



Administration Guide

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Telestream Contact Information

To obtain product information, technical support, or provide comments on this guide, contact us using our web site, email, or phone number as listed below.

Resource	Contact Information
Kumulate Technical Support	<p>Web site: https://telestream.net/telestream-support/kumulate/support.htm</p> <p>Support Portal (for use by all support customers except Platinum level): https://support.telestream.net</p> <p>Support email: cmsupport@telestream.net</p> <p>Platinum Support Phone (USA): (888) 827-3139</p> <p>Platinum Support Phone (International): +1 (905) 946-5701</p> <p>Depending on your support contract and problem severity, Telestream responds to your request within 2 business hours.</p> <ul style="list-style-type: none"> • Standard support hours: Monday-Friday, 9am-5pm local time. • Gold Support hours: 24/7.
Telestream, LLC	<p>Web site: telestream.net</p> <p>Sales and Marketing Email: info@telestream.net</p>
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Overview

This guide is for Kumulate system administrators and those professionals involved in setting up, configuring and managing Kumulate and related systems. It provides a comprehensive description of Kumulate functionality and detailed configuration instructions. It guides system administrators through initial Kumulate system configuration, daily operations, and routine maintenance.

Topics

- [Overview](#)
- [System Requirements](#)
- [New Features and Fixes](#)
- [Administration Quickstart](#)

Overview

Kumulate is a media content system that enables professionals in enterprises and institutions to locate and work with videos remotely, from any computer on your network. Administrators monitor and maintain the system and user accounts with minimal effort from anywhere they have access to your network.

You access Kumulate via a web browser using HTTP | HTTPS protocol. Advantages of a web-based interface include:

- No client software installation or updates are required
- A browser-based content application is accessible from anywhere on the network
- No client application configuration is necessary.

Using Kumulate you can:

- Search for video clips by file name, date, category, and format
- Define metadata fields that support search
- Perform advanced searches for specific criteria. For example, you can search for video clips of farm animals in the United State excluding Nebraska and Kansas.
- Review located clips using the built-in media player
- Extract selected frames, add them to a list of related clips, forward them to editing applications, or arrange them for distribution
- Administrators can assign a default set of metadata fields.

System Requirements

These products/systems must be installed and configured as specified before installing and using Kumulate:

- SPTI must be installed on the Kumulate server.
- MMP users that require searching by asset alias (Asset name) must set Use Alias on MMP query to YES.
- MTE (formerly HQS) version 2.0 or higher is required for full functionality. When using MTE/HQS, ensure that the Kumulate XMTI ML partial restore supported formats field has been updated to include MXF and QT.
- Avid Interplay must be configured via Interplay Web Services.
- Harmonic Spectrum Family (formerly Omneon Spectrum and Media Deck) firmware is supported up to version 8.3 on 64-bit Kumulate systems.
- Grass Valley K2 is supported up to version 3.2.74 build 1060.
- Kumulate supports T10KC drives in Oracle StorageTek libraries. Backward compatibility is preserved for T9840A, T9840B, T9840C, T9940A, T9940B, and T10000A drives.

New Features and Fixes

This version of Kumulate includes the following changes, improvements, and features:

Issue	Description	Notes
KUM-11281	Add ability to control the port numbers for external Data Movers in order to be excluded in firewall rules for clients with very secure networks.	Add a port range setting to the DMPManager from which to assign ports to DM processes.
KUM-11451	Reduce startup time for Data Movers in environments with many SCSI devices.	Execute SCSI commands during device scanning in parallel and with a configurable timeout (default 60 seconds).
KUM-11425	Add ability to copy metadata values from search results in table mode.	
KUM-11445	Improve usability for Search and Advance Search pages for systems that are not in Federation.	For systems that do not use Federation, eliminate the area used to display Federation groups in Search and Advanced Search pages.
KUM-11459	Make the client ID visible in all pages.	Since support people monitor many systems, it is useful to easily obtain the client ID when creating a new support ticket.
KUM-11482	Add ability to set favorite thumbnail from search results, e.g. MassStore.	Add ability to set the favorite thumbnail using the thumbnails view slider.
KUM-11513	Add ability to disable highlights for search results in order to increase performance.	Performance testing for big databases indicated that performing a search with <code>includeHighlights=false</code> the search time can be more than 10 times faster, the side effect being that the searched word is not highlighted anymore in the results when this flag is false.
KUM-11529	Export CML without checking out.	Add the capability to export CML from Kumulate basket page without having to check out the clips/assets present in the basket. This process speeds up the CML export and is useful when the basket clips are already present in the Kumulate Storage Locations that refer to the online/nearline storages that Vantage has access to.
KUM-11539	Improve the usability for Jobs/Jobs History pages.	Jobs and Jobs History pages are more responsive and allow to better visualization of relevant details for the jobs.
KUM-11628	Add a REST API endpoint to create lightweight renditions in the cache without uploading a file first and possibly multiple files.	New API endpoint allows creating an rendition in a single request by providing the files and their content.

KUM-11628	Add ability to easily export metadata definitions from Kumulate.	Added export button for each tab from the Asset Definitions page in order to export: <ul style="list-style-type: none">• asset metadata schema• rendition metadata schema• attachment definitions schema.
KUM-11447	Add ability to retry a full restore/transfer job.	Added the ability to retry a full transfer job from Jobs/Jobs History pages.
KUM-10818	Improve the responsiveness of Locations page.	Add the ability to collapse the left page with locations, similar with collapsing the left page in Asset details page.
KUM-11403	Improve the contrast and uniformity of all modal dialogs.	Changed the background color for all modal dialogs. Added a border for the dialog in order to have better delineation over the back page.

Administration Quickstart

Getting started with Kumulate administration involves logging on for the first time, and learning how to navigate the Kumulate web app's page tree to display the pages you'll be using to create and configure the components of Kumulate for your environment.

Accessing and Logging into the Kumulate Web App

You access Kumulate for administration as well as operation via its web app—referred to as the *Kumulate web app* or simply—*Kumulate*. Kumulate requires credentials for users to log in (user IDs are not case-sensitive).

To log in initially, use one of the default user IDs—*MNTN* (password *mntn*)—which is part of the default group, Montana User Group. You can use this user ID to set up user groups and users and perform other initial configuration tasks.

Note: Telestream recommends that as your first task, you should change the *mntn* user ID's password, and then set up user groups and users as required, before performing other tasks. See [Managing Groups and Users](#) for details.

Default User Group and Credentials

The default Montana User Group and its users have full read and write administration privileges for Kumulate, enabling the *MNTN* user to log in and create user groups and users to meet your requirements.

Default user group: *Montana User Group*

Default user ID: *MNTN*

Default password: *mntn*

Kumulate Web App URL

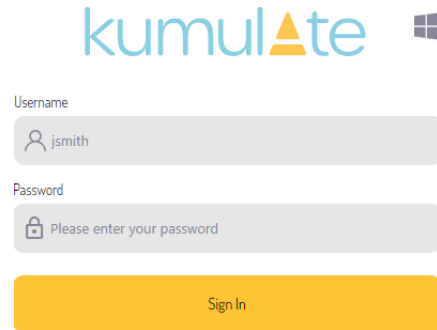
The Web app URL syntax is: `http://<host name | IP address>/montana`

You supply the DNS name or IP address of the server where the Kumulate web application is hosted:

For example: `http://10.10.10.10/montana` or `http://kumulate-one/montana`.

Logging In to Kumulate

When the Kumulate web app launches, it displays a login page where you can enter your credentials:

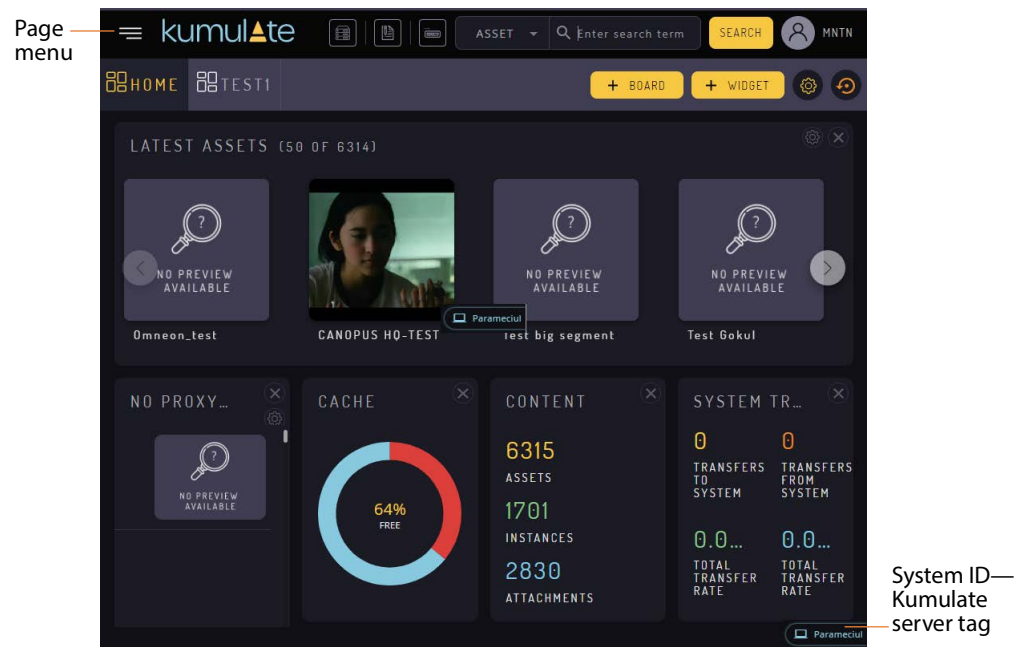


Enter the default user name and password and click Sign In.

Kumulate Web App Navigation for Administrators

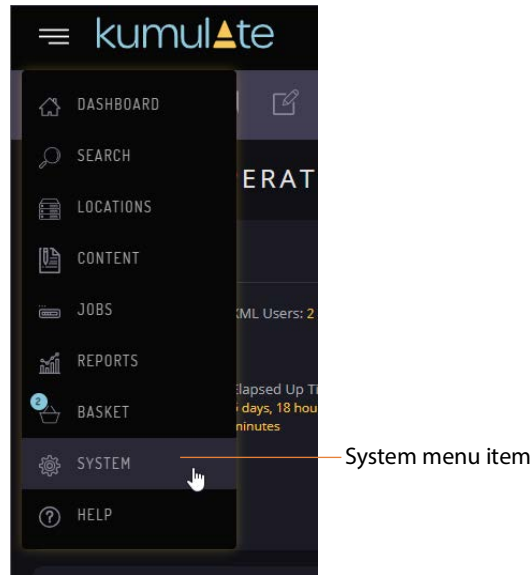
Before starting to configure your new Kumulate system, you should become familiar with navigating to the various pages in the Kumulate web app—specifically, to display the System > Administration page—where most of your component creation and configuration takes place.

This image depicts the default dashboard page where end users can view the latest assets created in Kumulate, along with statistics about system utilization:



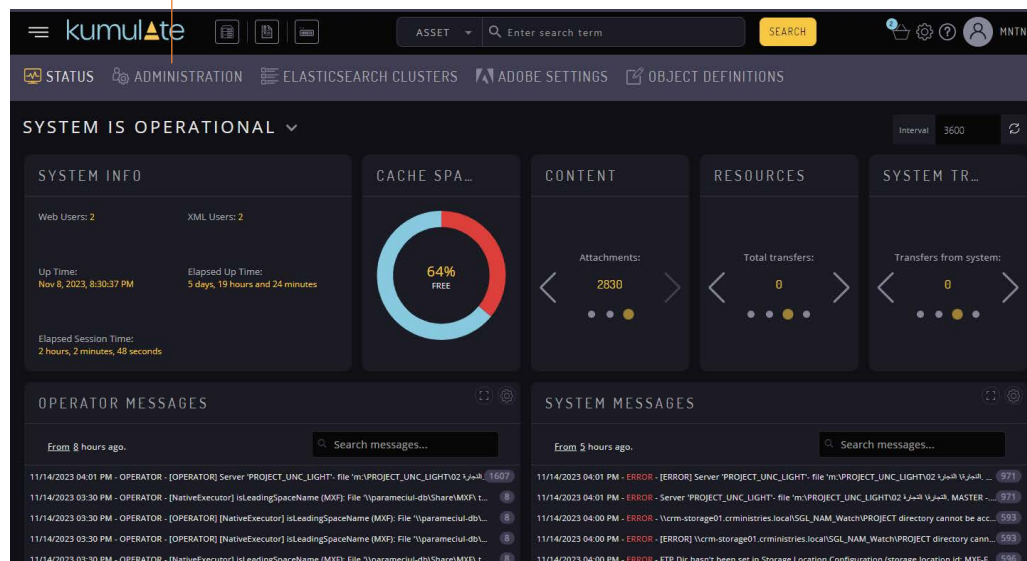
Note: In a multi-server (federation) Kumulate system, the system ID of the Kumulate server you're connected to displays in the bottom-right corner for easy identification.

You use the Page menu (in the upper left corner of the window—shown here selected) to display each of the pages that comprise the Kumulate web app:

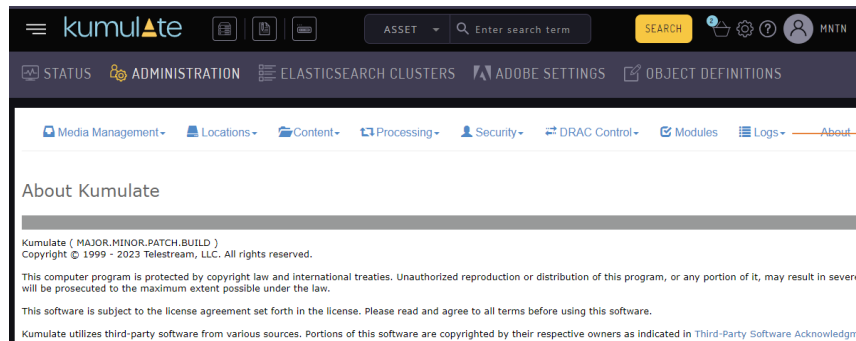


For administrative and configuration tasks, select System from the Page menu. Kumulate displays the System page:

Administration page button



Click Administration to display the Administration page—the page you use often, to navigate to other pages to perform most of your work:



Use these menus to navigate to each of the Administration sub-pages.

You'll use the menu in the Administration page to display each of its pages to create and configure locations, workflows, etc.

Here's an example, depicting selecting Processing > Workflow Information to display the Workflow Information window where you create and configure your workflows:

Workflow Information

A screenshot of the 'Workflow Definitions' page in the Kumulate application. At the top, there is a header 'Workflow Definitions' and a button labeled 'ADD WORKFLOW'. Below the header is a table with four columns: 'Test Preview', 'Actions', 'ID', and 'Description'. The table contains seven rows of workflow definitions, each with a checkbox in the 'Test Preview' column, a pencil icon and a close icon in the 'Actions' column, and the workflow name in the 'ID' column. The workflow names are: Lib_to_Vs, NEW_ON_MXF, Test, Test WF, Test2, Test_batch, and VSO_6125.

Test Preview	Actions	ID	Description
<input type="checkbox"/>		Lib_to_Vs	
<input type="checkbox"/>		NEW_ON_MXF	
<input type="checkbox"/>		Test	
<input type="checkbox"/>		Test WF	
<input type="checkbox"/>		Test2	
<input type="checkbox"/>		Test_batch	
<input type="checkbox"/>		VSO_6125	

You'll use this navigation process often, as you perform managerial and configuration tasks as a Kumulate administrator.

System > Administration Pages

Here are all of Kumulate's administration pages, organized by the menus shown above:

Media Management Search Storage Units Media Status Media Grouping	Locations Storage Archive	Content Attachment Management Metadata Management Resource Filters	Processing Transcode Profile Workflow Information E-mail Templates Thumbnail Extraction Profiles
Security User Information Group Information Session Control	DRAC Control Data Mover Information Transfer Engine Information Transcode Engine Information Cluster Information	Modules	Logs Statistics System Information

Managing Groups and Users

Kumulate requires credentials for all users to access and utilize Kumulate, both for administrative and operational usage. Anonymous or public access is not permitted. Kumulate users are organized by groups to improve user control and management.

Each Kumulate user group specifies how users assigned to it interact with Kumulate. Access privileges and controls are used to grant various levels of access to features, objects, assets, attachments, locations, and metadata in Kumulate.

Note: Because a user must be assigned to a group when the user is created, groups must be created before their users.

The Montana User Group, Transcode Engine Group, and News Group are predefined user groups. The Montana User Group provides users full read and write administration privileges for the entire Kumulate system. The Transcode Engine Group is used internally by the transcode engine. And the News Group is for users that use news plugins from Kumulate. Plugins include one that is able to archive/restores content to/from Kumulate and one that integrates with Avid iNews and Enps news applications.

Topics

- [Creating a New Group](#)
- [Setting Group Privileges and Permissions](#)
- [Applying Changes Made to a Group](#)
- [Creating a New Kumulate User](#)
- [Managing User Sessions](#)

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).

Creating a New Group

Follow these steps to create a new group:

1. Navigate to System > Administration > Security > Group Information to display the User Group Information panel and enable editing by selecting Future from the See rights menu:

User Group Information



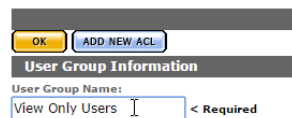
2. Click Add New User Group to create a new group:

User Group Information



3. On the Create User Group page, enter a name for the group in the User Group Name text field and then continue to [Setting Group Privileges and Permissions](#):

Add User Group



Setting Group Privileges and Permissions

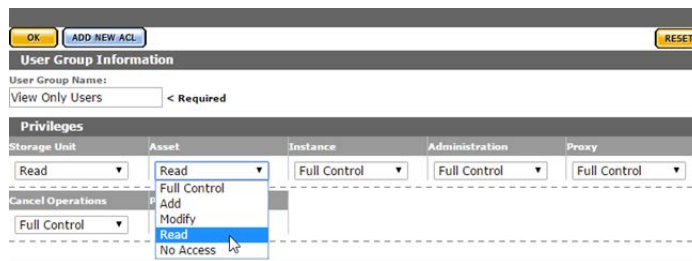
Groups set the privileges and permissions for users. These must be set appropriately to allow users to perform their tasks without accessing forbidden media and features.

See [Privileges and Permissions for Common Operations](#) for examples of how to set privileges and permissions.

To set group privileges and permissions, follow these steps:

1. Navigate to the System > Administration > Security > Group Information panel.

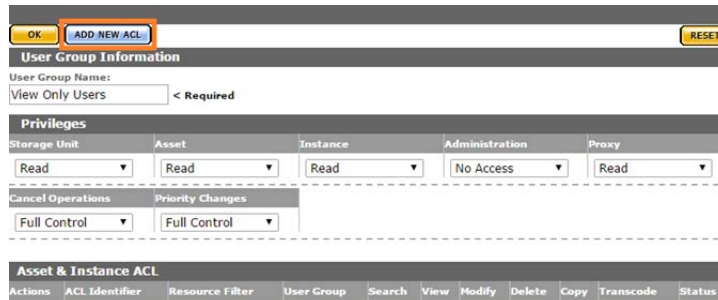
Access privileges control which parts of the Kumulate system users in the group can access. Group access to administrative functions is set using the Privileges menus as shown here:



After the privileges are set, you must add permissions to particular resources by adding ACLs (Access Control Lists). ACLs must be set for Storage Locations, meta-data, attachments, objects, and assets. If an ACL is not set for any of these items, the users won't have access to them at all.

Follow these steps to add an ACL to a group:

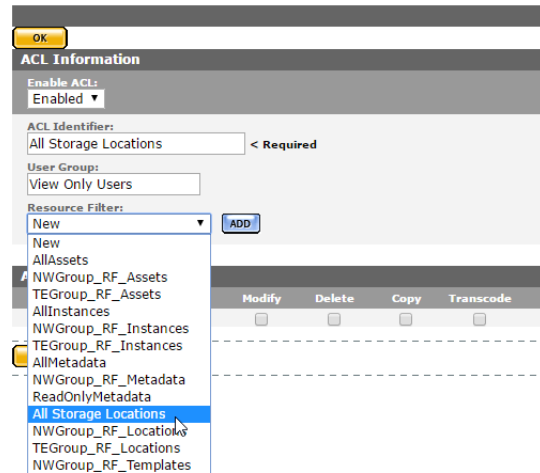
2. Click Add New ACL to open the Add ACL dialog:



3. Provide a unique ACL Identifier and select a Resource Filter to use in the Add ACL dialog, or create a new resource filter by selecting New from the menu. Resource

filters are used to select particular objects, assets, Storage Locations, metadata, and attachments based on a set of requirements.

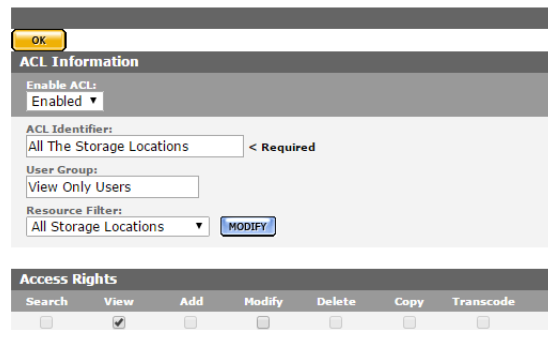
Add ACL



Note: The selected resource filter can be modified. However, modifying a resource filter will modify all ACLs and groups that use that filter. Telestream recommends that you create a new resource filter rather than modifying an existing filter.

3. Select the access rights for the resource filter, then click OK to save and return to the Add User Group page.

Add ACL



4. Add as many ACLs as required. The ACLs are grouped according to type.

User Group Information

User Group Name: Required

Privileges

Storage Unit	Asset	Instance	Administration	Proxy
Read	Read	Read	No Access	Read

Cancel Operations	Priority Changes
No Access	No Access

Storage Location ACL

Actions	ACL Identifier	Resource Filter	User Group	View	Status
	Storage Locations	All Storage Locations	MS RESTRICTED	✓	Enabled

Metadata ACL

Actions	ACL Identifier	Resource Filter	User Group	Search	View	Modify	Status
	Metadata	AllMetadata	MS RESTRICTED	✓	✓		Enabled

Attachment Template ACL

Actions	ACL Identifier	Resource Filter	User Group	Add	View	Modify	Delete	Status
	Closed_Caption	RF_CLOSEDCAPTIONING	MS RESTRICTED		✓			Enabled
	Segments	RF_SEGMENT	MS RESTRICTED		✓			Enabled
	Markers	RF_MARKER	MS RESTRICTED		✓			Enabled

Asset & Instance ACL

Actions	ACL Identifier	Resource Filter	User Group	View	Modify	Delete	Copy	Transcode	Status
	Assets	AllAssets	MS RESTRICTED	✓					Enabled
	Instances	AllInstances	MS RESTRICTED	✓					Enabled

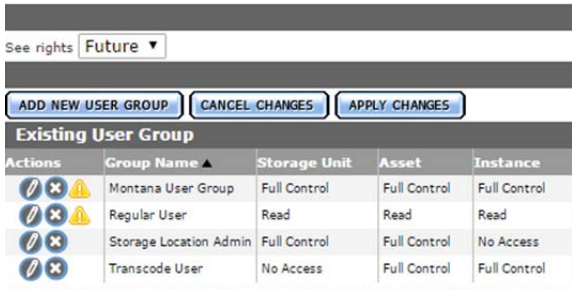
5. Click OK to save and return to the User Group Information page after all the ACLs have been added to the group.

Applying Changes Made to a Group

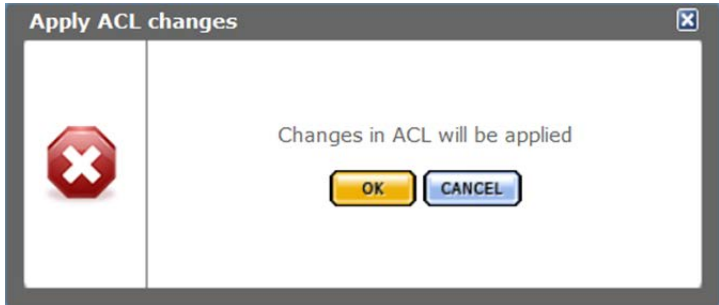
You apply changes made to a group on the User Group Information page.

Clicking OK doesn't automatically apply the changes when a group's ACLs and privileges have been configured or modified. The changes need to be applied from the User Group Information page. An attention symbol displays next to the group until all the changes are either applied or canceled.

User Group Information



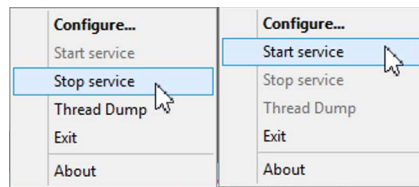
Click Apply Changes. Kumulate displays a confirmation dialog to confirm that you want to proceed; click OK to continue.



Changes to the asset and Rendition ACLs only take effect after Kumulate is restarted. Kumulate must be restarted for the changes to take effect if the *Changes are scheduled to be applied* message displays after the dialog box closes.





Stop and restart the Tomcat Service on the Kumulate server:



The attention symbol disappears after the changes are applied.

The screenshot shows the 'Existing User Group' table in the Kumulate administration interface. The table has columns for Actions, Group Name, Storage Unit, Asset, and Instance. The 'Montana User Group' row has an attention symbol (a blue circle with a white 'x') in the Actions column. The other rows do not have attention symbols.

Actions	Group Name ▲	Storage Unit	Asset	Instance
 	Montana User Group	Full Control	Full Control	Full Control
 	Regular User	Read	Read	Read
 	Storage Location Admin	Full Control	Full Control	No Access
 	Transcode User	No Access	Full Control	Full Control

Creating a New Kumulate User

When you create a new user, you assign it to a group which controls its access and privileges. Because of this requirement, users should be added to Kumulate after their group has been created. You can change the group a user is assigned to at any time.

Follow these steps to create a new user:

1. Navigate to System > Administration > Security > User Information to display the User Information page:

User Information

Actions	User ID	User Group	User Name	Location	Department	Status
	silvia	Montana User Group	silvia	Masstech Group	Development	ENABLED
	WEBSERVICE	Montana User Group	WEBSERVICE	Masstech Group	Development	ENABLED
	postman	Montana User Group	postman	Masstech Group	Development	ENABLED
	archivesearch	Montana User Group	archivesearch	New	New	ENABLED

2. Click Add New User to display the Add New User page:

Add New User

OK [RESET]

User Information

User ID: < Required

Password: < Required

User Name:

Location: New [ADD]

Language: EN_US

Phone Number:

Allow multiple login sessions: NO

Use Alias on MHP query: NO

Re Enter Passwords: < Required

User Group: Montana User Group

Department: New [ADD]

Email Address:

Active Directory User: NO

3. Enter the new user’s details:

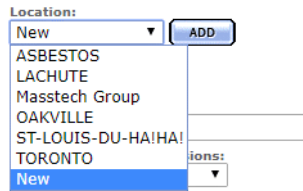
User ID (required)—User’s user ID

Password (required)—The user’s authorized password

User Name (required)—The user’s actual name (*not* their user ID)

Location (required)—The user’s location. The menu is populated from the Masstech Group by default, and by any previously-entered locations.

For a new location, select New, click ADD and enter the location in the text field:



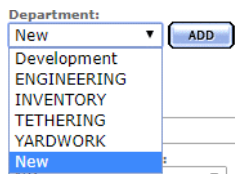
Allow multiple login sessions—Allows the user to log in to Kumulate multiple times simultaneously. This is useful in cases where the user may be logged in via the Kumulate web app from multiple computers.

Use Alias on MMP query—Allows using an alias for MMP queries rather than the User ID.

User Group (required)—The group assigned to this user.

Department (required)—The user’s department. The menu is populated with Development by default, and by previously-entered departments.

To add a new department, select New, then click ADD and enter the new department in the text field.



Active Directory User—Identifies that the user is an Active Directory user.

5. Click OK to create the user.

Managing User Sessions

The Session Control panel displays a list of all users currently connected to the Kumulate system and enables administrators to disconnect them if required.

Follow these steps to display the Session Control page:

1. Navigate to System > Administration > Security > Session Control.

The Session Control panel displays a list of all users currently connected to Kumulate:

Session Control

The screenshot shows a web interface for Session Control. At the top right is a 'REFRESH' button. Below it is a table with the following data:

User ID	IP Address	Connections	Time Out	Last Access	Action
SANDRA	10.1.5.60	1	14:18:24	11:31:44	Kill Session
MNTN	10.1.11.24	1	14:18:25	11:31:45	Kill Session

This table describes the columns in the Session Control table:

Column	Description
User ID	The user connected to Kumulate.
IP Address	The IP address of the workstation connected to Kumulate.
Connections	The number of connections this user has made from this IP address.
Time Out	The idle time left before the user is automatically disconnected.
Last Access	The time the user last accessed Kumulate.
Action	Kill Session automatically disconnects the user from Kumulate.

Disconnecting Users from Kumulate

Kill Session—click to automatically disconnect the user from Kumulate. Kumulate won't ask for confirmation of this action. Kumulate terminates the session.

Performing a Cluster Failover

In a clustered configuration, two Kumulate servers are connected to each other to ensure redundancy and continuation of operation. The two clustered servers operate as master and backup. Services are installed on both servers, but only run on the master server. During fail-over, services are shut down on the master and restarted on the backup. Failover also affects the operation of the Data Movers.

Kumulate cluster services are managed using Windows Failover Cluster Manager. Services can be failed over from the Kumulate web application or from the master or backup server using Windows Failover Cluster Manager.

Topics

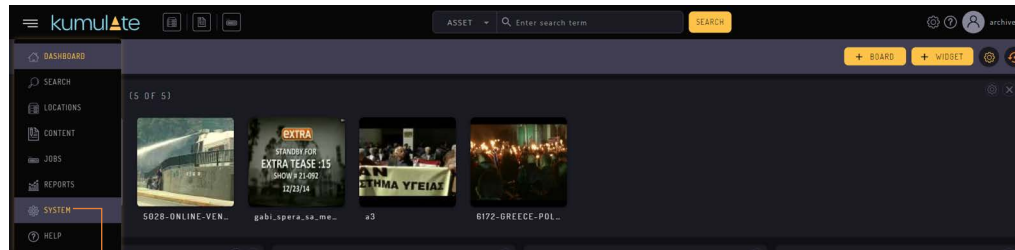
- [Failover using the Kumulate Web App](#)
- [Windows Failover using Cluster Manager](#)
- [Failover Effects on the Internal Data Mover](#)

Failover using the Kumulate Web App

Before performing a failover, be sure that the system is quiesced and users have logged off.

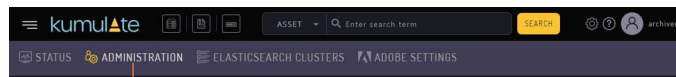
Follow these steps to fail over the system using the Kumulate web app:

1. Open Kumulate in your browser and log in.
2. Select System in the menu panel:



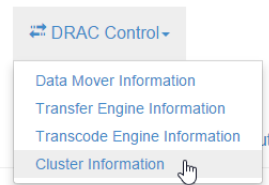
SYSTEM button

3. In the System window, click ADMINISTRATION:



ADMINISTRATION button

4. Select DRAC Control > Cluster Information:



Kumulate displays the master/backup server table.

5. Click the backup server's Play button (see Status column) to trigger fail-over:

Cluster Information

Actions	Cluster Member ID	Status	Station	User
	clm_IRONMAN	Master	IRONMAN	oust_IRONMAN
	clm_IRONFIST	Backup	IRONFIST	oust_IRONFIST


Play button

6. Click OK on the confirmation dialog to confirm:



7. Kumulate is immediately unavailable, and remains unavailable until all services stop and restart with the new master. The fail-over process takes approximately three minutes.

8. Reload the web page. When Kumulate comes back online, observe that the server roles are reversed and fail-over is complete:

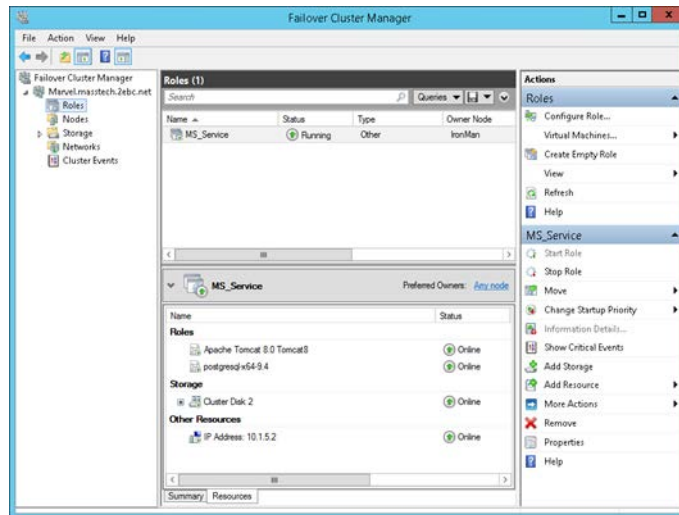
Actions	Cluster Member ID	Status	Station	User
 	cm_IRONMAN	Backup	IRONMAN	oustr_IRONMAN
 	cm_IRONFIST	Master	IRONFIST	oustr_IRONFIST

Windows Failover using Cluster Manager

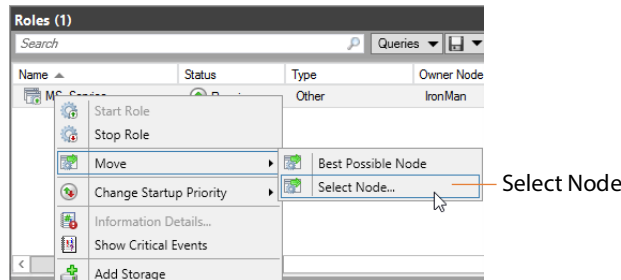
Before performing a failover, be sure that the system is quiesced and users have logged off.

Follow these steps to fail-over services from Windows Failover Cluster Manager:

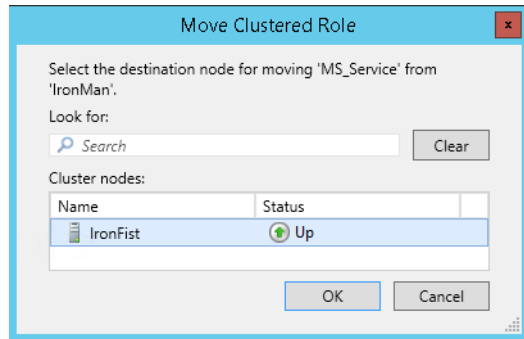
1. Log in to the master or backup server and open Windows Failover Cluster Manager:



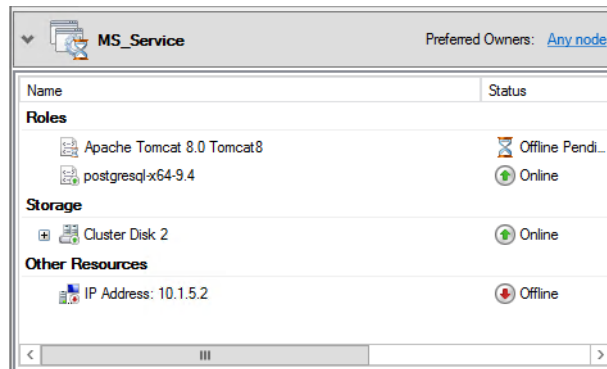
2. In Roles, right-click the MS_Services | MS_Service cluster and select Move > Select Node:



3. Select the Backup server from the node list:

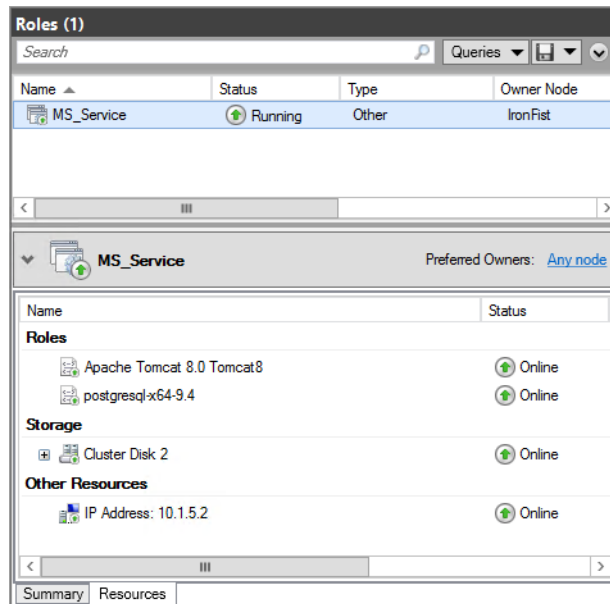


4. Click OK to take the services offline:



5. Kumulate is immediately unavailable, and remains unavailable until all services stop and restart with the new master. The fail-over process takes approximately three minutes.

6. Wait until the services are running on the backup server before attempting to access Kumulate:



7. Reload the web page. When Kumulate comes back online, observe that the server roles are reversed and fail-over is complete and the backup is now the master:

Actions	Cluster Member ID	Status	Station	User
	clm_IRONMAN	Backup	IRONMAN	ousr_IRONMAN
	clm_IRONFIST	Master	IRONFIST	ousr_IRONFIST

Failover Effects on the Internal Data Mover

Data Movers on both the master and backup servers are operational in a cluster. However, only the Data Mover on the master acts as the internal Data Mover. The Data Mover on the backup acts as an external Data Mover.

In the event of fail-over, the internal Data Mover also fails over. The backup server becomes the master server, and the external Data Mover on the backup becomes the internal Data Mover.

Check the Disable for Local DM flag in the internal Data Mover endpoint configuration to disable the endpoint when the Data Mover assumes the role of the internal Data Mover. See [Add a Data Mover Endpoint](#) for more information.

Managing Storage Locations

This chapter describes the different types of Storage Locations that are available for use with Kumulate.

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).

Topics

- [Managing Storage Locations](#)
- [Managing Avid Standalone Storage Locations](#)
- [Installing and Using the PMRUpdater Module](#)
- [Media Repository Path Replacement Examples](#)
- [Managing Avid Interplay Storage Locations](#)
- [Managing Avid Storage Location Metadata Mapping](#)
- [Managing Omneon FTP Storage Locations](#)
- [Managing Pitchblue FTP Storage Locations](#)
- [Managing Project FTP Storage Locations](#)
- [Managing Project UNC Storage Locations](#)
- [Managing UNC Storage Locations](#)
- [Managing Discriminators and File Identifiers](#)
- [Managing BXF Storage Locations](#)

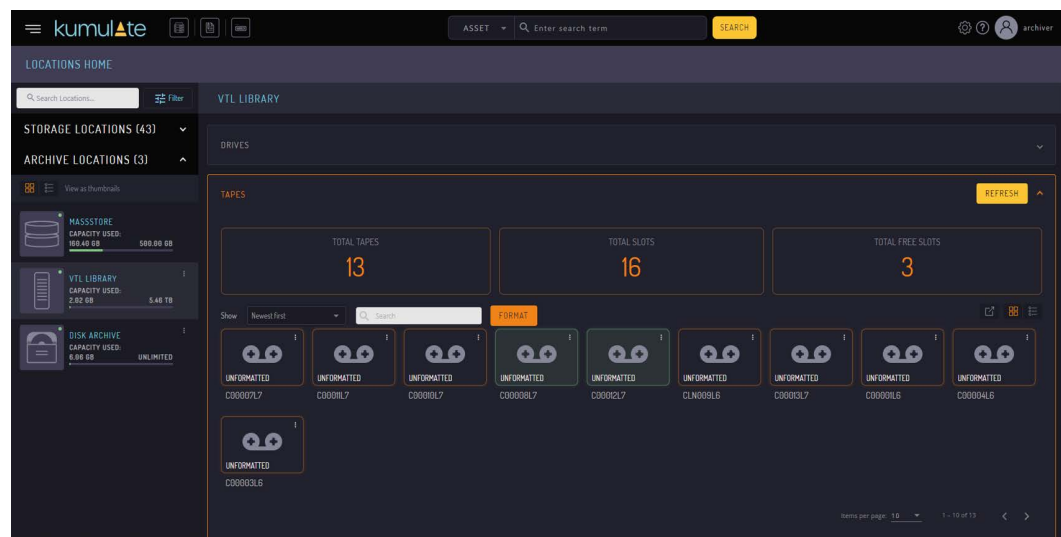
Managing Storage Locations

You can access Storage Locations using UNC or FTP protocol. Each Storage Location is configured based on the media stored on it and the transfer mode used to transfer the media.

Storage Locations are configured to expect a specific instance format. Assets that don't match this format cannot be transferred to the location unless a Transcode Profile exists that can transcode the incoming instance to the format specified by the location's Restore Profile.

Storage Locations are not automatically accessible to users, nor are they automatically added to external Data Movers. They need to be explicitly added as endpoints to external Data Movers, as well as user groups.

Kumulate administration capabilities are displayed on the Locations page:



Here are the administrative capabilities:

- Viewing general storage status and statistics
- Taking a storage online/offline
- Taking monitoring on/off for a storage location
- Viewing and exporting the instance list for a storage location
- Taking a tape drive online/offline
- Viewing tape drive status and configuration
- Taking an archive location online/offline
- Viewing and exporting the instance list for an archive location
- Taking a disk/cloud archive location's storage unit online/offline
- Viewing storage unit status and configuration
- Viewing and exporting the instance list for a storage unit

- Viewing a tape library's tape status, configuration, and tape list
- Modifying tape description and state (Online, Readonly, Unformatted) for a tape
- Viewing a tape status
- Viewing and exporting the instance list for a tape
- Adding a tape group
- Modifying a tape group configuration
- Viewing a tape group status, configuration, and tape list.

Managing Avid Standalone Storage Locations

Avid standalone Storage Locations consist of an Avid Media Composer workstation connected to a Kumulate system.

When two or more Media Composer workstations use a shared storage location, such as an ISIS storage location, to store their media files, Kumulate connects to the ISIS location rather than to the Media Composer workstations themselves.

Topics

- [File and Folder Formats](#)
- [Adding/Configuring Avid Storage Locations](#)
- [Setting Monitoring Parameters](#)
- [Setting Transfer Parameters](#)

File and Folder Formats

Avid standalone Storage Locations store MXF OP_ATOM files and AAF files.

MXF OP_ATOM files can contain video or audio essences. The video and audio of a media clip are stored in individual MXF OP_ATOM files. The video file and its audio file together make up an Avid Master Clip.

Master Clips are used to create finished media projects called sequences. A sequence's AAF file contains its list of Master Clip segments and the order in which to play them. When a sequence is added to Kumulate, its AAF file and Master Clips are also added to the instance.

Effects are stored in separate MXF_OP_ATOM files only if the effects are rendered either before the sequence is exported from Avid, or as part of the export process. If the effects are not rendered, they are stored as metadata in the AAF file.

When Kumulate monitors an Avid Standalone storage location, it monitors the AAF file location. When a new AAF file is discovered, Kumulate creates a new asset and adds the Master Clips listed in the AAF file to an instance.

When a sequence or Master Clip is transferred from an archive location, or from one Avid Standalone storage location to another, Kumulate transfers the AAF file and the Master Clips it references. Kumulate places the Master Clips in numbered subfolders under the Avid MediaFiles\MXF\ root folder. The number of files per subfolder is capped by the Interplay Maximum Files storage location configuration parameter. The Avid MediaFiles\MXF\ folder can be located on a local drive, on a mapped drive or an UNC location.

The name of the numbered subfolders is set using the Interplay Repository Folder Pattern parameter. The folder number is appended to the folder name after a separator. The separator is specified by the Folder Pattern Separator parameter. For example, if MyMedia is used for the Interplay Repository Folder Pattern, and underscore (_) is used

for the Folder Pattern Separator, then the subfolders are named `MyMedia_1`, `MyMedia_2`, `MyMedia_3`, etc.

If the *Interplay Repository Folder Pattern* is left blank, no separator is used—even if one is specified. In this case, the subfolders are simply numbered: 1, 2, 3, etc.

The Folder Pattern Separator can be a period (.), an underscore (_), or a dash (-). If PMRUpdater is being used, the Folder Pattern Separator must be a period (.), and the Interplay Repository Folder Pattern must be the Media Composer workstation's name. For example, if the Media Composer workstation's fully qualified domain name is `MyWorkStation.MyOrg.com`, the Interplay Repository Folder Pattern must be set to *MyWorkstation*.

Adding/Configuring Avid Storage Locations

Use this procedure to add/configure Avid standalone Storage Locations:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [Pencil] [Checkmark]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [Pencil] [Checkmark]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [Pencil] [Checkmark]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [Pencil] [Checkmark]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [Pencil] [Checkmark]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [Pencil] [Checkmark]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [Pencil] [Checkmark]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [Pencil] [Checkmark]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [Pencil] [Checkmark]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [Pencil] [Checkmark]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new storage location or click the Pencil button to edit an existing one:

Storage Location Manager

Actions	Location ID	Model
[X] [Pencil] [Checkmark]	EXTERNAL	EXTERNAL

3. Enter the ID and description for the repository, then click OK:

Create Storage Location

OK

Storage Location Information

Location ID: < Required

Location Description:

Location Type:

OK

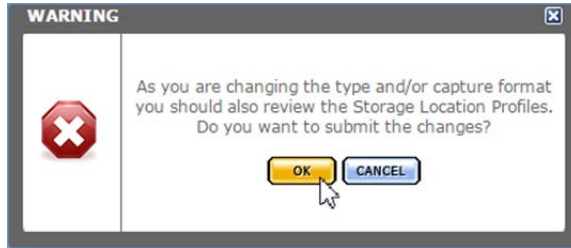
4. Select the Monitoring tab. Set API Protocol to *UNC*, and Capture Format to *AVID*:



The screenshot shows the 'Monitoring' tab selected in a configuration window. The 'API HostName' field contains 'AVISTANDALONE'. The 'API Protocol' dropdown menu is set to 'UNC'. The 'Capture Format' dropdown menu is set to 'AVID'.

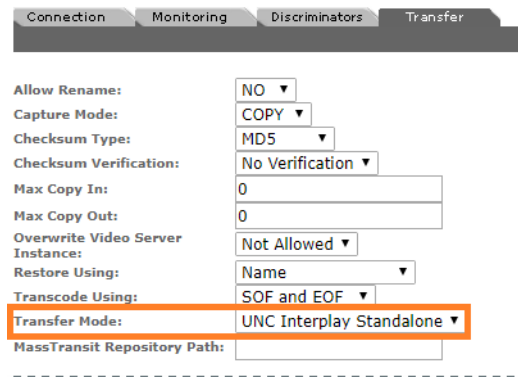
5. Click OK to continue.

Kumulate displays a warning dialog to verify that you want to submit the changes:



6. Click OK to continue.

7. Select the Transfer tab and set Transfer Mode to *UNC Interplay Standalone*:



The screenshot shows the 'Transfer' tab selected in a configuration window. The 'Transfer Mode' dropdown menu is set to 'UNC Interplay Standalone' and is highlighted with an orange border. Other settings include: Allow Rename: NO; Capture Mode: COPY; Checksum Type: MD5; Checksum Verification: No Verification; Max Copy In: 0; Max Copy Out: 0; Overwrite Video Server Instance: Not Allowed; Restore Using: Name; Transcode Using: SOF and EOF; MassTransit Repository Path: (empty field).

8. Click OK to continue.

9. Continue to [Instance Discovery Configuration](#) if the storage location is used to discover new assets
OR
to [Instance Transfer Configuration](#) if the locations are used to copy assets from Kumulate to a physical location.

Instance Discovery Configuration

Follow these steps to configure the Connection and Monitoring tabs to discover new assets and copy them into Kumulate:

1. Display the Connection tab and enter a fully-qualified path to the AAF files, which Kumulate monitors for new files:

Connection Monitoring Discriminators Transfer

Extract Metadata: NO

Directory: //10.1.5.60/AAFFiles/

2. Display the Monitoring tab and set the Files Dir Enable, Media Repository Path, Media Repository String to Replace, and Monitoring parameters:

Connection Monitoring Discriminators Transfer

API Protocol: UNC

Capture Format: AVID

Delete From Video Server: Not Allowed

Discover Avid Sequences with Media Offline: YES

Files Dir Enable: YES

Media Repository Path: \\10.1.5.60\

Media Repository String to Replace (regex): :.\

Monitor Timeout (min): 45

Monitoring: ON

Interplay WS Mode: NO

Polling Begin Time: 0

Polling End Time: 24

Polling Interval(sec): 0

3. Set the metadata mapping parameters for the location:

Files Dir Enable—Must be set to *YES*.

Media Repository Path—The path to the Avid MediaFiles\MXF\ folder on the Media Composer workstation relative to Kumulate.

Media Repository String to Replace (default .*\\) —Regular expression (regex) that matches the local path to the Avid MediaFiles\MXF\ folder used in the AAF file. By default this is set to (.*\), matching any drive letter. The matched string is replaced by Media Repository Path. This should only be changed if Media Composer is running on a MacOS workstation.

Monitoring—This must be set to *ON*.

See the following section for the complete list of applicable parameters.

Caution: Do not forget to set Metadata Mapping.

Instance Transfer Configuration

Configure the Transfer tab settings so that assets transferred to this storage location are copied to a physical location, as shown here:

Allow Rename:	NO
Capture Mode:	COPY
Checksum Type:	MD5
Checksum Verification:	No Verification
Delete source AAF file after copy in:	NO
Interplay AAF Root Folder:	c:\AvidStandalone\AAF
Interplay Content Temporary Folder:	C:\AvidStandalone\Avid M
Folder pattern separator:	-
Interplay Maximum Files:	5000
Interplay Media Reconcile After Transfer:	NO
Interplay Media Repository Path:	C:\AvidStandalone\tmp
Interplay Media Root Folder:	C:\AvidStandalone\Avid M
Interplay Repository Folder Pattern:	MS
Max Copy In:	0
Max Copy Out:	0
Overwrite Video Server Instance:	Not Allowed
Preserve Cache Structure:	NO
Restore Using:	Name
Transcode Using:	SOF and EOF
Transfer Mode:	UNC Interplay Standalone
DataMover Repository Path:	
MassTransit Repository Path:	

Set these parameters:

Interplay AAF Root Folder—Path to the folder where Kumulate writes the AAF file.

Interplay Content Temporary Folder—Fully-qualified path to Avid MediaFiles\MXF\Creating\.

Folder Pattern Separator—The separator used with Interplay Media Repository Folder Pattern: period (.) | underscore (_) | dash (-). If omitted and Interplay Media Repository Folder Pattern is not left blank, MS is used. Must be set to period (.) when using PMRUpdater.

Interplay Media Reconcile After Transfer—Determines whether PMR files are updated by PMRUpdater or Media Composer. Must always be set to NO if PMRUpdater is not installed.

Interplay Media Repository Path—Fully qualified path to a temporary directory for the AAF files. Must be blank when using shared storage.

Interplay Media Root Folder—Fully qualified path to Avid MediaFiles\MXF\. Additional subfolders can be created below this folder.

Interplay Media Repository Folder Pattern—Prefix used with the indexed subfolders of the Interplay Media Root Folder. Must be set to the Media Composer workstation name when using PMRUpdater.

See [Setting Transfer Parameters](#) for the complete list of Transfer parameters.

Setting Monitoring Parameters

These parameters in the Monitoring tab are used by Avid Standalone Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API Protocol—Always set to *UNC*

Capture Format—Always set to *Avid*

Discover Avid Sequences with Media Offline (Default: YES)—When discovering assets on the location, the AAF file used may point to files that are located on offline media.

When set to *YES*, assets are discovered even if the files are located on offline media. Set to *NO* to ignore assets if the files are located in offline media.

Files Dir Enable—Indicates whether the full directory structure of the folder on the ISIS storage unit is recreated on the cache.

The parameter must be set to *YES* when the storage location is configured for discovery. Otherwise, the parameter can be left set to *NO*.

Set to *YES* to recreate the directory structure, allowing Kumulate to transcode the files and create proxies. Set the parameter to *NO* to create a proxy on the cache instead.

Media Repository Path (regex)—Path to Avid MediaFiles\MXF\ relative to the Kumulate server. It replaces the path specified by Media Repository String to Replace (regex).

AAF files contain paths to the Master Clips used in its sequence. However, the paths are relative to the Media Composer workstation. To add files to Kumulate, the paths must be changed to be relative to the Kumulate server.

Media Repository String to Replace (regex—default: `. * \\`)—Regular expression that selects the path to the *Avid MediaFiles\MXF* folder in the AAF file. The path selected by the regular expression is replaced by Media Repository Path.

AAF files contain paths to the Master Clips used in its sequence. However, the paths are relative to the Media Composer workstation. For the files to be discovered by Kumulate, the paths must be changed to be relative to the Kumulate server.

When set (`. * \\`), Kumulate selects a drive letter. The result is that the drive letter before *Avid MediaFiles\MXF* is replaced with the value in Media Repository Path.

For examples, see [Media Repository Path Replacement Examples](#).

Monitor Timeout (min)—A potentially-deprecated parameter that may or may not have an effect on some function. **Do not change this parameter.**

Monitoring—Indicates whether this storage location is to be monitored if the location is used to copy in files. If the location is only used to copy out files, set the parameter to *OFF*; otherwise set it to *ON*.

Interplay WS Mode—Indicates whether Kumulate communicates with the storage location via the Interplay Web Services interface. Since Avid Standalone Storage Locations are not connected to an Interplay system, this parameter must be set to *NO*.

Polling Begin Time | Polling End Time | Polling Interval (sec)—Controls how Kumulate polls the AAF file.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on a 24-hour clock and can only be set to hours.

Polling Interval instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10 seconds. Setting this parameter to 0 effectively sets it to 10s.

Setting Transfer Parameters

The parameters in the Transfer tab are used by Avid Standalone Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

Capture Mode—Specifies whether the physical file on this storage location is kept or deleted after its instance is transferred to another location.

MOVE deletes the physical file from this location after the transfer, while COPY keeps it.

Checksum Type and Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. If the instance's checksum is not already in the database, it is added. If the instance's checksum is already in the database, but the two checksums do not match, the transfer fails and an error is generated.

If *After Write* is selected for Checksum Validation, then an additional check is made after the instance has been fully copied to the location. If the checksum of the written instance doesn't match the checksum in the database, the transfer will fail.

Delete Source AAF file after copy in—Applies when Kumulate is copying in files from the storage location. It deletes the AAF file from the storage location after its files have been transferred from the storage location to cache. A copy of the AAF file will remain in the cache.

Interplay AAF Root Folder—Path to the location where Kumulate will write the AAF file when copying out files to the storage location. The Avid system must be configured to retrieve the AAF file from this location.

Interplay Content Temporary Folder—Temporary file write location on the Media Composer workstation or ISIS storage location. Kumulate writes files, including the AAF file, to this temporary folder to prevent the Avid system from indexing the files before Kumulate has completed restoring the files.

After Kumulate has completed transferring the files, it updates the Master Clip paths in the AAF file with the Interplay Media Root Folder path, and moves the contents of this folder to the Interplay Media Root Folder. The AAF file is moved to Interplay AAF Root Folder.

The Interplay Content Temporary Folder must be named `Creating` and must be located on under `Avid MediaFiles\MXF\`. `Creating` can be located under a subfolder of `Avid MediaFiles\MXF\`. If the folder doesn't exist, it is created by Kumulate.

Folder Pattern Separator—May be left blank or set to dash (-), underscore (_), or period (.). It must be set to period (.) when using PMRUpdater.

It is used in conjunction with the Interplay Media Repository Folder Pattern to create the numbered subfolders under the Interplay Media Root Folder.

The numbered subfolders are created and named `[repository_folder_pattern][folder_pattern_separator][number]`. For example, if the folder pattern separator is an underscore (_), and the folder pattern is `MyFiles`, folders named `MyFiles_1`, `MyFiles_2`, `MyFiles_3`, etc. is created under the root folder.

If this setting is left blank, Kumulate uses `MS` as the separator. For example, `MyFilesMS1`, `MyFilesMS2`, `MyFilesMS3`, etc.

If the Repository Folder Pattern is also left blank, Kumulate will create folders with only numbers in their names. For example, `Avid MediaFiles\MXF\1\`, `Avid MediaFiles\MXF\2\`, `Avid MediaFiles\MXF\3\`, etc.

Interplay Maximum Files—The maximum number of files per numbered subfolders. A new numbered subfolder is created when the maximum is reached.

Telestream recommends 2500 files per folder. Avid limits the number of files per folder to 5000. **Do not set this parameter to any value greater than 5000.**

Interplay Media Reconcile After Transfer—Only used when PMRUpdater is installed.

When set to `YES`, PMRUpdater is used to update PMR files. The PMR files are updated by Media Composer when it is set to `NO`.

If PMRUpdater is not installed and Interplay Media Reconcile After Transfer is set to `YES`, transfers to and from this storage location will fail.

Interplay Media Repository Path—Temporary directory for the AAF file.

Interplay Media Root Folder—The fully-qualified path to the root folder on the Avid Standalone storage location where the transferred files are placed. The path used for the Interplay Media Root Folder must include `Avid MediaFiles\MXF\`, which is automatically created by Media Composer.

The numbered folders can be located in a subfolder of `Avid MediaFiles\MXF\`. If `Avid MediaFiles\MXF\` is in an unmapped UNC location, the subfolder must already exist

before it can be used as the Interplay Media Root Folder. If Avid MediaFiles\MXF\ is located on a local or mapped drive, Kumulate will create the subfolder if it doesn't already exist.

Interplay Media Repository Folder Pattern—Used in conjunction with Folder Pattern Separator to create the numbered subfolders under the Interplay Media Root Folder.

The numbered subfolders are created and named <Interplay Media Repository Folder Pattern>[Folder Pattern Separator][number]>. For example, if Folder Pattern Separator is set to underscore (_) and Interplay Media Repository Folder Pattern is set to MyFiles, folders named MyFiles_1, MyFiles_2, MyFiles_3, etc. are created.

If this parameter is left blank, Kumulate will create folders with number names. For example, Avid MediaFiles\MXF\1\, Avid MediaFiles\MXF\2\, Avid MediaFiles\MXF\3\, etc.

This parameter must be set to the Media Composer workstation machine name when using PMRUpdater. For example, if the machine's fully qualified domain name is ThisMachine.MyCompany.com, then this parameter must be set to *ThisMachine*.

Max Copy In—Only applies when the storage location is configured for copying in files. It sets the maximum number of concurrent transfers from the storage location to Kumulate.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers. The default value is 0.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Max Copy Out—Only applies when the storage location is configured for copying out files. Sets the maximum number of concurrent transfers from Kumulate to the storage location.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers. The default value is 0.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Overwrite Video Server Instance—When set to *NOT ALLOWED*, a transfer from Kumulate to the storage location will fail if the file already exists on the location.

When set to *ALLOWED*, the transfer will overwrite the existing file on the location.

Preserve Cache Structure—Set to *YES* in cases where Avid files are stored on a shared storage location that is not connected to a Media Composer workstation. This setting is generally used when moving files from one Kumulate system to another Kumulate system.

When Avid files are saved to the cache, they are saved along with a copy of the AAF file to the same folder structure. The AAF file is stored under VirtualAssetID/Metadata/ while the media files are stored under VirtualAssetID/Media/.

When the files need to be transferred to another Kumulate system, the VirtualAssetID folder on the originating Kumulate system is copied in its entirety to a storage location connected to the destination Kumulate system. This storage location is configured with Preserve Cache Structure set to *YES*.

Restore Using must be set to *Asset ID* when Preserve Cache Structure is set to *YES*.

Restore Using—Specifies how to name the physical file when an instance is transferred to this storage location. There are four options

Asset ID—The file is named using the transferred instance’s Asset ID.

Name—The file is named using the transferred instance’s Asset Name.

Original Name—The file is named using the transferred instance’s Asset Original Name. Original Name contains the name of the asset when its source instance was discovered.

Preserve Filenames—The file name is not modified after transfer. The Restore Extension parameter isn’t applicable when this option is used. If the storage location configuration is saved after setting this option then Restore Extension is hidden.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and the Original Name may be identical.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the beginning and the end of the advertisement. Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

The entire file is transcoded when set to *SOF and EOF*. Only a part of the file is transcoded when set to *SOM and EOM*.

See [Start of Message Parameter](#) for more information.

Transfer Mode—Always set to *UNC Interplay Standalone*.

Installing and Using the PMRUpdater Module

Media Composer PMR files are used to keep track of online resources available to Media Composer Editor. A Media Composer workstation that is not connected to an ISIS storage location or is connected to an ISIS location that is not configured to perform continuous updates to PMR files will only update its PMR files when there is user input. If many files have been added or removed before there is user input, the time required for Media Composer is significant.

PMRUpdater runs on the Kumulate server and updates PMR files as soon as changes are made to the contents of a PMR file's folder.

Installation

The PMRUpdater is installed on the Kumulate Server. PMRUpdater is only available for 64-bit architectures. Use these steps to install PMRUpdater:

1. Log in to the Masstech FTP site, ftp.masstech.com, as the Software user, and change directory to *CORE_PRODUCTS/KUMULATE/AVID Interfaces/*.
2. Create a directory on the Kumulate Server named *Avid_PMRUpdater* under the *C:\Software* directory.
3. Download *Avid_PMRUpdater* to *C:\Software\Avid_PMRUpdater*.
4. Navigate to the *C:\Software\Avid_PMRUpdater\2014.01.07.1.0.0.2* directory on the Kumulate Server.
5. Run *PMRUpdater64Installer.msi* as the Administrator, and follow the instructions to install the PMRUpdater executable.
6. Set Interplay Media Reconcile After Transfer to *YES*.

Note: If PMRUpdater is not installed ([Installing and Using the PMRUpdater Module](#)), but Interplay Media Reconcile After Transfer is set to YES, transfers to and from the storage location will fail.

Connection Monitoring **Transfer**

Allow Rename: NO ▾
 Capture Mode: COPY ▾
 Delete source AAF file after copy in: NO ▾
 Interplay AAF Root Folder: c:\AvidStandalone\AAF
 Interplay Content Temporary Folder: C:\AvidStandalone\Avid Me
 Folder pattern separator: .
 Interplay Maximum Files: 5000
 Interplay Media Reconcile After Transfer: YES ▾
 Interplay Media Repository Path:
 Interplay Media Root Folder: C:\AvidStandalone\Avid Me
 Interplay Repository Folder Pattern: MS
 Max Copy In : 0
 Max Copy Out : 0
 Overwrite Video Server Instance: Not Allowed ▾
 Preserve Cache Structure: NO ▾
 Restore Using: Asset Alias ▾
 Transfer Mode: UNC Interplay Standalone ▾
 DataMover Repository Path:
 MassTransit Repository Path:

7. Click OK to save the changes.
8. Modify all the Avid Standalone Storage that is using the PMR Updater.

Configuring the MMC Module

Use these steps to configure the MMC Module:

Note: Before configuring the MMC module, perform at least one transfer to any Avid Standalone storage location. The PMRUpdater Path parameter only displays in the MMC module after a transfer to an Avid Standalone storage location has been made.

1. Navigate to System > Administration > Modules to display the System Control page:

System Control

Actions	Module	State	Options
	ACI	RUNNING	STOP
	CMC	RUNNING	STOP
	CPC	RUNNING	STOP
	DISK ARCHIVE	RUNNING	STOP
	DM MANAGER	RUNNING	STOP
	EIE	RUNNING	STOP
	HARRIS	RUNNING	STOP
	MEDIA LIBRARY	RUNNING	STOP
	MMC	RUNNING	STOP

2. Click the MMC module's pencil icon to display the MMC Module Configuration page:

Modules Information			
Actions	Module	State	Options
	CMC	RUNNING	STOP
	CPC	RUNNING	STOP
	DM MANAGER	RUNNING	STOP
	EIE	RUNNING	STOP
	HARRIS	RUNNING	STOP
	INDEX MANAGER	RUNNING	STOP
	MEDIA LIBRARY	STOPPED	START
	MMC	RUNNING	STOP
	MMI	RUNNING	STOP

3. Enter the path of the PMRUpdater executable in the PMRUpdater Path text field:

<input type="radio"/> MaxCopyThreads-5:	<input type="text" value="3"/>
<input type="radio"/> Max From Archive Threads:	<input type="text" value="10"/>
<input type="radio"/> Max To Archive Threads:	<input type="text" value="1"/>
<input type="radio"/> PMRUpdater Path:	<input type="text" value="C:\Program Files\Masstech\PMRUpdater\PMRUpdater.exe"/>
<input type="radio"/> Priority ACI:	<input type="text" value="5"/>
<input type="radio"/> Priority ALE:	<input type="text" value="5"/>

4. Click OK to save the changes.

Media Repository Path Replacement Examples

The file paths extracted from monitored AAF files point to locations on the Media Composer host. These paths must be changed to locations relative to Kumulate for the files to be archived. The Media Repository Path and Media Repository String to Replace parameters are used to alter the file paths.

The following Media Repository Path Replacement usage examples demonstrate how to configure these parameters.

Replacing a Drive Letter

When the path to Avid MediaFiles in the AAF file uses a drive letter, the drive letter is replaced by keeping Media Repository String to Replace set to (.*\).

Note: Replacing multiple drive letters for the same storage location are not supported.

For example, to change:

```
C:\Avid MediaFiles\MXF\5\tvo1345.mxf
to
\\10.1.4.1\Avid MediaFiles\MXF\5\tvo1345.mxf
```

Set these Media Repository Path and Media Repository String to Replace (in regex syntax) values:

Media Repository Path	\\10.1.4.1\
Media Repository String to Replace (regex)	(.*\)

Replacing a Known Path

When the path to Avid MediaFiles/MXF/ used in the AAF file is known, Media Repository String to Replace (regex) can be set to the path. If any special characters such as backslashes (\) need to be removed, they must be prefixed by a backslash (\).

For example, to change:

```
\\macpath\workspace3\Avid MediaFiles\MXF\mtg.2\e1234567.mxf
to
\\isis123\workspace3\Avid MediaFiles\mxf\mtg.2\e1234567.mxf.
```

Enter the following for Media Repository Path and Media Repository String to Replace (in regex syntax):

Media Repository Path	isis123
Media Repository String to Replace (regex)	macpath

or

Media Repository Path	isis123
Media Repository String to Replace (regex)	\\\\mactest\\

TRUE | FALSE

In the first option only the names are matched and replaced. In the second option the leading and trailing backslashes, in addition to the names, are matched and replaced.

Note: Replacing multiple drive letters for the same storage location are not currently supported.

If Media Repository String to Replace (regex) ends with a double backslash (\\) to match an end backslash, then the Media Repository Path needs to include the ending backslash (\), otherwise the ending backslash is removed and not replaced.

Case-Insensitive Replacement

When the path to the Avid MediaFiles\MXF\ folder used in the AAF file can be either lower or upper case, use the (?) modifier in the Media Repository String to Replace (regex) regular expression.

For example, to change

```
\\MyPath\Avid MediaFiles\MXF\5\tvo1345.mxf
```

or

```
\\mypath\Avid MediaFiles\MXF\5\tvo1345.mxf
```

to

```
\\isis123\Avid MediaFiles\MXF\5\tvo1345.mxf,
```

enter these values for Media Repository Path and Media Repository String to Replace (using regex syntax):

Media Repository Path	\\isis123\
Media Repository String to Replace (regex)	(?!)\\\\mypath\\

The (?) modifier matches the regular expression without considering case.

Regular Expression doesn't Match Root Path

If Media Repository String to Replace doesn't match the file path used in the AAF file, Kumulate will behave differently depending on the file path in the AAF file.

AAF File Contains Drive Letters or IPv4 Addresses

If the AAF file uses drive letters or IPv4 addresses, Kumulate will replace the paths in the AAF with the new path even if Media Repository String to Replace (regex) doesn't match the paths in the AAF file.

For example, if the Media Repository Path and Media Repository String to Replace (regex) parameters are set as follows:

Media Repository Path	\\NewPath\
Media Repository String to Replace (regex)	\\\\OriginalPath\\

but the file paths in the AAF file are of the form:

```
C:\Avid MediaFiles\MXF\5\tvo1345.mxf
or
\\10.1.4.1\Avid MediaFiles\MXF\5\tvo1345.mxf
so the path still should be changed to:
\\NewPath\Avid MediaFiles\MXF\5\tvo1345.mxf
```

Note: Leaving Media Repository String to Replace (regex) blank, but filling in Media Repository Path will produce the same result.

File Path is a Location Name

If the AAF file contains UNC file paths that do not match Media Repository String to Replace, Kumulate adds the Media Repository Path to the beginning of the path. Kumulate can't find the files and the copy-in will fail.

For example, if the Media Repository Path and Media Repository String to Replace (regex) parameters are set as follows:

Media Repository Path	\\NewPath\
Media Repository String to Replace (regex)	\\\\OriginalPath\\

but the file paths in the AAF file are of the form:

```
\\SomeOtherPath\Avid MediaFiles\MXF\5\tvo1345.mxf
so the new path is
\\NewPath\SomeOtherPath\Avid MediaFiles\MXF\5\tvo1345.mxf.
```

Note: The files won't be found in this case and the transfer fails.

Log and Operator Messages

In all cases where Media Repository String to Replace doesn't match the paths in the AAF file, an error is logged in the Montana logs, and an operator message is generated.

For example, the operator message would be as follows:

Media Repository String to Replace (<\\OriginalPath\>) doesn't match on storage location TEST

The message in the Montana log would be as follows:

14-11-17 11:36:32.609

CMI:FtpUncAvidStandaloneFolderCommandExecutor.GetFilesInfolfCompleted: Failed to replace (\\OriginalPath\)/(\\NewPath\) on file C:\Avid MediaFiles\MXF\5\tvo1345.mxf.

Managing Avid Interplay Storage Locations

An Avid Interplay storage location consists of an ISIS storage unit and an Interplay server. The Interplay server keeps an inventory of the ISIS unit contents.

Kumulate communicates with the Interplay server via a Web Services interface, to identify files available to copy-in from the ISIS storage unit, and to check-in files that have been copied to the ISIS storage unit with the Interplay server.

Files are moved to/from the ISIS storage unit using an ISIS client installed on the Kumulate server. When Kumulate transfers files to the ISIS unit, the files must be checked-in with the Interplay server (by Kumulate) to update Interplay's inventory.

Separate Avid Interplay Storage Locations must be configured for copy-in and copy-out, even if they both correspond to the same physical Interplay server and ISIS storage unit.

File and Folder Formats

Avid Interplay Storage Locations store MXF OP_Atom files that can contain video or audio essences. The video and audio of a media clip are stored in individual MXF OP_ATOM files. The video file and its audio file together make up an Avid Master Clip.

Master Clips are used to create finished media projects called Sequences. Sequences are defined in AAF files. A sequence's AAF file contains a list of Master Clip segments, and the order in which to play them. If data and effects are used in the sequence, they are stored in separate MXF OP_ATOM files, which are also referenced in the sequence's AAF file. When a sequence is added to Kumulate, its AAF file and Master Clips are also added to the instance.

In an Avid Interplay storage location, Kumulate communicates with the Interplay server via the Web Services interface. Kumulate and Interplay pass messages that contain information about Sequences and Master Clips. Both the Kumulate and Interplay servers use these messages to create AAF files.

When a sequence is copied in to Kumulate, Kumulate polls Interplay via Web Services. Interplay responds with a message that contains information about the sequence. Kumulate then uses the message to generate an AAF file used to pull the Master Clips from the ISIS storage unit using the ISIS client.

When an instance is copied out to the Avid Interplay storage location, Kumulate creates an AAF describing the instance, then copies the files to the ISIS storage unit using the ISIS client installed on the Kumulate server. Kumulate places the Master Clips in numbered subfolders under the Avid MediaFiles\MXF\ root folder. The number of files per subfolder is capped by the Interplay Maximum Files storage location configuration parameter. Kumulate then uses its AAF file to create a Web Service message that it sends to Interplay. Interplay then becomes aware of the files that were copied to the ISIS storage unit.

The name of the numbered subfolders is set using the Interplay Repository Folder Pattern parameter. The folder number is appended to the folder name after a separator. The separator is specified by the Folder Pattern Separator parameter, which can be a

period (.), an underscore (_), or a dash (-). For example, if MyMedia is used for Interplay Repository Folder Pattern, and underscore (_) is used for Folder Pattern Separator, then the subfolders are named MyMedia_1, MyMedia_2, MyMedia_3, etc.

If Interplay Repository Folder Pattern is left blank, no separator is used even if one is specified. In this case, the subfolders will simply be numbers: 1, 2, 3, etc.

Instance Discovery Configuration

Note: Avid Interplay Storage Locations cannot be configured to both copy in new assets and copy out existing assets. Separate Storage Locations must be created for these two scenarios regardless of whether the same physical location is used for both.

Use these steps to configure Interplay Storage Locations to be used for instance discovery:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

ADD NEW LOCATION

1 - 50 (69 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new storage location.

Storage Location Manager

ADD NEW LOCATION

1 - 2 (2 Items Returned)

Actions	Location ID	Model
	EXTERNAL	EXTERNAL

3. Enter a name and description for the storage location, then click OK.

Create Storage Location

OK

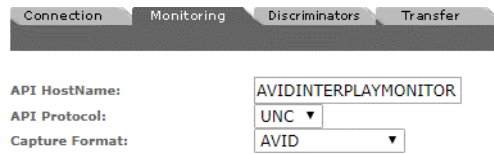
Storage Location Information

Location ID: AVIDINTERPLAYMONITOR < Required

Location Description: Monitored Avid Interplay Location

Location Type: Video Server

4. Select the Monitoring tab and set API Protocol to *UNC*, and Capture Format to *AVID*.



Connection Monitoring Discriminators Transfer

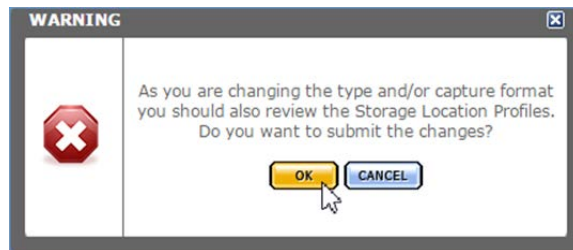
API HostName: AVIDINTERPLAYMONITOR

API Protocol: UNC

Capture Format: AVID

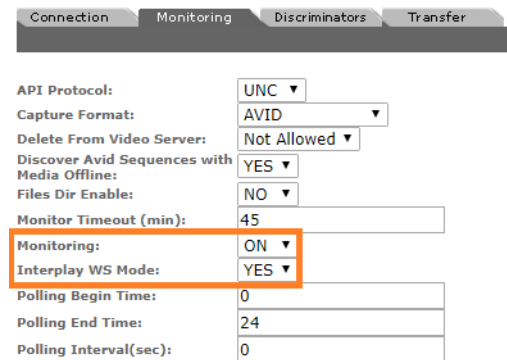
5. Click OK to continue.

Kumulate displays a warning to verify that you want to submit the change to the storage location.



6. Click OK to continue.

7. Select the Monitoring tab and set Monitoring to *ON* and Interplay WS Mode to *YES*.



Connection Monitoring Discriminators Transfer

API Protocol: UNC

Capture Format: AVID

Delete From Video Server: Not Allowed

Discover Avid Sequences with Media Offline: YES

Files Dir Enable: NO

Monitor Timeout (min): 45

Monitoring: ON

Interplay WS Mode: YES

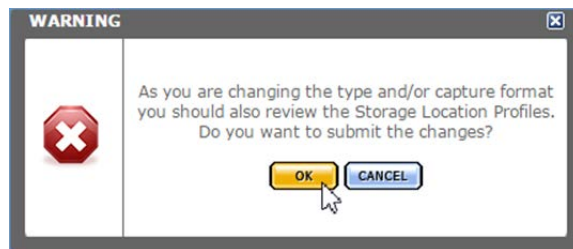
Polling Begin Time: 0

Polling End Time: 24

Polling Interval(sec): 0

8. Click OK to continue.

Kumulate displays a warning to verify that you want to submit the change. Click OK to continue. Kumulate displays the Connection tab:



9. Set Interplay Folder, Interplay WS Password, Interplay WS Address, Interplay WS user, Interplay Work Group, and Temporary AAF Repository Path:

Connection Monitoring Discriminators Transfer

API Protocol: UNC
Capture Format: AVID
Delete From Video Server: Not Allowed
Discover Avid Sequences with Media Offline: YES
Files Dir Enable: NO
Monitor Timeout (min): 45
Monitoring: ON
Interplay WS Mode: YES
Interplay Folder: interplay://AvidWorkGroup
Interplay WS Password: passwd
Interplay WS Address: http://10.1.4.14:81/service
Interplay WS User: user1
Interplay Work Group: AvidWorkGroup
Polling Begin Time: 0
Polling End Time: 24
Polling Interval(sec): 0
Temporary AAF Repository Path: \\10.1.4.14:81\AAFRepos

10. Click OK to continue. Kumulate displays the Connection tab.

11. Display the Transfer tab and set Transfer Mode to *UNC Interplay*:

Connection Monitoring Discriminators Transfer

Allow Rename: NO
Capture Mode: COPY
Checksum Type: MD5
Checksum Verification: No Verification
Max Copy In: 0
Max Copy Out: 0
Overwrite Video Server Instance: Not Allowed
Restore Using: Name
Transcode Using: SOF and EOF
Transfer Mode: UNC Interplay
MassTransit Repository Path:

12. Click OK to continue and return to the Connection tab.

Note: Ensure that the only connection parameter that displays is Extract Metadata, and that it is set to *NO*. Metadata is extracted automatically from the AAF file and doesn't need to be extracted from the discovered media files.

Connection Monitoring Discriminators Transfer

Extract Metadata: NO

13. Set the metadata mapping, then click OK to save and continue.

Instance Discovery Monitoring Parameters

The following parameters in the Monitoring tab are used by Avid Interplay copy-in Storage Locations:

Caution: Do not modify any parameter that doesn't display in this list.

API Protocol—Always set to *UNC*.

Capture Format—Avid Interplay Storage Locations used to send files to Kumulate (copy-in, archive, monitor) must have Capture Format set to *Avid*.

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Discover Avid Sequences with Media Offline (default: YES)—When discovering assets on the location, the AAF file used may point to files that are located on offline media.

When set to *YES*, assets are discovered even if the files are located on offline media. Setting this parameter to *NO* ignores assets if the files are located in offline media.

Files Dir Enable—Indicates whether the full directory structure of the folder on the ISIS storage unit is recreated on the cache.

Setting this to *YES* recreates the directory structure. This allows Kumulate to transcode the files and create proxies. Setting the parameter to *NO* creates a proxy on the cache instead.

Caution: Telestream strongly recommends that you set Files Dir Enable to YES when the storage location is configured for discovery.

Interplay WS Mode—Indicates whether Kumulate communicates with the storage location via the Interplay Web Services interface. Kumulate always communicates via Web Services with Avid Interplay Storage Locations. Therefore this parameter must be set to *YES*.

Interplay Folder—Information about Avid files stored on the ISIS storage unit is saved in metadata on the Interplay server. The server organizes information about the Avid files in folders. Kumulate monitors only one Interplay folder on an Avid Interplay storage location, and queries Interplay for information about this folder. In return, Interplay sends information about the files referenced in the folder to Kumulate, and Kumulate uses this information to discover the files on the ISIS storage location.

Interplay Folder is the fully qualified path to the folder on the Interplay server that Kumulate will monitor.

Interplay WS User | Interplay WS Password | Interplay WS Address—The connection credentials for Interplay Web Services.

Interplay Work Group—The Interplay work group to connect to.

Monitor Timeout (min)—A possibly deprecated parameter that may (or may not) have an effect on some functionality somewhere. **Do not change this parameter.**

Monitoring—Indicates whether this storage location is to be monitored. Must be set to *ON* when the Avid Interplay location is used to send files to Kumulate (copy-in, archive, monitoring).

Polling Begin Time, Polling End Time, Polling Interval (sec)—Controls how Kumulate polls the Interplay server.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval(sec) instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Temporary AAF Repository Path—Kumulate uses the information received from Interplay to create an AAF file that it then uses to discover files on the ISIS storage unit. The AAF file is saved to Temporary AAF Repository Path; which is a fully qualified path to a location on the Kumulate cache.

Instance Transfer Configuration

Note: Avid Interplay Storage Locations cannot be configured to both copy in new assets and copy out existing assets. Separate Storage Locations must be created for these two scenarios regardless of whether the same physical location is used for both.

Follow these steps to configure an Avid Interplay storage location for instance transfers:

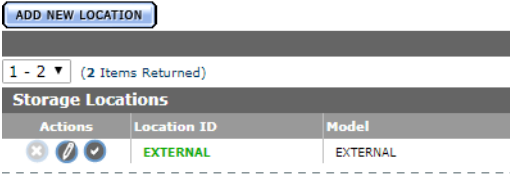
1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager

Storage Location Manager

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [i] [✓]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [i] [✓]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [i] [✓]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [i] [✓]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [i] [✓]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [i] [✓]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [i] [✓]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [i] [✓]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [i] [✓]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [i] [✓]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new storage location.

Storage Location Manager



3. Enter a name and description for the repository, then click OK.

Create Storage Location

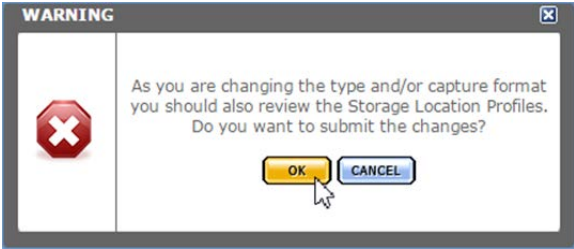


4. Select the Monitoring tab. Set API Protocol to UNC and Capture Format to MXF_OP_ATOM:



5. Click OK to continue.

Kumulate displays a warning to verify that you want to submit the change to the storage location.



6. Click OK to continue.

7. Display the Monitoring tab. Set Monitoring to *OFF*, and Naming Schema to *UMID*.

The screenshot shows the 'Monitoring' tab of a configuration window. The 'Monitoring' dropdown is set to 'OFF' and the 'Naming Schema' dropdown is set to 'UMID'. Both are highlighted with an orange box. Other settings include API Protocol (UNC), Capture Format (MXF_OP_ATOM), Check Asset Uniqueness (NO), Date Format (MM/dd/yyyy), Delete From Video Server (Not Allowed), Delete timeout (30), Delete Content From Archive (NO), Discovery method (Open for read), Export Metadata (NO), Files Dir Enable (NO), Files Patterns (Include) (.MPG), File Pre-Filter, Ignore List, Import Metadata (NO), Monitor Timeout (min) (45), Polling Begin Time (0), Polling End Time (24), Polling Interval(sec) (0), Recursive Discovery (NO), Release State (Ignore), Type Of Content, and Windows File Naming Check (NO).

8. Click OK to continue.

9. Select the Transfer tab. Set Transfer Mode to *UNC Interplay*.

The screenshot shows the 'Transfer' tab of a configuration window. The 'Transfer Mode' dropdown is set to 'UNC Interplay' and is highlighted with an orange box. Other settings include Allow Rename (NO), Capture Mode (COPY), Checksum Type (MD5), Checksum Verification (No Verification), Keep FTP Control Connection Alive (NO), Instance detection pattern (No check), Direct Transfer to ML (NO), Direct Transfer from ML (NO), Max Copy In (0), Max Copy Out (0), Move Media File (NO), Overwrite Video Server Instance (Not Allowed), Restore Using (Name), Restore Extension (Preserve original extension), Transcode Using (SOF and EOF), Transfer timeout(sec) (7200), and MassTransit Repository Path.

10. Click OK to continue.

Kumulate displays the Connection tab. Extract Metadata must be set to *NO*. Directory must be set to the UNC path to the location on the ISIS storage unit where the media files are copied.



11. Click OK to continue.

12. Select the Transfer tab and set these parameters (see [Copy-in and Copy Out Transfer Parameters](#) for the complete list):

Interplay Check In Folder—The fully qualified path to the folder on the Interplay server where metadata about the transferred files are written.

Folder Pattern Separator—The separator used with Interplay Repository Folder Pattern. This can be a period (.), underscore (_), or dash (-). If it is omitted, and Interplay Media Repository Folder Pattern is not left blank, MS is used.

Interplay Repository Folder Pattern—The prefix name used with the indexed subfolders of the Interplay Root Path.

Interplay Root Path—UNC path to the Avid MediaFiles\MXF\ folder on the ISIS storage unit. Subfolders of Avid MediaFiles\MXF\ must also be included in this path.

Interplay WS Password—

Interplay WS Address—

Interplay WS User—The web server connection credentials.

Interplay Work Group—The Interplay workgroup to connect to.

Restore Using—Must always be set to *Name*.

Data Mover Repository Path—The UNC path to the location on the ISIS storage unit where the media files are copied. This must be the same path used for the Directory parameter in the Connection tab.

13. Click OK to save and continue.

Instance Transfer Monitoring Parameters

These parameters in the Monitoring tab are used by Avid Interplay copy-out Storage Locations.

Caution: Do not modify any parameter that is not in this list.

API Protocol—Always set to *UNC*.

Capture Format—Avid Interplay Storage Locations that are used to receive files from Kumulate (copy-out, check in) must have Capture Format set to *MXF_OP_ATOM*.

Files Dir Enable—Indicates whether the full directory structure of the folder on the ISIS storage unit is recreated on the cache.

Setting Files Dir Enable to *YES* recreates the entire directory structure on the cache. This allows Kumulate to transcode the files and create proxies. Setting the parameter to *NO* will only create file proxies on the cache.

Caution: Telestream strongly recommends that you set Files Dir Enable to YES when the storage location is configured for discovery.

Monitoring—Indicates whether this storage location is to be monitored. This parameter must be set to OFF when the Avid Interplay location is used to receive files from Kumulate (copy-out, check in).

Naming Schema—Set this to *UMID*.

Copy-in and Copy Out Transfer Parameters

These parameters in the Transfer tab are used by Avid Interplay Storage Locations:

Caution: Do not modify any parameter that doesn't display in this list.

Capture Mode—The Capture Mode parameter specifies whether the physical file on this storage location is kept or deleted after its instance is transferred to another location.

MOVE deletes the physical file from this location after the transfer, while *COPY* keeps it.

Note: Only the *COPY* option is implemented for Avid Interplay Storage Locations.

Check If Sequence Online—When set to *NO*, Kumulate assumes the sequence to copy in from the storage location is online and ready to transfer. When set to any other value, Kumulate queries the Interplay server about the state of the sequence for each transfer. This parameter is not case sensitive.

Checksum Type and Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. If the instance's checksum doesn't exist in the database, it is added. If the instance's checksum does exist in the database, but the two checksums do not match, the transfer will fail and an error is generated.

If *After Write* is selected for Checksum Validation, then an additional check is made after the instance has been fully copied to the location. If the checksum of the written instance doesn't match the checksum in the database, the transfer will fail.

Interplay Check In Folder—After Kumulate transfers files to the ISIS storage unit, it sends a Web Service message to Interplay to update the Interplay folder associated with the files that have been transferred. The Interplay Check In Folder is the fully qualified path to the Interplay folder that is being updated. Only one folder can be updated per storage location.

Folder Pattern Separator—Used in conjunction with the Interplay Repository Folder Pattern to create the numbered subfolders under the Interplay Root Path. This parameter can be left blank or set to dash (-), underscore (_), or period (.).

The numbered subfolders are created and named as follows:

```
<repository_folder_pattern><folder_pattern_separator><number>
```

For example, if the folder pattern separator is an underscore (_), and the folder pattern is MyFiles, folders named MyFiles_1, MyFiles_2, MyFiles_3, etc. are created under the root folder.

If Folder Pattern Separator is left blank, Kumulate uses MS as the separator. For example, MyFilesMS1, MyFilesMS2, MyFilesMS3, etc.

Note: If the Interplay Repository Folder Pattern is also left blank, Kumulate will create folders with only numbers in their names. For example, Avid MediaFiles\MXF\1\, Avid MediaFiles\MXF\2\, Avid MediaFiles\MXF\3\, etc.

Interplay Maximum Files—The maximum number of files per numbered subfolders. A new numbered subfolder is created when the maximum is reached.

Note: 2500 files per folder is recommended. Avid limits the number of files per folder to 5000. Do not set this parameter to any value greater than 5000.

Interplay Repository Folder Pattern—Used in conjunction with Folder Pattern Separator to create the numbered subfolders under the Interplay Root Path.

The numbered subfolders are created and named as follows:

```
[Interplay Repository Folder Pattern][Folder Pattern Separator][number]
```

For example, if Folder Pattern Separator is set to underscore (_), and Interplay Repository Folder Pattern is set to MyFiles, folders named MyFiles_1, MyFiles_2, MyFiles_3, etc. are created.

Note: If Interplay Repository Folder Pattern is left blank, Kumulate will create folders with number names. For example, Avid MediaFiles\MXF\1\, Avid MediaFiles\MXF\2\, Avid MediaFiles\MXF\3\, etc.

Interplay Root Path—The fully qualified path to the root folder on the ISIS storage unit where the restored Master Clips are placed. The path used for the Interplay Root Path must include Avid MediaFiles\MXF\, which is automatically created by Media Composer.

The numbered folders can be located in a subfolder of Avid MediaFiles\MXF\. The subfolder must already exist before it can be used as the Interplay Root Path.

Interplay WS Check In Retry Interval and Interplay WS Check In Retry Number

In the event that a transfer is not successful, the transfer is retried *Interplay WS Check In Retry Number* times, every *Interplay WS Check In Retry Interval*. If the transfer is still unsuccessful when *Interplay WS Check In Retry Number* is reached, the transfer fails.

Interplay WS User, Interplay WS Password, and Interplay WS Address—The connection credentials for the Interplay Web Services service.

Interplay Work Group—The Interplay workgroup to connect to.

Max Copy In—Only applies when the storage location is configured for copying in files. It sets the maximum number of concurrent transfers from the storage location to Kumulate. The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers. The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Max Copy Out—Only applies when the storage location is configured for copying out files. It sets the maximum number of concurrent transfers from Kumulate to the storage location. The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers. The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Overwrite Video Server Instance—When set to *NOT ALLOWED*, a transfer from Kumulate to the storage location will fail if the file already exists on the storage location. When set to *ALLOWED*, the transfer will overwrite the existing file on the storage location.

Restore Using—Specifies how to name the physical file when an instance is transferred to this storage location. Select from these options:

Asset ID—The file is named using the transferred instance's Asset ID.

Name—The file is named using the transferred instance's Asset Name.

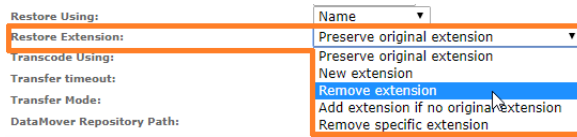
Original Name—The file is named using the transferred instance's Original Name. Original Name contains the name of the asset when its source instance was discovered.

Preserve Filenames—The file name is not modified after transfer. The Restore Extension parameter doesn't apply when this option is used. If the storage location configuration is saved after setting this option, Restore Extension is hidden.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

Restore Extension—Determines how file extensions are handled when files are copied to the storage location. Filenames and their extensions are preserved when

assets are copied between locations by default. The Restore Extension parameter allows extensions to be added, removed, or replaced:



Select from these options:

Preserve original extension—The extension doesn't change when the file is copied to the storage location.

This is the default behavior.

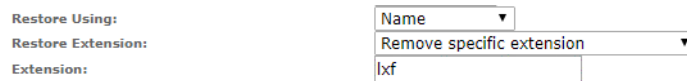
New extension—Change the existing extension to the specified extension.

Remove extension—Remove the extension if one exists.

Add extension if no original extension—Add the specified extension if the original filename doesn't have an extension.

Remove specific extension—Remove only the specified extension and preserve all other extensions.

The New extension, Add extension if no original extension, and Remove specific extension options work with the Extension parameter. This parameter is not displayed by default. If the Extension parameter is not displayed, click OK to save the configuration, then navigate back to the Transfer tab to view it.



Extension—The Extension parameter works with the Restore Extension parameter to replace file extensions when assets are copied to the storage location. This parameter is not displayed by default. It only displays when Restore Extension is set to New extension, Add extension if no original extension, or Remove specific extension.

Note: In some cases, the configuration must be saved after selecting New extension, Add extension if no original extension, or Remove specific extension for the Extension parameter to display.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the beginning and the end of the advertisement. Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

When set to *SOF and EOF*, the entire file is transcoded. When set to *SOM and EOM*, only a part of the file is transcoded.

See [Start of Message Parameter](#) for more information.

Transfer Mode—Always set to *UNC Interplay*.

Data Mover Repository Path—Provides the Data Mover access to the ISIS storage location. This must point to the location of the files on the ISIS storage unit. With copy-out Storage Locations, this path must be the same path used for the Directory parameter under the Connection tab.

MassTransit Repository Path—Provides HQS access to the ISIS storage location. Allows HQS to transcode files on the storage location rather than on the cache.

The parameter should either point to the location of the files on the ISIS storage unit, or it can be left blank. If this parameter is left blank, HQS will transcode files once they are transferred to the cache.

With copy-out Storage Locations, this path must be the same path used for the Directory parameter under the Connection tab.

Managing Avid Storage Location Metadata Mapping

When Avid assets are copied in to Kumulate, an AAF processor extracts metadata and a metadata mapping assigns the extracted metadata to Kumulate metadata.

You have to manually add metadata mappings to an Avid storage location for the metadata extracted from the AAF to be assigned to the appropriate Kumulate metadata.

Before mappings are added, a representative AAF file needs to be examined by the administrator creating the metadata mappings. The AAF processor included with HQS can be used for this purpose.

Note: The information in this section applies to all Avid Storage Locations except Avid Interplay copy-out Storage Locations.

Adding a Metadata Mapping

The metadata in an Avid instance's AAF file can be mapped to Kumulate metadata. These mappings must be added to the Avid storage location after a representative AAF file has been examined. The AAF processor installed with HQS can be used to extract the metadata in an AAF file to an XML file.

For example:

```
C:\AAFFiles>aafProcessor.exe -r ExtractMetadata Sample.aaf MD_Sample.aaf.xml
```

Note: The aafProcessor.exe can be found on the server where HQS is installed in C:\Program Files (x86)\Masstech\AAFProcessor\ folder.

Each XML tag in the output file is an AAF metadata and its value.

For example:

```
<AAFProcessor version="1.0">
[...]
```

```
<Metadata type="TVDM">
  <MobAttributeList id="60958183-47b1-11d4-a01c0004ac969f50">
    <_VERSION>2</_VERSION>
    <_SERVERUSER type="__AttributeList">
      <Name>W0002-076</Name>
    </_SERVERUSER>
    <_EXPORT type="__AttributeList">
      <Duration>24;35;29</Duration>
      <Modified_Date>7/31/2014 9:52:50</Modified_Date>
      <Creation_Date>7/28/2014 11:52:29</Creation_Date>
      <CFPS>59.94</CFPS>
      <Color></Color>
      <End>02;52;03;01</End>
      <FPS>59.94</FPS>
    </_EXPORT>
  </MobAttributeList>
</Metadata>
```

```

<Lock></Lock>
<Offline></Offline>
<Start>02;27;27;02</Start>
<Tracks>V1 A1-8 TC1</Tracks>
<_HEADFRAMEOFFSET>0</_HEADFRAMEOFFSET>
<_HEADFRAMEIMAGE type="Unknown">
  ccaa73d1-f538-11d3-a081006094eb75cb
</_HEADFRAMEIMAGE>
</_EXPORT>
</MobAttributeList>
</Metadata>

```

[...]

```
</AAFProcessor>
```

The metadata tags in the output file correspond to a point-separated Location Metadata ID.

For example:

```
<metadata><mobAttributList><export><start>
```

corresponds to

metadata.mobAttributeList.export.start

```

<Metadata type="TVDM">
  <MobAttributeList id="60958183-47b1-11d4-a01c0004ac969f50">
    [...]
    <_EXPORT type="__AttributeList">
      [...]
      <Start>02;27;27;02</Start>
      [...]
    </_EXPORT>
  </MobAttributeList>
</Metadata>

```

Metadata Mapping List	
Actions	Location Metadata ID
	metadata.userComments.comments
	metadata.userComments.name
	metadata.mobAttributeList.export.duration
	metadata.mobAttributeList.export.video
	metadata.mobAttributeList.export.cfps
	metadata.mobAttributeList.export.end
	metadata.mobAttributeList.export.start
	Modified By
	Video ID
	metadata.timecodeInfo.cfps
	metadata.timecodeInfo.start
	metadata.timecodeInfo.end
	metadata.timecodeInfo.duration
	extractGroup.name
	extractGroup.metadataID.type

Follow these steps to add a metadata mapping to a storage location:

1. Click Location Metadata Mapping on the Storage Location Configuration page:
 Storage Location Configuration



2. Click Add Mapping to add default metadata mappings:



3. The default metadata mappings are loaded and added to the storage location:

Metadata Mapping List			
Actions	Location Metadata ID	MASSTORE_METADATA_ID	Mapping Type
	metadata.userComments.comments	Asset/Default/program_notes	Direct
	metadata.mobAttributeList.export.cfps	Instance/Default/Video Standard	Mapped value
	metadata.mobAttributeList.export.start	Instance/Default/SOM	Direct
	metadata.timecodeInfo.cfps	Instance/Default/Video Standard	Mapped value
	extractGroup.metadataID.type	Instance/Default/media_type	Mapped value
	metadata.mobAttributeList.export.video	Instance/Default/Video Format	Direct
	metadata.timecodeInfo.duration	Asset/Default/Duration	Direct
	extractGroup.name	Asset/Default/Display Name	Direct
	metadata.userComments.name	Asset/Default/Title	Direct
	metadata.mobAttributeList.export.duration	Asset/Default/Duration	Direct
	metadata.mobAttributeList.export.end	Instance/Default/EOM	Direct
	metadata.timecodeInfo.start	Instance/Default/SOM	Direct
	metadata.timecodeInfo.end	Instance/Default/EOM	Direct

The default metadata mapping is different for Avid Standalone and Avid Interplay locations.

The metadata mapping table has three columns:

Location Metadata ID—The path to the metadata in the AAF file.

KUMULATE METADATA ID—The Kumulate metadata that are assigned the AAF metadata.

Mapping Type—Can be Direct or Mapped.

If the metadata is Mapped, the metadata in the AAF file is mapped to a value that is then used as the Kumulate metadata; otherwise the metadata in the AAF file is assigned to the Kumulate metadata directly.

The default metadata mapping may not correspond to the actual metadata in the AAF file, or the user may prefer that some metadata be mapped differently from the default.

If metadata mapping should be changed, click the pencil icon to edit it.

For example, if the asset/default/title Kumulate metadata needs to get its value from extractGroup.name rather than from metadata.userComments.name as set by default, click the pencil icon next to that line:

Metadata Mapping List	
Location Metadata ID	MASSTORE_METADATA_ID
metadata.userComments.comments	Asset/Asset Information/Program Notes
metadata.userComments.name	Asset/Asset Information/Title
metadata.mobAttributeList.export.duration	Asset/Asset Information/Duration
Modify Metadata Mapping	Asset/Avid Metadata/Video Id
metadata.timecodeInfo.duration	Asset/Asset Information/Duration
extractGroup.name	Asset/Asset Information/Name
metadata.mobAttributeList.export.video	Instance/Video/Video Format

The Modify Metadata Mapping page displays the current metadata mapping:

Location Metadata Mapping

Location Metadata ID:
 < Required

MassStore Metadata ID:
 < Required

Mapping Type:
 < Required

Both the Kumulate and the Location Metadata IDs can be modified. However, if both the Kumulate metadata and the AAF metadata need to be modified, a new metadata mapping should be created instead.

In the following example only the Location Metadata ID needs to be modified:

Select extractGroup.name from the Location Metadata ID menu as shown:

Location Metadata Mapping

Location Metadata ID:
 < Required

Created By
 Creation Date
 Duration
 End
 Media File Format
 Media Size
 Media Status
 Modified By
 Modified Date
 Moniker
 Start
 Source ID
 Tape
 Tracks
 Version
 Comment
 < Required

Note: If the AAF metadata that needs to be mapped is not in the menu, it can be added manually.

Creating a New Metadata Mapping

If an additional metadata mapping between location metadata and AAF metadata, it can be created and added to the list of metadata mappings.

Note: The AAF metadata must already exist in the Kumulate Metadata ID menu. If the metadata doesn't exist in the menu, it must be added.

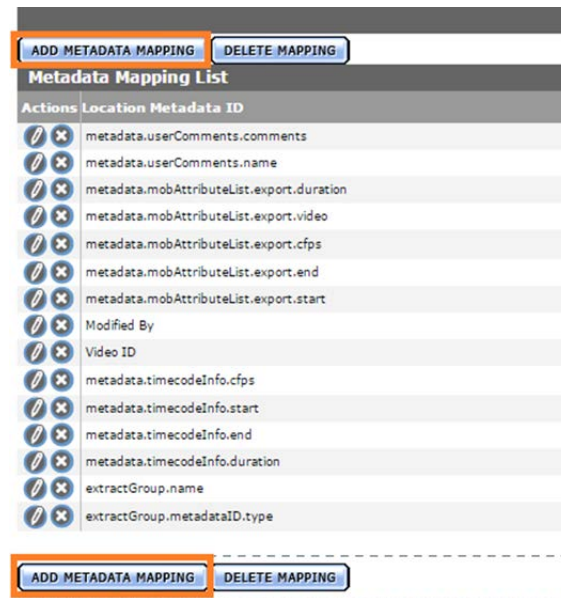
Follow these steps to create a new metadata mapping:

1. Click Location Metadata Mapping from the Storage Location Configuration page:

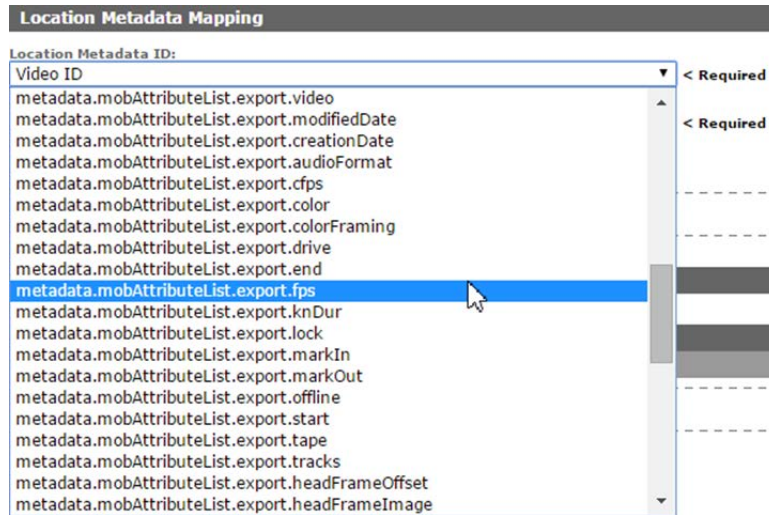
Storage Location Configuration



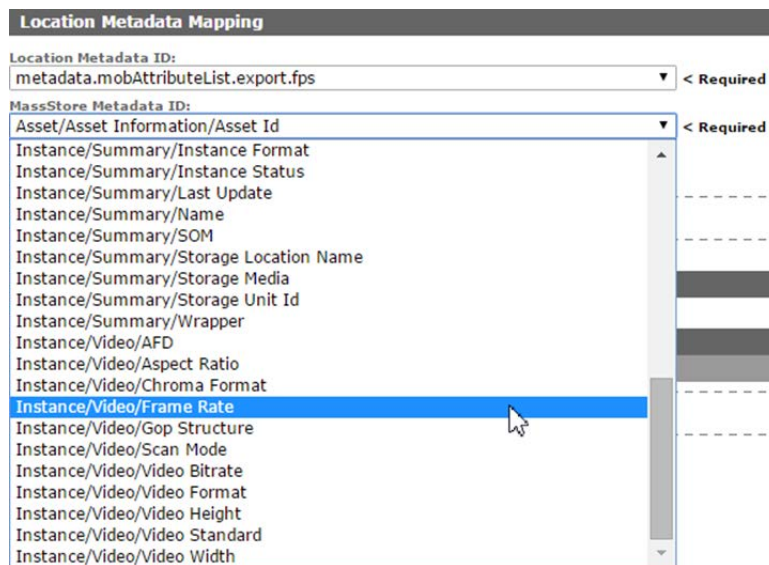
2. Click Add Metadata Mapping on the Metadata Mapping page:



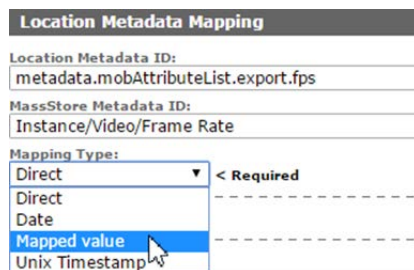
3. Select the AAF file metadata from the Location Metadata ID menu:



4. From the Kumulate Metadata ID menu, select the Kumulate metadata that should be assigned the AAF metadata:



5. Select the mapping type from the Mapping Type menu:



6. With the date mapping type, the date format must also be selected

Mapping Type:
 Date < Required

Date Format:

- year month day
- month day year
- year day month
- day month year

On the Add New Mapping Attribute page, add the expected value from the AAF in the Location Value text field, and add the value to use in the Kumulate metadata in the Kumulate value text field:

Add New Mapping Attribute

Location: AVIDSTANDALONE

OK

Metadata Mapping Attribute

Location value:
 23.876 < Required

MassStore value:
 24 < Required

OK

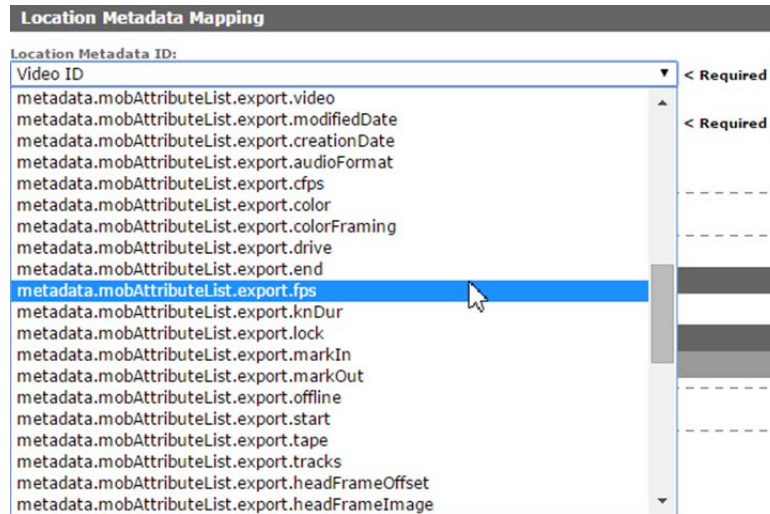
1. Click OK to save. The mapping displays in the Metadata Mapping List:

Metadata Mapping List			
Actions	Location Metadata ID	MASSSTORE_METADATA_ID	Mapping Type
	metadata.mobAttributeList.export.start	Instance/Default/SOM	Direct
	metadata.timecodeInfo.cfps	Instance/Default/Video Standard	Mapped value
	metadata.userComments.comments	Asset/Default/program_notes	Direct
	metadata.mobAttributeList.export.cfps	Instance/Default/Video Standard	Mapped value
	metadata.timecodeInfo.duration	Asset/Default/Duration	Direct
	metadata.mobAttributeList.export.fps	Instance/Default/Frame Rate	Mapped value
	extractGroup.metadataID.type	Instance/Default/media_type	Mapped value
	metadata.mobAttributeList.export.video	Instance/Default/Video Format	Direct
	metadata.mobAttributeList.export.duration	Asset/Default/Duration	Direct
	metadata.timecodeInfo.end	Instance/Default/EOM	Direct
	metadata.mobAttributeList.export.end	Instance/Default/EOM	Direct
	metadata.timecodeInfo.start	Instance/Default/SOM	Direct
	extractGroup.name	Asset/Default/Display Name	Direct
	metadata.userComments.name	Asset/Default/Title	Direct

The Kumulate metadata will now be populated using the information extracted from the AAF file.

Adding AAF Metadata

When a new metadata mapping is created, metadata from the AAF file is mapped to Kumulate metadata. The available AAF metadata displays in the Location Metadata ID menu:



If the AAF metadata needed for the mapping is not in the menu, it can be added by modifying `AVID_UNC_location_metadata.properties` and `aaf-xml-entries.xml`.

Follow these steps to add the AAF Metadata:

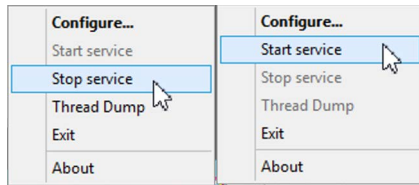
1. On the Kumulate server, change the directory to `C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps\montana\WEB-INF\classes\`.
2. Open the `AVID_UNC_location_metadata.properties` file.
3. Convert the metadata XML tags in the AAF file to a point-separated name.
 For example, the AAF metadata XML path `<metadata><slots><Descriptive-Marker><UserComments><Comment>` corresponds to `metadata.slots.DescriptiveMarker.UserComments.Comment`.
4. Add the point-separated AAF metadata ID to the list of IDs:


```
metadata.mobAttributeList.systemColumnData.columnVideoFileFormat
metadata.timecodeInfo.duration
metadata.timecodeInfo.cfps
metadata.timecodeInfo.start
metadata.timecodeInfo.end
metadata.slots.DescriptiveMarker.UserComments.Comment
```
5. Save `AVID_UNC_location_metadata.properties`.
6. Open `aaf-xml-entries.xml` (located in the same directory), and create an entry for the new Location Metadata ID.

- 7. Each MetadataInfo entry in the aaf-xml-entries.xml file associates the point-separated name used in the Location Metadata ID field with the XML path in the AAF file.
- 8. For example, to add metadata.slots.DescriptiveMarker.UserComments.Comment, add the following at the end of the file, before the </MetadataInfo> closing tag:

```
<MetadataInfo>  
  <MetadataName>  
    metadata.slots.DescriptiveMarker.UserComments.Comment  
  </MetadataName>  
  <Type>TEXT</Type>  
  <Tag>  
    /Metadata[0]/Slots[0]/DescriptiveMarker[0]/UserComments[0]/  
    Comment[0]  
  </Tag>  
</MetadataInfo>
```

- 9. Save *aaf-xml-entries.xml*.
- 10. Stop and start the Apache Tomcat Service to restart Kumulate—right-click on the Tomcat icon in the system tray:



- 11. The newly-added metadata ID now displays in the list.

Managing Omneon FTP Storage Locations

Note: Omneon Spectrum and Media Deck are now known as Harmonic Spectrum Family. However, the configuration name for this type of storage location remains Omneon FTP, and the capture type remains OMNEON.

An Omneon FTP storage location consists of a Harmonic Spectrum video server, or an Omneon Spectrum or Media Deck video server, connected to a Kumulate server via location on an FTP server. Kumulate monitors the FTP server location for new assets.

File and Folder Formats

An Omneon FTP storage location only supports reference MOV files. A reference MOV file is essentially a file containing a list of MOV files. The MOV files in the list are stored in a separate directory.

When Kumulate discovers a reference MOV file, Kumulate transfers the file, opens it to obtain its list of files, then copies in the files in the list.

Files that are transferred from Kumulate to the video server are also placed on the FTP server.

The reference MOV files are generally located under the *clip.dir* directory. The media files referenced by the MOV files are located in the *clip.dir/media.dir* directory.

Configuration

An Omneon FTP storage location is typically configured as both a copy-in and a copy-out location. Each Omneon FTP storage location is configured to discover MXF, self-contained MOV, or reference MOV files. An Omneon FTP storage location can handle either self-contained MOV files or reference MOV files, but not both.

Follow these steps to configure an Omneon FTP storage location:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

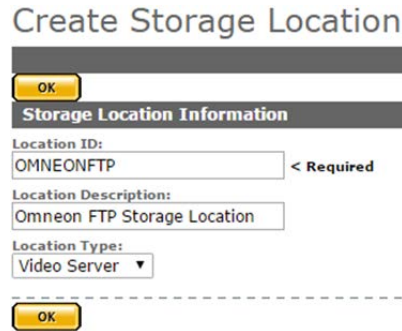
The screenshot shows the Storage Location Manager interface. At the top, there is an 'ADD NEW LOCATION' button. Below it, a dropdown menu shows '1 - 50' and '(69 Items Returned)'. To the right are 'RESTORE PROFILE INFORMATION' and 'REFRESH' buttons. The main content is a table with the following columns: Actions, Location ID, Model, Comment, Status, and Validation Process.

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [i] [c]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [i] [c]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [i] [c]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [i] [c]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [i] [c]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [i] [c]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [i] [c]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [i] [c]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [i] [c]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [i] [c]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

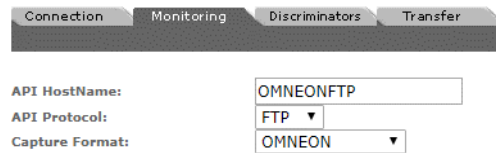
2. Click Add New Location to create a new storage location:



3. Enter a name and description for the repository, then click OK:

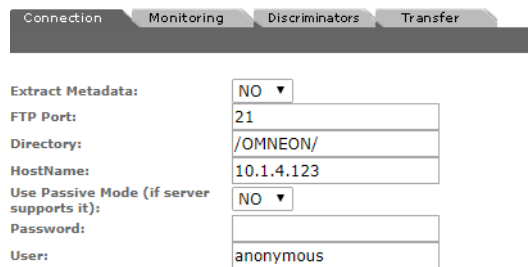


4. Display the Monitoring tab and set Capture Format to *OMNEON*:



5. Click OK to continue—Kumulate displays the Connection tab.

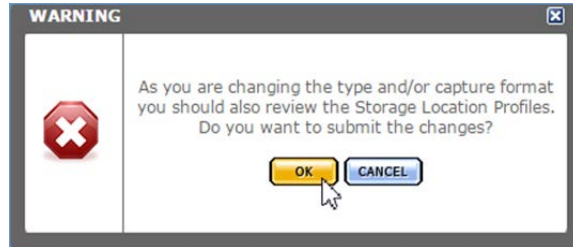
Enter the FTP credentials in the text fields. The Directory parameter must point to the FTP root directory. Extract Metadata must be set to *NO*.



6. Active FTP is used by default. Set Use Passive Mode (if server supports it) to *YES* to use passive FTP.

Note: The FTP connection will default back to Active if the Passive FTP connection fails.

- Click OK to continue. Kumulate displays a warning to verify that you want to submit the change to the storage location. Click OK to continue. Kumulate displays the Connection tab:



- Display the Monitoring tab:

Connection	Monitoring	Discriminators	Transfer
API HostName:	10.1.4.123		
API Protocol:	FTP		
Capture Format:	OMNEON		
Check Asset Uniqueness:	NO		
Clip Dir (Omneon):	Clip.dir		
Date Format:	MM/dd/yyyy		
Delete From Video Server:	Not Allowed		
Delete timeout:	30		
Delete Content From Archive:	NO		
Discovery Iterations:	Single Step		
Export Metadata:	NO		
Files Dir Enable:	YES		
Files Patterns (Include):	*.MXF,*.MOV		
Files Patterns (Exclude):			
Ignore List:			
Import Metadata:	NO		
Media Dir (Omneon):	Clip.dir/Media.dir		
Monitor Timeout (min):	45		
Monitoring:	ON		
Naming Schema:	UMID		
Polling Begin Time:	0		
Polling End Time:	24		
Polling Interval(sec):	0		
Release State:	Ignore		
Type Of Content:			

9. Set API Hostname, Clip Dir (Omneon), Files Dir Enable, Files Patterns (Include), Media Dir (Omneon), and Monitoring:

API HostName—The FTP hostname or IP address. Must be the same as that used under the Connection tab.

Clip Dir (Omneon)—The FTP folder used for the clip files. This directory contains the MXF and MOV files, including reference MOV files. The folder will generally be named clip.dir.

Files Dir Enable—Must be set to *YES*.

Files Patterns (Include)—The file type extension(s) to discover on the storage location, separated by commas if both MXF and MOV files should be discovered.

Media Dir (Omneon)—The FTP folder for media files referenced by the reference MOV files. The folder will generally be named clip.dir\media.dir.

Monitoring—Set Monitoring to *ON*.

See [Setting Monitoring Parameters](#) and [Transfer Parameters](#) for complete parameter lists.

10. Click OK to save the configuration.

Monitoring Parameters

These parameters on the Monitoring tab are used by Omneon FTP Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API HostName—The IP address of the FTP server.

API Protocol—Always set to *FTP*.

Capture Format—Omneon FTP Storage Locations must have Capture Format set to *OMNEON*.

Clip Dir (Omneon)—This is the FTP directory used for the clip files. This directory contains the MXF and MOV files, and includes the reference MOV files.

The MXF and MOV files (including reference MOV files) are typically kept in the clip.dir directory. This directory may be different in certain configurations. The files referenced by reference MOV files are stored in a subdirectory. The Media Dir (Omneon) parameter must point to this directory.

Delete Content From Archive (Default: NO)—(YES | NO). Determines whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location, the existing instance is deleted and replaced with the changed instance.

YES: Delete all assets located on archive Location locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to *ON*, and the asset doesn't contain any other storage location assets in addition to the one that has changed, the asset is deleted and a new asset is created for the changed instance.

Note: Delete Content From Archive has no effect when discriminators are used by the location.

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server.

If the timeout is reached and the file has not been deleted, the operation fails and the file is no longer displayed. However, it may remain in an unusable state on the video server.

Files Dir Enable—Indicates whether the full directory structure of the folder on the FTP server is recreated on the cache.

Setting Files Dir Enable to *YES* recreates the entire directory structure on the cache. This allows Kumulate to transcode the files and create proxies. Setting the parameter to *NO* only creates file proxies on the cache.

Note: Files Dir Enable must be set to *YES* in Omneon FTP Storage Locations.

Files Patterns (Include)—The file type extensions to discover on the storage location and must be set to MOV. This value is used to populate the wrapper metadata.

Ignore List—Kumulate won't copy-in any files that display in this list. Ignore List can either be a list of filenames or a regular expression.

Media Dir (Omneon)—The FTP directory used for media files referenced by reference MOV files. The MXF and MOV files (including reference MOV files) are kept in the Clip Dir (Omneon). The MOV files referenced by the reference MOV files are kept in a subdirectory of this directory; typically named media.dir.

Monitoring—Specifies whether Kumulate is monitoring the location to discover and copy in new assets. Omneon FTP Storage Locations are generally used to both copy-in and copy-out media. Therefore, Monitoring is set to *ON*. It should only be set to *OFF* if the storage location won't be used to discover and copy-in assets.

Naming Schema—Determines how the Asset ID is set upon discovery.

Asset ID sets the Asset ID to the root filename of the discovered instance. In this case, the Asset Name, Asset ID, and Original Name of the asset are identical.

UMID sets the Asset ID to a unique UMID. This ensures unique names for all assets. The Asset Name will still be the root filename of the discovered instance.

Note: Neither instance nor asset discriminators can be used when Naming Schema is set to Asset ID.

Polling Begin Time, Polling End Time, Polling Interval (sec)—Controls the frequency at which Kumulate polls the FTP server.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval (sec) instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Transfer Parameters

These parameters on the Transfer tab are used by Omneon FTP Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

Capture Mode—The capture mode specifies whether the physical file on this storage location is kept or deleted after its instance is transferred to another location.

MOVE deletes the physical file from this location after the transfer, while COPY keeps it.

Checksum Type and Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. If the instance's checksum is not already in the database, it is added. If the instance's checksum is already in the database, but the two checksums do not match, the transfer will fail and an error is generated.

If After Write is selected for Checksum Validation an additional check is made after the instance has been fully copied to the location. If the checksum of the written instance doesn't match the checksum in the database the transfer will fail.

File info command—The FTP command to use to determine whether a file is on an FTP server.

Note: Do not change the value from the default unless the FTP command results in errors.

Max Copy In—Only applies when the storage location is configured for copying in files, and sets the maximum number of concurrent transfers from the storage location to Kumulate.

The value can be between 0 and 127 where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Max Copy Out—This parameter only applies when the storage location is configured for copying out files, and sets the maximum number of concurrent transfers from Kumulate to the storage location.

The value can be between 0 and 127 where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Overwrite Video Server Instance—When set to NOT ALLOWED, a transfer from Kumulate to the storage location will fail if the file already exists on the storage location.

When set to ALLOWED, the transfer will overwrite the existing file on the storage location.

Restore Using—Specifies how to name the physical file when an instance is transferred to this storage location, using these options:

Asset ID—The file is named using the transferred instance's Asset ID.

Name—The file is named using the transferred instance's Asset Name.

Original Name—The file is named using the transferred instance's Original Name. Original Name contains the name of the asset when its source instance was discovered.

Preserve Filenames—The filename is not modified after transfer.

The Restore Extension parameter won't be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension is hidden.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the beginning and the end of the advertisement. Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

When set to *SOF and EOF*, the entire file is transcoded. When set to *SOM and EOM*, only a part of the file is transcoded.

See [Start of Message Parameter](#) for more information.

Transfer Mode—Always set to *Direct FTP*.

Managing Pitchblue FTP Storage Locations

A Pitchblue storage location consists of an FTP server connected to Kumulate. Kumulate monitors the FTP server for new files and pulls them in. Pitchblue Storage Locations are purely used to discover and copy-in assets.

Two new options have been added to the Pitchblue storage location configuration in Kumulate 3.1 to enable the centralized ingest and subsequent distribution to local Kumulate systems. The new options are named Find Media from XML and Instance Format.

The Find Media from XML parameter was added to configure the media path discovery method. If the parameter is set to YES, Kumulate will extract the discovery file and media path from the XML file. If the parameter is set to NO, Kumulate will look for these files in the path specified in the XML Path parameter (similar to BXF/EXTREMEREACH).

- The XML files in XML Path are monitored; this can be a relative or absolute path from the FTP Connection directory.
- The connection directory is scanned for files matching the name of the XML file (excluding the extension).
 - All files in the directory are iterated if there are wildcards in the extensions of the File Patterns (Include) setting.
 - If there are only explicit extensions, Kumulate will attempt to find only files with the XML file's name with the explicit extension; this is faster than iterating all files.

The Instance Format parameter provides the option of different instance formats to support configurations where content is transcoded before it arrives in the Kumulate storage location. The available values are as follows:

- PITCHBLUE (this is the default value)
- MXF
- QT
- MP4
- MPEG2TS
- MPEG2PS

Storage Location ID:
PITCHBLUE

Connection Monitoring Discriminators Transfer

API HostName:	dell1
API Protocol:	FTP
Rename asset to:	Short Name + Episode Number
Capture Format:	PITCHBLUE
Attach XML to asset:	YES
Check Asset Uniqueness:	NO
Type Of Content:	SYNDICATED
Date Format:	MM/dd/yyyy
Delete From Video Server:	Not Allowed
Delete Content From Archive:	NO
Delete timeout:	30
Discovery Iterations:	Single Step
Exclude EOM from duration:	YES
Files Dir Enable:	NO
Files Patterns (Include):	.*
Files Patterns (Exclude):	
Set ISCI as Title for Commercial segments:	YES
Ignore List:	
Find Media From XML:	YES
Monitor Timeout (min):	45
Monitoring:	ON
Naming Schema:	UMID
Instance Format:	PITCHBLUE
Polling Begin Time:	0
Polling End Time:	24
Polling Interval(sec):	0

File and Folder Formats

The physical FTP server storage location is used to receive content from content creators. This content is discovered and copied in by Kumulate. Assets are never transferred to Pitchblue Storage Locations.

Pitchblue Storage Locations expect each media file to have a corresponding format sheet file. The format sheet file is an XML file that contains information on how to segment their associated media files. It can be saved as an attachment by using the Attach XML to Asset parameter.

The root FTP directory will contain two subdirectories: content and XML. The media files are located under the content directory and may contain several subdirectories. The format sheets are located in the XML directory. These are searched recursively by Kumulate for media files.

Note: If a media file doesn't have a corresponding format sheet file, the file won't be copied in, and no new asset is created.

Configuration

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

ADD NEW LOCATION

1 - 50 (69 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new storage location:

Storage Location Manager

ADD NEW LOCATION

(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH					

3. Enter a name and description for the repository, then click OK:

Create Storage Location

OK

Storage Location Information

Location ID:
 < Required

Location Description:

Location Type:

OK

4. Select the Monitoring tab and set Capture Format to *OMNEON*:

Connection Monitoring Discriminators Transfer

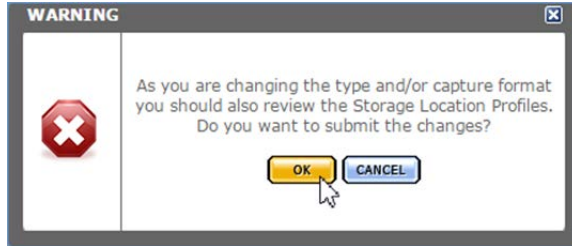
API HostName:

API Protocol:

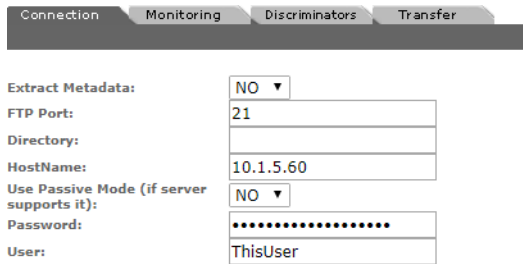
Capture Format:

5. Click OK to continue. Kumulate displays a warning to verify that you want to submit the change to the storage location. Click OK to continue.

Kumulate displays the Connection tab:



6. Enter the FTP credentials in the text fields. The Directory parameter must point to the FTP root directory. Extract Metadata must be set to NO:

A screenshot of the "Connection" tab in the Kumulate interface. The form contains the following fields:

- Extract Metadata: NO (dropdown menu)
- FTP Port: 21 (text field)
- Directory: (empty text field)
- HostName: 10.1.5.60 (text field)
- Use Passive Mode (if server supports it): NO (dropdown menu)
- Password: (masked with 12 dots)
- User: ThisUser (text field)

7. Active FTP is used by default. Set Use Passive Mode (if server supports it) to YES to use passive FTP. Click OK to continue.

Note: The FTP connection defaults to Active if the Passive FTP connection fails.

8. Navigate to the Monitoring tab:

API HostName:	10.1.5.60
API Protocol:	FTP
Rename asset to:	Short Name + Episode Number
Capture Format:	PITCHBLUE
Attach XML to asset:	YES
Check Asset Uniqueness:	NO
Date Format:	MM/dd/yyyy
Delete From Video Server:	Not Allowed
Delete timeout:	30
Delete Content From Archive:	NO
Discovery Iterations:	Single Step
Files Dir Enable:	NO
Files Patterns (Include):	*.*
Files Patterns (Exclude):	
Ignore List:	
Monitor Timeout (min):	45
Monitoring:	ON
Naming Schema:	UMID
Polling Begin Time:	0
Polling End Time:	24
Polling Interval(sec):	0
Release State:	Ignore
Remove Segment with ID List:	BLK
Set ISCI as Title for Commercial segments:	YES
Type Of Content:	SYNDICATED
Xml Path:	xml

9. Set API Hostname, Asset Name Format, Attach XML to Asset, and XML Path. The Xml Path is relative the root path and must point to the path on the FTP server where the format sheets are located:

API HostName—The FTP hostname or IP address. Must be the same as that used in the Connection tab.

Asset Name Format—The format to use for asset naming. This sets the Asset Name metadata, not the Asset ID metadata.

Attach XML to Asset—Set this to *YES* to upload the format sheet associated with the media to the asset as an attachment.

Set this to *NO* to discard the format sheet after it has been parsed.

Remove Segment ID with List—Use this to exclude events with specific IDs from segments. This can be used to remove blacks (BLK events) from segments. Separate multiple IDs with a comma.

XML Path—The path to the location of the format sheets relative to the root FTP directory.

See the following section for the complete list of applicable parameters.

10. Click OK to save the configuration.

Monitoring Parameters

These parameters, displayed in the Monitoring tab, are used for configuring Pitchblue FTP Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API HostName—The IP address of the FTP server.

API Protocol—Always set to *FTP*.

Attach XML to Asset—When set to *YES*, the format sheet associated with the discovered media file is uploaded as an attachment to the new asset.

If this parameter is set to *NO*, the information in the format sheet will still be used, but the file won't be uploaded as an attachment.

Asset Name Format—The format to use when setting the Asset Name. With the exception of the Original Name option, the naming information is extracted from the media file's associated format sheet.

Select from these options:

Short Name+Episode Number—Concatenate the short name and episode number to create the Asset Name.

Short Name+Job ShortName+Episode Number+Run ShortName—Concatenate the short name, job short name, episode number, and run short name to create the Asset Name.

Short Name+Episode Number[+Job ShortName][+Run ShortName]—Concatenate the short name, episode number, job short name, and run short name to create the Asset Name.

Original Name—Use the media file's root name as the Asset Name.

Capture Format—Pitchblue FTP Storage Locations must have Capture Format set to *PITCHBLUE*.

Delete Content From Archive (Default: *NO*)—Determines whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location, the existing instance is deleted and replaced with the changed instance.

YES: Also deletes all assets located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to *ON*, and the asset doesn't contain any other storage location assets in addition to the one that has changed, the asset is deleted and a new asset is created for the changed instance.

Note: Delete Content From Archive has no effect when discriminators are used by the location.

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server. If the timeout is reached and the file has not been deleted the operation fails. The file will no longer be visible, but it may remain in an unusable state on the video server.

Ignore List—Kumulate won't copy in any files that display in this list. This parameter can be a list of filenames or a regular expression.

Monitoring—Indicates whether this storage location is to be monitored. Always set to *ON*.

Naming Schema—Determines how the Asset ID is set upon discovery.

The Asset ID parameter sets the Asset ID to the root filename of the discovered instance. In this case, the Asset Name, Asset ID, and Original Name of the asset are identical. UMID sets the Asset ID to a unique UMID. This ensures unique names for all assets. The Asset Name will still be the root filename of the discovered instance.

Note: Neither instance nor asset discriminators can be used when Naming Schema is set to Asset ID.

Polling Begin Time | Polling End Time | Polling Interval—Controls the frequency at which Kumulate polls the FTP server.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval (in seconds) instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Remove Segment with ID in (list)—A comma-separated list of event IDs to exclude from segments. When the format sheet is parsed to create segments, any events that include these IDs won't be included in a segment. If an event with the listed ID is present in a segment, the segment is split around that event.

This parameter is used most often to remove blacks from the video. The event ID most likely to need to be removed is the BLK event ID.

Type of Content—This parameter identifies the type of content being monitored.

Xml Path—The path to the directory on the FTP server that contains the format sheets associated with the media files. The path must be in relation to the root directory.

Managing Project FTP Storage Locations

Kumulate monitors Project FTP Storage Locations for new directories rather than for new files. Kumulate copies in entire directories as an asset, preserving the directory structure. This type of repository is useful for archiving and restoring DPX projects. In the case of the Project FTP storage location, Kumulate monitors an FTP server for new directories.

File and Folder Formats

A project storage location consists of an FTP server connected to Kumulate. When Kumulate discovers a new directory on the location, it waits for all files under the directory to be completely uploaded before copying in the directory as a new asset.

Note: Kumulate will ignore any changes made to the directory after it has been copied in. Telestream strongly recommends that you only upload projects to the monitored location after the project is complete and no more changes are made to it.

A dominant file is selected to be used for transcodes, for metadata and for thumbnail extractions. This file is specified by the Dominant File Location and Dominant File Pattern parameters. If Dominant File Pattern is left blank, the largest file in the directory is used. When the asset is copied out, the entire directory structure is preserved.

Configuration

A Project FTP storage location is typically configured as both a copy-in and a copy-out location. Entire directories are copied in and out of the storage location.

Note: Project locations can also be configured as UNC locations. UNC locations offer better performance over FTP locations, and should be used instead of FTP locations when possible.

Follow these steps to configure Project FTP Locations:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

ADD NEW LOCATION

1 - 50 (69 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new repository:

Storage Location Manager

ADD NEW LOCATION

(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH					

3. Enter a name and description for the repository, then click OK:

Create Storage Location

OK

Storage Location Information

Location: < Required

Location Description:

Location Type:

OK

4. Select the Monitoring tab and set Capture Format to *PROJECT*:

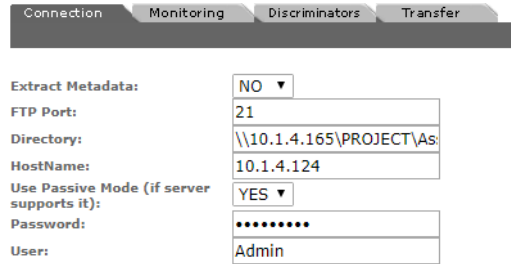
Connection Monitoring Discriminators Transfer

API HostName:

API Protocol:

Capture Format:

5. Click OK to return to the Connection tab and enter the FTP credentials in the text fields. The Directory parameter must point to the FTP root directory. Extract Metadata must be set to *NO*:

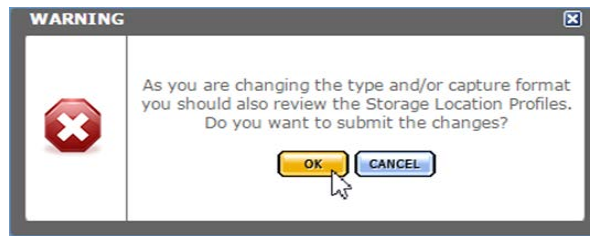


Connection	Monitoring	Discriminators	Transfer
Extract Metadata:	NO ▼		
FTP Port:	21		
Directory:	\\10.1.4.165\PROJECT\As		
HostName:	10.1.4.124		
Use Passive Mode (if server supports it):	YES ▼		
Password:	••••••••		
User:	Admin		

Active FTP is used by default. Set Use Passive Mode (if server supports it) to *YES* to use passive FTP.

Note: The FTP connection will default back to Active if the Passive FTP connection fails.

6. Click OK to continue. Kumulate displays a warning to verify that you want to submit the change to the storage location:



7. Click OK to continue.
Kumulate displays the Connection tab.
8. Display the Monitoring tab:

A screenshot of the "Monitoring" tab in the Kumulate interface. The tab is selected among "Connection", "Monitoring", "Discriminators", and "Transfer". The form contains various configuration options, with several highlighted by orange boxes: "Dominant file location" (Root folder), "Dominant file pattern (regex)" (.mov), "Files Dir Enable" (YES), and "Monitoring" (ON). Other visible fields include API HostName (PROJECT), API Protocol (FTP), Capture Format (PROJECT), Check Asset Uniqueness (NO), Date Format (MM/dd/yyyy), Delete From Video Server (Not Allowed), Delete timeout (30), Delete Content From Archive (NO), Discovery Iterations (Single Step), Export Metadata (NO), Files Patterns (Include) (.MPG), Files Patterns (Exclude) (empty), Ignore List (empty), Import Metadata (NO), Monitor Timeout (min) (45), Naming Schema (UMID), Polling Begin Time (0), Polling End Time (24), Polling Interval(sec) (0), Release State (Ignore), and Type Of Content (empty).

9. Set API Hostname, Dominant File Location, Dominant File Pattern, Files Dir Enable, and Monitoring parameters:

The Dominant File Location and Dominant File Pattern parameters are used to identify the file in the project to use for transcodes, metadata extractions, and thumbnail extractions.

See [Monitoring Parameters](#) for a complete list of applicable parameters.

API HostName—The FTP hostname or IP address. Must be the same as that used on the Connection tab.

Dominant File Location—The directory to search for the file that matches Dominant File Pattern. This file is used for transcodes, metadata extractions, and thumbnail extractions.

Set this to *All Folders* to search the project directory recursively for the file.

Set this to *Root folder* to search only the top-level project directory for the file.

Dominant File Pattern—A regular expression that matches the file to use for transcodes, metadata extractions, and thumbnail extractions.

If more than one file matches the regular expression the largest of the matched files is used.

If the parameter is left empty the largest file found is used.

If the dominant file is not a media file, the Transcode, Extract Thumbnail, and Extract Metadata operations for that asset is disabled.

Files Dir Enable—This parameter must be set to *YES*.

Monitoring—Set this parameter to *ON*.

9. Click OK to save the configuration.

Monitoring Parameters

These parameters, displayed on the Monitoring tab, are used by project FTP Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API HostName—The IP address of the FTP server.

API Protocol—Always set to *FTP*.

Capture Format—Project FTP Storage Locations must have Capture Format set to *PROJECT*.

Delete Content From Archive (Default: NO)—Determines whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location the existing instance is deleted and replaced with the changed instance.

YES: Also delete all assets located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to *ON*, and the asset doesn't contain any other storage location assets in addition to the one that has changed, the asset is deleted and a new asset is created for the changed instance.

Note: This parameter has no effect when discriminators are used by the location.

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server.

The operation will fail if the timeout is reached and the file has not been deleted. The file is no longer be visible, but it may remain in an unusable state on the video server.

Dominant File Location | Dominant File Pattern—These two parameters provide information about the location and name of the project's dominant file. The dominant file is the media file used for transcoding, thumbnail, and metadata extraction.

Setting Dominant File Location to *Root folder* will only search the top-level folder for the dominant file. Setting it to *All folders* searches the project's entire directory tree for the dominant file.

Dominant File Pattern is a regular expression that matches the file used for metadata extraction.

The largest of the files is used if more than one file matches Dominant File Pattern.

The largest file found is used as the dominant file if Dominant File Pattern is left blank.

If the dominant file is not a media file, the Transcode, Extract Thumbnail, and Extract Metadata operations for that asset's assets are disabled.

Files Dir Enable—Indicates whether the full directory structure of the folder on the FTP server is recreated on the cache.

Setting Files Dir Enable to *YES* recreates the entire directory structure on the cache. This allows Kumulate to transcode the files and create proxies. Setting the parameter to *NO* only creates file proxies on the cache.

Files Dir Enable must be set to *YES* in Project FTP Storage Locations.

Ignore List—Kumulate won't copy in and create assets for directories that match this list. Ignore List can be a regular expression or a list of directory names.

Monitoring—Indicates whether this storage location is to be monitored. Set Monitoring to *OFF* if the storage location will only be used to copy-out files. Set Monitoring to *ON* in all other cases.

Naming Schema—Determines how the Asset ID is set upon discovery.

Asset ID sets the Asset ID to the root filename of the discovered instance. In this case, the Asset Name, Asset ID, and Original Name of the asset are identical.

UMID sets the Asset ID to a unique UMID. This ensures unique names for all assets. The Asset Name will still be the root filename of the discovered instance.

Note: Neither instance nor asset discriminators can be used when Naming Schema is set to Asset ID.

Polling Begin Time | Polling End Time | Polling Interval (sec)—Controls how Kumulate polls the storage location.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Transfer Parameters

These parameters, displayed on the Transfer tab, are used by Project FTP Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

Capture Mode—Specifies whether the physical file on this storage location is kept or deleted after its instance is transferred to another location.

MOVE deletes the physical file from this location after the transfer, while COPY keeps it.

File info command—The FTP command to use to determine whether a file is on an FTP server.

Note: Do not change the value from the default unless the FTP command results in errors.

Checksum Type | Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. The instance's checksum is added to the database if it doesn't already exist. If the instance's checksum exists in the database, but the two checksums do not match, the transfer will fail and an error is generated.

If After Write is selected for Checksum Validation, then an additional check is made after the instance has been fully copied to the location. The transfer will fail if the checksum of the written instance doesn't match the checksum in the database.

Max Copy In—This parameter only applies when the storage location is configured for copying in files and sets the maximum number of concurrent transfers from the storage location to Kumulate.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Max Copy Out—This parameter only applies when the storage location is configured for copying out files and sets the maximum number of concurrent transfers from Kumulate to the storage location.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Overwrite Video Server Instance—Transfers from Kumulate to the storage location will fail if the file already exists on the storage location when set to NOT ALLOWED.

The transfer will overwrite the existing file on the storage location when set to ALLOWED.

Restore Using—Specifies how to name the physical file when an instance is transferred to this storage location. Select from these options:

Asset ID—The file is named using the transferred instance’s Asset ID.

Name—The file is named using the transferred instance’s Asset Name.

Original Name—The file is named using the transferred instance’s Asset Original Name. Original Name contains the name of the asset when its source instance was discovered.

Preserve Filenames—The filename is not modified after transfer. The Restore Extension parameter won’t be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension is hidden.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the beginning and the end of the advertisement.

Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*. The entire file is transcoded when set to *SOF* and *EOF*. Only a part of the file is transcoded when set to *SOM* and *EOM*.

See [Start of Message Parameter](#) for more information.

Transfer Mode—Always set to *Direct FTP*.

Managing Project UNC Storage Locations

Kumulate monitors Project Storage Locations for new directories rather than for new files. Kumulate copies in entire directories into assets preserving the directory structure. This type of repository is useful for archiving and restoring DPX projects. In the case of a Project UNC storage location, Kumulate monitors a UNC location for new directories.

File and Folder Formats

Note: Prior to Kumulate 8.1, Kumulate connected to the Project location using FTP. Systems that were upgraded from earlier versions to 8.1 may still have the FTP configuration.

When Kumulate discovers a new directory on the location, it waits for all files under the directory to be completely uploaded before copying in the directory as a new asset.

Note: Kumulate ignores any changes made to the directory after it has been copied in. Telestream strongly recommends that you only upload projects to the monitored location after the project is complete and no more changes are made to it.

Select a dominant file to use for transcodes, metadata, and thumbnail extractions. This file is specified by the Dominant File Location and Dominant File Pattern parameters. If Dominant File Pattern is empty, the largest file in the directory is used.

When the asset is copied out, the entire directory structure is preserved.

Configuration

A Project UNC storage location is typically configured as both a copy-in and a copy-out location. Entire directories are copied in and out of the storage location. Follow these steps to configure a Project UNC storage location:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [i] [c]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [i] [c]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [i] [c]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [i] [c]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [i] [c]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [i] [c]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [i] [c]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [i] [c]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [i] [c]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [i] [c]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

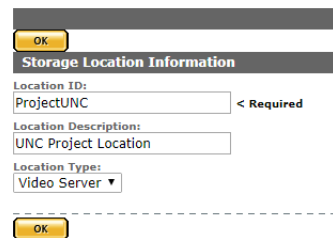
2. Click Add New Location to create a new storage location:

Storage Location Manager

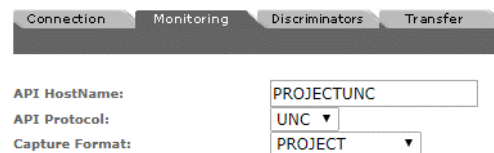


3. Enter a name and description for the repository, then click OK:

Create Storage Location

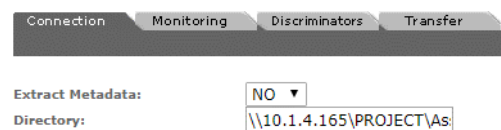


4. Select the Monitoring tab:



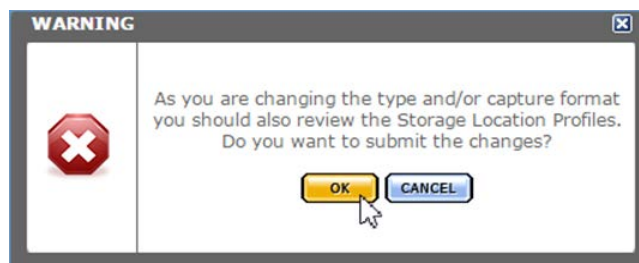
5. Set Capture Format to *PROJECT* and API Protocol to *UNC* and click OK.

Display the Connection tab:



6. Enter the FTP credentials in the text fields. The Directory parameter must point to the FTP root directory. Extract Metadata must be set to *NO*. Click OK to continue.

Kumulate displays a warning to verify that you want to submit the changes to the storage location.



- 7.** Click OK to continue.
Kumulate displays the Connection tab.
- 8.** Navigate to the Monitoring tab and set Dominant File Location, Dominant File Pattern, Files Dir Enable, and Monitoring parameters. The Dominant File Location and Dominant File Pattern parameters are used to identify the file in the project to

use for transcodes, metadata extractions, and thumbnail extractions:

Parameter	Value
API Protocol:	UNC
Capture Format:	PROJECT
Dominant file location:	Root folder
Dominant file pattern (regex):	.mov
Check Asset Uniqueness:	NO
Date Format:	MM/dd/yyyy
Delete From Video Server:	Not Allowed
Delete timeout:	30
Delete Content From Archive:	NO
Discovery Iterations:	Single Step
Discovery method:	Open for read
Export Metadata:	NO
Files Dir Enable:	YES
Files Patterns (Include):	.*
Files Patterns (Exclude):	
File Pre-Filter:	
Ignore List:	
Import Metadata:	NO
Monitor Timeout (min):	45
Monitoring:	ON
Naming Schema:	UMID
Polling Begin Time:	0
Polling End Time:	24
Polling Interval(sec):	0
Recursive Discovery:	NO
Release State:	Ignore
Type Of Content:	
Windows File Naming Check:	NO

See [Monitoring Parameters](#) for a complete list of applicable parameters.

Dominant File Location—The directory to search for the file that matches Dominant File Pattern. This file is used for transcodes, metadata extractions, and thumbnail extractions.

Set this to *All Folders* to search the project directory recursively for the file.

Set this to *Root folder* to search only the top-level project directory for the file.

Dominant File Pattern—A regular expression that matches the file that is used for transcodes, metadata extractions, and thumbnail extractions.

If more than one file matches the regular expression the largest of the matched files is used.

If the parameter is left empty the largest file found is used.

If the dominant file is not a media file, the Transcode, Extract Thumbnail, and Extract Metadata operations for that asset's assets are disabled.

Files Dir Enable—This parameter must be set to *YES*.

Monitoring—Set this parameter to *ON*.

Click OK to continue. Kumulate displays the Connection tab.

Select the Transfer tab and set the Transfer Mode parameter to *UNC* to use the Kumulate Data Movers to transfer files between the video server and Kumulate.

Set the value to *Signiant* or *Aspera* to use these transfer APIs.

Note: Signiant and Aspera must be installed to use these modes.

Connection Monitoring Discriminators **Transfer**

Allow Rename: NO ▾
 Capture Mode: COPY ▾
 Checksum Type: MD5 ▾
 Checksum Verification: No Verification ▾
 Keep FTP Control Connection Alive: NO ▾
 Instance detection pattern: No check ▾
 Direct Transfer to ML: NO ▾
 Direct Transfer from ML: NO ▾
 Max Copy In: 0
 Max Copy Out: 0
 Move Media File: NO ▾
 Overwrite Video Server Instance: Not Allowed ▾
 Restore Using: Name ▾
 Transcode Using: SOF and EOF ▾
 Transfer timeout(sec): 7200
Transfer Mode: UNC ▾
 MassTransit Repository Path:

9. Click OK to continue. Kumulate displays the Connection tab.

10. Select the Transfer tab and set Data Mover Repository Path and MassTransit Repository Path to the same UNC location used for the Directory parameter:

Connection Monitoring Discriminators **Transfer**

Allow Rename: NO ▾
 Capture Mode: COPY ▾
 Checksum Type: MD5 ▾
 Checksum Verification: No Verification ▾
 Instance detection pattern: No check ▾
 Direct Transfer to ML: NO ▾
 Direct Transfer from ML: NO ▾
 Max Copy In: 0
 Max Copy Out: 0
 Move Media File: NO ▾
 Overwrite Video Server Instance: Not Allowed ▾
 Restore Using: Name ▾
 Transcode Using: SOF and EOF ▾
 Transfer timeout(sec): 7200
 Transfer Mode: UNC ▾
DataMover Repository Path: \\10.1.4.165\PROJECT\As
MassTransit Repository Path: \\10.1.4.165\PROJECT\As

11. Click OK to save the changes.

Monitoring Parameters

These parameters, displayed on the Monitoring tab, are used by Project Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API Protocol—Set to *UNC*.

Capture Format—Project Storage Locations must have Capture Format set to *PROJECT*.

Delete Content From Archive—Sets whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location, the existing instance is deleted and replaced with the changed instance.

Setting this parameter to *YES* will also delete all assets located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to *ON*, and the asset doesn't contain any other storage location assets in addition to the one that has changed, the asset is deleted and a new asset is created for the changed instance.

The default setting for this parameter is *NO*.

Note: Delete Content From Archive has no effect when discriminators are used by the location.

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server.

The operation fails if the timeout is reached and the file has not been deleted. The file is no longer visible, but it may remain in an unusable state on the video server.

Discovery Method—By default, Kumulate will attempt to open a file for reading to determine whether the file has finished copying to the UNC location monitored by the storage location.

However, in cases where a file is being ingested and written in chunks to the UNC location, the file can be opened for reading even if the file has not been completely copied. In these situations, Discovery Method should be set to *Open for write* instead. This will cause Kumulate to attempt to open the file for writing to determine if it has finished being copied to the UNC location. The file won't be discovered until the process writing to it releases it.

Dominant File Location | Dominant File Pattern—Dominant File Location and Dominant File Pattern provide information about the location and name of the project's dominant file. The dominant file is the media file used for transcoding, thumbnail, and metadata extraction.

Dominant File Pattern is a regular expression that matches the file to use for metadata extraction.

Setting Dominant File Location to *Root folder* will only search the top-level folder for the dominant file. Setting it to *All folders* will allow Kumulate to search the project's entire directory tree for the dominant file.

The largest of the files is used if more than one file matches Dominant File Pattern.

If Dominant File Pattern is left blank, the largest file found is used as the dominant file.

If the dominant file is not a media file, the Transcode, Extract Thumbnail, and Extract Metadata operations for that asset are disabled.

Files Dir Enable—Indicates whether the full directory structure of the folder on the location is recreated on the cache.

Setting Files Dir Enable to *YES* recreates the entire directory structure on the cache. This allows Kumulate to transcode the files and create proxies. Setting the parameter to *NO* only creates file proxies on the cache.

This parameter must be set to *YES* for Project Storage Locations.

File Pre-Filter—Excludes files that match a regular expression from discovery.

The pre-filter step occurs before the file pattern inclusion and exclusion. Files that match the regular expression are not included in the list of files from which assets can be discovered. This is useful for excluding system files used by video servers, such as DS files.

Note: Do not use this option with the MXF_OP_ATOM capture format.

Ignore List—Kumulate won't copy in and create assets for directories that match this list. Ignore List can be a regular expression or a list of directory names.

Monitoring—Indicates whether this storage location is to be monitored. Set Monitoring to *OFF* if the storage location will only be used to copy-out files; set Monitoring to *ON* in all other cases.

Naming Schema—Determines how the Asset ID is set upon discovery. Asset ID sets the Asset ID to the root filename of the discovered instance. In this case, the Asset Name, Asset ID, and Original Name of the asset are identical.

UMID sets the Asset ID to a unique UMID. This ensures unique names for all assets. The Asset Name will still be the root filename of the discovered instance.

Neither instance nor asset discriminators can be used when Naming Schema is set to Asset ID.

Polling Begin Time | Polling End Time | Polling Interval (sec)—Instructs Kumulate how to poll the storage location.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Transfer Parameters

These parameters, displayed on the Transfer tab, are used by Project Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

Capture Mode—The capture mode specifies whether the physical file on this storage location is kept or deleted after its instance is transferred to another location.

MOVE deletes the physical file from this location after the transfer; COPY keeps it.

Checksum Type and Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. The instance's checksum is added to the database if it doesn't already exist. If the instance's checksum does exist in the database, but the two checksums do not match, the transfer will fail and an error is generated.

If After Write is selected for Checksum Validation an additional check is made after the instance has been fully copied to the location. If the checksum of the written instance doesn't match the checksum in the database, the transfer will fail.

Data Mover Repository Path—This should always be set to the same value as the Directory Connection parameter.

MassTransit Repository Path—This should always be set to the same value as the Directory Connection parameter.

Max Copy In—Only applies when the storage location is configured for copying in files and sets the maximum number of concurrent transfers from the storage location to Kumulate.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Max Copy Out—Only applies when the storage location is configured for copying out files and sets the maximum number of concurrent transfers from Kumulate to the storage location.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Overwrite Video Server Instance—Transfers from Kumulate to the storage location will fail if the file already exists on the storage location when set to NOT ALLOWED.

Transfers will overwrite the existing file on the storage location when set to ALLOWED.

Restore Using—Specifies how to name the physical file when an instance is transferred to this storage location. Select from these options:

Asset ID—The file is named using the transferred instance’s Asset ID.

Name—The file is named using the transferred instance’s Asset Name.

Original Name—The file is named using the transferred instance’s Original Name. Original Name contains the name of the asset when its source instance was discovered.

Preserve Filenames—The filename is not modified after transfer. The Restore Extension parameter won’t be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension is hidden.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the beginning and the end of the advertisement. Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

The entire file is transcoded when set to *SOF and EOF*. Only a part of the file is transcoded when set to *SOM and EOM*.

See [Start of Message Parameter](#) for more information.

Transfer Mode—Set the value to *UNC* to use the Kumulate Data Movers to transfer files between the video server and Kumulate. Set the value to *Signiant* or *Aspera* to use these transfer APIs.

Note: Signiant and Aspera must be installed to use these modes.

Managing UNC Storage Locations

UNC Storage Locations are locations connected to Kumulate using the UNC protocol. Several different capture formats can be used with UNC Storage Locations. The storage location is configured identically for all capture formats except for minor variations.

Configuration without Metadata Sidecar Files

A UNC storage location is typically configured as both a copy-in and a copy-out location. Follow these steps to configure UNC without metadata sidecar files:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new storage location:

Storage Location Manager

ADD NEW LOCATION

(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH					

3. Enter a name and description for the new repository, then click OK:

Create Storage Location

OK

Storage Location Information

Location ID:
UNC < Required

Location Description:
UNC Storage Location

Location Type:
Video Server

OK

4. Select the Monitoring tab. Set API Protocol to *UNC*, Capture Format to the file format that is copied in and copied out to the video server, and Monitoring to *ON*:

The screenshot shows the 'Monitoring' tab of a configuration interface. The 'Monitoring' field is highlighted with an orange box and set to 'ON'. Other fields include 'API Protocol' set to 'UNC', 'Capture Format' set to 'GENERIC', and 'Monitor Timeout (min)' set to '45'. The 'Connection' tab is also visible at the top of the interface.

See [Monitoring Parameters](#) for details.

5. Click OK.
Kumulate returns to the Connection tab.

6. Select the Monitoring tab and confirm that the Vendor Id parameter (now displayed) is set to *SPOT*:

The screenshot shows the 'Monitoring' tab selected in a configuration window. The 'Vendor Id' dropdown menu is highlighted with an orange box and set to 'SPOT'. Other visible settings include: API Protocol: UNC, Capture Format: GENERIC, Check Asset Uniqueness: NO, Date Format: MM/dd/yyyy, Delete From Video Server: Not Allowed, Delete timeout: 30, Delete Content From Archive: NO, Discovery Iterations: Single Step, Discovery method: Open for read, Export Metadata: NO, Files Dir Enable: NO, Files Patterns (Include): *, Files Patterns (Exclude):, File Pre-Filter:, Ignore List:, Import Metadata: YES, Find Media From XML: NO, Monitor Timeout (min): 45, Monitoring: ON, Naming Schema: UMID, Polling Begin Time: 0, Polling End Time: 24, Polling Interval(sec): 0, Recursive Discovery: NO, Release State: Ignore, Type Of Content:, Windows File Naming Check: NO, and Xml Path:.

7. Click OK to return to the Connection tab:

The screenshot shows the 'Connection' tab selected in a configuration window. The 'Extract Metadata' dropdown menu is set to 'NO' and the 'Directory' field contains '\\MediaServer\MasstechFi'.

8. Enter the FTP credentials. Directory must point to the shared UNC directory and Extract Metadata must be set to *NO*.

9. Click OK to return to the Connection tab.

10. Select the Transfer tab and set the Transfer Mode parameter to *UNC* to use the Kumulate Data Movers to transfer files between the video server and Kumulate.

The screenshot shows the 'Transfer' configuration tab with various settings. The 'Transfer Mode' dropdown is highlighted with an orange border and is set to 'UNC'. Other visible settings include: Allow Rename (NO), Capture Mode (COPY), Checksum Type (MD5), Checksum Verification (No Verification), Keep FTP Control Connection Alive (NO), Instance detection pattern (No check), Direct Transfer to ML (NO), Direct Transfer from ML (NO), Max Copy In (0), Max Copy Out (0), Move Media File (NO), Overwrite Video Server Instance (Not Allowed), Restore Using (Name), Transcode Using (SOF and EOF), Transfer timeout(sec) (7200), and MassTransit Repository Path (empty).

Set the value to *Signiant* or *Aspera* to use these transfer APIs.

Note: Signiant and Aspera must be installed to use these modes.

11. Click OK to save the changes.

Configuration with Metadata Sidecar Files

UNC locations can be configured to use metadata sidecar files in XML format.

Metadata sidecar files contain additional metadata not found in the accompanying media file. This metadata can be mapped to Kumulate metadata in the storage location configuration.

The Vendor ID parameter (displays when Import Metadata is set to YES) provides two options for sidecar metadata processing: SPOT and GENERIC XML.

The SPOT option is used specifically for metadata files created with Extreme Reach software. In addition to allowing metadata to be mapped from the sidecar file, this option also allows a commercial spot to be transcoded without its pre-frames automatically.

The GENERIC XML option can be used with XML metadata files created with any software.

Configuration Using Extreme Reach Metadata Sidecar Files

The SPOT UNC storage location configuration is used specifically for Storage Locations containing media files with Extreme Reach sidecar metadata files.

In addition to allowing metadata to be mapped from the sidecar files to Kumulate metadata, the SPOT configuration can also be used to automatically remove any additional frames that may come before or after a commercial spot. In many cases, these additional frames contain advertising agency information and do not need to be transcoded. These frames are removed automatically when transcoding the file by setting the TranscodeUsing parameter to *SOM* and *EOM*.

Follow these steps to configure UNC using Extreme Reach:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

The screenshot shows the Storage Location Manager interface with a table of storage locations. At the top, there is an 'ADD NEW LOCATION' button and a status bar indicating '1 - 50' items and '(69 Items Returned)'. There are also 'RESTORE PROFILE INFORMATION' and 'REFRESH' buttons.

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location create a new storage location:

Storage Location Manager

The screenshot shows the Storage Location Manager interface with an empty table. At the top, there is an 'ADD NEW LOCATION' button and a status bar indicating '(0 Items Returned)'. There are also 'RESTORE PROFILE INFORMATION' and 'REFRESH' buttons.

Actions	Location ID	Model	Comment	Status	Validation Process
(0 Items Returned)					

3. Enter a name and description for the repository, then click OK:

Create Storage Location

The screenshot shows the 'Create Storage Location' form. It has an 'OK' button at the top left. Below it is the 'Storage Location Information' section with the following fields:

- Location ID: UNC < Required
- Location Description: UNC Storage Location
- Location Type: Video Server (dropdown menu)

At the bottom of the form, there is another 'OK' button.

4. Select the Monitoring tab.

Field	Value
API HostName:	UNC
API Protocol:	UNC
Capture Format:	GENERIC
Check Asset Uniqueness:	NO
Date Format:	MM/dd/yyyy
Delete From Video Server:	Not Allowed
Delete timeout:	30
Delete Content From Archive:	NO
Discovery Iterations:	Single Step
Export Metadata:	NO
Files Dir Enable:	NO
Files Patterns (Include):	.*
Files Patterns (Exclude):	
Ignore List:	
Import Metadata:	YES
Monitor Timeout (min):	45
Monitoring:	ON
Naming Schema:	UMID
Polling Begin Time:	0
Polling End Time:	24
Polling Interval(sec):	0
Release State:	Ignore
Type Of Content:	

5. Set API Protocol to *UNC*, Capture Format to *GENERIC*, Import Metadata to *YES*, and Monitoring to *ON* and click OK to continue. See [Monitoring Parameters](#) for details.

6. Select the Monitoring tab. Confirm that the Vendor Id parameter (now displayed) is set to *SPOT*:

The screenshot shows the 'Monitoring' tab selected in a configuration window. The 'Vendor Id' parameter is highlighted with an orange box and set to 'SPOT'. Other parameters include API Protocol (UNC), Capture Format (GENERIC), Check Asset Uniqueness (NO), Date Format (MM/dd/yyyy), Delete From Video Server (Not Allowed), Delete timeout (30), Delete Content From Archive (NO), Discovery Iterations (Single Step), Discovery method (Open for read), Export Metadata (NO), Files Dir Enable (NO), Files Patterns (Include) (*), Files Patterns (Exclude) (empty), File Pre-Filter (empty), Ignore List (empty), Import Metadata (YES), Find Media From XML (NO), Monitor Timeout (min) (45), Monitoring (ON), Naming Schema (UMID), Polling Begin Time (0), Polling End Time (24), Polling Interval(sec) (0), Recursive Discovery (NO), Release State (Ignore), Type Of Content (empty), Windows File Naming Check (NO), and Xml Path (empty).

7. Click OK to return to the Connection tab:

The screenshot shows the 'Connection' tab selected in a configuration window. The 'Extract Metadata' parameter is set to 'NO' and the 'Directory' text field contains '\\MediaServer\MasstechFi'.

8. Enter the FTP credentials in the text fields. The Directory parameter must point to the shared UNC directory. Extract Metadata must be set to *NO*

9. Click OK to continue and return to the Connection tab.

10. Select the Transfer tab and set the Transfer Mode parameter to *UNC* to use the Kumulate Data Movers to transfer files between the video server and Kumulate.

The screenshot shows the 'Transfer' tab of the configuration interface. The 'Transfer Mode' dropdown menu is highlighted with an orange border and is currently set to 'UNC'. Other visible settings include: Allow Rename: NO, Capture Mode: COPY, Checksum Type: MD5, Checksum Verification: No Verification, Keep FTP Control Connection Alive: NO, Instance detection pattern: No check, Direct Transfer to ML: NO, Direct Transfer from ML: NO, Max Copy In: 0, Max Copy Out: 0, Move Media File: NO, Overwrite Video Server Instance: Not Allowed, Restore Using: Name, Transcode Using: SOF and EOF, Transfer timeout(sec): 7200, and MassTransit Repository Path: (empty).

Set the value to *Signiant* or *Aspera* to use these transfer APIs.

Note: Signiant and Aspera must be installed to use these modes.

11. Click OK to save the configuration. Kumulate returns to the Connection tab.

12. Select the Transfer tab:

The screenshot shows the 'Transfer' tab of the configuration interface. The 'Transcode Using' dropdown menu is highlighted with an orange border and is currently set to 'SOF and EOF'. Other visible settings include: Allow Rename: NO, Capture Mode: COPY, Checksum Type: MD5, Checksum Verification: No Verification, Instance detection pattern: No check, Direct Transfer to ML: NO, Direct Transfer from ML: NO, Max Copy In: 0, Max Copy Out: 0, Move Media File: NO, Overwrite Video Server Instance: Not Allowed, Restore Using: Name, Restore Extension: Preserve original ext, Transfer timeout: (empty), Transfer Mode: (empty), and DataMover Repository Path: (empty).

13. Set the Transfer Using parameter. Select *SOF and EOF* if the entirety of the file is to be transcoded. Select *SOM and EOM* if only the commercial spot is to be transcoded, without the leading and trailing frames and Click OK to continue.

14. Select the Transfer tab:

Connection | Monitoring | Discriminators | **Transfer**

Allow Rename: NO
 Capture Mode: COPY
 Checksum Type: MD5
 Checksum Verification: No Verification
 Instance detection pattern: No check
 Direct Transfer to ML: NO
 Direct Transfer from ML: NO
 Max Copy In: 0
 Max Copy Out: 0
 Move Media File: NO
 Overwrite Video Server Instance: Not Allowed
 Restore Using: Name
 Restore Extension: Preserve original extension
 Transcode Using: SOF and EOF
 Transfer timeout: 7200
 Transfer Mode: UNC
DataMover Repository Path: \\MediaServer\MasstechFi
MassTransit Repository Path: \\MediaServer\MasstechFi

15. Set Data Mover Repository Path and MassTransit Repository Path to the same UNC location used for the Directory parameter.

16. Click OK to save the changes.

Configuration Using Generic Metadata Sidecar Files

Use the Generic XML UNC storage location configuration to extract additional metadata from sidecar files. You can use any sidecar file provided it is in XML format; the structure of the expected XML file must be known.

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

ADD NEW LOCATION

1 - 50 (69 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [i] [c]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [i] [c]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [i] [c]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [i] [c]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [i] [c]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [i] [c]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [i] [c]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [i] [c]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [i] [c]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [i] [c]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new storage location:

Storage Location Manager

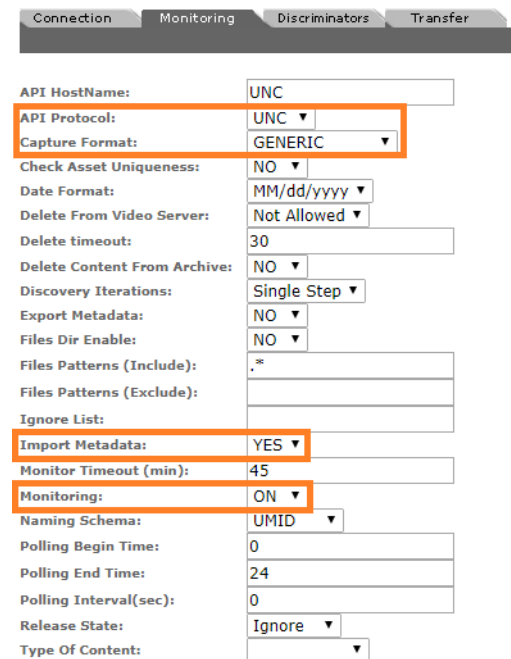


3. Enter a name and description for the new repository, then click OK:

Create Storage Location



4. Select the Monitoring tab:



5. Set API Protocol to *UNC*, Capture Format to *GENERIC*, Import Metadata to *YES*, and Monitoring to *ON* (see [Monitoring Parameters](#) for details). Click OK to continue.

6. Select the Monitoring tab:

The screenshot shows the 'Monitoring' tab selected in a configuration window. The 'Vendor Id' parameter is highlighted with an orange box and is set to 'GENERIC XML'. Other visible parameters include 'API Protocol' (UNC), 'Capture Format' (GENERIC), 'Check Asset Uniqueness' (NO), 'Date Format' (MM/dd/yyyy), 'Delete From Video Server' (Not Allowed), 'Delete timeout' (30), 'Delete Content From Archive' (NO), 'Discovery Iterations' (Single Step), 'Discovery method' (Open for read), 'Export Metadata' (NO), 'Files Dir Enable' (NO), 'Files Patterns (Include)' (.*), 'Files Patterns (Exclude)', 'File Pre-Filter', 'Ignore List', 'Import Metadata' (YES), 'Find Media From XML' (NO), 'Monitor Timeout (min)' (45), 'Monitoring' (ON), 'Naming Schema' (UMID), 'Polling Begin Time' (0), 'Polling End Time' (24), 'Polling Interval(sec)' (0), 'Recursive Discovery' (NO), 'Release State' (Ignore), 'Type Of Content' (highlighted), 'Vendor Id' (GENERIC XML), 'Windows File Naming Check' (NO), and 'Xml Path'.

7. Confirm that the Vendor Id parameter (now displayed) is set to *GENERIC XML*. Click OK to return to the Connection tab.

8. Enter the FTP credentials in the text fields. The Directory parameter must point to the shared UNC directory. Extract Metadata must be set to *NO*:

The screenshot shows the 'Connection' tab. The 'Extract Metadata' dropdown is set to 'NO'. The 'Directory' text field contains the UNC path '\\MediaServer\MasstechFi'.

9. Click OK to continue and return to the Connection tab.

10. Select the Transfer tab and set the Transfer Mode parameter to *UNC* to use the Kumulate Data Movers to transfer files between the video server and Kumulate:

The screenshot shows the 'Transfer' tab selected. The 'Transfer Mode' dropdown is highlighted with an orange box and set to 'UNC'. Other visible parameters include 'Allow Rename' (NO), 'Capture Mode' (COPY), 'Checksum Type' (MD5), 'Checksum Verification' (No Verification), 'Keep FTP Control Connection Alive' (NO), 'Instance detection pattern' (No check), 'Direct Transfer to ML' (NO), 'Direct Transfer from ML' (NO), 'Max Copy In' (0), 'Max Copy Out' (0), 'Move Media File' (NO), 'Overwrite Video Server Instance' (Not Allowed), 'Restore Using' (Name), 'Transcode Using' (SOF and EOF), 'Transfer timeout(sec)' (7200), and 'MassTransit Repository Path'.

11. Set the value to *Signiant* or *Aspera* to use these transfer APIs.

Note: Signiant and Aspera must be installed to use these modes.

12. Click OK to continue and then select the Transfer tab and set Data Mover Repository Path and MassTransit Repository Path to the same UNC location used for the Directory parameter:

The screenshot shows a configuration window with several tabs: Connection, Monitoring, Discriminators, and Transfer. The Transfer tab is active. The following settings are visible:

- Allow Rename: NO
- Capture Mode: COPY
- Checksum Type: MD5
- Checksum Verification: No Verification
- Instance detection pattern: No check
- Direct Transfer to ML: NO
- Direct Transfer from ML: NO
- Max Copy In: 0
- Max Copy Out: 0
- Move Media File: NO
- Overwrite Video Server Instance: Not Allowed
- Restore Using: Name
- Restore Extension: Preserve original extension
- Transcode Using: SOF and EOF
- Transfer timeout: 7200
- Transfer Mode: UNC
- DataMover Repository Path: \\MediaServer\MasstechFi
- MassTransit Repository Path: \\MediaServer\MasstechFi

13. Click OK to save the changes.

Sidecar Metadata Mapping

To use the metadata in the metadata sidecar XML files it must be manually mapped to Kumulate metadata elements. The metadata is mapped in the storage location configuration.

The following conditions must be met for the metadata to be mapped correctly:

- The sidecar metadata file must be in XML format.
- The sidecar metadata file must have the same root name as the media file. For example, if the media file is named MyMediaFile.mpg, the sidecar file must be named MyMediaFile.xml.
- The structure of the sidecar metadata files must be known.
- There can be no typographical errors in the mapping.

Kumulate won't generate any errors or messages in the event that any of these conditions are not met.

Follow these steps to create a mapping:

1. Click Location Metadata Mapping on the Storage Location Configuration page:

Storage Location Configuration



2. Click Add Mapping to add new a mapping:



3. In the Xpath Location Metadata ID, add the xpath to the metadata in the sidecar file. For example, enter `/ER_AD/TITLE_DESC` in Xpath Location Metadata ID to extract the TITLE_DESC metadata from a sidecar file that looks like this:

Note: Do not add an extra / at the end of the xpath.

```
<?xml version="1.0" encoding="utf-8"?>
<ER_AD>
  <TITLE_DESC>New Game Cutdown/Kids/Fri/HD :15</TITLE_DESC>
  <ISCI_CODE>DIMI1543H</ISCI_CODE>
  <PRODUCT_DESC>WDSMP/Million Dollar Arm</PRODUCT_DESC>
  <PLAY_LENGTH>00:00:15:00</PLAY_LENGTH>
  <START_TIME>00:00:07:00@29.97</START_TIME>
  <COMPRESSION_LEVEL_CODE>4:2:2</COMPRESSION_LEVEL_CODE>
  <ENCODER_TYPE_DESC>Extreme Reach</ENCODER_TYPE_DESC>
  <OUTPUT_RATE>29.97</OUTPUT_RATE>
  <FILE_NAME>DIMI1543H.mpg</FILE_NAME>
  <FILE_SIZE>114523208</FILE_SIZE>
  <COPY_DATE>2014-05-07T12:13:29.7415861Z</COPY_DATE>
  <ADVERTISER>WDSMP/Million Dollar Arm</ADVERTISER>
  <AGENCY_VENDOR>Walt Disney Studios Motion Pictures</AGENCY_VENDOR>
  <SPOT_TYPE>HD</SPOT_TYPE>
  <MEDIA_DESCRIPTION>HD1080i</MEDIA_DESCRIPTION>
  <SUPPORT_EMAIL>support@extremereach.com</SUPPORT_EMAIL>
</ER_AD>
```

- Select the Kumulate metadata to populate with the selected sidecar metadata from the Kumulate Metadata ID menu. For example, to populate the Asset Title with the sidecar metadata, select Asset/Asset Information/Title from the menu:

Location: GENERIC_ER_AD

OK

Location Metadata Mapping

Xpath Location Metadata Id:
/ER_AD/TITLE_DESC

MassStore Metadata ID:
 Asset/Asset Information/Asset Id
 Asset/Asset Information/Asset Type
 Asset/Asset Information/Create Date
 Asset/Asset Information/Duration
 Asset/Asset Information/Last Update Date
 Asset/Asset Information/Name
 Asset/Asset Information/Naming schema
 Asset/Asset Information/Program Notes
 Asset/Asset Information/Program Status
 Asset/Asset Information/Purge Date
 Asset/Asset Information/Source
Asset/Asset Information/Title
 Asset/Content Delivery/Episode Name
 Asset/Default/AddedBy
 Asset/Default/Original Name
 Asset/Default/View By All
 Asset/Default/user_private_data
 Asset/TEST/Test
 Asset/TEST/test2
 Instance/Default/Barcode

- Choose the mapping type from the Mapping Type menu.

Note: The Unix Timestamp type is not used.

Location Metadata Mapping

Xpath Location Metadata Id:
/ER_AD/TITLE_DESC

MassStore Metadata ID:
Asset/Asset Information/Title

Mapping Type:
 Direct < Required
Date
 Mapped value
 Unix Timestamp

- With the Date mapping type, the date format must also be selected:

Mapping Type:
Date < Required

Date Format:
 year month day
 month day year
 year day month
 day month year

With the Mapped Value type, the mapped value must be set. The Date mapping supports the following formats in the metadata file:

YY/MM/DD	YYYY/MM/DD	YYYY-MM-DD	YYYY-MM-DD hh:mm:ss
YYYY-MM-DDThh:mm:ss	YYYY-MM-DDThh:mm:ss.s	YY-MM-DDThh:mm:ssTDZ	YYYY-MM-DDThh:mm:ss.sTDZ
D/M/YY	DD/MM/YY	D/M/YYYY	DD/MM/YYYY
MM/DD/YY	MM/DD/YYYY	M/D/YYYY hh:mm:ss.s	

6. Click Add Mapping Attribute:

Location Metadata Mapping

Location Metadata ID:

MassStore Metadata ID:

Mapping Type:
 < Required

Metadata Mapping Attributes

Mapping Attributes List

Actions | Location value

- a. On the Add New Mapping Attribute page, add the expected value from the AAF in the Location Value box and add the value to use in the Kumulate metadata in the Kumulate value box as shown here:

Add New Mapping Attribute

Location: AVIDSTANDALONE

Metadata Mapping Attribute

Location value:
 < Required

MassStore value:
 < Required

- b. Click OK to save.
- c. Click OK to save.
- d. The list of mappings displays on the Metadata Mapping page as shown here:

Metadata Mapping for location:
GENERIC_ER_AD

ADD METADATA MAPPING DELETE MAPPING IMPORT EXPORT REFRESH

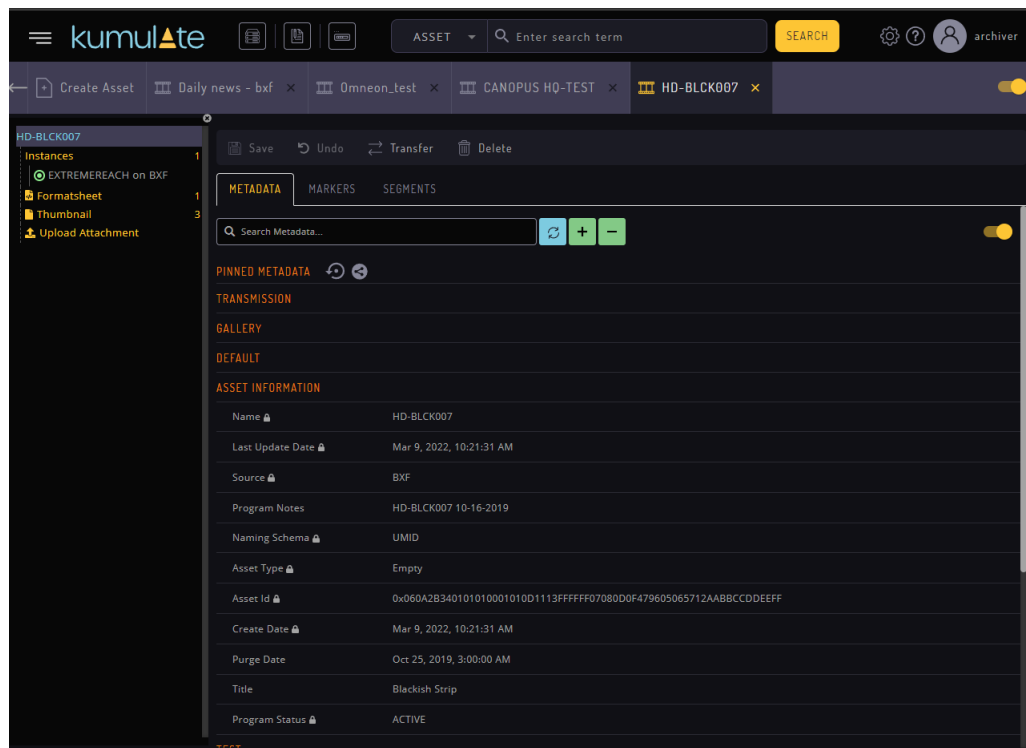
Metadata Mapping List

Actions	Location Metadata ID	MASSSTORE_METADATA_ID	Mapping Type
	/ER_AD/TITLE_DESC	Asset/Asset Information/Title	Direct
	/ER_AD/ADVERTISER	Asset/Asset Information/Program Notes	Direct

If more than one type of XML file is used, you can map xpaths for different file structures to the same Kumulate metadata. Kumulate searches for the xpaths in the file, and, if one matches, it is mapped to the Kumulate metadata:

Metadata Mapping List		
Actions	Location Metadata ID	MASSTORE_METADATA_ID
 	/ER_AD/TITLE_DESC	Asset/Asset Information/Name
 	/OTSM_AD/TITLE_DESC	Asset/Asset Information/Name
 	/EVS_Metadata/Clips_Infos/Clip/Other_Clip_Infos/LongClipName	Asset/Asset Information/Name

7. When an instance is discovered on this storage location, the metadata is extracted from its sidecar file and used to populate its Kumulate metadata:



Monitoring Parameters

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API HostName—The IP address of the FTP server.

API Protocol—Always set to *UNC*.

Capture Format—The capture format used depends on the type of file that is copied in and out of the video server.

Capture Format	File Type
FCP_UN	Final Cut Pro
Leitch	Leitch—Used when the video server is a Leitch video server, and the files are in Leitch's proprietary format.
MPEG2PS	Program Stream MPEG2
MXF	All MXF operational patterns except OP_ATOM.
MXF_OP_ATOM	MXF OP_ATOM
WM9	Windows Media Player
Generic	<p>Any single-file format such as self-contained MOV files, or single-file MXF files.</p> <p>Used when the file format is not covered by the other capture formats, or when the files can be a mix of any single-file format.</p> <p>Used for commercial spots, and generic XML files.</p> <hr/> <p>Note: Cannot be used with MXF OP_ATOM files.</p> <hr/>

Delete Content From Archive (Default: NO)—Delete Content From Archive sets whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location, the existing instance is deleted and replaced with the changed instance.

Set this parameter to *YES* to also delete all assets located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to *ON*, and the asset doesn't contain any other storage location assets in addition to the one that has changed, the asset is deleted and a new asset is created for the changed instance.

Note: Delete Content From Archive has no effect when discriminators are used by the location.

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server.

If the timeout is reached and the file has not been deleted, the operation fails. The file will no longer be visible, but it may remain in an unusable state on the video server.

Discovery Method—By default, Kumulate will attempt to open a file for reading to determine whether the file has finished copying to the UNC location monitored by the storage location.

However, in cases where a file is being ingested and written in chunks to the UNC location, the file can be opened for read even if the file has not been copied completely. In these situations, Discovery Method should be set to *Open for write* instead. This will cause Kumulate to attempt to open the file for writing to determine if it has finished being copied to the UNC location. The file won't be discovered until the process writing to it releases it.

Files Dir Enable—Indicates whether the full directory structure of the folder on the FTP server is recreated on the cache.

Setting Files Dir Enable to *YES* recreates the entire directory structure on the cache. This allows Kumulate to transcode the files and create proxies. Setting the parameter to *NO* only creates file proxies on the cache.

Files Dir Enable must be set to *YES* when the UNC location uses recursive discovery; otherwise it must be set to *NO*.

Files Patterns (Include)—The file type extensions to discover on the storage location. This value is used to populate the wrapper metadata.

Note: Do not use this option with the MXF_OP_ATOM capture format.

Files Patterns (Exclude)—Instructs Kumulate to ignore files with these extensions during discovery.

Note: Do not use this option with the MXF_OP_ATOM capture format.

File Pre-Filter—Excludes files that match a regular expression from discovery.

The pre-filter step occurs before the file pattern inclusion and exclusion. Files that match the regular expression are not included in the list of files from which assets can be discovered. This is useful for excluding system files used by video servers, such as .ds files.

Note: Do not use this option with the MXF_OP_ATOM capture format

Ignore List—Kumulate won't copy-in any files that display in this list. Ignore List can be a list of filenames, or a regular expression.

Import Metadata—Indicates that additional metadata is pulled in from metadata sidecar files.

Sidecar files must be in XML format, and they must have the same root names as their corresponding media files. All sidecar files on the same storage location must have the same structure.

Set to *YES* to import metadata from sidecar files—the Vendor ID parameter must also be set appropriately.

The sidecar metadata must be mapped to Kumulate metadata explicitly.

Monitoring—Indicates whether this storage location is to be monitored. If the storage location will only be used to copy-out files, set Monitoring to *OFF*; otherwise set it to *ON*.

Polling Begin Time | Polling End Time | Polling Interval (sec)—Controls how Kumulate polls the storage location.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval (sec) instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10 seconds.

Recursive Discovery—If assets can be discovered anywhere under the root folder of the storage location, set this parameter to *YES*.

Note: FTP Files Dir Enable must be set to *YES* when Recursive Discovery is set to *YES*.

Vendor Id—indicates the type of sidecar metadata files to expect.

Note: This parameter only displays when Import Metadata is set to *YES*.

Set Vendor Id to *SPOT* if Extreme Reach sidecar files are used; otherwise set it to *Generic XML*.

Transfer Parameters

The following parameters on the Transfer tab are used by UNC Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

Capture Mode—The capture mode specifies whether the physical file on this storage location is kept or deleted after its instance is transferred to another location.

MOVE deletes the physical file from this location after the transfer; COPY keeps it.

Checksum Type | Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. The instance's checksum is added if it doesn't

exist in the database. The transfer will fail and an error is generated if the instance's checksum does exist in the database, but the two checksums do not match.

An additional check is made after the instance has been fully copied to the location if After Write is selected for Checksum Validation. The transfer will fail if the checksum of the written instance doesn't match the checksum in the database.

Data Mover Repository Path—This should always be set to the same value as the Directory Connection parameter.

MassTransit Repository Path—This should always be set to the same value as the Directory Connection parameter.

Max Copy In—This only applies when the storage location is configured for copying in files, and sets the maximum number of concurrent transfers from the storage location to Kumulate.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Max Copy Out—This only applies when the storage location is configured for copying out files, and sets the maximum number of concurrent transfers from Kumulate to the storage location.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream strongly recommends that you change this to a non-zero value.

Overwrite Video Server Instance—A transfer from Kumulate to the storage location will fail if the file already exists on the storage location when set to NOT ALLOWED.

The transfer will overwrite the existing file on the storage location when set to ALLOWED.

Restore Using—Restore Using specifies how to name the physical file when an instance is transferred to this storage location.

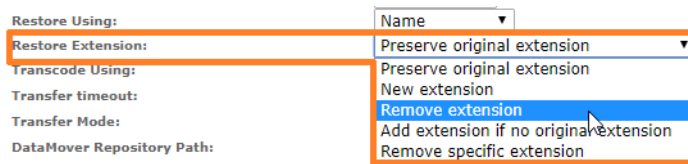
Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

There are four options for Restore Using as follows:

Asset ID	The file is named using the transferred instance's Asset ID.
Name	The file is named using the transferred instance's Asset Name.
Original Name	The file is named using the transferred instances Asset Original Name. Original Name contains the name of the asset when its source instance was discovered.
Preserve Filenames	The file name is not modified after transfer. The Restore Extension parameter won't be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension is hidden.

Restore Extension—The Restore Extension parameter determines how file extensions are handled when files are copied to the storage location.

File names and their extensions are preserved when assets are copied between locations by default. The Restore Extension parameter allows extensions to be added, removed, or replaced.



Select from these options:

Preserve original extension—Default behavior. The extension doesn't change when the file is copied to the storage location.

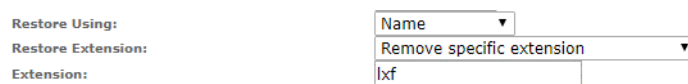
New extension—Changes the existing extension to the specified extension.

Remove extension—Remove the extension if there is one.

Add extension if no original extension—Add the specified extension if the original file name doesn't have an extension.

Remove specific extension—Remove only the specified extension; preserve all other extensions.

The New extension, Add extension if no original extension, and Remove specific extension work with the Extension parameter. This parameter is not displayed by default. If the Extension parameter is not displayed, click OK to save the configuration, then navigate back to the Transfer tab. The Extension parameter should now display:



Extension—The Extension parameter works with the Restore Extension parameter to replace file extensions when assets are copied to the storage location.

This parameter doesn't display by default. It only displays when Restore Extension is set to New extension, Add extension if no original extension, or Remove specific extension.

Note: In some cases, the configuration must be saved after selecting New extension, Add extension if no original extension, or Remove specific extension for the Extension parameter to display.

Transcode Using—When set to *SOF and EOF*, the entire file is transcoded. When set to *SOM and EOM*, only a part of the file is transcoded. See [Start of Message Parameter](#) for more information.

Files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots, which may have agency information, tags, and blacks appended to the beginning and the end of the clip. Select *SOM* and *EOM* to prevent these portions from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

Transfer Mode—Set the value to *UNC* to use the Kumulate Data Movers to transfer files between the video server and Kumulate.

Set the value to *Signiant* or *Aspera* to use these transfer APIs.

Note: Signiant and Aspera must be installed to use these modes.

Start of Message Parameter

Media files containing commercial spots will often begin with a series of frames with the name of the advertising agency, the name of the spot, and the running time of the spot.

Setting the TranscodeUsing parameter to *SOM&EOM* will remove these frames when an instance is transcoded.

UNC storage location using the *SPOT* Vendor ID will automatically remove the pre-frames without additional configuration from video with Extreme Reach sidecar files.

For UNC Storage Locations configured with *Generic XML* Vendor ID, the pre-frames can also be removed, but additional configuration is needed as follows:

1. To extract pre-frames, the sidecar file must contain the length of the clip, and a timestamp in hh:mm:ss.ms format that points to when the commercial spot begins:

```
<?xml version="1.0" encoding="utf-8"?>
<ER_AD>
  <TITLE_DESC>MillionArm</TITLE_DESC>
  <ISCI_CODE>DIMI1543H</ISCI_CODE>
  <PRODUCT_DESC>WDSMP/Million Dollar Arm</PRODUCT_DESC>
  <PLAY_LENGTH>00:00:15:00</PLAY_LENGTH>
  <START_TIME>00:00:07:00</START_TIME>
  <COMPRESSION_LEVEL_CODE>4:2:2</COMPRESSION_LEVEL_CODE>
  <ENCODER_TYPE_DESC>Extreme Reach</ENCODER_TYPE_DESC>
  <OUTPUT_RATE>29.97</OUTPUT_RATE>
  <FILE_NAME>MillionArm.mpg</FILE_NAME>
  <FILE_SIZE>114523208</FILE_SIZE>
  <COPY_DATE>2014-05-07T12:13:29.7415861Z</COPY_DATE>
  <ADVERTISER>WDSMP/Million Dollar Arm</ADVERTISER>
  <AGENCY_VENDOR>Walt Disney Studios Motion Pictures</AGENCY_VENDOR>
  <SPOT_TYPE>HD</SPOT_TYPE>
  <MEDIA_DESCRIPTION>HD1080i</MEDIA_DESCRIPTION>
  <SUPPORT_EMAIL>support@extimereach.com</SUPPORT_EMAIL>
</ER_AD>
```

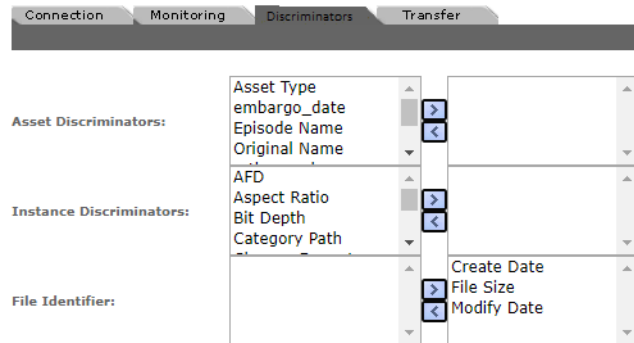
2. The start time and length of the clip must be explicitly mapped to the SOM and Duration Kumulate metadata fields:

Metadata Mapping List		
Actions	Location Metadata ID	MASSSTORE_METADATA_ID
 	/ER_AD/PLAY_LENGTH	Asset/Asset Information/Duration
 	/ER_AD/START_TIME	Instance/Summary/SOM

3. After the instance is discovered, extract its metadata.
4. Create the proxy. The pre-frames should now be trimmed.

Managing Discriminators and File Identifiers

These parameters, in the Discriminators tab, are used to differentiate between assets with the same name on the storage location:



Asset and Instance Discriminators

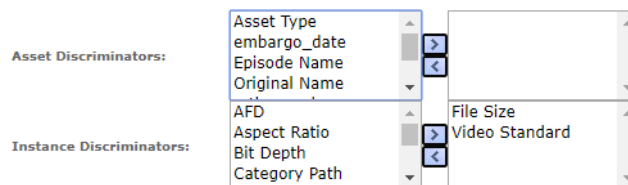
Note: Discriminators override the storage location’s Delete Contents From Archive setting.

Asset and instance discriminators are metadata used to determine whether an instance that has changed is the same instance or a different instance than one that is already on the storage location.

When an instance has changed, the instance discriminator metadata values of the original and changed assets are compared. If any of the discriminator metadata values do not match, Kumulate creates a new asset for the changed instance.

Select discriminator metadata from the left list and move it to the right list.

For example, to compare assets based on file size and video standard, select File Size and Video Standard and add them to the right list as shown here:



When Kumulate detects that the physical instance on the storage location has changed, it compares the file size and video standard of the original instance to the changed assets. Kumulate creates a new asset for the changed instance if either of the two metadata values do not match.

Note: Naming Schema must be set to *UMID*, and Extract Metadata must be set to *YES* when using discriminators. No assets are discovered on the storage location if discriminators are used but the storage location's naming schema is not set to *UMID*.

Managing BXF Storage Locations

A BXF storage location consists of a UNC path or FTP server that is delivering BXF files to Kumulate. Kumulate monitors the location for new files, parses the BXF file for metadata and ingests the content.

Two new options have been added to the BXF storage location configuration in Kumulate 3.1 to enable the centralized ingest and subsequent distribution to local Kumulate systems:

- The option to retrieve XML sidecar files from a different folder than the media files. The path is defined in the storage location's XML Path parameter. If no path is defined in this parameter, Kumulate will assume the path is the same as the one used for the media files.
- The option of different instance formats to support configurations where content is transcoded before it arrives in the Kumulate storage location. The format is defined

in the storage location's instance Format parameter in a list. All assets discovered on the location will have this format. The available values are as follows:

- a. EXTREMEREACH (this is the default value)
- b. MXF
- c. QT
- d. MP4
- e. MPEG2TS
- f. MPEG2PS

Storage Location ID:
BXF_FTP

Connection Monitoring Discriminators Transfer

API HostName:	10.30.5.47
API Protocol:	FTP ▾
Capture Format:	EXTREMEREACH ▾
Attach XML to asset:	YES ▾
Check Asset Uniqueness:	NO ▾
Type Of Content:	▾
Date Format:	MM/dd/yyyy ▾
Delete From Video Server:	Not Allowed ▾
Delete Content From Archive:	NO ▾
Delete timeout:	30
Discovery Iterations:	Single Step ▾
Exclude Trade/Barter segments:	YES ▾
Exclude EOM from duration:	YES ▾
Export Metadata:	NO ▾
Files Dir Enable:	NO ▾
Files Patterns (Include):	.ts
Files Patterns (Exclude):	._*, .DS_Store, Thumbs.d
Set ISCI as Title for Commercial segments:	YES ▾
Ignore Files With Leading Space:	NO ▾
Ignore List:	
Import Metadata:	YES ▾
Find Media From XML:	NO ▾
Monitor Timeout (min):	45
Monitoring:	ON ▾
Naming Schema:	UMID ▾
Instance Format:	EXTREMEREACH ▾
Polling Begin Time:	0
Polling End Time:	24

Configuration

Follow these steps to configure BXF Storage Locations:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

ADD NEW LOCATION

1 - 50 (69 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Locations create a new storage location:

Storage Location Manager

ADD NEW LOCATION

(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH					

3. Enter a name and description for the new repository, then click OK:

Create Storage Location

OK

Storage Location Information

Location ID: < Required

Location Description:

Location Type:

4. Select the Monitoring tab and set Capture Format to *ExtremeReach*:

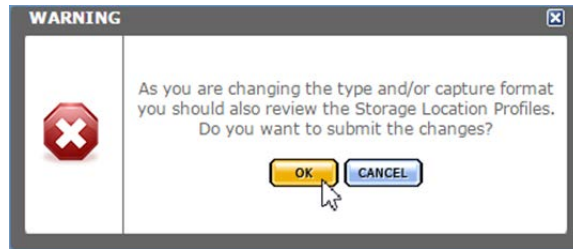
Connection Monitoring Discriminators Transfer

API Protocol:

Capture Format:

5. Click OK to continue.

6. Kumulate displays a warning to verify that you want to submit the change:



7. Click OK to continue. Kumulate displays Connection tab. Enter the UNC directory or FTP credentials and set Extract Metadata to *NO*:



8. In the Monitoring tab, set Vendor Id to *GENERIC XML*.
9. In the Transfer tab, set the input path for the Data Mover. If UNC is used as the protocol then set the input path for the Transcode Engine.
10. Click OK to continue.
11. Add the appropriate permissions in the Security area and the endpoint to your Data Mover.

Metadata Mapping

When BXF files are discovered, their metadata is read and mapped to Kumulate metadata. There are six default mappings for BXF files, but more can be added.

Use the following procedure to map BXF metadata:

1. Navigate to Location Metadata Mapping to add or remove mappings:

Metadata Mapping for location: BXF2

Actions	Location Metadata ID	MASOCDOME_METADATA_ID	Mapping Type
	/B/Message/B/Data/Content/ProgramContent/ContentMetadata/Description	Asset/Asset Information/Program Notes	Direct
	/B/Message/B/Data/Content/ProgramContent/ContentMetadata/UsagePolicy/PurgeDate	Asset/Asset Information/Purge Date	Date
	/B/Message/B/Data/Content/ProgramContent/ContentMetadata/UsagePolicy/FirstAirDate	Asset/Transmission/Air Date	Date
	/B/Message/B/Data/Content/ProgramContent/ContentMetadata/ContentId/AlternateId[@idType='Media 10']	Asset/Content Delivery/Content Id	Direct
	/B/Message/B/Data/Content/ProgramContent/ContentMetadata/ContentId/AlternateId[@idType='Episode Number']	Asset/Asset Information/Name	Direct
	/B/Message/B/Data/Content/ProgramContent/ContentMetadata/Name	Asset/Asset Information/Title	Direct

2. Modify settings on the Monitoring tab if necessary as follows:
 - a. Attach XML to asset.
 - b. Set ISCI as *Title for Commercial* segments.
 - c. Adjust SOM to zero (0).
 - d. Set Commercial as *Note*.
3. Validate the location.

Managing Video Server Storage Locations

This chapter describes how to create and configure resource filter Storage Locations. The locations are configured based on the type of video server that it will connect to.

Each location is configured to expect a specific instance format. Assets that don't match their specified format can't be transferred to the location unless a transcode profile exists to transcode the incoming instance to the format specified by the location's restore profile.

Storage Locations are not automatically accessible to users, nor are they automatically added to external Data Movers. They must be explicitly added as endpoints to external Data Movers, and explicitly added to user groups.

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).

Topics

- [K2 Storage Locations](#)
- [Leitch Storage Locations](#)
- [Omneon \(Harmonic\) Storage Locations](#)
- [Discriminators for Video Server Locations](#)
- [Fast Initialization & Delete Content From Archive](#)

K2 Storage Locations

A K2 storage location consists of a K2 resource filter connected to Kumulate. Communication between the video server and Kumulate is accomplished via the API using libraries installed on the Kumulate server.

Media transfers between Kumulate and the video server are performed via the video server's FTP service.

K2 File and Folder Formats

Kumulate receives a list of clips on the video server. K2 provides metadata information about the clips, but doesn't provide the file format. When Kumulate requests a clip, it sends a request to retrieve the clip from an FTP directory that corresponds to a wrapper type. The K2 server wraps the clip in the format corresponding to the directory and places it in the directory for Kumulate to copy-in.

Clips can be wrapped as GXF, MXF, or MOV. The root FTP directories for the wrapped clips correspond to the wrapper types. For example, the root directory for GXF is /GXF/.

The physical clips are stored within a subdirectory generally named default. For example, physical GXF files would be located under /GXF/default/.

For transfers to the K2 storage location, Kumulate places the files in their corresponding wrapper directories.

Kumulate can only monitor one wrapper type per K2 storage location.

Note: K2 doesn't support files with filename lengths over 32 characters long. Copying out a file with a filename longer than 32 characters to a K2 video server will fail.

K2 Configuration

A K2 storage location is typically configured as both a copy-in and copy-out location. Follow these steps to configure a K2 storage location:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

The screenshot shows the 'Storage Location Manager' interface. At the top, there is an 'ADD NEW LOCATION' button. Below it, a dropdown menu shows '1 - 50' and a status indicator '(69 Items Returned)'. To the right are 'RESTORE PROFILE INFORMATION' and 'REFRESH' buttons. The main content is a table with the following columns: Actions, Location ID, Model, Comment, Status, and Validation Process.

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [i] [c]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [i] [c]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [i] [c]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [i] [c]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [i] [c]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [i] [c]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [i] [c]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [i] [c]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [i] [c]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [i] [c]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

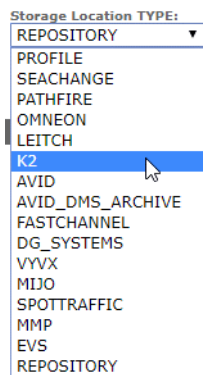
2. Click Add New Location to create a new storage location:



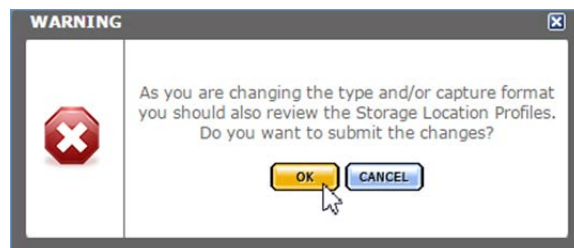
3. Enter a name and description for the new repository, then click OK:

Create Storage Location

4. On the Storage Location Configuration page, set Video Server Type to K2:



5. Click OK to continue—Kumulate displays a warning to verify that you want to submit the change to the storage location.



6. Click OK to continue. Kumulate displays the Connection tab.

7. Set the following minimum parameters (see [K2 Parameters](#) for the complete list).

API HostName—The hostname or IP address of the video server. This address is used by the API.

Directory—The location from where Kumulate requests to copy-in clips from the K2 server. The root directory dictates the type of wrapper the K2 server will apply to the transferred clips. Only GXF, MXF, and MOV wrappers are supported.

HostName | Password | Port | User—Connection credentials for the target FTP server used to transfer files.

Max Copy In—Sets the maximum number of concurrent transfers from the storage location to Kumulate.

The default value is 0 and allows an unlimited number of concurrent transfers.

Note: Telestream recommends that you change this to a non-zero value.

Max Copy Out—Sets the maximum number of concurrent transfers from Kumulate to the storage location.

The default value is 0 and allows an unlimited number of concurrent transfers.

Note: Telestream recommends that you change this to a non-zero value.

Monitoring—K2 Storage Locations are generally used to both copy-in and copy-out media. Monitoring should be kept ON unless the storage location will only be used for copy-out.

Naming Schema—Sets whether assets are named using an asset ID or using a UMID.

Note: Instance metadata discriminators cannot be used when Naming Schema is set to Asset ID. See [Fast Initialization & Delete Content From Archive](#) for more information.

Remote Dir—The server directory monitored by Kumulate. This directory must correspond to the directory where the K2 server stores its clips.

K2 Parameters

These parameters are used by K2 Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API HostName—Hostname or IP address of the video server used by the API.

Checksum Type and Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. The instance's checksum is added to the database if it doesn't already exist. The transfer will fail and an error is generated if the instance's checksum exists in the database, but the two checksums do not match.

An additional check is made after the instance has been fully copied to the location if After Write is selected for Checksum Validation. The transfer will fail if the checksum of the written instance doesn't match the checksum in the database.

Delete Content From Archive—Determines whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location, the existing instance is deleted and replaced with the changed instance.

YES: Also deletes all assets located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to ON, and the asset doesn't contain any other storage location assets in addition to the one that has changed, the asset is deleted and a new asset is created for the changed instance.

The default setting is NO.

Note: Delete Content From Archive has no effect when discriminators are used by the location

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server.

The operation fails if the timeout is reached and the file has not been deleted. The file will no longer be visible, but it may remain in an unusable state on the video server.

Directory—The location from where Kumulate requests to copy-in clips from the K2 server. The root directory dictates the type of wrapper the K2 server will apply to the transferred clips. Only GXF, MXF, and MOV wrappers are supported. The types of files that are copied in are found in a directory corresponding to their wrapper type as follows:

File Type	Directory
GXF	/GXF/default/
MXF	/MXF/default/
MOV	/MOV/default/

Note: The physical files are typically found in the default subdirectory, but may be located in other subdirectories.

HostName, Password, Port, User—Credentials for the FTP server used to transfer files.

Use Passive Mode (if server supports it)—Set to *YES* to use passive FTP connections. Passive FTP connections allow FTP to be used with firewalls with port forwarding.

It is set to *NO* by default.

Note: The FTP connection will default back to active FTP if the passive FTP connection fails.

File info command—The FTP command to use to determine whether a file is on an FTP server.

Note: Do not change the value from the default unless the FTP command results in errors.

This parameter is used with the instance detection pattern parameter.

Ignore List—Kumulate won't copy-in any files that display in this list. Ignore List can be a list of filenames or a regular expression.

ML Direct Transfer—Transfer files directly from the video server to the tape library without creating an instance in the cache.

This should only be set to *YES* if the instance doesn't need to be transcoded, or if a proxy doesn't need to be created.

Max Copy In—This setting only applies when the storage location is configured for copying in files and sets the maximum number of concurrent transfers from the storage location to Kumulate.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Max Copy Out—This setting only applies when the storage location is configured for copying out files and sets the maximum number of concurrent transfers from Kumulate to the storage location.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Monitoring—Specifies whether Kumulate is monitoring the location to discover and copy-in new assets.

OMNEON Storage Locations are generally used to both copy-in and copy-out media. Therefore, Monitoring is set to *ON*. It should only be set to *OFF* if the storage location won't be used to discover and copy-in assets.

Monitoring Interval (seconds)—The amount of time the system waits for the monitoring thread. The thread is restarted when this interval passes.

This value should be higher if there are several monitored Storage Locations in Kumulate.

Note: This parameter should be set with the help of the installation team.

Naming Schema—Determines how the Asset ID is set upon discovery.

Setting this to *Asset ID* sets the Asset ID to the root filename of the discovered instance. In this case, the Asset Name, Asset ID, and Original Name of the Asset are identical.

Setting this to *UMID* sets the Asset ID to a unique UMID. This ensures unique names for all assets. The Asset Name remains the root filename of the discovered instance.

Note: Neither instance nor asset discriminators can be used when Naming Schema is set to Asset ID.

Overwrite Video Server Instance—Transfers from Kumulate to the storage location will fail if the file already exists on the storage location when this is set to NOT ALLOWED.

The transfer will overwrite the existing file on the storage location when this is set to ALLOWED.

Polling Begin Time, Polling End Time, Polling Interval (sec)—Controls how Kumulate polls the storage location.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Remote Dir—Directory on the K2 server where unwrapped clips are kept. Kumulate queries the K2 server via the API for clips in this directory.

Restore Using—Specifies how to name the physical file when an instance is transferred to this storage location. There are four options for Restore Using:

Asset ID	The file is named using the transferred instance's Asset ID.
Name	The file is named using the transferred instance's Asset Name.
Original Name	The file is named using the transferred instance's Asset Original Name. Original Name contains the name of the asset when its source instance was discovered.
Preserve Filenames	The filename is not modified after transfer. The Restore Extension parameter won't be applicable when this option is used. Restore Extension is hidden if the storage location configuration is saved after setting this option.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the begging and the end of the advertisement. Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

The entire file is transcoded when set to *SOF* and *EOF*.

Only a part of the file is transcoded when set to *SOM* and *EOM*.

See [Start of Message Parameter](#) for more information.

Transfer Timeout—The transfer fails if it has not completed successfully within this amount of time. This value should only be changed if transfers routinely time out.

Transfer Mode—Always set to *Direct FTP*.

Video Format Type and Video Bitrate—The video format and bitrate information is not returned by the K2 API, but is extracted using HQS. Video Format Type and Video Bitrate are used as defaults if HQS is not installed.

Video Format Type is the video chroma subsampling. It can be 411, 420, 422, or 444.

Leitch Storage Locations

A Leitch storage location consists of a Leitch video server connected to Kumulate. Communication between the video server and Kumulate is performed via an API using libraries installed on the Kumulate server.

Media transfers between Kumulate and the video server are performed via the video server's FTP service.

Leitch File and Folder Formats

All files on a Leitch video server are in a proprietary format. The Leitch server wraps the file into either LXF, GXF, MXF, or MOV format, depending on the format Kumulate has requested, and makes the files available via the FTP server.

Leitch Configuration

A Leitch storage location consists of a Leitch video server connected to Kumulate. Files are copied in and copied out via the video server's FTP service. Leitch Storage Locations are typically configured as both a copy-in and a copy-out location. Follow these steps to configure a Leitch storage location:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

ADD NEW LOCATION

1 - 50 (69 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [i] [✓]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [i] [✓]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [i] [✓]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [i] [✓]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [i] [✓]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [i] [✓]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [i] [✓]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [i] [✓]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [i] [✓]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [i] [✓]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Add New Location to create a new storage location:

Storage Location Manager

ADD NEW LOCATION

(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH

Actions	Location ID	Model	Comment	Status	Validation Process
(0 Items Returned) RESTORE PROFILE INFORMATION REFRESH					

3. Enter a name and description for the new repository, then click OK:

Create Storage Location

The screenshot shows a dialog box titled "Create Storage Location". At the top, there is a yellow "OK" button. Below it is a section titled "Storage Location Information". This section contains three input fields: "Location ID:" with the value "LEITCH" and a "< Required" label; "Location Description:" with the value "Leitch Storage Location"; and "Location Type:" with a dropdown menu set to "Video Server". At the bottom of the dialog, there is another yellow "OK" button.

4. From the Storage Location Configuration page, set Video Server Type to *LEITCH*:

The screenshot shows a dropdown menu titled "Storage Location TYPE:". The menu is open, displaying a list of repository types. The "LEITCH" option is highlighted in blue, and a mouse cursor is pointing at it. Other options in the list include REPOSITORY, PROFILE, SEACHANGE, PATHFIRE, OMNEON, K2, AVID, AVID_DMS_ARCHIVE, FASTCHANNEL, DG_SYSTEMS, VYVX, MIJO, SPOTTRAFFIC, MMP, EVS, and REPOSITORY.

5. Click OK to continue—Kumulate displays a warning to verify that you want to submit the change to the storage location.

The screenshot shows a "WARNING" dialog box with a red 'X' icon. The text inside reads: "As you are changing the type and/or capture format you should also review the Storage Location Profiles. Do you want to submit the changes?". At the bottom, there are two buttons: "OK" and "CANCEL". A mouse cursor is pointing at the "OK" button.

6. Click OK to continue. Kumulate displays the Connection tab.

7. Set the following minimum parameters (see [Leitch Parameters](#) for the complete list of K2 storage location configuration parameters).

API HostName—The hostname or IP address of the video server. This address is used by the API.

HostName, Password, Port, User—Connection credentials for the FTP server used to transfer files.

Note: The Leitch FTP service uses port 2098.

Max Copy In (Default: 0)—Sets the maximum number of concurrent transfers from the storage location to Kumulate. To specify an unlimited number of concurrent transfers, set the value to 0.

Note: Telestream recommends that you change this to a non-zero value.

Max Copy Out (Default: 0)—Sets the maximum number of concurrent transfers from Kumulate to the storage location. To specify an unlimited number of concurrent transfers, set the value to 0.

Note: Telestream recommends that you change this to a non-zero value.

Marking Key—Used to mark assets on the video server once they are discovered. Leitch Storage Locations should use a short key. If this value is left blank, the key value set in the CMI module configuration is used.

Monitoring—K2 Storage Locations are generally used to both copy-in and copy-out media. Monitoring should be kept *ON* unless the storage location will only be used for copy-out.

Monitored Extension—Wrap discovered assets in the format specified by this extension. Only one extension is permitted. Valid extensions: MOV | MXF | GXF | LXF. Defaults to LXF if left blank.

Naming Schema—Sets whether assets are named using an asset ID or using a UMID.

Note: Instance metadata discriminators can't be used when Naming Schema is set to *Asset ID*. See [Fast Initialization & Delete Content From Archive](#) for more information.

Leitch Parameters

These parameters are used by Leitch Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API HostName—The hostname or IP address of the video server. This address is used by the API.

Allow Rename—Allows the renaming of an instance copied out to the video server. Only the physical file on the video server is renamed; the instance name on Kumulate doesn't change.

This parameter only applies to MMP requests and doesn't apply to requests made in the Kumulate web app.

Checksum Type and Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. The instance's checksum is added to the database if it doesn't already exist. The transfer fails and an error is generated if the instance's checksum exists in the database, but the two checksums do not match.

An additional check is made after the instance has been fully copied to the location if After Write is selected for Checksum Validation. The transfer will fail if the checksum of the written instance doesn't match the checksum in the database.

DefaultVideoBitrate—Used if the API doesn't report the bitrate of a discovered instance. This value is only used when the VIDEO_BIT_RATE metadata is not set. See [VIDEO_BIT_RATE Metadata Mapping](#) for details.

Delete Content From Archive (Default: NO)—Determines whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location, the existing instance is deleted and replaced with the changed instance.

YES: Also deletes all assets located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to *ON*, and the asset doesn't contain any other storage location assets in addition to the one that has changed, the asset is deleted and a new asset is created for the changed instance.

Note: Delete Content From Archive has no effect when discriminators are used by the location

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server.

The operation fails if the timeout is reached and the file has not been deleted. The file will no longer be visible, but it may remain in an unusable state on the video server.

HostName, Password, Port, User—Connection credentials for the FTP server used to transfer files.

Note: The Leitch FTP service uses port 2098.

Use Passive Mode (Default: NO)—Applies only if server supports passive mode. Set to *YES* to use passive FTP connections. Passive FTP connections allow FTP to be used with firewalls with port forwarding.

Note: The FTP connection defaults back to active FTP if the passive FTP connection fails.

File info command—The FTP command to use to determine whether a file is on an FTP server. This parameter is used with the instance detection pattern parameter.

Note: Do not change the value from the default unless the FTP command results in errors.

Ignore List—Kumulate won't copy-in any files that display in this list. Ignore List can be a list of filenames or a regular expression.

Use file name length validator for transfers—Leitch video servers only support a maximum file name length of 32 characters. Transferring a file with a filename longer than 32 characters to a Leitch video server will fail. Setting this parameter to *YES* verifies that the filename length of a file being copied out to the video server doesn't exceed this maximum. Kumulate won't attempt to copy out a file if its filename exceeds 32 characters; in this case Kumulate generates a warning.

If this parameter is set to *NO*, Kumulate will attempt to copy out the file regardless of the length of its filename.

Marking Key—Used to mark assets on the video server after they are discovered. This prevents the same instance from being discovered multiple times as Kumulate will ignore assets that have already been marked with its key.

The marking key is inserted into the file's wrapper. On Leitch video servers, marking keys must be at most 32 characters long. The default marking key should be changed to a shorter key that identified the Kumulate system. Each Kumulate system must have a unique marking key.

If the Marking Key parameter is left blank, the Processed Keyword parameter from the CMI Module Configuration is used.

Max Copy In (0-127, default: 0)—Only applies when the storage location is configured for copying in files and sets the maximum number of concurrent transfers from the storage location to Kumulate. The value 0 permits an unlimited number of transfers.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Max Copy Out (0-127, default: 0)—Only applies when the storage location is configured for copying out files and sets the maximum number of concurrent transfers from Kumulate to the storage location. The value 0 permits an unlimited number of transfers.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Monitoring—Specifies whether Kumulate is monitoring the location to discover and copy-in new assets.

LEITCH Storage Locations are generally used to both copy-in and copy-out media. Therefore, Monitoring is set to *ON*. It should only be set to *OFF* if the storage location won't be used to discover and copy-in assets.

Monitoring Interval—Amount of time (in seconds) the system waits for the monitoring thread. The thread is restarted when this interval passes.

This value should be higher if there are several monitored Storage Locations in the Kumulate system.

Note: This parameter should be set with the help of the installation team.

Monitored Extension—Specifies the wrapper format returned by the video server. The video server will return assets in this wrapper format, if possible. The transfer will fail if the assets cannot be wrapped in this format.

Supported wrapper formats: LXF | MXF | GXF | MOV. Default is LXF when left blank.

Naming Schema—Determines how the Asset ID is set upon discovery.

Setting this to *Asset ID* sets the Asset ID to the root filename of the discovered instance. In this case, the Asset Name, Asset ID, and Original Name of the Asset are identical.

Setting this to *UMID* sets the Asset ID to a unique UMID. This ensures unique names for all assets. The Asset Name will still be the root filename of the discovered instance.

Note: Neither instance nor asset discriminators can be used when Naming Schema is set to Asset ID.

Overwrite Video Server Instance—Transfers from Kumulate to the storage location will fail if the file already exists on the storage location when this is set to NOT ALLOWED.

The transfer will overwrite the existing file on the storage location when this is set to ALLOWED.

Polling Begin Time | Polling End Time | Polling Interval—Specifies how Kumulate polls the storage location.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Restore Using—Restore Using specifies how to name the file when an instance is transferred to this storage location. Select from these options:

Asset ID—The file is named using the transferred instance’s Asset ID.

Name—The file is named using the transferred instance's Asset Name.

Original Name—The file is named using the transferred instance’s Asset Original Name. Original Name contains the name of the asset when its source instance was discovered.

Preserve Filenames—The filename is not modified after transfer.

The Restore Extension parameter won’t be applicable when this option is used. Restore Extension is hidden if the storage location configuration is saved after setting this option.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the beginning and the end of the advertisement. Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

The entire file is transcoded when set to *SOF and EOF*.

Only a part of the file is transcoded when set to *SOM and EOM*.

See [Start of Message Parameter](#) for more information.

Transfer timeout—The transfer fails if it has not completed successfully within this amount of time. This value should only be changed if transfers routinely time out.

Transfer Mode—Always set to *Direct FTP*.

VIDEO_BIT_RATE Metadata Mapping

The Leitch DefaultVideoBitrate parameter is only used when the storage location's VIDEO_BIT_RATE metadata is not mapped. However, it is preferable to add the VIDEO_BIT_RATE metadata than to use the DefaultVideoBitrate parameter.

Use this procedure to verify that VIDEO_BIT_RATE metadata is present:

1. On the Storage Location Configuration page, click Location Metadata Mapping to display metadata mappings for the storage location:

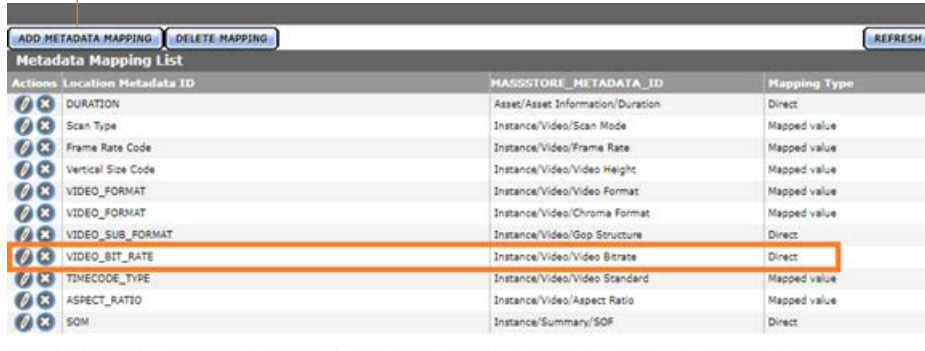


2. If there isn't any metadata mapping in the location, click Add Mapping:

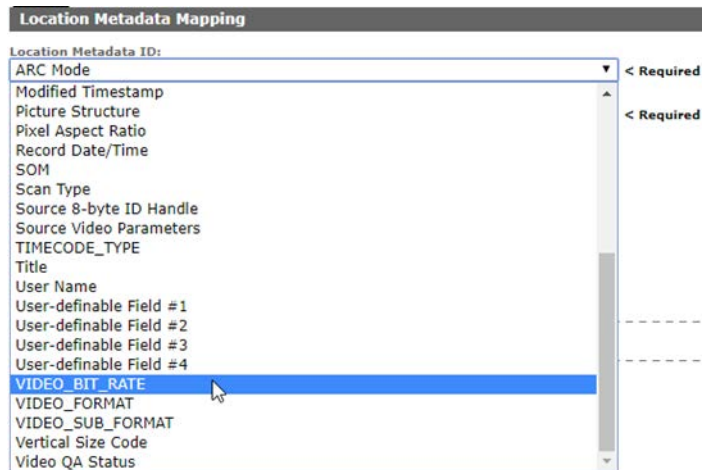


3. Verify that VIDEO_BIT_RATE is present in the Metadata Mapping List and it is mapped directly to *Instance/Video/Video Bitrate*:

ADD METADATA MAPPING button



4. If VIDEO_BIT_RATE is not in the list, add it—click ADD METADATA MAPPING and select it from the Location Metadata menu:



5. Map it to *Instance/Video/Video Bitrate* from the Metadata ID menu:

Location Metadata Mapping

Location Metadata ID: VIDEO_BIT_RATE < Required

MassStore Metadata ID: < Required

- Asset/Asset Information/Asset Id
- Instance/Summary/Instance Status
- Instance/Summary/Last Update
- Instance/Summary/Name
- Instance/Summary/SOF
- Instance/Summary/SOM
- Instance/Summary/Storage Location Name
- Instance/Summary/Storage Media
- Instance/Summary/Storage Unit Id
- Instance/Summary/Wrapper
- Instance/Summary/Wrapper Version
- Instance/Video/AFD
- Instance/Video/Aspect Ratio
- Instance/Video/Bit Depth
- Instance/Video/Chroma Format
- Instance/Video/Frame Rate
- Instance/Video/Gop Structure
- Instance/Video/Scan Mode
- Instance/Video/Video Bitrate**
- Instance/Video/Video Format
- Instance/Video/Video Height
- Instance/Video/Video Standard

6. Ensure that the Mapping Type is set to *Direct* and click OK to save:

Location Metadata Mapping

Location Metadata ID: VIDEO_BIT_RATE < Required

MassStore Metadata ID: Instance/Video/Video Bitrate < Required

Mapping Type: Direct < Required

Omneon (Harmonic) Storage Locations

Note: Omneon Spectrum and Media Deck are now known as Harmonic Spectrum Family. However, the configuration name for this type of storage location remains Omneon, and the video server type remains OMNEON.

An Omneon storage location consists of a Harmonic Spectrum video server, or an Omneon Spectrum or Media Deck video server, connected to Kumulate. Communication between the video server and Kumulate is achieved via an API using libraries installed on the Kumulate server. Media transfers between Kumulate and the video server are completed via an FTP service running on the video server. Kumulate receives a register of all the media on the video server.

Omneon (Harmonic) File and Folder Formats

Omneon Storage Locations can contain MXF, self-contained MOV, and reference MOV files. A reference MOV file is essentially a list of MOV files stored in a subdirectory.

Kumulate polls the video server via the API to discover new media files. The video server provides information about new files and a list of the reference MOV files in any reference MOV files that may be available for transfer.

Files that are transferred from Kumulate to the video server are placed on the FTP server. Files are generally located under the clip.dir directory. If the media files are reference MOV files, the media files referenced by the MOV files are located in the clip.dir/media.dir directory.

Omneon Configuration

An Omneon storage location is typically configured as both a copy-in and a copy-out location. Each Omneon storage location is configured to discover MXF, self-contained MOV, or reference MOV files.

Follow these steps to configure an Omneon storage location:

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

Actions	Location ID	Model	Comment	Status	Validation Process
[X] [i] [c]	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
[X] [i] [c]	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
[X] [i] [c]	EVS	REPOSITORY	EVS	OFFLINE	N/A
[X] [i] [c]	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
[X] [i] [c]	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
[X] [i] [c]	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
[X] [i] [c]	K2_TEST	K2	K2_TEST	OFFLINE	N/A
[X] [i] [c]	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
[X] [i] [c]	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
[X] [i] [c]	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

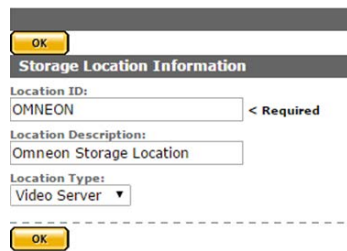
2. Create a new storage location—click Add New Location:

ADD NEW LOCATION button
Storage Location Manager

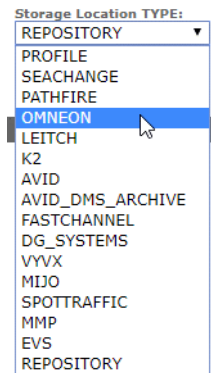


3. Enter a name and description for the repository, then click OK:

Create Storage Location

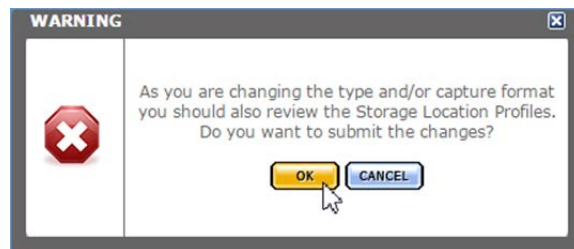


4. From the Storage Location Configuration page, set Video Server Type to K2:



5. Click OK to continue.

Kumulate displays a warning to verify that you want to submit the change to the storage location:



1. Click OK to continue. Kumulate displays the Connection tab.

2. Set the minimum parameters (see [Omneon Parameters](#) for the complete list).

API HostName—Hostname or IP address of the video server. This address is used by the API.

Clip Directory—Media file directory. This directory is usually clip.dir.

Container Extension List—The list of file extensions corresponding to the types of media files this storage location handles. Valid values are MOV and MXF. If both MOV and MXF files are handled, MOV and MXF must be separated by a comma.

HostName | Password | Port | User—Connection credentials for the FTP server used to transfer files.

Max Copy In (0-127, default: 0)—Sets the maximum number of concurrent transfers from the storage location to Kumulate. Set to 0 to permit an unlimited number of concurrent transfers.

Note: Telestream recommends that you change this to a non-zero value.

Max Copy Out (0-127, default: 0)—Sets the maximum number of concurrent transfers from Kumulate to the storage location. Set to 0 to permit an unlimited number of concurrent transfers.

Note: Telestream recommends that you change this to a non-zero value.

Media Directory Version—Always set this to 4.0 or higher.

Media Directory—The directory used for media files referenced by reference MOV files. The directory is usually clip.dir\media.dir.

Monitoring—Omneon Storage Locations are generally used to both copy-in and copy-out media. Monitoring should be kept *ON* unless the storage location will only be used for copy-out.

Naming Schema—Sets whether assets are named using Asset ID or using UMID.

Note: Instance metadata discriminators cannot be used when Naming Schema is set to Asset ID. See [Fast Initialization & Delete Content From Archive](#) for more information.

Player Version—Must be set to 4.6 or higher.

Omneon Parameters

These parameters are used by Omneon Storage Locations.

Caution: Do not modify any parameter that doesn't display in this list. Modifying an unlisted parameter may affect Kumulate's operations.

API Hostname—The hostname or IP address of the video server used by the API.

Allow Rename—Allows the renaming of an instance copied out to the video server. Only the physical file on the video server is renamed. The instance name on Kumulate doesn't change.

This parameter only applies to MMP requests and doesn't apply to requests made using the Kumulate web app.

Clip Directory—The directory used for the clip files.

Files are transferred between the video server and Kumulate using the video server's internal FTP server. The MXF and MOV files, including reference MOV files, are usually kept in the clip.dir directory. This directory may be different in certain configurations.

The files referenced by reference MOV files are stored in a subdirectory. The Media Directory parameter must point to this directory.

Checksum Type and Checksum Validation—Instance checksums are calculated to ensure that instance data is not corrupted.

When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. The instance's checksum is added to the database if it doesn't already exist. The transfer fails and an error is generated if the instance's checksum exists in the database, but the two checksums do not match.

An additional check is made after the instance has been fully copied to the location if After Write is selected for Checksum Validation. The transfer will fail if the checksum of the written instance doesn't match the checksum in the database.

Container Extension List—The list of file extensions corresponding to the types of media files this storage location handles. Valid values are MOV and MXF. If both MOV and MXF files are handled, MOV and MXF must be separated by a comma.

MOV may refer to either self-contained or reference MOV files.

Note: If two files have the same name except for their extensions, only one file is discovered. For example, if *Instance.mxf* and *Instance.mov* exist on the video server, only one of those files is discovered.

Delete Content From Archive (Default: NO)—Determines whether an asset's archived assets are deleted when the physical instance on the storage location changes.

When an instance changes on a storage location, the existing instance is deleted and replaced with the changed instance.

YES: Also deletes all assets located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Assets parameter in the Asset Manager module is set to *ON*, and the asset doesn't contain any other storage location assets, the asset is deleted and a new asset is created for the changed instance.

Note: Delete Content From Archive has no effect when discriminators are used by the location.

Delete From Video Server—Allows the deletion of files from the storage location after they have been copied in to Kumulate.

Delete Timeout—The amount of time to wait for a file to be physically deleted from the video server.

The operation fails if the timeout is reached and the file has not been deleted. The file will no longer be visible, but it may remain in an unusable state on the video server.

HostName, Password, Port, User—The connection credentials for the FTP server used to transfer files.

Use Passive Mode (if server supports it)—Set this parameter to *YES* to use passive FTP connections. Passive FTP connections allow FTP to be used with firewalls with port forwarding.

It is set to *NO* by default.

Note: The FTP connection will default back to active FTP if the passive FTP connection fails.

File info command—The FTP command to use to determine whether a file is on an FTP server.

Note: Don't change the value from the default unless the FTP command results in errors.

This parameter is used with the instance detection pattern parameter.

Ignore extra notify open—Indicates whether to ignore extra OPEN messages sent by the video server to Kumulate.

The extra OPEN message can cause Kumulate to fail to add newly-discovered assets to its database.

This may not occur with all versions of the video server. The value of this parameter should only be changed to *YES* if discovery errors occur.

Ignore List—Kumulate won't copy-in any files that display in this list. Ignore List can be a list of filenames or a regular expression.

Max Copy In—This setting only applies when the storage location is configured for copying in files and sets the maximum number of concurrent transfers from the storage location to Kumulate.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Max Copy Out—This setting only applies when the storage location is configured for copying out files and sets the maximum number of concurrent transfers from Kumulate to the storage location.

The value can be between 0 and 127, where 0 means that there is no limit on the number of transfers.

The default value is 0.

Note: Telestream **strongly recommends** that you change this to a non-zero value.

Media Directory Version—This parameter was introduced to allow for differences between earlier and later releases of the Omneon software. No new installations use a release of the Omneon (now Harmonic) software that is lower than 4.0.

Always set this to *4.0 or higher*.

Media Directory—The directory used for media files referenced by reference MOV files.

Files are transferred between the video server and Kumulate using the video server's internal FTP server. The MXF and MOV files, including reference MOV files, are kept in the Clip Directory. The MOV files referenced by the reference MOV files are kept in a subdirectory of this directory; typically *media.dir*.

The full path to the subdirectory must be specified for Media Directory. For example, if the reference MOV files are located in *clip.dir*, and the referenced files are located in *media.dir*, Media Directory must be set to *clip.dir/media.dir*.

Monitoring—Specifies whether Kumulate is monitoring the location to discover and copy-in new assets.

OMNEON Storage Locations are generally used to both copy-in and copy-out media. Therefore, Monitoring is set to *ON*. It should only be set to *OFF* if the storage location won't be used to discover and copy-in assets.

Naming Schema—Determines how the Asset ID is set upon discovery.

Setting this parameter to *Asset ID* sets the Asset ID to the root filename of the discovered instance. In this case, the Asset Name, Asset ID, and Original Name of the Asset are identical.

Setting this parameter to *UMID* sets the Asset ID to a unique UMID. This ensures unique names for all assets. The Asset Name will still be the root filename of the discovered instance.

Note: Neither instance nor asset discriminators can be used when Naming Schema is set to Asset ID.

Overwrite Video Server Instance—Transfers from Kumulate to the storage location will fail if the file already exists on the storage location when this is set to NOT ALLOWED.

The transfer will overwrite the existing file on the storage location when this is set to ALLOWED.

Player Version—This parameter was introduced to allow for differences between earlier and later releases of the Omneon software. No new installations use a release of the Omneon (now Harmonic) software that is lower than 4.0.

Always set this to *4.0 or higher*.

Polling Begin Time, Polling End Time, Polling Interval (sec)—Controls how Kumulate polls the storage location.

Polling Begin Time and Polling End Time instruct Kumulate to poll the storage location only between Polling Begin Time and Polling End Time. These parameters are based on the 24-hour clock, and can only be set to hours.

Polling Interval(sec) instructs Kumulate to poll the storage location every specified number of seconds. The interval begins when the discovery operation ends. The minimum value for this interval is 10s. Setting this parameter to 0 effectively sets it to 10s.

Process DAL0—Ensures compatibility with files that contain DAL0 metadata. Changing the value of Process DAL0 to YES only has an effect if GenerateDAL0 in the ALL Module Configuration has been set to YES.

Restore Using—Restore Using specifies how to name the physical file when an instance is transferred to this storage location. There are four options for Restore Using:

Asset ID—The file is named using the transferred instance’s Asset ID.

Name—The file is named using the transferred instance’s Asset Name.

Original Name—The file is named using the transferred instance’s Asset Original Name. Original Name contains the name of the asset when its source instance was discovered.

Preserve Filenames—The filename is not modified after transfer.

The Restore Extension parameter won’t be applicable when this option is used. Restore Extension is hidden if the storage location configuration is saved after setting this option.

Note: If the asset source location used Asset ID as the Naming Schema, the Asset ID, Asset Name, and Original Name may be identical.

Transcode Using—Some files may contain information at the beginning and end of the file that is not necessarily meant to be transcoded. This happens most often with commercial spots which can have agency information, tags, and blacks appended to the beginning and the end of the advertisement. Selecting *SOM* and *EOM* prevents these extraneous bits from being transcoded. Additional configuration is needed to use *EOM* and *SOM*.

The entire file is transcoded when set to *SOF and EOF*. Only a part of the file is transcoded when set to *SOM and EOM*.

See [Start of Message Parameter](#) for more information.

Transfer timeout—The transfer fails if it has not completed successfully within this amount of time. This value should only be changed if transfers routinely time out.

Transfer Mode—Always set to *Direct FTP*.

Discriminators for Video Server Locations

The asset discriminators and instance discriminators under the Discriminators tab are used to differentiate between assets with the same name on the same video server.

Asset discriminators and instance discriminators are metadata used to determine whether an instance that has changed is the same instance or a different instance than one that is already on the storage location.

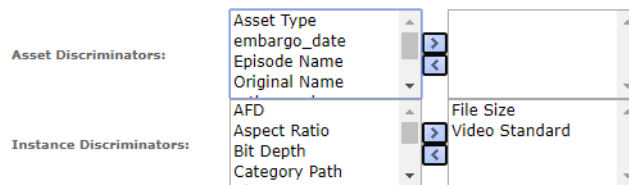
Note: Delete Content From Archive has no effect when discriminators are used.

When an instance has changed, the instance discriminator metadata values of the original and changed assets are compared. If any of the discriminator metadata values do not match, the original instance is deleted and a new asset is created for the changed instance.

The original asset is deleted if the original instance is the only instance in its asset and Delete Assets with No Assets is set to ON.

Discriminator metadata is selected from the left hand side list and moved to the right hand side using the arrow icon.

For example, to compare assets based on file size and video standard, select *File Size* and *Video Standard*:



When Kumulate detects that the physical instance on the storage location has changed, it will compare the file size and video standard of the original instance to the changed assets. If either of the two metadata values do not match, then the current instance in Kumulate is deleted and a new asset is created for the instance on the physical location.

Note: Naming Schema must be set to *UMID*, and Extract Metadata must be set to *YES* when using discriminators. No assets are discovered on the storage location if discriminators are used but the storage location's naming schema is not set to *UMID*.

Fast Initialization & Delete Content From Archive

The Fast Initialization and Delete Content From Archive parameters together determine what happens to archive assets when an instance with the same name as an existing asset is discovered on a storage location.

Delete Content From Archive determines whether an asset's archived assets are deleted when a new instance with the same name is discovered on a storage location.

When turned on, Fast Initialization causes Kumulate to only perform an in-depth cataloging of the assets on a storage location once; then subsequently only cataloging changes to the assets.

Delete Content From Archive Setting	Fast Initialization Setting	Result
No	No	<p>Kumulate deletes the existing archived assets. The discovered instance is added to the asset.</p> <p>The existing asset is deleted if the Asset Manager Delete Asset With No Assets parameter is set to <i>ON</i> and the asset has no other assets on Storage Locations. A new asset is created, and the new instance is added to this asset.</p> <p>If the Naming Schema parameter is set to <i>UMID</i>, there may be more than one asset with the same name. In this case, Kumulate will generate an exception.</p>
Yes	No	<p>Kumulate deletes all the assets in the existing asset, and creates a new asset for the newly-discovered instance.</p> <p>The asset is deleted if the Asset Manager Delete Asset With No Assets parameter is set to <i>ON</i>.</p>
Yes	Yes	<p>Kumulate will delete all assets in the existing asset. The existing asset is deleted if the Asset Manager Delete Asset With No Assets parameter is set to <i>ON</i>.</p> <p>A new asset is created for the newly-discovered instance.</p>
No	Yes	<p>Kumulate ignores the newly-discovered instance. No changes are made to the existing asset.</p>

Managing Archive Locations

Data libraries and the caches are referred to as *archive locations*. The cache is used as temporary storage and storage for the low-resolution proxies. Data libraries are used for long-term storage.

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).

Topics

- [Cache Configuration](#)
- [Adding A Tape Library](#)
- [Registering LibAttach for StorageTek/Oracle Network Libraries](#)
- [Configuring the Archive Location](#)
- [Formatting Tapes](#)
- [Defragmenting Tapes](#)
- [Adding Group Access to a Location](#)
- [Importing LTFS Tapes](#)
- [Archive Search](#)
- [Recovering Content from Tapes](#)

Note: In general, archive locations are connected to the Kumulate server and Data Movers via fiber channels rather than via a network connection. A notable exception are StorageTek libraries using LibAttach. These are connected to Kumulate via a network connection.

Cache Configuration

Every Kumulate system has exactly one cache. The cache is created by default and is used as a dedicated archive location connected to the Kumulate server and its Data Movers.

Although the physical cache location is generally connected via a fiber channel, the cache can also be connected via a network, where a UNC path is used to ensure that the connection is always available. A UNC path also ensures that additional servers and workstations that are not directly connected to the cache can still access it.

Four directories must be created on the physical cache:

Directory Name	Description
Media	Main cache directory. Any instance that is located on the cache, with the possible exception of proxy assets, is located in this directory.
ProxyRoot	Dedicated directory for low-resolution proxies. Low-resolution proxies can be located in the main cache along with the other cache assets or they can be kept in a separate directory. Proxies located on a separate directory cannot be transferred to other locations. The path to the proxy assets is also used to configure the Tomcat Service for proxy streaming.
Attachments	Attachment directory. Asset attachments are stored in this directory including closed caption files and thumbnails.
TempAttachment	Temporary directory that is used as a temporary repository when assets and attachments are discovered or uploaded.

The cache information is entered into Kumulate on the Administration page during installation. The cache information can also be viewed on Administration pages.

Follow these steps to configure the cache:

1. Navigate to System > Administration > Locations > Archive to display the Archive Location Manager page:

Archive Location Manager

Priority	Actions	Location ID	Model	Comment	Status	Validation Process
0	[X] [Refresh] [Checkmark]	MASSTORE	Cache	MASSTORE	ONLINE	N/A
1	[X] [Refresh] [Checkmark]	QUADSTOR	ADIC		ONLINE	N/A
2	[X] [Refresh] [Checkmark]	DISK_ARCHIVE	Disk Archive	Archive location	ONLINE	N/A
3	[X] [Refresh] [Checkmark]	DISK_ARCHIVE_2	Disk Archive	DISK_ARCHIVE 2	ONLINE	N/A
3	[X] [Refresh] [Checkmark]	DISK_ARCHIVE_AWS	Disk Archive		ONLINE	N/A
4	[X] [Refresh] [Checkmark]	VTL LIBRARY	ADIC	VTL LIBRARY	OFFLINE	N/A

- Click the pencil icon on the MASSSTORE Cache to display the Cache Location Manager and click Configure (pencil icon) to edit the cache details:

Actions	Location ID	Model	Comment	Status	Validation Process
	MASSSTORE	Cache	MASSSTORE	ONLINE	N/A

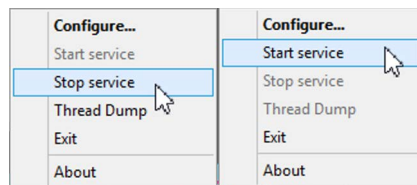
- The main cache path, proxy cache path and, attachment path and their corresponding UNC paths should be filled in correctly:

4.

Cache Type:	Windows
Checksum Type:	MD5
Checksum Verification:	No Verification
Content Backup:	NO
Content Backup Path:	
Delete timeout:	30
Main Cache:	YES
Main Cache Path:	\\10.1.4.165\Sandra\Medi
Main Cache Share:	\\10.1.4.165\Sandra\Medi
Main Unit ID:	CACHE
No Directories:	FALSE
Password :	
Protocol:	file
Proxy Cache:	YES
Proxy Cache Path:	\\10.1.4.165\Sandra\Prox
Proxy Cache Share:	\\10.1.4.165\Sandra\Prox
Proxy Unit ID:	CACHE
Attachments Path:	\\10.1.4.165\Sandra\Atta
Temporary upload folder:	C:\TempAttachment
Remote Addresses:	CACHE:2001
Transfer timeout:	7200

- Click OK to save the configuration.

- Stop and start the Apache Tomcat Service to restart Kumulate—right-click on the Tomcat icon in the system tray:



Adding A Tape Library

When you create a new archive location, Kumulate automatically detects the libraries connected to it. Before creating a new archive location, make sure that the model of any library connected to Kumulate is known.

Follow these steps to create a new archive location:

1. Navigate to System > Administration > Locations > Archive to display the Archive Location Manager page:

Archive Location Manager

The screenshot shows the 'Archive Location Manager' page. At the top, there are buttons for 'ADD NEW LOCATION' and 'REFRESH'. Below these is a dropdown menu showing '1 - 6' and '(6 Items Returned)'. The main content is a table with the following columns: Priority, Actions, Location ID, Model, Comment, Status, and Validation Process.

Priority	Actions	Location ID	Model	Comment	Status	Validation Process
0	[X] [Refresh] [Check]	MASSTORE	Cache	MASSTORE	ONLINE	N/A
1	[X] [Refresh] [Check]	QUADSTOR	ADIC		ONLINE	N/A
2	[X] [Refresh] [Check]	DISK_ARCHIVE	Disk Archive	Archive location	ONLINE	N/A
3	[X] [Refresh] [Check]	DISK_ARCHIVE_2	Disk Archive	DISK_ARCHIVE 2	ONLINE	N/A
3	[X] [Refresh] [Check]	DISK_ARCHIVE_AWS	Disk Archive		ONLINE	N/A
4	[X] [Refresh] [Check]	VTL_LIBRARY	ADIC	VTL_LIBRARY	OFFLINE	N/A

2. Click Add New Location to display the Create Archive Location page. Kumulate detects the devices connected to it and lists them in the Device Information table:

The screenshot shows the 'Create Archive Location' form. It has a 'Location ID' field, a 'Location Description' field, and a 'Location Type' dropdown menu currently set to 'Data Library'. Below these is a 'Data Library Type' dropdown menu set to 'SCSI_CHANGER'. The 'Devices Information' table is visible below the form.

Device ID	Model	Status	Vendor	Product/model	Serial Number	Element Address	SCSI Path(s)
SPECTRA_INC	SPECTRA_T120	ONLINE	SPECTRA	PYTHON	9110003E1C	1	hba = 0, SCSI ID = 0, LUN = 0 hba = 0, SCSI ID = 0, LUN = 1 hba = 0, SCSI ID = 1, LUN = 0 hba = 0, SCSI ID = 1, LUN = 1
SPECTRA_DRV-HH47	LTO7	ONLINE	IBM	UATQJH-HH47	10110003E1C	236	hba = 0, SCSI ID = 0, LUN = 0 hba = 0, SCSI ID = 0, LUN = 1

The SCSI_CHANGER data library type is selected by default. When SCSI_CHANGER is selected, Kumulate automatically detects all the devices connected via a SCSI connection.

Select the NETWORK data library type to automatically discover all the StorageTek libraries connected to Kumulate via LibAttach. See [Registering LibAttach for StorageTek/Oracle Network Libraries](#) for details on using the NETWORK library type.

3. Select the device to use with the location, provide the location with a name, then click OK to create the location:

Create Archive Location

The location displays in the Manage Archive Location page. Before the location can be used, it must be validated to discover all the tapes in the library.

4. Click Validate in the Manage Archive Location menu:

Manage Archive Location

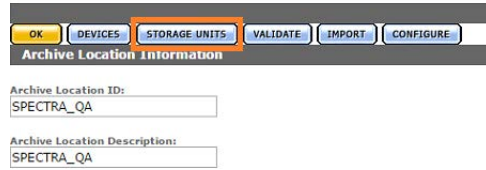
Statistical Information	
Location Type	Data Library
Number of Assets	0
Available Space (GB)	N/A
Total Space (GB)	N/A
Total Slots	10
Number of Tapes	4
Robot Movements Count	0
Current Errors	0
Occupied Slots	4
Status	ONLINE

Drive Slot ID	Status	Media ID	Read/Write Operation
SPECTRA_QA_SPECTRA_DRV-HH7	ONLINE		NONE

Kumulate displays this dialog box to verify which validate action to use. Click Validate Full to discover all the tapes in the library:

5. Click Storage Units in the Manage archive location to get a list of all the tapes in the library:

Manage Archive Location



The tapes are in an unformatted state when the library is first validated. Assets cannot be copied to the library until at least one of its tapes is formatted.

Note: Do not format tapes that you will add manually to a media group. See [Managing Media Groups](#) for details.

Storage Unit Search Results

Actions	Select	ID	Tape Generation	System	Frag. Level	Status	Comment
	<input type="checkbox"/>	000005L	LTO6		0	UNFRMTED	LTO6
	<input type="checkbox"/>	011838L7	LTO7		0	UNFRMTED	LTO7
	<input type="checkbox"/>	011838L7	LTO7		0	UNFRMTED	LTO7
	<input type="checkbox"/>	CLN07WOLX	N/A		0	ONLINE	CLEANING TAPE

Registering LibAttach for StorageTek/Oracle Network Libraries

A StorageTek library connected to Kumulate via LibAttach must be configured as a NETWORK library type.

When the NETWORK library type is used, Kumulate sends commands to the ACSLS using the LibAttach API.

To use the NETWORK library type, be sure to registers the LibAttach API before you start the Tomcat Service. Kumulate displays an error if LibAttach isn't registered:

Create Archive Location

The get_servers command has failed C++ Statics::acs_get_servers()Class not registered

OK

Archive Location Information

Location ID: < Required

Location Description:

Location Type:
Data Library ▼

Data Library Type
NETWORK ▼

Server Address:

Before registering the LibAttach API, ensure that LibAttach for 64-bit architecture is installed on the Kumulate host.

Follow these steps to register the LibAttach API:

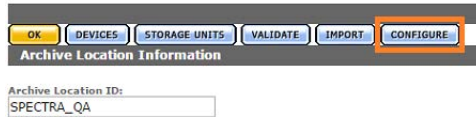
1. Stop the Apache Tomcat Service if its running—right-click on the Tomcat icon in the system tray.
2. Open a command window and change the directory to `C:\Masstech\bin\dll\x64\`.
3. Execute the `ComStoragetek.exe` command as follows:
ComStoragetek.exe /regserver
4. Restart the Tomcat Service after the API is registered; now you can use the NETWORK library type.

Configuring the Archive Location

Follow these steps to configure an archive location:

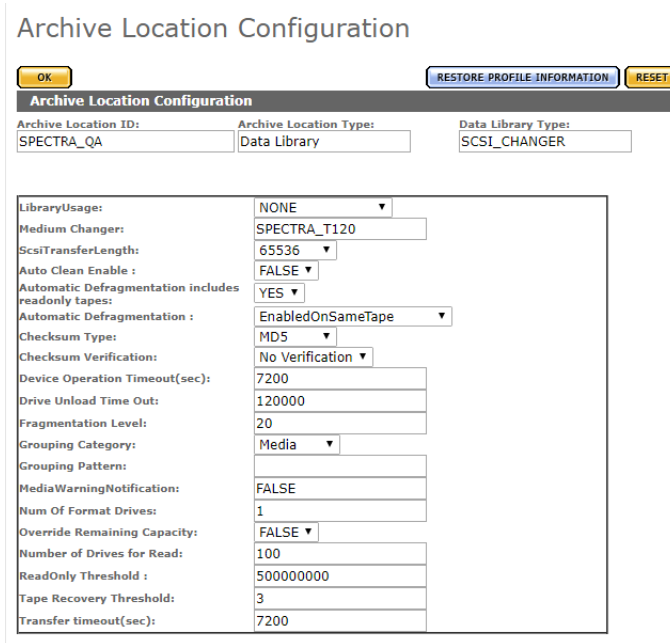
1. Click Configure in the Manage Archive Location page:

Manage Archive Location



2. Make changes to parameters as appropriate.

Caution: Take special care when setting parameters related to de-fragmenting



LibraryUsage—The name of the library being used by the archive location.

Medium Changer—The name of the medium changer being used by the archive location.

ScsiTransferLength—The maximum length for transfers across the SCSI interface.

ACSL Commands Timeout (in seconds)—The time in seconds to wait for an ACSLS to respond when connected to a StorageTek/Oracle library. Only displayed when configuring StorageTek/Oracle libraries.

Auto Clean Enable—This enables or disables automatic cleaning of the archive location. When set to TRUE it is enabled; setting it to FALSE disables this function.

Automatic Defragmentation—includes readonly tapes

When set to NO, read only tapes won't be defragmented automatically.

Checksum Type—Generate a checksum using the specified algorithm.

This is set to MD5 by default.

Checksum Validation—When an instance is copied to the location, its checksum is calculated using the algorithm specified by Checksum Type. The instance's checksum is added if it doesn't exist in the database. The transfer fails and an error is generated if the instance's checksum does exist in the database, but the two checksums do not match.

An additional check is made after the instance has been fully copied to the location if After Write is selected. The transfer will fail if the checksum of the instance after copy doesn't match the checksum in the database.

This is set to No Verification by default.

Automatic De-fragmentation—When enabled, tapes in the library is de-fragmented automatically when the library's fragmentation level is reached. Two options are available for de-fragmenting tapes:

EnabledOnSameTape—copies the undeleted contents of a tape to the cache, defragments the tape, then recopies the contents back to the same tape.

EnabledUsingGroupPattern—copies the undeleted contents back to any tape in the media group specified in Grouping Pattern.

Device Unload Timeout(sec)—

Fragmentation Level—When enabled, this is the percentage by which the ratio of deleted content to written content needs to be exceeded to trigger automatic defragmentation.

Grouping Category—The media group category to use when defragmented content is recopied to tape.

Used with the Automatic Defragmentation EnabledUsingGroupPattern option.

Grouping Pattern—The media group to use when defragmented content is recopied to tape.

Used with the Automatic Defragmentation EnabledUsingGroupPattern option.

MediaWarningNotification—

Num Of Format Drives—

Override Remaining Capacity—

Number of Drives for Read—

ReadOnly Threshold—The tape is marked as read after the empty space drops to this level or below.

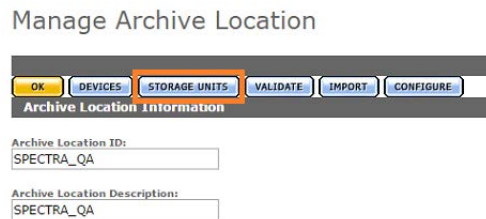
Server Address—The IP address of the library server.

Tape Recovery Threshold—

Transfer Timeout—

Formatting Tapes

Tapes must be formatted before they can be written to. Tapes belonging to a particular archive location are accessed by clicking the Pencil icon next to the archive location, then click Storage Units as shown here:



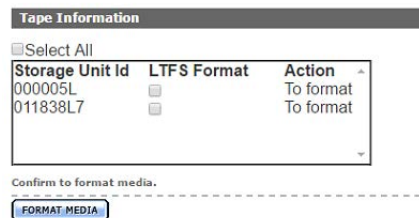
Tapes can also be accessed by performing a search using the Archive Search. Select all or some of the tapes to format, then click Format Media as shown here:

Actions	Select	ID	Tape Generation	System	Frag. Level	Status	CommentGroup Name	Location
	<input type="checkbox"/>	000001L6	LTO6		0	UNPRINTED	LTO6	QUALSTAR
	<input type="checkbox"/>	000002L6	LTO6		0	UNPRINTED	LTO6	QUALSTAR
	<input type="checkbox"/>	000003L6	LTO6		0	UNPRINTED	LTO6	QUALSTAR
	<input type="checkbox"/>	000005L	LTO6	LTF5	0	UNPRINTED	DEFAULT_GROUP	SPECTRA_QA
	<input checked="" type="checkbox"/>	011838L7	LTO7		0	UNPRINTED	DEFAULT_GROUP	SPECTRA_QA
	<input type="checkbox"/>	011839L7	LTO7		0	OFFLINE	LTO7	SPECTRA_QA
	<input type="checkbox"/>	011848L7	LTO7	LTF5	0	ONLINE	DEFAULT_GROUP	QUALSTAR
	<input type="checkbox"/>	011849L7	LTO7		0	OFFLINE	DEFAULT_GROUP	QUALSTAR
	<input type="checkbox"/>	012319L7	LTO7		0	UNPRINTED	LTO7	QUALSTAR
	<input type="checkbox"/>	CLN07W6LK	N/A		0	ONLINE	CLEANING TAPE	SPECTRA_QA

Kumulate displays the Media Format page. Select the tapes that require LTF5 formatting and click Format Media.

Note: If the tape is not an LTF5 tape, Kumulate won't use LTF5 formatting, even if LTF5 Format is selected.

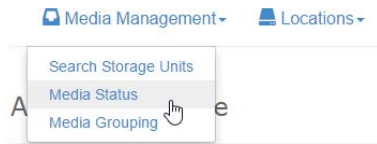
Media Format



Kumulate displays the Formatting Status page:

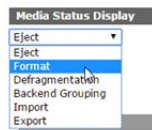
StorageUnitID	Comment	Status	Action
011838L7	LTO7	To format	
000005L	LTO6	Fetching	

Tape status proceeds from To format, which indicates that the tape is queued for formatting, to Fetching, which indicates that the tape is being moved to a drive, and finally, to Formatting. Tape status can also be viewed on the Media Status page:



On the Media Status page, select the operation you want to monitor. To monitor tape formatting, select Format from the menu:

Media Status



Tapes and their status that are in the process of being formatted is displayed:

Media Status

Media Status Display

Format

StorageUnitID	Comment	Status	Action
011838L7	LTO7	To format	
000005L	LTO6	Unloading	

The status changes to FRMTTED after formatting is complete. Tapes won't change to ONLINE until an instance has been copied to them:

Storage Unit Search Results

1 - 4 (4 Items Returned) Select All

Actions	Select	ID	Tape Generation	System	Frag. Level	Status	Comment
	<input type="checkbox"/>	000005L	LTO6		0	UNFRMTED	LTO6
	<input type="checkbox"/>	011838L7	LTO7		0	UNFRMTED	LTO7
	<input type="checkbox"/>	011839L7	LTO7		0	UNFRMTED	LTO7
	<input type="checkbox"/>	CLN07WOLX	N/A		0	ONLINE	CLEANING TAPE

Defragmenting Tapes

When an instance is deleted from a tape in Kumulate, the record of the instance is deleted from the database. However, the content is not deleted from the tape itself; a physical copy is left on the tape.

A tape can be defragmented to make room on the tape and to consolidate all the content that is still in Kumulate.

When a tape is defragmented, all the content that remains in Kumulate is copied to the cache, and the EOD (End Of Data) mark is reset to the beginning of the tape. The content is then recopied to the original tape, or to any tape in a specified media group.

Defragmenting can be triggered automatically for all tapes on a tape library archive location by setting Automatic Defragmentation to either *EnabledOnSameTape* or *EnabledUsingGroupPattern*. Defragmenting will then occur whenever the ratio of deleted content to written content exceeds the percentage specified by the Fragmentation Level parameter.

Automatic defragmenting can be disabled for read only tapes using the Automatic Defragmentation includes readonly tapes parameter. This prevents content that has been deleted in Kumulate from being overwritten on the tape.

Adding Group Access to a Location

Storage and managed storage locations are not automatically visible to users. A location must be added to a user’s Group ACL (Access Control List) for the user to have access to it.

Follow these steps to add group access to a location:

1. Navigate to System > Administration > Security > Group Information to display the Group Information page:

User Group Information

See rights: Applied

Existing User Group									
Actions	Group Name ▲	Storage Unit	Asset	Instance	Administration	Proxy	Cancel Operations	Priority Changes	Security
	ArchiverTestGroup	Full Control	Full Control	Full Control	No Access	Full Control	Full Control	Full Control	No Access
	Federation	No Access	Read	Read	No Access	Read	Full Control	No Access	No Access
	Gallery Group	Modify	Modify	Add	No Access	Read	Full Control	No Access	No Access
	MNTNREAD	Read	Read	Read	Read	Read	No Access	No Access	No Access
	Montana User Group	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control
	News Group	Read	Full Control	Full Control	No Access	Read	No Access	No Access	No Access

2. The default view in the User Group Information page doesn’t allow the user to create or edit groups. Selecting Future from the See rights menu enables editing:

User Group Information

See rights: Applied

See rights: Applied, Future

Actions	Group Name ▲	Storage Unit	Asset
	Montana User Group	Full Control	Full Control
	News Group	Read	Full Control
	Regular User	Read	Read

3. Click the Pencil icon to the left of the group to select the group to edit:

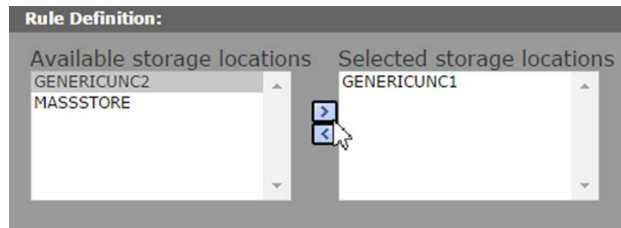
Existing User Group				
Actions	Group Name ▲	Storage Unit	Asset	Instance
	Montana User Group	Full Control	Full Control	Full Control
	News Group	Read	Full Control	Full Control
	Regular User	Read	Read	Read

4. An existing ACL can be modified to include a new storage location, or a new ACL can be created for the storage location. Click the icon to the left of a resource filter under storage location ACL to modify an existing ACL.

Note: Adding a location to an existing ACL resource filter modifies all ACLs and groups that use that filter.

Storage Location ACL					
Actions	ACL Identifier	Resource Filter	User Group	View	Status
	MS_FULL_SL	All Storage Locations	MS Full Access Group		Enabled

5. Select locations from the Available storage locations list, then use the right arrow to add them to the Selected storage locations list:

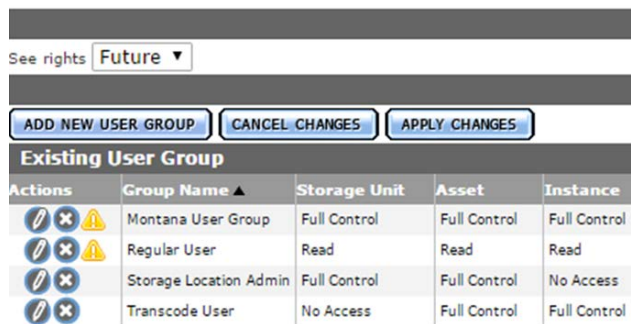


6. Click Add to add the location to the filter. The location is added to the Matching Rule Set list:

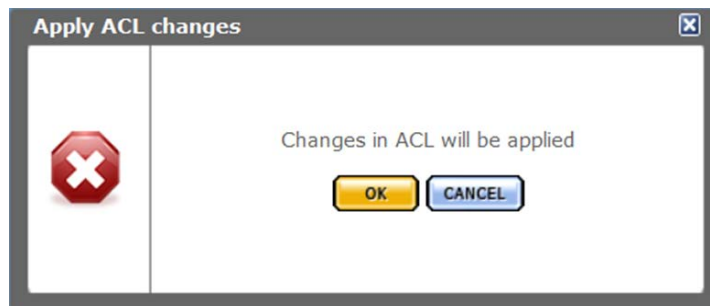
Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	MASSTORE	N/A	
	<input type="checkbox"/>	GENERICUNC1	N/A	
	<input type="checkbox"/>	GENERICUNC2	N/A	

7. Click OK to save the changes and return to the User Group Information page.
8. An attention symbol will remain next to the group until all the changes are applied or canceled:

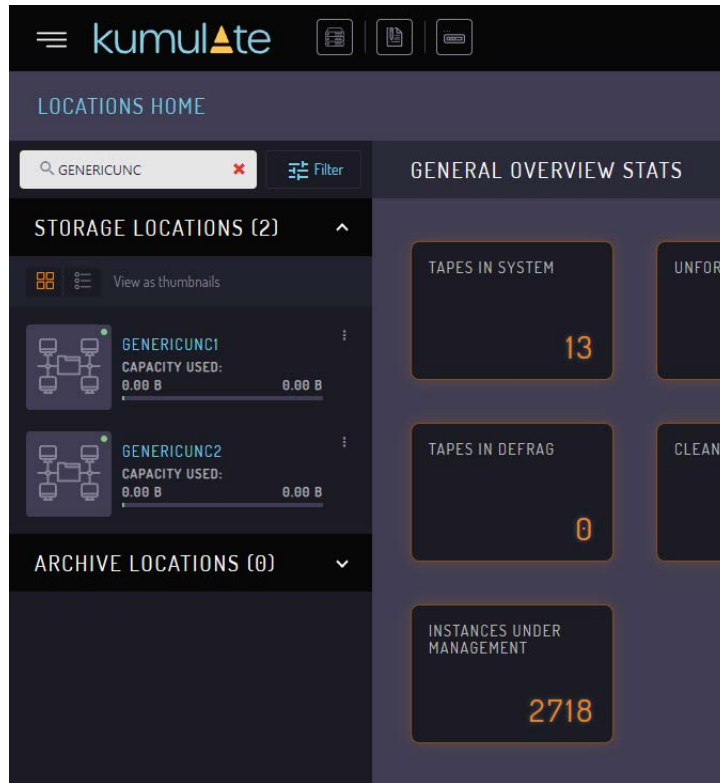
User Group Information



9. Click Apply Changes. A confirmation dialog displays; click OK to continue:



10. The new storage location displays:



Importing LTF5 Tapes

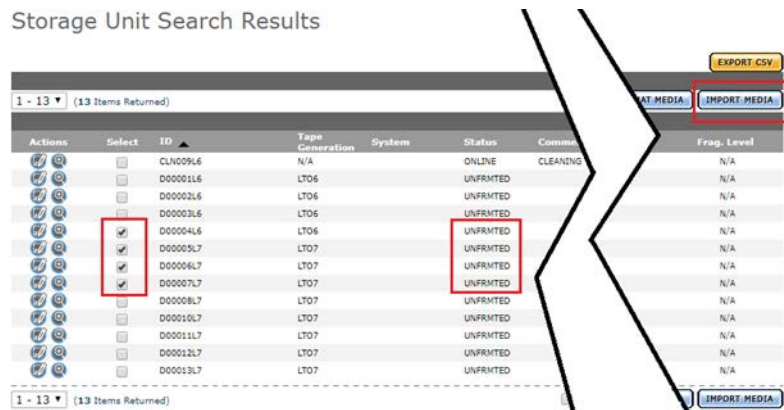
Kumulate can import tapes written in LTF5 format by other systems. When importing projects from LTF5 tapes, Kumulate supports the ability to choose the parent folder for the assets to be imported. The LTF5 structures are saved in the database (for future use) after they have been read. Users can initiate an operation to read the LTF5 structure (index and label) for selected tapes, and then download file(s) displaying the structure.

When a tape is sent for import, if the structures are present, the import is executed, regardless of whether the drives are available for import. A successful import won't remove the LTF5 data; allowing the user to run subsequent imports with different parameters.

If one tape is selected, the download operation will produce a file containing an explanation of the LTF5 structure related to the import operation. If more than one tape is selected the download will create a zip archive containing an explanation of the LTF5 structure for the selected tapes.

Users can view the status of the operations on the Media Status page. They can then set the folder depth for the tape (as in previous releases) based on the tape's structure.

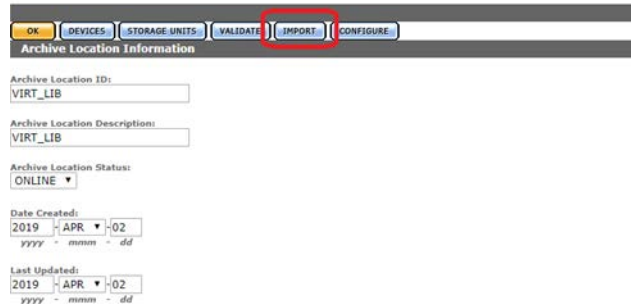
To access this function navigate to System > Administration > Locations > Archive and select Storage Units. From this page, you can select the tapes to import and then click Import Media:



After clicking Import, Kumulate displays a new page where you can configure the LTF5 content import criteria. This is presented in the following section regarding the import of LTF5 tapes.

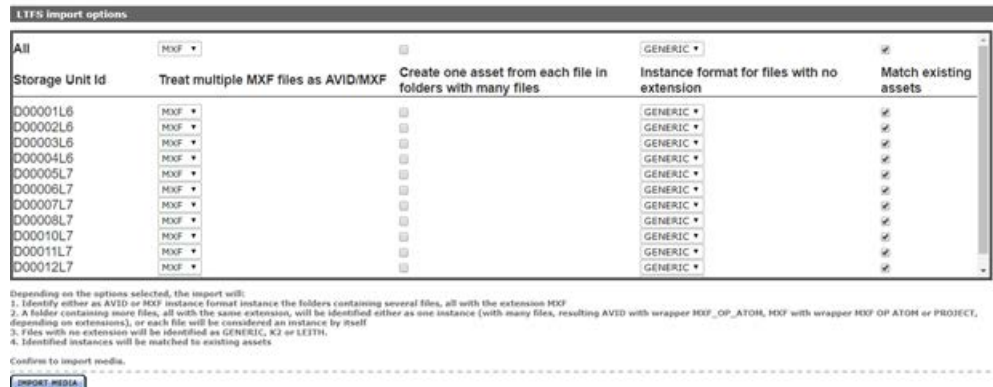
You can also access the LTFS content import—navigate to System > Administration > Locations > Archive. Select the library and click Import:

Manage Archive Location



Individual parameters can be set for each tape selected after the selection of tapes to import is determined:

Media Import



Set these parameters:

Treat multiple MXF files as AVID/ MXF—Applies to folders with multiple files with XMF extensions and instructs the system to identify these files as either AVID or as MXF assets.

Create one Asset from each file in folders with many files—Combined with the option above, will generate either one AVID/MXF instance with capture format MXF_OP_ATOM (if unchecked) or many AVID/ MXF assets with capture format MXF_OP_ATOM/ MXF (if checked).

Instance format for files with no extension—For files that have no extension this instructs the system to consider them as GENERIC/ K2 or LEITCH.

Match existing assets—Attempts to match the newly imported assets to existing assets based on the original name or, if not filled, on the alias. If no match is found, a new asset is created.

The system will attempt to determine what format of content is on each tape during the import process and set the instance format and wrapper appropriately.

Deleting LTFS Data

Users can manually delete the LTFS data for the selected tapes. The data is removed automatically when the tape goes into a formatted state. This means that even if the tape had content on it, the user knowingly chose to format the tape. In this case, the LTFS index is no longer valid for the tape content.

Use the appropriate button to perform the desired operation:

Media Management - Locations - Content - Processing - Security - DRAC Control - Modules - Logs

Storage Unit Search Results

1 - 10 (10 Items Returned) Select All

Actions	Select	ID	Bin	Generation	System	Status	Comment	Group Name	Location	Capacity	Used	Usage	Frags	Level
<input type="checkbox"/>	<input type="checkbox"/>	KAT131.0	1024	L708	FRMTD	L708	GRP_1		VTL_QUAD	12.88 TB	N/A	0.00 %	0.00 %	
<input type="checkbox"/>	<input type="checkbox"/>	KAT132.0	1025	L708	FRMTD	L708	GRP_2		VTL_QUAD	12.88 TB	N/A	0.00 %	0.00 %	
<input type="checkbox"/>	<input type="checkbox"/>	KAT133.0	1026	L708	UNFRMTD				VTL_QUAD	N/A	N/A	N/A	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	KAT144.0	1027	L708	UNFRMTD				VTL_QUAD	N/A	N/A	N/A	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	KAT150.0	1028	L708	OFFLINE				VTL_QUAD	N/A	N/A	N/A	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	KAT202.0	1029	L708	ONLINE	L708	DEFAULT_GROUP		VTL_QUAD	12.88 TB	32.00 GB	0.25 %	0.17 %	
<input type="checkbox"/>	<input type="checkbox"/>	KAT232.0	1030	L708	UNFRMTD				VTL_QUAD	N/A	N/A	N/A	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	KAT242.0	1031	L709	UNFRMTD	L709	DEFAULT_GROUP		VTL_QUAD	12.88 TB	N/A	0.00 %	0.00 %	
<input type="checkbox"/>	<input type="checkbox"/>	KAT252.0	1032	L709	UNFRMTD	L709			VTL_QUAD	12.88 TB	N/A	0.00 %	0.00 %	
<input type="checkbox"/>	<input type="checkbox"/>	KAT262.0	1033	L708	READYONLY	L708	DEFAULT_GROUP		VTL_QUAD	12.88 TB	42.74 GB	0.33 %	0.29 %	

1 - 10 (10 Items Returned) Select All

Archive Search

You can perform dedicated tape archive searches where you enter specific criteria to filter results. Follow these steps to perform an archive search:

1. Navigate to System > Administration > Media Management > Search Storage Units to display the Advanced Search page:

Advanced Search

The screenshot shows the 'Advanced Search' interface. At the top, there are 'SEARCH' and 'RESET' buttons. Below is a section titled '- STORAGE UNIT CRITERIA' with a sub-section '- Static Group'. It contains several search fields with radio button options for comparison operators: 'Storage Unit ID' (Contains, Starts, Exact), 'Storage Unit Location' (Contains, Starts, Exact), 'Media Type' (N/A dropdown, Equal, Not), 'Storage Length' (Less, Equal, Greater), 'Create Date' (calendar icon, Less, Equal, Greater), 'Status' (N/A dropdown, Equal, Not), 'Group ID' (Contains, Starts, Exact), 'Barcode' (Contains, Starts, Exact), and 'Comment' (Contains, Starts, Exact). At the bottom, there is a '- RESULT CRITERIA' section with a 'Results Per Page' dropdown set to 50.

Note: The terms storage units, media, and tapes are often used interchangeably.

2. The search returns tapes that match the search criteria. Clicking Search without any criteria returns all of the tapes in the system:

Advanced Search

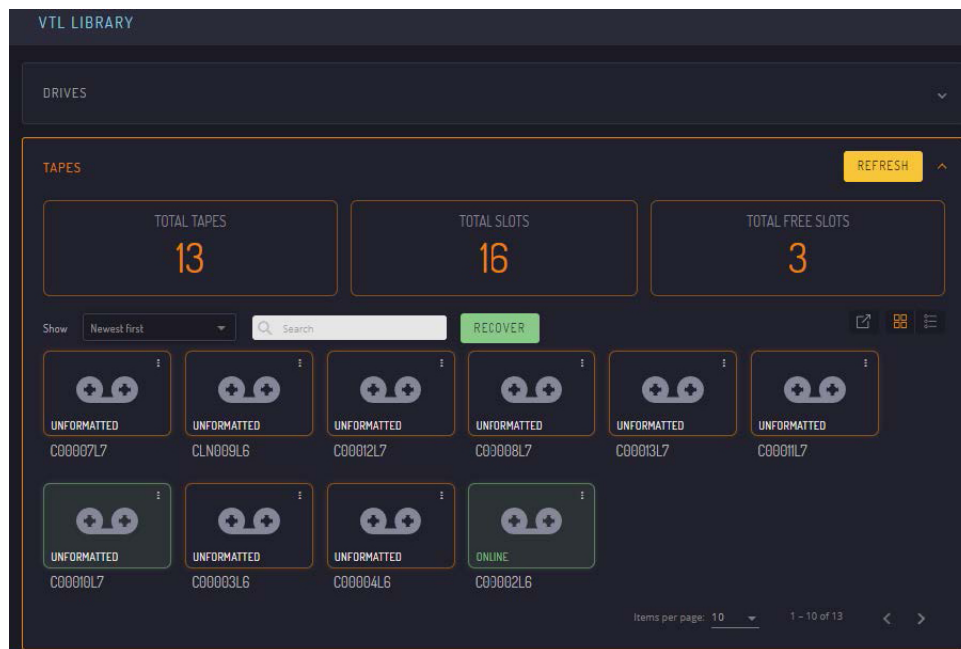
This screenshot is identical to the one above, showing the 'Advanced Search' interface with the same search criteria and options.

Recovering Content from Tapes

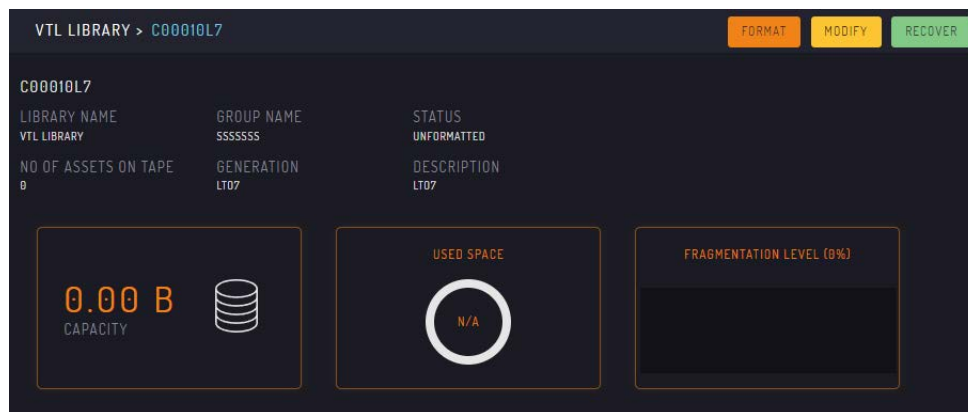
When Kumulate’s database is compromised and cannot be recovered, content written to tapes is lost. However, the files are still present, and by scanning the tapes for them, whole asset instances can be recovered and inserted into the database, making the content available again.

User Actions for Recovering Tapes

Click Recover in the Tapes view of an Archive Location’s page when tapes eligible for content recovery are selected:



You can also click Recover on an individual tape’s page; the button is only available for eligible tapes:



Uninitialized tapes in UNFORMATTED or OLD_CONTENT states are the main target for the recovery operation. However, used tapes in READONLY or ONLINE states may also be recovered; in the latter case, the recovery operation equates to an undelete of deleted instances.

Only so much content can be restored as it's available on tapes: no metadata for files, instances and assets can be recovered (except for LTFS tapes, see the following), as these are not present on non-LTFS tapes written by Kumulate. However, because asset IDs are stored on tape, recovered instances are associated with assets existing in the database; if there are none, new assets are created. The asset's Source metadatum is also initialized with the Recovered from TapeID value, where TapeID is the id of the recovered tape.

The recovery process detects whether the tape under recovery has been formatted for LTFS and employs different mechanisms for recovering content from LTFS tapes. LTFS tapes written by Kumulate contain instance and asset metadata, so a full recovery of the content on LTFS tapes is possible. Recovering content from LTFS tapes is a much shorter process because only the LTFS index must be read (as opposed to all content in the non-LTFS case).

Click Recover to display the Recover Tape Content dialog box:

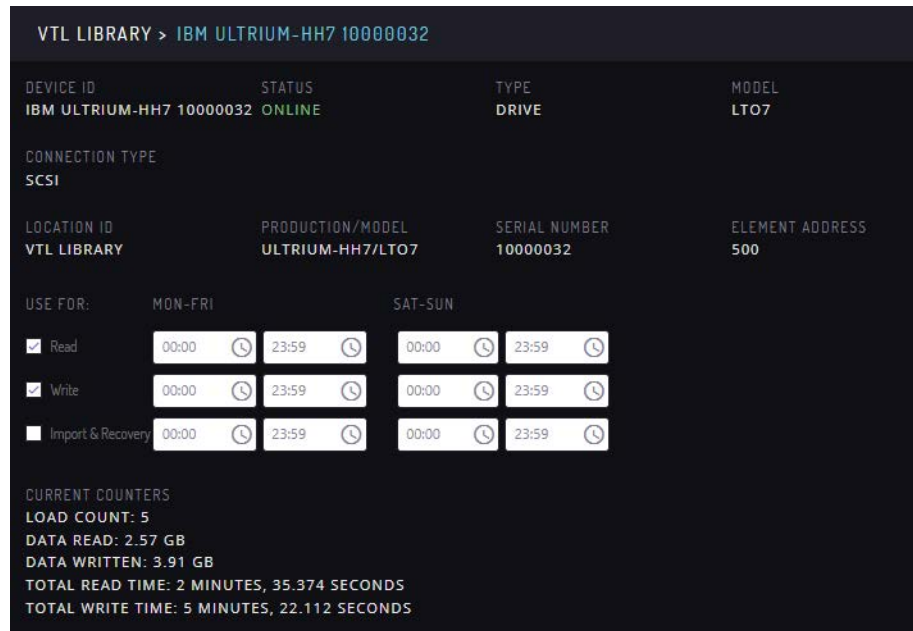


These parameters are configurable from this page and dictate the recovery process:

Priority—Scanning a tape for content requires allocating a Data Mover and a drive that is configured as an endpoint in that Data Mover; just like for any transfer from/to tape job. This means the recover job competes for available drives with all other tape jobs in the system, so setting the job's priority allows for the prioritization of recover jobs relative to the other scheduled tape jobs.

A recover job might take a significant amount of time to complete (if the tape contains a lot of files), during which the drive is unavailable for other tape jobs. Therefore, giving recover jobs a high priority might significantly slow down content archive and restore operations. This can be partially mitigated by configuring appropriate schedules for the

drive's operations. As seen here, content recovery is on the same schedule as the Import operations:



MXFs as Avid—An instance containing only MXF files can be coerced into an Avid instance format using this flag (even though a regular Avid instance would also have an AAF file). When this is not set, these instances are regarded as having regular MXF instance format.

Prefer Project to Generic—The recovery process tries to determine on a best-effort basis the instance format from the recovered file's extensions; when no specific format can be determined, it defaults to the unspecific and limited Generic format. With this setting, these instances can be configured to have Project format instead.

No Extension Format—Instances with files having no extension cannot be assigned a specific format and will default to Generic. With this setting, a more specific instance format like LXF (for Leitch media) and GXF (for K2 media) can be assigned to these instances when the tapes are known to contain such formats.

Force Full Scan—For ONLINE and READONLY tapes, this setting allows undeleting all the instances written on the tape. This makes little sense for tapes in UNFORMATTED and OLD_CONTENT tapes because they are always scanned from the beginning, and no sense for RECOVERING and PARTIALLY_RECOVERED tapes. RECOVERING tapes are either in the process of already being recovered, or their recovery jobs have been cut short (typically by a system restart), and PARTIALLY_RECOVERED tapes have been canceled; so only resuming from where the previous jobs left is possible for these states.

Recover Tape Content Jobs

Click Recover the Recover Tape Content dialog box to launch a Recover Tape Content job for each of the selected tapes. When there is more than one tape, the launched jobs

are grouped into one compound job that contains all the individual recovery jobs for easier tracking of the overall progress:

NAME	OPERATION	ENGINE	SOURCE	DESTINATION	STATUS	USER	ADDED	STARTED AT	PRIORITY
LTO5_LTFS									
LTO7TALS	Recover Tape ...	LT05_LTFS (...)	LT05_LTFS (...)	LT05_LTFS (...)	0% Waiting	archiver	May 18, 2022 10:18:12 AM	May 18, 2022 10:13:12 AM	Normal
LTO6TALS	Recover Tape ...	LT05_LTFS (...)	LT05_LTFS (...)	LT05_LTFS (...)	0% Waiting	archiver	May 18, 2022 10:18:12 AM	May 18, 2022 10:13:12 AM	Normal
LTO8TALS	Recover Tape ...	LT05_LTFS (...)	LT05_LTFS (...)	LT05_LTFS (...)	0% Waiting	archiver	May 18, 2022 10:18:12 AM	May 18, 2022 10:13:12 AM	Normal
LTO5TALS	Recover Tape ...	dm_DACIAN-D	LT05_LTFS (...)	LT05_LTFS (...)	0% Loading Media	archiver	May 18, 2022 10:18:12 AM	May 18, 2022 10:13:12 AM	Normal

RECOVERING is the state that tapes are in during the process of being recovered and during the entire scanning process.

Recover Tape Content jobs on non-LTFS tapes may take a lot of time as all written content on tape is read until End of Data. Therefore, it might make sense to pause these long-running jobs; unfortunately, this cannot be done in Kumulate.

However, as a work-around, a Recover Tape Content job can be canceled, and a new one can be scheduled later to resume the recovery process from where the job was canceled. When a job is canceled, the tape changes states from RECOVERING to PARTIALLY_RECOVERED; so tapes for which the recovery process has not been carried out completely can be easily identified as those having PARTIALLY_RECOVERED status.

When content recovery is successful, the status of the tape switches from RECOVERING to ONLINE if any content has been restored; except for the READONLY tapes, which become READONLY again. If there is no content the tape reverts to the initial status before the recovery. For example, an UNFORMATTED tape with no content ends up UNFORMATTED again after a successful recovery is complete.

Managing Media Groups

Media groups are groups of tapes within the same archive location where assets with specific metadata values are stored. Tapes can be assigned to groups manually or automatically.

When tapes are assigned to a group automatically, the archive location must have a pool of formatted tapes where assets can be copied. When an instance is copied to the location it is copied to a tape from the location's pool of formatted tapes. That tape is assigned to the appropriate media group based on the instance's metadata values.

When tapes are added to the media group manually, unformatted tapes are added to the group when it is configured.

By default, Kumulate adds unassigned tapes to the default group (DEFAULT_GROUP) when an instance is copied to it.

Assets that are stored on tapes belonging to the wrong group can be moved to tapes belonging to the appropriate group using back end grouping.

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).









Topics

- [Default Media Group](#)
- [Creating a Media Group](#)
- [Back End Grouping](#)

Default Media Group

After a tape has been assigned to DEFAULT_GROUP it can no longer be assigned to any other group in the Kumulate system. If there are no groups configured in the Kumulate system, all the tapes with assets will belong to DEFAULT_GROUP.

If tapes belonging to a particular archive location have been grouped, but the instance being copied to the location doesn't have metadata that matches any of the groups, Kumulate will copy the instance to an unassigned formatted tape and assign it to DEFAULT_GROUP.

Actions	Select	ID ▲	Tape Generation	System	Frag. Level	Status	Comment	Group Name	Location
 	<input type="checkbox"/>	000022L3	N/A		0	UNFRMTE			STK SL150
 	<input type="checkbox"/>	B0000901	N/A		0	ONLINE	ReWritable DL-600GB cartridge	DEFAULT_GROUP	SONY_ODA
 	<input type="checkbox"/>	B0001001	N/A		0	UNFRMTE	Write-once QJ-1.5TB		SONY_ODA
 	<input type="checkbox"/>	B0001101	N/A		0	UNFRMTE	ReWritable SL-300GB		SONY_ODA

Creating a Media Group

Media groups are groups of tapes that Kumulate uses to store assets with certain metadata values. Determining which assets to store on specific groups of tapes is accomplished using instance and asset resource filters. Add any new metadata needed before creating the grouping.

Follow these steps to create a media group:

1. Navigate to System > Administration > Media Management > Media Grouping to display the Media Grouping page:

Media Grouping

ADD VIEW INSTANCES

Group Information

Group Name
Copy_One

< Required
Group Description
First of two instances

Instance Filter
Copy_One < Required MODIFY

Asset Filter
AllAssets < Required MODIFY

Media Library Identifier:
S_TEK_NET

2. On the Media Grouping page, enter the information needed to create the tape group, and select which assets are stored on these tapes:

Media Grouping

ADD VIEW INSTANCES

Group Information

Group Name
Copy_One

< Required
Group Description
First of two instances

Instance Filter
Copy_One < Required MODIFY

Asset Filter
AllAssets < Required MODIFY

Media Library Identifier:
S_TEK_NET

Update these parameters:

Group Name—The unique name of the group.

Group Description—An optional description of the group.

Instance Filter—The instance resource filter to use to select assets to store on the tapes in this group. If a new resource filter is needed, select new and create a new resource filter.

Asset Filter—The asset resource filter to use to select assets to store on the tapes in this group. If a new resource filter is needed, select new and create a new resource filter.

Media Library Identifier—The archive location from which to select the tapes for this group.

4. Click Add to create the group. It will display at the bottom of the Media Groupings page. Click the Pencil icon to open the group in the Modify Group page:



5. Select whether to add the tapes manually to the group, or to allow Kumulate to assign tapes to the group automatically:

Modify Group

OK VIEW INSTANCES

Group Information

Group Name
COPY_ONE

< Required

Group Description
First of two instances

Instance Filter
Copy_One < Required MODIFY

Asset Filter
AllAssets < Required MODIFY

Media Library Identifier:
S_TEK_NET

Media Assignment Mode:
MANUAL
AUTOMATIC
MANUAL INSTANCES

6. If tapes are to be added manually, click ADD under Media Assignment at the bottom of the page to assign tapes to the group:

Media Assignment Mode:
MANUAL

OK VIEW INSTANCES

Media Assignment

ADD

Select	Media ID
ADD	

7. Select the tapes to add to the group on the Group Media Assignment page and click OK.

Note: All unformatted tapes in the system display on the Group Media Assignment page. Be mindful to select only the tapes that belong to the archive location assigned to the group.

Group Media Assignment

Media Available			
<input type="button" value="OK"/>			
Select	Media ID	Storage Location ID	
<input type="checkbox"/>	000022L3	STK SL150	
<input type="checkbox"/>	B0001001	SONY_ODA	
<input type="checkbox"/>	ISR233	S_TEK_NET	
<input type="checkbox"/>	ISR234	S_TEK_NET	
<input type="checkbox"/>	ISR235	S_TEK_NET	
<input type="checkbox"/>	ISR505L5	STK SL150	
<input checked="" type="checkbox"/>	ISR507	S_TEK_NET	
<input checked="" type="checkbox"/>	ISR912	S_TEK_NET	
<input type="checkbox"/>	ISR915	S_TEK_NET	
<input type="checkbox"/>	ISR916	S_TEK_NET	
<input type="checkbox"/>	ISR917	S_TEK_NET	
<input type="checkbox"/>	ISR918	S_TEK_NET	
<input type="checkbox"/>	ISR919	S_TEK_NET	

8. The selected tapes will display under Media Assignment:

Media Assignment			
<input type="button" value="ADD"/>		<input type="checkbox"/> Select All	<input type="button" value="DELETE"/>
Select	Media ID	Storage Location ID	
<input type="checkbox"/>	ISR507	S_TEK_NET	
<input type="checkbox"/>	ISR912	S_TEK_NET	

9. Use the archive search to ensure that the tapes are assigned to the group:

1 - 23 (23 Items Returned)								
<input type="checkbox"/> Select All								
<input type="button" value="REFRESH"/> <input type="button" value="EXPORT"/> <input type="button" value="DEFRAGMENT"/> <input type="button" value="MODIFY"/> <input type="button" value="DELETE"/> <input type="button" value="EJECT MEDIA"/>								
Actions	Select	ID	Tape Generation	System	Frag. Level	Status	CommentGroup Name	Location
	<input type="checkbox"/>	000022L3	N/A		0	UNFRMTD		STK SL150
	<input type="checkbox"/>	B0000901	N/A		0	ONLINE	ReWritable DL-600GB cartridge	SONY_ODA
	<input type="checkbox"/>	B0001001	N/A		0	UNFRMTD	Write-once Qz-1.5TB	SONY_ODA
	<input type="checkbox"/>	B0001101	N/A		0	UNFRMTD	ReWritable SL-300GB	SONY_ODA
	<input type="checkbox"/>	B0001201	N/A		0	UNFRMTD	ReWritable DL-600GB	SONY_ODA
	<input type="checkbox"/>	B0001301	N/A		0	UNFRMTD	ReWritable DL-600GB	SONY_ODA
	<input type="checkbox"/>	CLN413	N/A		0	ONLINE	CLEANING TAPE T10000CL	S_TEK_NET
	<input type="checkbox"/>	CLN414	N/A		0	ONLINE	CLEANING TAPE T10000CL	S_TEK_NET
	<input type="checkbox"/>	F50725	LTO5		0	ONLINE	LTO-1.5T cartridge	S_TEK_NET
	<input type="checkbox"/>	ISR505L5	N/A		0	UNFRMTD		STK SL150
	<input checked="" type="checkbox"/>	ISR507	N/A		0	UNFRMTD	LTO-1.5T cartridge	COPY_ONE S_TEK_NET
	<input checked="" type="checkbox"/>	ISR912	N/A		0	UNFRMTD	T1000072 cartridge	COPY_ONE S_TEK_NET
	<input type="checkbox"/>	ISR915	N/A		0	UNFRMTD	T1000072 cartridge	S_TEK_NET
	<input type="checkbox"/>	ISR916	N/A		0	UNFRMTD	T1000072 cartridge	S_TEK_NET
	<input type="checkbox"/>	ISR917	N/A		0	UNFRMTD	T1000072 cartridge	S_TEK_NET
	<input type="checkbox"/>	ISR918	N/A		0	UNFRMTD	T1000072 cartridge	S_TEK_NET
	<input type="checkbox"/>	ISR919	N/A		0	UNFRMTD	T1000072 cartridge	S_TEK_NET

10. If tapes are added automatically, Kumulate will assign a formatted tape to the group when an instance with matching metadata is copied to the group's archive

location. After an instance has been copied to the location, the tape where the instance was copied will display in the group's Media Assignment list:

Media Assignment		
<input type="button" value="ADD"/>	<input type="checkbox"/> Select All	<input type="button" value="DELETE"/>
Select	Media ID	Storage Location ID
<input type="checkbox"/>	1SR231	S_TEK_NET

11. Use the Archive Search the view the tapes assigned to the group:

1 - 23 (23 Items Returned) <input type="checkbox"/> Select All									
<input type="button" value="REFRESH"/> <input type="button" value="EXPORT"/> <input type="button" value="DEFRAGMENT"/> <input type="button" value="MODIFY"/> <input type="button" value="DELETE"/> <input type="button" value="EJECT MEDIA"/> <input type="button" value="FORMAT MEDIA"/>									
Actions	Select	ID	Tape Generation	System	Frags. Level	Status	Comment	Group Name	Location
<input type="checkbox"/>	<input type="checkbox"/>	000022L3	N/A		0	UNPRINTED			STK_5L130
<input type="checkbox"/>	<input type="checkbox"/>	80000901	N/A		0	ONLINE	ReWritable DL-4000B cartridge	DEFAULT_GROUP	SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	80001001	N/A		0	UNPRINTED	Writenonce QJ-1.5TB		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	80001101	N/A		0	UNPRINTED	ReWritable SL-3000B		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	80001201	N/A		0	UNPRINTED	ReWritable DL-6000B		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	80001301	N/A		0	UNPRINTED	ReWritable DL-6000B		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	CLN413	N/A		0	ONLINE	CLEANING TAPE T10000CL		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	CLN414	N/A		0	ONLINE	CLEANING TAPE T10000CL		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	F50725	LTO5		0	ONLINE	LTO-1.5T cartridge	DEFAULT_GROUP	S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	1SR034L3	LTO5		0	ONLINE		DEFAULT_GROUP	STK_5L130
<input type="checkbox"/>	<input type="checkbox"/>	1SR231	LTO5		0	ONLINE	LTO-2.5T cartridge	CDRY_ONE	S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	1SR232	N/A		0	UNPRINTED	LTO-2.5T cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	1SR233	N/A		0	UNPRINTED	LTO-2.5T cartridge		S_TEK_NET

Back End Grouping

Back end grouping is used to reorganize assets onto tapes in a particular group.

Note: A formatted, unused tape (FRMTTD) must be available in the tape group for an instance to be added to the tape group. This means that assets can only be regrouped into groups with automatically-added tapes.

And instance's Storage Unit ID shows the tape it is stored on:



The Storage Unit ID can be used to check the group the instance is associated with.

For example, a search for the instance (shown in the previous figure) Storage Unit ID (F50725), shows that the tape belongs to DEFAULT_GROUP:

	<input type="checkbox"/>	CLN414	N/A	0	ONLINE	CLEANING TAPE T10000CL	S_TEK_NET
	<input type="checkbox"/>	F50725	LTO5	0	ONLINE	LTO-1.5T cartridge	DEFAULT_GROUP S_TEK_NET
	<input type="checkbox"/>	ISR034L5	LTO5	0	ONLINE		DEFAULT_GROUP STK SL150
	<input type="checkbox"/>	ISR231	LTO5	0	ONLINE	LTO-2.5T cartridge	COPY_ONE S_TEK_NET
	<input type="checkbox"/>	ISR232	LTO5	0	FRMTTED	LTO-2.5T cartridge	ROUGH_DRAFT S_TEK_NET
	<input type="checkbox"/>	ISR233	LTO5	0	FRMTTED	LTO-2.5T cartridge	ROUGH_DRAFT S_TEK_NET
	<input type="checkbox"/>	ISR234	N/A	0	UNFRMTED	LTO-2.5T cartridge	S_TEK_NET

If the instance is meant to be stored on a tape in the ROUGH_DRAFT group, the instance can be moved to an available formatted tape in that group:

	<input type="checkbox"/>	CLN414	N/A	0	ONLINE	CLEANING TAPE T10000CL	S_TEK_NET
	<input type="checkbox"/>	F50725	LTO5	0	ONLINE	LTO-1.5T cartridge	DEFAULT_GROUP S_TEK_NET
	<input type="checkbox"/>	ISR034L5	LTO5	0	ONLINE		DEFAULT_GROUP STK SL150
	<input type="checkbox"/>	ISR231	LTO5	0	ONLINE	LTO-2.5T cartridge	COPY_ONE S_TEK_NET
	<input type="checkbox"/>	ISR232	LTO5	0	FRMTTED	LTO-2.5T cartridge	ROUGH_DRAFT S_TEK_NET
	<input type="checkbox"/>	ISR233	LTO5	0	FRMTTED	LTO-2.5T cartridge	ROUGH_DRAFT S_TEK_NET
	<input type="checkbox"/>	ISR234	N/A	0	UNFRMTED	LTO-2.5T cartridge	S_TEK_NET

Follow these steps to move the instance to the appropriate group:

1. Click the Show Assets icon (looks like a magnifying glass) next to the tape the instance is currently stored on:

	<input type="checkbox"/>	CLN414	N/A
	<input type="checkbox"/>	F50725	LTO5
	<input type="checkbox"/>	ISR034L5	LTO5
	<input type="checkbox"/>	ISR231	LTO5
	<input type="checkbox"/>	ISR232	LTO5
	<input type="checkbox"/>	ISR233	LTO5
	<input type="checkbox"/>	ISR234	N/A

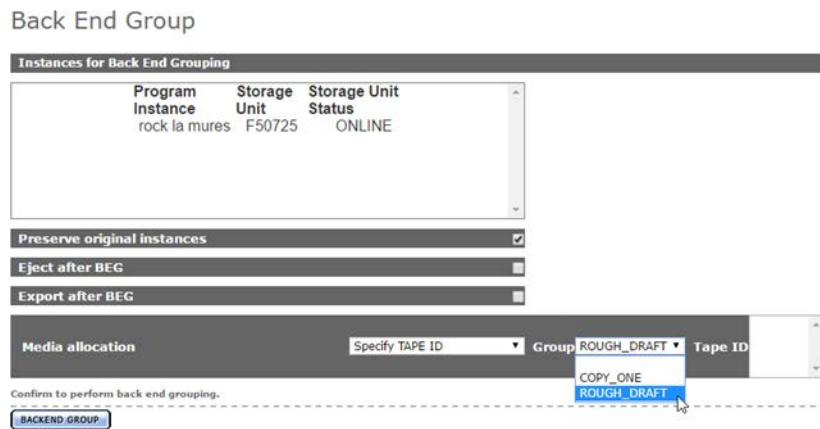
- On the Instance Search Results page, select the instance to move, then click Backend Group:



- On the Backend Group page, select the instance to move again, then click Backend Group again:



- On the Backend Group screen, select Specify Tape ID from the menu; then select the tape group the instance should be on:



- Select Preserve original assets to keep the instance on the source tape. Select Eject after BEG to eject the source tape after the instance has been moved.

6. Select the tape in the group to move the instance to, then click Backend Group:

Back End Group

Instances for Back End Grouping

Program Instance	Storage Unit	Storage Unit Status
rock la mures	F50725	ONLINE

Preserve original instances
 Eject after BEG
 Export after BEG

Media allocation: Specify TAPE ID [v] Group: ROUGH_DRAFT [v] Tape ID: ISR232 [v]
 ISR233 [v]

Confirm to perform back end grouping.

BACKEND GROUP

7. The Media Status page will open. The status is Copy to Archive while the instance is being copied:

Media Status

Media Status Display

Backend Grouping [v]

Status

(Status: Copy To Archive Mode: Specify Tape ID) **CANCEL**

Program Instance	Source Storage Unit
rock la mures	F50725

8. After the instance has been copied the status will change to BackEndGrouped:

Media Status

Media Status Display

Backend Grouping [v]

Status

(Status: BackEndGrouped Mode: Specify Tape ID)

Program Instance	Source Storage Unit
rock la mures	F50725

9. The instance's Storage Unit ID will now show the new tape ID:



rock la mures

Wrapper: QT • Video Bitrate: 13.5

Storage Unit Id: ISR232

Managing Attachment Templates

Attachments are additional files associated with assets. Captions, format sheets, marks, segments, and thumbnails are stored as attachments. Image files, PDF documents, and Microsoft Office documents can also be uploaded as attachments provided that attachment templates have been created for these types of attachments.

Attachment templates are used to upload attachments to the asset. They contain information on the type of file to expect and what metadata is associated with the attachment.

Attachment templates must be created for any type of attachment aside from the built-in caption, format sheet, mark, segment, and thumbnail attachments.

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).

Topics

- [Built-In Attachment Templates](#)
- [Creating an Attachment Template](#)
- [Adding Attachment Template Access to Groups](#)
- [Deleting an Attachment Template](#)

Built-In Attachment Templates

Kumulate includes built-in attachment templates for certain file types. These templates cannot be modified.

Attachment Template	Usage
Thumbnail	Thumbnail images associated with the media content. The thumbnail attachment type is used internally by Kumulate.
Segment	Video segments created by the user. The segment attachment type is used internally by Kumulate.
Marker	Video markers set by the user in the video previewer. The marker attachment type is used internally by Kumulate.
Closed Captioning	Closed captioning file. The closedcaptioning attachment type is used internally by Kumulate, but users can also use it to upload additional captioning files to an asset.
Format Sheet	XML attachments that provide information on run orders. The format sheet attachment type is used internally by Kumulate, but users can also use it to upload format sheet files to assets.

Creating an Attachment Template

Attachment templates must be created to upload files other than caption and format sheet files. Kumulate supports uploading any file type as an attachment. Using the exact file type in an attachment template optimizes indexing of the file, and improves attachment searches. Follow these steps to create an attachment template:

1. Navigate to System > Administration > Content > Attachment Management to display the Attachment Template Management page:

Attachment Template Management

Attachment Template List				
Actions	Select	Attachment Template ID	Description	Note
	<input type="checkbox"/>	adobepremiere	Adobe Premiere	System template
	<input type="checkbox"/>	closedcaptioning	Closed Captioning	System template
	<input type="checkbox"/>	document_pdf	pdf	System template
	<input type="checkbox"/>	formatsheet	Formatsheet	System template
	<input type="checkbox"/>	marker	Marker	System template
	<input type="checkbox"/>	picture	Picture	System template

2. Click Add Attachment Type to create a new attachment type.
3. Provide an Attachment Template Name, Description, and Class for the attachment type. The description is used as the attachment template's display name. It will display in a menu in the Kumulate web app. If it is omitted, the template name is used instead:

Attachment Template information

Attachment Template name:

Description:

Class: ▼

Select the file type for this attachment template.

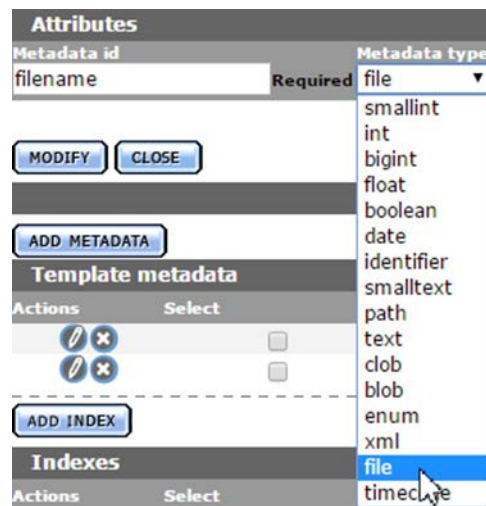
Note: Using the exact file type in an attachment template optimizes indexing of the file and improves attachment searches. Use the *free* and *text* classes only when absolutely necessary.

Class	Description
free	Any type of file. Use this class if the attachment will contain a type not defined by any other class.
xml	XML file
jpeg	JPEG file
pdf	PDF file
word	Word document

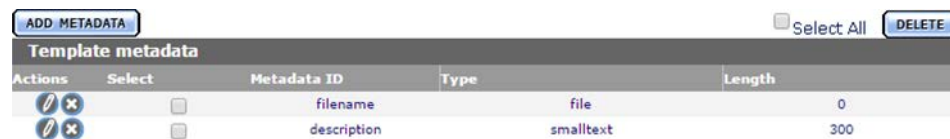
Class	Description
excel	Excel document
binary	Binary file: Use this class only if the attachments won't be Word, PDF, or Excel files.
text	Text file: Use this class only if the attachments won't be XML files.

- Click Add Metadata to add attachment attributes and provide a Metadata id and the Metadata type. These attributes are filled in by the user when the attachment is uploaded.

Note: The file metadata type is required to upload a file as an attachment.



- Click OK to add the attribute.
- Click OK to save and exit after all the attributes have been added:



- Refresh the browser to ensure that the changes are reflected in the user interface.

Saving the template automatically creates a resource filter for the new attachment template. The new resource filter is added with full privileges and controls to the current user's group and to the Montana User Group.

The resource filter can be added to all other groups manually. See the [Adding Attachment Template Access to Groups](#) for more details.

Adding Attachment Template Access to Groups

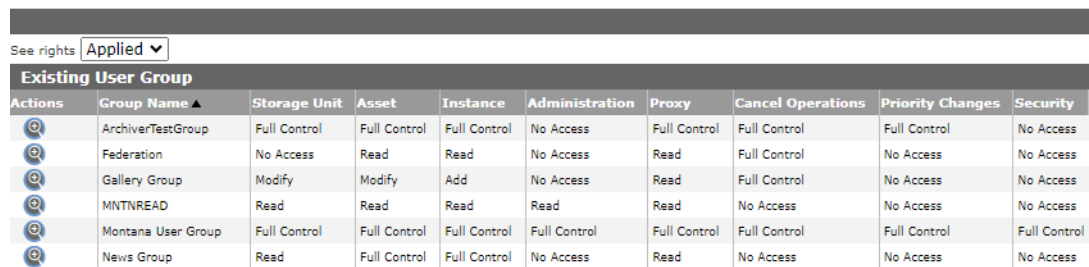
User groups do not automatically gain access to attachment templates created by a user. Access control lists for the templates must be added to the groups to allow groups of users to access the templates.

For more information on groups, see [Managing Groups and Users](#).

Follow these steps to add attachment template access to a group:

1. Navigate to System > Administration > Security > Group Information to display the Group Information page:

User Group Information



See rights: Applied

Actions	Group Name	Storage Unit	Asset	Instance	Administration	Proxy	Cancel Operations	Priority Changes	Security
	ArchiverTestGroup	Full Control	Full Control	Full Control	No Access	Full Control	Full Control	Full Control	No Access
	Federation	No Access	Read	Read	No Access	Read	Full Control	No Access	No Access
	Gallery Group	Modify	Modify	Add	No Access	Read	Full Control	No Access	No Access
	MNTNREAD	Read	Read	Read	Read	Read	No Access	No Access	No Access
	Montana User Group	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control
	News Group	Read	Full Control	Full Control	No Access	Read	No Access	No Access	No Access

2. The default view in the User Group Information page doesn't allow the user to create or edit groups. Enable editing by selecting Future from the See rights menu:



See rights: Applied

Applied

Future

Actions	Group Name	Storage Unit	Asset	Instance	Administration	Proxy	Cancel Operations	Priority Changes
	Montana User Group	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control
	RegUser	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control	Full Control

3. Select a group to edit. Click Add New ACL on the Modify User Group page:

Modify User Group

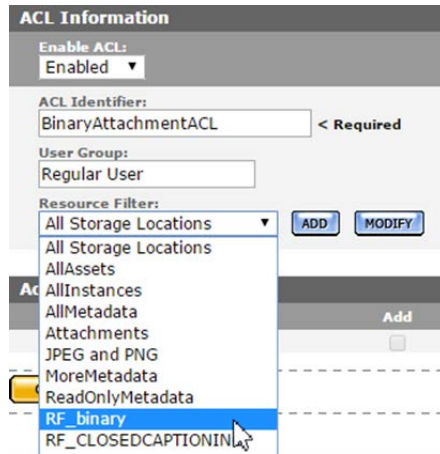


OK VIEW USERS ADD NEW ACL

User Group Information

User Group Name:
Regular User Required

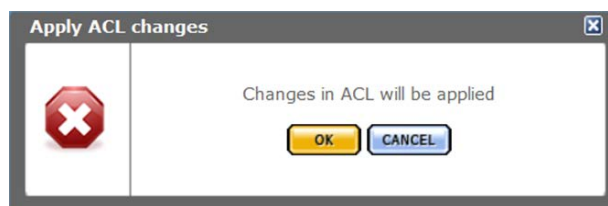
- On the Add ACL page give the ACL a name, then select the resource filter corresponding to the new attachment template. A new resource filter can be created if necessary:



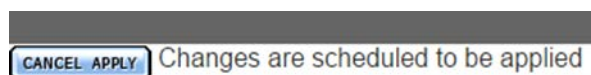
- Set the access rights to the template. See [Managing Access Control Lists and Access Privileges](#) for more information:



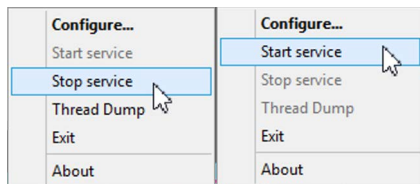
- Click OK to save changes and return to the Modify User Group page. An attention symbol remains next to the group until all changes are applied or canceled.
- Click Apply Changes. Kumulate displays a confirmation dialog; click OK to continue:



The Changes are scheduled to be applied message displays:



8. You must restart Kumulate for the changes to take effect. Stop and start the Apache Tomcat Service to restart Kumulate—right-click on the Tomcat icon in the system tray:



9. After Kumulate restarts, return to the Groups page to verify that the changes were applied.

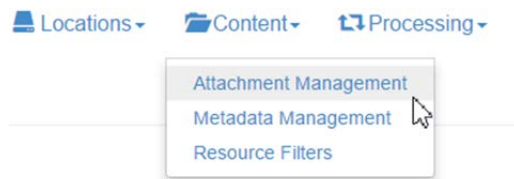
Deleting an Attachment Template

When an attachment template is deleted, its resource filter is not deleted. The resource filter must be removed from any groups that use it, then it must be deleted.

Note: Only attachment templates that are not associated with any attachments can be deleted.

Follow these steps to delete an attachment template:

1. Open the Attachment Template Management page by clicking System in the left menu, then selecting Content > Attachment Management from the top menu:



Any attachment template with the note Has Children is associated with one or more attachments in the system; these templates cannot be deleted. Templates can only be deleted when they are no longer associated with any attachments:

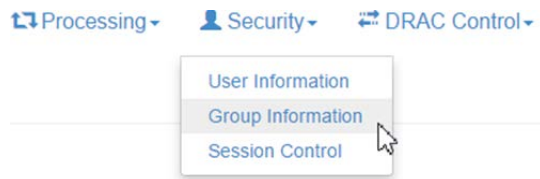
Attachment Template List		
Actions	Select	Attachment Template ID
		Thumbnail
		segment
		marker
		closedcaptioning
	<input type="checkbox"/>	other
		jpeg
	<input type="checkbox"/>	pdf
	<input type="checkbox"/>	word
	<input type="checkbox"/>	binary
	<input type="checkbox"/>	text

2. Delete the attachment template by clicking on the X icon next to the template.
 After the attachment is deleted, the resource filter associated with the template can be removed from any groups that use it; then the resource filter itself can also be deleted.

Removing an Attachment Template Resource Filter From a Group (Optional)

Follow these steps to remove an attachment template resource filter from a group; this is optional:

1. Select Security > Group Information from the top menu:



2. Select Future from the menu:



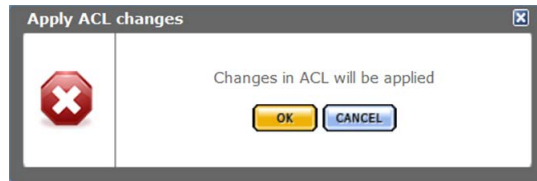
3. Select the group to edit.
4. Under Attachment Template ACL, click the X icon to delete the ACL identifier associated with the deleted template's resource filter.

Note: Resource filters created automatically by Kumulate are named RF_<TemplateName>. For example, the resource filter associated with the binary attachment template would be named RF_binary.

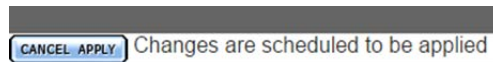
Attachment Template ACL		
Actions	ACL Identifier	Resource Filter
	other	RF_other
	PDF	RF_pdf
	JPEG	RF_peg
	Text	RF_text
	Binary	RF_binary
	Captions	RF_CLOSEDCAPTIONING
	segment	RF_SEGMENT
	Marker	RF_MARKER

5. Click OK to save the changes and return to the Modify User Group page. An attention symbol will remain next to the group until all the changes are applied or canceled.

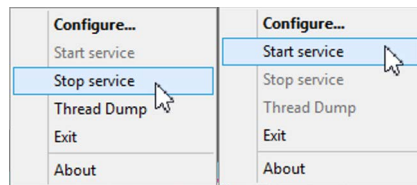
6. Click Apply Changes. A confirmation window will open; click OK to continue:



The message Changes are scheduled to be applied will display after the dialog box closes:



7. Kumulate must be restarted for the changes to take effect. Stop and start the Apache Tomcat Service to restart Kumulate—right-click on the Tomcat icon in the system tray:

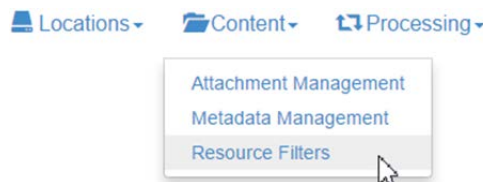


8. After Kumulate has restarted, return to the Groups page to verify that the changes were applied.

Delete the Resource Filter (Optional)

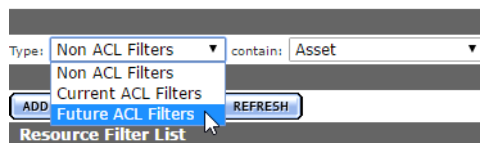
Follow these steps to delete the resource filter; this is optional:

1. Open the list of resource filters by selecting Content > Resource Filters from the top menu:

































2. Select Future ACL from the Type menu to bring up the list of ACL resource filters:

Resource Filters



3. Find the resource filter associated with the deleted template.

Note: Resource filters created automatically by Kumulate are named RF_<TemplateName>. For example, the resource filter associated with the binary attachment template would be named RF_binary.

Resource Filter List	
Actions	Name ▲
 	All Storage Locations
 	AllAssets
 	AllInstances
 	AllMetadata
 	ReadOnlyMetadata
 	RF_binary
 	RF_CLOSEDCAPTIONING
 	RF_jpeg
 	RF_MARKER
 	RF_other
 	RF_pdf
 	RF_png
 	RF_SEGMENT
 	RF_text
 	RF_word

4. Click the X icon to delete the resource filter. Do not delete any resource filter still used by a group.

Caution: Never delete RF_CLOSEDCAPTIONING, RF_MARKER, RF_SEGMENT, All Storage Locations, AllAssets, AllInstances, AllMetadata, or ReadOnlyMetadata filters.

Managing Data Movers

A Data Mover is a component of Kumulate, whose function is to transfer media files between locations known to Kumulate. Data Movers know how to move various types of files and file sets (MXF, QuickTime, PDF, etc.) as well as which protocol to use for various servers: FTP, Omneon, Web server, and Windows and UNIX and MacOS servers for example.

One Data Mover is implemented by default on the Kumulate server. Additional Data Movers can be deployed to other servers and added to the list of Data Movers.

Assets can only be transferred between locations if both locations are endpoints of the same Data Mover. Locations must be added to Data Movers manually.

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).

Topics

- [Add an External Data Mover](#)
- [Add a Data Mover Endpoint](#)

Add an External Data Mover

Additional Data Movers can be installed on hosts other than the Kumulate server. These external Data Movers must be added to the Kumulate system before they can be used. Information on installing external Data Movers is available in the Kumulate Deployment document.

Follow these steps to add an external Data Mover:

1. Navigate to System > Administration > DRAC Control > Data Mover Information to display the Data Move Information page:

Data Mover Information

Actions	Data Mover ID	Status	Load Count	State	Time	Transfer Count
	dm_MSDM1	ONLINE	0	RUNNING	02:04:10	0
	MSDM1	ONLINE	0	RUNNING	00:00:53	0

2. The internal Data Mover is always named with the prefix *dm*. Click Add Data Mover to add a new Data Mover:
3. Give the Data Mover a name to identify it. Set the nameserver URL to the data mover's IP address and listener port (default: 2809):

Add Data Mover

Data Mover Configuration:

Data Mover ID: < Required

Data Mover Nameserver URL: < Required

Data Mover Description:

Data Mover Status:

4. Click OK to save the information. The end point information will open immediately. Add endpoints to the Data Mover. The Data Mover can only move assets between locations that are in its list of endpoints:

Modify Data Mover

Data Mover Configuration:

Data Mover ID: < Required

Data Mover Nameserver URL: < Required

Data Mover Description:

Data Mover Status:

Endpoint Management:

Select All

Actions	Select Endpoint ID	Disable for local DM	Status	Connection Status
	<input type="checkbox"/> MASSSTORE	<input type="checkbox"/>	ONLINE	UNCONFIGURED

5. The newly added Data Mover will display in the list of Data Movers:

Data Mover Information

ADD DATA MOVER

REFRESH

Data Mover Status

Actions	Data Mover ID ▲	Status	Load Count	State	Time	Transfer Count
 	dm_MSBH1	ONLINE	0	RUNNING	02:04:10	0
 	MSDM1	ONLINE	0	RUNNING	00:00:53	0

Add a Data Mover Endpoint

Data Movers are components of Kumulate that are used to transfer assets between locations. Locations must be added as Data Mover endpoints for assets to be transferred between them.

The internal Data Mover runs on the Kumulate server. In the case of a clustered installation, it will run on the master host. When an endpoint is added to a Data Mover on a Kumulate server that is part of a cluster, the Disable for local DM option can be used to remove the endpoint when the Data Mover's host becomes the cluster master.

Follow these steps to add an end point to a Data Mover:

1. Navigate to System > Administration > DRAC Control > Data Mover Information to display the Data Move Information page:

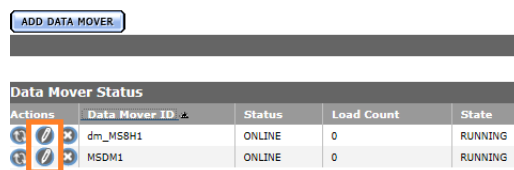
Data Mover Information



Actions	Data Mover ID	Status	Load Count	State	Time	Transfer Count
	dm_MS8H1	ONLINE	0	RUNNING	02:04:10	0
	MSDM1	ONLINE	0	RUNNING	00:00:53	0

2. Click the Pencil icon next to the Data Mover to modify it:

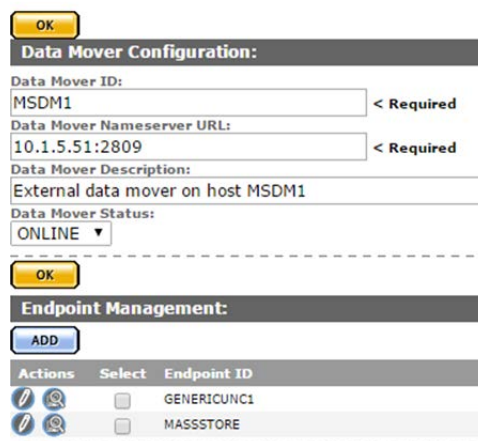
Data Mover Information



Actions	Data Mover ID	Status	Load Count	State
	dm_MS8H1	ONLINE	0	RUNNING
	MSDM1	ONLINE	0	RUNNING

3. Click ADD under Endpoint Management:

Modify Data Mover



Data Mover Configuration:

Data Mover ID: < Required

Data Mover Nameserver URL: < Required

Data Mover Description:

Data Mover Status:

Endpoint Management:

Actions	Select	Endpoint ID
	<input type="checkbox"/>	GENERICUNC1
	<input type="checkbox"/>	MASSTORE

- Select the storage location from the Endpoint ID menu:

Add Endpoint

Connection endpoint:

Endpoint ID:

- AVIDINTERPLAYCOPYOUT
- AVIDINTERPLAYCOPYOUT
- AVIDINTERPLAYMONITOR
- AVIDSTANDALONE**
- AVIDSTANDALONE2
- AVIDTEST1
- GENERICUNC2
- K2
- LEITCH
- OMNEON
- OMNEONFTP
- PROJECTSL
- UNC
- UNC1

- If the Data Mover is located on a Kumulate server that is part of a clustered Kumulate installation, the Disable for local DM option can be selected so that the endpoint is not used when the Data Mover's host is the Cluster Master:

Add Endpoint

Connection endpoint:

Endpoint ID:
AVIDSTANDALONE

Endpoint Configuration:
AVIDSTANDALONE

Endpoint Status:
ONLINE

Disable for local DM

OK

- Click OK to add the endpoint. The location will display in the Endpoint Management List. Its status should be ONLINE; disregard the Connection Status:

Modify Data Mover

OK

Data Mover Configuration:

Data Mover ID:
MSDM1 < Required

Data Mover Nameserver URL:
10.1.5.51:2809 < Required

Data Mover Description:
External data mover on host MSDM1

Data Mover Status:
ONLINE

OK

Endpoint Management:

ADD

Actions	Select	Endpoint ID	Configuration	Status
	<input type="checkbox"/>	AVIDSTANDALONE	AVIDSTANDALONE	ONLINE
	<input type="checkbox"/>	GENERICUNC1	GENERICUNC1	ONLINE
	<input type="checkbox"/>	MASSTORE	MASSTORE	ONLINE

Managing Metadata Templates

You can view metadata in Kumulate using the Metadata Management page. You can also add custom metadata to Kumulate via the Metadata Management page. Administrators can assign a default set of pinned metadata fields.

Note: These tasks are all performed in the Kumulate web app. For access, login and navigation assistance, see [Kumulate Web App Navigation for Administrators](#).

Topics
























- [Managing Metadata](#)
- [Adding Custom Metadata](#)
- [Creating List Metadata](#)
- [Adding Custom Asset Metadata to an ACL](#)
- [Prioritizing Search Results in Specific Metadata](#)
- [Deleting Unused Combo Metadata](#)

Managing Metadata

You use the Metadata Management page to view and edit asset and instance metadata, and create custom instance and asset metadata.

Follow these steps to access the list of all metadata:

1. Navigate to System > Administration > Content > Metadata Management to display the Metadata Management page:

Metadata Management								
+ Asset Metadata								
- Instance Metadata								
Actions	Metadata ID ▲	Metadata Name	Metadata Group	Format	Default Value	Length	Mandatory	Display Mode
 	afd	AFD	Video	List		20	YES	Visible
 	bit_depth	Bit depth	Video	Free		50	NO	Read only
 	category_path	Category Path	Summary	Free		260	NO	Visible
 	CRC	CRC	Default	Free		500	NO	Visible
 	dal	DAL	Default	Free		50	NO	Visible
 	definition	Definition	Default	Free		20	NO	Visible
 	dominant_file	Dominant File	Summary	Free	Dominant File	300	NO	Read only
 	frame_rate	Frame Rate	Video	List		20	NO	Read only
 	is_proxy	IsProxy	Default	Combo	NO	20	NO	Visible
 	is_temporary	IsTemporary	Default	Combo	NO	20	NO	Visible
 	marked_on_capture	Marked On Capture	Default	Free		20	NO	Visible
 	media_type	NLE Media Type	Default	Free		50	NO	Visible
 	scan_mode	Scan Mode	Video	List		20	NO	Read only
 	video_height	Video Height	Video	Free		20	YES	Read only
 	video_width	Video Width	Video	Free		20	YES	Read only

2. Expand the asset or instance headers to show all metadata, including custom metadata. For example, in this image, the *IsProxy* and *IsTemporary* metadata were created.

The table provides details about the metadata:

Metadata Parameter	Description
Metadata ID	The unique, internal metadata identifier. By convention, the ID is in lowercase characters with words separated by underscores (_).
Metadata Name	The name used to identify the metadata. This is the name used when the metadata is displayed and is the name that should be used when creating resource filters, or searching using metadata.
Metadata Group	The group to which the metadata belongs. Groups can be added as needed. Metadata will display under its group in the asset or instance view.

Metadata Parameter	Description
Format	The format of the metadata. The following options are available: Free: The metadata can have any value assigned by the user. Combo: The metadata value can be selected from a list of values or entered by the user. List: The metadata value can only be selected from a list of values. Date: The metadata value is a date.
Default Value	The value assigned to the metadata by default.
Length	The maximum character length of the metadata value.
Mandatory	The metadata must be populated when set to YES.
Display Mode	The metadata value cannot be set or modified by a user when set to Read Only.

4. Click Add Metadata to add new asset or instance metadata.

Adding Custom Metadata

Custom metadata can be added from the Metadata Management screen. Administrators can now assign a default set of pinned metadata fields. Follow these steps to add custom metadata:

1. Navigate to System > Administration > Content > Metadata Management to display the Metadata Management page:

Metadata Management								
+ Asset Metadata								
- Instance Metadata								
Actions	Metadata ID ▲	Metadata Name	Metadata Group	Format	Default Value	Length	Mandatory	Display Mode
	afd	AFD	Video	List		20	YES	Visible
	bit_depth	Bit depth	Video	Free		50	NO	Read only
	category_path	Category Path	Summary	Free		260	NO	Visible
	CRC	CRC	Default	Free		500	NO	Visible
	dal	DAL	Default	Free		50	NO	Visible
	definition	Definkion	Default	Free		20	NO	Visible
	dominant_file	Dominant File	Summary	Free	Dominant File	300	NO	Read only
	frame_rate	Frame Rate	Video	List		20	NO	Read only
	is_proxy	IsProxy	Default	Combo	NO	20	NO	Visible
	is_temporary	IsTemporary	Default	Combo	NO	20	NO	Visible
	marked_on_capture	Marked On Capture	Default	Free		20	NO	Visible
	media_type	NLE Media Type	Default	Free		50	NO	Visible
	scan_mode	Scan Mode	Video	List		20	NO	Read only
	video_height	Video Height	Video	Free		20	YES	Read only
	video_width	Video Width	Video	Free		20	YES	Read only

2. Click Add Metadata and enter the parameters for the new metadata:

Add Metadata

The table columns provide information about the metadata:

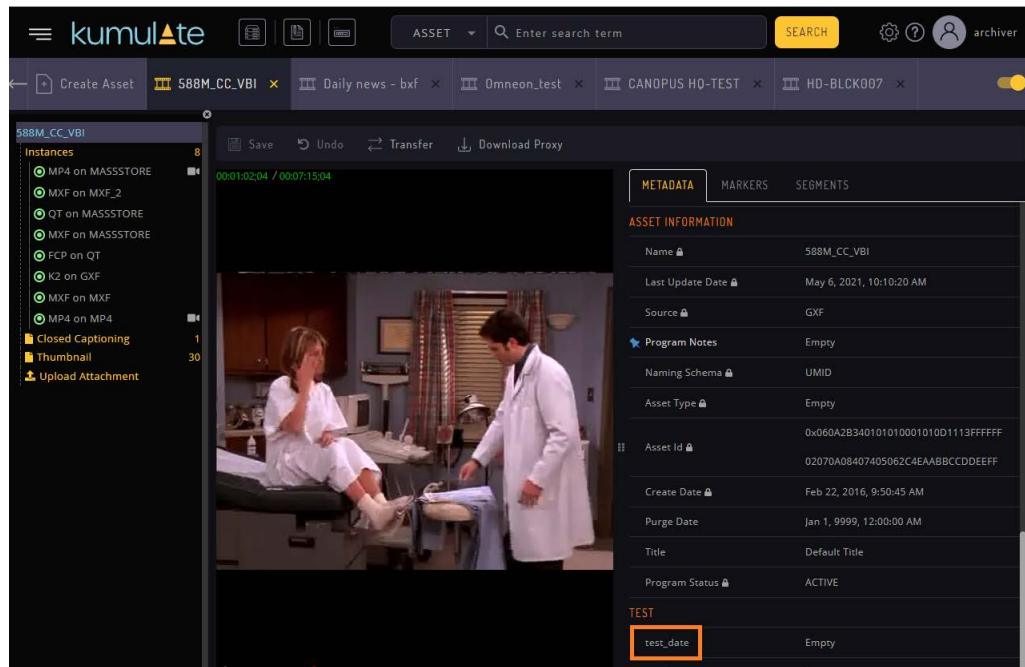
Metadata Parameter	Description
Metadata ID	The unique, internal metadata identifier. By convention, the ID is in lowercase characters with words separated by underscores (_).
Metadata Name	The name used to identify the metadata. This is the name used when the metadata is displayed and is the name that should be used when creating resource filters, or searching using metadata.

Metadata Parameter	Description
Metadata Format	<p>The format of the metadata. The following options are available:</p> <p>Combo: The metadata value can be selected from a list of values or entered by the user.</p> <p>Date: The metadata value is a date.</p> <hr/> <p>Note: Never set a default value when creating date metadata.</p> <hr/> <p>Free : The metadata value can be in any format. The length is capped at 4000 characters .</p> <p>List: The metadata value is selected from a set list of values. See Creating List Metadata for detailed information on configuring this metadata format.</p> <p>Number: The metadata value is a number entered by the user.</p> <p>Large Text: The same as Free, except that the length is capped at 32000 characters instead of 4000 characters.</p>
Length	The maximum character length of the metadata value.
Default Value	<p>The value assigned to the metadata by default.</p> <hr/> <p>Note: Keep this field empty when creating date metadata.</p> <hr/>
Type	Indicates whether this is asset or instance metadata.
Display Mode	The metadata value cannot be set or modified by a user when set to Read Only.
Mandatory	The metadata must be populated when set to YES.

Metadata Parameter	Description
Metadata Group	<p>The group to which the metadata belongs. Groups can be added as needed. Click Create New Group if a new metadata group is needed.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Metadata Management</p> <p>Metadata ID: <input type="text" value="instance_note"/></p> <p>Metadata Name: <input type="text" value="Instance Note"/></p> <p>Length: <input type="text" value="4000"/></p> <p>Default Value: <input type="text"/></p> <p>Metadata Format: <input type="text" value="Free"/></p> <p>Type: <input type="text" value="Instance"/></p> <p>Display Mode: <input type="text" value="Visible"/></p> <p>Mandatory: <input type="text" value="NO"/></p> <p>Metadata Group: <input type="text" value="Extra"/> <input type="button" value="CANCEL"/></p> </div>

4. Click OK to save.

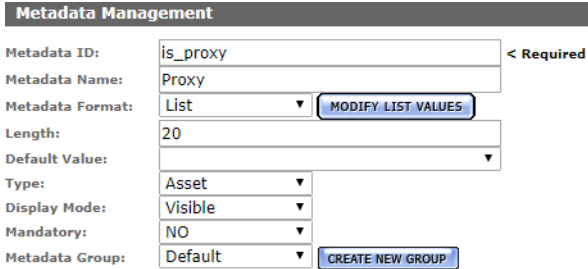
When you create new asset metadata, you must add it to a group ACL to be visible by users. When viewing an asset or instance, metadata displays under its group.



Creating List Metadata

List metadata is metadata that uses pre-set values that can be selected from a list. Follow these steps to create list metadata:

- 1. Select List as the Metadata Format after filling in the Metadata ID and Display Name:



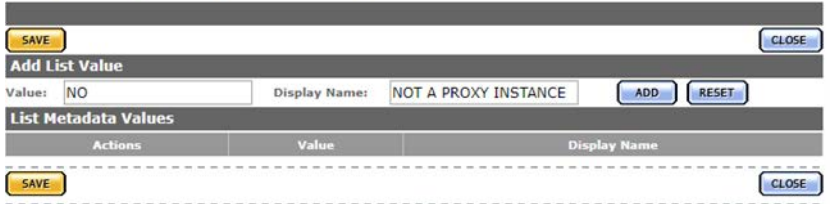
- 2. Click Modify List Values to open the Metadata Values Editor

List Metadata Values Editor



- 3. Enter the metadata value to be used internally by Kumulate and the display name that users will see. Spaces are not allowed in the internal value, but are allowed in the display name.
- 4. Click ADD to add the value to the list of values:

List Metadata Values Editor



5. Add in as many values as required before clicking Save. Clicking Close cancels the operation:

List Metadata Values Editor

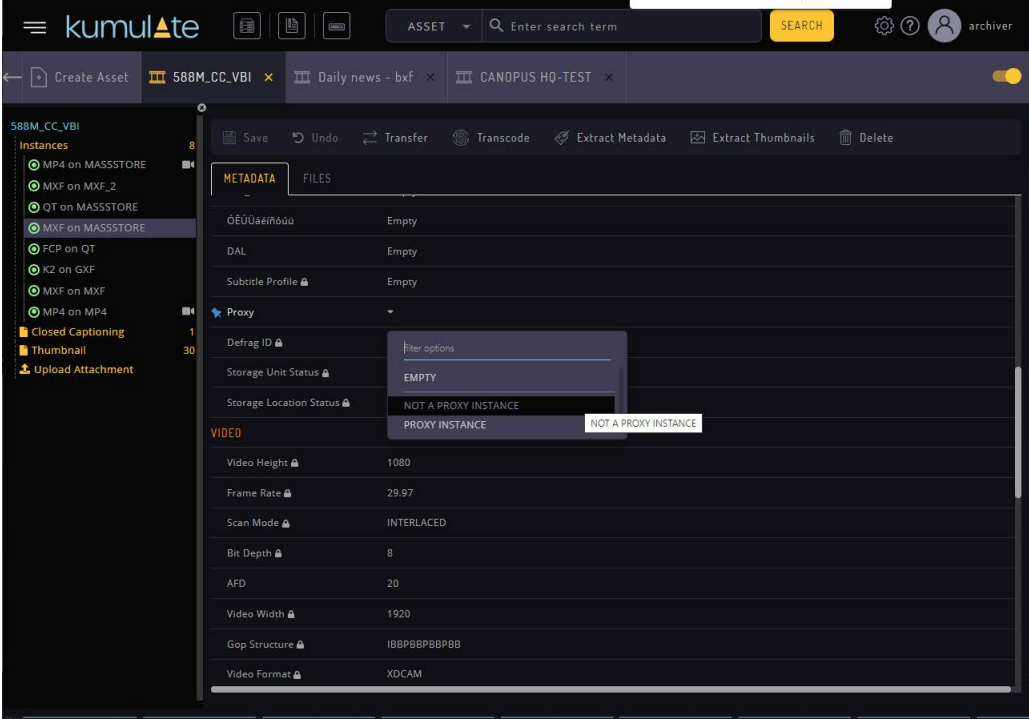
6. Choose a default value if required:

Add Metadata

7. Set the rest of the parameters as required, then click OK to save:

Add Metadata

The metadata can be set by choosing from the values in the list:

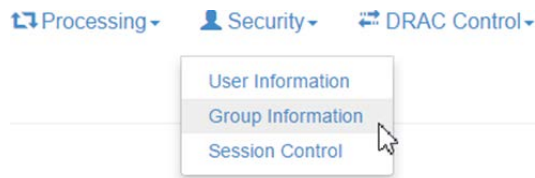


Adding Custom Asset Metadata to an ACL

When you create new, custom asset metadata, you add it to group ACLs for users to view the new metadata.

Follow these steps to add custom asset metadata to an ACL:

1. After creating the new custom asset metadata, click Security > Group Information:

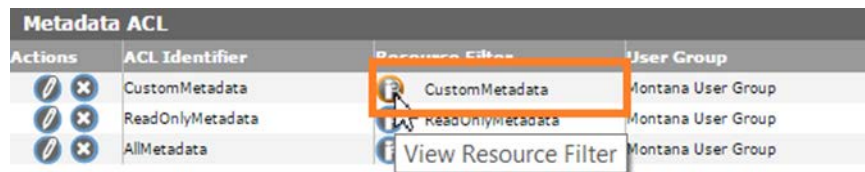


2. Select Future from the See rights menu:

User Group Information

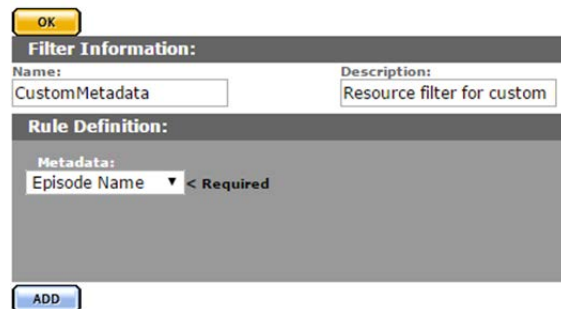


3. Click the Pencil icon next to the user group to modify.
4. Under Metadata ACL, select the metadata Resource Filter that you want to add the new metadata:



Select the metadata to add to the ACL, then click ADD:

Modify Resource Filter



5. Click OK to save changes and return to the Modify User Group page.
6. Click OK to save changes to the user group and return to the User Group Information page.

Note: A hazard sign may display next to the groups affected by the change to the resource filter.

7. Click Apply Changes for the changes to take effect:

User Group Information

See rights **Future** ▾

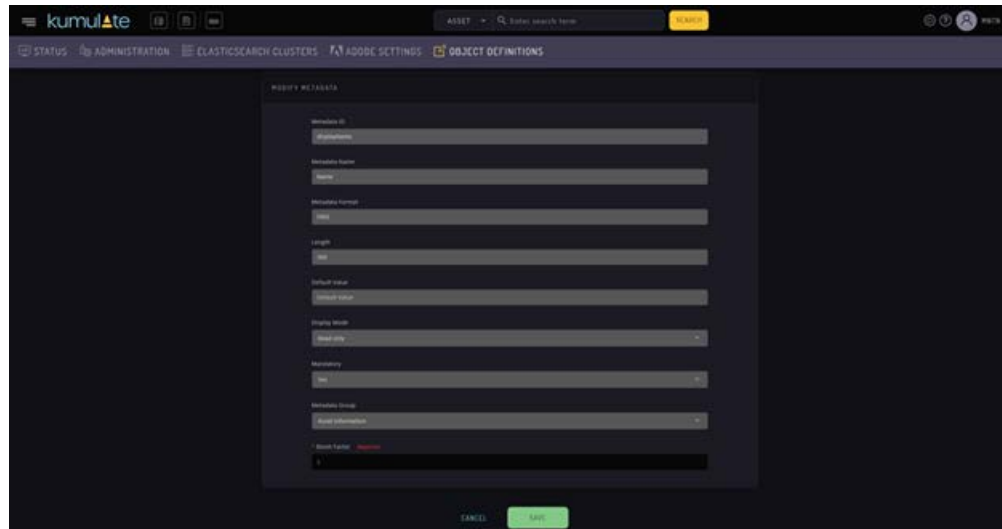
Existing User Group

Actions	Group Name ▲	Storage Unit	Asset	Instance
	Montana User Group	Full Control	Full Control	Full Control
	Regular User	Read	Read	Read
	Storage Location Admin	Full Control	Full Control	No Access
	Transcode User	No Access	Full Control	Full Control

Users belonging to the groups affected by the change can now view the metadata:

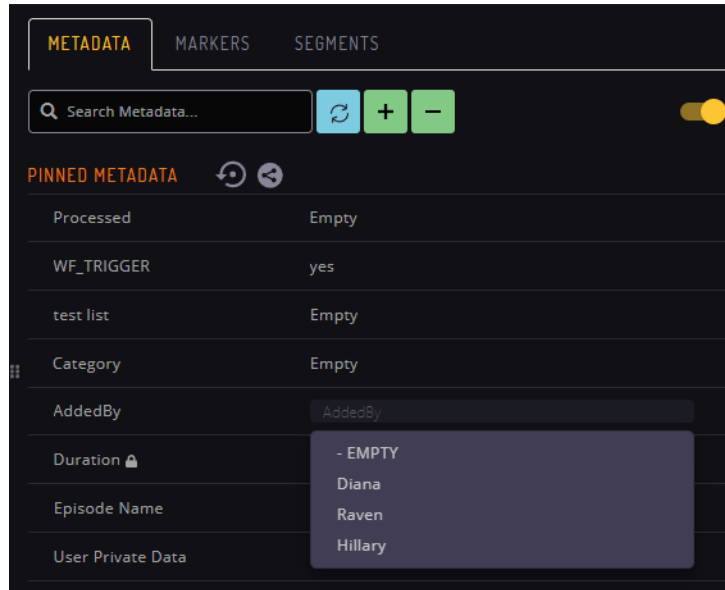
The screenshot shows the Kumulate web interface. At the top, there's a search bar and user profile 'archiver'. Below, a navigation bar shows 'Create Asset' and several asset tabs: '588M_CC_VBI', 'Daily news - bxf', and 'CANOPUS HQ-TEST'. The main content area is split into a video player on the left and a metadata panel on the right. The video player shows a man in a white lab coat. The metadata panel has tabs for 'METADATA', 'MARKERS', and 'SEGMENTS'. Under 'METADATA', there's a 'DEFAULT' section with fields like 'Episode Name', 'Processed' (Yes), 'PrimaryAudioLanguage' (Empty), 'Original Name' (588M_CC_VBI), 'User Private Data' (dddd), and 'Embargo Date' (Empty). Below that is an 'ASSET INFORMATION' section with fields like 'Last Update Date' (May 6, 2021, 10:10:20 AM), 'Source' (GXF), 'Program Notes' (Empty), 'Purge Date' (Jan 1, 9999, 12:00:00 AM), 'Program Status' (ACTIVE), 'Name' (588M_CC_VBI), 'Naming Schema' (UMID), and 'Asset Type' (Empty). At the bottom, there's a unique ID: '0x060A2B3401010001010D1113FFFFFF'.

The boost factor can be changed from this page:



Deleting Unused Combo Metadata

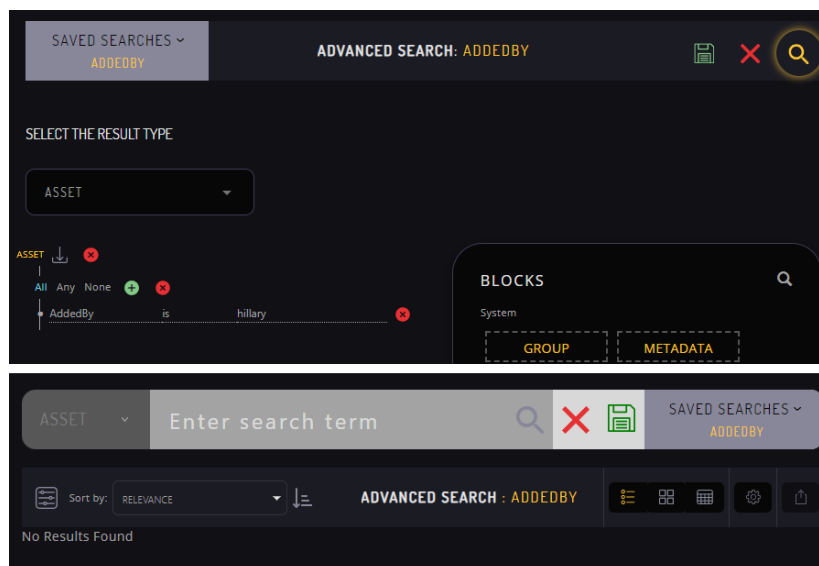
Combo metadata is metadata where the value is entered manually and stored in the database. When editing combo metadata, previously used values display in a menu:



All previously-used values are available in the menu regardless of whether these values are currently assigned to the metadata.

For example, if the AddedBy metadata had once been assigned three different values, all three of these values are made available as options in the menu.

The search returns no results if a search is performed for a metadata value that is not used anywhere in the system:



Click Remove Unused Values to remove any combo metadata values that are no longer assigned to the metadata:

Modify Metadata

The screenshot shows a 'Metadata Management' dialog box with the following fields and controls:

- Buttons: OK (yellow), DELETE (blue)
- Metadata ID: added_by (text input), < Required
- Metadata Name: AddedBy (text input)
- Length: 20 (text input)
- Default Value: (text input)
- Metadata Format: Combo (dropdown menu), REMOVE UNUSED VALUES (button, highlighted with an orange border)
- Type: Asset (text input)
- Display Mode: Visible (dropdown menu)
- Mandatory: NO (dropdown menu)
- Metadata Group: Asset Informativ (dropdown menu), CREATE NEW GROUP (button)
- Buttons: OK (yellow), DELETE (blue)

These values no longer display in menus of metadata value suggestions:

The screenshot shows the 'METADATA' tab in the interface. A search bar is at the top. Below it, there are tabs for 'PINNED METADATA', 'MARKERS', and 'SEGMENTS'. A table lists metadata items with their values:

Metadata Name	Value
Processed	Empty
WF_TRIGGER	yes
test list	Empty
Category	Empty
AddedBy	AddedBy (dropdown menu open)
Duration	Empty
Episode Name	Empty
User Private Data	Empty

The dropdown menu for 'AddedBy' is open, showing the following options:

- EMPTY
- Diana
- Raven

Note: Kumulate must be reloaded for changes to take effect. You may also need to clear the cache.

Managing Resource Filters

Resource filters are used to select specific assets, instances, storage locations, metadata, and attachments based on the requirements.

Resource filters are separated into ACL and non-ACL filters. ACL Resource Filters are used in group configurations to control access to attachment templates, Storage Locations, and metadata elements. Non-ACL Resource Filters are used by workflow and transcode to narrow triggers, sources, and destinations.

Non-ACL and ACL Resource Filters can share the same names. However, it is best practice to not duplicate resource filter names.

Because resource filters can be changed from several different administrative pages, always verify that modifications to resource filters won't impact workflows, transcodes, or groups.

Topics

- [Adding an Asset Resource Filter](#)
- [Adding a Instance Resource Filter](#)
- [Audio Metadata in Non-ACL Instance Resource Filters](#)
- [Adding a Metadata Resource Filter](#)
- [Adding a Storage Location Resource Filter](#)
- [Adding an Attachment Template Resource Filter](#)
- [Adding a Video Essence Resource Filter](#)
- [Adding an Audio Essence Resource Filter](#)
- [Using Date Metadata in a Resource Filter](#)
- [Searching with the Metadata-Based Resource Filter](#)
-

Types of Resource Filters

Resource Filters are used to select assets, instances, metadata, storage locations, and attachments using specific criteria. The type of the resource filter dictates what is filtered.

Type of Resource Filter	Description
Asset	Selects assets with metadata that matches the defined criteria.
Instance	Selects assets with metadata that matches the defined criteria.
Metadata	Selects only the listed metadata elements.
Storage Location	Selects only the listed Storage Locations.
Attachment Template	Selects attachments created with the listed attachment templates by the listed user groups.
Video Essence	Selects video essences with the matching metadata.
Audio Essence	Selects audio essences with the matching metadata.

Adding an Asset Resource Filter

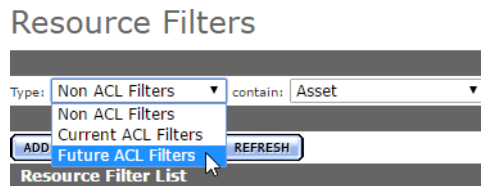
Asset Resource Filters select assets based on metadata values. They are used in workflows and group ACLs (Access Control Lists). Always ensure that any changes made to an Asset Resource Filter won't negatively affect existing workflows or groups.

Asset Resource Filters can be used in workflows and ACLs.

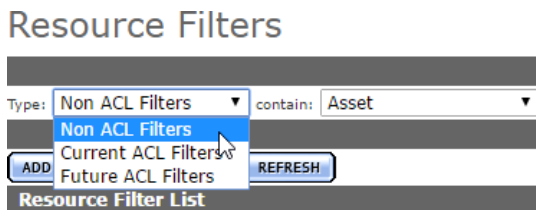
Follow these steps to create an Asset Resource Filter from the Resource Filters page:

1. Navigate to System > Administration > Content > Resource Filters to display the Resource Filters page:

2. If the resource filter is used in a group ACL, select Type > Future ACL Filters:



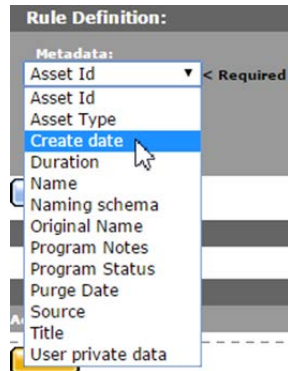
3. If the resource filter is used in a workflow, select Type > Non ACL Filters:



4. Click Add New Resource Filter and give the resource filter a useful name and description. Select Asset from the Type menu:



5. Click OK.
6. On the Modify Resource Filter page, enter the asset metadata to use as a filter.
 - a. Select the metadata from the Metadata menu:



- b. Enter the metadata value. The resource filter will select assets that satisfy the metadata conditions.

The Program Status metadata value can be selected from a menu, or entered using the text field:

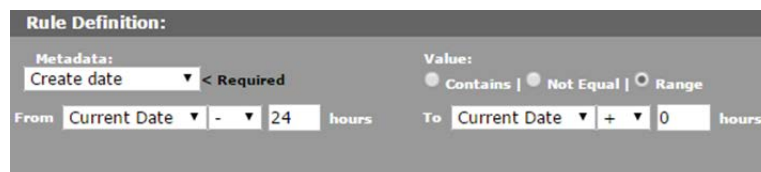


All other metadata values are entered using the text field:



All metadata values are treated as regular expressions except Create Date, Duration, and Purge Date. The Contains option finds all values that match the regular expression, and the Not Equal option finds all values that do not match the regular expression.

The Range option is disabled for all metadata except Create Date, Duration, and Purge Date:



The Contains option is interpreted as is equal to for Create Date, Duration, and

Purge Date.

See [Using Date Metadata in a Resource Filter](#) before using date metadata.

- c. Click Add to save the metadata condition.
 - d. Repeat these steps for each attachment to include in the resource filter.
7. Click OK to save the resource filter.

Adding a Instance Resource Filter

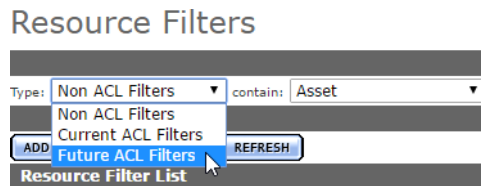
Instance Resource Filters select assets based on metadata values. They are used in workflows and group ACL (Access Control Lists). Always ensure that any changes made to a Instance Resource Filter won't negatively affect existing workflows or groups.

Instance Resource Filters can be used in workflows and ACLs.

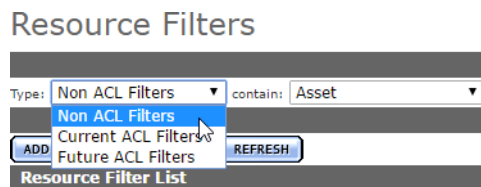
Follow these steps to create a Instance Resource Filter:

1. Navigate to System > Administration > Content > Resource Filters to display the Resource Filters page: :

2. If the resource filter is used in a group ACL, select Type > Future ACL Filters:



3. If the resource filter is used in a workflow, select Non ACL Filters from the Type menu:

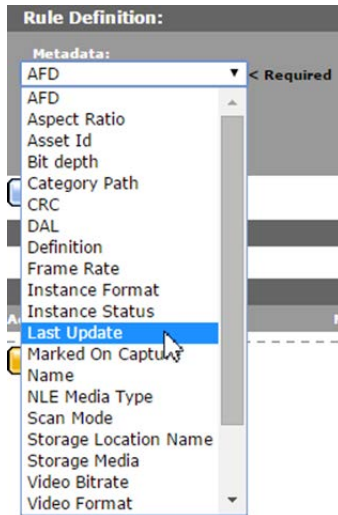


4. Click Add New Resource Filter. Enter a useful name and description. Select Instance from the Type menu:



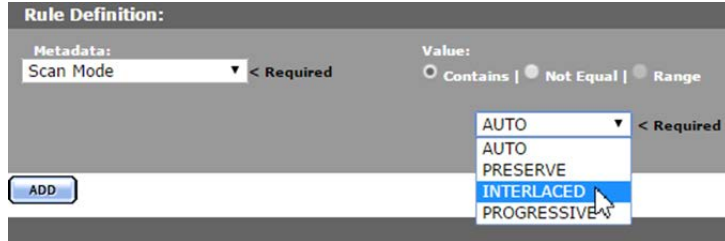
5. Click OK.

6. On the Modify Resource Filter page, enter the asset metadata to use as a filter.
 - a. Select the metadata from the Metadata menu:



- b. Enter the metadata value. The resource filter will select assets that satisfy the metadata conditions.

The AFD, Frame Rate, and Scan Mode metadata values are selected exclusively from a menu:



The Aspect Ratio, Instance Format, Instance Status, Storage Media, and Video Format metadata values can be selected from a menu or entered in the text field:

The screenshot shows the 'Rule Definition' dialog with 'Metadata' set to 'Aspect Ratio' and 'Value' set to 'Contains'. The value field contains '1x1' and a dropdown menu is open showing '16x9' as the selected option. The 'Required' checkbox is checked.

All other metadata values are entered using a text field:

The screenshot shows the 'Rule Definition' dialog with 'Metadata' set to 'Storage Location Name' and 'Value' set to 'Contains'. The value field contains the text 'GENERIC.*'. The 'Required' checkbox is checked.

All metadata values are treated as regular expressions except Last Update. The Contains option finds all values that match the regular expression, and the Not Equal option finds all values that do not match the regular expression.

The Range option is disabled for all metadata except Last Update:

The screenshot shows the 'Rule Definition' dialog with 'Metadata' set to 'Last Update' and 'Value' set to 'Range'. The 'From' field is 'Current Date - 24 hours' and the 'To' field is 'Current Date + 0 hours'. The 'Range' radio button is selected.

The Contains option is interpreted as is equal to for Last Update.

See [Using Date Metadata in a Resource Filter](#) before using date metadata.

See [Audio Metadata in Non-ACL Instance Resource Filters](#) before using audio metadata.

- c. Click Add to save the metadata condition.
 - d. Repeat these steps for each attachment to include in the resource filter.
7. Click OK to save the resource filter.

Audio Metadata in Non-ACL Instance Resource Filters

Audio metadata can be used to select assets in non-ACL Instance Resource Filters.

Note: Metadata must be extracted from assets before using these resource filters.

Types of Audio Metadata

Assets can be filtered by the bit depth, bitrate, block align, sample rate, codec used in one or more essences, the number of essences, and audio channels in a Instance.

Metadata	Description
Audio.Bit depth	Used to filter assets by the bit depth of one or more of their audio essences.
Audio.Bitrate	Used to filter assets by the bitrate of one or more of their audio essences.
Audio.Block align	Used to filter assets by the block align of one or more of their audio essences.
Audio.Sample rate	Used to filter assets by the sample rate of one or more of their audio essences.
Audio.Codec	Used to filter assets by the codec used in one or more of their audio essences.
Audio.Channels	Used to filter assets by the number of channels in one or more of their audio essences.
Audio.Channel count	Used to filter assets by the total number of channels over all its essences.
Audio.Essence count	Used to filter assets by the number of essences in the Instance.

Using Audio Metadata

With the exception of Audio.Channel count and Audio.Essence count, the audio metadata is matched to one or more audio essences in the Instance. The Essence no: field specifies the essence to which the metadata must be matched.

Note: Essence numbers are displayed from the Instance audio metadata.

AUDIO						
#	Codec	Channels	Bitrate	Sample Rate	Bit Depth	Block Align
1	AAC	2	112000	48000	16	4
2	AAC	2	112000	48000	16	4
3	AAC	2	112000	48000	16	4
4	AAC	2	112000	48000	16	4

To apply the filter to one specific essence, enter the essence number in the Essence no: field. For example, to select assets where audio essence 1 has a bit depth of 16, enter 1 in the Essence no field:

Rule Definition:

Metadata: < Required Value: Contains | Not Equal | Range

Essence no:

To apply the filter to more than one essence, essence numbers can be separated by commas, or specified by a range.

Note: The metadata must match each essence in the list.

For example, to select assets where essences 1, 2, and 4 have a bit depth of 16, enter 1,2,4 in the Essence no: field:

Rule Definition:

Metadata: < Required Value: Contains | Not Equal | Range

Essence no:

To select assets where essences 1, 2, 3, and 4 have a bit depth of 16, enter 1-4 in the Essence no: field:

Rule Definition:

Metadata: < Required Value: Contains | Not Equal | Range

Essence no:

Note: All ranges are inclusive; the lower and upper limits are included in the range.

Use the * to match the metadata to any essence in the Instance.

For example, to select assets that have at least one essence with a bit depth of 16, enter * in the Essence no: field:

Rule Definition:

Metadata:	Value:
Audio.Bit depth < Required	Contains Not Equal Range
Essence no: *	16

In the Matching Rule Set list, the matched values are displayed as essence.value. If only one essence is being matched, that essence number will display in the value:

Matching Rule Set:

Actions	Select	Metadata	Matching Rule Set	Lower Value
 	<input type="checkbox"/>	Audio.Bit depth	Contains	1.16

If a comma-separated list of essences is used, the comma separated list will display in the value:

Matching Rule Set:

Actions	Select	Metadata	Matching Rule Set	Lower Value
 	<input type="checkbox"/>	Audio.Bit depth	Contains	1,2,4,16

If a range of essences is used, the range will display in the value:

Matching Rule Set:

Actions	Select	Metadata	Matching Rule Set	Lower Value
 	<input type="checkbox"/>	Audio.Bit depth	Contains	1-4,16

If the value can match any essence, the * will display in the value:

Matching Rule Set:

Actions	Select	Metadata	Matching Rule Set	Lower Value
 	<input type="checkbox"/>	Audio.Bit depth	Contains	*,16

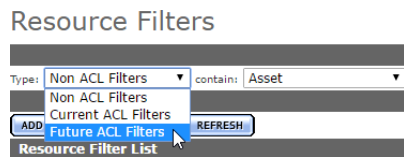
Adding a Metadata Resource Filter

Metadata Resource Filters select the listed metadata elements and are used to limit the metadata elements a user group can access. They are generally used in ACLs and workflows. Metadata Resource Filters are managed on the Resource Filters page.

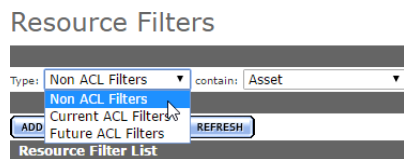
Follow these steps to create a Metadata Resource Filter:

1. Navigate to System > Administration > Content > Resource Filters to display the Resource Filters page: :

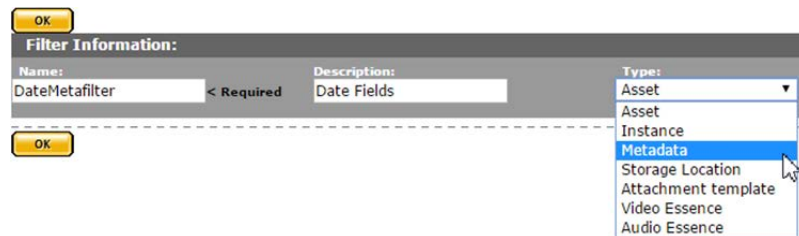
2. If the resource filter is used in a group ACL, select Type > Future ACL Filters:



3. If the resource filter is used in a workflow, select Non ACL Filters from the Type menu:

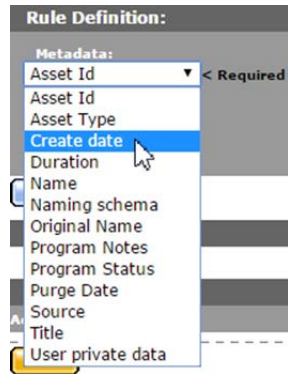


4. Click Add New Resource Filter and enter a useful name and description. Select Metadata from the Type menu:

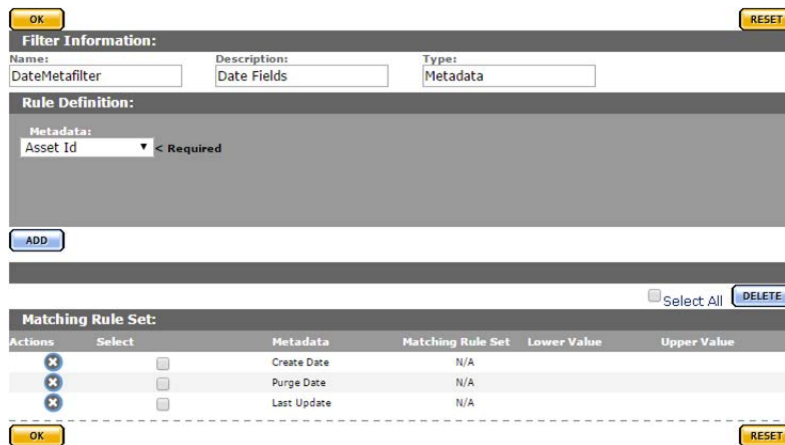


5. Click OK.

6. On the Modify Resource Filter page, enter the asset metadata to use as a filter.
 - a. Select the metadata from the Metadata menu:



- b. Click Add to save the metadata element.
 - c. Repeat these steps for each attachment to include in the resource filter.
7. Click OK to save the resource filter:



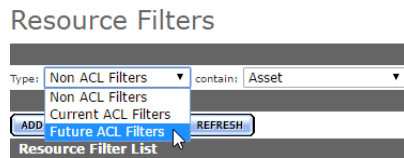
Adding a Storage Location Resource Filter

Storage Location Resource Filters are a list of Storage Locations. They can be modified from Group Settings or from the Resource Filters page. Always ensure that any changes made to a Storage Location Resource Filter won't negatively affect group configurations. Storage Location Resource Filters are used exclusively in group ACLs (Access Control Lists).

Follow these steps to create a Storage Location Resource Filter:

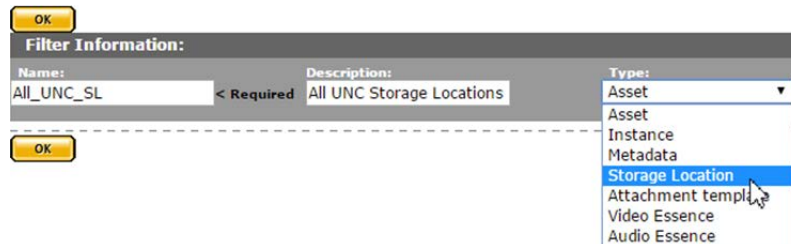
1. Navigate to System > Administration > Content > Resource Filters to display the Resource Filters page:

2. Select Type > Future ACL Filters:



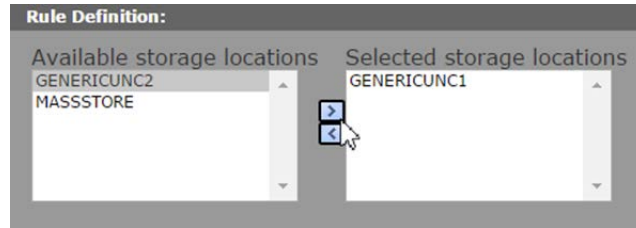
3. Click Add New Resource Filter.

4. Give the resource filter a useful name and description. Select Storage Location from the Type menu:



5. Click OK.

6. On the Modify Resource Filter page, select the Storage Locations returned by this filter.
 - a. Select Storage Locations from the Available storage locations list, then use the right arrow to add them to the Selected storage locations list:



- b. Click Add to add the location to the filter.
 - c. The location is added to the Matching Rule Set list:

Matching Rule Set:					
Actions	Select		Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>		MASSSTORE	N/A	
	<input type="checkbox"/>		GENERICUNC1	N/A	
	<input type="checkbox"/>		GENERICUNC2	N/A	

7. Click OK to save the resource filter.

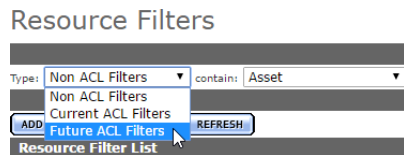
Adding an Attachment Template Resource Filter

Attachment Template Resource Filters select attachments created by specific user groups, using specific templates. They are used exclusively by ACLs (Access Control Lists). Always ensure that any changes made to an Attachment Template Resource Filter won't negatively affect group configurations.

Follow these steps to create an Attachment Template Resource Filter:

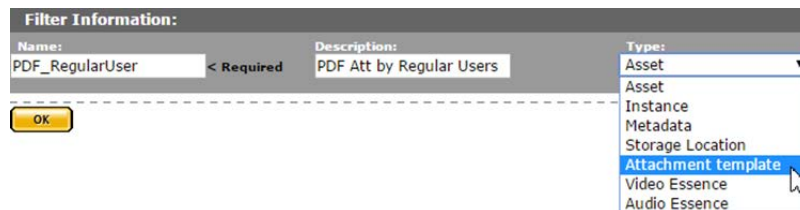
1. Navigate to System > Administration > Content > Resource Filters to display the from the Resource Filters page

2. Select Future ACL Filters from the Type menu:



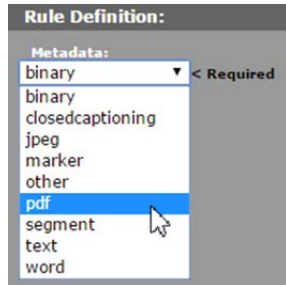
3. Click Add New Resource Filter.

4. Give the resource filter a useful name and description. Select Attachment Template from the Type menu:

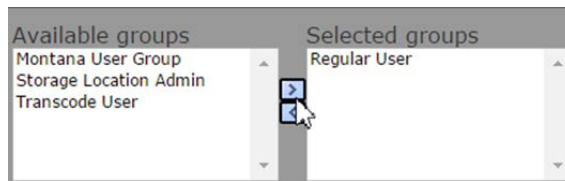


5. Click OK.

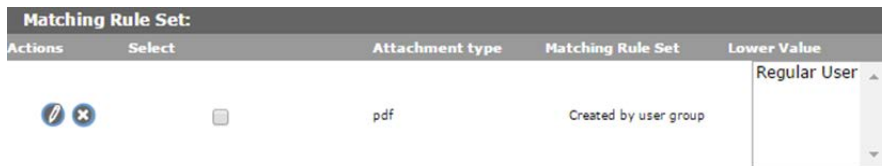
6. On the Modify Resource Filter page, add the attachments created by the specific user groups that are returned by this filter.
 - a. Select an attachment template from the Metadata menu. The menu will show all built-in attachment templates, as well as any user-created templates:



- b. Select a group. This group is the group that created the attachment. The filter will only return attachments created by the selected group. Select as many groups as needed from the Available groups list, then Click the right arrow to add the group to the Selected groups list:



- c. Click Add to add the group to the Matching Rule Set list:



- d. Repeat these steps for each attachment to include in the resource filter.
7. Click OK to save the resource filter.

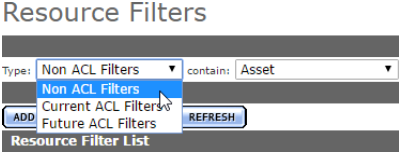
Adding a Video Essence Resource Filter

Video Essence Resource Filters select assets based on their video metadata. They are used in workflows and transcode profiles; they are not used in ACLs. Always ensure that any changes made to a Video Essence Resource Filter won't negatively affect existing workflows and transcode profiles.

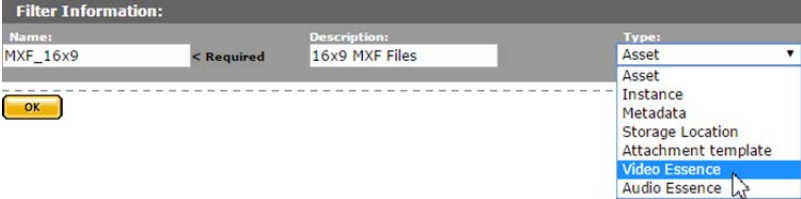
Follow these steps to create a Video Essence Resource Filter from the Resource Filters page:

1. Navigate to System > Administration > Content > Resource Filters to display the Resource Filters page: :

2. Select Non ACL Filters from the Type menu:

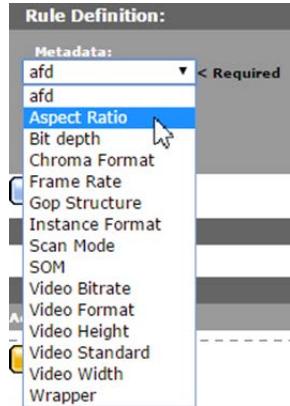


3. Click Add New Resource Filter.
4. Give the resource filter a useful name and description. Select Video Essence from the Type menu:

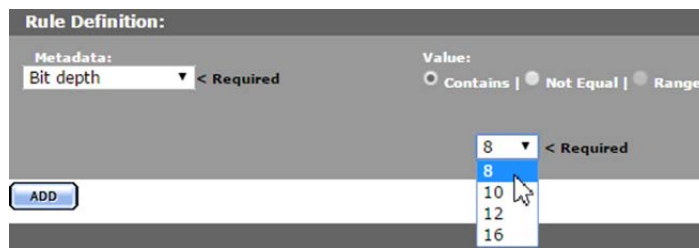


5. Click OK.

6. On the Modify Resource Filter page, add the attachments created by the specific user groups to be returned by this filter.
 - a. Select the metadata from the Metadata menu:



- b. Enter the metadata value. The resource filter will select assets that satisfy the metadata conditions. The afd, Bit depth, Frame Rate, and Scan Mode metadata values are selected exclusively from a menu:



The Aspect Ratio, Chroma Format, GOP Structure, Instance Format, Video Format, and Video Standard metadata values can be selected from a menu, or entered using the text field.

A value entered into the text field is added to the menu if it is also assigned to a Instance:



The SOM, Video Bitrate, Video Height, Video Width, and Wrapper metadata values are entered in the text field:



Note:

- Text metadata values are interpreted as regular expressions. The Contains option finds all values that match the regular expression, and the Not Equal option finds all values that do not match the regular expression.
- The Contains option is interpreted as is equal to when the metadata value is a numeric type, such as SOM.
- The Range option is disabled for all metadata except SOM and Video Bitrate.

c. Click Add to save the metadata condition.

7. Click OK to save the resource filter.

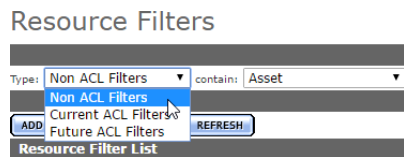
Adding an Audio Essence Resource Filter

Audio Essence Resource Filters select assets based on their audio metadata. They are used in workflows and transcode profiles; they are not used in ACLs. Always ensure that any changes made to an Audio Essence Resource Filter won't negatively affect existing workflows and transcode profiles.

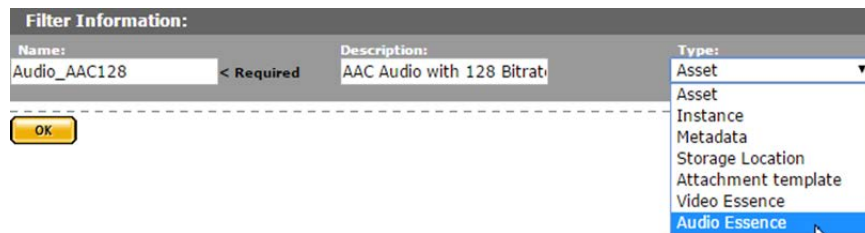
Follow these steps to create an Audio Essence Resource Filter:

1. Navigate to System > Administration > Content > Resource Filters to display the Resource Filters page: :

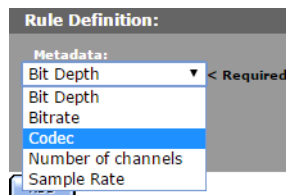
2. Select Non ACL Filters from the Type menu:



3. Click Add New Resource Filter.

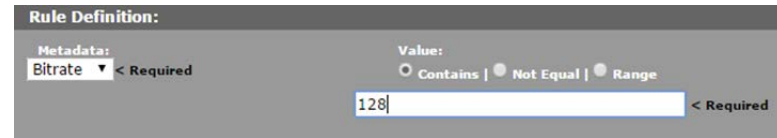


4. Enter a useful name and description, select Audio Essence from the Type menu and click OK to create it.
5. On the Modify Resource Filter page, enter the audio metadata to use to filter assets.
 - a. Select the metadata from the Metadata menu:

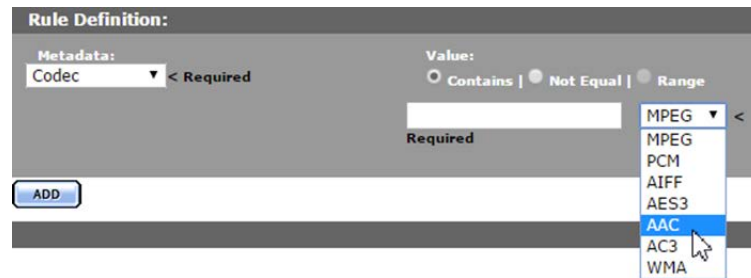


- b. Enter the metadata value. The resource filter will select assets that satisfy the metadata conditions. The Bit Depth, Bitrate, Number of channels and Sample Rate metadata can be set to either be equal to a value (Contains), not equal to a

value (Not Equal), or between two values (Range). The Range option includes the lower bound, but excludes the lower bound in the match:



The Codec metadata values can be set to either match a codec (Contains) or not match a codec (Not Equal). The codec can either be selected from the menu or entered in the text field. The Range option is disabled for codec metadata:



- c. Click Add to save the metadata condition.
- d. Click OK to save the resource filter.

Using Date Metadata in a Resource Filter

Date metadata, such as Purge Date, Create Date, and Last Update Date are stored with second precision—the metadata contains date, hour, minute, and second time values.

When creating a Date Resource Filter, the Contains option exactly matches the date and time of the metadata. An exact match with stored metadata is almost impossible because a resource filter only allows you to match a date without the time component.

For example, a resource filter that selects assets where Create Date Contains January 1, 2016 will only return assets that were created on January 1, 2016 at 00:00:00, instead of all assets that were created on January 1, 2016.

Instead, use the Range option to select date metadata that contains a particular day. The range includes the lower limit, but doesn't include the upper limit.

For example, to select all assets that were created on January 1, 2016, use a range between January 1, 2016, and January 2, 2016:

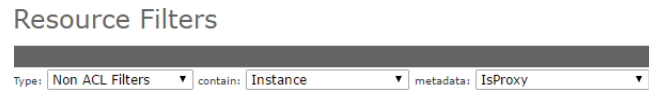
The screenshot shows a 'Rule Definition' window. Under 'Metadata:', 'Create Date' is selected and marked as '< Required'. Under 'Value:', the 'Range' radio button is selected. The 'From' field is set to 'Date' with a dropdown menu, followed by '2016 - Jan - 01' and 'To' with a dropdown menu, followed by '2016 - Jan - 02'. Below the date fields are labels 'yyyy', 'mmm', and 'dd' for both the start and end dates. A '<' symbol is visible at the end of the range.

Because the upper limit of the range is not included, this range only matches assets with a Create Date of January 1, 2016.

Searching with the Metadata-Based Resource Filter

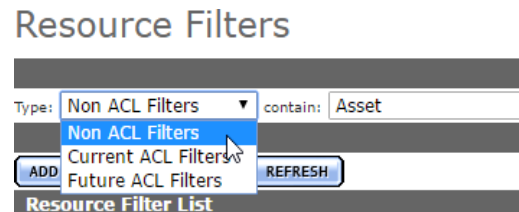
In some cases it may be necessary to find all of the resource filters that use specific metadata. For example, cases where metadata needs to be deleted or replaced.

Search for resource filters using the search bar at the top of the Resource Filter page:

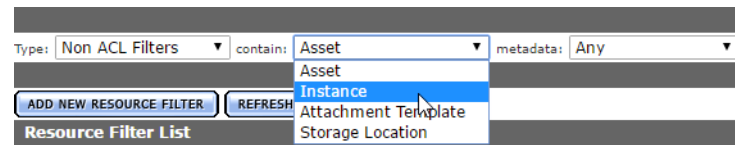


Follow these steps to search resource filter metadata:

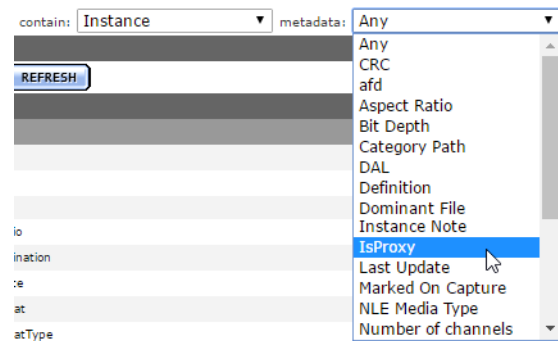
1. Select the type of resource filter to search:



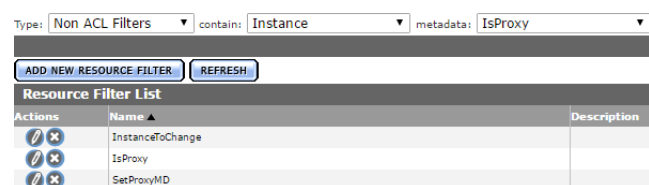
2. Select the metadata type—for example, Instance:



3. Select the metadata (only metadata associated with the Instance type displays):



After the metadata is selected, the Resource Filter list will only show resource filters that use the selected metadata:



Managing Access Control Lists and Access Privileges

User access to the various views and features of Kumulate is regulated by the access controls and privileges assigned to groups of which the user is a member.

Access Control Lists (ACLs) use resource filters to provide groups access to specific assets, instances, instances, attachments, locations, and metadata. Access privileges are used to provide group access to administrative tasks.

It is important to understand how ACLs and access privileges work together as you create, configure, and manage user groups.

Topics

- [Access Control Lists Overview](#)
- [Access Privileges](#)
- [Privileges and Permissions for Common Operations](#)

Access Control Lists Overview

ACLs are used to control how users interact with particular groups of resources. They are granular, allowing different access permissions for different groups of resources. ACLs use resource filters to specify the exact resources users in groups have access to.

There are four types of ACLs:

- [Storage Location ACLs](#)
- [Metadata ACLs](#)
- [Attachment Template ACLs](#)
- [Asset and Instance ACLs](#)

Storage Location ACLs

The ACL for storage repositories allows or denies users the ability to view or modify storage and archive locations and their contents.

Access is given to groups of locations defined by resource filters. A group will have no access to locations that are not selected by a resource filter.

Access	Description
View	The minimum access level needed for users to view locations and their contents. If a location is not visible to the user, the user cannot access the instances on that location, even if their assets are visible.
Modify	Allows users to move and transcode instances to the locations in the resource list. If a user doesn't have modify access to a location they won't see the location as a transcode or transfer destination.

Metadata ACLs

The Metadata ACL sets whether users in the group can search, view, or modify metadata. Access to metadata ACLs must be set at least to Search for search operations to work properly. Administrators can now assign a default set of pinned metadata fields.

Attachment Template ACLs

Attachment Template ACLs give a group's users permission to access asset attachments. These include marks, segments, closed captions, format sheets, and any user-created attachment types.

Resource filters are automatically created for each individual attachment type, including user-created attachment types. This allows ACLs to be set for each attachment type, giving groups specific permissions to specific attachments.

Access	Description
View	The minimum access level required for users to view and download attachments.
Add	Allows users to upload attachments. The Add access level depends on the View access level. View access is automatically added when Add is selected. If View is deselected then Add is automatically deselected.
Modify	Allows users to modify existing markers and segments, and modify attachment metadata. The Modify access level depends on the View access level. View access is automatically added when Modify is selected. If View is deselected then Modify is automatically deselected.
Delete	Allows users to delete attachments. The Delete access level depends on the View access level. View access is automatically added when Delete is selected. If View is deselected then Delete is automatically deselected.

Asset and Instance ACLs

Asset and Instance ACLs give a group's users permission to access assets and instances. ACLs for assets and instances are set separately. However, the two ACLs work together. Instances within an asset are not viewable unless the asset is displayed. Assets must have at least View permissions for the instances within them to be viewable.

Asset ACL permissions provide the following access levels:

Access	Description
View	The minimum access level needed for users to view assets. No information about assets or instances is available unless the ACL access is set to View.
Modify	Allows users to modify asset metadata. The Modify access level depends on the View access level. View access is automatically added when Modify is selected. If View is deselected then Modify is automatically deselected.

Access	Description
Delete	Allows users to delete assets, including all instances in the asset, regardless of the instance access control level. The Delete access level depends on the View access level. View access is automatically added when Delete is selected. If View is deselected then Delete is automatically deselected.
Copy	Allows users to transfer instances from the asset search results page. The Copy access level depends on the View access level. View access is automatically added when Copy is selected. If View is deselected then Copy is automatically deselected.
Transcode	Has no effect on the ability to transcode instances. Access to transcoding is set exclusively by the Instance ACLs.

Instance ACL permissions provide the following access levels:

Access	Description
View	The minimum access level needed for users to view instances and extract thumbnails. No information about instances is available unless the ACL access is set to View.
Modify	Allows users to modify instance metadata and extract thumbnails. The Modify access level depends on the View access level. View access is automatically added when Modify is selected. If View is deselected then Modify is automatically deselected.
Delete	Allows users to delete instances and extract thumbnails. The Delete access level depends on the View access level. View access is automatically added when Delete is selected. If View is deselected then Delete is automatically deselected.
Copy	Allows users to transfer instances and extract thumbnails. The Copy access level depends on the View access level. View access is automatically added when Copy is selected. If View is deselected then Copy is automatically deselected.
Transcode	Allows users to transcode instances and extract thumbnails. The Transcode access level depends on the View access level. View access is automatically added when Transcode is selected. If View is deselected then Transcode is automatically deselected.

Access Privileges

Access Privileges control which parts of the Kumulate system users in the group can access. Privileges can be set at different levels for the following:

- [Storage Location Administration](#)
- [Asset Access Privileges](#)
- [Instance Access Privileges](#)
- [Administrative Privileges](#)
- [Proxy Access](#)
- [Cancel Operations and Priority Changes Privileges](#)

Storage Location Administration

Storage Administrator groups and default Storage Users provide access to storage administration tasks on the Locations page without giving the user access to all Administration capabilities.

The following privileges apply to archive, cache, and storage location configuration functions:

Privilege Level	Description
Storage Administrator	Users in this group have full control as identified in the next entry.
Full Control	Users in the group can create, delete, modify, and view storage locations.
Add	Users in the group can create, modify, and view storage locations, but cannot delete them.
Modify	Users in the group can modify and view storage locations, but can neither create nor delete locations.
Read	Users in the group can only view the storage location configuration, and cannot modify, create, or delete locations.
Storage User	Users in the group have access to limited administrative storage location functions.
No Access	Users do not have access to the Storage Location Administration page, but they can still view storage locations and their contents from the Locations page.

Asset Access Privileges

The following privileges set access to assets:

Privilege Level	Description
Full Control	Users in the group can create, delete, modify, and view assets.
Add	Users in the group can create, modify, and view assets, but cannot delete them.
Modify	Users in the group can view assets, and change asset metadata, but cannot create or delete assets, nor can they add attachments; including segments and markers.
Read	Users in the group can only view the assets and cannot modify, create, or delete assets.
No Access	Users have no rights to assets and cannot search for assets, nor can they search for instances.

Note: Only No Access prevents users from manipulating instances. All other privilege levels allow users to create and delete instances, transcode and transfer instances, extract metadata and thumbnails, and extract instance segments into new assets (Partial Restore).

Instance Access Privileges

The following privileges set access to instances:

Privilege Level	Description
Full Control	Users in the group can create, delete, modify, and view instances.
Add	Users in the group can view, create, transfer, transcode instances, and extract thumbnails and metadata, but cannot delete instances.
Modify	Users in the group can view instances and change instance metadata, but cannot create, delete, transfer, or transcode instances, nor can they extract thumbnails or metadata.
Read	Users in the group can only view and play instances.
No Access	Users have no rights to instances or assets.

Administrative Privileges

The Administration Privileges set the access privileges for the entire administration section of Kumulate. If these privileges are set to a stricter value than the other settings, these settings will take precedence.

Privilege Level	Description
Full Control	Users in the group have full access to all administrative functions.
Add	Users in the group can create, modify, and view configurations, but cannot delete elements such as storage locations, groups, resource filters, etc.
Modify	Users in the group can modify and view configurations, but cannot create nor delete elements such as storage locations, groups, resource filters, etc.
Read	Users in the group can only view configurations, but cannot modify, create, or delete elements such as storage locations, groups, resource filters, etc.
No Access	Users do not have access to the Storage Location Administration page.

Proxy Access

These privileges govern how users in the group interact with proxy instances.

Note: If the asset privileges are set to No Access, users in the group is unable to access proxy instances.

Privilege Level	Description
Full Control	Users in the group can view, play, create, and delete proxy instances.
Add	Users in the group can view, play, and create proxy instances, but cannot delete them.
Modify	Users in the group can view, play, create, and delete proxy instances.
Read	Users in the group can only view proxy instances, but cannot modify, create, or delete them.
No Access	Users cannot see proxy instances.

Cancel Operations and Priority Changes Privileges

The Cancel Operations and Priority Changes privileges set whether users in the group can cancel operations, and change priorities on operations, respectively. These privileges are set to either No Access or Full Control.

Setting the privilege to Full Control allows users to cancel or change priorities. Setting the privilege to No Access prevents users from canceling or changing priorities.

Privileges and Permissions for Common Operations

The following topics outline the minimum group privileges and permissions needed for common operations.

Privileges and Permissions for Searching

Searching requires access to the metadata of the assets being searched and read access to the assets themselves.

There must be access to instances and assets at a minimum. To successfully search attachments, including captions, marks, and segments, the group additionally needs access to the type of attachment they are allowed to search.

Minimum Requirements to Search Assets and Instances

The following are the minimum requirements to successfully search and view assets and instances. These permissions and privileges do not give the group the ability to modify assets, instances, or their metadata in any way.

Privilege	Level
Asset	Read
Instance	Read

ACL Resource Filter	Action	Description
All Metadata	Search, View	The ACL must use the AllMetadata resource filter.
Read Only Metadata	Search, View	The ACL must use the ReadOnlyMetadata resource filter.
Assets	View	The asset resource filter used with the ACL must include assets the group should have access to and exclude any assets the group should not have access to.
Instances	View	The instance resource filter used with the ACL must include any instances the group should have access to and exclude any instances the group should not have access to. Instances that are on locations the group doesn't have access to won't be visible.

Minimum Requirements to Search Attachments

The following are the minimum requirements to successfully search attachments. These permissions and privileges give the group the ability to view and download attachments, but do not give the group the ability to modify, delete, or upload attachments, or to modify attachment metadata.

Note: Assets and instances can be viewed only.

Privilege	Level
Asset	Read
Instance	Read

ACL Resource Filter	Action	Description
All Metadata	Search, View	The ACL must use the AllMetadata resource filter.
Read Only Metadata	Search, View	The ACL must use the ReadOnlyMetadata resource filter.
Assets	View	The asset resource filter used with the ACL must include assets the group should have access to and exclude any assets the group should not have access to.
Instances	View	The instance resource filter used with the ACL must include any instances the group should have access to and exclude any instances the group should not have access to. Instances that are on locations the group doesn't have access to won't be visible.
Attachments	View	Multiple ACLs can be created, each corresponding to a resource filter for a specific attachment type. Kumulate automatically creates resource filters for attachment types. These resource filters are named RF_<attachment_type>. The ACLs and their resource filters must cover all the attachments the group should have access to.

Privileges and Permissions for Transferring

Transferring an instance to another location is a copy operation, not a move operation. When an instance is transferred to a location, a new instance is created on the target location, but not removed from the original location.

A group needs privileges and permissions to create new instances on a location to successfully transfer instances to the location.

A group doesn't need the rights to modify assets or storage locations to create new instances.

Note: Groups with only transfer privileges are still able to perform dissimilar transfers, which include transcode operations.

Privilege	Level
Storage Unit	Read
Asset	Read
Instance	Add

ACL Resource Filter	Action	Description
Storage Locations	Modify	The instance resource filter used with the ACL must include all the locations that the group should be able to transfer instances to.
Assets	View	The instance resource filter used with the ACL must include all the locations where the group should be able to view instances.
Instances	Copy	The instance resource filter used with the ACL must include all the locations that the group should be able to copy instances to.

Privileges and Permissions for Transcoding

Transcoding requires access to the cache. The cache acts as a staging area for transcoding instances. If the group doesn't have permission to access the cache, users in the group is unable to transcode instances and create low-resolution proxy instances.

A group needs privileges and permissions to create new instances to successfully transcode instances.

A group doesn't need the rights to modify assets or storage locations to create new instances.

Privilege	Level
Storage Unit	Read
Asset	Read
Instance	Add

ACL Resource Filter	Action	Description
Storage Locations	Modify	Transcoding requires access to the Kumulate cache. The resource filter used must include the cache otherwise all transcode operations will fail.
Assets	View	Transcoding requires access to the Kumulate cache. The resource filter used must include the cache otherwise all transcode operations will fail.
Instances	Transcode	Transcoding requires access to the Kumulate cache. The resource filter used must include the cache otherwise all transcode operations will fail.

Privileges and Permissions for Marking

Marks made using the Kumulate player are stored as attachments. Because of this, access to the mark attachment type regulates the way a group can use marks.

Different access levels are available for marks. Groups can be given permission to view, add, modify, or delete marks.

The following privileges and permissions are required for any group that needs to access marks:

Privilege	Level
Asset	Read
Instance	Read
Proxy	Read

ACL Resource Filter	Action
Assets	View
Instances	View

The group must use an ACL with an attachment resource filter that includes the Marker Attachment Type.

A Marker Attachment Resource Filter (RF_MARKER) is already included in Kumulate. However, the ACL can use any attachment resource filter that includes the marker attachment template. See [Adding an Attachment Template Resource Filter](#) for more information.

The following ACL permissions are needed for access to different actions on marks:

Mark Action	ACL Action	Description
View Marks	View	Allows users in the group to view marks. This action is selected automatically when any of the other actions are selected. If View is deselected all the other actions will also be deselected automatically.
Add Marks	Add	Allows users in the group to create marks.
Edit Marks	Modify	Allows users in the group to edit the mark comment and color.
Delete Marks	Delete	Allows users in the group to delete marks.

Note: For users in the group to have access to the marks they created, the Group Name must be added to the Marker Attachment Resource Filter. Users in the group is unable to view, modify, or delete the marks they have created if the Group Name is not added to the resource filter. See [Adding an Attachment Template Resource Filter](#) for more information.

Privileges and Permissions for Segmenting

Segments created using the Kumulate player are stored as attachments. Because of this, access to the segment attachment type regulates the way a group can use segments. Different access levels are available for segments. Groups can be given permission to view, add, modify, or delete segments.

Note: The privileges and permissions needed to extract (partial restore) segments are covered in [Privileges and Permissions for Extracting Segments](#).

The following privileges and permissions are required for any group that needs to access segments:

Privilege	Level
Asset	Read
Instance	Read
Proxy	Read

ACL Resource Filter	Action
Assets	View
Instances	View

The group must use an ACL with an attachment resource filter that includes the Marker Attachment Type.

A segment attachment resource filter (RF_SEGMENTS) is already included in Kumulate. However, the ACL can use any attachment resource filter that includes the segment attachment template. See [Adding an Attachment Template Resource Filter](#) for more information.

The following ACL permissions are needed for access to different actions on segments:

Segment Action	ACL Action	Description
View Segments	View	Allows users in the group to view segments. This action is selected automatically when any of the other actions are selected. If View is deselected all the other actions will also be deselected automatically.
Add Segments	Add	Allows users in the group to create segments.
Edit Segments	Modify	Allows users in the group to modify the start and end times of segments, and their metadata.
Delete Segments	Delete	Allows users in the group to delete segments.

Note: For users in the group to have access to the segments they created, the Group Name must be added to the Segment Attachment Resource Filter. If the Group Name is not added to the resource filter, users in the group are unable to view, modify, or delete the segments they have created. See [Adding an Attachment Template Resource Filter](#) for more information.

Privileges and Permissions for Extracting Segments

A new instance and asset is created for a segment when it is extracted (partially restored). Because of this, the group needs the privileges and permissions required to create a instance.

The following permissions are required to be able to extract segments:

Privilege	Level
Storage Unit	Read
Asset	Read
Instance	Add

ACL Resource Filter	Action
Storage Location	View, Modify
Assets	View
Instances	View
Segment Attachments	View. See Privileges and Permissions for Segmenting .

Managing Authentication, Authorization, and Access Control

Kumulate user groups control access to the features of Kumulate. Each group sets privileges and access levels for the users in the group. Authentication is accomplished either directly in Kumulate, or optionally, via LDAP or SSO (Single Sign On).

Topics

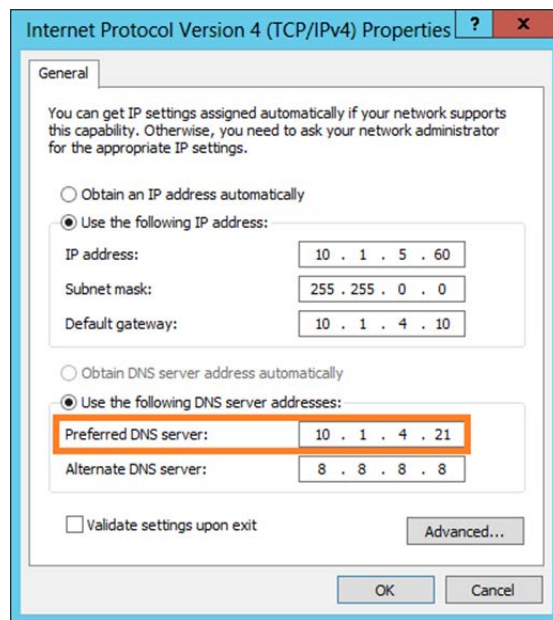
- [Enable Optional Kumulate LDAP Authentication](#)
- [Enable Optional Single Sign-On Authentication](#)

Enable Optional Kumulate LDAP Authentication

The groups used by Kumulate must have LDAP group counterparts with exactly matched names to use LDAP. Users are added automatically to the LDAP user groups.

When users log in to Kumulate for the first time, they are automatically added to the Kumulate group with the same name as their LDAP group. The Kumulate group sets the authorization and privileges for users belonging to the LDAP group of the same name. LDAP groups are only used to authenticate the users.

The Public IP adapter's Preferred DNS server must be configured to point at the LDAP server IP address on the Kumulate server:



Enable Optional Single Sign-On Authentication

Note: LDAP authentication must be enabled to use SSO authentication.

A Kumulate system configured to use LDAP authentication can optionally use SSO authentication.

A user belonging to a Kumulate LDAP user group has the option to use Windows credentials to log in to Kumulate when SSO authentication is enabled:



The image shows the Kumulate login interface. At the top is the Kumulate logo, which includes a Windows icon. Below the logo are two input fields: 'Username' with the text 'jsmith' and 'Password' with the placeholder text 'Please enter your password'. A yellow 'Sign In' button is positioned below the password field.

Click the Windows icon on the standard login panel to pass the user to the SSO login panel:



The image shows the SSO login interface. It features the Kumulate logo with the Windows icon. Below the logo is a single yellow 'Sign In' button.

Managing Transcode Engines, Transcode Profiles, and Thumbnail Profiles

A Transcode Engine and a Transcode Profile are required to submit jobs to transcode media. A Thumbnail Extraction Profile is required to extract thumbnails.

A transcode engine is an external system that transcodes video and extracts thumbnails. Kumulate system can be connected to more than one transcode engine.

Transcode Profiles provide information about how to transcode specific sources to specific destinations.

Thumbnail Extraction Profiles describe rules for extracting thumbnails from video sources.

Topics

- [Adding a Transcode Engine](#)
- [Adding a Transcode Profile](#)
- [Creating Restore Profiles](#)
- [Adding a Thumbnail Extraction Profile](#)

Adding a Transcode Engine

You must configure Kumulate to connect to a transcode engine before it can be used.

Follow these steps to add a transcode engine:

1. Navigate to System > Administration in > DRAC Control > Transcode Engine Information to display the Transcode Engine Information page:

Transcode Engine Information



2. Click ADD to display the Transcode Engine Add page:

Transcode Engine Add

3. Configure these parameters and click OK to add it:

Transcode Engine ID—Provide a unique name for the transcode engine.

Description—Provide an optional description for the transcode engine.

Transcode Engine Hostname/IP—The host name or IP address of the transcode engine.

Transcode Engine Port—The transcode engine's connection port.

For transcode—Check to enable Kumulate to use the transcode engine to transcode assets. When deselected, Kumulate won't send transcode jobs to this engine.

For extract metadata—Check to enable Kumulate to use the transcode engine to extract metadata from assets. When deselected, Kumulate won't send extract metadata jobs to this engine.

Minimum Priority—Specifies the minimum priority job this transcode engine will accept. The transcode engine won't accept any job with a priority below this value. This is useful for creating dedicated transcode engines that only process high-priority jobs.

Adding a Transcode Profile

Kumulate uses transcode profiles to provide a template for transcode jobs.

The Source Filter option provides information about what type of assets are handled by this profile. The profile is only made visible to assets that satisfy the source criteria. The Destination Filter provides information about the format to transcode the source instance into.

A Transcode Profile provides the option of performing additional metadata mapping, as long as this mapping is supported by HQS. A default Transcode Profile is available for creating proxy assets.

Follow these steps to create custom profiles:

1. Navigate to System > Administration > Processing > Transcode Profile to display the Transcode Profile page:

Kumulate displays this page:

Add New Transcode Profile

Transcode Information

Name: < Required

Description:

Operation:
 Transcode Rewrap

Status: < Required

Source Filter: < Required

Destination Filter: < Required

Extended Metadata:

Rename:

Attribute:

2. Click Add Transcode Profile to display the Add New Transcode Profile page.

3. Configure these parameters and click OK to add it:

Name (REQUIRED)—Provide a unique name for the transcode profile.

Description—Provide an optional description of the profile.

Transcode | Rewrap—Select Rewrap to rewrap MXF assets with additional meta-data without decoding and re-encoding the video/audio streams. Select Transcode to decoding and re-encode the media.

Status (Default: Enabled)—Select *Disabled* to prevent users from utilizing this profile.

Source Filter—Select All Instances or a specific resource filter that returns the type of assets to transcode.

Destination Filter (Default: Rewrap)—Select a resource filter that defines the parameters of the final result of the transcode. Rewrap can only be used when rewrapping MXF OP_ATOM and MXF OP_1A assets.

Extended Metadata—Specifies metadata values for the destination. Extended metadata must agree with the HQS parameters.

Rename—Deprecated; do not use.

Attribute—Specifies the type of transcode to perform. Set to Proxy to create a low-resolution proxy. Set to Profile for all other types of transcodes. The Required option is deprecated.

5. Select Set Audio Mapping if audio channels need to be remapped:

Set Audio Mapping Set Audio Metadata

ADD ESSENCE Audio Filter: New >

Required ADD

Select an audio essence resource filter from the Audio Filter menu. The audio essence filter selected must only contain the Number of channels metadata.

The menu will show all audio essence resource filters in the system regardless of whether they are appropriate resource filters.

If no appropriate resource filter exists, click ADD to create a new resource filter:

Add Resource Filter

- a. Select Number of channels as the metadata, then add the number of channels for the destination instance in the Value text field:

Modify Resource Filter

- b. Click ADD to add the metadata to the rule set:

Modify Resource Filter

Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value
<input type="checkbox"/>	<input type="checkbox"/>	Number of channels	Contains	4	

- c. Click OK to save the resource filter and return to the Transcode Profile page.
- d. Select the new resource filter from the menu on the Transcode Profile page (*audioMapping* depicted):

Set Audio Mapping
 Set Audio Metadata

ADD ESSENCE
 Audio Filter: New ▼
 New
 Audio_AAC128
 Audio_AAC192
 Audio_MP364
 audioMapping

- e. Click Add Essence to map the channels:

Set Audio Mapping Set Audio Metadata

Audio Filter:

< Required

✱ Essence 0, Audio Filter:audioMapping

Destination Channels	Source Channels
Channel 0	0
Channel 1	2
Channel 2	4
Channel 3	6

Additional mappings can be added by clicking Add Essence.

Caution: Do not use Set Audio Metadata.

6. Click OK to save the profile.

Creating Restore Profiles

Restore Profile configurations are used by Storage Locations to specify the instance formats that can be copied to them.

When an instance doesn't match a storage location's restore profile is copied to the storage location, Kumulate searches for a transcode profile that matches the source and destination instance and uses it to transcode the instance to the appropriate format before copying it.

Note: A storage location can use more than one Restore Profile and each can describe a different instance format.

Restore Profiles can be created from a storage location's configuration page, or from the Restore Profile Information page.

1. Navigate to System > Administration > Locations > Storage to display the Storage Location Manager page:

Storage Location Manager

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

2. Click Restore Profile Information to display this page:

Storage Location Manager

Actions	Location ID	Model	Comment	Status	Validation Process
	EXTERNAL	EXTERNAL	Template for temporary destinations	ONLINE	N/A
	ELECTIONS	REPOSITORY	ELECTIONS	OFFLINE	N/A
	EVS	REPOSITORY	EVS	OFFLINE	N/A
	FTP_MEDIAHUB	REPOSITORY	FTP_MEDIAHUB	OFFLINE	N/A
	INBOX	REPOSITORY	INBOX	OFFLINE	N/A
	K2-FOR-MORE-TEST	REPOSITORY	K2-FOR-MORE-TEST	OFFLINE	N/A
	K2_TEST	K2	K2_TEST	OFFLINE	N/A
	LEITCH_TEST	LEITCH	LEITCH_TEST	OFFLINE	N/A
	RECURSIVE	REPOSITORY	RECURSIVE	OFFLINE	N/A
	SHOWS	REPOSITORY	SHOWS	OFFLINE	N/A

All Restore Profiles are displayed on this page:

Restore Profile Information

Restore Profile Information List			
ADD RESTORE PROFILE		REFRESH	
Actions	Name	Description	Status
	Profile_AVIDINTERPLAYCOPYOUT	Default profile for AVIDINTERPLAYCOPYOUT	ENABLED
	Profile_TEST	Default profile for TEST	ENABLED
	Profile_AVIDSTANDALONEUNC	Default profile for AVIDSTANDALONEUNC	ENABLED
	Profile_OMNEONFTP	Default profile for OMNEONFTP	ENABLED
	Profile_GENERICUNC1	Default profile for GENERICUNC1	ENABLED
	Profile_GENERICUNC2	Default profile for GENERICUNC2	ENABLED
	Profile_PROJECT	Default profile for PROJECT	ENABLED
	Profile_INTERPLAYCOPYOUTTEST	Default profile for INTERPLAYCOPYOUTTEST	ENABLED
	Profile_TEASL_GENERIC	Default profile for TEASL_GENERIC	ENABLED
	Profile_XMLUNC	Default profile for XMLUNC	ENABLED
	Profile_SPOTUNC	Default profile for SPOTUNC	ENABLED
	Profile_AVIDINTERPLAYTEST	Default profile for AVIDINTERPLAYTEST	ENABLED
	Profile_K2	Default profile for K2	ENABLED

Although Restore Profiles can be created, modified, and deleted from this page, since Restore Profiles are used by individual Storage Locations, best practice is to create them from the storage location where they are intended to be used.

- Open the Storage Location Configuration page of the storage location that uses the profile and click Restore Profile Information:



- One profile is always created by default with the storage location. However, the default profile doesn't contain enough Video Essence metadata to use with a Transcode Profile.

Note: The default profile should not be modified. Instead, a more appropriate restore profile should be added to the storage location.

Restore Profile Information for location: QT

Restore Profile Information List					
ADD RESTORE PROFILE		REFRESH			
Actions	Name	Description	Status	Transcode Dissimilar For Transfer	Delete Dissimilar From Cache
	Profile_QT	Default profile for QT	ENABLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- If there is no suitable available profile in the system that can be used by the storage location, click Add Restore Profile to create a new profile.

6. Provide the new profile a name in the Name text field:

Add New Restore Profile

The dialog box is titled "Add New Restore Profile". It contains the following fields and controls:

- Name:** Text input field containing "ToQT". A "< Required" label is to the right.
- Description:** Empty text input field.
- Status:** Dropdown menu set to "ENABLED". A "< Required" label is to the right.
- Destination Filter:** Dropdown menu set to "New". A "< Required" label and an "ADD" button are to the right.
- Buttons: "OK" (top left), "OK" (bottom left), and "ADD" (bottom right).

7. Select a Destination Filter to use with the Restore Profile, or click ADD to add a new one. The Destination Filter is a Video Essence Resource Filter that describes the target instance.

Note: Don't use the default Resource Filter with the storage location.

8. If a new Destination Filter is being used, provide the filter with a name and (optionally) a description, then click OK:

Add Resource Filter

The dialog box is titled "Add Resource Filter". It contains the following fields and controls:

- Filter Information:**
 - Name:** Text input field containing "RP_QuickTime". A "< Required" label is to the right.
 - Description:** Text input field containing "QuickTime Instance".
 - Type:** Dropdown menu set to "Video Essence".
- Buttons: "OK" (top left), "RESET" (top right), "OK" (bottom left), and "RESET" (bottom right).

9. Set the metadata for the filter:

Modify Resource Filter

The dialog box is titled "Modify Resource Filter". It contains the following fields and controls:

- Filter Information:**
 - Name:** Text input field containing "RP_QuickTime".
 - Description:** Text input field containing "QuickTime Instance".
 - Type:** Text input field containing "Video Essence".
- Rule Definition:**
 - Metadata:** Dropdown menu set to "afd". A "< Required" label is to the right.
 - Value:**
 - Radio buttons for "Contains", "Not Equal", and "Range". "Contains" is selected.
 - Dropdown menu set to "4X3_2". A "< Required" label is to the right.
- Matching Rule Set:**
 - Buttons: "ADD" (bottom left), "SELECT ALL" (top right), and "DELETE" (top right).
 - Table:
- Buttons: "OK" (top left), "RESET" (top right), "OK" (bottom left), and "RESET" (bottom right).

Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value
	<input type="checkbox"/>	Video Format	Contains	H264	
	<input type="checkbox"/>	Instance Format	Contains	QT	

10. Click OK to return to the Restore Profile page after all metadata has been set:

Add New Restore Profile

Restore Profile Information

Name: ToQT < Required

Description:

Status: ENABLED < Required

Destination Filter: RP_QuickTime < Required MODIFY

OK

11. Click OK to save the profile. It will display in the list of Restore Profiles associated with the storage location:

Restore Profile Information for location: QT

Actions	Name	Description	Status	Transcode Dissimilar For Transfer	Delete Dissimilar From Cache
	Profile_QT	Default profile for QT	ENABLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ToQT		ENABLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Transcode Dissimilar For Transfer check box will already be selected. This option must be selected for the profile to be used to transcode an instance to the right format before copying it. The process of transcoding an instance before copying it is referred to as a dissimilar transfer.

A Transcode Profile that uses the same destination metadata as the Restore Profile must exist for a dissimilar transfer to succeed.

When a dissimilar transfer is made to the location, the instance is transcoded to the cache; then the transcoded instance is copied to the destination location. The instance on the cache is kept unless the Delete Dissimilar From Cache check box is selected.

If a Transcode Profile that can convert assets to the Destination Profile format exists, the default profile's Transcode Dissimilar For Transfer check box can be deselected, and its priority can be lowered:

Restore Profile Information for location: QT

Actions	Name	Description	Status	Transcode Dissimilar For Transfer	Delete Dissimilar From Cache
	ToQT		ENABLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Profile_QT	Default profile for QT	ENABLED	<input type="checkbox"/>	<input type="checkbox"/>

Note: If no Transcode Profile exists, create one using either the same destination filter, or a destination filter with the same metadata as used in the Restore Profile.

Transcode Information

Name:
QT-h264

Required

Description:

Status:
ENABLED < Required

Source Filter:
AllInstances < Required
MODIFY

Destination Filter:
RP_QuickTime < Required
MODIFY

Extended Metadata:

Rename:
New

Attribute:
Profile

Restore Profiles is visible in the Available Profiles menu and can be used by any storage location after the profile has been created:

ADD RESTORE PROFILE

Restore Profile Information List

Available Profiles

RPToMXF	ADD
RPToMXF	
ToQT	
Profile_BACKUPQT	Description Default profile for BACKUPQT

ADD RESTORE PROFILE

Profiles can be edited by clicking the Pencil icon. The Storage Locations that use the Restore Profile display on the right of the Modify Resource Profile dialog:

Modify Restore Profile

OK RESET

Restore Profile Information

Name:
ToQT < Required

Description:

Status:
ENABLED < Required

Destination Filter:
RP_QuickTime < Required MODIFY

Attached Storage Locations

- QT
- BACKUPQT

OK RESET

Note: Changes to the Restore Profile affect all Storage Locations.

Adding a Thumbnail Extraction Profile

Thumbnail Extraction Profiles are used to specify how to extract thumbnails from an instance. The default Thumbnail Extraction Profile uses scene detection to create up to ten thumbnails per video. This profile is not suitable for assets that are longer than five minutes.

New Thumbnail Extraction Profiles can be created that are better suited to different types of assets.

Caution: Do not edit the default Thumbnail Extraction Profile.

Follow these steps to create a Thumbnail Extraction Profile:

1. Navigate to System > Administration > Processing > Thumbnail Extraction Profiles to display the Thumbnail Extraction Profiles page:

Thumbnail Extraction Profiles

List of configurations					
Actions	Configuration id	Offset(s)	No. of thumbnails	Width	Height
	Default configuration	0	100	180	120

2. Select a Thumbnail Extraction Type from the Extraction type menu.

There are two main extraction types to choose from: Scene Detection and Fixed Interval.

Note: Fixed Interval profiles are not supported on HQS prior to release 1.14.3.

3. Click New to open the Thumbnail Extraction Configuration page and create a new profile.

Scene Detection Profiles

Scene Detection selects thumbnails based on scene changes in the video source:

Add parameters

Extraction type:

Configuration id: < Required

Offset(s): < Required

No. of thumbnails: < Required

Resolution: x < Required

Scene Detection Parameters

Configuration ID—A unique name for the Thumbnail Extraction Profile.

Offset(s)—The time (in seconds) from the start of the instance and the end of the instance. Thumbnails will begin being extracted from the offset time after the start of the instance and stop being taken at the offset time before the end of the instance.

Number of Thumbnails—The maximum number of thumbnails to extract.

Resolution (width x height)—The resolution to extract the thumbnails

Fixed Interval Profiles

Fixed Interval extracts thumbnails at fixed intervals in the video source:

Add parameters	
Extraction type:	Fixed Interval
Configuration id:	Every 5s < Required
Offset(s):	5 < Required
Interval(s):	5 < Required
No. of thumbnails:	1000 < Required
Resolution:	180 120 < Required

Fixed Interval Parameters

Configuration ID—A unique name for the Thumbnail Extraction Profile.

Offset(s)—The time (in seconds) from the start of the instance and the end of the instance. Thumbnails will begin being extracted from the offset time after the start of the instance and stop being taken at the offset time before the end of the instance.

Number of Thumbnails—The maximum number of thumbnails to extract.

Resolution (width x height)—The resolution to extract the thumbnails.

Subtitle and Logo Burn-ins

Kumulate provides the ability to burn subtitles and/or a logo into a video file as part of a transfer, when using the Masstech Transcode Engine for transcoding jobs.

The burn in details and properties, such as subtitle size and logo position, are configured in the Masstech Transcode Engine using strings set up in the transcode profiles.

Add these strings to Kumulate as possible profiles using these steps:

1. Navigate to System > Administration > Content > Metadata Management > Instance Metadata to display the Metadata Management page:

Metadata Management

Actions	Metadata ID	Metadata Name	Metadata Group	Format	Default Value	Length	Mandatory	Display Mode
	_test	_test	Default	Combo		20	NO	Visible
	afd	AFD	Video	List		20	YES	Visible
	bit_depth	Bit Depth	Video	Free		50	NO	Read only
	category_path	Category Path	Summary	Free		4000	NO	Visible
	CRC	CRC	Default	Free		500	NO	Visible
	dal	DAL	Default	Free		50	NO	Visible
	definition	Definition	Default	Free		20	NO	Visible
	dominant_file	Dominant File	Default	Free		4000	NO	Visible
	frame_rate	Frame Rate	Video	List		20	NO	Read only
	is_proxy	Proxy	Default	List		20	NO	Visible
	list_metadata	List Metadata	Default	List	1111	100	NO	Visible
	logoProfile	Logo Profile	Default	List		50	NO	Read only
	marked_on_capture	Marked On Capture	Default	Free		20	NO	Visible
	media_type	NLE Media Type	Default	Free		50	NO	Read only
	metadata_inst	metadata_inst	Default	Combo		20	NO	Visible
	MOBID	MOBID	Default	Free		250	NO	Read only
	PrimaryAudioLanguage	PrimaryAudioLanguage	Default	Free		20	NO	Visible
	scan_mode	Scan Mode	Video	List		20	NO	Read only
	subtitleLanguage	Subtitle Language	Default	Free		50	NO	Read only
	subtitleProfile	Subtitle Profile	Default	List		50	NO	Read only
	test_instance	test_instance	Default	Combo		20	NO	Visible
	video_height	Video Height	Video	Free		20	YES	Read only

2. Find and edit either subtitleProfile or logoProfile:

Modify Metadata

OK DELETE

Metadata Management

Metadata ID: subtitleProfile < Required

Metadata Name: Subtitle Profile

Metadata Format: List MODIFY LIST VALUES

Length: 50

Default Value: [dropdown]

Type: Instance

Display Mode: Read only [dropdown]

Mandatory: NO [dropdown]

Metadata Group: Default CREATE NEW GROUP

OK DELETE

3. Select Modify List Value > Add new profiles. Enter the burn-in profiles configured in the Masstech Transcode Engine:

List Metadata Values Editor

SAVE

Add List Value

Value: [input] Display Name: [input] ADD RESET

List Metadata Values

Actions	Value	Disp
	SUB_PROFILE_1	SUB
	SUB_PROFILE_2	SUB
	SUB_PROFILE_3	SUB

SAVE

After this is accomplished, the storage location(s) must be set up. The burn-in options work with video servers, but not the cache or a media library. There are two modes that can be used to generate a burned-in file:

- **Manual:** In manual mode the user chooses the settings for each file as part of the transfer action. To enable manual burn-in for a location, navigate to Modify Storage Location > Configure > Transfer Tab and set the Enable Burn-in option to Yes. After saving, three new default settings display related to Burn-in options that are configurable defaults:
 - Subtitle Language
 - Default Subtitle Profile
 - Logo Profile

Storage Location Configuration

The screenshot shows the 'Storage Location Configuration' window with the 'Transfer' tab selected. At the top, there are buttons for 'VALIDATE', 'DEFAULT METADATA PROFILE', 'RESTORE PROFILE INFORMATION', 'LOCATION METADATA MAPPING', and 'RESET'. Below these, the 'Storage Location ID' is 'MXF' and the 'Storage Location TYPE' is 'REPOSITORY'. The 'Transfer' tab contains the following settings:

- Allow Rename: NO
- Append .ITMP Extension to Incomplete Files: NO
- Capture Mode: COPY
- Checksum Type: MDS
- Checksum Verification: No Verification
- Default logo profile: LOGO_PROFILE_2
- Default subtitle language: english
- Default subtitle profile: SUB_PROFILE_2
- Enable Burn-in from UI: YES
- Instance detection pattern: No check
- Location Backed by Cloud: NO
- Direct Transfer to ML: YES
- Direct Transfer from ML: YES
- Max Copy In: 0
- Max Copy Out: 0
- Overwrite Video Server Instance: Not Allowed
- Pre-allocate Storage Space for Files: YES
- Restore Using: Name

To perform a manual burn-in for an asset, transfer it and select a location that has been configured for manual burn-in. A dialog displays that has the burn-in options available for selection.

The 'Burn-in Options' dialog box contains the following settings:

- Subtitle Language: english
- Subtitle Profile: SUB_PROFILE_2
- Logo Profile: LOGO_PROFILE_1

Buttons: Transfer, Cancel

- **Automatic:** In automatic mode the settings are added automatically using predetermined parameters added in Restore Profiles. To enable automatic burn-in for a location, navigate to Modify Storage Location > Configure > Restore Profile Infor-

mation, select a profile and then select Modify Profile. Set Burn In Enabled to *ENABLED*:

Add New Restore Profile

The screenshot shows a dialog box titled "Restore Profile Information". At the top are "OK" and "RESET" buttons. The form contains the following fields:

- Name:** Profile_MXF_BurnIn (marked as Required)
- Description:** (empty text box)
- Storage Location Id:** MXF
- Status:** ENABLED (dropdown menu, marked as Required)
- Destination Filter:** DestFilter_MXF (dropdown menu, marked as Required) with a "MODIFY" button to its right.
- Burn In Enabled:** A dropdown menu is open, showing "ENABLED" selected and "DISABLED" as an alternative option.

 A dashed horizontal line is present below the "Burn In Enabled" dropdown, with a "RESET" button to its right.

This adds the options this restore profile uses for a burn-in:

- Subtitle Language
- Subtitle Profile
- Logo Profile

Set up either Subtitle Language and Subtitle Profile for a subtitle burn-in, logo profile for a logo burn-in, or both.

Modify Restore Profile

The screenshot shows the "Restore Profile Information" dialog box for modification. At the top are "OK" and "RESET" buttons. The form contains the following fields:

- Name:** Profile_MXF_XDCAM (marked as Required)
- Description:** (empty text box)
- Storage Location Id:** MXF_XDCAM
- Status:** ENABLED (dropdown menu, marked as Required)
- Destination Filter:** DestFilter_MXF_XDC (dropdown menu, marked as Required) with a "MODIFY" button to its right.
- Burn In Enabled:** ENABLED (dropdown menu)
- Subtitle language:** english
- Subtitle Profile:** SUB_PROFILE_3 (dropdown menu)
- Logo Profile:** LOGO_PROFILE_3 (dropdown menu)

 A dashed horizontal line is present below the "Logo Profile" field, with an "OK" button to its left.

This restore profile will now use these settings. When an asset is transferred to a location that has automatic burn-in configured, the burn-in process is executed as part of the transfer.

Note: Multiple restore profiles with different settings can be configured on the same location.

Managing Workflows

Workflows automate operations on assets and instances in Kumulate. Each workflow consists of one or more profiles, and profiles are comprised of a trigger and a command.

Profiles are triggered by Kumulate events, such as creating a new instance or changing metadata, or they can be triggered by the completion of another profile. More than one profile can be triggered on the same event, allowing them to run in parallel.

For workflows that must be triggered from Administration, the User must have at least the Administration Read privilege.

Note: Workflows that include a profile which deletes an asset, never enter the completed state even though the asset was successfully deleted.

Topics

Managing Profiles

A profile, in the context of Kumulate, is a component that consists of a command and a trigger. Kumulate has two kinds of profiles—a Transcode Profile and a Thumbnail Extraction Profile. One or more profiles are attached to a workflow and are used to execute the command when these conditions for the trigger are met:

- Adjusting Profile Priority
- Deleting a Profile

Processing Profile Information

A workflow consists of one or more profiles:

Workflow Definition

Actions	ID	Description	Trigger	Command	Attribute
	ExtractMetadata	Extract metadata from discovered	DiscoverOnGenericUNC1	ExtractMetadata	Transient
	CopyHDTToCache		ExtractMetadataDone	CopyHDTToCache	Final
	CreateProxy	Create low-resolution proxy	ExtractMetadataDone	CreateProxy	Final
	SetProxyFlag		ProxyCreated	SetProxyFlag	Transient
	ExtractThumbnails	Extract thumbnails	ProxyDone	CreateThumbnail	Final

Each profile command displays an entry on the Jobs page when the workflow executes. Individual profile commands can't be canceled:

NAME	OPERATION	ENGINE	SOURCE	DESTINATION	STATUS	USER	ADDED	STARTED AT	PRIORITY
00182K ^ TranscodeCopyExtract									
ExtractMetadata ^									
00182K	Extract Metad...	TR-Local	FCP QT - DV_PRO -10	MASSTORE...	Done	Internal	Jul 19, 2018 12:35:09 PM	Apr 13, 2022 8:34:37 PM	Normal
00182K	Extract Metad...	TR-Local	FCP QT - DV_PRO -10	MASSTORE...	Done	Internal	Jul 19, 2018 12:35:09 PM	Apr 13, 2022 8:38:33 PM	Normal
CopyHDTToCache ^									
00182K	Copy	dm_PARAMECLU	QT	MASSTORE L...	Copied	WORKFLOW MA...	Apr 13, 2022 8:36:03 PM	Apr 13, 2022 8:38:42 PM	Normal
CreateProxy ^									
00182K	Transcode	TR-Local	FCP QT - DV_PRO -10	MP4 H264 - 1	Done	Internal	Apr 13, 2022 8:38:39 PM	Apr 13, 2022 8:38:39 PM	Normal
00182K	Extract Metad...	TR-Local	MIM UNKNOWN -H26		Done	Internal	Apr 13, 2022 8:38:52 PM	Apr 13, 2022 8:38:52 PM	High
SetProxyFlag									
					Completed				
ExtractThumbnails ^									
00182K	Extract Thum...	TR-Local	FCP QT - DV_PRO -10		Done	Internal	Apr 13, 2022 8:36:03 PM	Apr 13, 2022 8:38:59 PM	Normal

Note: If a profile is configured to run the delete command, this command won't display in the Jobs view.

Triggers Overview | Managing Triggers

A workflow profile's command executes on the event defined by the trigger. If the trigger is not configured properly, the command won't execute, or won't execute under the right conditions. Kumulate does not notify you of incorrectly-configured triggers.

You configure triggers with a unique ID, an event, and one or more filters. Filters are non-ACL resource filters that narrow down the trigger to events that occur to specific types of assets or instances, on specific storage locations, or with specific metadata.

You can use the following events as triggers:

Trigger	Description
Add Instance	The command is triggered when a instance is added to an asset.
Add Asset	The command is triggered when an asset is added to Kumulate.
Add Segment	The command is triggered when a segment is created.
Delete Instance	The command is triggered when a instance is deleted.
Delete Asset	The command is triggered when an asset is deleted.
Delete Segment	The command is triggered when a segment is deleted.
PreparedCompleted	The command is triggered when the metadata in the Workflow Manager Module's Prepare Completed Asset Metadata field is modified.
PreparedCompletedInstance	The command is triggered when the metadata in the Workflow Manager Module's Prepare Completed Instance Metadata field is modified.
ProfileCompletion	The command is triggered by the completion of another profile's command.
Rename Asset	The command is triggered when an asset is renamed.
Timer	Used to trigger the command at specific times, or at specific time intervals.
Update Asset	The command is triggered when asset metadata is updated.
UpdateList	

Add Instance Event

The profile's command is triggered when a instance is added to an asset.

This event is used in situations where a command must be executed when a new instance is discovered or created. The filter is used to refine the type of new instance that will trigger the command.

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', 'TranscodedToCache' is selected with an 'ADD' button. The 'Filter:' section shows 'ProxyOnCache' selected with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. The 'Trigger ID:' field contains 'TranscodedToCache'. The 'Event:' dropdown is set to 'Add Instance'.

In this case, the command is triggered when a new low-resolution proxy is created on the cache.

The ProxyOnCache resource filter is a instance resource filter that selects cache instances with MP4 Instance format.

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	Instance Format	Contains	MP4
	<input type="checkbox"/>	Storage Location Name	Contains	MASSSTORE

More than one filter can be used instead of one specific filter, as shown here:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', 'TranscodedToCache' is selected with an 'ADD' button. The 'Filter:' section shows 'OnCache' selected with 'ADD' and 'MODIFY' buttons. Below it, 'AND' is selected in a dropdown, followed by 'MP4Instance' selected with 'ADD', 'MODIFY', and 'REMOVE' buttons. The 'Trigger ID:' field contains 'TranscodedToCache'. The 'Event:' dropdown is set to 'Add Instance'.

In this case, the OnCache filter selects instances on the cache, and the MP4Instance filter selects instances with MP4 Instance format. The command is triggered when a new instance is added that is selected by both resource filters.

To trigger the command if a new instance is discovered on either of two storage locations, two instance resource filters that select instances on specific storage locations can be used instead of one resource filter:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', 'DiscoveredOnUNC' is selected with an 'ADD' button. The 'Filter:' section shows 'OnGenericUNC1' selected with 'ADD' and 'MODIFY' buttons. Below it, 'OR' is selected in a dropdown, followed by 'OnGenericUNC2' selected with 'ADD', 'MODIFY', and 'REMOVE' buttons. The 'Trigger ID:' field contains 'DiscoveredOnUNC'. The 'Event:' dropdown is set to 'Add Instance'.

In this case, the command is triggered when a new instance is detected on either the GenericUNC1 or GenericUNC2 locations.

Add Asset Event

The profile's command is triggered when a new asset is created. This event is used when a command must be executed whenever a new asset is created. The filter is used to refine the conditions that will trigger the command:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', there is a dropdown menu set to 'New Asset' and an 'ADD' button. To the right, the 'Filter:' section has a dropdown menu set to 'AllAssets', with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. Below this, the 'Trigger ID:' field contains 'New Asset'. The 'Event:' dropdown menu is set to 'Add Instance'.

In this case, the command is triggered when any asset is created. Use a different resource filter to trigger the command when an asset is created with a certain set of metadata attributes:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', there is a dropdown menu set to 'New Asset' and an 'ADD' button. To the right, the 'Filter:' section has a dropdown menu set to 'AvidLocation', with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. Below this, the 'Trigger ID:' field contains 'New Asset'. The 'Event:' dropdown menu is set to 'Add Asset'.

The AvidLocation resource filter is an asset resource filter that selects assets with sources on the AVIDSTANDALONE storage location:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	Storage Location Name	Contains	AVIDSTANDALONE

More than one filter can be used as shown here:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', there is a dropdown menu set to 'New Asset' and an 'ADD' button. To the right, the 'Filter:' section has a dropdown menu set to 'AvidLocation' with 'ADD' and 'MODIFY' buttons. Below it is an 'OR' dropdown menu, followed by a dropdown menu set to 'OnGenericUNC1' with 'ADD', 'MODIFY', and 'REMOVE' buttons. Below this, the 'Trigger ID:' field contains 'New Asset'. The 'Event:' dropdown menu is set to 'Add Asset'.

In this case, the AvidLocation filter selects sources on the AVIDSTANDALONE location, and the OnGenericUNC1 filter selects sources on the GENERICUNC1 location. The command is triggered when an asset with a source on either of these storage locations is created.

Add Segment Event

The profile's command is triggered when a segment is created. This event is used when a command must be executed when a segment is created in an asset that satisfies the resource filter:

The screenshot shows a configuration window titled 'Triggers'. Under 'Configured Triggers', a dropdown menu is set to 'CreateSegment' with an 'ADD' button next to it. To the right, the 'Filter:' dropdown is set to 'AllAssets', with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. Below this, the 'Trigger ID:' field contains 'CreateSegment'. The 'Event:' dropdown is set to 'Add Segment'.

In this case, the command is triggered when a segment is created in any asset. Use a different resource filter to trigger the command when a segment is created in a particular set of assets:

This screenshot is similar to the previous one, but the 'Filter:' dropdown is set to 'DecemberAssets' instead of 'AllAssets'. The 'Trigger ID:' field still contains 'CreateSegment' and the 'Event:' dropdown is 'Add Segment'.

The DecemberAssets resource filter is an asset resource filter that selects assets that were created in December:

Matching Rule Set:					
Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value
		Create Date	Range	2015-12-01	2016-01-01

Delete Asset Event

The profile's command is triggered when an asset is deleted. This event is used when a command must be executed whenever an asset that satisfies the conditions of the filter is deleted:

The screenshot shows the 'Triggers' configuration window. The 'Configured Triggers' dropdown is set to 'OnDelete' with an 'ADD' button. The 'Filter:' dropdown is set to 'DecemberAssets' with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. The 'Trigger ID:' field contains 'OnDelete'. The 'Event:' dropdown is set to 'Delete Asset'.

In this case, the command is triggered when any asset created in December 2015 is deleted. The DecemberAssets resource filter is an asset resource filter that selects assets created in December 2015:

Matching Rule Set:					
Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value
		Create Date	Range	2015-12-01	2016-01-01

A profile that triggers on the deletion of an asset cannot operate on that asset. The profile can only use the Notify or Synchronize command.

Delete Instance Event

The profile's command is triggered when a instance is deleted. This event is used when a command must be executed when a instance that satisfies the conditions of the filter is deleted:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', 'OnDelete' is selected with an 'ADD' button. The 'Filter:' dropdown is set to 'ProxyOnCache', with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. The 'Trigger ID:' field contains 'OnDelete'. The 'Event:' dropdown is set to 'Delete Instance'.

In this case, the command is triggered when a low-resolution proxy is deleted from the cache. The ProxyOnCache resource filter is a instance resource filter that selects cache instances with MP4 Instance format:

Matching Rule Set:					
Actions	Select	Metadata	Matching Rule Set	Lower Value	
	<input type="checkbox"/>	Instance Format	Contains	MP4	
	<input type="checkbox"/>	Storage Location Name	Contains	MASSSTORE	

More than one filter can be used instead of one specific filter:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', 'OnDelete' is selected with an 'ADD' button. The 'Filter:' dropdown is set to 'OnCache', with 'ADD' and 'MODIFY' buttons. Below it, the logical operator 'AND' is selected in a dropdown. The second filter dropdown is set to 'MP4Instance', with 'ADD', 'MODIFY', and 'REMOVE' buttons. The 'Trigger ID:' field contains 'OnDelete'. The 'Event:' dropdown is set to 'Delete Instance'.

In this case, the OnCache filter selects instances on the cache, and the MP4Instance filter selects instances with MP4 Instance format. The command is triggered when a instance selected by both resource filters is deleted.

To trigger the command if a instance is deleted on either of two storage locations, use two instance resource filters that select instances on specific storage locations:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', 'DiscoveredOnUNC' is selected with an 'ADD' button. The 'Filter:' dropdown is set to 'OnGenericUNC1', with 'ADD' and 'MODIFY' buttons. Below it, the logical operator 'OR' is selected in a dropdown. The second filter dropdown is set to 'OnGenericUNC2', with 'ADD', 'MODIFY', and 'REMOVE' buttons. The 'Trigger ID:' field contains 'DiscoveredOnUNC'. The 'Event:' dropdown is set to 'Add Instance'.

In this case, the command is triggered when a instance is deleted from either the GenericUNC1 or GenericUNC2 locations.

Delete Segment Event

The profile's command is triggered when a segment is deleted. This event is used when a command must be executed when a segment is deleted from an asset that satisfies the resource filter

The screenshot shows a 'Triggers' configuration window. Under 'Configured Triggers', 'DeleteSegment' is selected with an 'ADD' button. Under 'Filter:', 'AllAssets' is selected with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. Below, 'Trigger ID:' is 'DeleteSegment' and 'Event:' is 'Delete Segment'.

In this case, the command is triggered when a segment is deleted from any asset. Use a different resource filter to trigger the command when a segment is deleted from a particular set of assets:

The screenshot shows a 'Triggers' configuration window. Under 'Configured Triggers', 'DeleteSegment' is selected with an 'ADD' button. Under 'Filter:', 'DecemberAssets' is selected with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. Below, 'Trigger ID:' is 'DeleteSegment' and 'Event:' is 'Delete Segment'.

The DecemberAssets resource filter is an asset resource filter that selects assets that were created in December:

Matching Rule Set:					
Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value
		Create Date	Range	2015-12-01	2016-01-01

PreparedCompleted Event

The profile's command is triggered when the specific asset metadata listed in Workflow Manager Module's Prepare Completed Asset Metadata parameter is modified. The filter specifies the metadata values that will trigger the command:

The screenshot shows a 'Triggers' configuration window. Under 'Configured Triggers', 'UserNameChanged' is selected with an 'ADD' button. Under 'Filter:', 'AddedByName' is selected with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. Below, 'Trigger ID:' is 'UserNameChanged' and 'Event:' is 'PreparedCompleted'.

In this case, the command is triggered when a particular user name is added to the AddedBy custom metadata element:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
		AddedBy	Contains	Sandra

In the Workflow Manager Module, the Prepare Completed Asset Metadata will list this metadata:

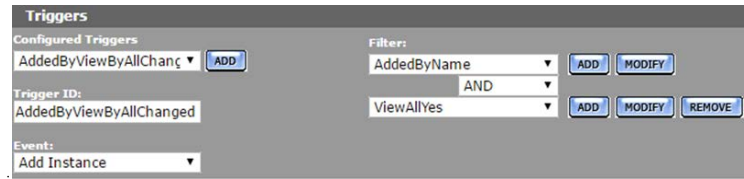
To trigger the command on more than one metadata element, enter a comma-separated list of metadata in the Workflow Module's Prepare Completed Asset Metadata parameter:

In this case, the PreparedCompleted trigger can use changes to the AddedBy and View By All custom metadata to trigger the command. If changes to both the metadata are required to trigger the event, both metadata can be set in the same filter:

In this case, the AddedByViewAll Asset resource filter filters both AddedBy and View By All custom metadata:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	View By All	Contains	YES
	<input type="checkbox"/>	AddedBy	Contains	Sandra

Alternately, two filters can be used:



In either case, all the metadata listed must be modified at the same time for the command to be triggered:



Use an OR operator to allow the command to be triggered using any of the metadata listed in the Workflow Manager Module.

PreparedCompletedInstance Event

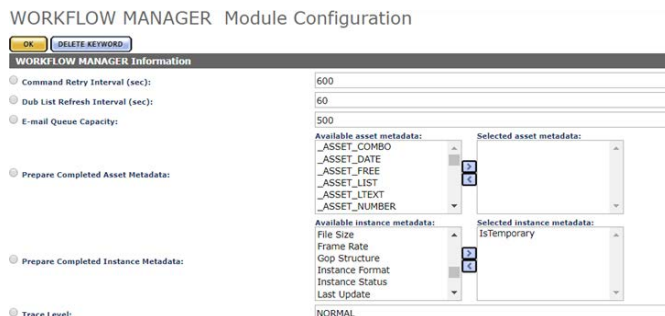
The profile's command is triggered when the specific instance metadata listed in Workflow Manager Module's Prepare Completed Instance Metadata field is modified. The filter specifies the metadata values that will trigger the command:



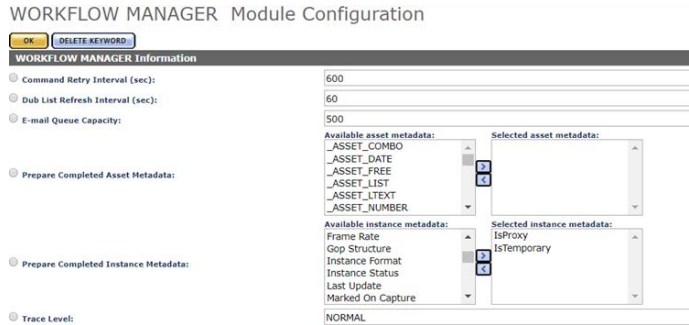
In this case, the command is triggered when a instance's IsTemporary custom metadata element has been set to YES:



In the Workflow Manager Module, the Prepare Completed Instance Metadata will list this metadata:



To trigger the command on more than one metadata element, enter a comma-separated list of metadata in the Workflow Module's Prepare Completed Instance Metadata parameter:



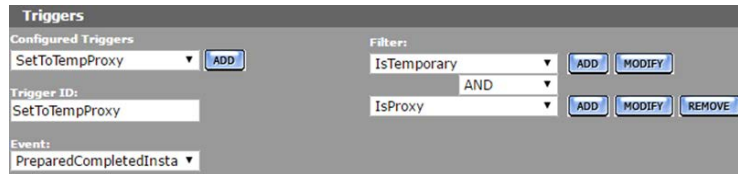
In this case, the PreparedCompletedInstance trigger can use changes to the IsTemporary and IsProxy custom metadata to trigger the command. If changes to both the metadata are required to trigger the event, both metadata can be set in the same filter:



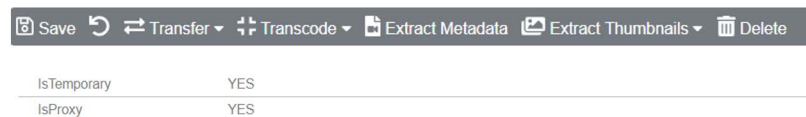
In this case, the IsTempAndProxy Instance resource filter filters both AddedBy and IsProxy custom metadata:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	IsProxy	Contains	YES
	<input type="checkbox"/>	IsTemporary	Contains	YES

Alternately, two filters can be used:



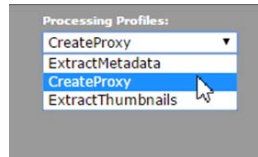
In either case, all the metadata listed must be modified at the same time for the command to be triggered:



Use an OR operator to allow the command to be triggered using any of the metadata listed in the Workflow Manager Module.

ProfileCompletion Event

The profile's command is triggered when another profile's command completes. This event is used when a the command must be executed after a previous command has completed. The Processing Profiles menu will list the profiles used in the workflow that is being modified. Select the profile that will trigger this profile:

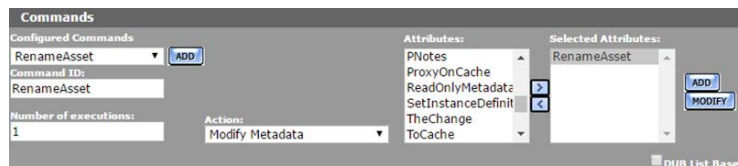


For example, a profile that extracts thumbnails executes after CreateProxy, a profile that creates a low-resolution proxy, completes:



Rename Asset Event

The profile's command is triggered when an asset is renamed. This event is used when a command must be executed when an asset that satisfies the resource filter is renamed:



In this case, the command is triggered when any asset is renamed. Use a different resource filter to trigger the command when only certain assets are renamed:



The DecemberAssets resource filter is an asset resource filter that selects assets that were created in December:

Matching Rule Set:					
Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value
		Create Date	Range	2015-12-01	2016-01-01

Timer Event

The Timer trigger is used to trigger the command at specific times, or at specific time intervals. Unlike other profiles, a profile that use a timer profile must be started manually by clicking Start:



Actions	ID	Description	Trigger	Command	Attribute	
	TimeRename	Renames assets	TimeTest	RenameAsset	Final	

After you click Start, the profile is triggered according to the timer configuration.

Note: The Start button is active even though it displays grayed out.

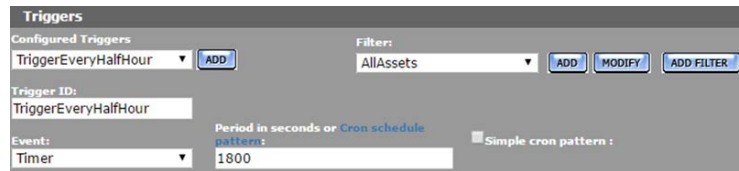
The Start button changes to a Stop button when it is clicked. The Stop button stops the profile from being triggered. The profile should be stopped before it is edited:



Actions	ID	Description	Trigger	Command	Attribute	
	TimeRename	Rename Assets	TriggerEveryHalfHour	RenameAsset	Final	

Click Run to execute the profile one time. Clicking Run triggers the command immediately, regardless of the timer settings.

To configure the command to be triggered at specific time intervals, keep the Simple cron pattern option deselected, and add the time interval (in seconds) to the field:



Triggers

Configured Triggers: TriggerEveryHalfHour Filter: AllAssets

Trigger ID: TriggerEveryHalfHour

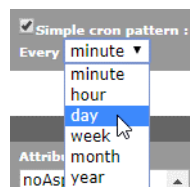
Event: Timer Simple cron pattern :

To configure the command to be triggered according to a schedule, select the Simple cron pattern check box; an interval menu will open:



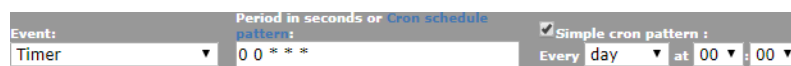
Event: Timer Simple cron pattern : Every

Select whether you want the profile triggered every minute, hour, day, week, month, or year:



Simple cron pattern :
Every

Helpful dialogs will open to help you create the cron pattern:



Event: Timer Simple cron pattern :
Every at :

You can click Cron schedule pattern for more information.

Note: Cron scheduled jobs that cross between standard time and daylight savings time may behave unexpectedly when the time change happens.

The filter is used to select assets or instances on which to run the command. To run the command on any asset, use AllAssets, and to run the command on Any Instance, use AllInstances. Otherwise, select the appropriate filter. For example, to only run the command on instances on a specific storage location, select a instance resource filter that selects instances on that location:

In this case, the OnGenericUNC1 resource filter selects instances on the GenericUNC1 storage location:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	Instance Format	Contains	GENERIC
	<input type="checkbox"/>	Storage Location Name	Contains	GENERICUNC1

Commands

A profile's command defines the action to perform on the asset or instance that triggered it. Commands are configured with a unique ID, an action, and one or more attributes. Attributes are non-ACL resource filters that select the instance or asset on which to perform the action, or select and set the metadata that needs to be modified, depending on the type of action.

The command's action will display under the workflow name in the Jobs view of the web interface when the workflow executes.

Executed command—*Processing_WF TranscodeCopyExtract*:

NAME	OPERATION	ENGINE	SOURCE	DESTINATION	STATUS	USER	ADDED	STARTED AT	PRIORITY
00182K ^ TranscodeCopyExtract									
ExtractMetadata ^									
00182K	Extract Metad...	TR-Local	FCP QT - DV_PRO -10		Done	Internal	Jul 19, 2018 12:35:09 PM	Apr 13, 2022 8:34:37 PM	Normal
00182K	Extract Metad...	TR-Local	FCP QT - DV_PRO -10		Done	Internal	Jul 19, 2018 12:35:09 PM	Apr 13, 2022 8:38:33 PM	Normal
CopyHDTtoCache ^									
00182K	Copy	dm_PARAMECLU	QT	MASSTORE L...	Copied	WORKFLOW MA...	Apr 13, 2022 8:36:03 PM	Apr 13, 2022 8:38:42 PM	Normal
CreateProxy ^									
00182K	Transcode	TR-Local	FCP QT - DV_PRO -10	MP4 H264 - 1	Done	Internal	Apr 13, 2022 8:38:39 PM	Apr 13, 2022 8:38:39 PM	Normal
00182K	Extract Metad...	TR-Local	MP4 UNKNOWN -H26		Done	Internal	Apr 13, 2022 8:38:52 PM	Apr 13, 2022 8:38:52 PM	High
SetProxyFlag									
ExtractThumbnails ^									
00182K	Extract Thum...	TR-Local	FCP QT - DV_PRO -10		Done	Internal	Apr 13, 2022 8:36:03 PM	Apr 13, 2022 8:38:59 PM	Normal

Kumulate performs a check on the command prior to its execution. If there is nothing to do for a command because a instance it creates already exists, its metadata is already extracted, or no instances or assets match its attributes, the command won't be executed, its profile won't complete, and the workflow will never enter the completed state.

The following actions can be taken by the command:

Command Description

Batch

This has been deprecated. This is replaced with the Story Board feature.

Copy

Copy a instance from one storage location to another.

CreateThumbnail

Extract a thumbnail from the proxy instance.

Delete

Delete an asset or a instance.

Extract Content Info

Extracts clip instance information.

Extract Metadata—Extract metadata from the instance that triggered the command.

Modify Metadata—Modify the metadata of the asset or instance that triggered the command, using the attributes set in the command.

Notify—Used only with Harris databases. Sends a notification to a Harris database.

Rename Asset—Used to rename the asset.

Synchronize—Synchronizes two connected Kumulate systems.

Transcode—Transcode a instance using the transcode profile specified in the command attributes.

Copy Command

The Copy command copies the instance that triggered the command, or a instance of the asset that triggered the command, from one location to another.

Note: Kumulate checks whether a instance belonging to the asset being processed exists on the destination before running the command. If a instance exists on the destination, the command won't be run. No message is generated.

The command needs two attributes. The first attribute is the source location, and the second attribute is the destination location:



Both attributes are instance resource filters. The source location attribute must include the source location's name. A instance format can be provided if only certain instance formats should be copied to the destination:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	Instance Format	Contains	GENERIC
	<input type="checkbox"/>	Storage Location Name	Contains	GENERICUNC1

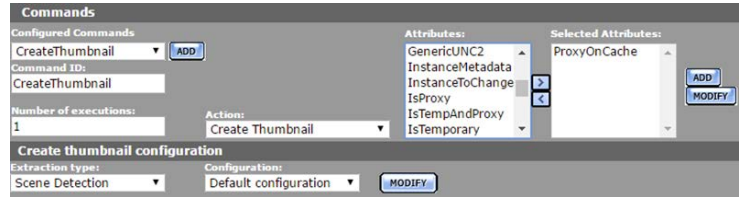
Only the destination location name is required in the destination location attribute. However, to ensure that Kumulate doesn't attempt to copy an incompatible instance to a location, the expected instance format should also be included in the attribute.

Create Thumbnail Command

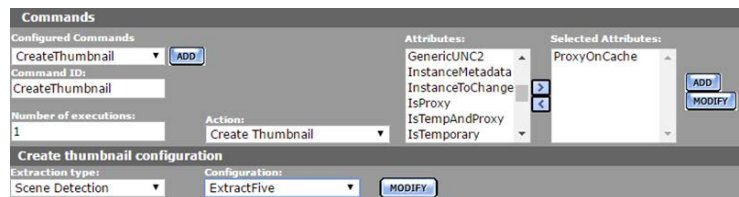
The Create Thumbnail command extracts thumbnails from a instance.

Note: If thumbnails have already been extracted for the instance's asset, the command won't be run. No message is generated.

The command requires a instance resource filter attribute that selects the type of instances from which to extract the thumbnails, and the thumbnail extraction profile to use.



In this example, the default thumbnail extraction profile is used to extract thumbnails from instances selected using the ProxyOnCache instance resource filter. If custom thumbnail extraction profiles have already been created, they can be selected from the Configuration menu:



In this example (see the previous figure), the ExtractFive thumbnail extraction profile is used to extract thumbnails.

New thumbnail extraction profiles can be created by clicking Modify next to the Configuration menu. Follow the instructions in the section on thumbnail extraction profiles.

Note: Only the Scene Detection extraction type is currently supported.



Delete Command

The Delete command deletes assets or instances that satisfy the conditions set in the command's attributes. If no asset or instance exists that satisfy the attribute, the command won't run.

The Delete command requires one attribute that selects the asset or instance to delete. To delete a specific instance from the asset, select a instance resource filter from the list of attributes:



In this case, the NonProxyOnCache attribute is a resource filter that selects a instance on the cache that is not the low-resolution proxy:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
 	<input type="checkbox"/>	Instance Format	Contains	GENERIC
 	<input type="checkbox"/>	Storage Location Name	Contains	MASSSTORE

Note: If the command deletes the asset that was passing through the workflow, the action won't display in the list of jobs. The workflow will also never enter the completed state even if all its commands were completed successfully.

Extract Metadata Command





The Extract Metadata command extracts metadata from one or more instances.

Note: Kumulate checks the metadata before running the command. If metadata has already been extracted from the instance, the command won't run. Consequently, the workflow may not enter the completed state.

Select a instance resource filter attribute that narrows down the type of instance from which to extract the metadata:



In this case (see previous figure), OnGenericUNC1 selects instances that are located on the GENERICUNC1 storage location:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
 	<input type="checkbox"/>	Instance Format	Contains	GENERIC
 	<input type="checkbox"/>	Storage Location Name	Contains	GENERICUNC1

Note: The Extract Metadata command only runs on instances.

Modify Metadata Command

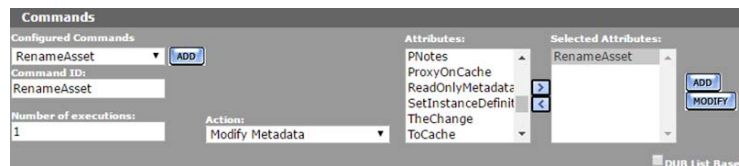
The Modify Metadata command modifies the metadata of the asset being processed, or of a instance being processed. Administrators can assign a default set of pinned metadata fields.

Note: Kumulate checks the metadata before running the command. If the asset or instance metadata is already set, the command won't run. No message is generated.

When modifying asset metadata, the command takes only one attribute that defines the new metadata values. When modifying instance metadata, an additional attribute selecting the instances to modify must be used.

Note: Only select one metadata-modifying attribute. The profile won't be triggered if more than one attribute is used.

To modify the metadata of the asset being processed, select an attribute that is an asset resource filter that modifies metadata:

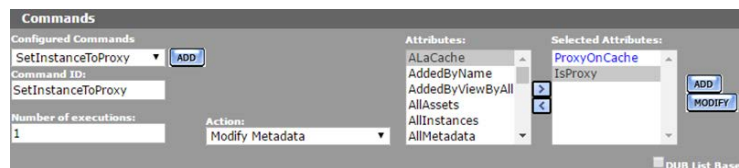


In this case (see previous figure), the RenameAsset attribute changes the asset name and title:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	Name	Contains	Things Fall Apart
	<input type="checkbox"/>	Title	Contains	The Centre Cannot Hold

Select two instance resource filter attributes to modify the metadata of a instance. The first attribute in the list filters the instances that are modified, and the second attribute modifies the instance metadata.

Note: If no instance satisfies the first attribute, the command won't run.



In this case (see previous figure), ProxyOnCache selects the low-resolution proxy on the cache:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	Instance Format	Contains	MP4
	<input type="checkbox"/>	Storage Location Name	Contains	MASSSTORE

And the IsProxy attribute sets the IsProxy custom instance metadata to YES:

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	IsProxy	Contains	YES

Transcode Command

The Transcode command transcodes the instance the workflow is operating on using the selected transcode profile.

Note: Kumulate checks whether a instance that matches the transcode profile exists on the destination before running the command. If a instance that matches the profile exists on the destination, the command won't be run. No message is generated.

Select a transcode profile from the list of attributes:



Only one transcode profile can be used at a time. If more than one transcode profile is selected, the command won't run. No message is generated.

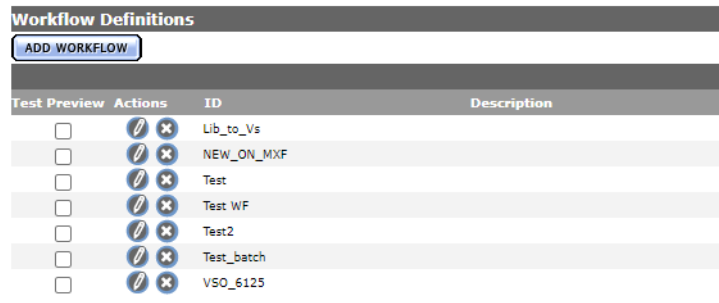
Creating a Workflow

Workflows are used to automate tasks. Each workflow is composed of a set of profiles that execute commands when triggered by specific events in Kumulate.

Follow these steps to create a workflow:

1. Navigate to System > Administration > Processing > Workflow Information to display the Workflow Information page:

Workflow Information



The screenshot shows the 'Workflow Definitions' page with an 'ADD WORKFLOW' button and a table of existing workflows.

Test Preview	Actions	ID	Description
<input type="checkbox"/>		Lib_to_Vs	
<input type="checkbox"/>		NEW_ON_MXF	
<input type="checkbox"/>		Test	
<input type="checkbox"/>		Test WF	
<input type="checkbox"/>		Test2	
<input type="checkbox"/>		Test_batch	
<input type="checkbox"/>		VSO_6125	

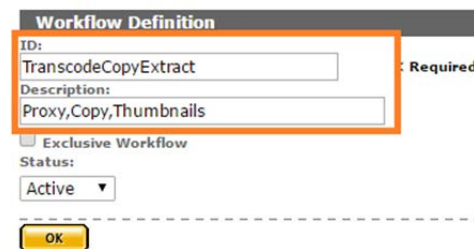
2. Click Add Workflow to display the Workflow Definition page:

Workflow Information



3. Use the ID field to provide a unique name for the workflow. Optionally, a description of the workflow can be added. The workflow name should reflect the actions performed by the workflow:

Workflow Definition



The screenshot shows the 'Workflow Definition' form with the ID and Description fields highlighted by an orange box.

Workflow Definition

ID: : Required

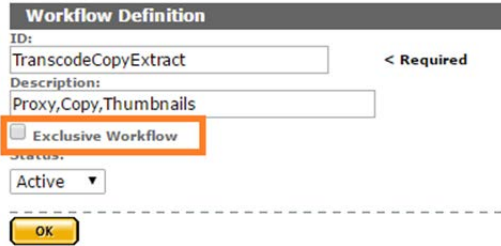
Description:

Exclusive Workflow

Status:

4. Select the Exclusive Workflow check box if this workflow should run only when no other workflow is running:

Workflow Definition



The screenshot shows a 'Workflow Definition' form with the following fields and options:

- ID:** TranscodeCopyExtract (marked as < Required)
- Description:** Proxy, Copy, Thumbnails
- Exclusive Workflow (highlighted with an orange box)
- Status:** Active (dropdown menu)
- OK** button

5. The workflow Status can be set to Active or Inactive. An inactive workflow is not executed.

Note: Do not use the Test status option.

Workflow Definition

Workflow Definition

ID: < Required

Description:

Exclusive Workflow

Status:

- Active ▾
- Active
- Inactive
- Test

6. Click OK to save the workflow.

Kumulate displays the Workflow Information page.

7. Click the Pencil icon next to the workflow to add profiles to the workflow:

Workflow Information

Workflow Definitions

Test	Preview	Actions	ID	Description
<input type="checkbox"/>			ProcessOTSMAD	
<input type="checkbox"/>			ProcessPitchblue	
<input type="checkbox"/>			ProcessSPOTUNC	
<input type="checkbox"/>			ProcessTEASLInstances	
<input type="checkbox"/>			ProcessXMLUNC	
<input type="checkbox"/>			TranscodeCopyExtract	Proxy,Copy,Thumbnails

Creating a Profile

A workflow is composed of at least one profile. Profiles execute commands when they are triggered by an event:

Workflow Definition

Workflow Definition

ID: < Required

Description:

Exclusive Workflow

Status:

Processing Profiles

Actions	ID	Description	Trigger	Command	Attribute
<input type="button" value="ADD PROFILE"/>					

After creating a workflow, click Add Profile from the Workflow Definition page to open the Processing Profile Information page:

Processing Profile Information

OK RESET

Profile Information

Profile ID: Description:

Retry: Unlimited Priority: Normal

Triggers

Configured Triggers: ADD Filter: ALaCache ADD MODIFY ADD FILTER DUB List Based

Trigger ID:

Event: Add Instance

SAVE CANCEL

Commands

Configured Commands: ADD

Command ID:

Number of executions: 1 Action: Batch

Attributes: ALaCache AllInstances AllMetadata Audio_AAC128 Audio_AAC192 Audio_MP364

Selected Attributes: ADD MODIFY

SAVE CANCEL

Attribute

Final

Email Notifications

Send e-mail on:	E-mail template:	Asset/Instance filter:	Priority:
<input type="checkbox"/> Completed	Completed Workflow	<No filter>	Normal
<input type="checkbox"/> Failed	Completed Workflow	<No filter>	Normal
<input type="checkbox"/> In Progress	Completed Workflow	<No filter>	Normal
<input type="checkbox"/> Canceled	Completed Workflow	<No filter>	Normal

The profile must be given a unique name. The name should reflect what the profile does, so it should include an action word such as extract, transcode, or copy. Because several profiles may exist that perform the same action, a way of differentiating between the different profiles that perform the same actions should be used:

Profile Information

Profile ID: Extract Description: Discover and extract metadata

Retry: Specified Times: 3 Priority: Normal

The maximum number of times its command can be retried upon failure, and its priority must also be provided.

Parameters

Profile ID—A unique profile name.

Completed profiles can be used as triggers in their workflows. A descriptive name helps differentiate between the profiles in the workflow, making it less likely that a trigger will be mis-configured.

Profiles should be named for the function they perform. For example, a profile that extracts metadata from a newly-discovered instance might be named

ExtractMetadataFromNew.

Description—Practical description to differentiate between similar profiles.

Retry (Default: unlimited)—The number times to retry the command if it fails. By , meaning that the command will retry indefinitely. The retry interval is set in the Workflow Manager Module.

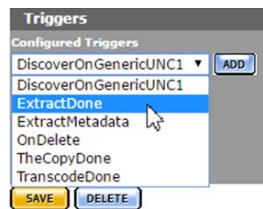
Priority (Default: normal)—The command’s execution priority.

Configuring the Trigger

The profile’s command is executed when a trigger event is detected. If the trigger is not configured properly, the command may not execute, or it may execute at an unexpected moment.

The section on [Triggers Overview | Managing Triggers](#) provides additional information about configuring different types of triggers.

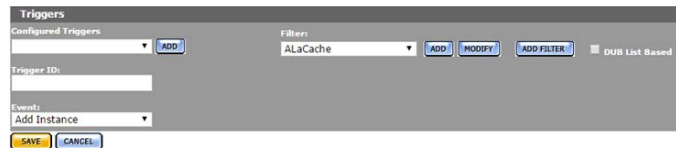
To use a previously-configured trigger, select a trigger from the Configured Triggers menu:



This will automatically populate the trigger fields. Do not forget to save the trigger.

Follow these steps to create a new trigger:

1. Click ADD in the Triggers page:



2. Enter a unique name for the trigger in the Trigger ID field.

The trigger name should reflect the event associated with the trigger; for example, instanceDiscoveredOnSL, or TranscodeCompleted. Because several triggers may exist that are triggered on similar events, a naming scheme that differentiates between the similar triggers should be used.

3. Select the event that will trigger the command from the Event menu. More information about events can be found in the [Triggers Overview | Managing Triggers](#) section.

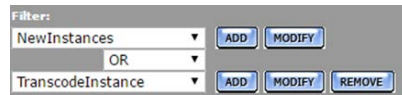
4. Select a resource filter that identifies the conditions that will trigger the command for the event from the Filter drop-down menu.

Click Add to create a new non-ACL resource filter if no suitable filter is available.

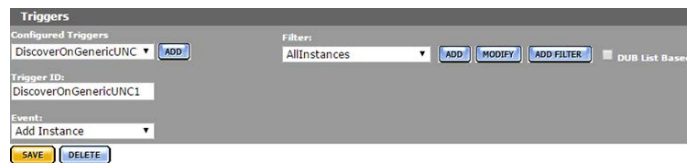
Note: Do not modify an existing resource filter unless it is certain that this resource filter is not used in another profile or workflow, and is not used in another part of Kumulate. Filters can be used in more than one trigger, and also in commands. To

prevent confusion, filter names should reflect the types of assets that it selects; for example, NewInstances or InstancesOnCache.

- To add more than one filter, click Add Filter and select whether both or either filter condition must be satisfied:



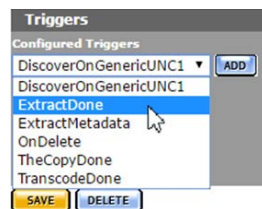
- Click Save to save the trigger:



Configuring the Command

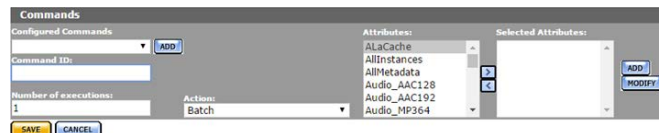
Configure the command that will execute when the trigger conditions are detected. If the command is not configured properly, it might not execute, or it may produce unexpected results. See the [Commands](#) section for more information.

To use a previously-configured command, select a command from the Configured Commands menu:



Follow these steps to create a new command:

- Click ADD on the Commands page:



- Enter a unique name for the command in the Command ID text field. The command's name should reflect the type of action it will execute; for example, CreateProxyInstance, or ExtractThumbnails. Because several commands may exist that perform similar actions, a naming scheme that differentiates between the similar commands should be used.
- Enter the number of times to execute the command in the Number of executions text field.

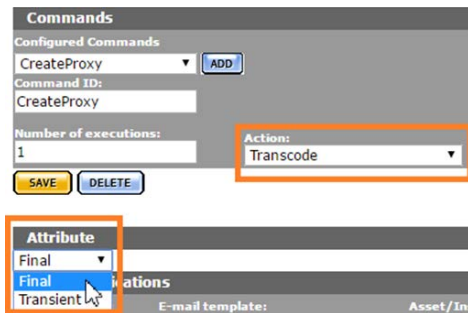
4. Select the command to execute from the Action menu. See the [Commands](#) section for more information.
5. Select a resource filter the command will act on from the Attributes menu. Click Add to create a new non-ACL resource filter if no suitable filter is available.

Note: Do not modify an existing resource filter unless it is certain that this resource filter is not used in another profile or workflow, and is not used in another part of Kumulate. Attributes can be used in more than one command and in triggers. To prevent confusion, attribute names should reflect the types of assets selected; for example, CacheLocation or InstancesOnCache.

6. Click Save to save the command.

Set the Final/Transient Setting

The only profiles that should be marked as final are profiles that display last in a workflow, or profiles that create a instance via a copy or a transcode. All other profiles must be set to transient:



Configure Email Notifications (Optional)

The profile can be configured to send notification emails:

Email Notifications			
Send e-mail on:	E-mail template:	Asset/Instance filter:	Priority:
<input type="checkbox"/> Completed	Completed Profile	<No filter>	Normal
<input type="checkbox"/> Failed	Completed Profile	<No filter>	Normal
<input type="checkbox"/> In Progress	Completed Profile	<No filter>	Normal
<input type="checkbox"/> Cancelled	Completed Profile	<No filter>	Normal

Note: The email alert feature must be enabled, and email templates must be created to use this feature.

Select the condition to send a notification (for example, Failed as shown here), then select the email template to use:

Send e-mail on:	E-mail template:	Asset/Instance filter:	Priority:
<input type="checkbox"/> Completed	Completed Profile	<No filter>	Normal
<input checked="" type="checkbox"/> Failed	Completed Profile	<No filter>	Normal
<input type="checkbox"/> In Progress	Completed Profile	<No filter>	Normal
<input type="checkbox"/> Cancelled	Failed Profile	<No filter>	Normal

Optionally, an asset or instance filter can be used, and a priority for the email can be set. The notification will only be sent if the asset or instance processed by the profile match the filter.

Managing Email Alerts and Notifications

Kumulate can be configured to send logs, alerts, and notifications via email.

When the email alerts feature is turned on, operator emails will automatically start being sent to the specified emails. Workflow notifications will only be sent if the email alerts feature has been enabled. The email notification system can also be configured to send zipped log files to the recipient.

Topics

- [Configuring the Email Service](#)
- [Configuring Email Notification Templates](#)

Configuring the Email Service

The email service that sends workflow notifications, log messages, and operator alerts is configured in the System module.

Before configuring the email service, ensure that the address to be used to send emails can send emails, that the SMTP port and server are known, and that the TSL or SSL port is known.

Note: The password for the address that will send email is visible in the System module. (xref)

Follow these steps to configure the email service:

1. Navigate to System > Administration > Modules to display the System Control page:

System Control

Actions	Module	State	Options
	ACI	RUNNING	STOP
	CMC	RUNNING	STOP
	CPC	RUNNING	STOP
	DISK ARCHIVE	RUNNING	STOP
	DM MANAGER	RUNNING	STOP
	EIE	RUNNING	STOP
	HARRIS	RUNNING	STOP
	MEDIA LIBRARY	RUNNING	STOP
	MMC	RUNNING	STOP

2. Click Advanced on the System Control page:

System Control



3. Click the Pencil icon to the left of the SYSTEM module:

System Configuration

Actions	Module
	ACI
	ALE
	ALL
	ASSET MANAGER
	CLUSTER MANAGER
	CMI
	FEDERATION MANAGER
	MEDIA LIBRARY
	HOSI
	OSM
	SDRT
	SYSTEM
	TSS
	UII

4. Enter the information in these parameters; descriptions follow:

<input type="radio"/> Client Id:	8.0.3.5
<input type="radio"/> Customer Resource Location:	C:/Masstech/Customer
<input type="radio"/> Delete DVS Content Upon Asset Deletion:	Off
<input type="radio"/> Email debugging:	Off
<input type="radio"/> Email From Address:	smtp.sender@mycompany.com
<input type="radio"/> Use SMTP Auth:	yes
<input type="radio"/> Email SMTP Host:	smtp.mycompany.com
<input type="radio"/> SMTP port:	25
<input type="radio"/> SMTP SSL Port :	587
<input type="radio"/> Email Service:	on
<input type="radio"/> Email Subject:	LOGS
<input type="radio"/> Email To Address:	admin@mycompany.com
<input type="radio"/> Use SSL SMTP:	no
<input type="radio"/> Email User Name:	smtp.sender@mycompany.com
<input type="radio"/> Email User Password:	ThisIsAFakePassword
<input type="radio"/> Extended UMID:	FALSE
<input type="radio"/> General TraceLevel:	DEBUG
<input type="radio"/> LDAP Domain:	mycompany.com
<input type="radio"/> LDAP Single Sign-On:	off
<input type="radio"/> LDAP URL:	ldap://10.1.1.1:389/DC=MyCompany,DC=com
<input type="radio"/> Log Dir:	C:\Masstech\Logs\Montana
<input type="radio"/> Monitor Period:	5000
<input type="radio"/> Operator Email:	second.admin@mycompany.com
<input type="radio"/> Optional Email 1:	
<input type="radio"/> Optional Email 2:	
<input type="radio"/> SecurityManager TraceLevel:	NORMAL
<input type="radio"/> Send Logs By Email:	off
<input type="radio"/> Send Operator Email:	on
<input type="radio"/> StartTLS:	YES
<input type="radio"/> Trace Level:	DEBUG

5. Configure these parameters:

Email From Address—The sending email address for notification emails. This must be identical to the email address specified in Email User Name.

Use SMTP Auth—When set to YES, authentication is performed via SMTP. Generally, this should be set to YES.

Email SMTP Host—The SMTP host being used to send emails.

SMTP Port—The non-SSL SMTP port. This is typically port 25.

SMTP SSL Port—The SSL or TSL SMTP port. SSL uses port 465 by default. TLS uses port 587 by default. If TLS is used, ensure that StartTLS is set to YES.

Email Service—Turns the email service on and off. If the email service is off, no emails are sent by the system.

Note: Most operator messages are not sent using email, even when the service is on.

Email Subject—The subject line for emails containing logs and operator messages. Subject lines for emails sent by workflows are set in their respective email templates.

Email To Address—The email address of the recipient of log and operator messages. Recipients for emails sent by workflows are set in their respective email templates.

Use SSL SMTP—Set to *YES* to use SSL; set to *NO* if TSL is used instead.

Email User Name—The email address of the sender. This must be identical to Email From Address.

Email User Password—The sender’s SMTP authentication password.

Operator Email—Optional Email 1

Optional Email 2—Additional email address which can receive operator email. Any or all of these parameters can contain an email address.

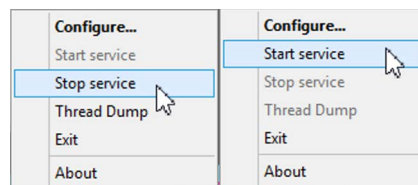
Note: If more than one Operator Email parameter is present, only the second one is active. If only the first of the two has been assigned an email address, emails will never be received at that address. Send Operator Email must be set to *YES* for emails to be sent to these recipients.

Send Logs By Email—Zipped log files are sent to the Email To Address when this is set to ON.

Send Operator Email—Operator emails are sent to the email addresses specified by Operator Email, Optional Email 1, and Optional Email 2 when this is set to ON.

Start TLS—Set to *YES* to use TSL; set to *NO* if SSL is used instead.

6. Click OK to save the configuration.
7. Restart Kumulate for the changes to take effect. Stop and start the Apache Tomcat Service to restart Kumulate—right-click on the Tomcat icon in the system tray:



Configuring Email Notification Templates

Email templates must be created for Kumulate to send workflow notifications by email. Workflows will only send notifications if the email alerts feature is enabled.

Follow these steps to create an email template:

1. Navigate to System > Administration > Processing > Email Templates to display the Email Template Information page:
2. Click Add on the E-mail Templates page.
3. Provide the template with a unique name, the email address of the recipient, a subject for the email, and body text for the email. To send the notification to two or more recipients, separate email addresses by commas:

E-mail Template Information:

Template Name:
Completed Profile < Required

Destination E-mail Addresses:
[Input field]

E-mail Subject (right mouse button to insert dynamic fields):
Profile complete

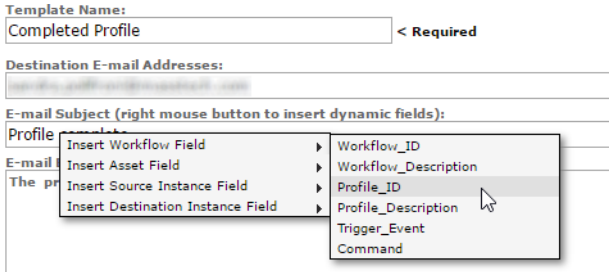
E-mail Body (right mouse button to insert dynamic fields):
The profile completed successfully.

3904 character left

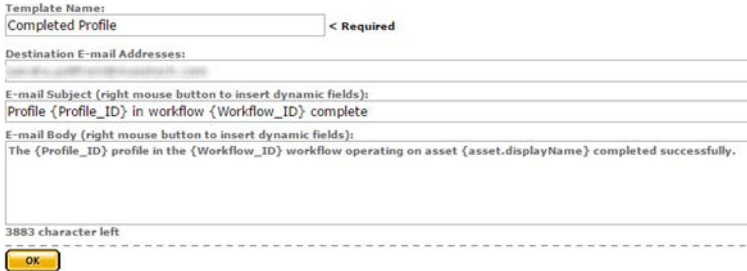
OK

The email subject and body can include dynamic fields which specify workflow, asset and Instance information, making the email more informative.

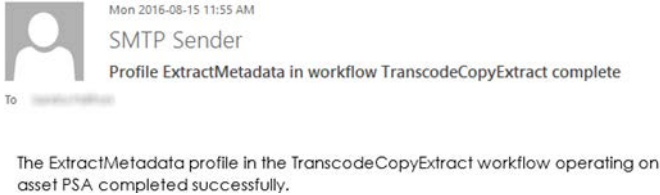
4. To add a dynamic field, right-click on the email subject or body where the field should display, and select the field from the menu:



The dynamic field to insert will display enclosed in curly braces in the subject or body text:



5. Click OK to save the template. The email generated using the previous template is formatted as shown here, when received:



Managing System Control and Configuration Modules

System control modules control how Kumulate operates. Settings for transcoders, indexers, loggers, email servers, and Data Movers are accessible via Kumulate system modules.

System Control modules in the System Control panel can re-configured and the change applied by stopping and starting the module again. System Control modules displayed in the System Configuration can be re-configured and the change takes effect immediately. However, some parameter changes may require a system restart when you change its configuration.

Topics

- [Accessing System Modules](#)
- [Configuring the CMI Module](#)
- [Configuring the DM Manager Module](#)
- [Configuring the Media Library Module](#)
- [Configuring the MMC Module](#)
- [Configuring the SDBI Module](#)
- [Configuring the System Module](#)
- [Configuring the Workflow Manager Module](#)

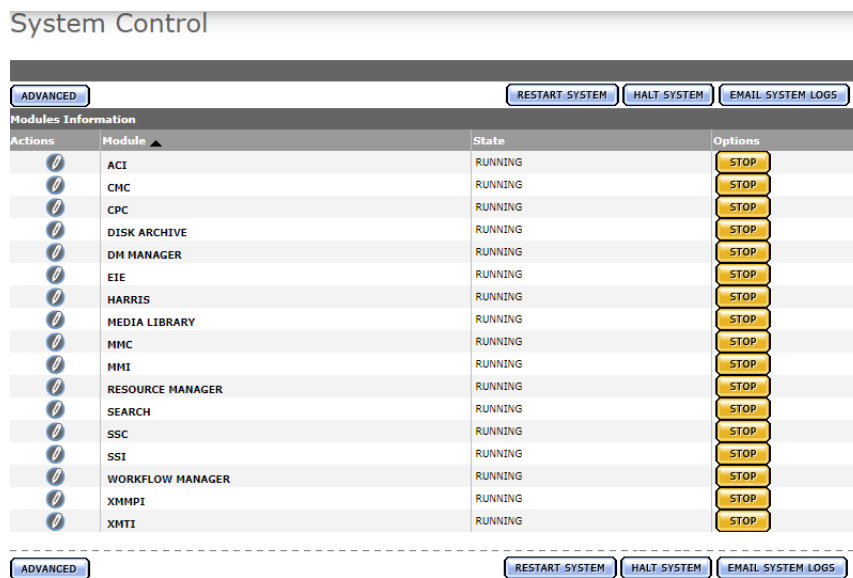
Accessing System Modules

You view system modules and access each module’s configuration page from the System Control panel or the System Configuration panel. System modules that require restarting display in the System Control panel; those that generally do not require restarting display in the System Configuration panel.

Note: Some system modules in the System Configuration panel have parameter changes that require a system restart when you change its configuration. Some parameters do not display until after a specific feature is used for the first time, when they are added to the module dynamically. To display and manage system modules displayed in the System Configuration panel, click Advanced on the System Control panel.

Follow these steps to view the system modules:


1. Navigate to System > Administration > Modules to display the System Control page:



Note: To display and manage system modules displayed in the System Configuration page, click Advanced on the System Control panel.

Using the System Control Table

The System Control table displays the system modules that require restarting after re-configuration. Their operations and details are organized in these columns:

Actions—Click the edit  button to view or modify module’s configuration. You can edit the configuration at any time; you must restart the module or system for the changes to take effect.



Module—Displays the name of the module. Click the heading to sort ascending or descending.

State—displays the module’s current status: RUNNING | STOPPED.

Options—displays Start  | Stop  buttons, which you use to change its state after modifying its configuration. See [Starting and Stopping a System Module](#).

The table also displays general buttons that you use to perform system-wide functions (see [Performing General System Control Functions](#)).

Starting and Stopping a System Module

To start or stop a specific system module, use the Start  | Stop  buttons on the target module’s row:

Stopping a Module—Click Stop so that you can edit its parameters.

Starting a Module—Click Start to restart the system module with changes.

Now, observe the state of module in the State column and ensure that it starts up and reports RUNNING.

Performing General System Control Functions

Buttons above and below the table enable you to perform system-wide functions:

Advanced—Displays the System Configuration panel, which displays system modules that require a system restart to use the changed configuration. The table has the same columns as the System Control table, without the Options column since the modules require an entire system restart.


Caution: Do not use the Restart System and Halt System buttons.

Using the System Configuration Table

The System Configuration table displays the system modules that generally do not require restarting after re-configuration.

Note: Some modules in the System Configuration panel have parameter changes that require a system restart when you change its configuration.

Their status and module-specific functions are organized in these columns:

Actions—Click the edit  button to view or modify module's configuration. You can edit the configuration at any time; changes generally are effective immediately.

Module—Displays the name of the module. Click the heading to sort ascending or descending.

State—displays the module's current status: INACTIVE.

Note: The term INACTIVE means that generally, these modules are stateless; configuration changes are effective immediately.

Updating System Modules

Each module has at least two general purpose buttons:

OK—Click OK when you're done reviewing/updating the parameters to save parameter changes and return to the System Control/System Configuration page.

Reset—Returns all parameter values to default values.

Note: Some modules display additional buttons for specific functions on that module. These are described directly in the module topic.

Configuring the CMI Module

Use the CMI module to mark previously-discovered assets in Kumulate.

Caution: Do not modify any parameter not in this list without consulting Technical Support (see [Telestream Contact Information](#)).

Parameters

Processed Keyword—Used as a mark that is inserted into an instance wrapper to indicate that the instance has been discovered and copied in by Kumulate.

This value must be unique to each Kumulate system.

Because this mark cannot be longer than 32 characters on Leitch Storage Locations, this setting can be overwritten on Leitch Storage Locations only using the Marking Key parameter. (xref)

Trace Level—Sets the logging level:

- OFF: Only errors are logged.
- NORMAL: Errors and trace messages are logged.
- DEBUG: Logs all messages, including debug messages.

Configuring the DM Manager Module

The Data Mover Manager (DM Manager) module is responsible for configuring Data Movers.

Caution: Do not modify any parameter not in this list without consulting Technical Support (see [Telestream Contact Information](#)).

Parameters

To make changes, stop the module. Edit the parameters and restart the module.

Local Data Mover Port (Default: 2089)—Kumulate server's Data Mover listening port.

Pool Management Frequency (Default: 180 seconds)

Process Restart Timeout (Default: 60)—Maximum time (in seconds) to wait for the Data Mover module to restart. If the Data Mover doesn't restart within this timeframe, it remains offline.

System Restart Timeout (Default: 300)—Maximum time (in seconds) to wait for restart. If the doesn't restart within this time frame, it remains offline.

Trace Level—Keyword; Sets the logging level for the module:

OFF—Only errors are logged.

NORMAL—Errors and trace messages are logged.

DEBUG—Logs all messages, including debug messages.

Configuring the Media Library Module

Kumulate utilizes the Media Library to connect with tape libraries and communicate with them to transfer files and other information. The Media Library module must be configured and running to connect Kumulate to tape libraries.

Caution: Do not modify any parameter not in this list without consulting Technical Support (see [Telestream Contact Information](#)).

Parameters

Trace Level—Sets the logging level:

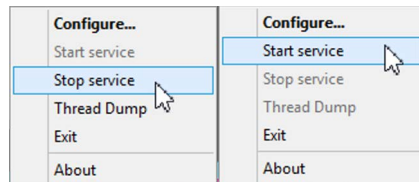
- OFF: Only errors are logged.
- NORMAL: Errors and trace messages are logged.
- DEBUG: Logs all messages, including debug messages.

Enabled (keyword)—Set to one of these keywords:

YES—Enable Kumulate to connect to tape libraries and interact with them.

No—Disable Kumulate from connecting to tape libraries or interacting with them.

Stop and start the Apache Tomcat Service to restart Kumulate—right-click on the Tomcat icon in the system tray:



Ensure that the module is running.

Trace Level—Keyword; Sets the logging level for the module:

OFF—Only errors are logged.

NORMAL—Errors and trace messages are logged.

DEBUG—Logs all messages, including debug messages.

Configuring the MMC Module

Caution: Do not modify any parameter not in this list without consulting Technical Support (see [Telestream Contact Information](#)).

Parameters

Archive Buffer Size—The size in KB of the buffer used for transfers to and from archive locations.

The default is 5120KB.

Failed reads threshold when Force Read Tape is YES—When Force Read Tape is set to YES, read operations from a tape library will take precedence over write operations to the library. In cases where the read operations are unsuccessful, the queued write operations may never be executed.

Failed reads threshold when Force Read Tape is YES sets a limit on the number of failed read attempts to make before attempting the write operations.

Force Read Tape—When set to YES, read operations from a tape library will take precedence over write operations to the library.

Works with Failed reads threshold when Force Read Tape is YES and Max writes to allow before read again.

Max Archive Transfers—Maximum number of transfers to and from the tape archive.

The default is 1.

PMRUpdater Path—Path to the PMRUpdater executable. This only applies when using the PMRUpdater with Avid Standalone Storage Locations.

Trace Level—Keyword; Sets the logging level for the module:

OFF—Only errors are logged.

NORMAL—Errors and trace messages are logged.

DEBUG—Logs all messages, including debug messages.

Write In New Thread—When set to ON improves archiving performance by creating separate threads for reading from and writing to archive.

Max writes to allow before read again—Max writes to allow before read again works with Force Read Tape and Failed reads threshold when Force Read Tape is YES.

Max writes to allow before read again specifies the number of write operations to attempt when read operations to a tape library are suspended.

Configuring the SDBI Module

Kumulate's memory cache maintains information about frequently-used assets and instances to reduce access to the database. Caches are controlled by the SDBI (Standard DataBase Interface) module, according to its parameter settings.

If Kumulate requires details about an asset or instance that is found in that cache, no database query is required. If an asset or instance is not found in the cache it is automatically added at first use.

After expiration time (the time passed since asset | instance was last time used) the assets or instances are automatically removed from the cache. Cache size is limited by the configured value. Older values are removed if the size limit is reached.

Note: It may be useful to disable the cache when performing investigations related to metadata values that are not correct in Kumulate.

Functions

Clear Asset Cache—Deletes the metadata in the asset cache.

Clear Instance Cache—Deletes the metadata in the instance cache.

Parameters

Asset Cache Expire Time (INT)—The expiration time in minutes. The asset is removed automatically after a certain time period from when it was inserted into the cache.

Asset Cache Size (INT)—The maximum number of assets that are preserved in memory cache. If this value is set to 0, the assets cache is disabled.

Instance Cache Expire Time (INT)—The expiration time in minutes. The instance is removed automatically after a certain time period from when was inserted into the cache.

Instance Cache Size (INT)—The maximum number of assets that are preserved in the cache. If this value is set to 0, the instances cache is disabled.

Trace Level (keyword)—Sets the logging level for the module:

- OFF: Only errors are logged.
- NORMAL: Errors and trace messages are logged.
- DEBUG: Logs all messages, including debug messages

Configuring the System Module

The System module contains configuration settings for a variety of Kumulate features.

Caution: Do not modify any parameter not in this list without consulting Technical Support (see [Telestream Contact Information](#)).

Parameters

AVID Interplay WebService TraceLevel (Keyword)—Controls the logging of messages to and from the Avid Interplay web service.

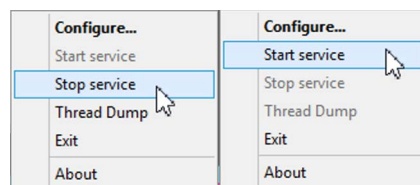
DEBUG: Messages are logged.

NORMAL | OFF: Messages are not logged.

Client Id (String)—Client ID of the Kumulate server displays in the Kumulate web app tab, enabling you to differentiate between multiple systems:



Stop and restart the Tomcat Service on the Kumulate server for this change to take effect:



Email debugging (Keyword)—Enables or disables debugging email errors; leave this disabled unless emails are not operational.

ON: Kumulate logs email errors

OGFF: Kumulate ignores email errors.

Email From Address (Email address)—Email address used to send logs and operator messages. Credentials must be known for this email address.

Caution: The email user's password is visible and stored in clear text; it is not encrypted.

Use SMTP Auth (keyword)—(Default: YES) Enables SMTP authentication.

YES: SMTP authentication is performed

NO: SMTP authentication is disabled.

Email SMTP Host—Name | IP address of the SMTP server of the sender's email.

SMTP Port
(Default: 25)

Non-SSL SMTP port.

SMTP SSL Port
(Default—SSL: 465).

Integer; SSL or TLS SMTP port. TLS uses port 587.

The Use SSL SMTP parameter must be set to *YES* to use SSL.

StartTLS must be set to *YES* for TLS to be used.

Email Service—Keyword; turns the email service on and off.

OFF: No emails are sent by Kumulate.

ON: Enables Kumulate to send email messages.

Email Subject—String; subject line for emails containing log messages.

Email To Address—Email address; the email address of the recipient of log and operator messages. Recipients for emails sent by workflows are set in their respective email templates.

Use SSL SMTP—keyword; *YES*: use SSL; *NO*: use TSL.

Email User Name—Email address of the sender.

Email User Password—String; sender's SMTP authentication password.

Caution: The email user's password is visible and stored in clear text; not encrypted.

General TraceLevel—Keyword; logging level to use for general trace logs.

LDAP Domain—Customer's LDAP client domain. Used when Kumulate is configured to use LDAP.

See [Enable Optional Kumulate LDAP Authentication](#) for more information.

LDAP Single Sign-On
(Default: OFF)

Keyword; ON: Enables the single sign-on feature. OFF: disables the feature.

LDAP must be enabled to use single sign-on. If this parameter is set to ON but LDAP is not configured and enabled, Kumulate changes the login screen, but single sign-on won't work. See [Enable Optional Single Sign-On Authentication](#) for details.

LDAP URL—Customer's LDAP server location, with appropriate search terms. Used when Kumulate is configured to use LDAP. See [Enable Optional Kumulate LDAP Authentication](#) for details.

Log Dir—Directory where the Kumulate logs are saved.

(Default: C:\Masstech\Logs\Montana)

Monitor Period—Set to *YES* to keep track of periods; otherwise, set to *NO*.

Operator Email | Optional Email 1 | Optional Email 2—Email address which can receive operator email. Each may or may not contain an email address.

Note: If more than one Operator Email parameter is present, only the second one is active. If only the first of the two has been assigned an email address, emails will never be received at that address. Send Operator Email must be set to *YES* for emails to be sent to these recipients.

Send Operator Email—Keyword; ON: operator messages are sent to the email addresses specified in Email To Address, Operator Email, Optional Email 1, and Optional Email 2. OFF; no emails sent.

System Id—String; a unique ID generated by Kumulate used in clustering.

Trace Level—Keyword; sets the logging level for the module:

- OFF: Only errors are logged.
- NORMAL: Errors and trace messages are logged.
- DEBUG: Logs all messages, including debug messages.

Configuring the Workflow Manager Module

The Workflow Manager module controls workflow operations. See [Managing Workflows](#) for more information.

Parameters

Caution: Do not modify any parameter not in this list without consulting Technical Support (see [Telestream Contact Information](#)).

Command Retry Interval (INT)

(Default: 600)—Integer; the amount of time in seconds to wait between attempts to retry a workflow command.

Dub List Refresh Interval (INT)

(Default: 60)—Integer; the amount of time in seconds to wait between attempts to retry a workflow command.

E-mail Queue Capacity (INT)—Integer; the total number of emails that can be queued when workflows are configured to send notification emails.

Prepare Completed Asset Metadata (list)—Asset metadata that must be modified to trigger a profile with a [PreparedCompleted](#) trigger. Kumulate must be stopped and restarted for changes to take effect.

Use the arrows to move assets to Available Asset Metadata list or the Selected Asset Metadata list.

Prepare Completed Instance Metadata (list)—The instance metadata that must be modified to trigger a profile with a [PreparedCompletedInstance](#) trigger. Kumulate must be stopped and restarted for the changes to take effect.

Use the arrows to move instances to Available Instance Metadata list or the Selected Instance Metadata list.

Trace Level (keyword)—Keyword; sets the module's logging level:

- OFF: Only errors are logged.
- NORMAL: Errors and trace messages are logged.
- DEBUG: Logs all messages, including debug messages.

Managing Elasticsearch and Kibana

Kumulate uses Elasticsearch—a powerful, open search platform from elastic.co—to index asset metadata and system activities. All Kumulate searches use Elasticsearch indexes. They are also used to create visualizations and dashboards for end users, utilizing Elastic’s Kibana analytics tool, which are displayed in Kumulate’s Reports panel.

Topics

- [Configuring Elasticsearch](#)
- [Index Alias Indicators](#)
- [Importing Kibana Dashboards Into Kumulate](#)
- [Creating and Modifying Dashboards and Visualization](#)

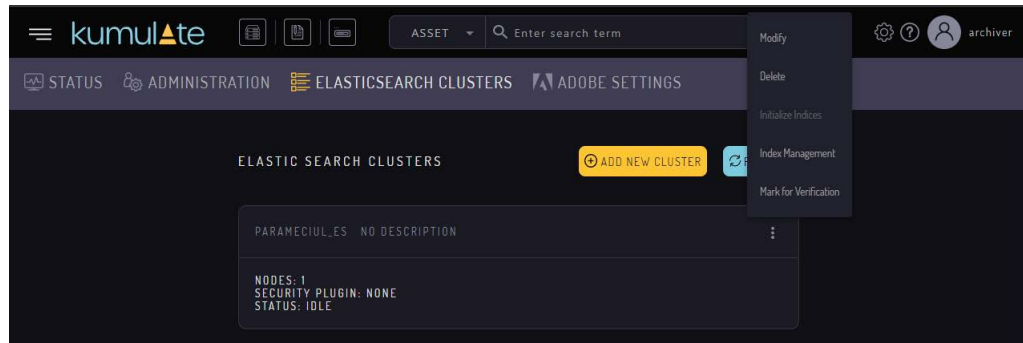
Configuring Elasticsearch

You should configure Elasticsearch as part of your initial configuration.

Caution: Do not modify settings without conferring with Technical Support.

Follow these steps to configure the Elasticsearch and Kibana server:

1. Navigate to System > Elasticsearch Clusters > Modify to display the Elastic Search Clusters page:



Modify these parameters as required:

Cluster Name—The name of the Elasticsearch cluster that was created during the Kumulate system installation. The cluster name is determined by viewing the *Elasticsearch.xml* file; typically found in *C:\ProgramData\Elastic\Elasticsearch\config*.

Description—The descriptive name of the cluster.

Enable—Set to *Yes*.

Use Sniffer—Set to *No*.

Security Plugin—Set to *X-Pack Security*.

Authentication Scheme—Set to *Basic*.

Use SSL—Set to *Yes*.

Username—The user that Kumulate uses to send API requests to Elasticsearch.

Password—The password associated with the Username.

Kibana Server URL—The address that Kumulate uses to send API requests to Kibana.

Kibana Server URL (User)—The address used by Kumulate to access Kibana.

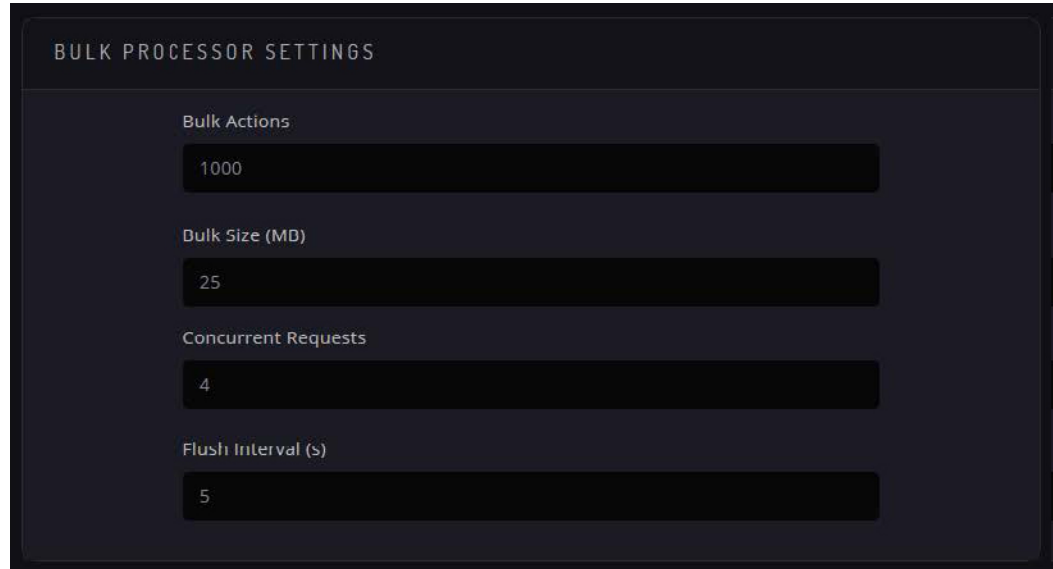
Kumulate Kibana User—The user that Kumulate uses to send API requests to Kibana. This doesn't need to be configured if security plugins were not configured for Kibana.

Kumulate Kibana Password—The password that Kumulate uses to send the account.

Elasticsearch nodes—

Bulk Processor Configuration

Use the Elasticsearch Cluster configuration panel to configure bulk processor settings:



The screenshot shows a configuration panel for the Bulk Processor. The title is "BULK PROCESSOR SETTINGS". There are four settings, each with a text input field:

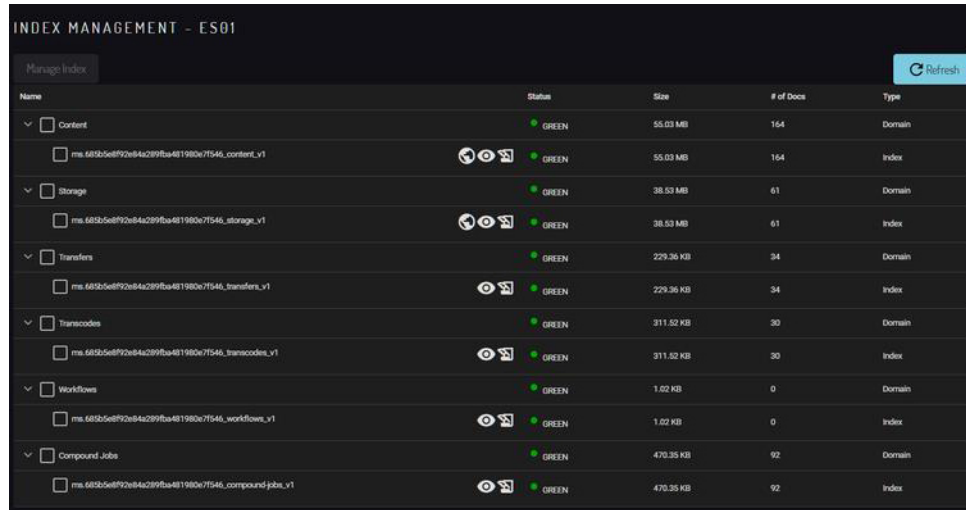
- Bulk Actions:** 1000
- Bulk Size (MB):** 25
- Concurrent Requests:** 4
- Flush Interval (s):** 5

The Bulk Processor accumulates indexing requests until it exceeds the number of Bulk Actions configured, or the Bulk Size (MB) configured, or at every Flush Interval (s). Up to Concurrent Requests bulk requests can be sent for processing at once to Elasticsearch while accumulating more bulk requests.

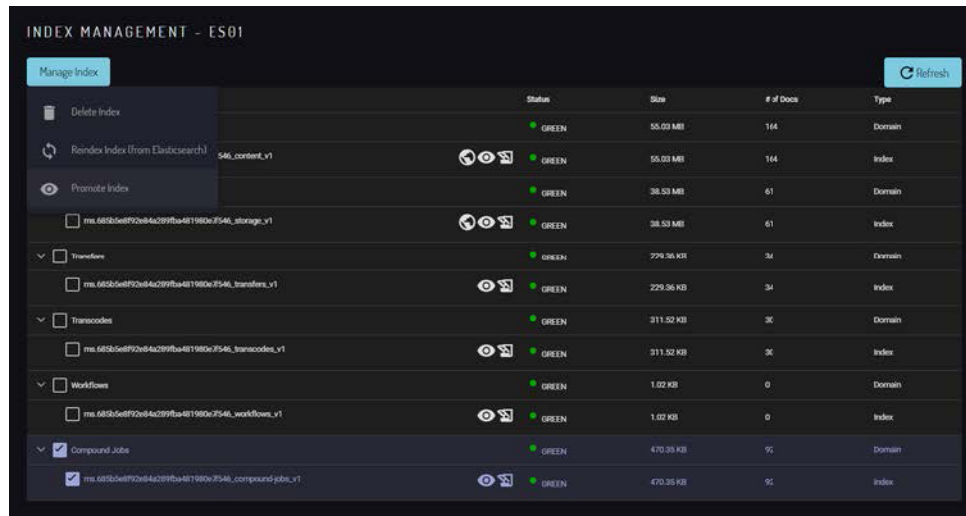
Note: Do not use excessive values, as the Elasticsearch coordinating node has to hold the entire bulk request in memory and you can potentially run out of memory if you have too many large requests simultaneously. Official advice from Elastic is not to exceed tens of MB for the bulk size, even if it appears to perform better.

Index Alias Indicators

Index Alias Indicators are now displayed to the left of the Status on the Index Management page as seen here. This is useful for viewing if an index has an alias associated with it without having to enter Kibana and use the API for diagnostics purposes:

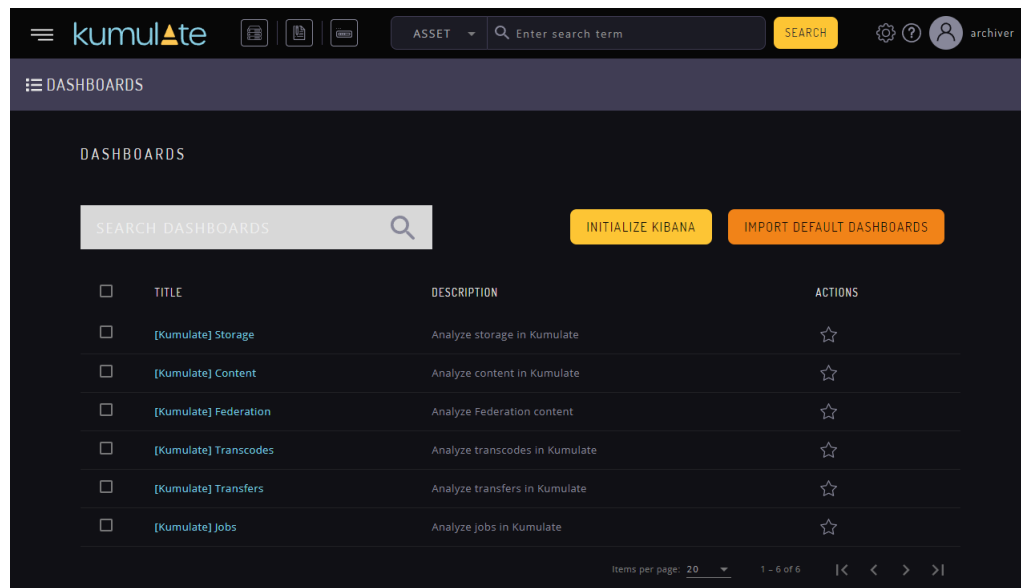
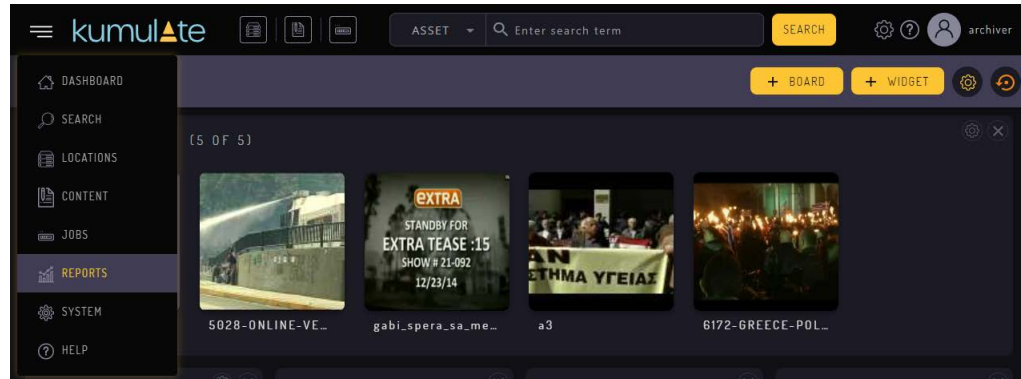


If one of the indexes doesn't have its index aliases but should have it (for example, from a snapshot restore, or if re-indexing from the Elasticsearch was interrupted), then you can select the index and choose the Promote Index option:



Importing Kibana Dashboards Into Kumulate

When Kumulate is initially installed, no dashboards display on the Reports page. Click Import Default Dashboards from the Reports page to import the default dashboard into Kumulate. This imports a set of dashboards and their visualizations that have been pre-configured by Telestream.



Creating and Modifying Dashboards and Visualization

Kibana provides the ability to create custom visualizations using any of the information stored in Elasticsearch indices. Locate tutorials at [elastic.co](https://www.elastic.co). Alternatively, Telestream can create custom visualizations as a professional service.

Contact your Telestream Account Manager for more information.