable token ISCI is given the value 12H4JA678, wherever the ISCI variable token appears in the filename pattern it is replaced with that value.

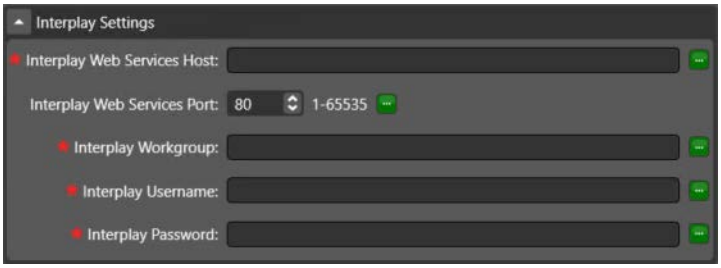
- *Date*. The current date at the time the filename is constructed. Change the date format using the menu.

- *Time*. The current time at the time the filename is constructed. Change the time format using the menu.

General Settings

Mob ID. Specifies the Mob ID associated with the Avid master clip asset registered in the specified Interplay system.

Interplay Settings



Note: This set of controls is only displayed when you select *Interplay* from the Interplay Configuration menu, to provide the target system directly in the action. If you select an Interplay system that you have defined in the Vantage Management Console, this panel is not displayed.

Interplay Web Services Host. The DNS/IP address of the Interplay Web Services server.

Interplay Web Services Port. The port being utilized by the Interplay Web Services server.

Interplay Workgroup. Name of workgroup (case-sensitive) associated with this Interplay system.

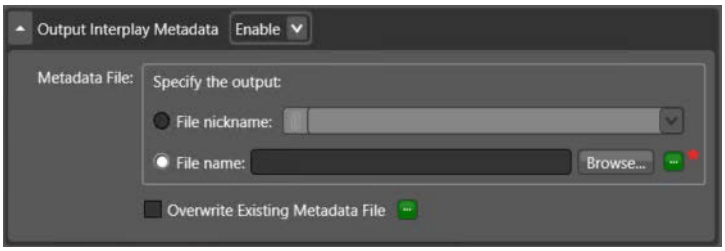
Interplay Username. Authorized user name.

Interplay Password. Authorized password.

Output Interplay Metadata

Configure these controls to generate a separate metadata XML file containing CML, as an attachment file for use downstream or separately. In Vantage, you can use the Extract action to access the AVID assets metadata in these files.

The metadata CML file contains the MXF file paths, Avid User properties - Name/Value string pairs, Avid Interplay Frame Locators, Avid Asset Restrictions (Copyright information, TV rating, etc.).



Output Interplay Metadata. Specify Enable to generate an optional metadata file in XML format and supply a nickname or fully-qualified filename.

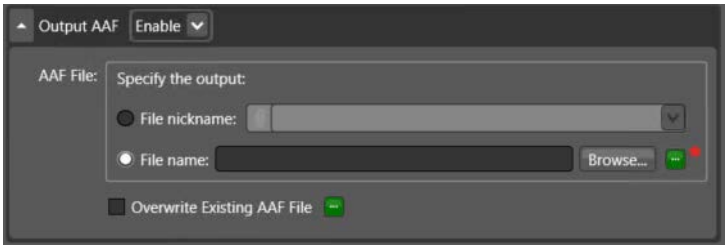
File Nickname. Select File nickname to identify the file by nickname.

File Name. Manually enter or browse and select the fully-qualified path to the XML metadata file. The destination must be writable by the Vantage Avid Service.

Overwrite Existing Metadata File. When checked, write the new file out to the destination, overwriting the existing file (if it is writable) without warning. If unchecked and the file exists, the job fails at the start of the job when user configuration is validated.

Output AAF

Configure these controls to generate a separate AAF file, as an attachment file for use downstream or separately.



Output AAF. Specify Enable to generate an optional AAF file and supply a nickname or fully-qualified filename.

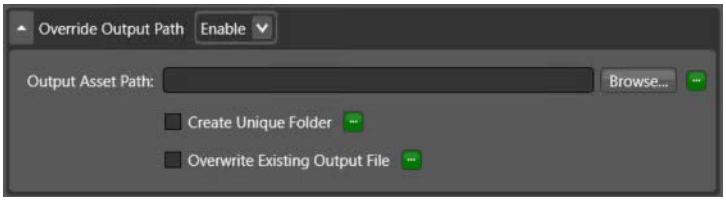
File Nickname. Select File nickname to identify the file by nickname.

File Name. Manually enter or browse and select the fully-qualified path to the AAF file.

Overwrite Existing AAF File. Check to silently overwrite the existing output file without warning. If unchecked and the file exists, the job fails at the start of the job when user configuration is validated.

Override Output Path

Configure these controls to override the default output path for the MP4 Reference file, for use downstream or separately.



Override Output Path. Specify Enable to override the default MP4 location (Vantage store) and supply a fully-qualified filename. When disabled, the location is the default Vantage store.

Output Asset Path. Manually enter or browse and select the fully-qualified path to the MP4 reference file. The destination must be writable by the Vantage Avid Service.

Create Unique Folder. Specify Enable to generate a folder in the path, and write the file to the new folder. The subfolder is named with a randomly generated GUID.

Overwrite Existing Output File. Check to silently overwrite the existing output file without warning. If unchecked and the file exists, the job fails at the start of the job when user configuration is validated.

Generating and Ingesting Avid-Compatible MXF OP-Atom Media

You can re-wrap primary/proxy media into an Avid-Compatible MXF OP-Atom container for use in an Interplay environment or Media Composer by creating workflows implemented with the Media Creation action. The Media Creation action doesn't transcode media; it simply re-wraps it. Therefore, you may have to transcode your media before processing it in the Media Creation action to use video that is compatible with MXF OP1a.

This chapter describes how the Media Creation action is implemented in Vantage and how you can use it in workflows to re-wrap media for import into Interplay (MediaCentral | Production Management) environment or Media Composer environment.

For a complete description of the Media Creation action's configuration details, see *Media Creation Action Configuration*.

Note: The listed license options do not support Edit While Ingest mode used with the AAF action. These require V-AVID or LS-LIVE-AVID-OPT license options.

Topics

Overview

Media Creation actions are executed by the Vantage Avid Service.

The Media Creation action has two operational modes for generating MXF OP-Atom media files—one for ingest into an Interplay (MediaCentral | Production Management) environment and one for a direct ingest to Media Composer environment:

- **Media Composer Mode**. For creating Avid-compatible MXF OP-Atom media files and the associated AAF file, including User Property metadata for use within a Media Composer editor directly. On a Vantage system, this mode is enabled with a Transcode Pro license. On a Live Capture system, this mode is enabled with the default Live Capture license.
- **Interplay Mode**. For creating Avid-compatible MXF OP-Atom media files and metadata that can be written to Avid shared storage and automatically checked into Production. On a Vantage system, this mode is enabled with a Transcode Pro Connect license containing the Advanced Avid Option. On a Live Capture system, this mode is enabled with the Live Capture Avid Option.

When ingesting media into Avid shared storage and checking the asset into a Production system, the asset can include integrated User Properties, Asset Restrictions, Locators, and a Head Frame file. Additional operations can be added by using a Notify Action.

If the workflow is set into an Open Workflow mode, Frame Chase (Edit While Ingest) can be enabled allowing a media file to be edited as it is being written into Production.

Note: In Interplay mode, for master files, you can enable the Custom Metadata Management to allow an Asset Name to be updated in Interplay (MediaCentral | Production Management) from an Open, Edit While Ingest Flip64, Lightspeed Live Capture or Tape workflow. When you enable Custom Metadata Management, Vantage can update User Metadata and create a head frame in the asset while the file is open and growing, without requiring the use of the Notify action to generate the MOB ID in primary videos. For proxy generation, you are still required to use the Notify action to generate the MOB ID.

This action is open workflow-capable if the Open Workflows license is installed; right-click the action and select Workflow Mode > Open. Open Workflows must also be enabled for the current workflow and in the Vantage Management Console > Settings. For Open Workflow configuration details, consult the Vantage Domain Management Guide available on the Telestream website.

Note: The Media Creation action does not perform media transcoding. Files are re-wrapped into Avid compatible MXF OP-Atom files. Therefore, the video must already be in the required format.

If the video in the file you want to add/update does not contain video in the appropriate format, it should first be processed through a Flip64 or Capture action to produce MXF OP1a or TIFO media containing video in the proper format. For Flip64 or Capture configuration details, consult the appropriate guides available on the Telestream web site.

You can also perform live or tape capture operations using the Capture or Tape action workflows on video you want to ingest. Configure the Capture/Tape action to produce MXF OP1a or TIFO media containing video in the proper format. For Flip64 | Capture |

Tape action configuration details, consult the appropriate guides available on the Telestream web site.

Note: For Live Capture | Tape workflows using the Media Creation action, always enable Set One Track per Channel.

Media Creation Action Codec Support

The Media Creation action supports pass-through of media in these forms:

- AVC Intra 50
- AVC Intra 100
- AVC Long GOP G12/G25/G50
- AVC Ultra
- DNxHD 444 / HQX / HQ / SQ / LB
- DNxHR 444 / HQX / HQ / SQ / LB
- DV based 25 / 50 /100
- DVCPro HD
- H.264 800Kbps / 1.5Mbps / 2 Mbps Proxies
- IMX 30 / 40 / 50
- XAVC Long GOP 25 / 30 / 50
- XAVC Intra 50 / 100
- XAVC Intra Class 300 CBG / VBR
- XAVC Intra Class 480 CBG / VBR
- XDCAM HD 18 / 35
- XDCAM HD 50
- XDCAM EX 35

Note: J2K support is limited; not all J2K progressive formats are expected to process correctly. J2K interlaced files are not supported in AMT.
AVC Intra 2K/4K 444 formats are not currently supported for Avid Flip64 workflows.
Flip64 supports creation of Open MXF XDCAM HD for use in the Media Creation action as well as TIFO files for open, Edit While Ingest workflows.

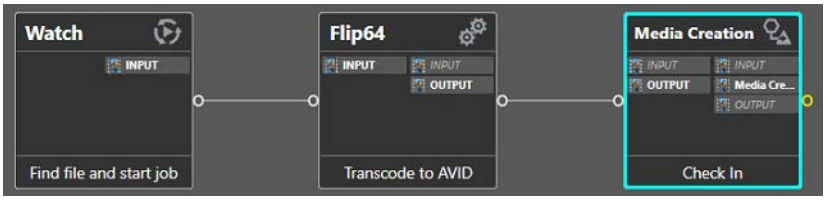
Creating Media Creation Workflows

You can create a variety of workflows using the Media Creation action for ingest into Interplay (MediaCentral | Production Management) systems. These include but are not limited to single resolution and multi-resolution workflows, metadata processing, and the generation of Avid classic proxies as required.

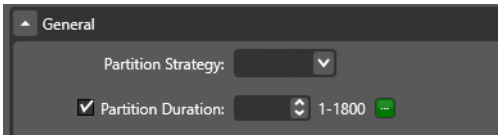
Note: In Interplay mode, for master files, you can enable the Custom Metadata Management to allow an Asset Name to be updated in Interplay (MediaCentral | Production Management) from an Open, Edit While Ingest Flip64, Lightspeed Live Capture or Tape workflow. When you enable Custom Metadata Management, Vantage can update User Metadata and create a head frame in the asset while the file is open and growing, without requiring the use of the Notify action to generate the MOB ID in primary videos. For proxy generation, you are still required to use the Notify action to generate the MOB ID.

Single Resolution Mezzanine Workflow

- Watch Action (Set to Open mode)—origin action, configured to monitor for sources.
- Flip64 Action (Set to Open mode)—transcode to the appropriate media format with Avid specific settings. TIFO and MXF OP1A are supported.
- Media Creation Action (Set to Open mode)—write Avid OP-Atom and AAF to Avid Storage and check asset into Production. Select TIFO or MXF OP1A as input depending on type specified in Flip64 action.



Note: When creating Open MXF XDCAM HD files with Flip64 for use in the Media Creation action, configure partition settings in Flip64 as specified below.



Partition Strategy—Select 'Place essence container in the body partition, the Index Tables are placed in the partition following essence partitions + RIP'.

Partition Duration—Enable and set to 5 seconds.

Simple Live Capture to Production Workflow

- Capture action (Set to Open mode)—origin action, create MOB IDs, Capture into Avid format. TIFO and MXF OP1A are supported. Always enable Set Force One Track Per Channel when using the Capture action or Tape action in a Media Creation workflow.
- Media Creation Action (Set to Open mode)—write Avid OP-Atom and AAF to Avid Storage and check asset into Production. Select TIFO or MXF OP1A as input depending on type specified in Capture action.

Note: For workflows which use Capture to generate proxies, Master MOB and Source MOB ID variable generation is specified in the Capture action configuration so a Notify action is not required.

Note: MPEG-1 Layer 2 audio is supported in Media Creation for Avid Proxy format created by Capture.

Media Creation Action Configuration

Configuring a Media Creation action involves three distinct steps:

- Select the format of your input file for proper decoding. See *Media Creation Action Configuration*.
- Configure the high-level controls for the Media Creation action to perform as specified, regardless of whether you are delivering media to Media Composer or an Interplay system. See *Configuration Overview*.
- Configure Media Composer controls or Interplay controls, based on your target system. See *Configuration Details*.

Input Formats

Select. Specifies Auto | AIFF | MXF OP1a | TIFO | Wave. See *Media Creation Action Codec Support* for supported formats.

- Select *Auto Input* to ingest media which is in a video/audio format supported by your Media Composer or a Interplay (MediaCentral | Production Management) environment for re-wrapping into Avid-compatible MXF OP-Atom files.
- Select *AIFF Input* to ingest media from an AIFF input file for re-wrapping into Avid-compatible MXF OP-Atom files.

- Select *MXF OP1a Input* when you are processing Open MXF OP1a files created by Lightspeed Live Capture. For other supported file formats, select Auto or TIFO.
- Select *TIFO Input* when you are capturing video in open workflow mode in TIFO format and want to re-wrap it into Avid-compatible MXF OP-Atom files. TIFO input is Open Workflow capable.
- Select *TIFO InputWave Input* when you are ingesting media from a WAVE input file for re-wrapping into Avid-compatible MXF OP-Atom files. Each Wave input supports one-channel-per audio track(s). This input component should only be utilized when you are processing WAVE files. Submitting non WAVE files to this input will result in job failures. For other supported file formats select Auto, MXF OP1a or TIFO.

Media Creation Settings

Media Creation actions are executed by the Vantage Avid Service.

Vantage Avid Service log files (avid.trace) are written to the *C:\Program Files (x86)\Telestream\Vantage\Avid* directory on the server where the Vantage Avid Service that executed the action is hosted. Update the config file to write log files per your requirements.

The Media Creation action enables you to create single and multi-resolution assets for use in a Media Composer or an Interplay (MediaCentral | Production Management) system. The Media Creation action operates in two modes: Media Composer mode and Interplay mode. Your first configuration task is to choose the mode from the Interplay Configuration menu at the top of the configuration details panel.

Note: You can select *Interplay* and configure the target Media Central Production Management system directly in the action. Or, you can identify one or more Media Central Production Management systems in the Vantage Management Console - Workflow Designer automatically displays these systems by name in the same Interplay Configuration menu. This enables you to choose the target MediaCentral | Production Management system from the menu, avoiding repeated manual configuration.

- Media Composer Mode: Select *Media Composer* to create Avid-compatible MXF OP-Atom files including metadata for ingest into a Media Composer editor. Media Composer is not required to be part of a MediaCentral | Production Management infrastructure.

- Interplay Mode: Select *Interplay Mode | Pre-defined MediaCentral | Production Management System (see Adding MediaCentral | Production Management Systems to Vantage*, below) to create Avid MXF OP-Atom files and metadata written to ISIS/NEXIS storage and automatically checked into a MediaCentral | Production Management system. Specific systems may be identified in the Vantage Management Console and selected from the menu.

When delivering media directly to a MediaCentral | Production Management system, assets include integrated User Property and Headframe creation. Locator metadata can

also be created; use a Notify action for delivery along with Interplay Web Service check-in into an Avid MediaCentral | Production Management workspace.

You can also create files for ingest into Media Composer in Open mode for Frame Chase editing; metadata insertion is supported while live video is being captured and the file is being processed in Vantage, enabling real-time editing.

Note: The Media Creation action does not perform transcoding. Files are re-wrapped into Avid-compatible MXF OP Atom AAF files. Therefore, the video must already be processed if required, with a supported codec. The Media Creation action supports a number of popular file formats. Consult the Generating and Ingesting Avid-Compatible MXF OP-Atom Media chapter in the Avid Integration Guide for the list.

If the video in the file you want to add/update is not in a supported format, it should first be processed through a Flip64 action to produce MXF OP1a media containing video in the proper format.

This action is Open workflow capable. It requires an Open Workflows license; right-click the action and select Workflow Mode > Open. Open Workflows must also be enabled for the workflow and at the domain level, in Vantage Management Console > Settings.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. The variable must have a value when this action executes. You can assign the value to the variable in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Accessing a MediaCentral | Production Management System

Prior to designing and implementing Avid workflows in Vantage to access Interplay (MediaCentral | Production) systems, you (the customer or Avid representative) must identify each system, including credentials.

Use these specifications to define Avid connections in the Vantage Domain Console for use in Media Creation and Asset Monitor workflows, or define them statically or dynamically via variables, directly in your workflows.

Asset Monitor and Media Creation actions are configured to interact with a specific MediaCentral | Production Management system. System configuration may be manual—statically specifying a system which does not change on a job-by-job basis.

System identification can also be dynamic, where you can use variables to identify the system dynamically for each job you execute. This is preferable when you may be accessing one of many Avid systems in a single workflow, based on run-time metrics. Dynamic, variable-driven workflows often simplify workflow design and utilization.

Note: Always connect to MediaCentral | Production Management and Web Services using a fully-qualified DNS name, which is registered with Forward and Reverse look up tables in DNS.

Note: Specific Avid systems that display in the Interplay Configuration menu are connections that have been configured in Vantage via the Management Console. For full details, see the Avid Integration Guide > Accessing MediaCentral | Production Management Systems.

To add a MediaCentral | Production connection to Vantage, follow these steps:

1. In the Vantage Management Console, in Settings & Options, display the Avid tab. The Interplay configuration panel enables you to create, configure, delete, import and export MediaCentral | Production Management system connections.
2. Create and configure a connection to the target system, providing the following information:

- Name (displays as a menu item in the action's Interplay Configuration menu)

- Web Services Host (enter the IP address | DNS name)

- Web Services Port

- Production Workgroup name

- Production Username

- Production Password

For more details on configuring and managing connections, click the ? icon to display the topic in the Vantage Domain Management Guide.

1. Click Test to confirm that Vantage can access the target MediaCentral | Production Management server. If you have problems, determine the issue and retry.

Action Configuration Details

Input (Left Panel)

Select. Specifies Auto | AIFF | MXF OP1a | TIFO | Wave.

- Auto: Ingest media which is in a video/audio format supported by your Media Composer/MediaCentral | Production system for re-wrapping into Avid-compatible MXF OP-Atom files.

- AIFF: Ingest media from an AIFF input file for re-wrapping into Avid-compatible MXF OP-Atom files.

- MXF OP1a: To process Open MXF OP1a files. For other supported file formats, select Auto or TIFO.

Note: The MXF OP1a decoder supports open workflows only for files being created by Lightspeed Live Capture.

- TIFO: To capture video in open workflow mode in TIFO format for re-wrapping into Avid-compatible MXF OP-Atom files. TIFO input is Open Workflow capable.

- Wave: To ingest media from a WAVE input file for re-wrapping into Avid-compatible MXF OP-Atom files. Each Wave input supports one-channel-per audio track(s). This input component should only be utilized when you are processing WAVE files. Submitting non WAVE files to this input will result in job failures. For other supported file formats select Auto, MXF OP1a or TIFO.

Interplay Configuration Mode

Interplay Configuration. Specifies Media Composer | Interplay | <<Avid System connections identified in the Management Console>>. There may be zero or more connections in the menu, depending on the connections you've created. The connections following Media Composer | Interplay are dynamically generated from the MediaCentral | Production systems identified in the Vantage Management Console. See *Adding MediaCentral | Production Management Systems to Vantage* (above) for details.

- *Media Composer*. Select to write AAF files to a specific location, and configure the Media Creation action to facilitate Media Composer ingest and use of the files.

- *Interplay*: A workflow-specified MediaCentral | Production Management system.

- <<Avid System connections identified in the Management Console>>. There may be zero or more connections in the menu, depending on the connections you've created. The list is dynamically generated from the MediaCentral | Production connections identified in the Vantage domain. See *Adding a MediaCentral | Production Management System to Vantage* (above) for details.

Configuring Output Media File Settings

Output Media File Nickname. Specifies the nickname for the output file for use in downstream actions.

Edit Filename Pattern. Opens the Filename Pattern Editor. Enter the complete filename or a portion of the filename, and use the menu on the right side to select one or more tokens to insert to create the exact filename pattern you require. You can drag and drop a token to change its order relative to other tokens, thus changing its location in the filename.

You can use the following tokens:

- *Base Name*. The name of the file, without the extension.

- *Variable*. You select the variable to use.

The Variable token is replaced by the value it holds when the action executes. The variable should be set prior to execution of this action. For example, if a variable token ISCI is given the value `12H4JA678`, wherever the ISCI variable token is located in the filename pattern, it is replaced with that value.

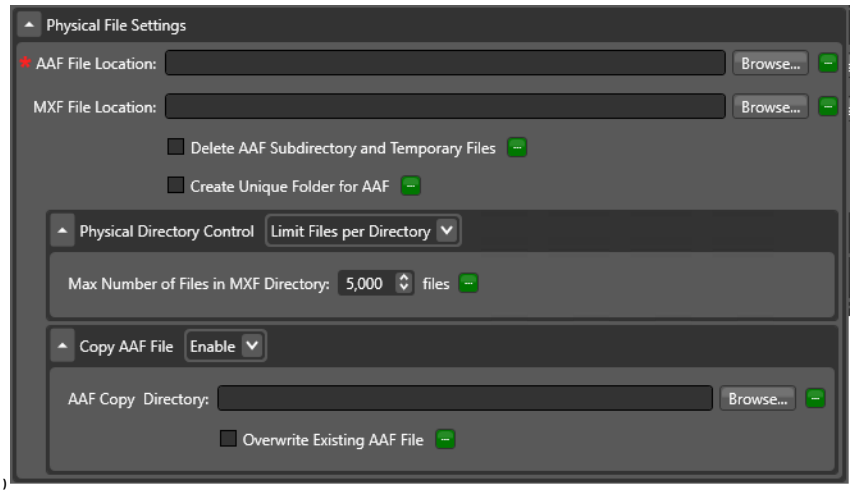
- *Date.* The current date at the time the filename is constructed. Change the date format via the menu.

- *Time.* The current time at the time the filename is constructed. Change the time format via the menu.

Media Composer Configuration

Use these panels to configure the Media Creation action for use with a Media Composer system:

Physical File Settings



AAF File Location. Specifies the UNC path to Avid storage where the AAF file will be written. The typical pattern is \\<*servername*>\<*workgroup folder*>\<*filename*>. For example: `\\avidnexispro\Interplay2021\AAF\AAF File1.aaf`.

MXF File Location. UNC path to Avid storage where the MXF OP-Atom media files will be written. The typical pattern is *\\servername\workgroup folder\Avid MediaFiles\MXF\file*. For example: `\\avidnexispro\Interplay2021\Avid MediaFiles\MXF\MXF File1.mxf`.

Note: Initial MXF path name must include the *\Avid MediaFiles\MXF* string.

Delete AAF Sub-directory and Temporary Files. When checked, deletes the AAF files and temporary files after the media has been checked into Interplay. These files are not deleted if the job fails.

Create Unique Folder for AAF. When checked, creates a unique directory folder for the output AAF file.

Physical Directory Control. Specifies Limit Files per Directory | Do Not Limit Files per Directory.

- *Limit Files per Directory*: When Limit Files per Directory is selected, update the Max Number of MXF Files in MXF Directory field to specify the maximum number of files. When the maximum is reached, the action creates a new directory with a numerical suffix (<dirname>.1, etc.) to store the next set of files. Range: 100 - 10,000. Default: 5,000.

- *Do Not Limit Files per Directory*: When Do Not Limit Files per Directory is selected, there is no maximum.

Copy AAF File. Specifies Enable | Disable:

- *Enable*: Specifies the AAF Copy Directory and option to Overwrite Existing AAF File.

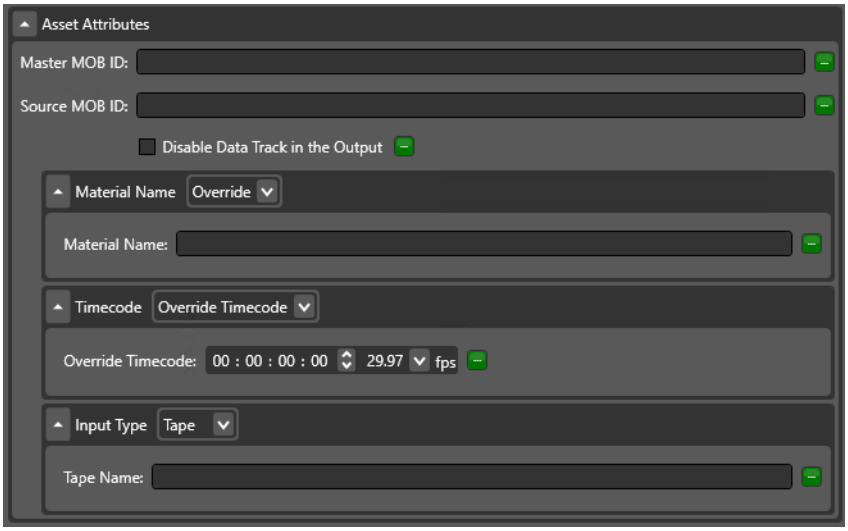
  AAF Copy Directory. Browse to select or manually enter the fully-qualified folder path.

  Overwrite Existing AAF File. Check to overwrite an existing file of the same name in the target copy directory; uncheck to fail the action.

- *Disable*: Do not copy the AAF file. Local AAF file is temporary and disposed of per Vantage settings.

Note: If Overwrite Existing File is unchecked and a file with the same name exists in the destination directory, the job fails.

Asset Attributes



Master MOB ID. Specifies the master MOB ID for this asset.

Source MOB ID. Specifies the source MOB ID for this asset.

Disable Data Track in the Output. When checked, disables creation of a data track in the output.

Set Source Clip Start Time Offset. When checked, sets the timecode in the SMTE 377 timeline.

Material Name. Specify Use Media Name | Override. This name displays as the asset's display name unless a non-empty tape name is configured.

- *Use Media Name*. Input media name is used to configure the asset name.

- *Override*. Overrides default asset name with the user specified value. When selected, complete this control:

  Material Name. Specifies the name to use for the asset.

Note: To change the AAF folder name and filename use the Filename Pattern Editor to change the naming scheme.

Timecode

If the transcoded source uses drop frame timecode then the Media Creation action generates drop frame output. Conversely, if the transcoded source is non-drop frame then the generated output is also non-drop frame.

Timecode. Specifies timecode to use: Use Source Timecode | Override Timecode.

- *Use Source Timecode*. Uses the source timecode detected in the media.

- *Override Timecode*. Timecode detected in source file is used with no changes to the timecode in the output. When selected, provide:

  Override Timecode. Specify the timecode, frame rate, and drop frame or non-drop frame notation to use.

Input Type

Both Tape Name and Source Package Name values change the first 9 characters of the MXF output filenames and add metadata to Access and Media Composer in the tape name field (no character limit). If values are entered, this overrides the name set in the Filename Pattern Editor.

Dynamic Relinking: Avid uses the input descriptor information to check whether one of the two media are proxies or can be dynamically relinked. In the case of Dynamic Relinking using 2 Media Creation actions (1 high-res, the other proxy) the input descriptors (Tape Name/Source Package Name values) must be the same. This is best achieved by using a variable.

Naming Tapes: Tape names must be alphanumeric characters (A - Z, 0 - 9) and include uppercase and lowercase characters. Select a case convention and maintain it throughout a project.

Guidelines for MultiRez Tape Management: When working in a MultiRez workflow, it is important to name tapes properly. In particular, you should keep the following in mind:

Whenever you create a new tape, Media Composer generates a new source ID, even if the name you type for the new tape exactly matches that of an existing tape. You cannot dynamically relink media that does not share a source ID.

Do not use the same name for two different tapes or different names for the same tape. This might cause incorrect media association. Do not use the default tape name New Tape.

Input Type. Specifies input type: Tape | Import. Default: Import.

Tape: Select when media is tape-based, and specify the optional tape name of the asset.

Note: Avid does not support ingesting media define as Tape for 4K media - the asset displays as offline. Additionally, media with a non-zero timecode greater than 26 seconds also displays as offline.

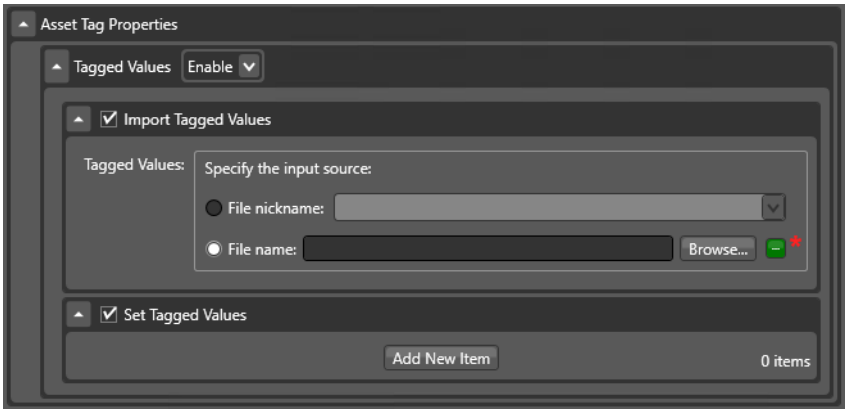
Tape Name. When Input Type is *Tape*, optionally specify the asset tape name.

Import: When media is digital (disk-based), specifies the asset source package name.

Note: While Avid strongly recommends using *Import* mode for file-based digital media workflows, this method does not permit the Tape name field to be used for relinking. Tape mode should be used for traditional dynamic relinking using the Tape field.
Tape name data replaces the Asset Name set in the Vantage Filename Pattern Editor when not empty. To configure the Asset Name you must configure a User Property with the property name Display Name along with the desired value. Consult the Avid Integration Guide for more details.

Source Package Name. When Input Type is *Import*, specifies the optional source package name of the asset.

Asset Tag Properties



Tagged Values. Specifies Disable | Enable. When enabled, allows specification by filename or file nickname of an XML file containing tagged values for an asset.

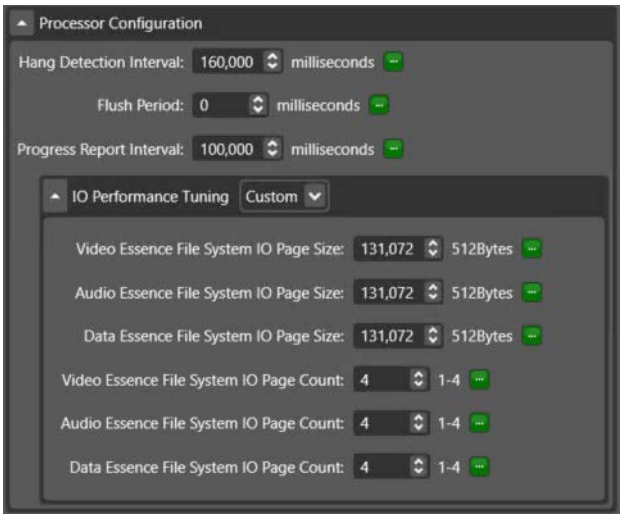
Import Tagged Values. When checked, allows specification by filename or file nickname of an XML file containing tagged values for an asset.

File Nickname. Select File nickname to identify the file by nickname.

File Name. Manually enter or browse and select the fully-qualified path to the XML file.

Set Tagged Values. When checked, allows specification of tagged value pairs that are displayed in the Media Composer bin. Click Add New Item and configure pairs. Each tagged value pair item contains metadata fields for the name and associated value for the tagged pair.

Processor Configuration



Hang Detection Interval. (Default: 160,000) Specifies the time interval in MS to detect a hung process.

Flush Period. (Default: 6,000) Specifies the flush period time interval in MS.

Progress Report Interval. (Default: 50,000) Specifies the progress report time interval in MS.

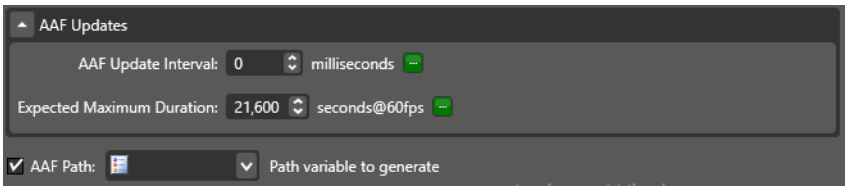
IO Performance Tuning

Specifies Default | Custom. For Custom settings, configure these controls:

Video | Audio | Data Essence File System IO Page Size. Larger size leads to better performance. 512KB to 64MB in 512K increments.

Video | Audio | Data Essence File System IO Page Count. Smaller page count leads to better performance. 1 - 4 pages.

AAF Updates



AAF Update Interval. An AAF file, updated progressively, is made available for importing into Media Composer for editing, at the beginning of media capture. Specifies optional local AAF update interval time in milliseconds. Default is 0 (disabled).

Expected Maximum Duration. Expected duration in seconds, rationalized for 60 fps.

AAF Path and Mob ID Variables

AAF Path. When checked, specifies the path variable and is assigned the fully-qualified path of the AAF file for use by downstream actions. Typically this is used in Open workflows to provide an intermediate AAF path while media files are still growing. The variable is set from the AAF action from the Input > Source > File name field.

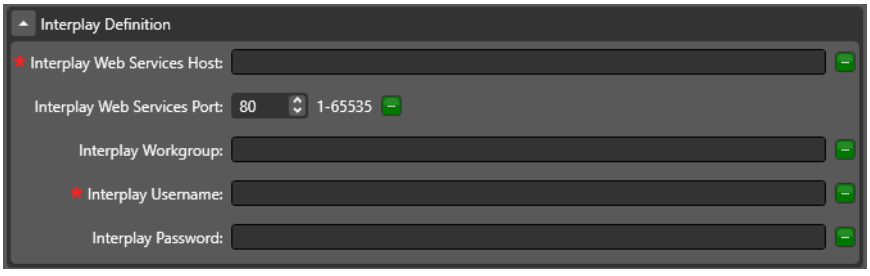
Master MOB ID. When checked, specifies the text variable and is assigned the master MOB ID of the asset for use by downstream actions.

Interplay Mode Configuration

Use the following panels to configure the Media Creation action for use with an Interplay system that you want to specify directly in this action or for use with a specific Interplay system:

Note: The Interplay Definition panel is only displayed when you select Interplay and must identify the target system directly in the action. If you select an Interplay system that you have defined in the Vantage Management Console, these controls are not displayed.

Interplay Definition



Interplay Web Services Host. The DNS/IP address of the Interplay Web Services server.

Interplay Web Services Port. The port being utilized by the Interplay Web Services server.

Interplay Workgroup. Name of workgroup (case-sensitive) associated with this Interplay system.

Interplay Username. Authorized user name.

Interplay Password. Authorized password.

Interplay Settings

Interplay Folder. Specifies the MediaCentral | Production Management virtual folder path to be used for the output asset. For example `\Incoming Media\Media Creation\New Folder or /Incoming Media/`. You may enter a known path; browse to an existing folder path; or bind to a folder path variable.

Create Interplay Folder Path. When checked, creates the Production virtual folder(s) that do not exist in the configured Interplay Folder path. When not enabled, the job fails if the Interplay folder path does not exist.

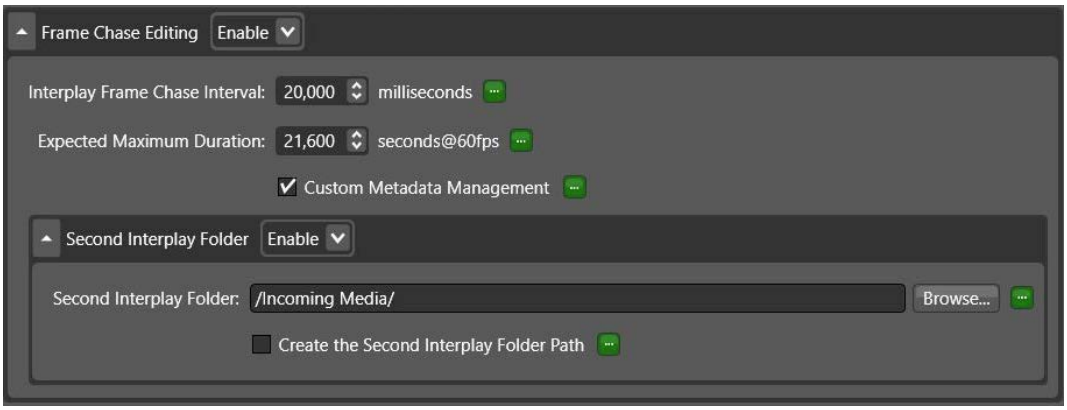
These top-level system directories in Production can't be modified Catalogs

- Incoming Media
- Orphan Clips
- Projects
- Send To Playback
- Unchecked-In Avid Assets

Note: These special characters are not allowed in folder names ? : / \ " < > |

Frame Chase Editing. Specifies Enable | Disable. When enabled, creates a special type of Production asset, that can be edited while media ingest is in progress. The growing asset is available in the Production system, as soon as the initial check-in occurs. When the media capture ends, a final update is made to the Production system. This update

changes the clip's type from an in-progress clip to a conventional master clip and updates the metadata. Configure these controls:



Interplay Frame Chase Interval. Specifies the frame chase interval (integer - number of milliseconds). Growing assets are checked into Production at the end of every specified frame chase interval.

Expected Maximum Duration. Specifies the expected maximum duration in seconds @60fps that is displayed in Interplay Access and Media Composer while a file is being processed. Once the file is complete and updated, the duration shows the actual duration of the file. This applies to both open and closed workflow configurations.

Custom Metadata Management. Enable to allow an Asset Name to be updated in MediaCentral | Production Management in an Open, Edit-During-Capture (Frame Chase) Flip64, Lightspeed Live Capture or Tape workflow. Enables Vantage to update the asset user metadata and the head frame without requiring the use of the Notify action to generate the MOB ID. For proxy generation in a Flip64 workflow, you must use a Notify action to generate MOB IDs. In a Capture/Tape workflow, you may use the Capture/Tape action to generate the MOB IDs directly.

Note: For improved Head Frame display performance in Interplay Access, enable Custom Metadata Management.

Second Interplay Folder. Specifies Enable | Disable. When enabled, creates an identical, duplicate media asset to a secondary folder on the same system.

Second Interplay Folder. Specifies the MediaCentral | Production Management virtual folder path to be used for the secondary output asset. For example `\Incoming Media\Media Creation\New Folder or /Incoming Media/`. You may enter a known path; browse to an existing folder path; or bind to a folder path variable.

Create the Second Interplay Folder Path. Optionally, create the virtual folder manually in Interplay Access. Or check the control to create the Production virtual

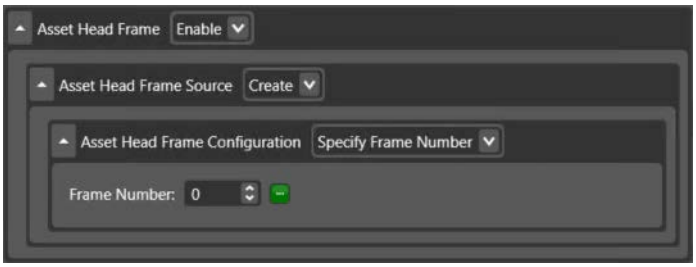
folder(s) that do not exist in the configured Interplay Folder path. When not enabled, the job fails if the Interplay folder path does not exist.

These top-level system directories in Production can't be modified Catalogs

- Incoming Media
- Orphan Clips
- Projects
- Send To Playback
- Unchecked-In Avid Assets

Note: These special characters are not allowed in folder names ? : / \ " < > |

Asset Head Frame. Specifies Enable | Disable. When enabled, allows specification of a Head Frame source as generated by a Media Creation or Flip64 action. Creation of an open Head Frame is supported.



Asset Head Frame Source. Specifies Create | Set. Allows specification of a Head Frame source using Frame Number or Timecode (Create) or via an Asset Head Frame file (Set). Configure these controls:

- *Create*. Specifies Head frame using frame number or timecode (default).

  Asset Head Frame Configuration. Specifies Specify Frame Number | Specify Timecode. Complete these controls as appropriate:

  Frame Number. Creates and uses the first I-frame from the specified frame number in the input video track.

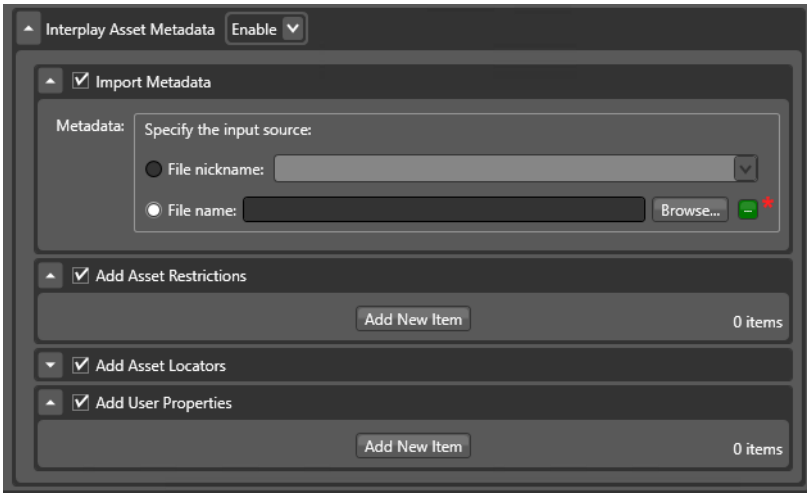
  Specify Timecode. Creates and uses the first I-frame from the specified timecode in the input video track.

- *Set*. Specifies Head Frame using filename or nickname of the file generated:

  File Nickname. Specifies the file by nickname. The file must have been ingested by an upstream action and assigned a nickname. Use this option when the file changes for each job.

  File Name. Manually enter or browse and select the fully-qualified path to the file. The Vantage service that executes this action must have access to the file location. Use this option when you want to assign a static file, which is used for every job. If you assign a variable, the variable must be assigned the fully-qualified path and file name in an upstream action and the file can change for each job.

Interplay Asset Metadata. Specifies Disable | Enable. When enabled, allows metadata to be added via a file using a (Interplay) Production metadata file or manually using Add Asset Restrictions, Add Asset Locators, or Add User Properties controls.



Note: The XML for Avid User Property Metadata and Locators uses a simple structure. It consists of two Element types: <Entry> for adding Avid User Property data and <Locator> for adding Avid Locator data. Each Element has several attributes, used to supply data for the Entry or Locator element you are defining. Multiple Entry and Locator elements are permitted. See *MediaCentral | Production Management Metadata XML*.

Import Metadata File. Allows specification of an Production Asset Metadata file by file path or nickname. Various parameters such as User Properties and Locators can be added via an XML file.

Add Asset Restrictions. When checked, allows manual addition of Asset Restrictions. A restriction is a span of an asset that indicates a clip, or a portion of a clip, whose use is limited in some way, such as through intellectual property rights management or content compliance. There are 2 options for setting the Restriction:

- In Frame Number / Out Frame Number
- In Timecode / Out Timecode

The Frame Number options are enabled by default and values entered in Timecode fields are ignored. Disable the Frame Number options to use the In Timecode and Out Timecode values.

If Frame Numbers are used, the In Frame Number and Out Frame Number are offsets from the beginning of the clip. A Frame Number is considered invalid if it is negative or if it extends past the duration of the clip.

Note: Jobs complete successfully, and assets are created, even if a restriction was unable to be added to the database. This can occur, for example, if an Asset Restriction uses a non-existent frame number or timecode value. However, such failures with Production transactions in setting the asset metadata will not result in job failures.

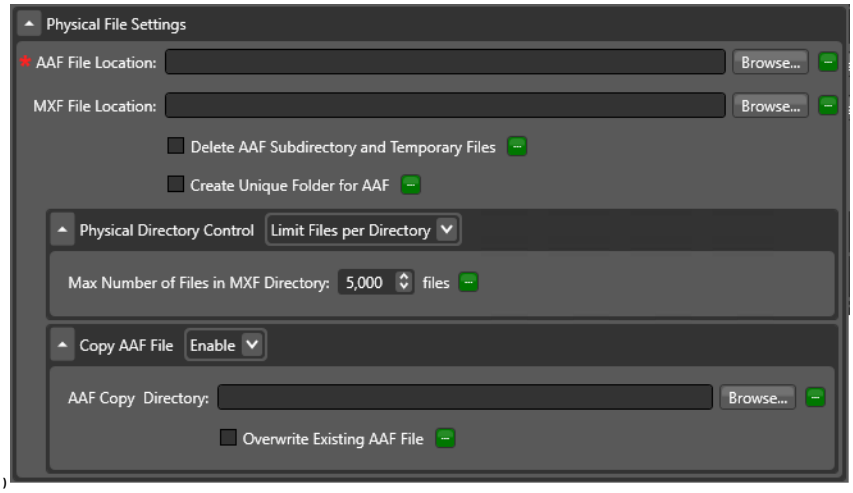
Note: Unlike other Interplay Access metadata features, the following special characters are allowed ? : / \ " < > |.

Add Asset Locators. When enabled, allows the addition of frame locators and associated attributes for assets. These include Comment, Color, Timecode, Frame Number, and Track.

Add User Properties. When enabled, allows the addition of Avid User Properties. If the name of the User Property does not exist, it is created and populated with the associated value.

Note: When viewed in Interplay Access, copied clips may intermittently include a random number sequence appended to the display name (EX.*Dup_12345678*). Specifying 'Display Name' for Name in Add User Properties metadata field prevents this from occurring.

Physical File Settings



AAF File Location. Specifies the UNC path to Avid storage where the AAF file will be written. The typical pattern is \\<*servername*>\<*workgroup folder*>\<*filename*>. For example: `\\avidnexispro\Interplay2021\AAF\AAF File1.aaf`.

MXF File Location. UNC path to Avid storage where the MXF OP-Atom media files will be written. The typical pattern is *\\servername\workgroup folder\Avid MediaFiles\MXF\file*. For example: `\\avidnexispro\Interplay2021\Avid MediaFiles\MXF\MXF File1.mxf`.

Note: Initial MXF path name must include the **\Avid MediaFiles\MXF** string.

Delete AAF Sub-directory and Temporary Files. When checked, deletes the AAF files and temporary files after the media has been checked into Interplay. These files are not deleted if the job fails.

Create Unique Folder for AAF. When checked, creates a unique directory folder for the output AAF file.

Physical Directory Control. Specifies Limit Files per Directory | Do Not Limit Files per Directory.

- *Limit Files per Directory*: When Limit Files per Directory is selected, specify the **Max Number of MXF Files in MXF Directory**. When the maximum is reached, a new directory is created with a numerical suffix (<dirname>.1, etc.) to store the next set of files. Range: 100 - 10,000. Default: 5,000.

- *Do Not Limit Files per Directory*: When Do Not Limit Files per Directory is selected, there is no maximum.

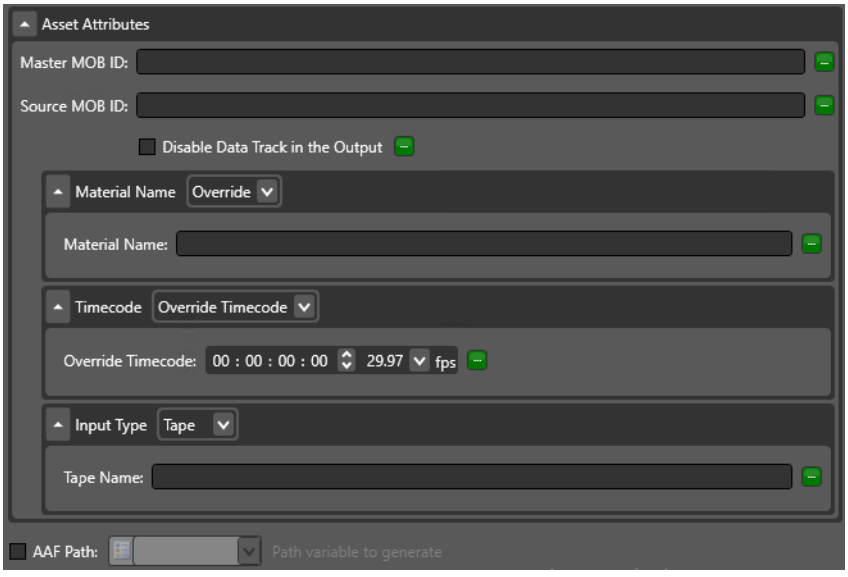
Copy AAF File. Specifies Enable | Disable.

- *Enable*: Specifies the **AAF Copy Directory** and option to **Overwrite Existing AAF File**.

- *Disable*: Do not copy the AAF file. Local AAF file is temporary and disposed of per Vantage settings.

Note: If Overwrite Existing File is unchecked and a file with the same name exists in the destination directory, the job fails.

Asset Attributes



Master MOB ID. Specifies the master MOB ID for this asset.

Source MOB ID. Specifies the source MOB ID for this asset.

Disable Data Track in the Output. When checked, disables creation of a data track in the output.

Set Source Clip Start Time Offset. When checked, sets the timecode in the SMTE 377 timeline.

Material Name

Specify Use Media Name | Override. This name displays as the asset's display name unless a non-empty tape name is configured:

- ***Use Media Name***. Input media name is used to configure the asset name.

- ***Override***. Overrides default asset name with the user specified value. When selected, complete this control:

    Material Name. Specifies the name to use for the asset.

Note: To change the AAF folder name and filename use the Filename Pattern Editor to change the naming scheme.

Timecode

If the transcoded source uses drop frame timecode then output is drop frame. If transcoded source is non-drop frame then output is non-drop frame.

Specifies timecode to use: Use Source Timecode | Override Timecode:

- ***Use Source Timecode***. Uses the source timecode detected in the media.

- ***Override Timecode***. Timecode detected in source file is used with no changes to the timecode in the output. When selected, specify...

    Override Timecode. Specify the timecode, frame rate, and drop frame or non-drop frame notation to use.

Override Physical Source Timecode

When the Media Creation action generates a new asset from a part of the media file that was used to make another asset and these two assets need to be relinked, then the new asset should have the same physical start timecode as the one made with the complete media file.

Specifies: Enable | Disable. When enabled, specify...

Override Timecode. Specify the timecode, frame rate, and drop frame or non-drop frame notation to use.

Input Type

Specifies: Tape | Import. Complete these controls as appropriate:

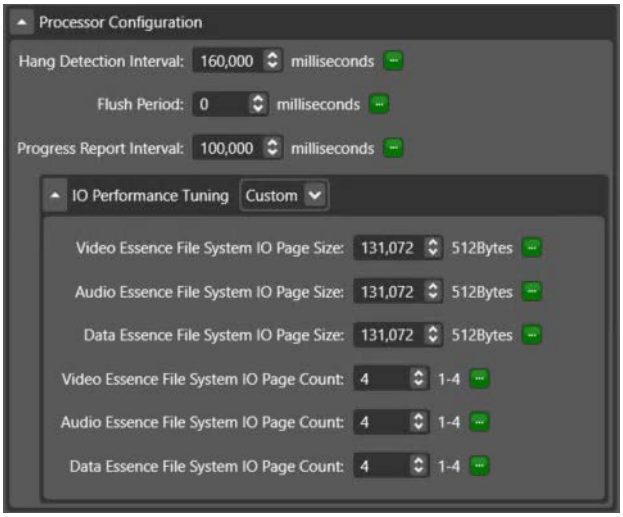
Note: Avid does not support ingesting media via Tape mode for 4K media - the asset displays as offline. Additionally, non-zero timecode greater than 26 seconds also displays as offline.

- ***Tape Name***. When Input Type is *Tape*, specifies the tape name of the asset.

- ***Import***. When Input Type is *Import*, specifies the source package name of the asset.

Note: While Avid strongly recommends using Import for file based digital media workflows, this method does not allow for the Tape name field to be used for relinking. Tape mode may be used for traditional dynamic relinking using the Tape field. Tape name data replaces the Asset Name set in the Vantage Filename Pattern Editor when not empty. To configure the Asset Name you must configure a User Property with the property name 'Display Name' along with the desired value. Consult the Avid Integration Guide for more details on this configuration.

Processor Configuration



Hang Detection Interval. (Default: 160,000) Specifies the time interval in MS to detect a hung process.

Flush Period. (Default: 6,000) Specifies the flush period time interval in MS.

Progress Report Interval. (Default: 50,000) Specifies the progress report time interval in MS.

IO Performance Tuning

Specifies Default | Custom. For Custom settings, configure these controls:

Video | Audio | Data Essence File System IO Page Size. Larger size leads to better performance. 512KB to 64MB in 512K increments.

Video | Audio | Data Essence File System IO Page Count. Smaller page count leads to better performance. 1 - 4 pages.

AAF Path and Mob ID Variables

AAF Path. When checked, specifies the path variable and is assigned the fully-qualified path of the AAF file for use by downstream actions. Typically this is used in Open workflows to provide an intermediate AAF path while media files are still growing. The variable is set from the AAF action from the Input > Source > File name field.

Master MOB ID. When checked, specifies the text variable and is assigned the master MOB ID of the asset for use by downstream actions.

Avid Multi-Res Configuration using Flip64

The Media Creation action supports TIFO x264 inputs with an Avid-compatible proxy format (up to 16 channels of MPEG-1 Layer 2 audio) and a compatible high-res format created by Flip64 (see Flip64 Settings for Avid Proxies).

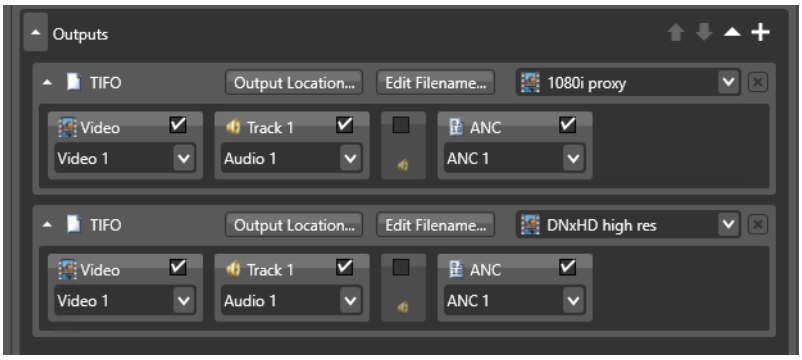
Note: The Media Creation action supports TIFO files with MPEG-1 Layer 2 audio.

Avid Multi-Res Workflow using Flip64

- Watch Action—origin action.
- Notify Action—generates Master MOB and Source MOB ID variables. These variables are bound in the Media Creation actions and allow the high-res and proxy assets to be toggled using Dynamic Relinking in Media Composer.

Note: In Interplay mode, for master files, you can enable the Custom Metadata Management to allow an Asset Name to be updated in Interplay (MediaCentral | Production Management) from an Open, Edit While Ingest Flip64, Lightspeed Live Capture or Tape workflow. When you enable Custom Metadata Management, Vantage can update User Metadata and create a head frame in the asset while the file is open and growing, without requiring the use of the Notify action to generate the MOB ID in primary videos. For proxy generation, you are still required to use the Notify action to generate the MOB ID.

- Flip64 Action—creates TIFO outputs, one for proxy and one for high-res.



- Media Creation Actions—parallel actions (for proxy and high-res) for delivering assets to Avid systems.

Configuring the Notify action to generate Media Creation variables

1. Select MOB ID Generator Notifier.
2. Configure to generate Master MOB ID and Source MOB ID variables.

Configuring the Flip64 action x264 proxy TIFO output

1. Create a Flip64 action configured with a TIFO output container.
2. For the Video track, select x264 from the Video Codec menu and configure.

Note: Enter the x264 configuration settings detailed in the Flip64 Settings for Avid Proxies document available from Telestream.

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3. For the Audio track, select PCM or MPEG-1 Layer 2 audio. For PCM set the appropriate *Number of Channels, Sample Rate* of 48,000 Hz, and *Format* to 16 or 24 bits. For MPEG-1 Layer 2 audio, set *Channel Configuration* to Mono, *Bit Rate* to 48 kbps, and a *Sample Rate* of 48,000 Hz.

Configuring the Flip64 action high-res MXF OP1a | TIFO output

1. Create a Flip64 action configured with a MXF OP1a | TIFO output container.
2. Select a supported format from the container's Video Codec menu. See *Media Creation Action Codec Support*.
3. Configure PCM audio, setting the appropriate *Number of Channels*, a *Sample Rate* of 48,000 Hz, *Format* to 16 or 24-bits and the *Number of channels per track* set to 1.

Configuring the Media Creation proxy action

1. Create a Media Creation action configured with a TIFO input container.
2. Set the Avid Picture Essence Coding Type to the appropriate proxy setting (800 kbps, 1.5 Mbps, or 2 Mbps). See *Specifying the Avid Picture Essence Coding Type* for required values.

Configuring the Media Creation high-res action

1. Create a Media Creation action configured with a TIFO or MXF OP1a input container to process your input file properly.
2. Set the Avid Picture Essence Coding Type to Auto. If ingesting AVCI 50/100 or XAVCI 50/100, select the appropriate value. See *Specifying the Avid Picture Essence Coding Type* for required values.
3. Bind the Master MOB ID and Source MOB ID variables, generated previously in the Notify action, in the Asset Attributes panel.
4. For both Media Creation actions, select Import (Source Package Name) for the Input Type in the Asset Attributes panel. See *Using the Import Input Type*.
5. Enter a value for the Source Package name. See *Guidelines for Multi-Res Input Type Name Management*.

Note: Import (Source Package Name) value specified must be the identical for both Media Creation actions.

Guidelines for Multi-Res Input Type Name Management

When working in a multi-res workflow, it is important to use Import (Source Package Name) properly. In particular, you should keep these issues in mind:

1. Whenever you create a new Import (Source Package Name), Media Composer generates a new source ID, even if the name you type exactly matches that of an existing Import (Source Package Name). You cannot dynamically relink media that does not share a source ID.
2. Do not use the same name for two different assets or different names for the same asset. This will result in incorrect media association.
3. When using the Tape Name input type, do not use the Avid reserved tape name of *New Tape*.
4. Input Type names are case-sensitive—for example, *inputname1* and *InputName1* are considered distinct—so maintain a consistent naming convention throughout a project.

Note: Historically, using a tape name was common because most material was digitized from tape. For example in Avid Media Composer, creating a 'New tape' creates a new tape Source MOB ID. With most sources now being file based, the correct descriptor type to select is Import with specified Source Package Name. Depending on the descriptor type selected, Avid Media Toolkit follows slightly different rules for naming files and Master MOB IDs. It is not necessary to create a tape name to be able to set the 'tape name' property in the resulting media asset. For configuration details see *Using the Import Input Type*.

Dynamic Relinking

Avid uses the Input descriptor information to check whether one of the two media are proxies can be dynamically relinked or not. In the case of Dynamic Relinking using two Media Creation actions (one high-res, the other a proxy) the Input descriptors must be the same. This is best achieved by using a variable.

Note: Tape name data replaces the Asset Name set in the Vantage Filename Pattern Editor when not empty.

Using the Import Input Type

WARNING: *Avid strongly recommends using Import mode for file-based digital media workflows.*

Using Import mode doesn't allow for the Tape Name field to be used for relinking. The Tape name value specified in the Media Creation action is replaced by the Asset Name set in the Vantage Filename Pattern Editor (when not empty).

Using the Tape Input Type

WARNING: *Ingesting media generated as Tape input type may not perform as expected.*

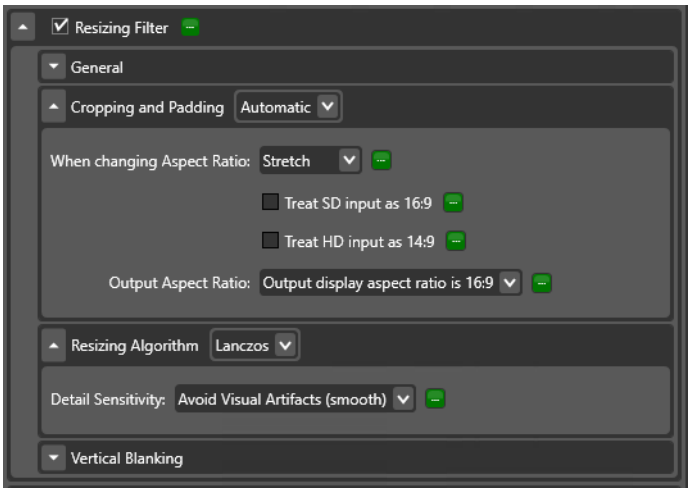
Tape mode may be used for traditional dynamic relinking but the Tape name value specified in the Media Creation action will replace the Asset Name set in the Vantage Filename Pattern Editor (when not empty). In order to use Tape mode and properly configure the Asset Name and Tape name in Media Composer and Interplay Access, perform these tasks:

- Enable Interplay Asset Metadata and check Add User Properties. Click Add New Item and set Name to the reserved value of Display Name. Provide a value (for example, Name of the File) or bind it to a variable which provides a value.
- Under Input Type, select Import and provide a source package name (for example, *RedHerring*) or bind a variable which provides a value. Avid recommends using Import.

Requirements for Creating Proxies

Configuring the Resizing Filter in Flip64

For 720p 50/59.94 2 Mbs proxies, configure the resizing filter in Flip64 as shown:



Cropping and Padding—Automatic

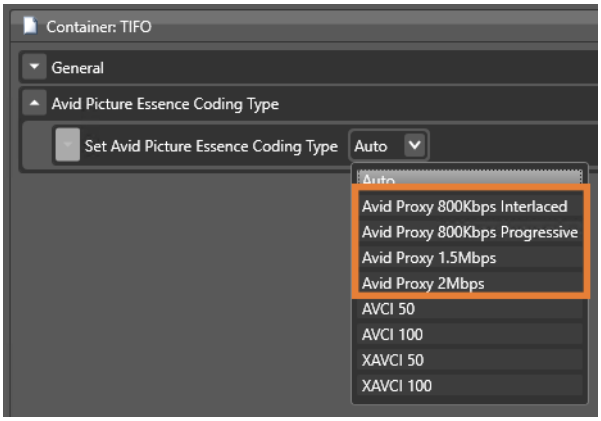
Output Aspect Ratio—Output display aspect ratio is 16:9

Detail Sensitivity—Avoid Visual Artifacts (smooth).

Specifying the Avid Picture Essence Coding Type

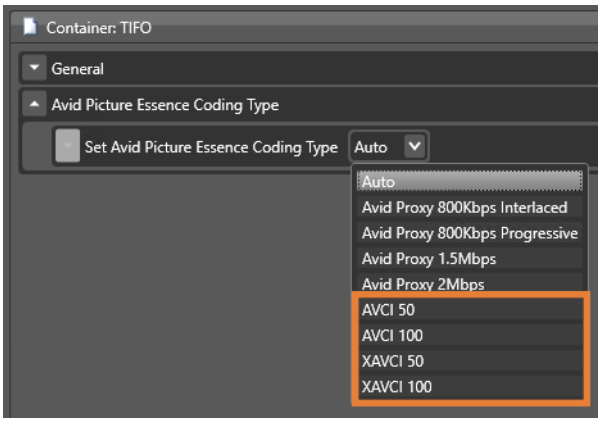
Avid Proxy Formats

In the Media Creation action under TIFO input, specify required Avid Picture Essence Coding Type for creation of Avid proxy formats. See Flip64 Settings for Avid Proxies and menu below for required settings.



AVCI and XAVC Formats

In the Media Creation action under TIFO input, specify required Avid Picture Essence Coding Type for creation of AVCI and XAVC formats.



Note: When the input media does not have SMPTE RP2027 descriptors necessary for distinguishing AVCI from XAVCI formats, this configuration can be used to identify them correctly.

Exporting Sequences to Live Play | Vantage via Send to Playback

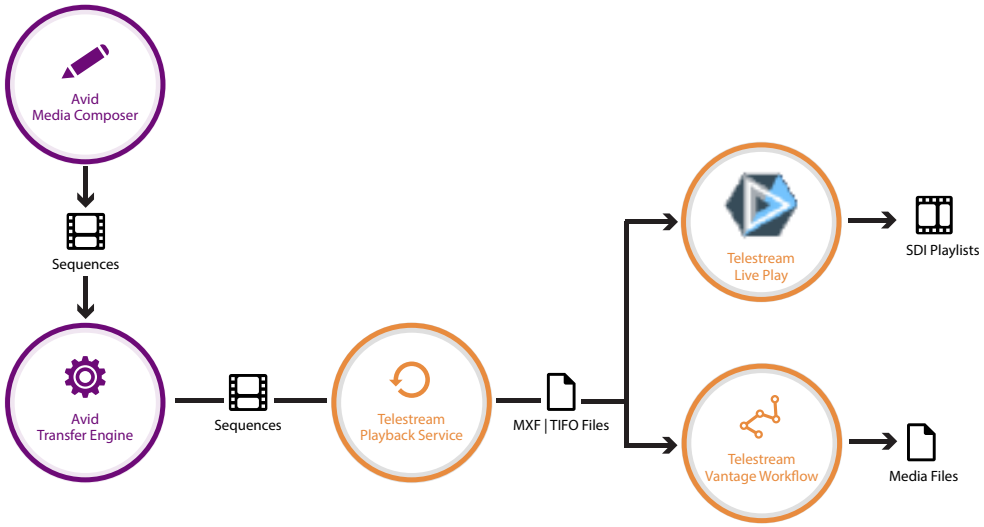
Telestream's Send to Playback components integrate Telestream's Live Play and Vantage with Avid Transfer Engine and Media Composer.

Avid operators can use Media Composer's Send to Playback command to re-wrap Avid OP-Atom files into MXF or TIFO and export them to Live Play and register them in a playlist for playback. Operators can also use the Send To Playback command to export sequences directly to a Vantage watch folder for ingest by the associated workflow for processing.

Topics

Overview

Telestream's Playback Service enables operators using Avid Media Composer with Avid Interplay Transfer Engine to use the Send to Playback command to send sequences directly to Vantage and Live Play. When a Media Composer operator performs the Send to Playback operation on a sequence, Avid Interplay Transfer Engine delivers the sequence to the Telestream Playback Service, which encodes and delivers the media to a target location and registers the clip in a Live Play playlist for playout, or delivers the media to a target location for processing by a Vantage workflow.



You can install the Telestream Playback Service in any supported Avid configuration (see *Installing the Telestream Playback Service*) on as many Avid Interplay Transfer Engine instances as required. You can also create multiple playback devices to identify Live Play systems and Vantage workflows to suit your media processing requirements.

Product Requirements

A Telestream Send to Playback-enabled system requires these Telestream and Avid products up and running:

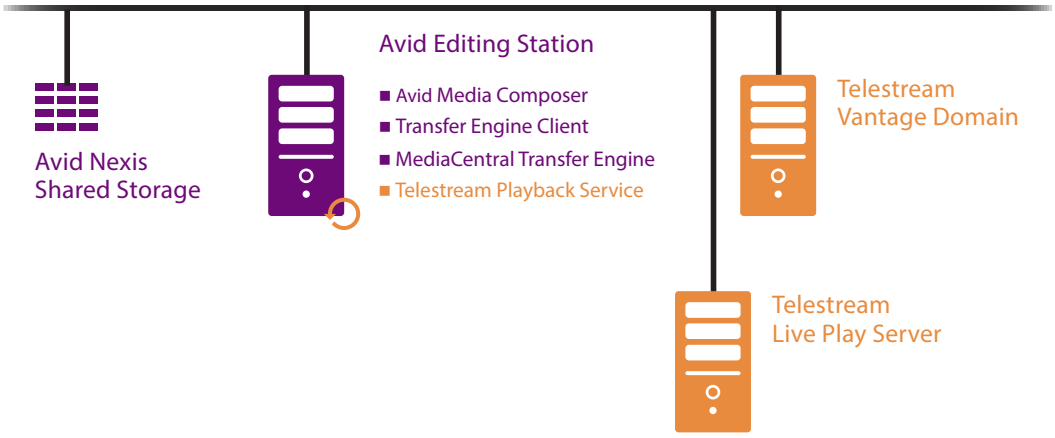
- Optionally, Vantage 8.2 UP3 or later
- Optionally, Live Play version 2.0 or later
- Telestream Playback Service version 2.0 or later
- Avid Media Composer 23.12.0 or later
- Avid Transfer Engine Client 23.12.0 or later
- Avid Interplay Transfer Engine 2023.7 or later, installed on the same server as Telestream Playback Service
- Avid Interplay Transfer Client 2023.7 or later—You must install the Avid Interplay Transfer Engine client program on each edit system that plans on transferring Avid assets to a playback device.

The Telestream Playback Service may be hosted in these Avid configurations:

- *Avid Interplay Transfer Engine on Edit Workstation—Nexis Shared Storage*
- *Avid Interplay Transfer Engine on Editing System—Local Storage*

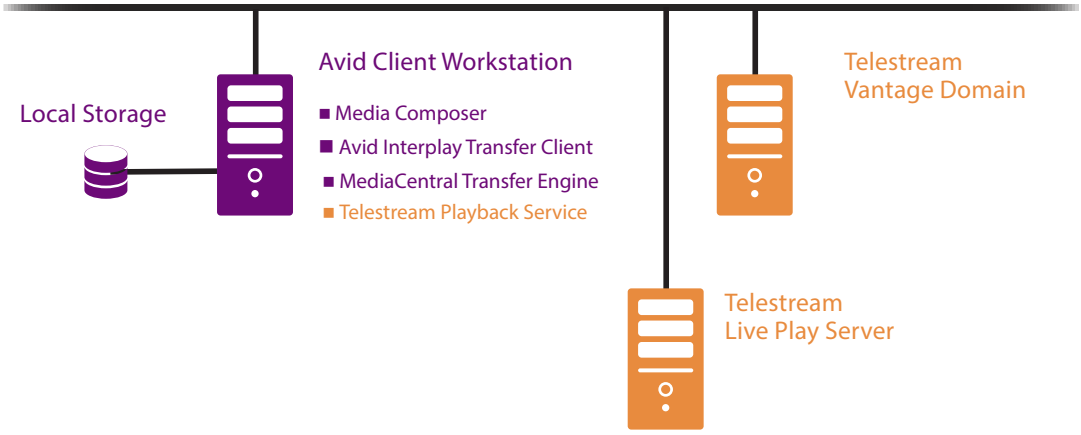
Avid Interplay Transfer Engine on Edit Workstation—Nexis Shared Storage

In this configuration, the Avid Interplay Transfer Engine is installed on an Avid editing workstation, without a Production Management Engine. Each editing workstation must host both the Avid Interplay Transfer Engine and Avid Interplay Transfer Engine Client.



Avid Interplay Transfer Engine on Editing System—Local Storage

In this configuration, Avid Interplay Transfer Engine is installed on an Avid editing system with local storage.



Installation, Configuration, and Verification

Before you can submit media to Live Play or Vantage, you should perform these one-time installation and configuration tasks. Before starting, ensure that your Avid edit system (Avid Media Composer and Avid Interplay Transfer Engine) is operational. Next, you'll install the Telestream Send to Playback programs, create a Vantage workflow and/or create a Live Play playlist, depending on your workflow requirements, and then configure the Telestream Playback Service, Transfer Engine, and Avid Media Composer to integrate them.

Note: When you are installing software or modifying Avid programs or systems, always confer and coordinate with your Avid systems administrator or manager to make these changes, including restarting any services. Always refer to Avid documentation if you have questions about the use of their products.

Installation and Configuration Tasks

1. *Uninstalling an Older Telestream Playback Service*—Uninstalling an older version in preparation for upgrading the Send to Playback feature.
2. *Installing the Telestream Playback Service*—Installing the Telestream Playback Service components on the Avid Interplay Transfer Engine server.
3. *Creating a Workflow in Vantage*—Optionally, creating a Vantage workflow that monitors the storage location where Telestream Playback Service writes the encoded file out each time a sequence is received.
4. *Creating a Playlist in Live Play*—Optionally, creating a playlist in Live Play that is updated by Telestream Playback Service when it writes the encoded file out each time a sequence is received.
5. *Configuring the Telestream Playback Service*—Creating a playback device entry in the Telestream Playback Service.
6. *Configuring Avid Interplay Transfer Engine with Playback Devices*—Creating a matching playback device entry in the Avid Interplay Transfer Engine to integrate with the Telestream Playback Service.
7. *Configuring Avid Media Composer to Integrate with Vantage | Live Play*—Configuring Media Composer to be able to send sequences to the Telestream Playback Service via Avid Interplay Transfer Engine.

Testing Media Composer-Vantage | Media Composer-Live Play Integration

1. *Sending Media to a Vantage Workflow or Live Play*—Test sending a sequence from Media Composer to a Vantage workflow for processing or sending a sequence from Media Composer to Live Play and updating the playlist.

Uninstalling an Older Telestream Playback Service

You should always install the Telestream Playback Service on a server that hosts the Avid Interplay Transfer Engine. To determine if an older version of Telestream Playback Service is installed, open the Add/Remove Programs | Programs and Features control panel, locate the Telestream Playback Service and note the version.

To uninstall older versions of Telestream Playback Service, follow these steps:

1. Close all programs.
2. Run *PlaybackServiceInstaller_TE_x.x_Vxx.x.msi*, click Remove, then click Finish

   OR

   Display the Add/Remove Programs | Apps and Features control panel (depending on your Windows system), locate the Telestream Playback Service, select it, and click Yes | Uninstall to remove the program.
3. Restart the Transfer Engine host computer.

Installing the Telestream Playback Service

Use this topic to install the Telestream Playback Service on each computer running the Avid Interplay Transfer Engine, which is used to transfer media to Vantage | Live Play via the Telestream Playback Service.

The installer installs the following components:

- Telestream Playback Service
- Telestream Playback Service Manager, with a desktop shortcut—*Telestream Playback Service_IF.exe*.

Note: If your system has an older version of the Telestream Playback Service installed, remove it (see *Uninstalling an Older Telestream Playback Service*) before installing the current version.

Obtain the Telestream Playback Service installer—follow these steps:

1. Go to the Telestream Web site Vantage Downloads page and log in with your credentials.
2. Scroll down to view the tabbed panels—click on the Additional Components tab.
3. Click on the Telestream Playback Service's Download Now link and download the ZIP file.

Install the Telestream Playback Service—follow these steps:

1. Copy the installer to the computer where the Avid Interplay Transfer Engine is installed.
2. Run the Telestream Playback Service installer—*Telestream_PlaybackService_<<version>>.msi*. (On Windows desktop operating systems, you may have to run it as Administrator—if Windows displays the error "Please open Playback Service Manager in admin mode", your user does not have permissions to run the program. Right-click and run the program as Administrator.
3. If an Open File security warning displays, click Run to continue.
4. The installer displays the Welcome panel—click Next.
5. The Telestream Playback Service requires Microsoft .NET 8, an optional Windows feature. If the installer detects that Windows .NET 8 isn't installed, close the installer and install it now: Open the Start menu and search for the Add Roles and Features Wizard. Open the wizard and navigate to Features. Select .NET Framework 8 Features and click Install and then restart the installer.
6. If the installer detects that the proper version of Transfer Engine isn't installed, install it now and restart the installer.
7. License Agreement panel—Select I Agree (if you do), and click Next.
8. Select Installation Folder—Accept the default folder (`C:\Program Files\Telestream\Telestream PlaybackService 2.0\`) or select another folder, and click Next.
9. Confirm Installation—Click Next to start installation.

10. Installing Telestream Playback Service—Wait for installation to complete.

11. Installation Complete—Click Close to exit the installer.

12. Restart the computer.

Creating a Workflow in Vantage

If you plan to send a sequence from Media Composer to process media in Vantage workflows for direct-convert operations, transcoding, or other media processing, you must first design, configure, and activate the workflow(s) in Vantage Workflow Designer.

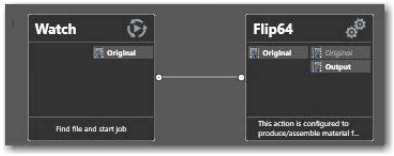
Note: If you are not familiar with Vantage Workflow Designer, please start the program and open the Workflow Designer User Guide for assistance in creating and configuring a workflow.

You should design and configure your workflows to process the media ingested from Media Composer to suit your media processing requirements.

These workflows can optionally deliver the media that has been processed back to an Avid client as a new master clip via Avid Interplay Transfer Engine, creating a round-trip workflow.

Avid Media Composer identifies Vantage workflows as playback devices; for each one that you require, you should create one or more Vantage workflows to monitor the folder specified in the Playback device. The common directory is the only connection between Media Composer and the Vantage workflow.

Here is a simple, prototype workflow:



The only requirement for a workflow being used as a playback device is that it starts with a Watch action, so that the workflow starts a job for each new file placed in the watch folder. When you activate the workflow, for each new file delivered—it starts a job to process the media.

Configure the playback device entry in the Telestream Playback Service Manager (*Configuring the Telestream Playback Service*) to match the Watch folder path specified in the Watch action.

When you activate the workflow, for each new file delivered—it starts a job to process the media. Workflows must be activated in Vantage during the time an operator plans to use the Send to Playback command to deliver sequences to this workflow.

Creating a Playlist in Live Play

If you plan to send a sequence from Media Composer to play out media in Live Play, you must first create and configure a playlist.

To create a playlist in Live Play, open the Live Play web app. In the Playlists panel, click the Create New Playlist button at far right in the title bar. For help with creating playlists, see the Creating and Managing Playlists topic in the Live Play User Guide.

Note: If you aren't familiar with Live Play, please start the program and open the Live Play User Guide for assistance in creating and configuring a playlist.

Name the playlist, and configure the playlist as required for your playback requirements. Note the name; this is used is the Playback Service Manager's Playlist Name in the Config Playlist dialog (see *Configuring the Playlist Name and Logging Details*).

Configuring the Telestream Playback Service

You use the Telestream Playback Service Manager to create playback device entries—providing one entry for each playback device you plan to use in Avid Media Composer. Each device entry identifies a specific Vantage watch folder or Live Play playlist.

A playback device, in the context of Avid, refers to a dedicated hardware device or server, or an external system—such as Telestream Vantage and Telestream Live Play—that receives a video sequence from Avid Media Composer for play back or other processing, essentially acting as the output point for your edited content.

You should create one device entry for each Live Play system you've implemented, and one device entry for your Vantage domain to enable Avid Interplay Transfer Engine to transfer files to these systems. You'll typically set up at least one device entry initially, then add or modify entries as your workflow requirements increase or change.

For each playback device you add, you should create at least one corresponding playback device entry in the Avid Interplay Transfer Engine Configuration Manager. The Telestream Playback Service Manager publishes these device entries for use by the Telestream Playback Service when transferring files to them.

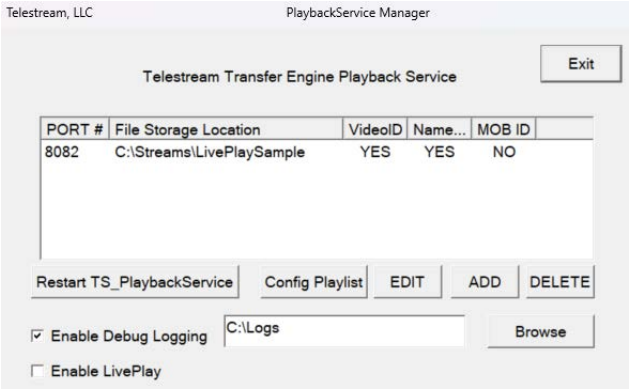
Note: Each time you add, delete, or modify playback device entries, you must restart the Telestream Playback Service in order to obtain the current set of device entries. (See *Starting the Telestream Playback Service*). Also, always restart the Avid Interplay Transfer Engine after making changes to the Avid Interplay Transfer Manager configuration or the Telestream Playback Service configuration.

To start Telestream Playback Service Manager, choose one:

- Double-click the *Telestream Playback Service_IF.exe* icon on the desktop

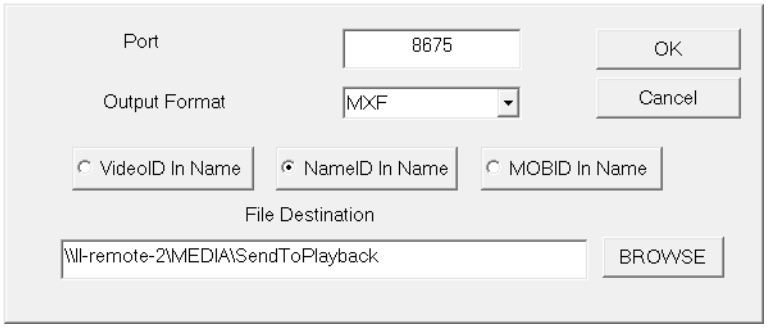
  Or, on desktop operating systems, you may have to navigate to `C:\Program Files\Telestream\Telestream PlaybackService` (default) to start *Telestream Playback Service_IF.exe*. Right-click and select Properties. In the Compatibility tab, select Run as Administrator.

The Telestream Playback Service Manager starts and displays this window:



Adding | Editing Playback Device Entries

Click ADD or select a device entry and click EDIT—the Telestream Playback Service Manager displays this dialog:



Configure these settings:

Port. The port number to be used for this destination path. Suggested ports: 8001-65535. This port must not be used by other program on this server, and the port number must match the port entered in the Playback Device entry in the Avid Interplay Transfer Engine Configuration Manager (*Adding | Editing Playback Device Entries*).

Note: While you're unlikely to select a port already in use and create a conflict, you can open a command window (Start > Run, enter `cmd` and press OK) and run `netstat -a` to obtain a list of ports in use on this computer.

Output Format. Specifies the file format (MXF | TIFO) that the Telestream Playback Service should save the encoded sequence as.

Select one or more of these optional Name choices (at least one must be selected) to use these values when composing the file name for all files sent to this destination:

VideoID in Name. Unique material identifier specified in TapeID or VideoID attributes in the Interplay environment.

NameID in Name. Display name of the associated sequence in the Interplay environment.

MobID in Name.The internal system identifier used by Interplay to track the video sequence.

File Destination. Click Browse to navigate and select a server and folder or manually enter a fully-qualified UNC path where the files are to be stored for ingest by the target Vantage workflow or Live Play playlist. The path may be a local path—although it is unlikely that all systems (Avid and Vantage | Live Play) are running on the same computer—or a network server path. It should be a share with full read/write privileges, so that Vantage can access the media.

For a Vantage workflow destination, this path must be the same path configured in the Watch action of your target workflow. For a Live Play destination, it may be any location;

the destination is automatically added to the playlist. The location may or may not be identified as a media pool.

When you're done, click OK to save the entry and close the dialog.

Configuring the Playlist Name and Logging Details

When you're creating/editing a device entry for Live Play, select the entry and configure the Live Play server and target playlist:

Config Playlist. Click to display a dialog to identify the Live Play server and playlist:

Live Play Location. Specify the IP address | DNS name of the Live Play server.

Playlist Name. Specify the name of the target playlist, as defined by the name of the playlist you created in Live Play.

When you're done, click OK to update the information and close the dialog.

When you create a device entry for a Vantage workflow or Live Play, select the entry and configure optional logging:

Enable Debug Logging. Check to enable logging, and specify the fully-qualified path to the logging folder.

Enable Live Play. Check to enable playout in Live Play, and specify the fully-qualified path to the logging folder.

Click Exit to close the Telestream Playback Service Manager.

Starting the Telestream Playback Service

After adding/updating playback device entries in the Telestream Playback Service Manager, you must restart the Telestream Playback Service to pick up the current set of entries for use by the Avid Interplay Transfer Engine.

To restart the Telestream Playback Service, choose one of these options:

- In the Telestream Playback Service Manager, click the Restart TS_PlaybackService button. Wait for the Playback Service Restarted Successfully notification, dismiss the dialog and exit the program

  OR

- Open the Windows Services (Control Panel > Administrative Tools > Services) panel, locate the TS_PlaybackService service, and click Restart.

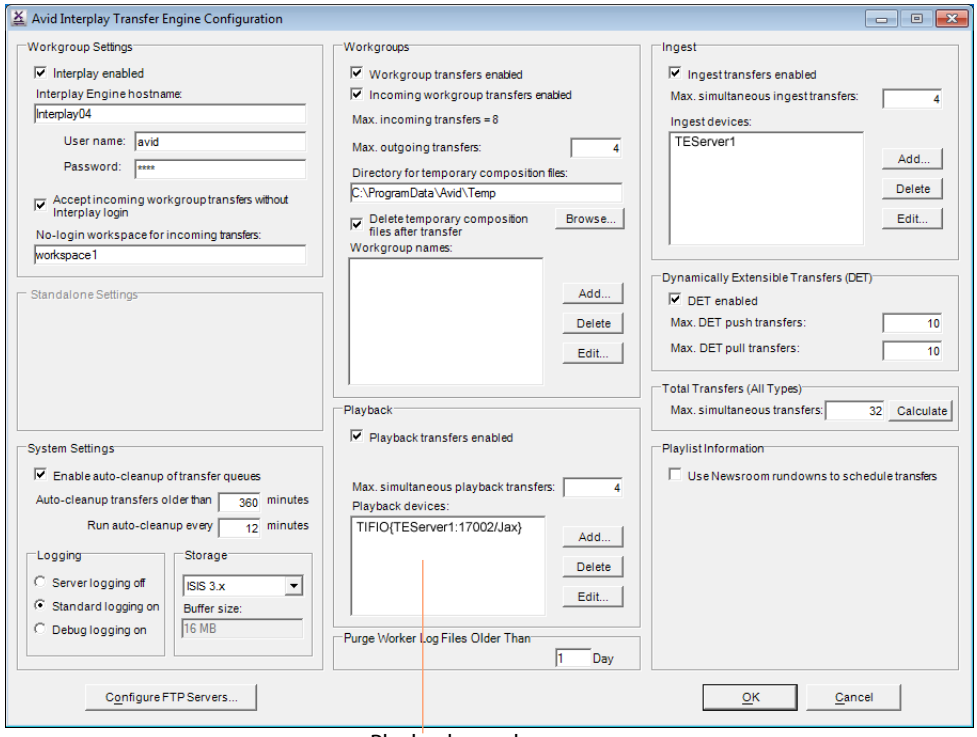
Note: If you attempt to exit the Telestream Playback Service Manager after making changes to playback device entries, the program displays a restart dialog to remind you. Click Yes to confirm that you want to restart the service.

Configuring Avid Interplay Transfer Engine with Playback Devices

Avid Interplay Transfer Engine should be configured using the Interplay Transfer Configuration program to integrate with the Telestream Playback Service and mirror the device playback entries in the Telestream Playback Service you've created.

To configure Transfer Engine settings, start the Avid Interplay Transfer Engine Configuration program from the desktop icon or at *C:\Program Files\Avid\Avid Interplay Transfer Engine\TRANSFERMGRSERVERCONFIG\tmconfig.exe*.

When it starts, it displays this window:



Playback panel

Configure this setting in the Total Transfers (All Types) panel (right center):

Max. Simultaneous Playback Transfers. Suggested value: 4. This is an arbitrary number to limit server load—it should be adjusted as required—and typically matches the same control in Playback (following).

Configure these settings in the Playback panel (center bottom):

Playback Transfers Enabled. Check this option to enable playback transfers.

Max. Simultaneous Playback Transfers. Suggested value: 4. This is an arbitrary number to limit server load; it may be adjusted as required.

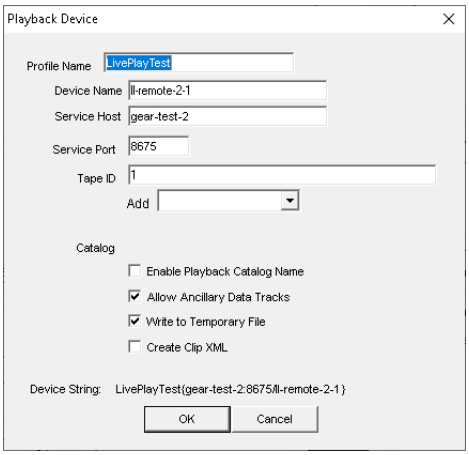
Configure other settings as required.

Adding Transfer Engine Playback Devices

For each destination you intend to use in your Avid-Telestream media processing workflows, you must add a playback device for use by Avid Interplay Transfer Engine, configured with the destination folder being monitored for ingest by each Vantage workflow or Live Play playlist. Each playback device must have a unique name and use a dedicated port number.

Note: Set up at least one playback device initially, then add or modify devices as your workflow requirements change. For each playback device you have, you need to create a corresponding playback device entry in the Telestream Playback Service Manager. Always restart the Telestream Playback Service after making changes.

In the Playback panel (bottom center), click Add (or select a playback device and click Edit) to display this dialog:



Update these settings:

Profile Name. A descriptive phrase that identifies this playback device. For example, the destination folder and workflow or playlist name. It cannot contain spaces. The name displays in the Playback panel's Playback devices list (*<Profile Name>{<ingest service computer:port/<device name>}*.

Device Name. The descriptive name of the device, which should be indicative of the workflow in which it is utilized. It cannot contain spaces. This name displays in Avid Media Composer's playback device list when you select Send to Playback.

Service Host. The name of the computer that hosts the Transfer Engine and Telestream Playback Service.

Service Port. The port number Transfer Engine uses to transfer the sequence to Telestream Playback Service for this destination. Suggested ports: 8001-65535. The port number must match the port entered in the Playback Device entry in the Telestream Playback Service Manager (*Adding | Editing Playback Device Entries*).

Optionally, you can add a descriptive name at the end of the server:port identifier, separated by a slash (/). For example: `AMC7-2:17000/Jax_Test`.

Tape ID. Each sequence that you send to Transfer Manager must have the Tape ID set either here or in Media Composer. It must not contain spaces. The data that is placed in this ID is irrelevant and is not used, but Transfer Manager will not transfer sequences without it.

Catalog. Check these options as appropriate for your requirements

Click OK to save the playback device and close the dialog.

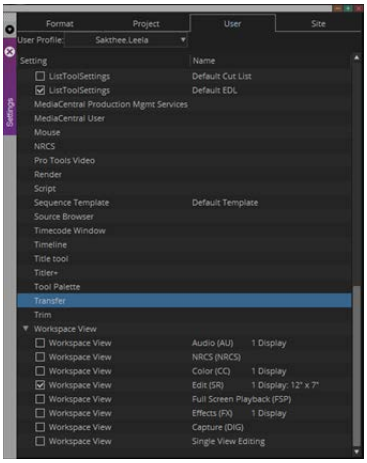
Note: When adding a device, be sure to add the corresponding playback device entry in the Telestream Playback Service Manager (see *Adding | Editing Playback Device Entries*).
Each time you make changes to your playback device list, be sure to re-start the Avid Interplay Transfer Engine to obtain and publish the new list of Avid playback devices.

Configuring Avid Media Composer to Integrate with Vantage | Live Play

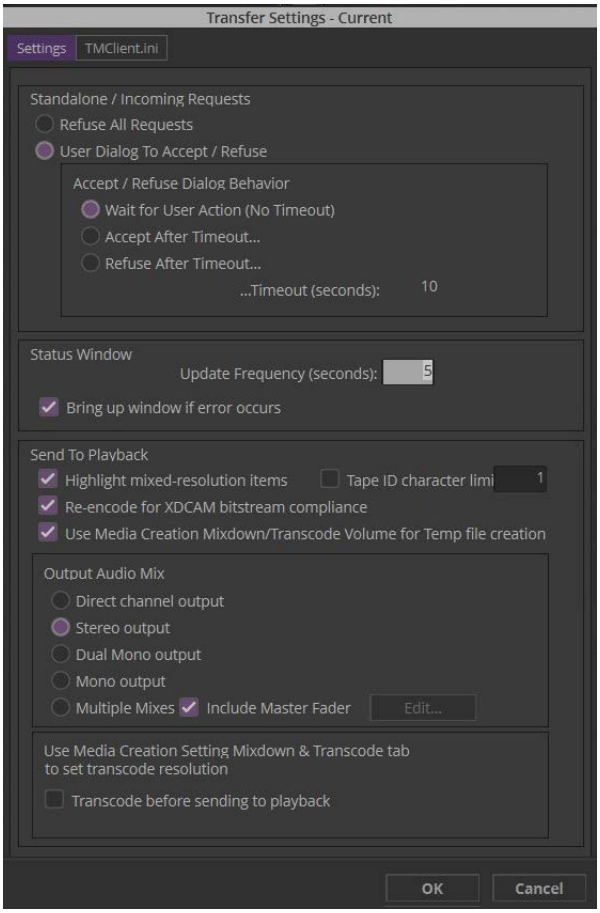
Note: Be sure to coordinate with your Avid systems administrator to make these changes or restart any computers.

To set up Media Composer to use the Telestream Playback Service, follow these steps:

1. Start Media Composer and select File > Settings > Transfer:

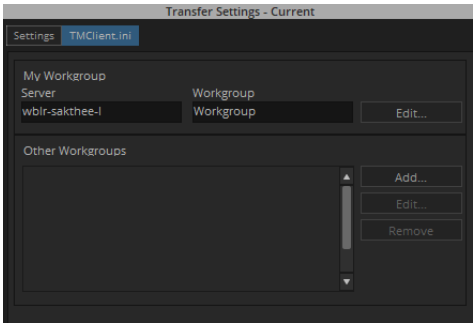


2. Double-click the Transfer setting to display the Transfer > Settings tab:



3. In the Settings tab, settings may be configured per your requirements.

4. Display the TMClient.ini tab:



5. Make sure that the settings are appropriate for your network environment—In the Server field, enter the name of the server on which Transfer Engine and Send to Playback are installed.

6. Click OK when finished.

Note: For complete details on configuring Avid Media Composer, see their guides.

Sending Media to a Vantage Workflow or Live Play

This topic describes the typical method of using Media Composer to send sequences to the Telestream Playback Service for processing by a Vantage workflow or to Live Play for playback:

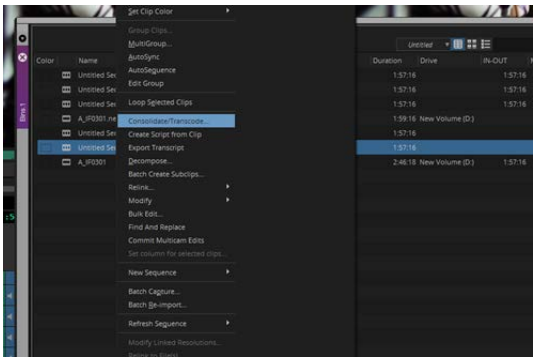
1. Make sure that the Telestream Playback Service is running. To start the Telestream Playback Service, choose one of these options:

- In the Telestream Playback Service Manager, click Restart TS_PlaybackService

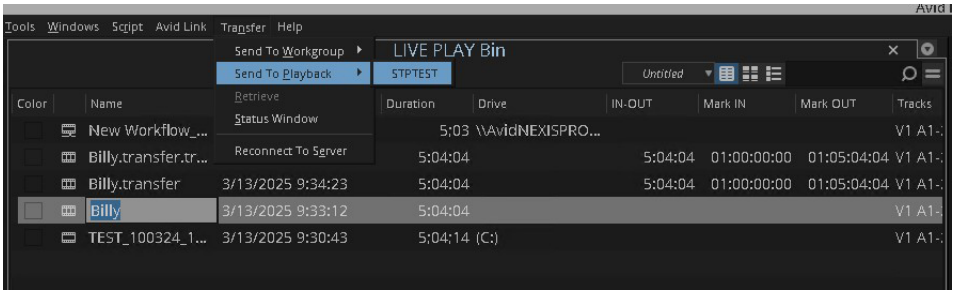
  OR

- Open the Windows Services panel and restart the TS_PlaybackService Service.

2. Make sure that the Avid Interplay Transfer Engine is running.
3. In Media Composer, select Transfer > Reconnect to Server and open the Bin directory.



4. Select a sequence from a bin directory.
5. Select *Transfer* > *Send To Playback* > *<<Playback Device>>*.



6. Provide the sequence with a tape ID (no spaces allowed) if required. The Avid Interplay Transfer Engine won't transfer the sequence without it.

The sequence is sent to the Avid Interplay Transfer Engine, which sends it to the selected playback device. (If you attempt to send a sequence with the same tape ID as one already in the Transfer Engine an error displays. To overwrite the tape ID name, select the Overwrite option.)

The Avid Interplay Transfer Engine connects with the Telestream Playback Service to encode the media as a TIFO | MXF file in the destination path specified by the playback device you selected.

Note: If there are un-rendered effects in the timeline, Media Composer renders the sequence automatically before the transfer starts.

The Vantage workflow ingests the file and transcodes it as specified.

Or, Live Play plays out the newly-added media in the cliplist.

Troubleshooting

If a transfer fails, check these issues:

1. Make sure that the Telestream Playback service is running

2. For delivery to Live Play, make sure that Live Play has the same playlist name that you have configured

3. For delivery to Live Play, make sure that the Live Play Service is running

4. Make sure that the shared network path is accessible from both systems.

Troubleshooting

If you are having problems successfully transferring a sequence to a Vantage workflow, follow these steps and tips:

- Confirm that the target Transfer Engine is running.
- Confirm that the Telestream Playback Service is running. Restart the Telestream Playback Service via the Windows control panel.
- Verify that the playback device entries in both systems are using the same (and unique) port number.
- Be sure to restart the Telestream Playback Service after adding or modifying a playback device entry in the Avid Interplay Transfer Engine Configuration program.
- Be sure to enter a tape ID in your sequences.
- Confirm that Media Composer is connected to the server (*Transfer* > *Connect to Server*).
- Confirm that the destination path in your playback devices is a share.
- Confirm that the share has full rights for all Windows users.
- Confirm that you are not referencing a local drive letter directory instead of a share.
- In the TMClient.ini tab, make sure that the settings are appropriate for your network environment.
- In Vantage:
  - Confirm that your Vantage workflow is active in Workflow Designer.
  - Confirm that your workflow's Watch action is monitoring the correct share.

Note: If you are still having problems, contact Telestream Customer Service for assistance.

- Consider restarting the TS_PlaybackService Service in case of issues during transfer.
- Check log files generated by Avid for transfer. Its available under *C:\ProgramData\Avid\Temp\TMServerLog and C:\ProgramData\Avid\Temp\TransferEngine\TmWorkerLogs*.
- When Enable Debug Logging is checked in the Playback service, the logs are generated in *PlaybackService_<DATE>.log* files, written to the location specified in the Enable Debug Logging field.

Telestream Intermediary Format (TIFO)

Telestream Intermediary Format (TIFO) is a proprietary, intermediate media wrapper format designed by Telestream as a lightweight, uniform, interchangeable file format to ensure interoperability among Telestream's media processing products.

TIFO provides a low-overhead wrapper that is essence-agnostic, with metadata, timecode, and closed caption support. TIFO improves the ability to move media files between Telestream products with all media essence elements & metadata intact, preserving the widest range of transcoding options.

TIFO files are a Telestream proprietary format and aren't playable or readable by non-Telestream applications. You should only use TIFO format if your workflow requires transcoding by Telestream workflow automation applications. The maximum temporal length of a TIFO file is 12 hours.

Workflow Considerations

TIFO format should be used when you are encoding your files for playback. TIFO files are unique, in that they can be transcoded as they are being written, allowing you to create multiple different output files in real-time. TIFO files can also contain metadata such as closed captions and time code, which can be processed by Vantage or Episode.

Managing Send to Playback Logging

Logging can be enabled and viewed for both Transfer Engine and for the Telestream Playback Service.

Transfer Engine Logging

Avid Transfer Manager generates log files that may be of value during troubleshooting.

The log files are located at:

- *C:\ProgramData\Avid\Temp\TMServerLog*
- *C:\ProgramData\Avid\Temp\TransferEngine\TmWorkerLogs*.

For more information about Avid logging, see appropriate Avid guides.

Telestream Playback Service Logging

When you check Enable Debug Logging in the Telestream Playback Service Manager, the service also generates log files named *PlaybackService_*`<DATE>`*.log*, writing them at the location specified in the Enable Debug Logging field.

Supported Avid Media Formats

These media formats can be processed by Vantage via the Telestream Playback Service.

Support for ancillary data tracks includes:

- 608/708 captions
- XDS
  - Program Name
  - V-Chip/Content Advisory Information
  - Ratings
- Active Format Description

Media Formats

HD Formats

- *720P Media Formats*
- *1080i Media Formats*
- *1080p Media Formats*

720P Media Formats

Format	Rate (fps)	Frame Size
DNxHD 60 MXF	23.976	1280x720
DNxHD 90 MXF	23.976	1280x720
DNxHD 90 X MXF	23.976	1280x720
AVC Intra 100	23.976	1280x720
AVC Intra 50	23.976	960x720
DNxHD 60 MXF	25	1280x720
DNxHD 90 MXF	25	1280x720
DNxHD 90 X MXF	25	1280x720
DVCPRO HD MXF	25	1280x720
AVC Intra 100	25	1280x720
DVCPRO HD MXF	25	960x720
AVC Intra 50	25	960x720
DNxHD 75 MXF	29.97	1280x720
DNxHD 110 MXF	29.97	1280x720

720P Media Formats

Format	Rate (fps)	Frame Size
DNxHD 110 X MXF	29.97	1280x720
DVCPRO HD MXF	29.97	1280x720
AVC Intra 100	29.97	1280x720
DNxHD 120 MXF	50	1280x720
DNxHD 185MXF	50	1280x720
DNxHD 185 X MXF	50	1280x720
DVCPRO HD MXF	50	1280x720
AVC-Intra 100	50	1280x720
DVCPRO HD MXF	50	960x720
AVC Intra 50	50	960x720
DNxHD 145 MXF	59.94	1280x720
DNxHD 220 MXF	59.94	1280x720
DNxHD 220 X MXF	59.94	1280x720
DVCPRO HD MXF	59.94	1280x720
AVC Intra 100	59.94	1280x720
DVCPRO HD MXF	59.94	960x720
AVC Intra 50	59.94	960x720

1080i Media Formats

Format	Rate (fps)	Frame Size
DNxHD 120 MXF	50	1920x1080
DNxHD 185MXF	50	1920x1080
DNxHD 185 X MXF	50	1920x1080
DVCPRO HD MXF	50	1920x1080
AVC Intra 100	50	1920x1080
DNxHD TR 120 MXF	50	1440x1080
DVCPRO HD MXF	50	1440x1080
AVC Intra 50	50	1440x1080

1080i Media Formats

Format	Rate (fps)	Frame Size
DNxHD 145 MXF	59.94	1920x1080
DNxHD 220 MXF	59.94	1920x1080
DNxHD 220 X MXF	59.94	1920x1080
DVCPRO HD MXF	59.94	1920x1080
AVC Intra 100	59.94	1920x1080
DVCPRO HD MXF	59.94	1280x1080
AVC Intra 50	59.94	1440x1080
DNxHD TR 145 MXF	59.94	1440x1080

1080p Media Formats

Format	Rate (fps)	Frame Size
DNxHD 36 MXF	23.976	1920x1080
DNxHD 115 MXF	23.976	1920x1080
DNxHD 175 MXF	23.976	1920x1080
DNxHD 175 X MXF	23.976	1920x1080
AVC Intra 100	23.976	1920x1080
AVC Intra 50	23.976	1440x1080
DNxHD 36 MXF	24	1920x1080
DNxHD 115 MXF	24	1920x1080
DNxHD 175 MXF	24	1920x1080
DNxHD 175 X MXF	24	1920x1080
DNxHD 36 MXF	25	1920x1080
DNxHD 120 MXF	25	1920x1080
DNxHD 185 MXF	25	1920x1080
DNxHD 185 X MXF	25	1920x1080
AVC Intra 100	25	1920x1080
DNxHD 45 MXF	29.97	1920x1080
DNxHD 145 MXF	29.97	1920x1080

1080p Media Formats

Format	Rate (fps)	Frame Size
DNxHD 220 MXF	29.97	1920x1080
DNxHD 220 X MXF	29.97	1920x1080
AVC Intra 100	29.97	1920x1080

SD Formats

480i Formats

Format	Rate (fps)	Frame Size
DV25 411 MXF	30	720x480
DV50 MXF	30	720x480
MPEG 30 (IMX) MXF	30	720x480
MPEG 40 (IMX) MXF	30	720x480
MPEG 50 (IMX) MXF	30	720x480

480p Formats

Format	Rate (fps)	Frame Size
DV25P 411 MXF	23.976	720x480
DV50P MXF	23.976	720x480

576i Formats

Format	Rate (fps)	Frame Size
DV25 420 MXF	25i	720x576
DV25 411 MXF	25i	720x576
DV50 MXF	25i	720x576
MPEG 30 (IMX) MXF	25i	720x576
MPEG 40 (IMX) MXF	25i	720x576
MPEG 50 (IMX) MXF	25i	720x576

576p Formats

Format	Rate (fps)	Frame Size
DV25P 420 MXF	25p	720x576
DV25P 411 MXF	25p	720x576
DV50P MXF	25p	720x576

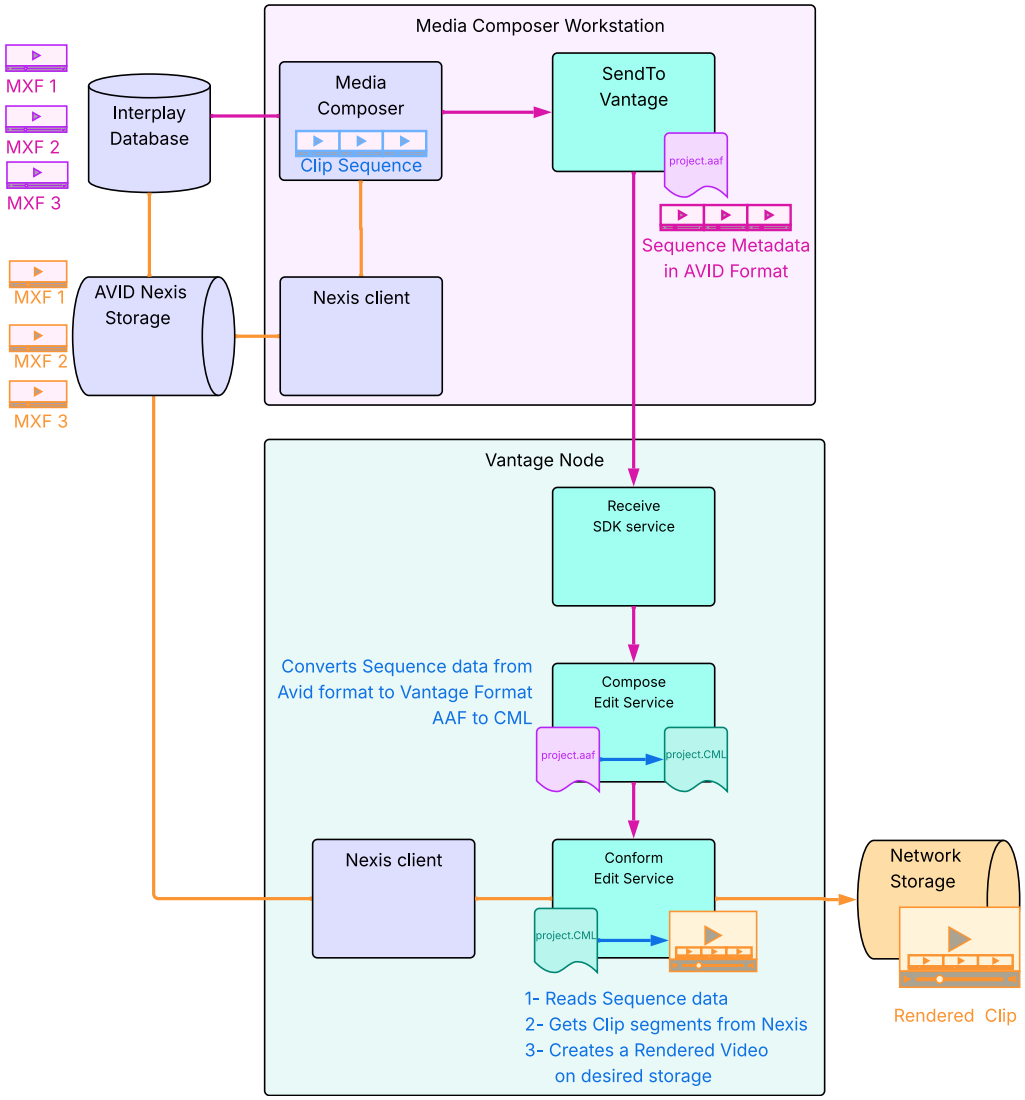
Starting Sequence Processing Jobs from Media Composer

The Send To Vantage feature is an optional suite of Vantage programs for Avid Media Composer that enables Avid editors to send sequences directly from Media Composer to an active Vantage workflow for processing.

Topics

Overview

Send To Vantage in Media Composer interacts directly with Vantage to start a Vantage workflow job and process the selected sequence. This diagram depicts the components, data flow, and processes in both the Media Composer workstation and in Vantage, where the job executes.



Send To Vantage is comprised of three programs which are all installed on a Media Composer workstation:

- Send To Vantage Template Editor—Enables you to create templates, which are used during job initiation to facilitate media and metadata transfer for processing.
- Send To Vantage Template Installer—Used to install templates that you have created as output options in Media Composer.

- Vantage File Sender—The program that you use when they populate job details, and submit and monitor jobs. This program is started automatically by Media Composer when you choose Send To > Vantage.

You can install the Send To Vantage feature on as many Media Composer workstations as required, to meet your media processing requirements.

Topics

Prerequisites

A Send To Vantage-enabled Media Composer workstation must meet these prerequisites:

- The Send To Vantage programs must be installed on the workstation where Media Composer is installed
- Media Composer and Vantage must have read/write access to a common, shared storage location for access to media files and template files. When storage is Avid Nexis, which is most common, both systems require Nexis clients installed.

Media Composer/Vantage Workflow Limits

The following limits apply when using Send To Vantage in Media Composer:

- You can only submit sequences—you can't independently submit master clips, sub-clips or grouped clips
- You can only submit media with simple transition cuts
- You can't submit sequences with offline partially-offline clips
- You can't submit sequences with third-party effects
- Workflows are limited to the same constraints as Post Producer Simple AAF workflows (See page 66 in the Post Producer Developer Guide, published on the Telestream web site.

Product and Version Requirements

A Send To Vantage-enabled Media Composer and Vantage domain requires these Telestream and Avid products up and running:

Avid Media Composer...

- Avid Media Composer 7 or newer
- Avid Media Composer Client 7 or later, when Media Composer is on a dedicated workstation.

- Send To Vantage V1.0 or newer

Vantage...

- Vantage 8.1 UP5 or later
- Post Producer ComponentPac—2023.1.0.188 or higher

Note: There are no licensing requirements for using the Send To Vantage feature.

Installation, Configuration, and Verification

Before you can submit sequence processing jobs to Vantage, you should perform these one-time installation and configuration tasks.

Before starting, you should ensure that Avid Media Composer is operational. Next, you'll install the Send To Vantage programs on the Media Composer workstation, create and configure at least one Vantage workflow, and create and install at least one template, depending on your workflow requirements.

Note: When you are installing software or modifying Avid programs or systems, always confer and coordinate with your Avid systems administrator or manager to make these changes, including restarting any services. Always refer to Avid documentation if you have questions about the use of Avid products.

Installation and Configuration Tasks

1. *Uninstalling the Send To Vantage Programs*—Uninstall an older version of Send To Vantage programs if any, before installing a newer version.
2. *Installing the Send To Vantage Programs*—Install the Send To Vantage programs on the Media Composer workstation.
3. *Creating a Send To Vantage Workflow*—Create a Vantage workflow that starts a new job in Vantage each time a sequence is received and processes it.
4. *Creating and Installing Send To Vantage Templates*—Create and install templates in Media Composer for each workflow you've created.

Uninstalling the Send To Vantage Programs

Use this topic to uninstall the Send To Vantage programs on a Media Composer workstation where the feature has been installed. You may be removing it permanently from a Media Composer workstation or you may be removing it in preparation to install a newer version.

Uninstall the Send To Vantage programs using the Windows Add or Remove Programs in System Settings. The program can only be uninstalled by the user ID that installed it.

Installing the Send To Vantage Programs

Use this topic to install the Send To Vantage programs on each Media Composer workstation. The installer installs the following programs:

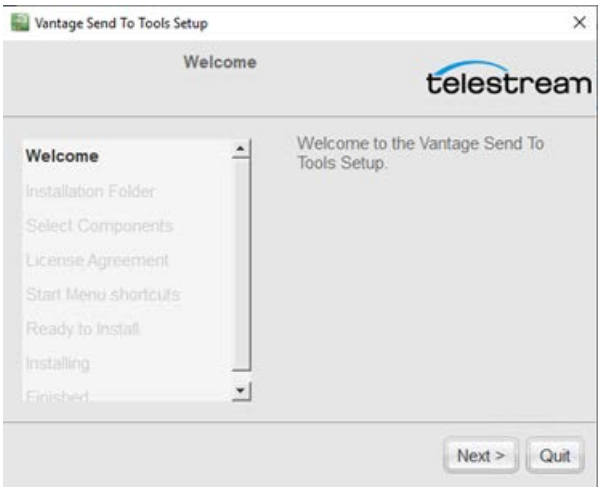
- Send To Vantage Template Editor
- Send To Vantage Template Installer
- Vantage File Sender

Obtain the Send To Vantage installer

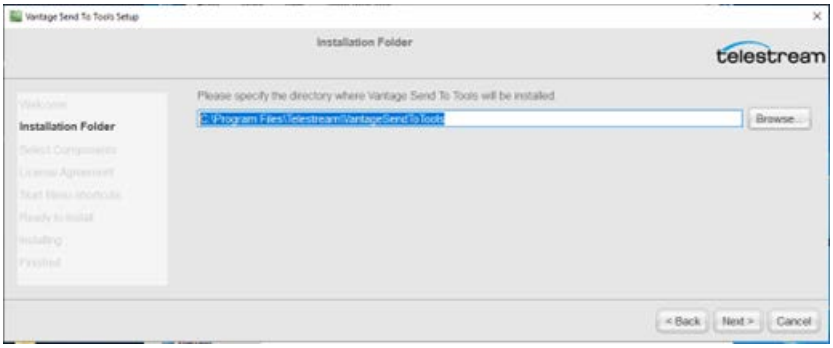
To obtain the Send To Vantage programs installer, contact your Telestream representative (see *Obtaining Support | Information | Assistance*).

Install the Send To Vantage programs

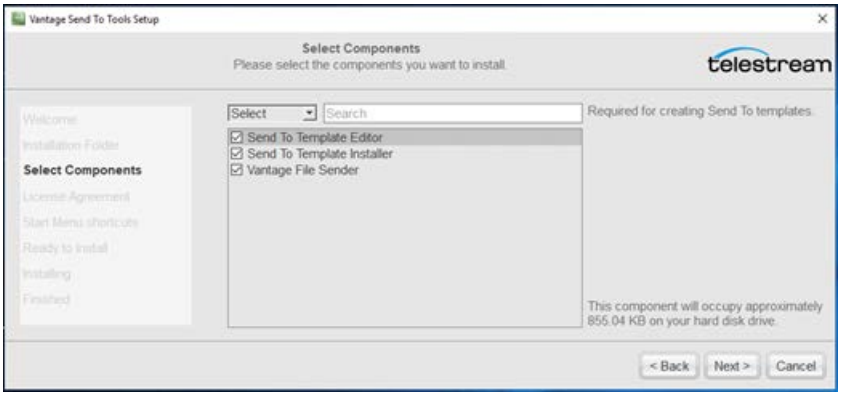
1. Run the installer—*SendToToolsWindowsInstaller.exe*. The installer displays the Welcome panel:



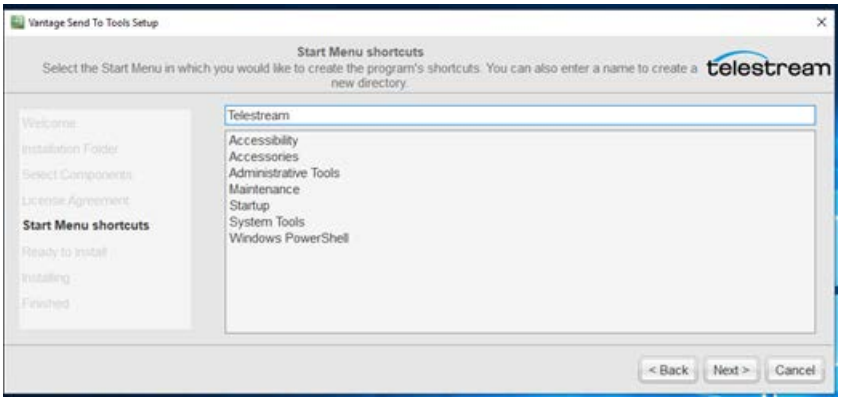
2. Click Next to continue—the Installer Folder panel displays:



3. Accept the default location or browse to the location where you want to install the program and click Next. The Select Components panel displays:

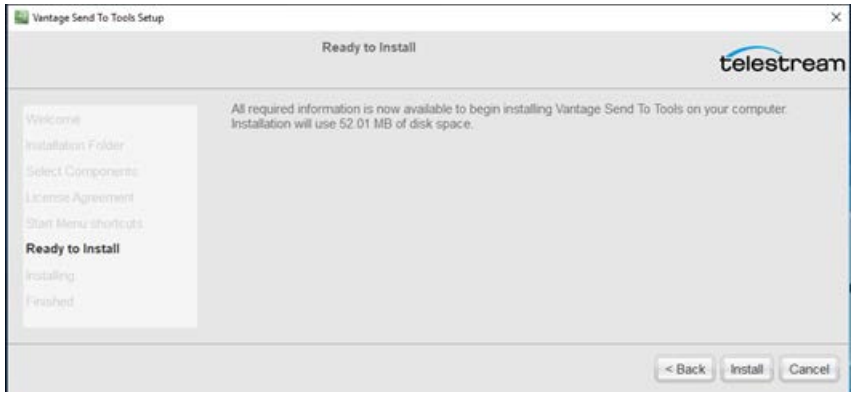


4. Select all components and click Next. The Start Menu Shortcuts panel displays:



5. Accept the default Windows Start menu shortcuts or change them if required.

6. Click Next—the Ready to Install panel displays:



7. Click Install to begin installation.

   If the error "... You are not installing on a Media Composer..." displays, cancel the installation and verify that the target workstation has Media Composer installed.

8. When installation is complete, click Finish to close the installer.

Creating a Send To Vantage Workflow

In order to send a sequence from Media Composer to process in a Vantage workflow, you must first design, configure, and activate the workflow in Vantage Workflow Designer.

Note: If you are not familiar with Vantage Workflow Designer, refer to the Workflow Designer User Guide (directly in the program) for assistance in creating and configuring a workflow. Detailed configuration help is also available for each action—in the action's inspector window, click on the M icon in the upper-right corner.

A workflow that you send media to using Send To Vantage feature must have a Receive > Compose > Conform set of actions in it. The Compose action converts simple AAF media descriptor files into Post Producer Composition Markup Language (CML), for processing by Vantage using the Conform action.

The Conform action renders media descriptor compositions (as defined in the Composition XML file which it is passed) with transition and image effects and graphic overlays and conformed audio, applying option filters as appropriate, encoding the output video in the specified format.

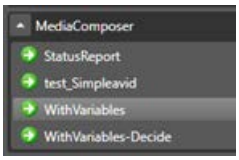
Workflows can optionally deliver the media that has been processed back to an Avid client as a new master clip via Avid Interplay Transfer Engine, creating a round-trip workflow.

Workflows must be activate in Vantage during the time an editor plans to use the Send to Vantage feature to deliver sequences to this workflow. For each sequence sent to it from Media Composer, the workflow starts a job to process it.

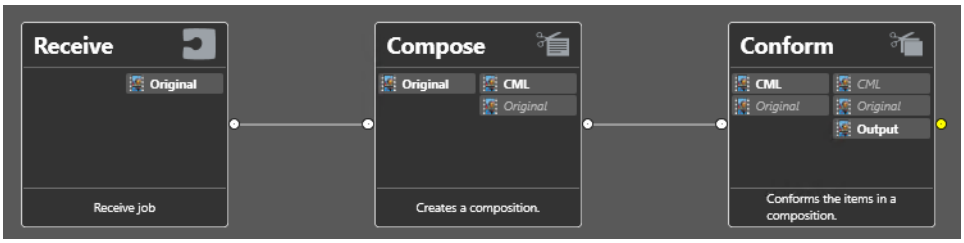
Prototype Workflow Configuration

You should design and configure your workflows to process the media ingested from Media Composer to suit your media processing requirements. You must have at least one workflow to use the feature. Follow these steps to create this prototype:

1. Open Workflow Designer.
2. Create a new category for the File Send program to query, You'll use this category later when configuring templates for use in Media Composer. In this example, the category is named *MediaComposer*:

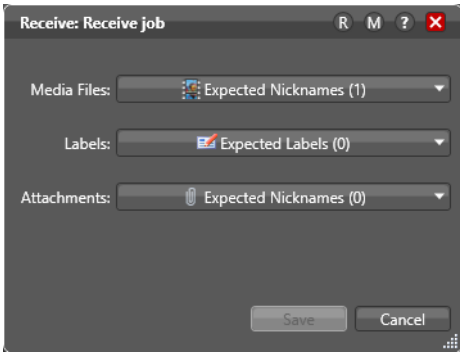


3. Now, create a new workflow in Vantage Workflow Designer—name it *STV Test* for this prototype. The basic requirement is a workflow containing these three actions: Receive > Compose >Conform:



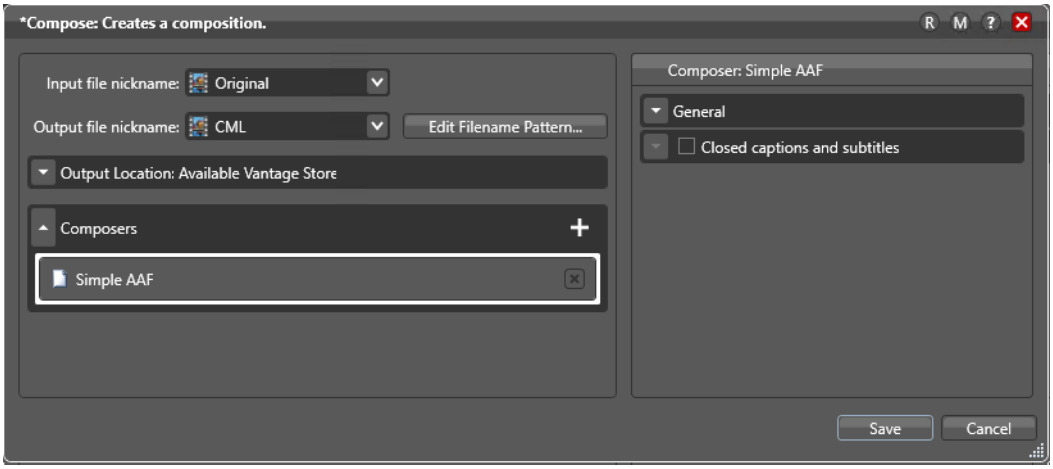
It may contain other actions to perform additional tasks, but these three are required.

1. Configure the Receive action—A workflow being triggered via the API (in this case, the Vantage File Sender program) must start with a Receive origin action. Open its inspector:



2. Specify Media Files > Expected Nicknames (1) and specify *Original*, to ingest a single file from Media Composer.
3. Click Save to update the action and close the inspector.

4. Now, open the Compose action's inspector:



5. Configure these controls:

   Input File Nickname. Specify *Original*, the nickname assigned the input file in the Receive action.

   Output File Nickname. Specify *CML*, which is the type of file being generated by the Compose action and forwarded to the Conform action for processing.

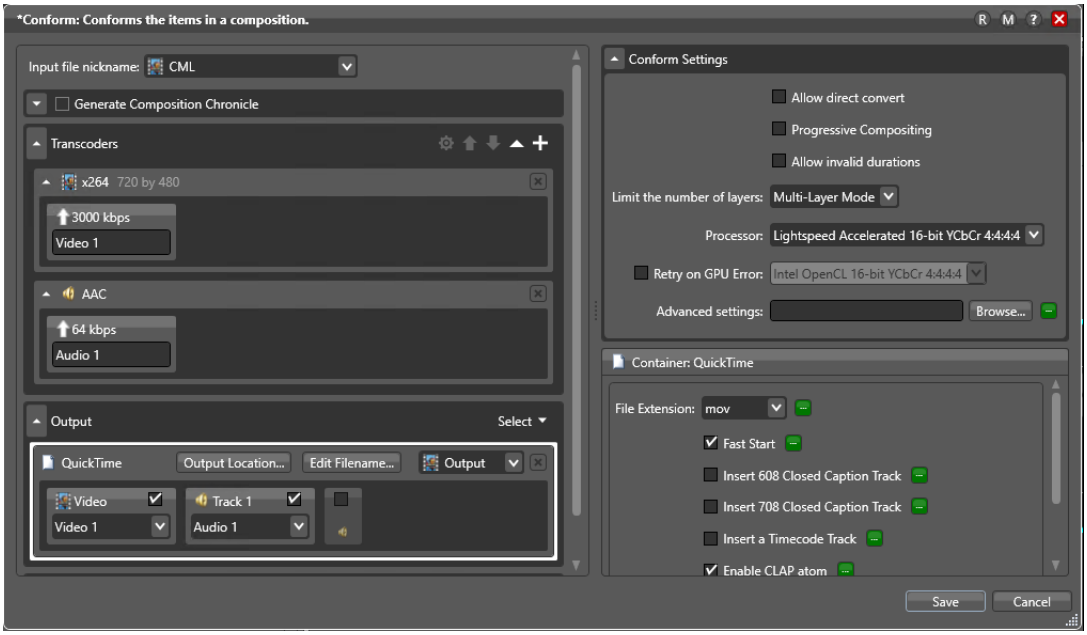
   Output Location. Specify *Available Vantage Store*, the default working store for temporary files during job execution.

   Composers. Specify *Simple AAF*, the media descriptor dialect of the sequence being ingested.

   Configure all other controls as required.

6. Click Save to update the action and close the inspector.

7. Finally, configure the Conform action—display its inspector:



8. Configure these controls:

   Input File Nickname. Specify *CML*, the nickname assigned the output file in the Compose action.

   Transcoders. Add and configure a video and audio transcoder as required for your output specifications.

   Output. Select and configure the container format, including its output location, file name, and nickname, as required for your output specifications.

   Configure other controls as required.

9. Click Save to update the action and close the inspector.

Activating the Workflow

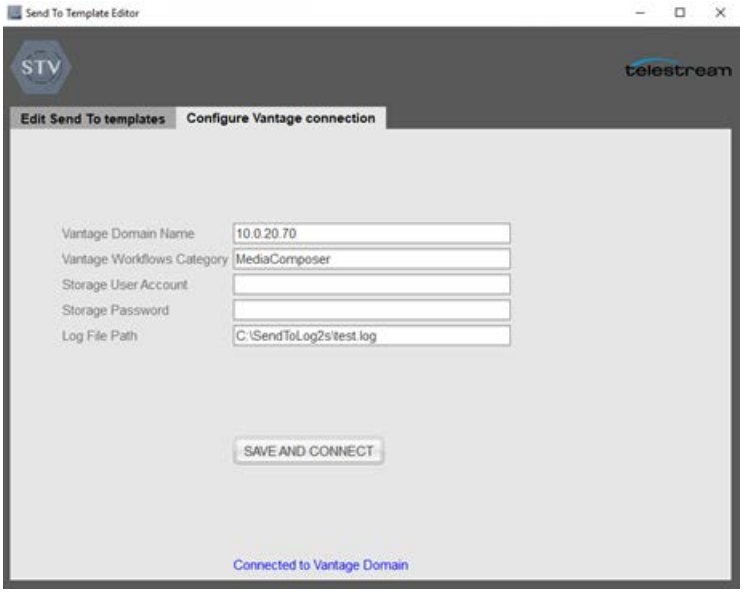
Workflows that are to be used to ingest your AAF files from Media Composer via Send To Vantage must be active. In Workflow Designer, select the workflow to display it, and at the bottom of the window, click the Activate button.

Creating and Installing Send To Vantage Templates

Use these topics to create and install templates for each workflow you plan to use.

Identifying Your Vantage Domain

1. On your Media Composer workstation, start the Send To Vantage Template Editor from the Windows Start menu. and display the Configure Vantage Connection tab:



2. Configure these Vantage connection controls:

   Vantage Domain Name. Enter the domain name or IP address of the target Vantage domain. In a Vantage array, specify the server hosting the Vantage SDK Service.

   Vantage Workflows Category. Specify the name of the workflow category you created in Workflow Designer when creating your first workflow.

   Storage User Account. Optional; user ID for the storage being utilized.

   Storage Password. Optional; password associated with the user account.

   Log Files Path. Optional; specifies the fully-qualified path to the folder where logs should be written. Default location is the current user's home directory (C:\Users\ %USERNAME%\Documents\VantageSendToLog.txt).

3. Click Save and Connect to test the connection to the domain you just specified.

   The Send To Vantage Template Editor program successfully connects to Vantage and displays the success message at the bottom of the window.

   If the connection fails, update the configuration to correct the problem.

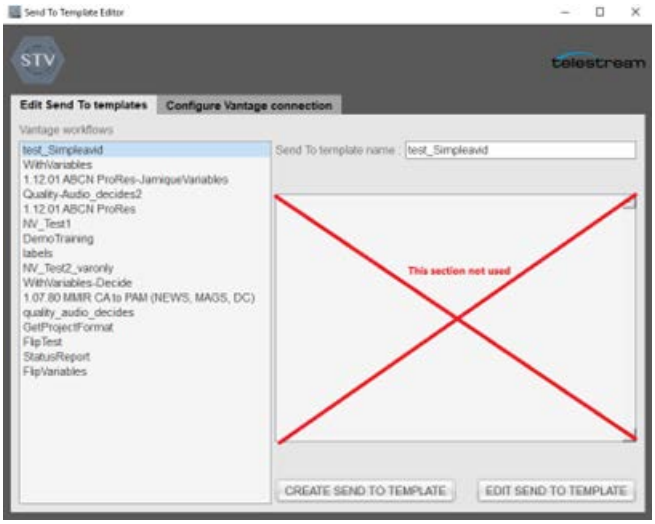
Creating a Template

Send To Vantage templates are comprised of an STT file and an INI file, stored in a folder named by you. Each time a job is submitted, these files are utilized.

Note: For each new workflow you create, you must create and configure a template for it to use.

---

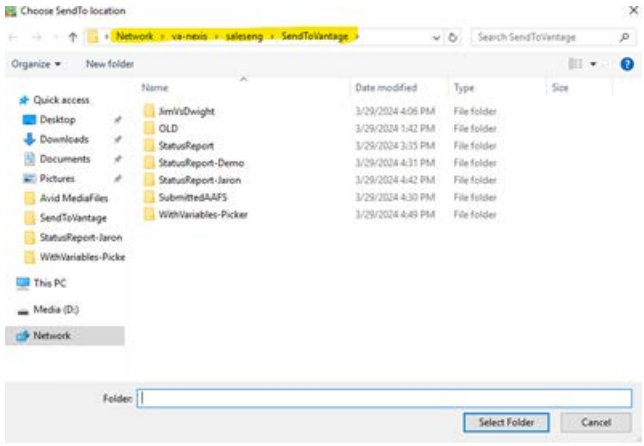
1. Click the Edit Send To Templates tab:



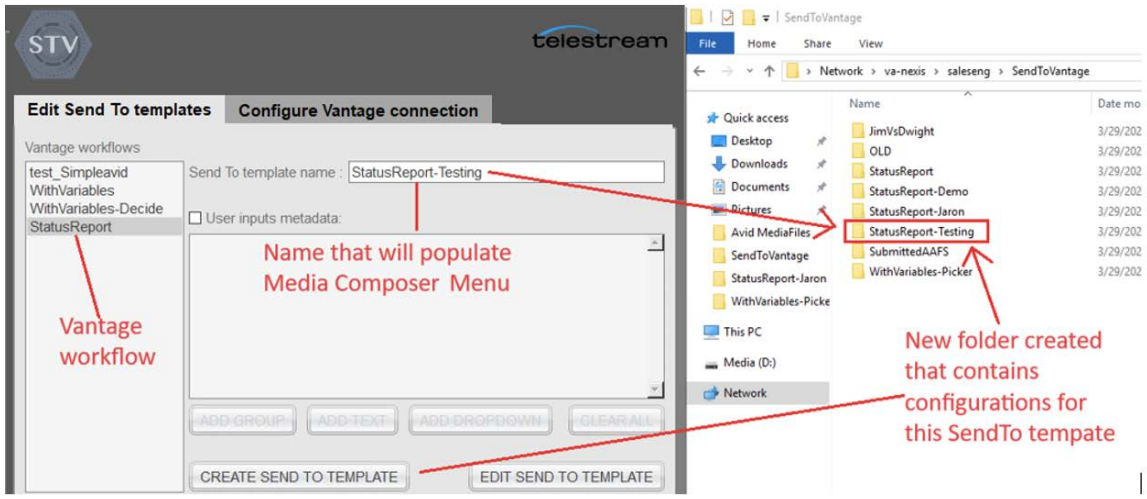
When you connect to a Vantage domain, the Send To Vantage Template Editor fetches the list of workflows in the specified workflow category you created earlier in Workflow Designer, and displays them in the Target Workflows list.

2. Select a workflow from the list and enter a template name in the Send to Template name field, which identifies both the workflow in Media Composer, and the folder which contains its template files. Consider using the same name as the workflow. This is identified as the output location in Media Composer when you select Output > Send to > Vantage.
3. In Windows Explorer, create (or identify) the parent template folder directory, naming it as appropriate and making certain that both Media Composer and Vantage have read/write access to it. This is the folder where the AAF hand-off takes place: Media Composer writes the AAF to this folder and Vantage reads them for ingest from here.
4. Back in Send To Vantage Template Editor, click Create Send to Template. The program displays a File Save dialog so that you can navigate to and save the template in the parent folder you just created or identified:

Note: This directory must be accessible with read/write privileges to both Vantage and Media Composer.



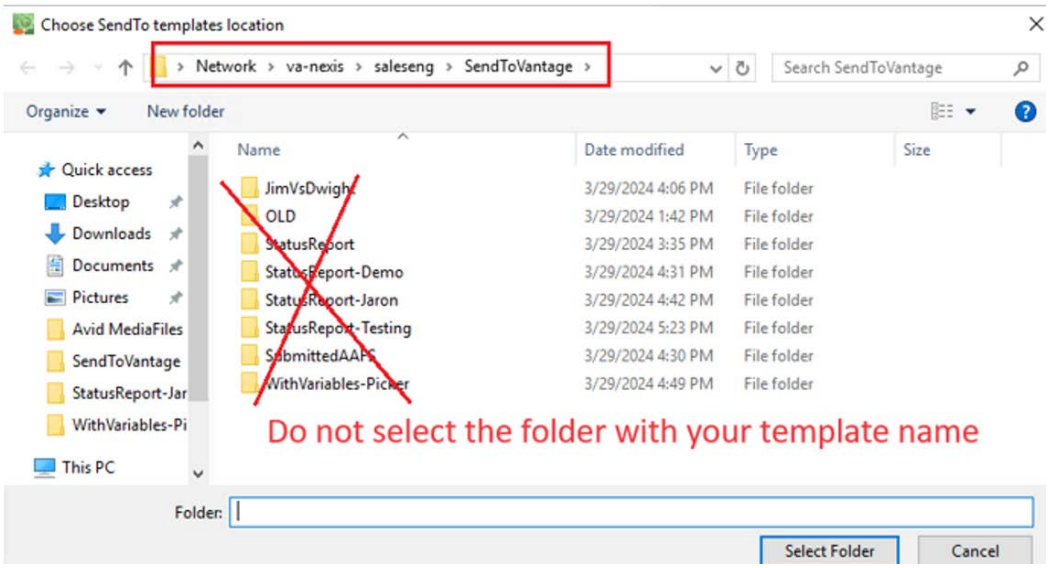
5. Navigate to the parent folder and click Select Folder to automatically create the template folder and also write the STT and INI files to it.



6. Close the Send To Vantage Template Editor when you are done creating templates.

Installing Templates

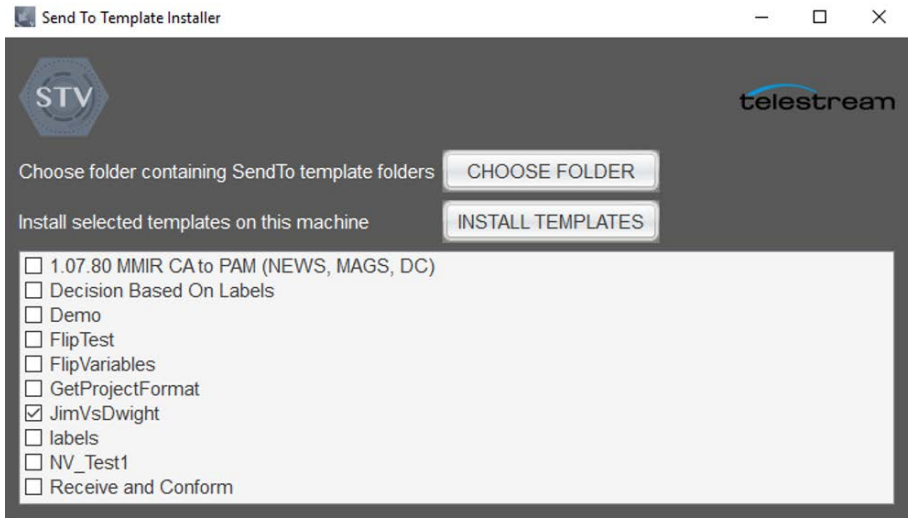
1. Start the Send To Vantage Template Installer program. It displays an Open File dialog:



2. Click Choose Folder and browse to the parent folder that you used to store the template when creating it—not the template folder itself—and click Select Folder.

   For example, you created a template for the workflow *STV Test Workflow*, naming it the same name and saved it in *\\va-nexis\MediaComposer\SendToVantage*. This is the folder to select.

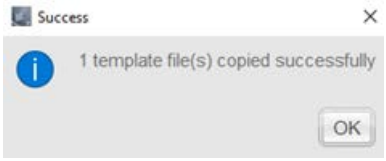
   Send To Vantage Template Installer displays the list of template folders in the parent folder.



   Select the templates to install and click Install Templates. When you install a template, Vantage Template Installer copies the STT file from the template folder into

the Media Composer directory *C:\Users\Public\Documents\Avid Media Composer\Avid Templates\Send To Templates\Vantage*.

The program displays a confirmation when the template is installed:

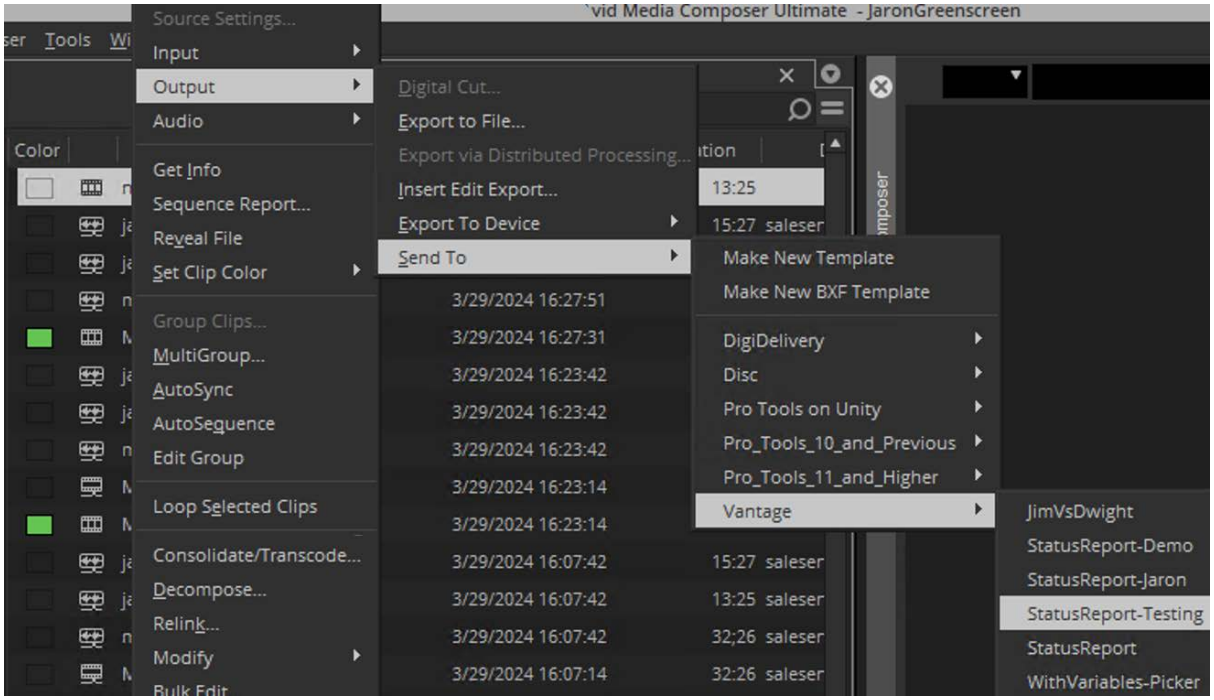


3. Now, close and re-open Media Composer so that it identifies all of the installed templates and makes them available for use.

Sending Sequences to a Vantage Workflow

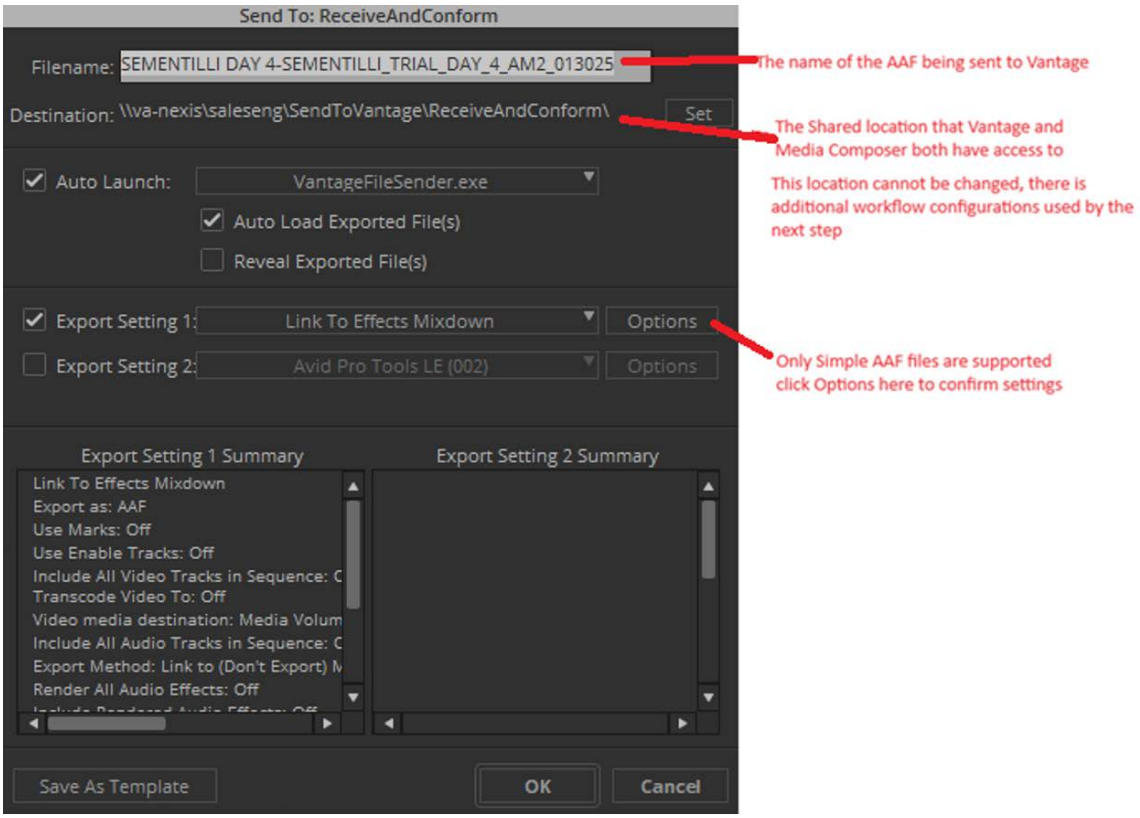
To send a sequence to Vantage, follow these steps:

1. In Media Composer navigate to one of your bins:



2. Right-click a sequence in the bin and select Output > Send To > Vantage > [your template name]. Alternatively, select File > Output > Send To > Vantage > [your template name].

   Media Composer displays the Export Options window:



   These settings should be checked (enabled):

- **Filename**—the name of the AAF file being sent to Vantage. Media Composer saves the AAF file to the selected server and path that is being monitored by the Vantage workflow.

  Media Composer may display a warning about overwriting files referencing the AAF files created in your destination folder:

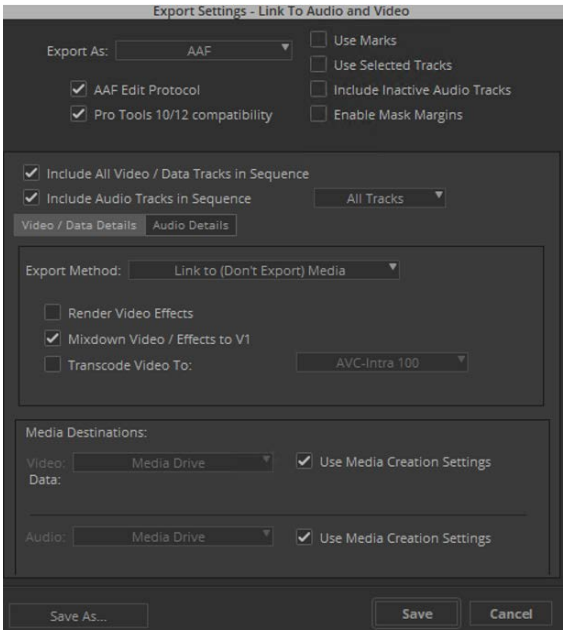
  Click Overwrite to overwrite the existing AAF file in this location.

- **Destination**—the shared location that Vantage and Media Composer both have access to. This is set automatically and should not be changed.
- **Auto Launch**—the file transfer program (VantageFileSender.exe). Do not change.

  Export Settings—must be checked—select the Link to Effects Mixdown option.

  If the setting doesn't display, click File > Settings > User tab. Under the Export category, check Export—Link to Effects Mixdown and close the window. The new setting should now display in the list.

3. Click Export Settings > Options to display the Export Settings - Link to Audio and Video window:



4. Confirm these settings are checked (above and below the video/audio tabs):

- **Export As**—Select AAF—only Simple AAF files are supported. (See page 66 in the Post Producer Developer Guide, published on the Telestream web site.)
- **AAF Edit Protocol**
- **Pro Tools 10/12 compatibility**
- **Include All Video/Data Tracks in Sequence**
- **Include Audio Tracks in Sequence**—Select the number of audio tracks to include
- **Media Destinations > Video: Use Media Creation Settings**
- **Media Destinations > Audio: Use Media Creation Settings**

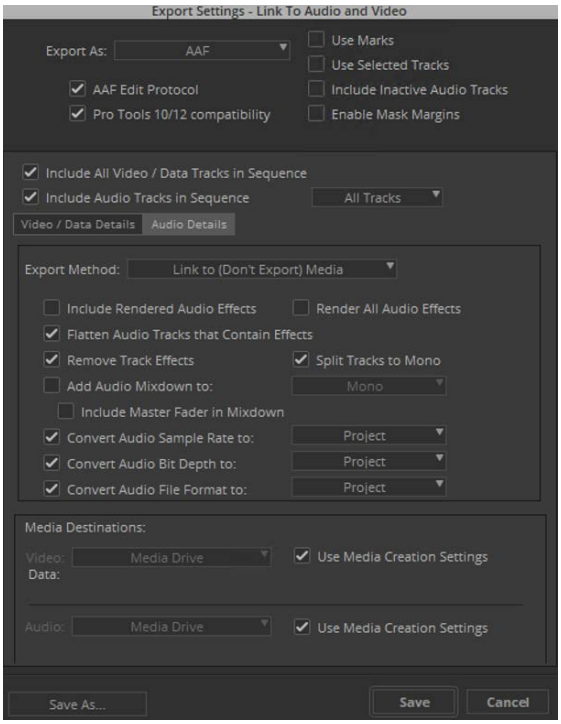
Note: The Media Destinations drive where you want to save any newly-created media should be accessible to Vantage.

---

5. On the Video/Data tab, confirm these settings are checked:

- **Export Method**—Link to (Don't Export) Media
- **Mixdown Video / Effects to V1**

6. Next, click the Audio Details tab to confirm these settings:



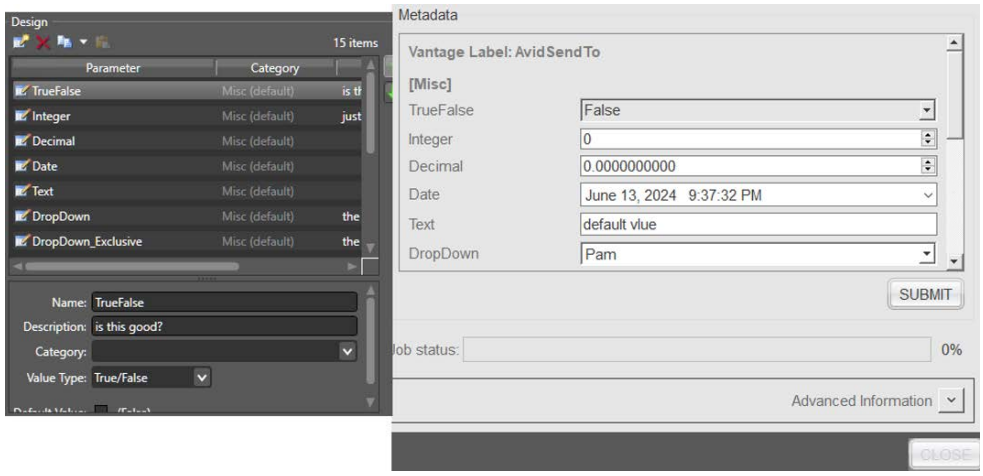
7. **Flatten Audio Tracks.** Check this setting.
8. Click Save to update the settings and close the dialog.

   After clicking OK, Vantage File Sender launches and provides you an opportunity to enter any metadata your workflow may be expecting (see topic following).

Note: You can repeatedly select sequences and configure all controls as required before sending the sequences to the workflow. For each sequence you've configured, Vantage File Sender creates a new tab. When all sequences are ready, you can submit them to the workflow at one time, and Vantage creates a job for each one submitted.

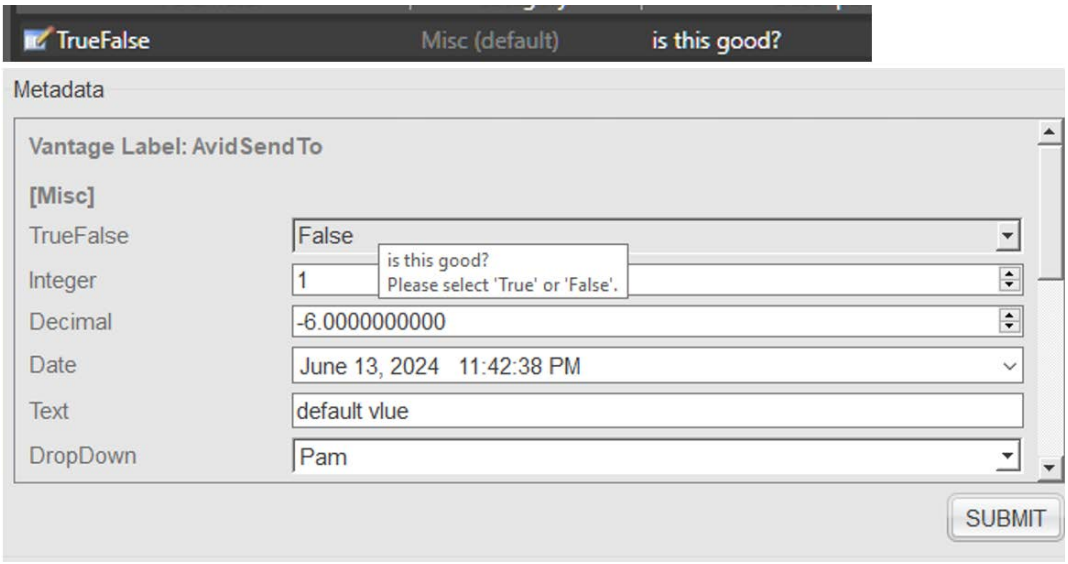
Providing Metadata with your Sequences

If your workflow requires metadata labels, they must be created in Vantage before you can provide the values during job submission. For information about creating metadata in Vantage, see relevant topics in the Vantage User Guide. If metadata isn't utilized, proceed to *Submitting your Sequences* to submit the job.



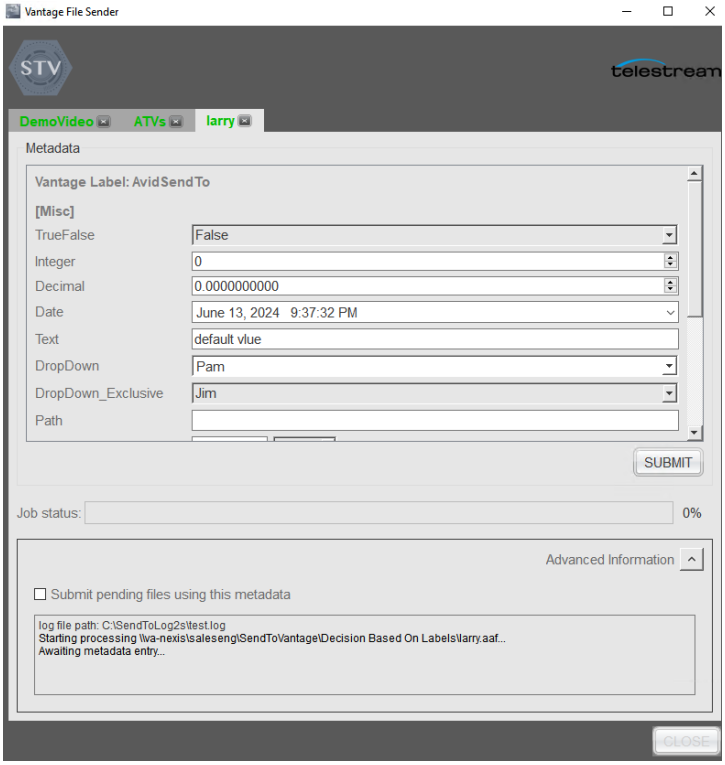
This graphic depicts the Vantage Workflow Designer label selector on the left, and the same label displayed in the Vantage File Sender program as you are sending the sequence to the workflow.

In the Vantage File Sender program, If you hover over a metadata field a tool tip displays showing you the description entered in the label in Vantage (see *Is this good?*).



Advanced Information Panel

When you are submitting multiple jobs simultaneously, you can optionally submit them with the same metadata:



To do so, display the Advanced Information panel and check Submit Pending Files Using This Metadata to submit all of these jobs with this metadata.

After clicking Submit, in the Advanced Information panel, Vantage File Sender displays information about your job status and which AAF file(s) were sent to the workflow by Vantage workflow ID (not by name (xref):

To view this workflow ID directly in Workflow Designer, display the workflow and click the top disclosure triangle to view the text field containing workflow ID. The workflow ID displays at the very top of the text window: scroll all the way to the top to locate it.

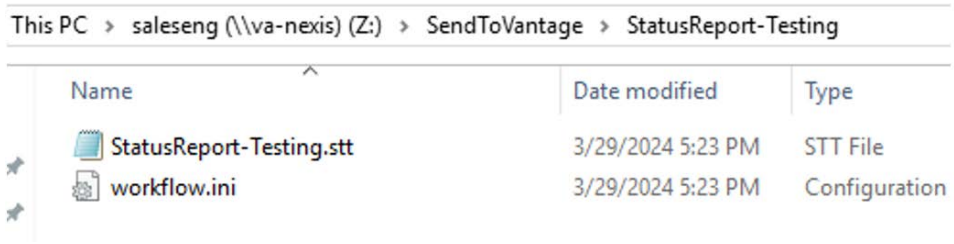
Submitting your Sequences

To submit your sequence or sequences to the workflow, click Submit, as depicted here:

For each sequence you've selected and configured, Vantage File Sender submits them to the workflow at one time, and creates a job for each one submitted. Now, you can view jobs being processed (or completed) in Vantage, via Workflow Designer.

Template Files Information

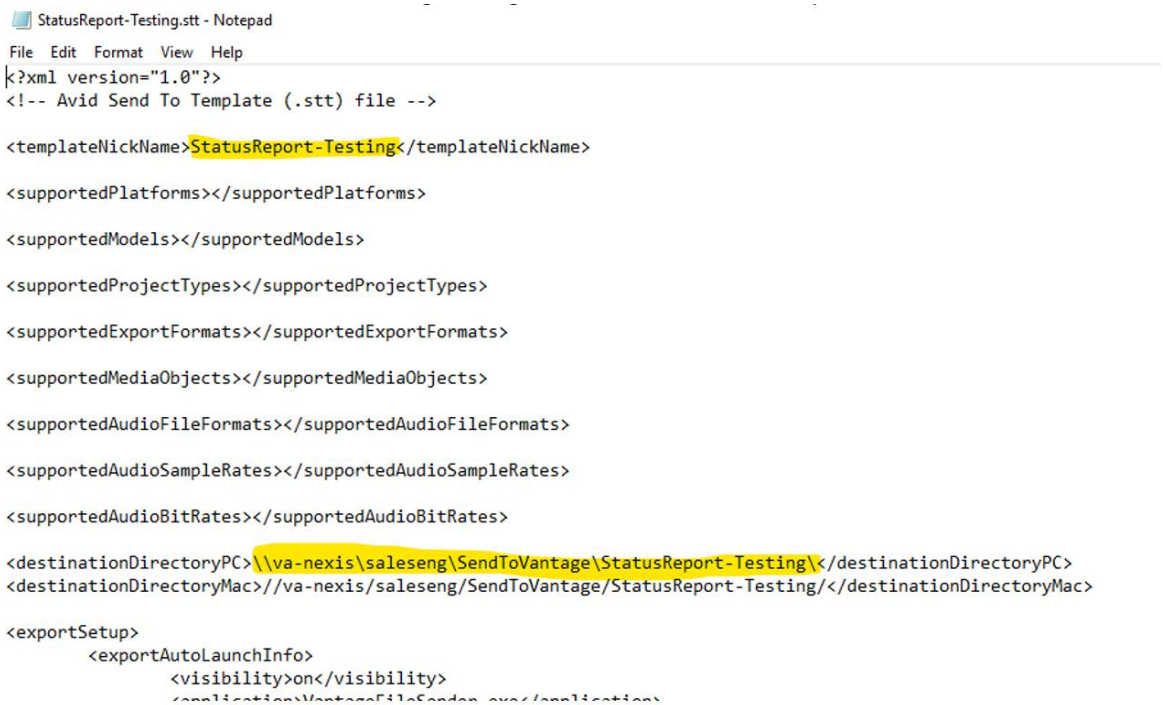
In the parent folder where templates are stored, each template folder contains two files—an STT file and an INI file:



The STT file is a copy of the file in the Avid Media Composer directory. Template files that Media Composer uses are located at *C:\Users\Public\Documents\Avid Media Composer\Avid Templates\Send To Templates\Vantage*.

Prototype STT File

STT files reference the template (and by convention, the workflow name) and the location where the template was created—see highlighted text:



Prototype INI File

The workflow.ini file has data about the Vantage domain, shared storage, credentials, the target workflow ID, and other variables—see highlighted text:

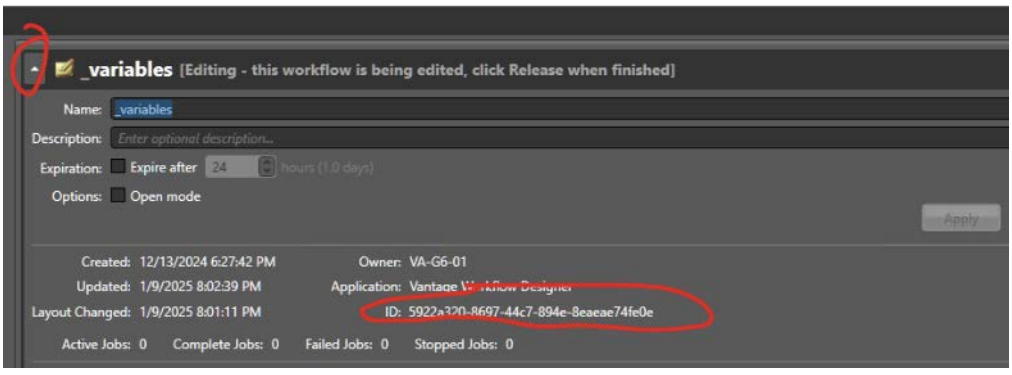
workflow.ini - Notepad

File Edit Format View Help

```
[connection]
host=10.0.20.70
user=MediaComposer
workflow=bf726ae4-c9cc-454b-b51e-ddce2d8fe0bc
templatename=StatusReport-Testing

[Storage]
username=
password=@ByteArray(\x1e\x62\xc5<E\x93\xda\xd3\xa9\x9cNZ\xd6\x

[metadata]
forceentry=true

[metadatagroups]
mediacomposer=Media Composer
vantage=Vantage

[metadataentries]
vantage\testname\displayname=TestName
vantage\testname\default=
vantage\testname\force=false
vantage\testname\type=text
```

These variables are generated when Media Composer initially sets up the workflow when you create the template. If new variables are added after the template is created, you must perform the creation process again.

The workflow ID specifies the workflow, and is displayed here in Vantage Workflow Designer:

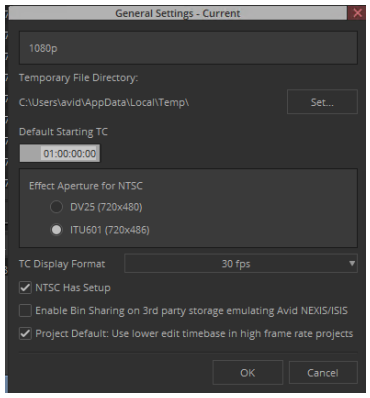


Display the workflow and click the disclosure button to the left of the workflow title in the design panel to view its ID and other pertinent information.

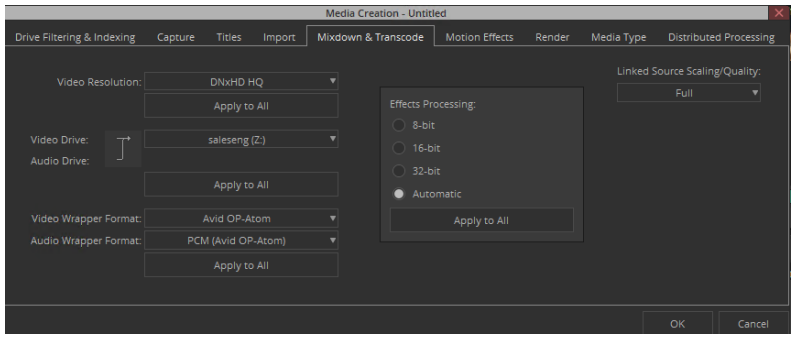
Troubleshooting

If you can not submit jobs using Send to Vantage, consider these issues:

- Confirm that the Nexis client is mounted on Media Composer and Vantage
- Confirm that the Vantage Edit Service is running as a user that has access privileges to the Nexis shares
- Confirm that you are using the correct Post Producer ComponentPac—see *Product and Version Requirements*.
- Confirm that you are using Simple AAF export settings
- If the timecode in CML and the timecode on the Media Composer timeline are not lining up, it may be helpful to adjust your Media Composer Timeline Display to match your frame rate: File > Settings > Project Tab > General:



- If the Conform action fails when video mix-downs are included, check your media creation settings for mix-downs: File > Settings > Project Tab > Media Creation:



Capturing Video for Edit While Ingest Operations

To perform Edit While Ingest operations in Avid Media Composer, you create a Live Capture workflow with a Media Creation action, and AAF action for environments not utilizing Interplay (MediaCentral | Production Management). These workflows capture live video and generate growing AAF-based MXF files that you can import into Avid Media Composer for editing in near real time.

Topics

Note: For complete configuration details, see *Media Creation Action* and *AAF Action*.

Edit While Ingest Workflow for Avid Media Composer

To perform Frame Chase | Edit While Ingest editing in Avid Media Composer that doesn't utilize Avid Interplay (MediaCentral | Production Management), you first create a prototype workflow to transcode single resolution media—multi-res encoding is not supported. Next, you start a capture event in Live Capture, and import the AAF file into Avid Media Composer.

Here are the tasks to perform (click on the link to view details):

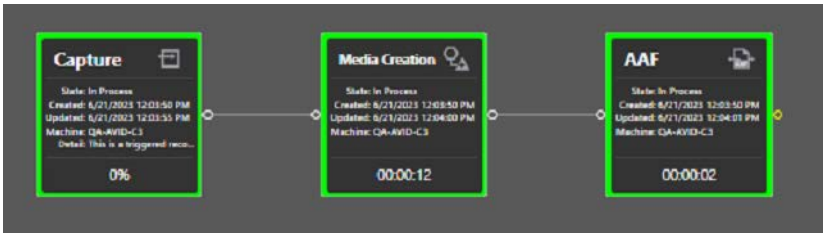
Tasks

1. *Creating the Workflow*
2. *Configuring the Workflow to Operate in Open Mode*
3. *Determining Your Source*
4. *Configuring the Capture Action*
5. *Configuring the Media Creation Action*
6. *Configuring the AAF Action*
7. *Activating the Workflow and Starting Capture*
8. *Start Editing in Avid Media Composer...*

Note: If you aren't familiar with operating workflows, review the Workflow Designer Guide or the Vantage Management Guide, both available from their programs. For general and highly-detailed configuration information, open the inspector for any action in your workflow and click the M button to display its man page.

Creating the Workflow

This workflow—which supports single resolution media transcoding only—is a prototype; it is the simplest workflow you can make to perform Edit While Ingest editing. After you create it and get it running properly, you can use it with confidence as a basis for more complex (and practical) Edit While Ingest workflows to meet your requirements.



In Vantage Workflow Designer, follow these steps to create this prototype workflow.

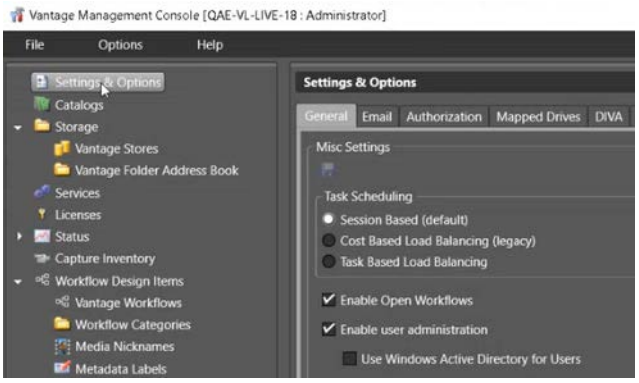
1. Create a new workflow and name it appropriately. This prototype is named *AAF Workflow*.
2. Add a Capture action, Media Creation action and an AAF action and connect them.

Configuring the Workflow to Operate in Open Mode

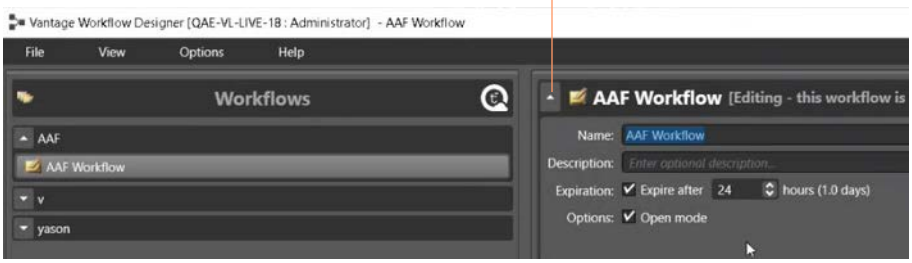
Edit While Ingest workflows must be set as an Open Workflow—all actions operate independently and as efficiently as possible, on a frame-by-frame basis—to process incoming live video and write it to file, making it accessible to Avid Media Composer in near real time.

To enable Open Workflow execution in Vantage and the workflow specifically, follow these steps:

1. First, make sure that Vantage is configured for Open Workflow processing. In the Vantage Management Console, click on Settings and Options:

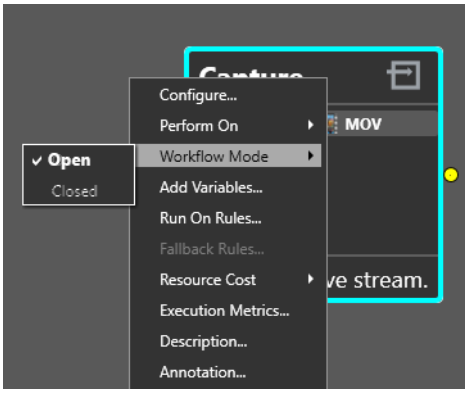


2. In the General tab, check Enable Open Workflows; click Save and close the console.
3. Back in Workflow Designer, click on the disclosure button to the left of the workflow name (here shown as *AAF Workflow*) to open its configuration panel:



4. Check Options: Open Mode to set the workflow to execute in open mode.

5. Now, right-click on each action in the workflow, and select Workflow Mode > Open:



After setting the Capture, Media Creation, and AAF action to Open mode, you're ready to continue.

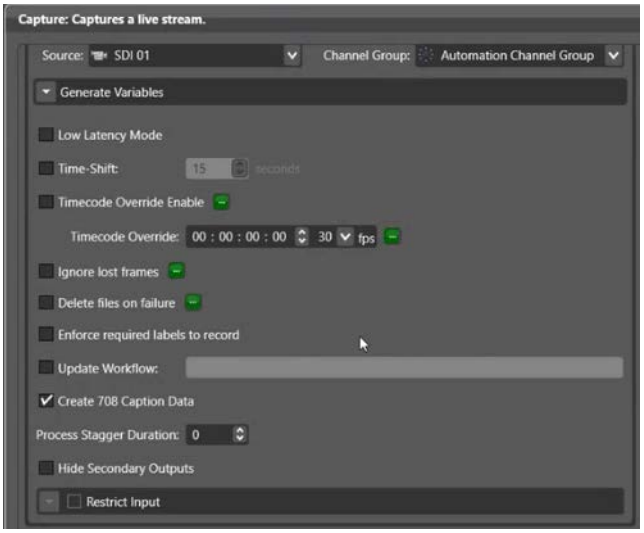
Determining Your Source

In the Live Capture web app, determine which source you are going to capture (we'll use *SDI 01* in this example)—you'll use its name to specify it when you configure the Capture action.

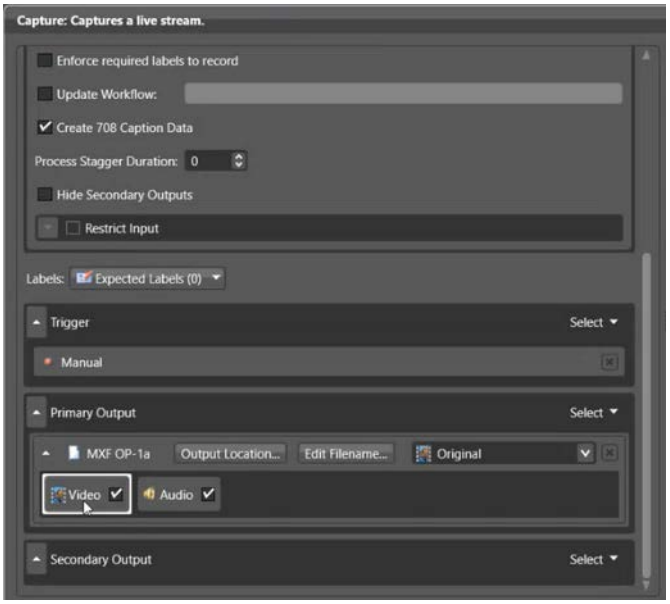
Configuring the Capture Action

The Capture action is an origin action—it captures live video (SDI | NDI | TS | RMPT | ST 2110), transcodes it and serializes it into a file. The Media Creation action can ingest MXF-OP1a and TIFO files for Edit While Ingest editing, so this action should be configured to use either an MXF or TIFO container. Other settings in the Capture action don't directly affect Edit While Ingest editing.

1. In Vantage Workflow Designer, open the Capture action inspector, and select your Live Capture Source (here shown as *SDI 01*) in the Source control. (If you have more than one channel group, you may have to specify it as well):



2. Set your primary output container to MXF or TIFO, select a codec (here, MXF with DNxHD) and configure its controls per your requirements:

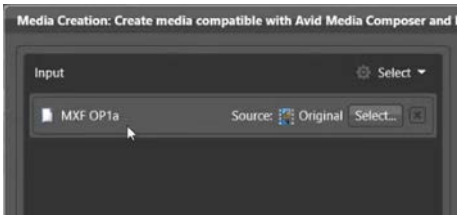


3. Check Force One Track per Channel for PCM audio.
4. Specify other settings in the Capture action to meet your requirements and save and close the inspector.

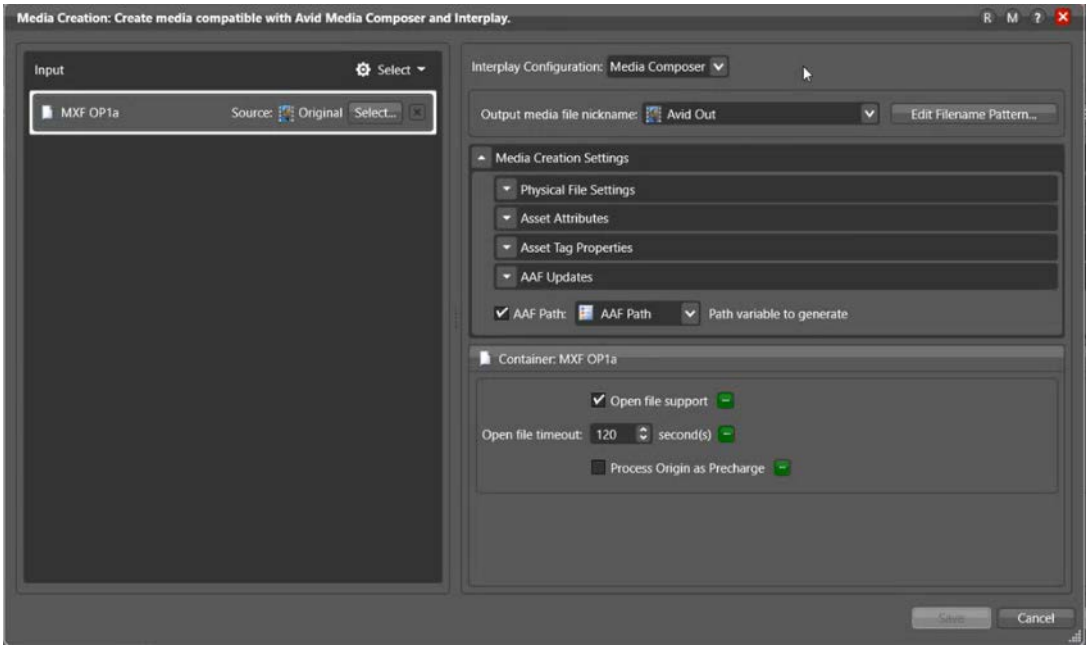
Configuring the Media Creation Action

The Media Creation action generates the Avid-compatible AAF file. For Edit While Ingest editing, you'll configure it to re-wrap the media for importing in Avid Media Composer, with Frame Chase Editing mode enabled and an output location, stored in a variable to identify the output location for use in the AAF action:

1. Open the Media Creation action inspector.
2. Click Select and specify MXF OP1a or TIFO, and then click Select and select the nickname of the Capture action Primary Output: *Original*:



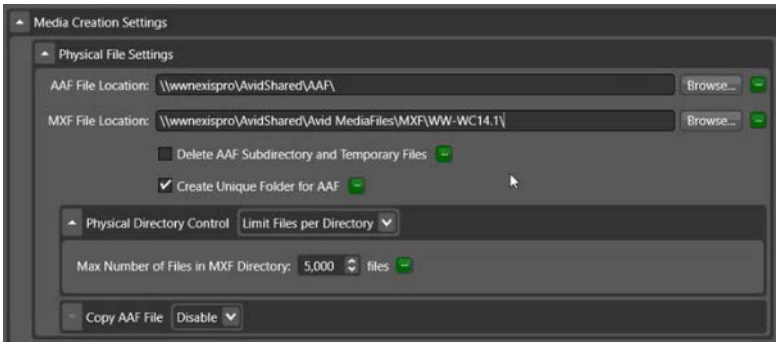
3. Now, in the configuration panel on the right set Interplay Configuration to *Media Composer*:



4. Also specify a nickname for the AAF output media file. Here, we've chosen *Avid Out*.
5. With the Input component selected as shown, in the Container panel at the bottom of the right panel, check Open File Support, to complete Open mode configuration.

   Now, lets configure the remaining Media Creation settings:

6. In Physical File Settings, set these controls as shown:



7. AAF File Location: Browse to select the location where you want to save the output AAF file. In this example, we're saving it in `\\wwnexispro\AvidShared\AAF\`. We'll be using this directory later, to import the AAF file into Avid Media Composer.
8. MXF File Location: Browse and select the SAN or other network storage where you want to save the MXF file set. In this example, we're saving it in `\\wwnexispro\AvidShared\Avid MediaFiles\MXF\WW-WC14.1\`.

Note: In this example, we've checked Create Unique Folder for AAF, so that we can specify a directory that doesn't yet exist, without action failure.

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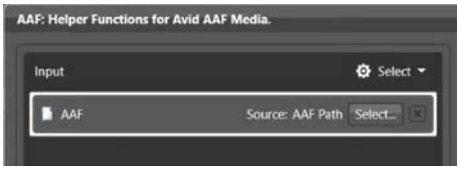
9. Asset Attributes: Not specifically related to Edit While Ingest editing—set as required for your requirements or accept default settings.
10. Input Type should be set to default *Import*.
11. Asset Tag Properties and AAF Updates: Not specifically related to Edit While Ingest editing—set as required for your requirements or accept default settings.
12. AAF Path: Set this control to a variable (*AAF Path* is used in this example—just remember the name of the variable for use when configuring the AAF action) to track the server and path where you specified that the AAF file should be written, for use in the AAF action.
13. Save and close the inspector.

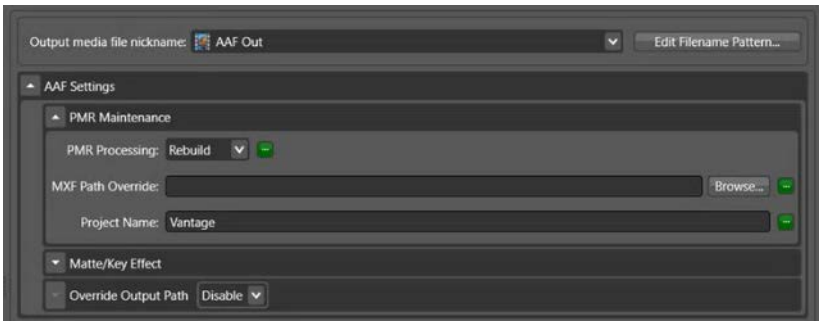
Configuring the AAF Action

The AAF action is a utility action that supports PMR operations, Matte Key creation, frame chasing editing, etc. For this application—Edit While Ingest editing in Media Composer, without an Interplay (MediaCentral | Production Management) system—configure the AAF action with the Input Source File Name bound to *AAF Path* variable generated in the Media Creation action:

1. Open the AAF action inspector and set your input to AAF (the only choice):



2. In the AAF Input component panel, click Select to display the Input Source dialog: select File name and click the green Browse button to select the *AAF Path* variable, which holds the fully-qualified path you specified for the AAF file in the Media Creation action. (The nickname of the output media—MXF file set—is not what we are using.)
3. In AAF Settings, set these controls as shown:

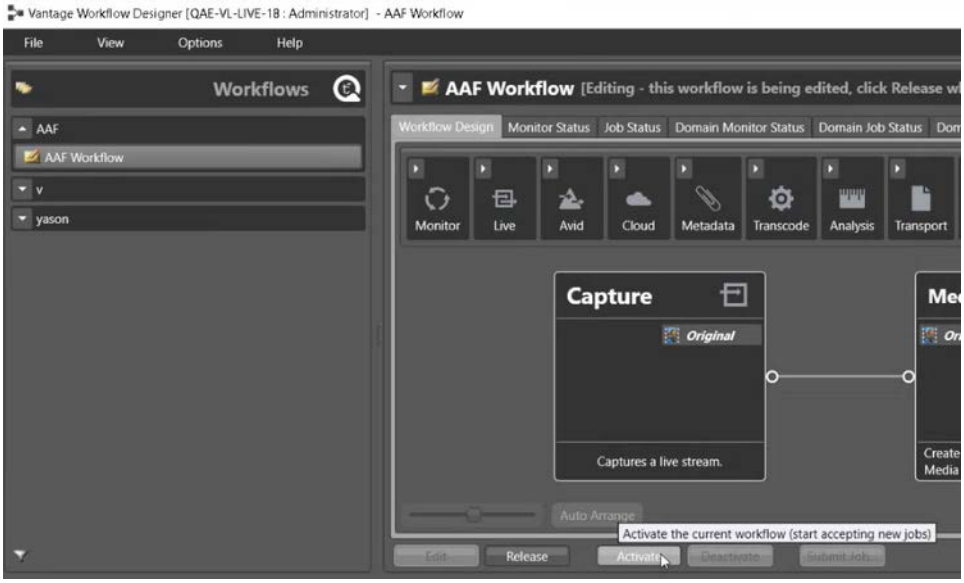


4. PMR Maintenance: Set to *Rebuild*.
5. Make sure that Matte/Key effect is set to *None*.
6. Save and close the inspector.

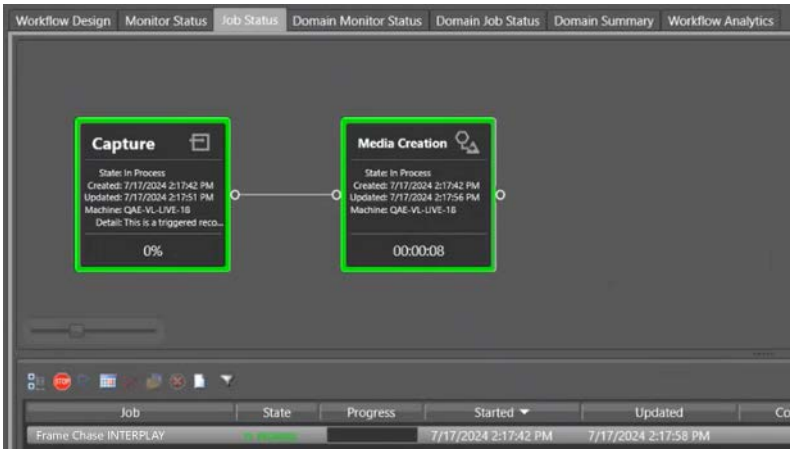
Activating the Workflow and Starting Capture

Now that you've configured the workflow, activate it (click Activate at the bottom of the window) and start capturing your video:

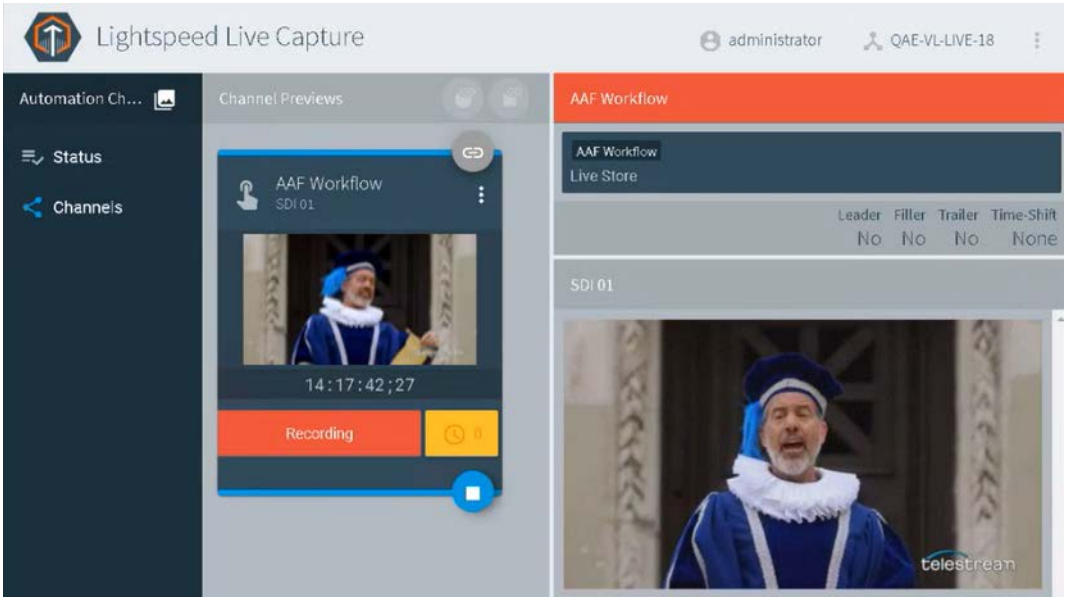
1. In Workflow Designer, activate the workflow:



2. Click Activate and then display the Job Status tab to see the workflow actions all come into a Processing state:



3. Now, in the Live Capture web app, start capturing your live video (in this example, SDI 01) by clicking the red record button at the bottom right of the preview panel; it starts capturing and displays a blue circle with white square:



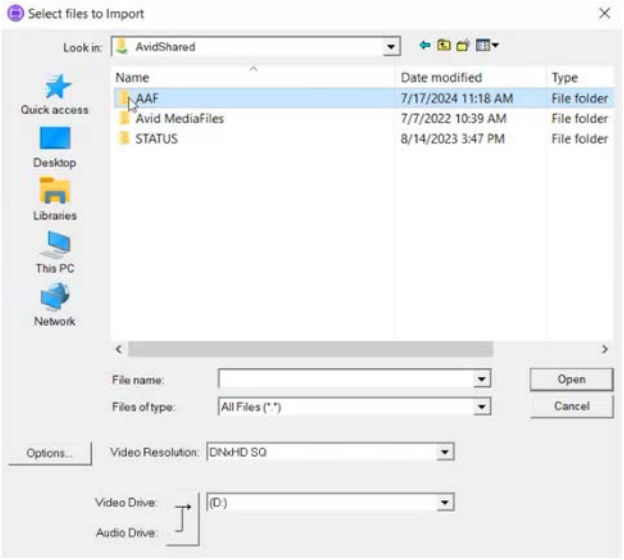
At this point, your Live Capture workflow is ingesting live media and writing DNxHD frames to your MXF file set; the Media Creation is performing its task, so that you can import the AAF file in Avid Media Composer.

With your live source streaming into Live Capture and being encoded and serializing into an open, growing file set, you can start Edit While Ingest editing.

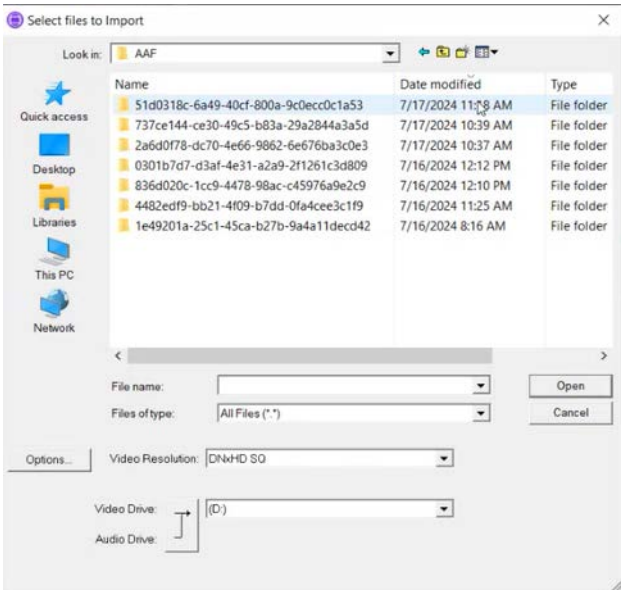
Start Editing in Avid Media Composer...

1. In Avid Media Composer, go to your project's bin, right-click and select Input > Import Media.

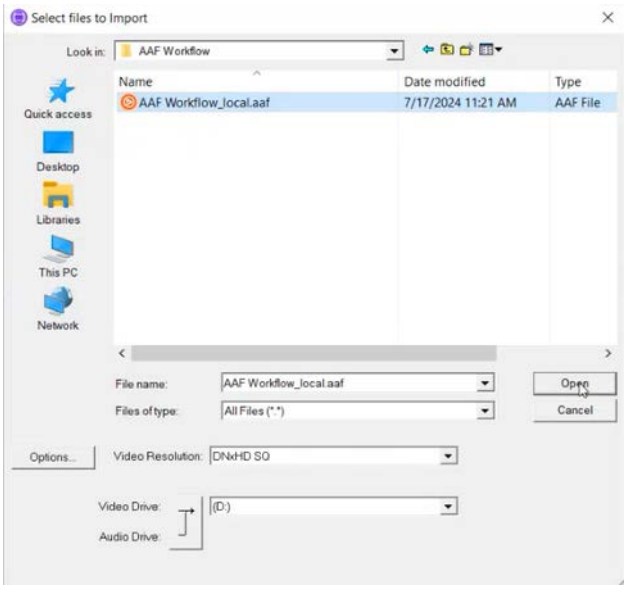
2. Avid Media Composer displays the Select Files to Import—navigate to the Avid shared storage server and directory that you specified in the Media Creation action (AAF File Location) for writing the AAF file:



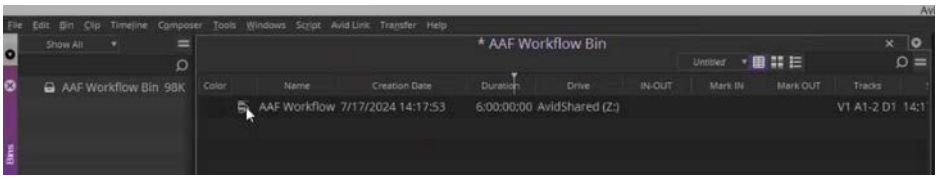
3. This directory holds recent Live Capture jobs in separate directories. Open the AAF directory you specified in the Media Creation action to display the job directories:



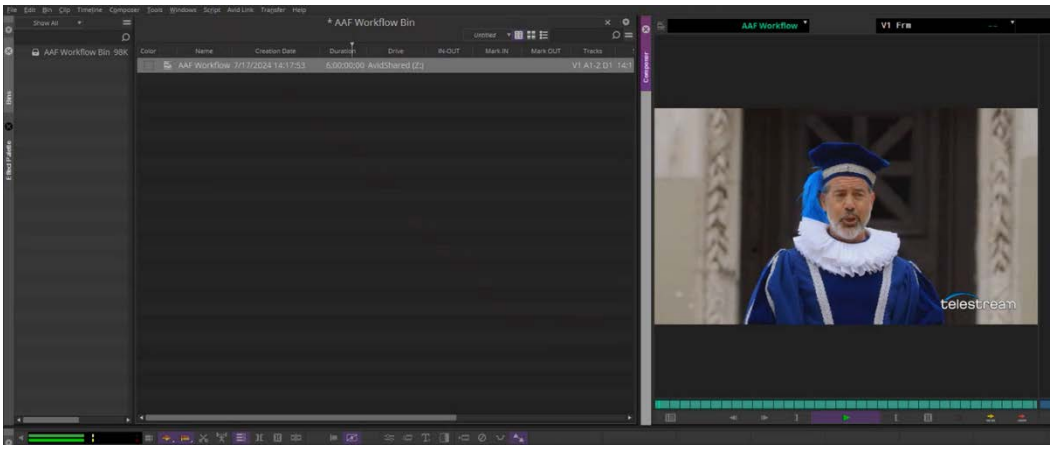
4. Typically, you'll open the most recently modified directory:



5. Select the AAF file and click Open to load it into Avid Media Composer.
6. Now, you can start Edit While Ingest editing:



Select the file to view its preview in near real time:



Once the AAF workflow has completed in Vantage, re-import the AAF file into your Media Composer bin to close the asset.

Edit While Ingest Workflow for an Interplay Environment

To perform Edit While Ingest editing for use in Avid Media Composer that utilizes Avid Interplay (MediaCentral | Production Management), you first create a prototype Edit While Ingest workflow. Next, you start a capture event in Live Capture, and import the AAF file into Avid Media Composer. Here are the tasks to perform (click on the link to view details):

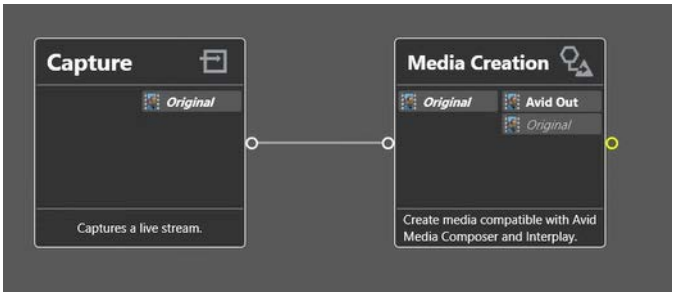
Tasks

1. *Creating the Workflow*
2. *Configuring the Workflow to Operate in Open Mode*
3. *Determining Your Source*
4. *Configuring the Capture Action*
5. *Configuring the Media Creation Action*
6. *Activating the Workflow and Starting Capture*
7. *Start Edit While Ingest Operations in Media Composer...*

Note: If you aren't familiar with operating workflows, review the Workflow Designer Guide or the Vantage Management Guide, both available from their programs. For general and highly-detailed configuration information, open the inspector for any action in your workflow and click the M button to display its man page.

Creating the Workflow

This workflow is a prototype; it is the simplest workflow you can make to perform Edit While Ingest editing. After you create it and get it running properly, you can use it with confidence as a basis for more complex (and practical) Edit While Ingest workflows to meet your organization's goals.



In Vantage Workflow Designer, follow these steps to create this prototype workflow.

1. Create a new workflow and name it appropriately. This prototype is named *Frame Chase INTERPLAY*.

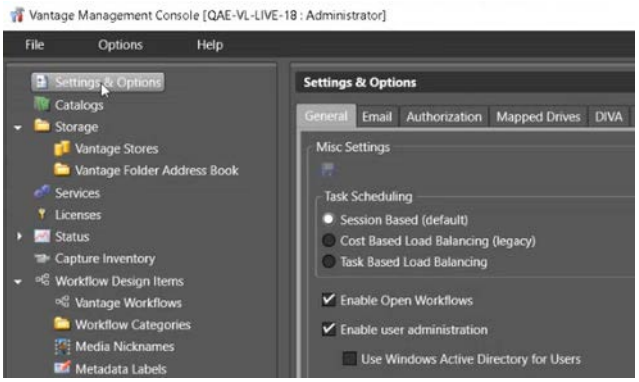
2. Add a Capture action and Media Creation action and connect them.

Configuring the Workflow to Operate in Open Mode

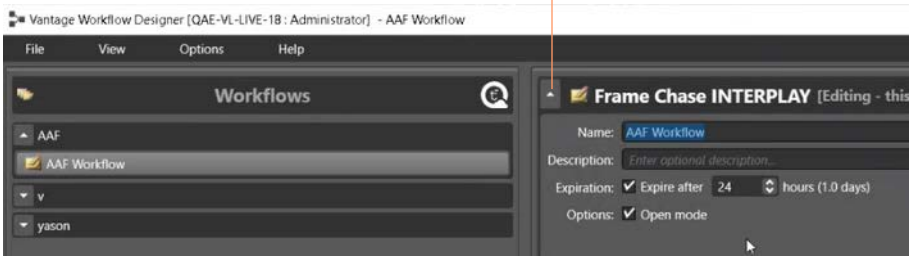
Edit While Ingest workflows must be configured as an Open Workflow—where all actions operate independently and as efficiently as possible, on a frame-by-frame basis—to process incoming live video and write it to file, making it accessible to Avid Media Composer in near real time.

To enable Open Workflow execution in Vantage and the workflow specifically, follow these steps:

1. First, make sure that Vantage is configured for Open Workflow processing. In the Vantage Management Console, click on Settings and Options:

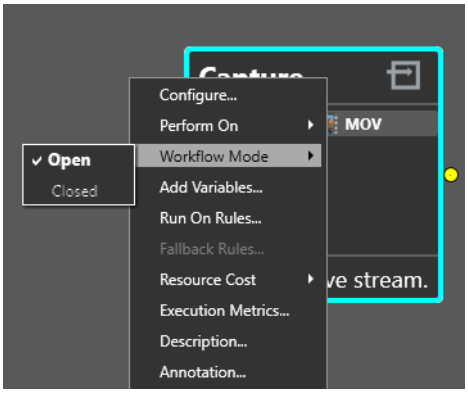


2. In the General tab, check Enable Open Workflows; click Save and close the console.
3. Back in Workflow Designer, click on the disclosure button to the left of the workflow name to open its configuration panel:



4. Check Options: Open Mode to set the workflow to execute in open mode.

5. Now, right-click on each action in the workflow, and select Workflow Mode > Open:



After setting the Capture and Media Creation action to Open mode, you're ready to continue.

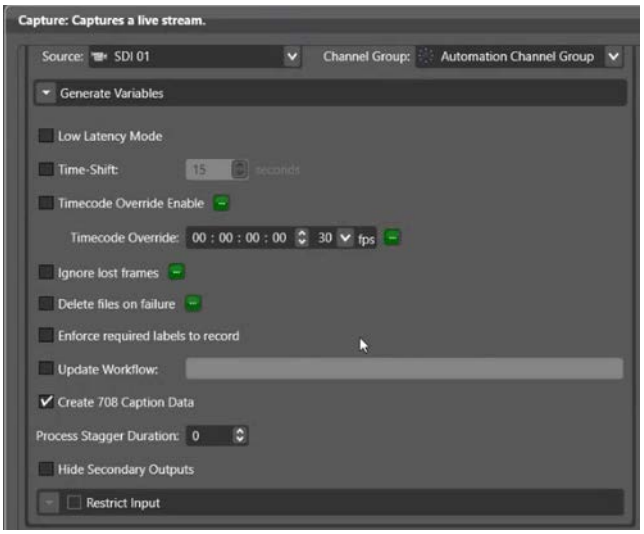
Determining Your Source

In the Live Capture web app, determine which source you are going to capture (we'll use *SDI 01* in this example)—you'll use its name to specify it when you configure the Capture action.

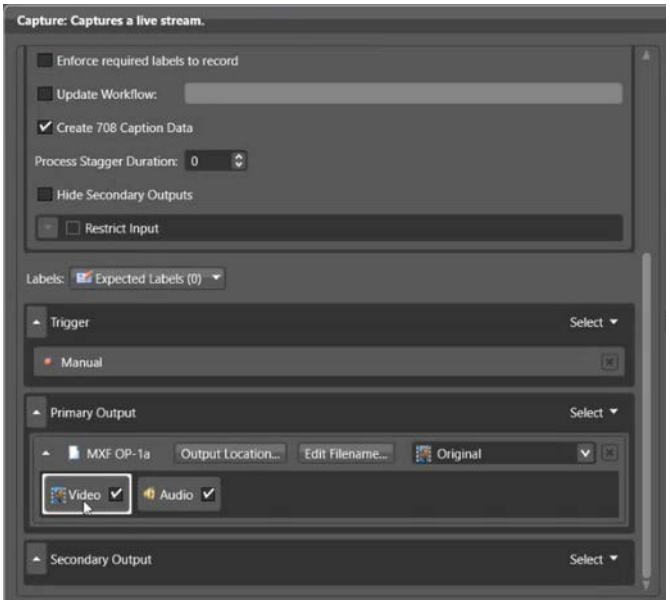
Configuring the Capture Action

The Capture action is an origin action—it captures live video (SDI | NDI | TS | RTMP | ST 2110), transcodes it and serializes it into a file. The Media Creation action can ingest MXF-OP1a and TIFO files for Edit While Ingest editing, so the Output in the Capture action should be configured to use either an MXF or TIFO container. Other settings in the Capture action don't directly affect Edit While Ingest editing.

1. In Vantage Workflow Designer, open the Capture action inspector, and select your Live Capture Source (here shown as *SDI 01*) in the Source control. (If you have more than one channel group, you may have to specify it as well):



2. Set your primary output to MXF or TIFO—this example uses MXF OP1a—select a codec (here, DNxHD) and configure its controls per your requirements:

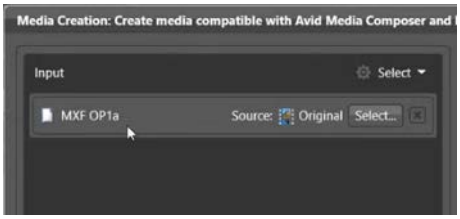


3. Check Force One Track per Channel for PCM audio.
4. Specify other settings in the Capture action to meet your requirements and save and close the inspector.

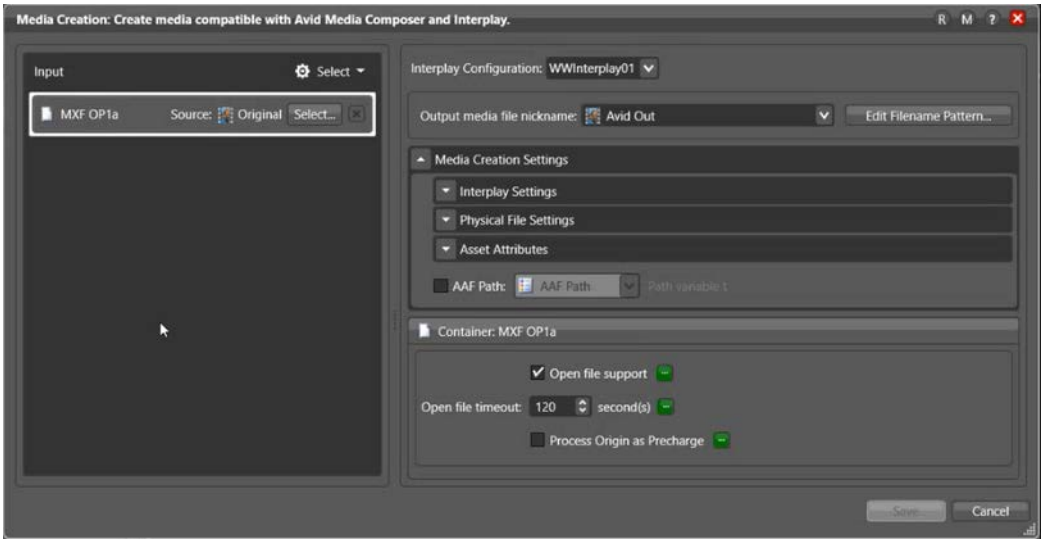
Configuring the Media Creation Action

The Media Creation action generates the Avid-compatible AAF file. For Edit While Ingest work, you'll configure it to re-wrap the media for importing in Avid Media Composer, with Frame Chase Editing mode enabled:

1. Open the Media Creation action inspector.
2. In the Select menu, specify *MXF OP1a* (either MXF or TIFO may be used) and then in the input component, click Select and specify the nickname of the Capture action's Primary Output: *Original*:



3. Now, in the configuration panel on the right, set Interplay Configuration to *Interplay* or to an Interplay system you've previously added to Vantage in the Vantage Management Console:



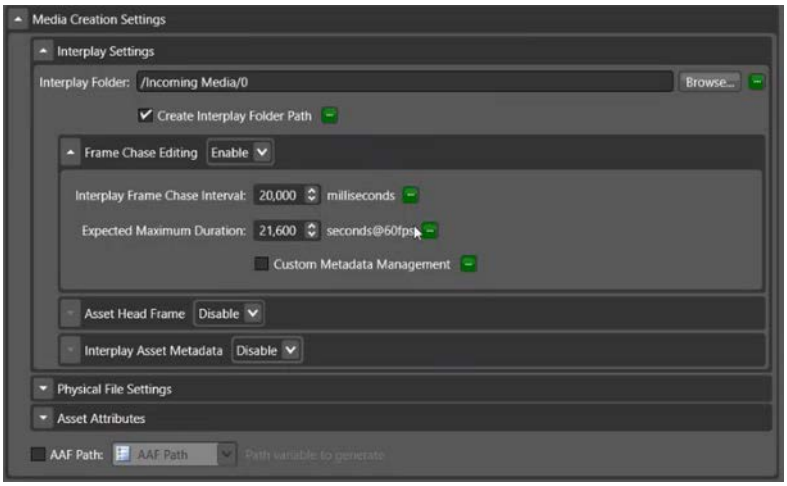
Note: You can select *Interplay* to set up its details directly in this action, in the Interplay Definition panel. You can also pre-configure one or more Interplay systems in the Vantage Management Console, and they display here in the Interplay Configuration menu for selection. For details, see the Vantage Management Guide.

4. Specify a nickname for the AAF output media file. Here, we've chosen *Avid Out*.

5. With the Input component selected as shown, in the Container panel at the bottom of the right panel, check Open File Support, to complete Open mode configuration.

   Now, lets configure the remaining Media Creation settings:

6. In Interplay Settings, set these controls as shown:



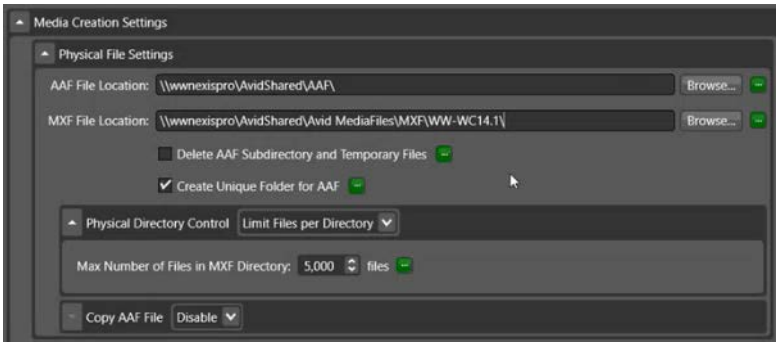
7. Interplay Folder: Specify (manually or by browsing) the Interplay (MediaCentral | Production Management) virtual folder path to be used for the output. (You can also use a variable that contains this path, set from a previous action.)

   Create Interplay Folder Path: Check to create the virtual folder(s) you just specified if they don't exist. If you don't check this control and they don't exist, the job fails.

   Frame Chase Editing: Select Enable. Modify the default controls as desired.

   Asset Head Frame | Interplay Asset Metadata: Set controls as desired.

8. In Physical File Settings, set these controls as shown:



9. AAF File Location: Browse and select the SAN or other network storage where you want to save the output AAF file. In this example, we're saving it in `\\wwnexispro\AvidShared\AAF\`. We'll be using this directory later, to import the AAF file into Avid Media Composer.

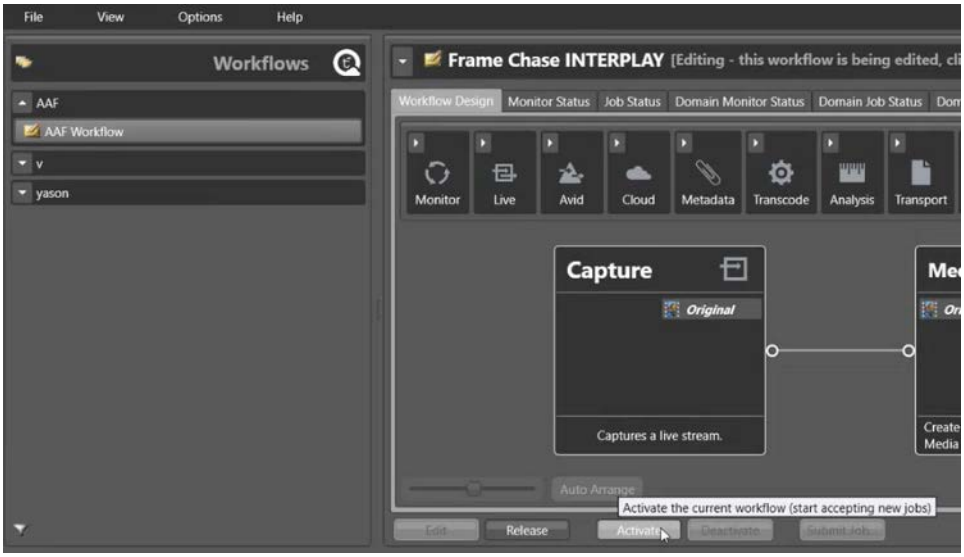
10. MXF File Location: Browse and select the SAN or other network storage where you want to save the MXF file set. In this example, we're saving it in `\\wwnexispro\AvidShared\Avid MediaFiles\MXF\WW-WC14.1\`.
11. In this example, we've checked Create Unique Folder for AAF, so that we can specify a directory that doesn't yet exist without action failure.
12. Asset Attributes: Not specifically related to Edit While Ingest—set as required for your requirements or accept default settings.

    Unless you're importing tape-based material, Input Type should be set to default *Import*.
13. Asset Tag Properties and AAF Updates: Not specifically related to Edit While Ingest editing—set as required for your requirements or accept default settings.
14. Save and close the inspector.

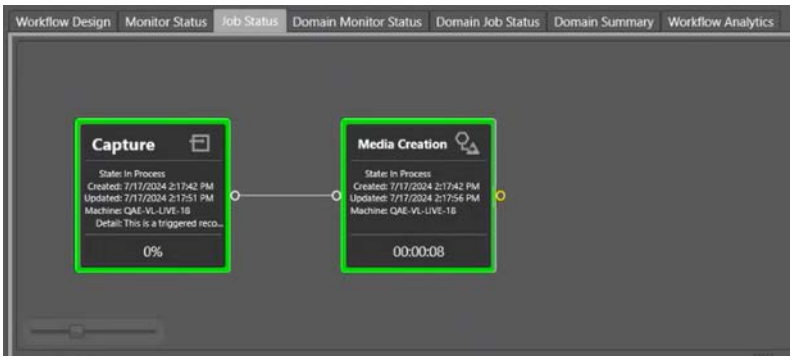
Activating the Workflow and Starting Capture

Now that you've configured the workflow, activate it (click Activate at the bottom of the window) and start capturing your video:

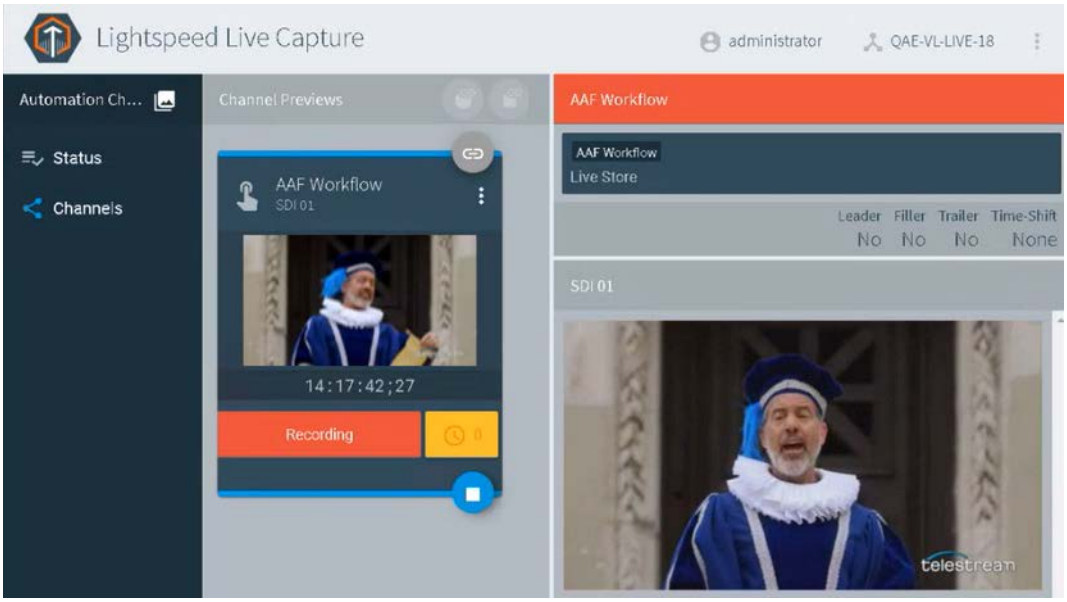
1. In Workflow Designer, activate the workflow:



2. Click Activate and then display the Job Status tab to see the workflow actions all come into a Processing state:



3. Now, in the Live Capture web app, start capturing your live video (in this example, SDI 01) by clicking the red record button at the bottom right of the preview panel; it starts capturing and displays a blue circle with white square:

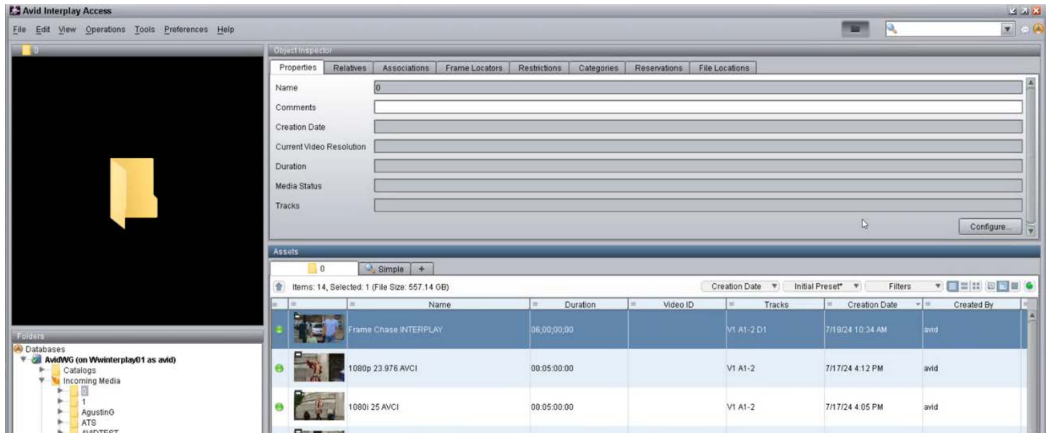


At this point, your Live Capture workflow is ingesting live media and writing DNxHD frames to your MXF file set; the Media Creation action is performing its task, so that you can import the AAF file in Avid Media Composer.

With your live source streaming into Live Capture and being encoded and serializing into an open, growing file set, you can import it into Avid Media Composer and start Edit While Ingest operations.

Start Edit While Ingest Operations in Media Composer...

In Avid Media Composer, open the Tools > Production Management Window to locate the AAF file and drag and drop it into your Avid Media Composer project's bin:



Navigate to the server and directory (in this case, `/Incoming Media/0`). select the file and import it.

Note: You could also launch Interplay Access and log in; to import the AAF file being generated by the workflow, locate the AAF file and drag and drop it into your Avid Media Composer project's bin.

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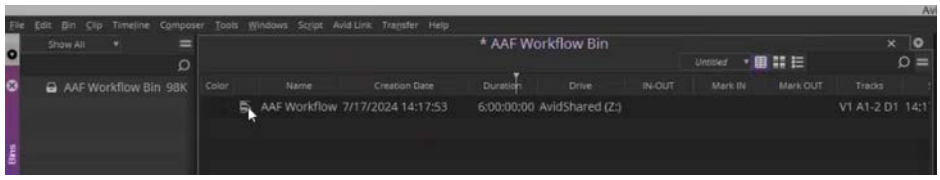
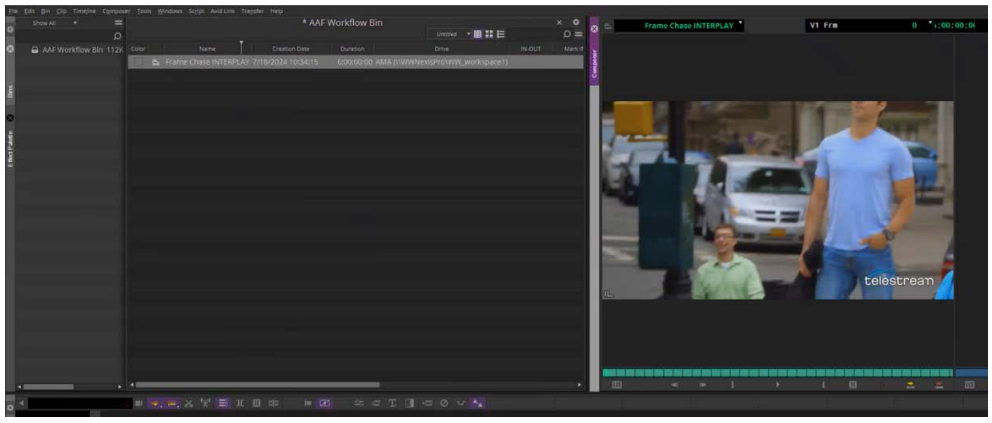
1. Now, Select the file to play it:



2. Select the file to display it.



3. Now, you can start Edit While Ingest operations on the file as it grows in near real time.
4. Once the AAF workflow has completed in Vantage, re-import the AAF file into your Media Composer bin to close the asset.

Creating an Avid Media Composer Matte/Key Effect

You can use a Flip64 > Media Creation > AAF action workflow to produce two video clips, composite them, and then import into Avid Media Composer as an effect, and use to apply a Matte/Key effect on your video.

Matte/Key capabilities in Vantage enable customers to automate their often tedious, manual graphics ingest processes. The Matte/Key Effect feature exposes a background clip through foreground clip (derived from the alpha channel as the matte key), using a monochromatic, grayscale clip as a matte key. This creates a composite, superimposed clip with transparent through opaque gradation areas based on the alpha channel image.

You can use a still image with alpha channel or a video with alpha channel as your matte key effect source.

Note: For a detailed description of all of the Media Creation action's configuration controls, see *Media Creation Action Configuration*.

Requirements

Creating a video composition that you can import into Avid Media Composer for use as an effect requires that the video meets these requirements:

- The alpha channel (for the matte key) and the RGB channel video are in the same file. Configure your Receive action (or other origin action as required) to receive your input file.
- The Alpha Mask Filter in Flip64 extracts the alpha channel from the source video track and generates video with the transparency levels mapped to the Y channel. The generated video is DNxHD | DNxHR to be processed by the Media Creation action. The video track created only contains the grayscale alpha mask image from the source.

Overview

To produce Matte/Key Effect files, you can ingest two types of media into your workflow:

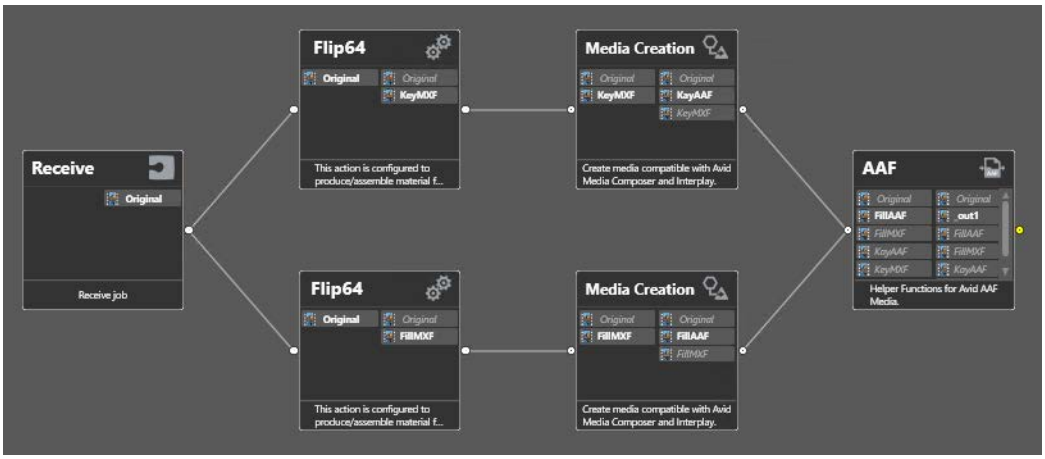
- Image files (PNG | TIFF | WebP, etc.) with an alpha channel
- ProRes file with an alpha channel.

Follow these steps to produce a video composition in Vantage that you can import into Avid Media Composer as an effect to apply a Matte Key effect on your video clip:

1. Determine the format, frame rate, and duration of the video you plan to generate, to apply the matte/key effect.
2. Create a ProRes clip with an alpha channel of the proper duration or a PNG file with an alpha channel.
3. Create and configure your Matte/Key Effects workflow (see *Configuring a Matte/Key Effect Workflow*).
4. Process your still frame/video through the Matte/Key Effects workflow to generate the matte/key effects composition.
5. Import the matte/key effects composition into Avid Media Composer.
6. Apply it to your baseline video clip.

Configuring a Matte/Key Effect Workflow

This is a prototype matte/key effect Media Creation/AAF action workflow:



Receive action—Origin action, configured to accept the file (PNG or ProRes) to pass downstream with same nickname: *Original*. Other origin actions may be used.

Flip64 action #1 (top branch)—Ingests *Original*, and extracts the alpha channel, converts the color range of the video and encodes it into DNxHD/DNxHR format for Avid compatibility. If a still image is submitted, it encodes video from the image.

- Input for ProRes file: Auto

- Input for PNG file: Still Image
  - Video: Duration set to time of intended length of the matte key effect.
- Output: MFX OP1a (nickname *AlphaMXF*):
  - Video:

    Enable Color Space Filter. Media Composer expects Full range video—set General > Output Video Range to Full Range.

    Enable Alpha Mask Filter. Alpha scaling: Full to Studio.

Note: If you want to invert the alpha channel, do not use the Alpha Mask Filter's Assume Use Inverted Alpha Mask control. Instead, enable the AAF action's Matte/Key Effect > Swap Sources control.

Enable Allow Video Processor Bypass Filter if incoming media is already DNxHD | DNxHR.

Codec: DNxHD | DNxHR to match fill video specifications.

Note: For DNxHR, be sure to check the Preserve Alpha Channel in the DNxHR codec configuration panel.

Media Creation action #1 (following Flip64 action #1)—Wraps the DNxHD | DNxHR alpha channel source generated from Flip64 #1 into an Avid-compatible AAF/OP-Atom media file.

- Input: MXF OP1a (nickname *AlphaMXF*).
- Output Media File Nickname: *AlphaAvidOut*
- Interplay Configuration: Media Composer, per your requirements.
- Physical File Settings:
  - Specify AAF file location; check Create Unique Folder for AAF.
  - Physical Directory Control: Do Not Limit Files Per Directory
  - Copy AAF File: Disable
- Asset Attributes:
  - Master/Source MOB ID: blank
  - Disable Data Track in Output: unchecked.
  - Material Name: *Use Media Name*
  - Timecode: *Use Source Timecode*
  - Input Type: *Import*; Source Package Name: empty
- AAF Path: Checked; *AAFPathKey* (variable)

Flip64 action #2 (bottom branch)—Transcodes the input media file into DNxHD | DNxHR and encodes the video from the input image | media file to meet Avid Media Composer requirements for the fill—RGB Channel utilization.

- Input for ProRes file: Auto
- Input for PNG file: Still Image
  - Video: Duration set to time of intended length of the matte key effect.
- Output MFX OP1a (nickname *NonAlphaMXF*):

  Video:

  Enable Allow Video Processor Bypass Filter if incoming media is already DNxHD | DNxHR.

  Codec: DNxHD | DNxHR to match fill video specs.

Media Creation action (following Flip64 action #2)—Wraps the video generated from Flip64 #2 into an Avid-compatible AAF/OP-Atom media file.

- Input: MXF OP1a (nickname *NonAlphaMXF*).
- Output Media File Nickname: *NonAlphaAvidOut*
- Interplay Configuration: Media Composer, per your requirements.
- Physical File Settings:
  - Specify AAF file location; check Create Unique Folder for AAF.
  - Physical Directory Control: Do Not Limit Files Per Directory
  - Copy AAF File: Disable
- Asset Attributes:
  - Master/Source MOB ID: blank
  - Disable Data Track in Output: unchecked.
  - Material Name: *Use Media Name*
  - Timecode: *Use Source Timecode*
  - Input Type: *Import*; Source Package Name: empty

AAF action—Generates a composite media file by applying the Matte Operation using the video tracks of the two video clips made by the Media Creation actions.

- Input: AAF (nickname *nonAlphaAvidOut*)
- Output Media File NickName: *AAFOut*
- AAF Settings
- PMR Maintenance: disabled (PMR Processing: None)
- Matte/Key Effect
  - Matte/Key Effect Processing: *Apply*
  - Effect AAF Path: File name; bound to AAF Path variable *AAFPathKey*, set in alpha channel's Media Creation #1 action.
  - Effect Name: Practical string, per your utilization in Avid Media Composer
- Swap Sources: typically, unchecked. When checked, AAF action swaps foreground and background layers to compensate for an inverted alpha channel.
- Override Output Path: Typically, *Enable* and specify the output AAF path.

- Create Unique Folder: Typically, check enabled.

Performing Avid Media Production Operations

This chapter describes how to use Vantage's Notify action in Interplay (MediaCentral | Production Management) workflows. The Notify action has several functions for use in these workflows: To create MOB IDs and to perform various other Avid Production operations.

Note: The Media Creation action supports Edit While Ingest operations in single-resolution workflows, and in multi-resolution workflows when using Generate MOB ID. Select a Notify action's MOB ID Generator Notifier to create unique MOB IDs for use. The MOB ID Generator returns a MASTER MOB ID and a SOURCE MOB ID as Vantage variables.

Topics

Note: The Notify action can be added to any Vantage workflow. To create, configure, and manage workflows in Vantage, use the Vantage Workflow Designer. If you are not familiar with Vantage workflows, refer to the latest version of the Vantage User Guide located on the Telestream website.

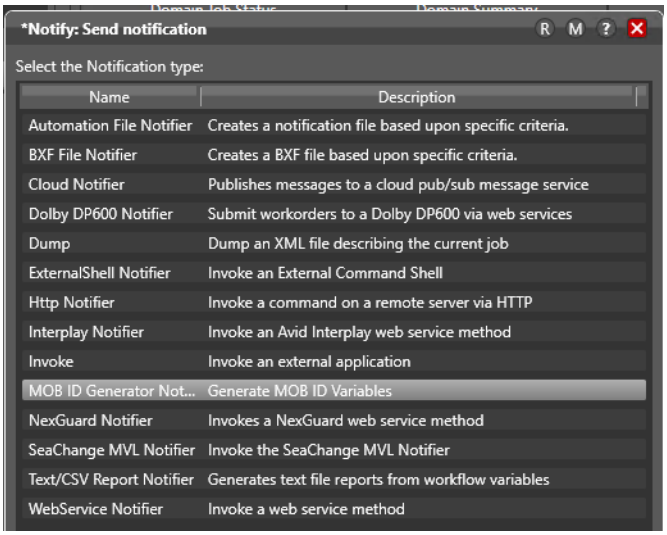
Creating MOB IDs for Interplay (MediaCentral | Production Management) Workflows

The purpose of the Master MOB ID in Avid is to uniquely identify an Interplay (MediaCentral | Production Management) asset. In the context of a Vantage workflow, you can generate a master or source MOB ID using the Notify action, depending on your workflow requirements. Master and Source MOB IDs are used to dynamically link files and metadata together to form an Production asset, acting as a unique identifier.

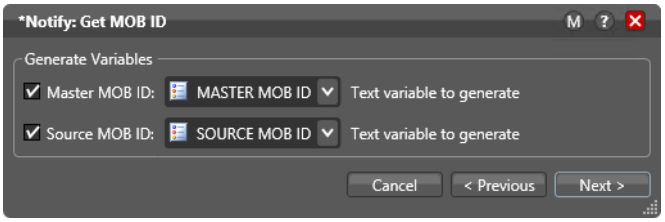
You need to place the Notify action prior to the Media Creation action so that the action has access to the variables holding the MOB IDs you generated.

To generate a MOB ID, add a Notify action to the workflow Open the Notify action inspector and follow these steps:

1. Select the Notify action's MOB ID Generator Notifier:



2. Check options to produce Master and/or Source MOB IDs and select the variables to hold the MOB ID values:



3. Click Next and then click Save to update the action and close the inspector.

The MOB ID variables can be used to populate MOB ID fields within the Media Creation action, and the Notify action's Interplay Notifier notification type.

For example, you can pass a MOB ID to a second Media Creation action to create additional media files that are associated with a Production asset. Or, you can pass it to a Notify action to interact with Production and perform a variety of operations on a Production asset by its MOB ID.

Using MOB IDs in Workflows

A MOB ID is a unique identifier in production Interplay (MediaCentral | Production Management) systems. In the context of Vantage, there are several ways to create a MOB ID:

- Explicitly, using the MOB ID Generator in a Notify action (see *Creating MOB IDs for Interplay (MediaCentral | Production Management) Workflows*).
- Automatically, via the Interplay options in the Media Creation action.
- Automatically, when creating Media Composer assets without checking them into Production. The MOB IDs can be accessed downstream in these workflows.

The purpose of a MOB ID is to provide a unique identifier to associate components to a Production asset, which often is comprised of a set of files of the same content in different formats, plus head frames, XML files, etc., all associated with the primary asset.

In the context of a Vantage workflow, the Vantage Notify action's MOB ID Generator function returns a MOB ID that can be assigned a variable, which can then be used in downstream actions. For example, you can pass it to a subsequent Notify action to interact perform a variety of operations on an asset by its MOB ID.

Note: Only in unusual circumstances should a MOB ID be entered manually. For example, when rectifying an error such as a failed transcode. When you manually enter a MOB ID, that workflow can only be used to modify assets of the MOB ID you specify.

Metadata XML File Structure

XML files are used in Vantage workflows for ingesting a wide variety of metadata into Avid environments with:

- The Notify Action's Interplay Notifier
- The Media Creation Action in Interplay mode
- The Media Creation Action in Media Composer mode

Interplay (MediaCentral | Production Management) Metadata XML

Interplay (MediaCentral | Production Management) metadata can be ingested using a simple XML schema structure supporting Avid User Property, Locator and Restriction

metadata, shown in the example below. This applies to the Notify Action's Interplay Notifier, and Media Creation Action in Interplay mode.

```
<Metadata>
  <Entry>
    <Tag>Avid Property Name</Tag>
    <Value>Data for Property</Value>
  </Entry>
  <Locator>
    <Label>Comment for Locator</Label>
    <Color>Color for Locator</Color>
    <Timecode>Absolute TC</Timecode>
    <Username>username for WS/Interplay Server</Username>
    <Track>Valid video or audio track such as V1 or A1</Track>
  </Locator>
  <Restriction>
    <Comment>Avid Property Name</Tag>
    <InTimecode>Absolute In Timecode</Value>
    <OutTimecode>Absolute Out Timecode</Value>
  </Restriction>
</Metadata>
```

The schema consists of three element types:

- Entry—for adding Avid User Property data.
- Locator—for adding Avid Locator marker data.
- Restriction—for adding Restriction information.

The Entry element has child elements that contain data values:

- *Tag*—for the name of the Avid User Property.
- *Value*—for the Avid User Property data.

The Locator element also has child elements that contain data values:

- *Label*—for a comment for this locator.
- *Color*—for the display color for this locator (Red, Green, Blue, Cyan, Magenta, Yellow, Black, White).
- *Timecode*—for the absolute or relative timecode for this locator (hh:mm:ss;ff or hh:mm:ss;ff).
- *Username*—for the username used for Web Services or the MediaCentral | Production Management Server login.
- *Track*—for the identity of the video or audio track (for example: V1 or A1). Multiple Entry and Locator elements can be defined in the XML file.

The Restriction element has child elements that contain data values:

- *Comment*—for a comment for this restriction.
- *InTimecode*—for the absolute In Timecode for this restriction (hh:mm:ss;ff or hh:mm:ss;ff).
- *OutTimecode*—for the absolute Out Timecode for this restriction (hh:mm:ss;ff or hh:mm:ss;ff).

Multiple Entry, Locator, and Restriction elements can be added to the XML file.

Media Composer Metadata XML

Media Composer metadata can be ingested using a simple XML schema supporting AAF metadata that can be added to a Media Composer BIN when the AAF is imported. This applies to the Media Creation Action in Media Composer mode.

XML for Media Composer AAF Tagged Value Pairs

Here is an example of a Media Composer metadata XML file, with specified AAF tagged value pairs.

```
<Metadata>
  <AAFEntry>
    <Tag>AAF PropertyA</Tag>
    <Value>AAF CommentA</Value>
  </AAFEntry>
  <AAFEntry>
    <Tag>AAF PropertyB</Tag>
    <Value>AAF Commentb</Value>
  </AAFEntry>
  <AAFEntry>
    <Tag>AAF PropertyC</Tag>
    <Value>AAF CommentC</Value>
  </AAFEntry>
</Metadata>
```

The schema consists of a single type:

- AAFEntry—for adding Tagged Property data and values.

The AAFEntry element has child elements that contain data values:

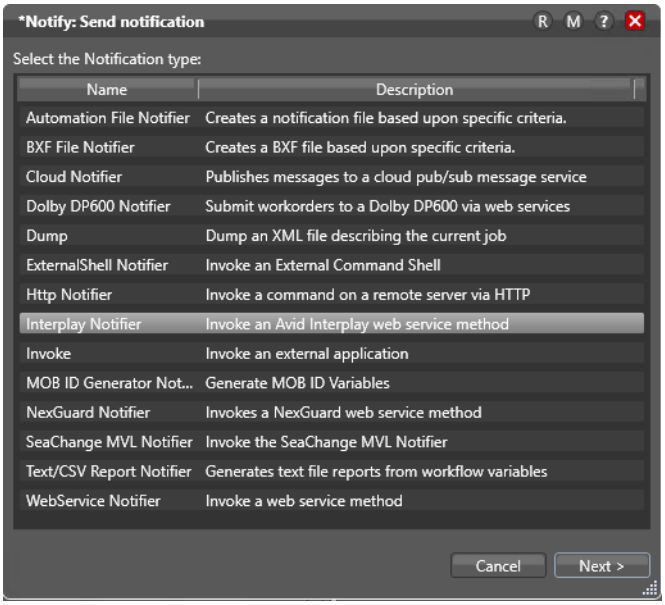
- Tag—for the name of the AAF Entry Property.
- Value—for the AAF Entry Property data.

Multiple AAFEntry elements can be added to the XML file.

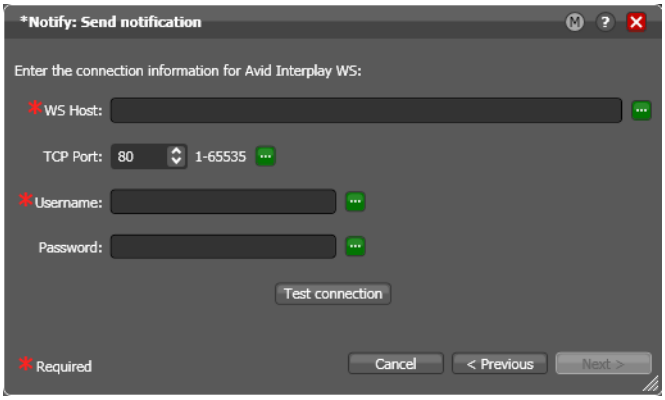
Configuring the Interplay Notifier's Web Services Host Connection

To configure the Notify action's Interplay Notifier function to connect to your Interplay Notifier's Web Services host, display the Inspector and follow these steps:

1. Select the Interplay Notifier.



2. Click Next to configure connection details for Web Services.



3. Configure these parameters for your system:

   WS Host—specifies the URL or IP address of the Web Services host.

   TCP Port—specifies the port number of the Web Services host you're connecting to.

   Username and Password—specifies the username and password to connect with. (This is your MediaCentral | Production Management username/password).

Note: The Password field cannot be bound to a variable.

Test Connection—tests the WS Host settings. If they are correct and the Web Service is available, Vantage reports success. Otherwise, determine the problem and test the connection again. You can't continue until you have a successful connection.

4. Click Test Connection to verify your configuration and availability of the Avid Web Service.
5. Click Next to configure the action to perform the Production operation you require.

Performing MediaCentral | Production Management Operations

After you've successfully configured the Notify action's Interplay Notifier to connect to your MediaCentral | Production Management Web Service, you can configure the action to perform various Production operations. Except for *Create Master Clip*, these operations all use a specific MOB ID (see *Using MOB IDs in Workflows*).

Here are the Production operations you can perform:

- *Create Master Clip*—creates a new, fully-formed master asset. Note that clips added to assets created using Create Master Clip cannot be frame-chase edited.
- *Add Metadata to Clip*—adds metadata to the master asset (locators, user properties set in the Inspector, and from XML attachments). (Locator metadata can only be added after an asset contains at least one clip resolution.)
- *Extract Clip Metadata*—extracts metadata from the master asset
- *Set Headframe*—creates a headframe image from the specified source
- *Copy Clip*—copies an existing asset and optionally preserves the Master MOB ID of the source
- *Move Clip*—moves the master asset
- *Rename Clip*—renames Interplay assets
- *Delete Clip*—deletes the master asset. (The media files are not deleted.)
- *Check In Graphic File*—checks in non-Avid assets, such as a JPG/PNG graphic file
- *Check In AAF file*—checks in AAF files

To perform a specific operation, select it. Next, complete the form for the operation you selected. Click Next and then click Finish to save and close the inspector.

Delivering Media to Transfer Engine

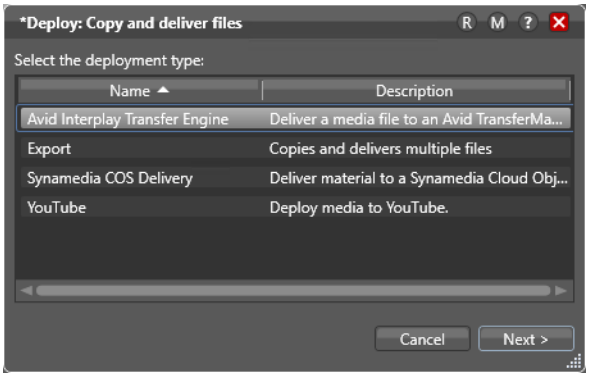
Your workflow can deliver media to an Avid Interplay Transfer Engine via the Deploy action configured with the Avid Interplay Transfer Engine plugin. The Deploy action exports the specified file or file sets including metadata to a system outside of the Vantage domain.

You should use Deploy in this manner when media is generated using the Avid Transfer Manager | Transfer Engine encoder; these files are then re-wrapped in a new container by Transfer Manager | Transfer Engine, and delivered into Avid storage.

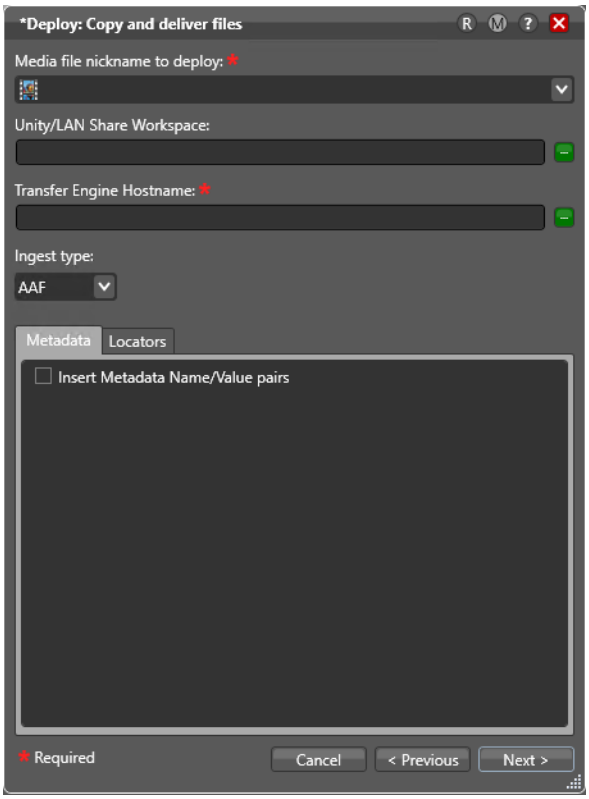
Configuring the Deploy Action

To configure the Deploy action, follow these steps:

1. Add the Deploy action to the workflow and open it's inspector:



2. Select Avid Interplay Transfer Engine plugin and click Next. The Deploy action displays the configuration panel:



3. Configure these settings:

   Media File Nickname to Deploy. Specifies the nickname of this media file, for use in downstream actions.

   Unity/LAN Share Workspace. Specifies the name of the workspace that this media should be placed in. Leave blank to utilize the default workspace.

   Transfer Engine Hostname. The name | IP address of the Transfer Engine | Transfer-Manager that is the target of this deployment.

   Ingest Type. The container format of the media (AAF | OMF) that should be created during the deployment process.

Metadata Tab

4. In the Metadata tab, optionally create a collection of metadata name/value pairs, which may be provided to the Avid Transfer Manager ingest process.

   Insert Metadata Name/Value Pairs. Check to add metadata tags; add as many as required.

   Add New Item. Adds a new metadata tag. Manually enter the Metadata tag name and value or click Browse to assign a variable which contains the value. To re-arrange the list, use the up/down arrows. To delete a tag, click the X icon (upper right).

Locators Tab

5. Use the Locators tab to create a collection of color-coded labels to mark points of interest on the timeline, which may be provided to the Avid Transfer Manager ingest process.

   Insert Locators. Check to add locators; add as many as required.

   Add New Item. Adds a new l Manually enter the comment (which displays the string at the specified timecode) or click Browse to assign a variable which contains the value. Specify the color of the mark point and the timecode. To re-arrange the list, use the up/down arrows. To delete a locator, click the X icon (upper right).

6. Click Next and then click Save to update the action and close the inspector.

Vantage Actions for Avid Media Processing

Telestream has created and implemented several actions—the Asset Monitor action, Retrieve action, Media Creation action, and the AAF action—which you can use in Vantage workflows specifically for importing, exporting, and specialized processing of media files for Avid utilization.

This chapter is an overview these actions and output formats, with detailed explanations of their functionality and all of their configuration controls. These same topics are available directly in Vantage Workflow Designer as man pages.

Topics

Asset Monitor Action

The Asset Monitor action monitors the specified Interplay folder and initiates a job each time a new or modified asset is discovered in Avid MediaCentral | Production Management since the last scan, and generates the specified format reference output, passing control to the next action (if any) in the workflow.

Asset Monitor actions are executed by the Vantage Avid Service.

The Asset Monitor action is an origin action, and can only be used as the first action in a workflow; however, it may be the *only* action in a workflow. Asset Monitor actions run when the workflow is activated and during the active time frame, if specified.

The Asset Monitor action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows.

It generates an Interplay metadata and/or Telestream proprietary MP4 media file from the new/modified input asset.

Note: When some or all media is offline, and only AAF Container and Interplay Metadata are configured to produce output files for an Interplay asset (master clips or sequences), the job will process and complete. However, if MPEG-4 Reference is selected, the job will fail because Vantage can not create an MPEG-4 reference file with missing Avid OP Atom media.

A wide variety of Avid formats are supported for decoding. Consult the Ingesting Master Clips | Subclips | Sequences chapter in the Avid Integration Guide for a complete list.

Before this action can be activated and used in a workflow, you must configure your Vantage domain for the MediaCentral | Production system(s) you are using. See *Adding a MediaCentral | Production Management System to Vantage*, below, for details.

Topics

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. The variable must have a value when this action executes. You can assign the value to the variable in a previous action in the

workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Avid Media Composer Sequence Requirements

In order for the Asset Monitor action to ingest and process Avid media, it must adhere to the following requirements:

The Asset Monitor action processes two kinds of Interplay assets - master clips and sequences. Sequences may have:

- Gaps in the timeline. During processing, gaps will be filled with black frames/silent audio.

- Mixed formats (codecs/resolutions). Segments that differ from the format of the first segment will be transcoded to the first segment's format and the samples will be stored in the output MP4.

- Transition effects. Transition effects must be rendered before submitting the asset to the Asset Monitor action.

- Segment effects. Tracks that contain segment effects must be rendered before submitting the asset.

Note: Segment effect rendering is effective for most commonly used compositions but may not work as expected for highly complex sequences.

Processing Asset Types

You can process Master Clip and Sequence assets as well as Master Clip assets.

Note: If the Asset Monitor is active and processing output as it is being written (frame chase editing | edit while ingest), occasionally the proxy file will be written first. As a result, his will be the file processed by the Asset Monitor. When ingesting growing media in the Avid Interplay folder being monitored, the Asset Monitor processes the asset only when it is complete. Files must be completed and closed prior to the Asset Monitor activation so that both the proxy and high-res are present.

MP4 File Generation

The Asset Monitor action creates a a Telestream proprietary MP4 media file for further Vantage processing, which references MXF OP-Atom files located on Avid shared storage for the asset and may also include additional transcoded media. The file also includes VANC data extracted from the Interplay asset's data track. In addition, a metadata XML file containing the Interplay asset's metadata is generated. The MP4

reference file and XML file are passed to downstream actions in the workflow or to other workflows for transcoding and metadata extraction.

Any system processing these MP4 files must have fully-authenticated access to the media files located in the Avid shared storage (ISIS/NEXIS).

MP4 files generated by the Asset Monitor action contain Telestream-proprietary extensions. Therefore, the following requirements apply:

- Vantage transcoding actions processing these files must use the Auto decoder for Flip64.

- For playback, Switch 4.0 or later is required and processes closed captions including other metadata in these files.

Adding MediaCentral | Production Management Connections to Vantage

Before this action can be activated and used in a workflow, you must add and configure an Interplay connection in your Vantage domain to communicate with each MediaCentral | Production Management system you are monitoring.

Note: The systems displayed in the Asset Monitor action Interplay Configuration menu re those that have been added to the Vantage Management Console.

To add an Interplay connection to Vantage and configure and test it, follow these steps:

1. Start the Vantage Management Console.
2. In Settings & Options, display the Interplay tab.

   Vantage displays the Interplay configuration panel where you create, configure, delete, import and export MediaCentral | Production Management system connections.
3. Create and configure a connection to the target system, providing the following information:

   - Connection Name
   - Interplay Web Services Host
   - Interplay Web Services Port
   - Interplay Workgroup
   - Interplay Username
   - Interplay Password.

   For more details on configuring and managing connections, click the ? icon to display the topic in the Vantage Domain Management Guide.
4. Click Test to confirm that Vantage can access the target MediaCentral | Production Management server. If you have problems, determine the issue and retry.

Configuration Overview

To configure an Asset Monitor action for your workflow, first specify the Interplay system you plan to monitor, and configure the monitoring options as required.

Note: The Interplay configurations listed are created by you in the Vantage Management Console.

Next, add your output(s) and configure them for processing.

When you are done configuring this action, click Save.

Configuration Details

Interplay Configuration. Specifies the target Interplay server for this workflow. When the workflow is activated, this list is dynamically generated from the Interplay systems identified in the Vantage domain. See *Adding a MediaCentral | Production Management System to Vantage* (above) for details.

Asset Monitor Settings

Interplay Folder. Specifies the full Interplay folder path for the output asset. For example: *`Incoming Media/Folder 1/Folder 2`*. The folder can be specified in the following ways: entering the folder path; clicking Browse and selecting an existing folder path; binding to a folder path variable.

Note: Interplay folder names are not case sensitive.

Master Clips. When checked, specifies that new master clips will be ingested for processing; otherwise they will be ignored. See Processing Asset Types below for more details.

Sequence Assets. When checked, specifies that new sequence assets will be ingested for processing; otherwise they will be ignored. See Processing Asset Types below for more details.

Ignore Custom User Attributes. Asset Monitor gathers all the asset metadata into a MediaCentral | Production Metadata output file, that includes system metadata, user metadata and contents of custom metadata fields defined for the MediaCentral | Production Workgroup, by default. When this option is checked, the custom metadata fields will be ignored. This option is used to address Interplay server issues involving control characters in the custom metadata.

Reprocess Assets on Modifications. When checked, assets that have been processed will be processed again when the asset is modified.

Persist Assets. When unchecked, processes all assets in a specified folder (conforming to other criteria, such as the last modified time of the asset being later than the date specified in Ignore Modifications Before) after each system/service restart.

When checked, saves the assets and their last-modified time stamps in persistent storage so they are not reprocessed after a system or service restart.

Track Deleted Assets. When checked, tracks assets that were deleted from an Interplay folder then added again later. Vantage will not reprocess the asset when the asset re-appears or if the Interplay service is restarted.

Process Incomplete Assets. When checked, processing an incomplete asset results in a failure for that asset. When unchecked (default), the asset will continue to be processed in subsequent scans.

Ignore Asset Online Status. When checked, ignores the online/offline status of an asset and processes the asset.

Process Partially Online Multi-Resolution Master Clip. When checked, processes the largest media size online resolution of a multi-resolution master clip track. When unchecked, the asset is always treated as having an offline track.

Asset Name Pattern. String supplied to Interplay for filtering the responses using a regular expression on the asset display name.

User Attribute Monitor. Monitors for changes to user attribute metadata from Interplay Access. If a change is detected, a new job will be triggered.

Note: Changing the attribute value to null (blank) or changes made while the service is not actively monitoring will not trigger a new job. When Track Deleted Asset is checked, moving the asset, modifying metadata, then moving the asset back to its original folder will trigger a new job.

Ignore Assets Created Before. Specifies a date in the past, beyond which no newly created assets should be ingested.

Ignore Modifications Before. Specifies a date in the past, beyond which no modified assets should be ingested.

Interplay Folder Scan Interval. Specifies the number of seconds (5-120) that should occur between scans.

Web Service Request Timeout. Specifies the maximum number of seconds (5-120) to wait for a response from the specified Interplay system before timing out.

Web Service Wait Per Request. Specifies the wait time for Web Service requests in milliseconds (0-120). Non-zero values disables HTTP persistence.

Generate Variables

Master MOB ID. When checked, specifies the text variable that contains the value of the master MOB ID for the ingested asset.

Source MOB ID. When checked, specify the text variable that contains the value of the Source MOB ID of the ingested asset, for use in downstream actions. The source MOB ID can be used to associate a high-res asset that is already in Production Management to link it to a Vantage/Flip64 proxy with the same MOB ID. The Source ID and Tape name are needed for Dynamic Relinking.

Tape (Source Package) Name. When checked, specify the text variable that contains the value of the tape name of the ingested asset, for use in downstream actions. The Source ID and Tape name are required for Dynamic Relinking.

Output Components

An Output component generates a file in the format specified, utilizing the ingested input file from the specified Interplay.

Output Toolbar Buttons

Up/Down Arrows. Moves the selected output up and down the set, for organization/readability purposes. Alternatively, use drag-and-drop: select a component and drag it to its new location in the set.

Plus Sign. Adds another output to this action. Click to select the type of output you want to add.

Deleting an Output

Delete. To delete an output, click the X icon immediately right of the nickname menu.

Adding and Configuring Outputs

Configure these controls:

Add Outputs. Add (using the Add button - Plus sign button - in the Output component toolbar) your outputs by format. Add one output for each file you plan to generate. Output formats include:

AAF - Create an AAF file of an Avid asset.

Interplay Metadata - A CML file containing the Interplay metadata associated with the asset. This file is intended to make metadata, along with the media files, available to Avid workflows. Asset restriction information for master clip assets is preserved in Interplay Metadata outputs.

Note: If you require the metadata file to have an XML extension instead of the default CML extension, select the output component to display the Container details panel in the details panel at the bottom. Click on the Browse button on the File Extension control and create a text variable, supplying the string 'xml' as the default value. This causes the file to use an XML extension instead of the default CML extension.

MPEG-4 Reference - A Telestream variant of an MPEG4 Reference file, intended for use in defining OP-Atom files for transcoding into the intended media file in a downstream action or workflow. Telestream MPEG-4 Reference files can be played in Switch.

Select the Output Location. Click Output Location and select from these choices:

- Available Vantage Store: Write the file to any available store, selected dynamically at run-time. Use this option typically when you only have one store, or when you are going to access and use the file by nickname in a downstream action - a transport or staging action, for example.

When you display the Vantage Folder Address Book, click the ? icon for more assistance. For more information on Vantage folder addresses, see the Vantage User Guide or the Vantage Domain Management Guide.

- *Vantage Store/Folder*: Write the file to a specific Vantage store or folder. Select from the list, or click the Browse button to display the Vantage Folder Address Book where you can create, edit, and manage your Vantage folder addresses.

When you display the Vantage Folder Address Book, click the ? icon for more assistance. For more information on Vantage folder addresses, see the Vantage User Guide or the Vantage Domain Management Guide.

- *Path*: Write the file to a specific Windows file system server and directory. Manually enter a Windows share (UNC path) or drive letter (not recommended on Vantage arrays) or click Browse to navigate and select the location. Or, click the green Browse button and select a variable which supplies the fully-qualified path.

Edit Filename Pattern. Displays the Filename Pattern Editor so that you can construct the exact filename pattern you require. Default: *Base Name*.

Click the insertion point in the text field and use the gear menu to select one or more tokens or multiple tokens of the same type to insert along with optional, static text fragments for the filename you are creating. You must specify a file extension. Drag tokens to re-arrange them; to delete a token, select and press Delete or right-click and select Delete.

Tokens:

- *Base Name*: Adds the Base Name (the portion of the filename excluding the period and the extension) of the input source file output filename to the output filename.

- *Variable*: Adds the value of the specified variable to the output filename. The Variable token is replaced by the value it holds when the action executes. The variable should be set prior to execution of this action. For example, if a Variable token named *ISCI* is given the value `12H4JA678`, wherever the ISCI variable token exists in the filename pattern it is replaced with `12H4JA678`.

- *Date*: Adds the date to the filename. Right-click the down-arrow to select the date format.

- *Time*: Select to add the time to the filename. Right-click the down-arrow to select the time format.

Select the Media Nickname. Click the menu to select the nickname (or enter it manually) for this new file.

Specify the Container File Extension. Select the output panel and specify the file extension for the selected wrapper, at the base of the right panel.

Retrieve Action

The Retrieve action receives an AVID Interplay system master file's MOB ID. It retrieves the master clip identified by the MOB ID from the target Interplay system, and generates a Telestream MP4 reference file as the primary output. The Retrieve action can not process an asset if it is in an Offline or partially Online state, because Vantage can not create an MP4 Reference with missing Avid OP Atom media.

Retrieve actions are executed by the Vantage Avid Service.

Workflows using a Retrieve action may start with a Receive origin action configured with a variable to enable it to receive the MOB ID - from an API-based external system such as Media Composer, a Forward action in another workflow, a Workflow origin action, or a manual job submission in Workflow Designer.

The Retrieve action is designed as a same-as-source-converter, assembling media as quickly as possible for processing (typically production transcoding and related tasks) by downstream actions or other workflows. The Retrieve action can not process assets that are sequences or subclips.

Typical workflow functionality involves transcoding the MP4 file downstream in Flip64 or other transcoding action to produce the desired output format. Metadata and AAF are optional output files that are delivered as attachments.

Before this action can be used in a workflow, you may configure your Vantage domain for the MediaCentral | Production system(s) you are using. See *Adding a MediaCentral | Production Management System to Vantage*, below, for details. Alternatively, you can define the target Interplay directly in the action.

Topics

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. The variable must have a value when this action executes. You can assign the value to the variable in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

MP4 File Generation

The Retrieve action creates a Telestream proprietary MP4 file that references MXF OP-Atom files located on Avid shared storage for the asset and may also include additional transcoded media. The file also includes VANC data extracted from the Interplay asset's data track. In addition, a metadata XML file containing the Interplay asset's metadata may be generated. The MP4 reference file (and XML metadata file and AAF file if

present) may be passed to downstream actions in the workflow or to other workflows for transcoding and metadata extraction.

Any system processing these MP4 files must have fully-authenticated access to the media files located in the Avid shared storage (ISIS/NEXIS).

MP4 files generated by the Retrieve action contain Telestream-proprietary extensions and are primarily for utilization within the Telestream ecosystem. Therefore, the following requirements apply:

- Vantage Flip64 actions processing these files must use the Auto decoder.

- For playback, Switch 4.0 or later is required and processes closed captions including other metadata in these files.

Adding MediaCentral | Production Management Connections to Vantage

To identify the target Interplay system, you can define it directly in the Retrieve action or you may add and configure an Interplay connection in your Vantage domain to communicate with each MediaCentral | Production Management system you are interacting with.

Note: The systems displayed in the Retrieve action Interplay Configuration menu are those that have been added to Vantage via the Vantage Management Console.

To add an Interplay connection to Vantage and configure and test it, follow these steps:

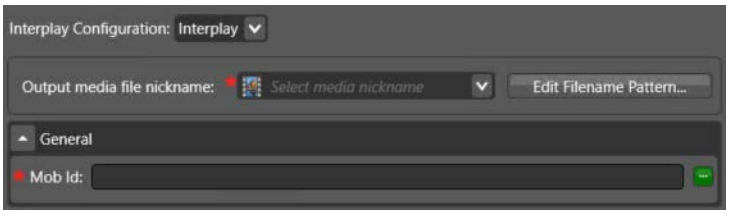
1. Start the Vantage Management Console.
2. In Settings & Options, display the Interplay tab.

   Vantage displays the Interplay configuration panel where you create, configure, delete, import and export MediaCentral | Production Management system connections.
3. Create and configure a connection to the target system, providing the following information:

   - Connection Name
   - Interplay Web Services Host
   - Interplay Web Services Port
   - Interplay Workgroup
   - Interplay Username
   - Interplay Password

   For more details on configuring and managing connections, click the ? icon to display the topic in the Vantage Domain Management Guide.

4. Click Test to confirm that Vantage can access the target MediaCentral | Production Management server. If you have problems, determine the issue and retry.



Configuration Details

Interplay Configuration

Interplay Configuration. Specifies Interplay | <<Specific user-specified Interplay systems>>. The specific Interplay systems menu items are dynamically generated from the MediaCentral | Production systems identified in the Vantage Management Console. See Adding MediaCentral | Production Management Systems to Vantage (above) for details.

Note: When you select a pre-defined Interplay system, the Interplay Settings panel (directly below the General panel) is hidden. If you select *Interplay*, the Interplay Settings panel displays and must be configured to identify the target system.

Configuring Output Media File Settings

Output Media File Nickname. Specifies the nickname associated with the MP4 output file for use in downstream actions.

Edit Filename Pattern. Opens the Filename Pattern Editor. Enter the complete filename or a portion of the filename, and use the menu on the right side to select one or more tokens to insert to create the exact filename pattern you require. You can drag and drop a token to change its order relative to other tokens, thus changing its location in the filename. Use the following tokens:

- *Base Name*. The name of the file, without the extension.

- *Variable*. You select the variable to use.

The *Variable* token is replaced by the value it holds when the action executes. The variable should be set prior to execution of this action. For example, if a variable token ISCI is given the value 12H4JA678, wherever the ISCI variable token appears in the filename pattern it is replaced with that value.

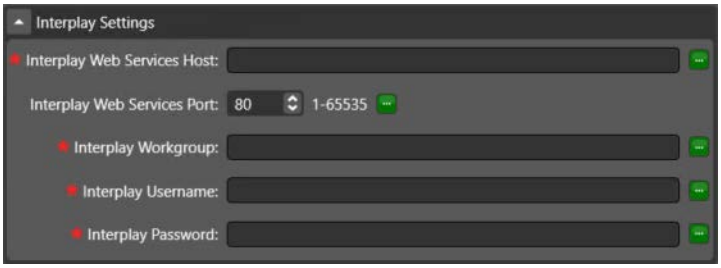
- *Date*. The current date at the time the filename is constructed. Change the date format using the menu.

- *Time*. The current time at the time the filename is constructed. Change the time format using the menu.

General Settings

Mob ID. Specifies the Mob ID associated with the Avid master clip asset registered in the specified Interplay system.

Interplay Settings



Note: This set of controls is only displayed when you select *Interplay* from the Interplay Configuration menu, to provide the target system directly in the action. If you select an Interplay system that you have defined in the Vantage Management Console, this panel is not displayed.

Interplay Web Services Host. The DNS/IP address of the Interplay Web Services server.

Interplay Web Services Port. The port being utilized by the Interplay Web Services server.

Interplay Workgroup. Name of workgroup (case-sensitive) associated with this Interplay system.

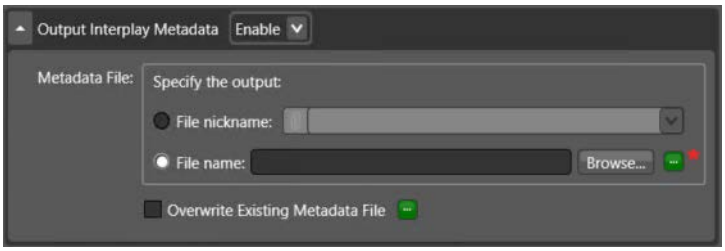
Interplay Username. Authorized user name.

Interplay Password. Authorized password.

Output Interplay Metadata

Configure these controls to generate a separate metadata XML file containing CML, as an attachment file for use downstream or separately. In Vantage, you can use the Extract action to access the AVID assets metadata in these files.

The metadata CML file contains the MXF file paths, Avid User properties - Name/Value string pairs, Avid Interplay Frame Locators, Avid Asset Restrictions (Copyright information, TV rating, etc.).



Output Interplay Metadata. Specify Enable to generate an optional metadata file in XML format and supply a nickname or fully-qualified filename.

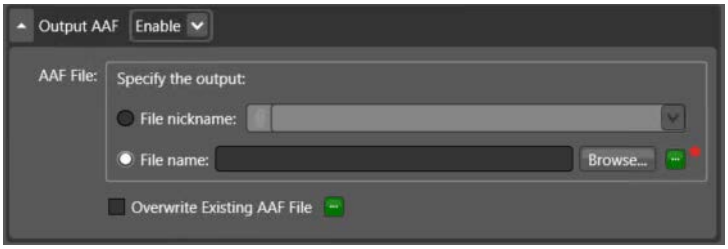
File Nickname. Select File nickname to identify the file by nickname.

File Name. Manually enter or browse and select the fully-qualified path to the XML metadata file. The destination must be writable by the Vantage Avid Service.

Overwrite Existing Metadata File. When checked, write the new file out to the destination, overwriting the existing file (if it is writable) without warning. If unchecked and the file exists, the job fails at the start of the job when user configuration is validated.

Output AAF

Configure these controls to generate a separate AAF file, as an attachment file for use downstream or separately.



Output AAF. Specify Enable to generate an optional AAF file and supply a nickname or fully-qualified filename.

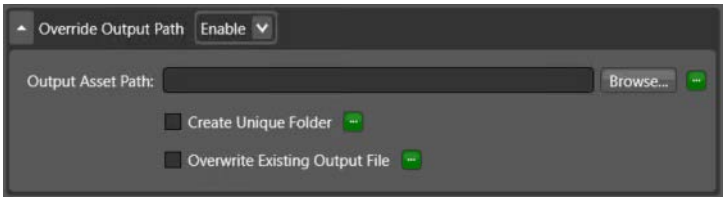
File Nickname. Select File nickname to identify the file by nickname.

File Name. Manually enter or browse and select the fully-qualified path to the AAF file.

Overwrite Existing AAF File. Check to silently overwrite the existing output file without warning. If unchecked and the file exists, the job fails at the start of the job when user configuration is validated.

Override Output Path

Configure these controls to override the default output path for the MP4 Reference file, for use downstream or separately.



Override Output Path. Specify Enable to override the default MP4 location (Vantage store) and supply a fully-qualified filename. When disabled, the location is the default Vantage store.

Output Asset Path. Manually enter or browse and select the fully-qualified path to the MP4 reference file. The destination must be writable by the Vantage Avid Service.

Create Unique Folder. Specify Enable to generate a folder in the path, and write the file to the new folder. The subfolder is named with a randomly generated GUID.

Overwrite Existing Output File. Check to silently overwrite the existing output file without warning. If unchecked and the file exists, the job fails at the start of the job when user configuration is validated.

Media Creation Action

Media Creation actions are executed by the Vantage Avid Service.

Vantage Avid Service log files (avid.trace) are written to the *C:\Program Files (x86)\Telestream\Vantage\Avid* directory on the server where the Vantage Avid Service that executed the action is hosted. Update the config file to write log files per your requirements.

The Media Creation action enables you to create single and multi-resolution assets for use in a Media Composer or an Interplay (MediaCentral | Production Management) system. The Media Creation action operates in two modes: Media Composer mode and Interplay mode. Your first configuration task is to choose the mode from the Interplay Configuration menu at the top of the configuration details panel.

Note: You can select *Interplay* and configure the target Media Central Production Management system directly in the action. Or, you can identify one or more Media Central Production Management systems in the Vantage Management Console - Workflow Designer automatically displays these systems by name in the same Interplay Configuration menu. This enables you to choose the target MediaCentral | Production Management system from the menu, avoiding repeated manual configuration.

- Media Composer Mode: Select *Media Composer* to create Avid-compatible MXF OP-Atom files including metadata for ingest into a Media Composer editor. Media Composer is not required to be part of a MediaCentral | Production Management infrastructure.

- Interplay Mode: Select *Interplay Mode* | *Pre-defined MediaCentral* | *Production Management System (see Adding MediaCentral* | *Production Management Systems to Vantage*, below) to create Avid MXF OP-Atom files and metadata written to ISIS/NEXIS storage and automatically checked into a MediaCentral | Production Management system. Specific systems may be identified in the Vantage Management Console and selected from the menu.

When delivering media directly to a MediaCentral | Production Management system, assets include integrated User Property and Headframe creation. Locator metadata can also be created; use a Notify action for delivery along with Interplay Web Service check-in into an Avid MediaCentral | Production Management workspace.

You can also create files for ingest into Media Composer in Open mode for Frame Chase editing; metadata insertion is supported while live video is being captured and the file is being processed in Vantage, enabling real-time editing.

Note: The Media Creation action does not perform transcoding. Files are re-wrapped into Avid-compatible MXF OP Atom AAF files. Therefore, the video must already be processed if required, with a supported codec. The Media Creation action supports a number of popular file formats. Consult the Generating and Ingesting Avid-Compatible MXF OP-Atom Media chapter in the Avid Integration Guide for the list.

If the video in the file you want to add/update is not in a supported format, it should first be processed through a Flip64 action to produce MXF OP1a media containing video in the proper format.

This action is Open workflow capable. It requires an Open Workflows license; right-click the action and select Workflow Mode > Open. Open Workflows must also be enabled for the workflow and at the domain level, in Vantage Management Console > Settings.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. The variable must have a value when this action executes. You can assign the value to the variable in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Accessing a MediaCentral | Production Management System

Prior to designing and implementing Avid workflows in Vantage to access Interplay (MediaCentral | Production) systems, you (the customer or Avid representative) must identify each system, including credentials.

Use these specifications to define Avid connections in the Vantage Domain Console for use in Media Creation and Asset Monitor workflows, or define them statically or dynamically via variables, directly in your workflows.

Asset Monitor and Media Creation actions are configured to interact with a specific MediaCentral | Production Management system. System configuration may be manual—statically specifying a system which does not change on a job-by-job basis.

System identification can also be dynamic, where you can use variables to identify the system dynamically for each job you execute. This is preferable when you may be accessing one of many Avid systems in a single workflow, based on run-time metrics. Dynamic, variable-driven workflows often simplify workflow design and utilization.

Note: Always connect to MediaCentral | Production Management and Web Services using a fully-qualified DNS name, which is registered with Forward and Reverse look up tables in DNS.

Note: Specific Avid systems that display in the Interplay Configuration menu are connections that have been configured in Vantage via the Management Console. For full details, see the Avid Integration Guide > Accessing MediaCentral | Production Management Systems.

To add a MediaCentral | Production connection to Vantage, follow these steps:

1. In the Vantage Management Console, in Settings & Options, display the Avid tab. The Interplay configuration panel enables you to create, configure, delete, import and export MediaCentral | Production Management system connections.

2. Create and configure a connection to the target system, providing the following information:

- Name (displays as a menu item in the action's Interplay Configuration menu)

- Web Services Host (enter the IP address | DNS name)

- Web Services Port

- Production Workgroup name

- Production Username

- Production Password

For more details on configuring and managing connections, click the ? icon to display the topic in the Vantage Domain Management Guide.

1. Click Test to confirm that Vantage can access the target MediaCentral | Production Management server. If you have problems, determine the issue and retry.

Action Configuration Details

Input (Left Panel)

Select. Specifies Auto | AIFF | MXF OP1a | TIFO | Wave.

- Auto: Ingest media which is in a video/audio format supported by your Media Composer/MediaCentral | Production system for re-wrapping into Avid-compatible MXF OP-Atom files.

- AIFF: Ingest media from an AIFF input file for re-wrapping into Avid-compatible MXF OP-Atom files.

- MXF OP1a: To process Open MXF OP1a files. For other supported file formats, select Auto or TIFO.

Note: The MXF OP1a decoder supports open workflows only for files being created by Lightspeed Live Capture.

- TIFO: To capture video in open workflow mode in TIFO format for re-wrapping into Avid-compatible MXF OP-Atom files. TIFO input is Open Workflow capable.

- Wave: To ingest media from a WAVE input file for re-wrapping into Avid-compatible MXF OP-Atom files. Each Wave input supports one-channel-per audio track(s). This input component should only be utilized when you are processing WAVE files. Submitting non WAVE files to this input will result in job failures. For other supported file formats select Auto, MXF OP1a or TIFO.

Interplay Configuration Mode

Interplay Configuration. Specifies Media Composer | Interplay | <<Avid System connections identified in the Management Console>>. There may be zero or more

connections in the menu, depending on the connections you've created. The connections following Media Composer | Interplay are dynamically generated from the MediaCentral | Production systems identified in the Vantage Management Console. See *Adding MediaCentral | Production Management Systems to Vantage* (above) for details.

- *Media Composer*. Select to write AAF files to a specific location, and configure the Media Creation action to facilitate Media Composer ingest and use of the files.

- *Interplay*: A workflow-specified MediaCentral | Production Management system.

- <<Avid System connections identified in the Management Console>>. There may be zero or more connections in the menu, depending on the connections you've created. The list is dynamically generated from the MediaCentral | Production connections identified in the Vantage domain. See *Adding a MediaCentral | Production Management System to Vantage* (above) for details.

Configuring Output Media File Settings

Output Media File Nickname. Specifies the nickname for the output file for use in downstream actions.

Edit Filename Pattern. Opens the Filename Pattern Editor. Enter the complete filename or a portion of the filename, and use the menu on the right side to select one or more tokens to insert to create the exact filename pattern you require. You can drag and drop a token to change its order relative to other tokens, thus changing its location in the filename.

You can use the following tokens:

- *Base Name*. The name of the file, without the extension.

- *Variable*. You select the variable to use.

The Variable token is replaced by the value it holds when the action executes. The variable should be set prior to execution of this action. For example, if a variable token ISCI is given the value `12H4JA678`, wherever the ISCI variable token is located in the filename pattern, it is replaced with that value.

- *Date*. The current date at the time the filename is constructed. Change the date format via the menu.

- *Time*. The current time at the time the filename is constructed. Change the time format via the menu.

Media Creation Action Input Components

The Media Creation action can ingest and process these file formats:

AIFF Input

The AIFF Input component re-wraps media into Avid-compatible MXF OP-Atom files. AIFF Input supports one-channel-per audio track(s). When using a Media Creation action with AIFF Input, it is not Open workflow capable.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their value. The variable must have a value when this action executes. You can assign the value in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Input Toolbar Buttons

Gear > Convert To. Changes the input from one type to another. Alternatively, right-click and select the format from the list. This saves you the effort of re-configuring an input when you just want to change the input container/format.

Delete. To delete this input, click the X icon in the upper right corner.

Input Configuration

Source. Click Select to display the input source dialog and specify the file to process, by nickname or by a unique file name. You can only use an input nickname one time in a given action.

To attach a file by nickname (which is typical), select the nickname of the file from the menu. The file must have been ingested or created by an upstream action in the workflow.

To attach a file by file name, manually enter the fully-qualified path and file name, click Browse to navigate and select the file (which may not yet exist in the directory, so you must manually enter the file name), or click Browse to select a variable which has been created in an upstream action and contains the fully-qualified path to the file.

Container Settings

Start Timecode Option. Specifies the edit rate to use. The edit rate is required for proper timecode calculations in Media Composer projects.

Auto Input

The Auto Input, as implemented for the Media Creation action, ingests media which is in a video/audio format supported by your Avid Media Composer/MediaCentral | Production Management system for re-wrapping into Avid-compatible MXF OP-Atom files. This is the default input component for the Media Creation action.

There are no user-configurable options for this decoder.

Note: Auto Input supports one video track. Audio must contain one track per channel otherwise the job will fail.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their value. The variable must have a value when this action executes. You can assign the value in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Input Toolbar Buttons

Gear > Convert To. Changes the input from one type to another. Alternatively, right-click and select the format from the list. This saves you the effort of re-configuring an input when you just want to change the input container/format.

Delete. To delete this input, click the X icon in the upper right corner.

Input Configuration

Source. Click Select to display the input source dialog and specify the file to process, by nickname or by a unique file name. You can only use an input nickname one time in a given action.

To attach a file by nickname (which is typical), select the nickname of the file from the menu. The file must have been ingested or created by an upstream action in the workflow.

To attach a file by file name, manually enter the fully-qualified path and file name, click Browse to navigate and select the file (which may not yet exist in the directory, so you must manually enter the file name), or click Browse to select a variable which has been created in an upstream action and contains the fully-qualified path to the file.

MXF OP1a Input

The MXF OP1a Input component re-wraps media into Avid-compatible AAF/MXF OP-Atom files. Each MXF OP1a Input supports one video stream and one or more PCM audio tracks, plus an ANC stream.

MXF OP1a Input is Open workflow capable. The MXF OP1a decoder supports open workflows, but only with MXF OP1A or TIFO files created by Live Capture and Flip64 actions. When Input Type is set to WAVE/AIFF/Auto, open mode is not supported.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their value. The variable must have a value when this action executes. You can assign the value in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Input Toolbar Buttons

Gear > Convert To. Changes the input from one type to another. Alternatively, right-click and select the format from the list. This saves you the effort of re-configuring an input when you just want to change the input container/format.

Delete. To delete this input, click the X icon in the upper right corner.

Input Configuration

Source. Click Select to display the input source dialog and specify the file to process, by nickname or by a unique file name. You can only use an input nickname one time in a given action.

To attach a file by nickname (which is typical), select the nickname of the file from the menu. The file must have been ingested or created by an upstream action in the workflow.

To attach a file by file name, manually enter the fully-qualified path and file name, click Browse to navigate and select the file (which may not yet exist in the directory, so you must manually enter the file name), or click Browse to select a variable which has been created in an upstream action and contains the fully-qualified path to the file.

Container Settings

Open File Support. When checked, the workflow starts transcoding this stream as soon as the file is opened and media is being written to it in real time. Input supports one video track. Audio must contain one track per channel otherwise the job will fail.

Open File Timeout. Specifies the maximum amount of time in seconds to wait after the file has stopped growing before assuming that file is finished being written to and has been closed.

Process Origin as Precharge. Specifies processing of MXF origin as Precharge Frames.

Cache Size. Specifies (in bytes) the stream cache buffer size. Should be set to a practical, non-zero value in Open workflows, when Flip64 or another Vantage action is writing to a Network Attached Storage (NAS) and the Media Creation

action running on a separate Vantage node is reading the file, to enable buffered reads when reading from NAS.

Cache Count. Specifies the number of stream cache buffers to create. Should be set to a practical, non-zero value in Open workflows, when Flip64 or another Vantage action is writing to a Network Attached Storage (NAS) and the Media Creation action running on a separate Vantage node is reading the file, to enable buffered reads when reading from NAS..

Max Invalid Key Count. Specifies the maximum number of random, failed read operations when ingesting a file from NAS. Set the value to the maximum value to prevent premature termination of Media Creation jobs.

TIFO Input

The TIFO Input component implemented in the Media Creation action supports capturing media in TIFO format for re-wrapping into Avid-compatible AAF/MXF OP-Atom files.

TIFO Input is Open workflow capable. The MXF OP1a decoder supports open workflows, but only with MXF OP1A or TIFO files created by Live Capture and Flip64 actions. When Input Type is set to WAVE/AIFF/Auto, open mode is not supported.

TIFO format is required for Avid classic proxies. Specification of Avid Picture Essence Coding Type is also supported. See *Specifying Avid Picture Essence Coding Type in Media Creation*. See Specifying Avid the Picture Essence Coding Type in the Avid Integration Guide.

Note: TIFO Input supports one video track. Audio must contain one track per channel otherwise the job will fail.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their value. The variable must have a value when this action executes. You can assign the value in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Input Toolbar Buttons

Gear > Convert To. Changes the input from one type to another. Alternatively, right-click and select the format from the list. This saves you the effort of re-configuring an input when you just want to change the input container/format.

Delete. To delete this input, click the X icon in the upper right corner.

Input Configuration

Source. Click Select to display the input source dialog and specify the file to process, by nickname or by a unique file name. You can only use an input nickname one time in a given action.

To attach a file by nickname (which is typical), select the nickname of the file from the menu. The file must have been ingested or created by an upstream action in the workflow.

To attach a file by file name, manually enter the fully-qualified path and file name, click Browse to navigate and select the file (which may not yet exist in the directory, so you must manually enter the file name), or click Browse to select a variable which has been created in an upstream action and contains the fully-qualified path to the file.

Container Settings

Open File Support. Check to enable Open File support, indicating that you want to start processing this stream as soon as the file is created and media is being written to it in real time.

Open File Timeout. Specifies the maximum amount of time to wait after the file has stopped growing before assuming that file is finished being written to and has been closed.

Avid Picture Essence Coding Type

Set Avid Picture Essence Coding Type. Specify coding type for creation of Avid proxy formats. Default is Auto.

Note: For AVCI 50, AVCI 100, XAVCI 50, XAVCI 100 formats, sets the MXF descriptor for compliance.

Wave Input

The Wave Input component re-wraps media into Avid-compatible MXF OP-Atom files. Each Wave Input supports one-channel-per audio track(s). Avid MXF output has one track per channel. The input WAVE file may have multiple channels per track.

Wave Input is not Open workflow capable.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their value. The variable must have a value when this action executes. You can assign the value in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Input Toolbar Buttons

Gear > Convert To. Changes the input from one type to another. Alternatively, right-click and select the format from the list. This saves you the effort of re-configuring an input when you just want to change the input container/format.

Delete. To delete this input, click the X icon in the upper right corner.

Input Configuration

Source. Click Select to display the input source dialog and specify the file to process, by nickname or by a unique file name. You can only use an input nickname one time in a given action.

To attach a file by nickname (which is typical), select the nickname of the file from the menu. The file must have been ingested or created by an upstream action in the workflow.

To attach a file by file name, manually enter the fully-qualified path and file name, click Browse to navigate and select the file (which may not yet exist in the directory, so you must manually enter the file name), or click Browse to select a variable which has been created in an upstream action and contains the fully-qualified path to the file.

Container Settings

Start Timecode Option. Specify start timecode to use.

Start Timecode Option. Specifies the edit rate to use. The edit rate is required for proper timecode calculations in Media Composer projects.

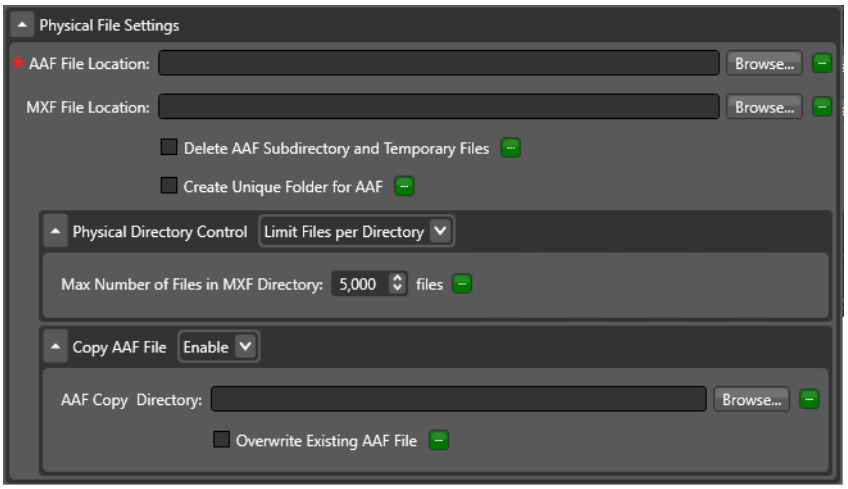
Note: Audio-only Wave outputs may have frame rates which are incorrectly identified in Interplay Access. These include:
- 60 fps NDF/DF identified as 59.94 FPS
- 30 fps NDF/DF identified as 29.97 FPS
- 48 fps NDF/DF identified with no FPS value
- 47.95 fps NDF/DF identified with no FPS value

Configuring Output for Media Composer

Media Creation Settings

Use the following panels to configure the Media Creation for your workflow:

Physical File Settings



AAF File Location. Specifies the UNC path to Avid storage where the AAF file will be written. The typical pattern is \\<*servername*>\<*workgroup folder*>\<*filename*>. For example: `\\avidnexispro\Interplay2021\AAF\AAF File1.aaf`.

MXF File Location. UNC path to Avid storage where the MXF OP-Atom media files will be written. The typical pattern is *\\servername\workgroup folder\Avid MediaFiles\MXF\file*. For example: `\\avidnexispro\Interplay2021\Avid MediaFiles\MXF\MXF File1.mxf`.

Note: Initial MXF path name must include the *\Avid MediaFiles\MXF* string.

Delete AAF Sub-directory and Temporary Files. When checked, deletes the AAF files and temporary files after the media has been checked into Interplay. These files are not deleted if the job fails.

Create Unique Folder for AAF. When checked, creates a unique directory folder for the output AAF file.

Physical Directory Control. Specifies Limit Files per Directory | Do Not Limit Files per Directory.

- *Limit Files per Directory*: When Limit Files per Directory is selected, update the Max Number of MXF Files in MXF Directory field to specify the maximum number of files. When the maximum is reached, the action creates a new directory with a numerical suffix (<dirname>.1, etc.) to store the next set of files. Range: 100 - 10,000. Default: 5,000.

- *Do Not Limit Files per Directory*: When Do Not Limit Files per Directory is selected, there is no maximum.

Copy AAF File. Specifies Enable | Disable:

- *Enable*: Specifies the AAF Copy Directory and option to Overwrite Existing AAF File.

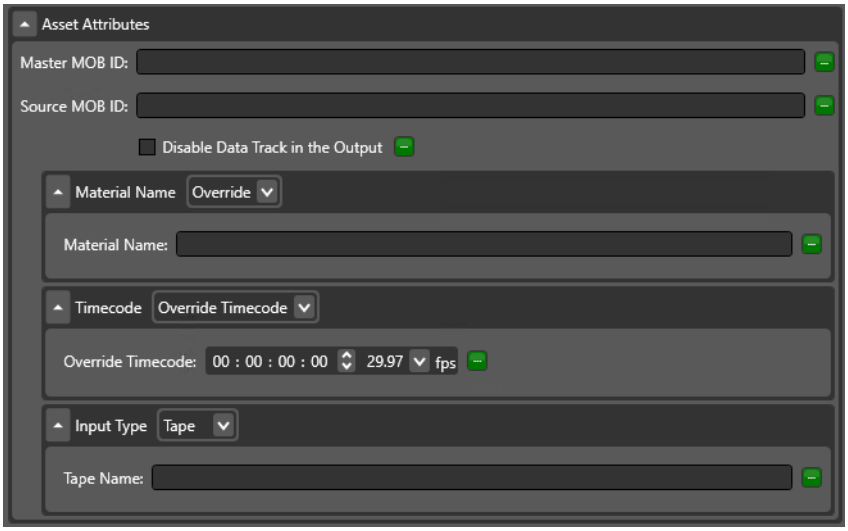
AAF Copy Directory. Browse to select or manually enter the fully-qualified folder path.

Overwrite Existing AAF File. Check to overwrite an existing file of the same name in the target copy directory; uncheck to fail the action.

- *Disable*: Do not copy the AAF file. Local AAF file is temporary and disposed of per Vantage settings.

Note: If Overwrite Existing File is unchecked and a file with the same name exists in the destination directory, the job fails.

Asset Attributes



Master MOB ID. Specifies the master MOB ID for this asset.

Source MOB ID. Specifies the source MOB ID for this asset.

Disable Data Track in the Output. When checked, disables creation of a data track in the output.

Material Name. Specify Use Media Name | Override. This name displays as the asset's display name unless a non-empty tape name is configured.

- *Use Media Name*. Input media name is used to configure the asset name.

- *Override*. Overrides default asset name with the user specified value. When selected, complete this control:

  Material Name. Specifies the name to use for the asset.

Note: To change the AAF folder name and filename use the Filename Pattern Editor to change the naming scheme.

Timecode

If the transcoded source uses drop frame timecode then output is drop frame. If transcoded source is non-drop frame then output is non-drop frame.

Timecode. Specifies timecode to use: Use Source Timecode | Override Timecode.

- *Use Source Timecode*. Uses the source timecode detected in the media.

- *Override Timecode*. Timecode detected in source file is used with no changes to the timecode in the output. When selected, provide:

    Override Timecode. Specify the timecode, frame rate, and drop frame or non-drop frame notation to use.

Input Type

Both Tape Name and Source Package Name values change the first 9 characters of the MXF output filenames and add metadata to Access and Media Composer in the tape name field (no character limit). If values are entered, this overrides the name set in the Filename Pattern Editor.

Dynamic Relinking: Avid uses the input descriptor information to check whether one of the two media are proxies or can be dynamically relinked. In the case of Dynamic Relinking using 2 Media Creation actions (1 high-res, the other proxy) the input descriptors (Tape Name/Source Package Name values) must be the same. This is best achieved by using a variable.

Naming Tapes: Tape names must be alphanumeric characters (A - Z, 0 - 9) and include uppercase and lowercase characters. Select a case convention and maintain it throughout a project.

Guidelines for MultiRez Tape Management: When working in a MultiRez workflow, it is important to name tapes properly. In particular, you should keep the following in mind:

Whenever you create a new tape, Media Composer generates a new source ID, even if the name you type for the new tape exactly matches that of an existing tape. You cannot dynamically relink media that does not share a source ID.

Do not use the same name for two different tapes or different names for the same tape. This might cause incorrect media association. Do not use the default tape name New Tape.

Input Type. Specifies input type: Tape | Import. Default: Import.

Tape: Select when media is tape-based, and specify the optional tape name of the asset.

Note: Avid does not support ingesting media define as Tape for 4K media - the asset displays as offline. Additionally, media with a non-zero timecode greater than 26 seconds also displays as offline.

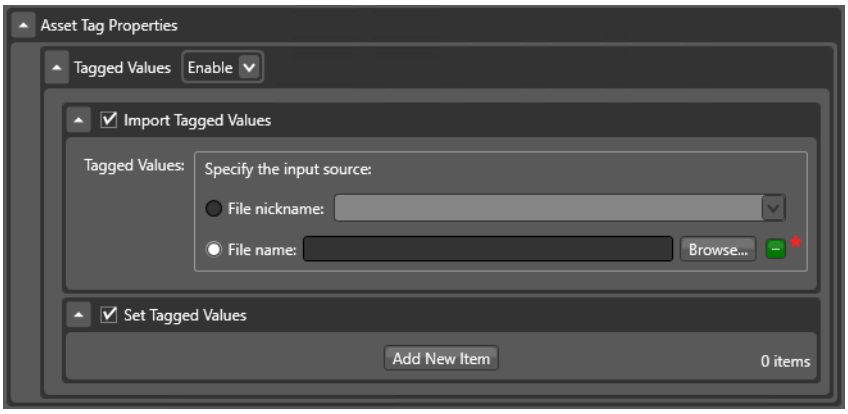
Tape Name. When Input Type is *Tape*, optionally specify the asset tape name.

Import: When media is digital (disk-based), specifies the asset source package name.

Note: While Avid strongly recommends using *Import* mode for file-based digital media workflows, this method does not permit the Tape name field to be used for relinking. Tape mode should be used for traditional dynamic relinking using the Tape field.
Tape name data replaces the Asset Name set in the Vantage Filename Pattern Editor when not empty. To configure the Asset Name you must configure a User Property with the property name Display Name along with the desired value. Consult the Avid Integration Guide for more details.

Source Package Name. When Input Type is *Import*, specifies the optional source package name of the asset.

Asset Tag Properties



Tagged Values. Specifies Disable | Enable. When enabled, allows specification by filename or file nickname of an XML file containing tagged values for an asset.

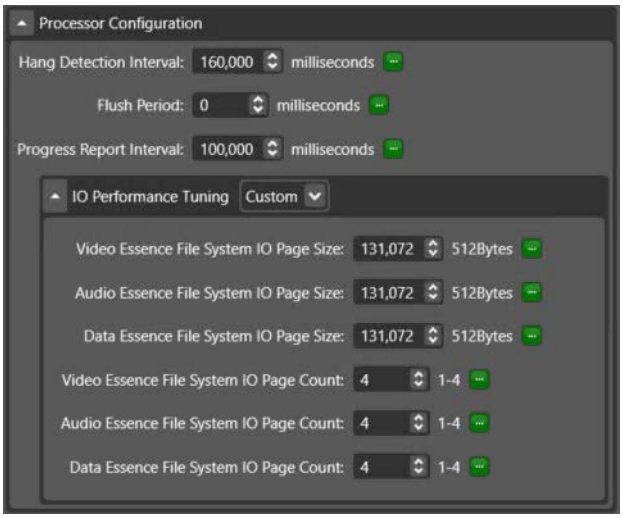
Import Tagged Values. When checked, allows specification by filename or file nickname of an XML file containing tagged values for an asset.

File Nickname. Select File nickname to identify the file by nickname.

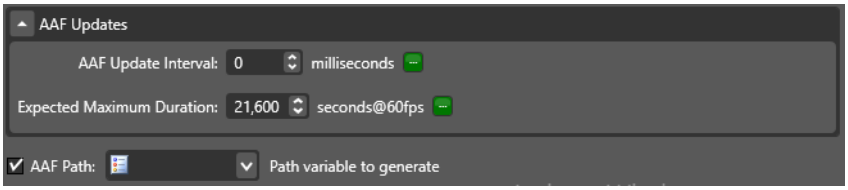
File Name. Manually enter or browse and select the fully-qualified path to the XML file.

Set Tagged Values. When checked, allows specification of tagged value pairs that are displayed in the Media Composer bin. Click Add New Item and configure pairs.

Each tagged value pair item contains metadata fields for the name and associated value for the tagged pair.



AAF Updates



AAF Update Interval. An AAF file, updated progressively, is made available for importing into Media Composer for editing, at the beginning of media capture. Specifies optional local AAF update interval time in milliseconds. Default is 0 (disabled).

Expected Maximum Duration. Expected duration in seconds, rationalized for 60 fps.

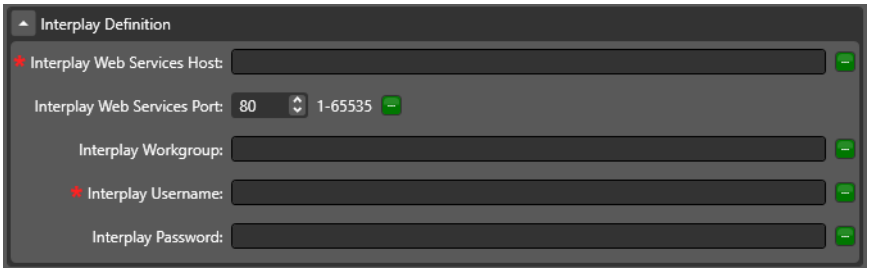
AAF Path

AAF Path. When checked, specifies the Path variable for use by downstream actions. Typically this is used in Open workflows to provide an intermediate AAF path while media files are still growing. The variable is set from the AAF action from the Input > Source > File name field.

Configuring Output for Interplay (MediaCentral | Production Management)

Media Creation Settings

Interplay Definition



Note: This set of controls is only displayed when you select Interplay and must provide the target system directly in the action. If you select an Interplay system that you have defined in the Vantage Management Console, these controls are not used.

Interplay Web Services Host. The DNS/IP address of the Interplay Web Services server.

Interplay Web Services Port. The port being utilized by the Interplay Web Services server.

Interplay Workgroup. Name of workgroup (case-sensitive) associated with this Interplay system.

Interplay Username. Authorized user name.

Interplay Password. Authorized password.

Interplay Settings

Interplay Folder. Specifies the MediaCentral | Production Management virtual folder path to be used for the output asset for example `\Incoming Media\Media Creation\New Folder or /Incoming Media/`. You may enter a known path; browse to an existing folder path; or bind to a folder path variable.

Create Interplay Folder Path. When enabled, creates the Production virtual folder(s) that do not exist in the configured Interplay Folder path. When not enabled, the job fails if the Interplay folder path does not exist.

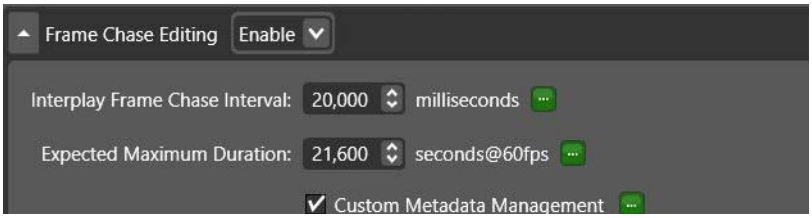
These top-level system directories in Production can't be modified Catalogs

- Incoming Media

- Orphan Clips
- Projects
- Send To Playback
- Unchecked-In Avid Assets

Note: These special characters are not allowed in folder names ? : / \ " < > |

Frame Chase Editing. Specified Enable | Disable. When enabled, creates a special type of Production asset, that can be edited while media ingest is in progress. The growing asset is available in the Production system, as soon as the initial check-in occurs. When the media capture ends, a final update is made to the Production system. This update changes the clip's type from an in-progress clip to a conventional master clip and updates the metadata. Configure these controls:



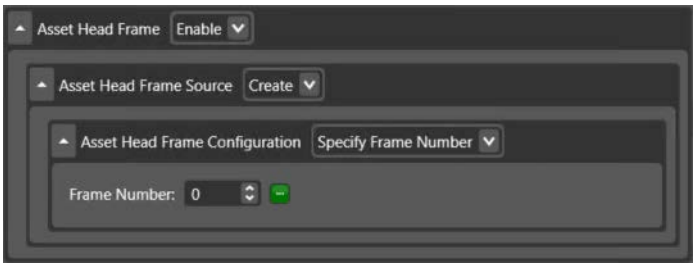
Interplay Frame Chase Interval. Specifies the frame chase interval (integer - number of milliseconds). Growing assets are checked into Production at the end of every specified frame chase interval.

Expected Maximum Duration. Specifies the expected maximum duration in seconds @60fps that is displayed in Interplay Access and Media Composer while a file is being processed. Once the file is complete and updated, the duration shows the actual duration of the file. This applies to both open and closed workflow configurations.

Custom Metadata Management. Enable to allow an Asset Name to be updated in MediaCentral | Production Management in an Open, Edit-During-Capture (Frame Chase) Flip64, Lightspeed Live Capture or Tape workflow. Enables Vantage to update the asset user metadata and the head frame without requiring the use of the Notify action to generate the MOB ID. For proxy generation in a Flip64 workflow, you must use a Notify action to generate MOB IDs. In a Capture/Tape workflow, you may use the Capture/Tape action to generate the MOB IDs directly.

Note: For improved Head Frame display performance in Interplay Access, enable Custom Metadata Management.

Asset Head Frame. Specifies Enable | Disable. When enabled, allows specification of a Head Frame source as generated by a Media Creation or Flip64 action. Creation of an open Head Frame is supported.



Asset Head Frame Source. Specifies Create | Set. Allows specification of a Head Frame source using Frame Number or Timecode (Create) or via an Asset Head Frame file (Set). Configure these controls:

- *Create*. Specifies Head frame using frame number or timecode (default).

  Asset Head Frame Configuration. Specifies Specify Frame Number | Specify Timecode. Complete these controls as appropriate:

  Frame Number. Creates and uses the first I-frame from the specified frame number in the input video track.

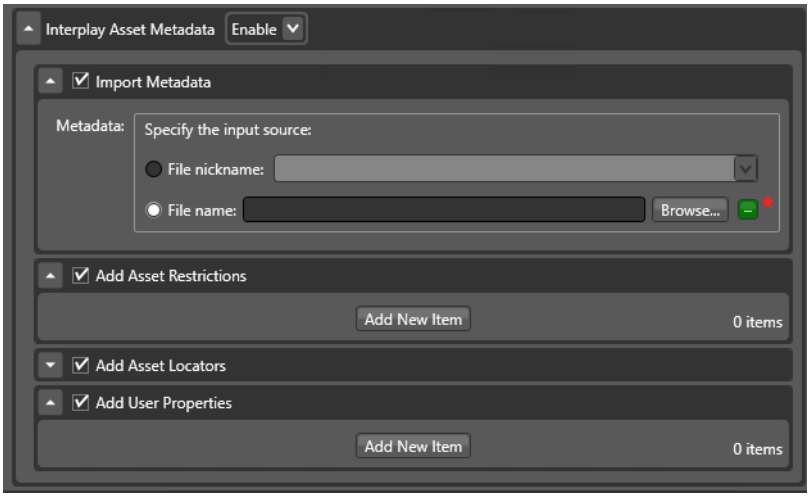
  Specify Timecode. Creates and uses the first I-frame from the specified timecode in the input video track.

- *Set*. Specifies Head Frame using filename or nickname of the file generated:

  File Nickname. Specifies the file by nickname. The file must have been ingested by an upstream action and assigned a nickname. Use this option when the file changes for each job.

  File Name. Manually enter or browse and select the fully-qualified path to the file. The Vantage service that executes this action must have access to the file location. Use this option when you want to assign a static file, which is used for every job. If you assign a variable, the variable must be assigned the fully-qualified path and file name in an upstream action and the file can change for each job.

Interplay Asset Metadata. Specifies Disable | Enable. When enabled, allows metadata to be added via a file using a (Interplay) Production metadata file or manually using Add Asset Restrictions, Add Asset Locators, or Add User Properties controls.



Note: The XML for Avid User Property Metadata and Locators uses a simple structure. It consists of two Element types: <Entry> for adding Avid User Property data and <Locator> for adding Avid Locator data. Each Element has several attributes, used to supply data for the Entry or Locator element you are defining. Multiple Entry and Locator elements are permitted. See *MediaCentral | Production Management Metadata XML*.

Import Metadata File. Allows specification of an Production Asset Metadata file by file path or nickname. Various parameters such as User Properties and Locators can be added via an XML file.

Add Asset Restrictions. When checked, allows manual addition of Asset Restrictions. A restriction is a span of an asset that indicates a clip, or a portion of a clip, whose use is limited in some way, such as through intellectual property rights management or content compliance. There are 2 options for setting the Restriction:

- In Frame Number / Out Frame Number
- In Timecode / Out Timecode

The Frame Number options are enabled by default and values entered in Timecode fields are ignored. Disable the Frame Number options to use the In Timecode and Out Timecode values.

If Frame Numbers are used, the In Frame Number and Out Frame Number are offsets from the beginning of the clip. A Frame Number is considered invalid if it is negative or if it extends past the duration of the clip.

Note: Jobs complete successfully, and assets are created, even if a restriction was unable to be added to the database. This can occur, for example, if an Asset Restriction uses a non-existent frame number or timecode value. However, such failures with Production transactions in setting the asset metadata will not result in job failures.

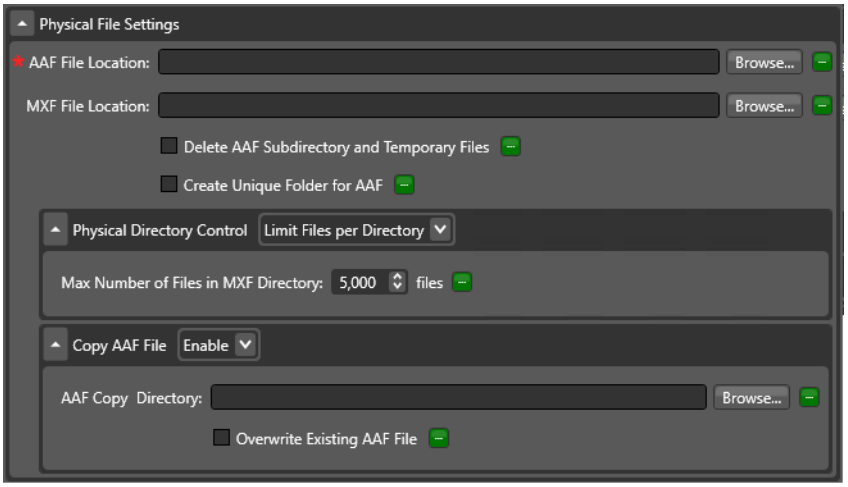
Note: Unlike other Interplay Access metadata features, the following special characters are allowed ? : / \ " < > |.

Add Asset Locators. When enabled, allows the addition of frame locators and associated attributes for assets. These include Comment, Color, Timecode, Frame Number, and Track.

Add User Properties. When enabled, allows the addition of Avid User Properties. If the name of the User Property does not exist, it is created and populated with the associated value.

Note: When viewed in Interplay Access, copied clips may intermittently include a random number sequence appended to the display name (EX.*Dup_12345678*). Specifying 'Display Name' for Name in Add User Properties metadata field prevents this from occurring.

Physical File Settings



AAF File Location. Specifies the UNC path to Avid storage where the AAF file will be written. The typical pattern is \\<*servername*>\<*workgroup folder*>\<*filename*>. For example: `\\avidnexispro\Interplay2021\AAF\AAF File1.aaf`.

MXF File Location. UNC path to Avid storage where the MXF OP-Atom media files will be written. The typical pattern is *\\servername\workgroup folder\Avid MediaFiles\MXF\file*. For example: `\\avidnexispro\Interplay2021\Avid MediaFiles\MXF\MXF File1.mxf`.

Note: Initial MXF path name must include the **\Avid MediaFiles\MXF** string.

Delete AAF Sub-directory and Temporary Files. When checked, deletes the AAF files and temporary files after the media has been checked into Interplay. These files are not deleted if the job fails.

Create Unique Folder for AAF. When checked, creates a unique directory folder for the output AAF file.

Physical Directory Control. Specifies Limit Files per Directory | Do Not Limit Files per Directory.

- *Limit Files per Directory*: When Limit Files per Directory is selected, specify the **Max Number of MXF Files in MXF Directory**. When the maximum is reached, a new directory is created with a numerical suffix (<dirname>.1, etc.) to store the next set of files. Range: 100 - 10,000. Default: 5,000.

- *Do Not Limit Files per Directory*: When Do Not Limit Files per Directory is selected, there is no maximum.

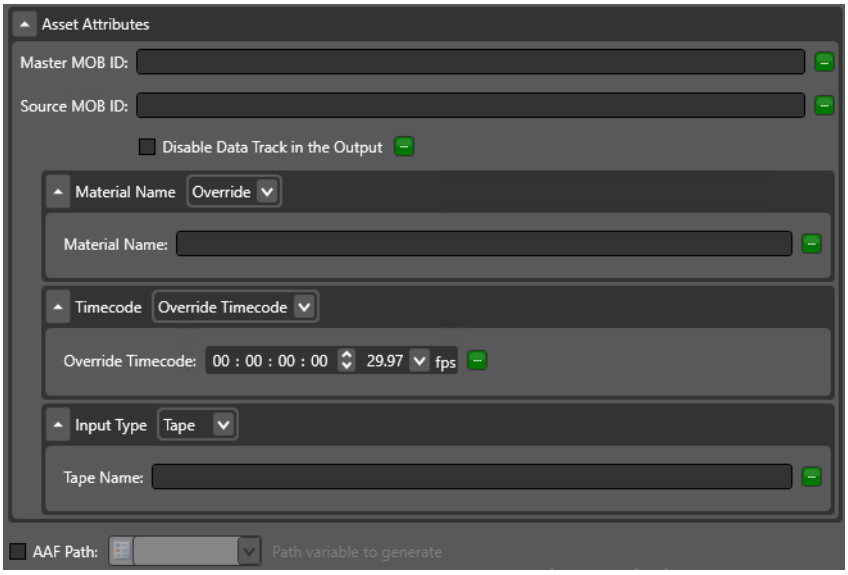
Copy AAF File. Specifies Enable | Disable.

- *Enable*: Specifies the **AAF Copy Directory** and option to **Overwrite Existing AAF File**.

- *Disable*: Do not copy the AAF file. Local AAF file is temporary and disposed of per Vantage settings.

Note: If Overwrite Existing File is unchecked and a file with the same name exists in the destination directory, the job fails.

Asset Attributes



Master MOB ID. Specifies the master MOB ID for this asset.

Source MOB ID. Specifies the source MOB ID for this asset.

Disable Data Track in the Output. When checked, disables creation of a data track in the output.

Material Name

Specify Use Media Name | Override. This name displays as the asset's display name unless a non-empty tape name is configured:

- ***Use Media Name***. Input media name is used to configure the asset name.

- ***Override***. Overrides default asset name with the user specified value. When selected, complete this control:

  Material Name. Specifies the name to use for the asset.

Note: To change the AAF folder name and filename use the Filename Pattern Editor to change the naming scheme.

Timecode

If the transcoded source uses drop frame timecode then output is drop frame. If transcoded source is non-drop frame then output is non-drop frame.

Specifies timecode to use: Use Source Timecode | Override Timecode:

- ***Use Source Timecode***. Uses the source timecode detected in the media.

- ***Override Timecode***. Timecode detected in source file is used with no changes to the timecode in the output. When selected, specify...

  Override Timecode. Specify the timecode, frame rate, and drop frame or non-drop frame notation to use.

Input Type

Specifies: Tape | Import. Complete these controls as appropriate:

Note: Avid does not support ingesting media via Tape mode for 4K media - the asset displays as offline. Additionally, non-zero timecode greater than 26 seconds also displays as offline.

- ***Tape Name***. When Input Type is *Tape*, specifies the tape name of the asset.

- ***Import***. When Input Type is *Import*, specifies the source package name of the asset.

Note: While Avid strongly recommends using Import for file based digital media workflows, this method does not allow for the Tape name field to be used for relinking. Tape mode may be used for traditional dynamic relinking using the Tape field.
Tape name data replaces the Asset Name set in the Vantage Filename Pattern Editor when not empty. To configure the Asset Name you must configure a User Property with the property name 'Display Name' along with the desired value. Consult the Avid Integration Guide for more details on this configuration.

AAF Path. When checked, specifies the Path variable for use by downstream actions. Typically this is used in Open workflows to provide an intermediate AAF path while media files are still growing. The variable is set from the AAF action from the Input > Source > File name field.

AAF Action

The AAF action is an AAF processing action. For PMR maintenance, it ingests an AAF file and processes the media in the MXF folder referenced in the AAF. To generate Matte/Key effect files to import and use in Avid Media Composer the AAF action updates the files for Avid-compatibility. Avid Media Composer utilizes Matte/Key effects to apply those effects to video clips.

The AAF action is executed by the Vantage Avid Service.

For Edit While Ingest operations, the AAF action processes the MXF folder referenced in the AAF to create a file you can open in Media Composer for Edit While Ingest operations in near real time.

Avid Media Composer utilizes Persistent Media Record (PMR) files for information about the online status of file Media Object information (MOB).

Each PMR file provides an index in a form that an editor can quickly load all the file MOBs and their associated media files in the media directory in which the PMR file resides.

The AAF action ingests an AAF file and performs various operations on the media in the MXF folder referenced in the AAF, as configured by you. Avid Media Composer utilizes Persistent Media Record (PMR) files for information about the online status of file Media Object information (MOB). Each PMR file provides an index in a form that an editor can quickly load all the file MOBs and their associated media files in the media directory in which the PMR file resides.

You can also perform a Matte/Key effect on ingested files to use in Avid Media Composer, where you apply a Matte/Key effect on selected media using the clips.

In order to perform Open Workflow, Frame Chase (Edit While Capture) processing of Media Creation outputs, you must bind the AAF Path variable (created in an upstream Media Creation action) to the Input Source File Name field.

For a practical guide to using the AAF in Avid workflows, please see the Avid Integration Guide on the Telestream web site.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. The variable must have a value when this action executes. You can assign the value to the variable in a previous action in the

workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Input

Select. Select AAF and specify input source by file name or file nickname.

Output Media File Settings

Output Media File Nickname. Specifies the nickname for the output file for use in downstream actions.

Edit Filename Pattern. Opens the Filename Pattern Editor. Enter the complete filename or a portion of the filename, and use the menu on the right side to select one or more tokens to insert to create the exact filename pattern you require. You can drag and drop a token to change its order relative to other tokens, thus changing its location in the filename. You can use the following tokens:

- Base Name. The name of the file, without the extension.

- Variable. You select the variable to use. The Variable token is replaced by the value it holds when the action executes. The variable should be set prior to execution of this action. For example, if a variable token ISCI is given the value 12H4JA678, wherever the ISCI variable token appears in the filename pattern it is replaced with that value.

- Date. The current date that the file is written from the perspective of the server running the Avid Service. Change the date format via the menu.

- Time. The current time that the file is written from the perspective of the server running the Avid Service. Change the time format via the menu.

Input Components

The AAF Input component ingests an AAF file for processing.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their value. The variable must have a value when this action executes. You can assign the value in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one.

Input Toolbar

Select. Click to specify one AAF input. No other file formats are supported, and only one file can be ingested per job.

General Input Details

Source. Click Select to display the Input Source dialog and specify the file to process, by nickname or by a unique file name.

Note: When used to create a composition for a Matte/Key Effect in Avid Media Composer, this file is intended for use of the alpha channel file.

Delete. To delete this input, click the X icon in the upper right corner.

AAF Action Configuration

PMR Maintenance | Frame Chase (Edit While Ingest) Editing

When enabled, you can use the MXF folder referenced in the file to perform PMR maintenance.

Avid Media Composer utilizes Persistent Media Record (PMR) files for information about the online status of file Media Object information (MOB). Each PMR file provides an index in a form that an editor can quickly load all the file MOBs and their associated media files in the media directory in which the PMR file resides.

The purpose of PMR maintenance is to provide an index for Media Composer specifying the online status of MXF files in a shared media directory.

For frame chase editing outside of Interplay, you also specify these controls.

Open the AAF Settings panel and the PMR Maintenance sub panel to configure PMR maintenance controls.

PMR Processing. Provides an MXF status index. Select from these options:

- *None*. (Default) No PMR processing is performed. Select None when you do not want to perform PMR operations.

- *Append*. Incrementally adds entries to the PMR file for those MXF files that have been added to the directory since the last modification to the PMR file. The PMR file should have been created by the AAF action; it is not interoperable with PMR files created by other programs.

- *Rebuild*. Deletes any existing PMR file in the directory and creates a new PMR file with entries for all the existing MXF files in the directory.

MXF Path Override. (Optional) When supplied, overrides the location of MXF files referenced in the AAF file.

Project Name. Specifies the asset's project name. Default: *Vantage*.

Copy Input AAF File. Specifies whether or not to copy the input AAF file. When enabled, configure these controls:

Input AAF Path. Specifies the fully-qualified path to the folder where the copied AAF file will be written.

Create Unique Folder. When checked, creates a unique folder in the Input AAF Path folder in which to store the AAF file.

Overwrite Existing File. When checked, enables the action to replace the existing AAF file with the copied file. If unchecked, the action fails.

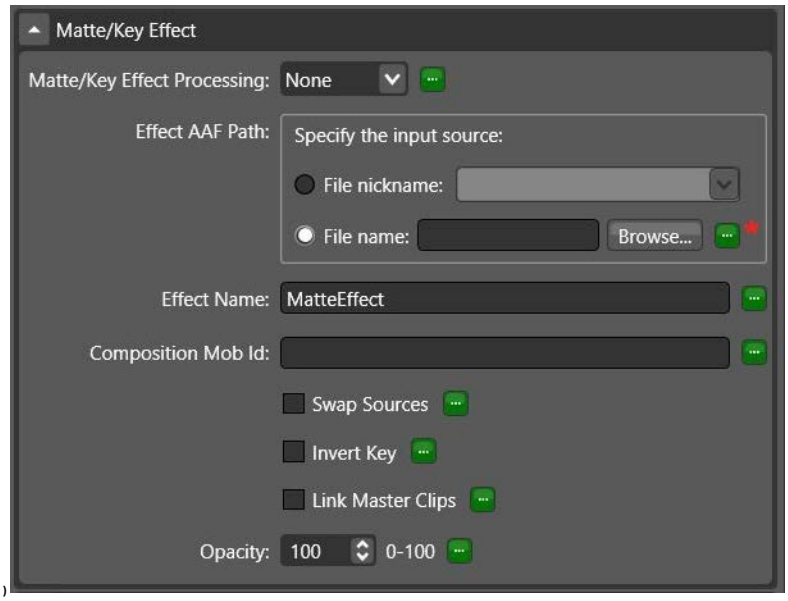
Matte/Key Effect Operation

The Matte/Key Effect feature in the AAF action generates a Matte/Key composition that you can import and use as an effect in Avid Media composer. You can perform a Matte/Key effect on ingested files, where you apply a Matte/Key effect on selected media using specified clips.

Note: For a practical discussion of typical Matte/Key Effects use cases, see the Creating a Matte/Key Effect for Media Composer topic in the Avid Integration Guide, published on the Telestream web site.

Note: The two files originate from a single source that is split into two files using the parallel set of Flip64 and Media Creation actions preceding the AAF action in a workflow. The AAF action does not check for the presence of RGB and alpha channels. It only checks that the first video track of each AAF file has the same frame rate and frame count (duration).

Open the AAF Settings panel and the Matte/Key Effect sub panel to configure the AAF action for Matte/Key Effect processing.



Matte/Key Effect Processing. Enables or disables Matte/Key effect processing (optionally specify a variable containing one of these keywords):

- *None*. (Default) Matte/Key effect processing is disabled. Select None when you do not want to perform Matte/Key effect processing.

- *Apply*. Matte/Key effect processing is enabled. Select Apply when you want to perform Matte/Key effect processing and configure these controls:

Effect AAF Path. Specifies the fully-qualified path to the input effect source, by file nickname or by file name; enter it manually or click Browse to navigate and select the file. It must be in DNxHD or DNxHR format - specify the nickname or path and file:

File Nickname: Check and select the alpha channel AAF file nickname, bound to AAF Path variable *AAFPathKey*, set in alpha channel's Media Creation #1 action.

OR

File name. Manually enter or browse and select the fully-qualified path to the file. The Vantage Avid service that executes this action must have access to the file location. Use this option when you want to assign a static file, which is used for every job. If you assign a variable, the variable must be assigned the fully-qualified path and file name in an upstream action and the file can change for each job.

Effect Name. Practical string, per your utilization in Avid Media Composer.

Composition MOB ID. Specifies the MOB ID for the new asset.

Swap Sources. Typically, unchecked. When checked, the AAF action swaps foreground and background layers to compensate for an inverted alpha channel.

Invert Key. When checked, inverts the key to reverse the effect of the matte; used when key is initially inverted when applied - making previously transparent areas opaque and opaque areas transparent.

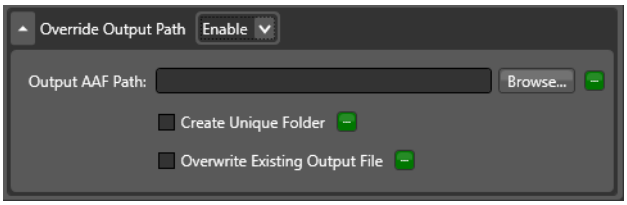
Link Master Clips. When checked, links the effect to the fill and key files.

Opacity. Specifies the relative opacity of the key - where 100 is fully opaque and 0 is fully transparent.

Override Output Path

When enabled, if you are conducting frame chase editing outside of an Interplay environment (as specified in the Media Creation action in your workflow), you configure PMR maintenance to suit your requirements specify the Override Output Path as required.

Note: In order to perform Open Workflow, Frame Chase (Edit While Capture) processing of Media Creation outputs, you must bind the AAF Path variable (created in an upstream Media Creation action) to the Input Source File Name field.



Override Output Path. Specifies Disable | Enable.

- *Disable*. When disabled, the output is saved in the current Vantage Store.

- *Enabled*. When enabled, you can save the output to a shared drive or other location for use directly in Interplay / Avid Media Composer.

Create Unique Folder. Check enabled when you want a unique folder created for the output of this job in the location you specify. Use this option when you always want output to be saved, avoiding duplicate file names.

Overwrite Existing Output File. Check enabled when you want to replace the previous job file with the current output. When disabled and the output file with same name exists, the job will fail.

Glossary

Throughout this guide and in numerous software tools provided by Avid, various Avid-specific terms are used as they relate to integration with Vantage. This glossary details the terminology currently in use by Avid.

Avid User Applications

Avid Media Composer

An Avid non-linear editing program used for editing film and video.

Avid ProTools

Digital audio workstation used for music creation and production, sound for picture (sound design, audio post production and mixing) and, more generally, sound recording, editing and mastering processes.

Avid Interplay Access

Client program for MediaCentral | Production (Interplay | Production, Interplay) providing access to the Interplay workgroup from any location worldwide.

Avid Interplay Assist

Desktop video tool designed for operators to review and log video before it gets into the edit suite.

Avid Interplay Administrator

Administration control panel used in MediaCentral | Production Management environments.

Avid Link

Avid licensing, purchasing and update manager application used for a variety of Avid products. Also allows for creative collaboration, content sharing and promotion.

Avid NEXIS Client Manager

Client software installed on systems that require access to Avid Media, including Vantage. The client is backward compatible so that new Nexis Client Manager versions will generally work with older Avid shared storage hardware.

Avid PathDiag

Diagnostic utility that allows validation of the Avid NEXIS storage group by quantifying the throughput (performance) of applications accessing Avid NEXIS workspaces including Vantage.

Avid Media Asset Management Systems

MediaCentral | Cloud UX

Work on MediaCentral news, editorial, production, graphics, and asset management projects and media from anywhere using a web browser.

MediaCentral | Production

The traditional Avid Production Management suite of tools, including Access and Assist, that is based on a product called *Alien Brain*. This is the system that Vantage has traditionally integrated with using AAF, IAE, Media Creation and Asset Monitor (aka Interplay Production, aka Interplay, aka PAM).

Avid Storage Systems

Avid ISIS 5000/5500/7000/7500

Older Avid storage systems vary significantly from the 5000 and 7000 series. 7000/7500 systems are rare, expensive and difficult to manage. 5000/5500 are more common.

Avid NEXIS

Current generation of the Avid storage platform with different hardware, however uses the same/similar network protocol and client software.

Avid Unity

EOL Avid shared storage system; not supported by Avid or Telestream.

Avid MediaCentral Production Components and Services

Avid MediaCentral | Production Management Server

The database host and heart of the MediaCentral | Production Management (aka Interplay Production, aka PAM) ecosystem. The database server in some cases may be more than a single server and in some cases may host other MediaCentral | Production Management services. Telestream products do not communicate directly with the Production server database.

Interplay Web Services

Interplay Web Services are the back-end web services which Vantage and other non-Avid Applications utilize for ingesting, monitoring and communicating with an Avid MediaCentral Production system. The web services may reside on a dedicated server or be hosted on another of the Production host system. In a purely Avid environment with no 3rd party applications there often is no Web Service host. There is no limit to the number of web service hosts—in practice, customers may have separate web service systems for different 3rd party vendors (Telestream, EVS, Harmonic, etc). Vantage

requires a properly-configured web service host for MediaCentral | Production Management integration (aka Interplay Web Services).

Avid MediaCentral | Production—Media Indexer

The Avid MediaCentral | Production Media Indexers are used to catalog and keep track of Avid Media files. A MediaCentral | Production Management system always has at least one dedicated Media Indexer but generally it is more common to see two of them which traditional was known as a HAG (High Availability Group), now known as a NOMI (Network of Media Indexers). All Avid editor clients that are part of a MediaCentral Production Management environment also have a Media Indexer installed and running.

Note: Do not confuse Avid MediaCentral Media Index with Media Indexers. Media Index is a MediaCentral cataloging and searching tool and not something used with Telestream products.

MediaCentral Production Avid Service Workgroup

The name of the MediaCentral | Production Management workgroup (aka Interplay Avid Service Workgroup).

MediaCentral | Production Interplay Folder

The virtual location of assets within a MediaCentral | Production Management system. This is not a file system location for media files, it is the location of assets in the MediaCentral | Production Management (Interplay) database.

MediaCentral Transfer

MediaCentral Transfer (aka Transfer Engine | Transfer Manager | Interplay Transfer) is a tool used to automate the movement of media within a MediaCentral | Production Management environment. This is a legacy application, however still fairly common.

iNews

Another MediaCentral editing tool used for news production.

Other Avid Products

Avid Airspeed

SDI ingest and playout device similar to Telestream Live Capture.

NuVista, Meridian, Adrenaline, Nitris, Artist IO

Various Avid SDI ingest and output hardware used in editors over the years. In some cases, like Meridian, is also the codec that was used.

FastServe

Avid's broadcast server, similar to Omneon, Grass and Imagine playout servers.

Maestro | Graphics

On-air graphics production systems.