



Telestream



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://www.telestream.net/telestream-support/kumulate/support.htm</p> <p>Support Email: cmsupport@telestream.net</p> <p>Phone (USA): (888) 827-3139</p> <p>Phone (International): +1 (905) 946-5701</p> <p>Depending on your support contract and problem severity, we will respond to your request within 1–2 business hours.</p> <ul style="list-style-type: none"> • Standard Support hours for customers are Monday – Friday, 9am to 5pm local time. • Gold Support hours for customers are 24/7.
Telestream, LLC	<p>Web Site: www.telestream.net</p> <p>Sales and Marketing Email: info@telestream.net</p> <p>Telestream, LLC 848 Gold Flat Road, Suite 1 Nevada City, CA USA 95959</p>
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Overview

This book gives a basic understanding of system functionality and detailed instructions for configuring Kumulate 2.1. It guides System Administrators through initial Kumulate system configuration, daily operations, and routine maintenance.

- [Overview](#)
- [System Requirements](#)
- [New Features and Functionality](#)

Overview

Kumulate is a Web Application enabling locating and working 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 through a web browser using the HTTPS protocol. Some of the advantages of a web-based interface include:

- No client software installation required
- A browser-based Web Application can be accessed from anywhere on the network
- No client application configuration is necessary
- No client updates are required

Using Kumulate you can:

- Search for video clips by file name, date, category, and format
- Define metadata fields that support search
- Use advanced search operations to hone searches for specific criteria. For example, you can search for video clips of farm animals in the United States, but not in Nebraska or 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 pinned metadata fields

System Requirements

The following system requirements must be up to date before installing or using Kumulate 2.1:

- SPTI must be installed on the Kumulate Server host.
- MMP users that require searching by asset alias (asset name) need to set Use Alias on MMP query to YES.
- MTE (formerly HQS) version 2.0.0 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 through Interplay Web Services.
- Harmonic Spectrum Family (formerly Omneon Spectrum and Media Deck) firmware is supported up to version 8.3 on 64bit Kumulate systems.
- Grass Valley K2 is supported up to version 3.2.74 build 1060.
- Support is available for T10KC drives in Oracle StorageTEK libraries. Backward compatibility is preserved for T9840A, T9840B, T9840C, T9940A, T9940B, and T10000A drives.

New Features and Functionality

The new features and functionality identified in the following sections are applicable to Kumulate release 1.4 and later.

Robotic Requests

In previous versions of Kumulate, the Application Server had to have access to the robotic control of the medium changer device, which limited the system architecture in virtualized, distributed and/or cloud-hosted environments. The responsibility for this communication is moved to the DataMover, so the Application Server no longer needs to be connected through Fibre or SAS to the medium changer device.

Kumulate Gallery Support

To support the features of Kumulate Gallery, several new features have been added as follows:

- New system asset metadata fields include category, currency, price, promoteStatus, publishForCompanies, publishStatus, purchasedBy and visibleInGallery. These fields are part of the Gallery metadata group and are hidden if a Gallery system is not present.
- New system attachment templates, including Picture and PDF.
- New Gallery Group user group. This group has a set of default permissions that can be modified by the Kumulate Administrator.
- New gallery default user for the Gallery Group user group.
- Extension of the cache cleanup mechanism to purge purchased files. Purchased files are uploaded to an S3 bucket, and the direct download link is shared with the purchaser. Kumulate will delete files from the S3 bucket based on an expiration time configured in Gallery

Subtitle and Logo Burn-ins

Kumulate now provides the ability to burn subtitles and/or a logo into a video file as part of a transfer.

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. After they are configured, these strings must be added to Kumulate as possible profiles using the following procedure:

1. Navigate to System > Administration > Content > Metadata Management > Instance Metadata.

Metadata Management

ADD METADATA ADVANCED REFRESH

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:

Type: Instance

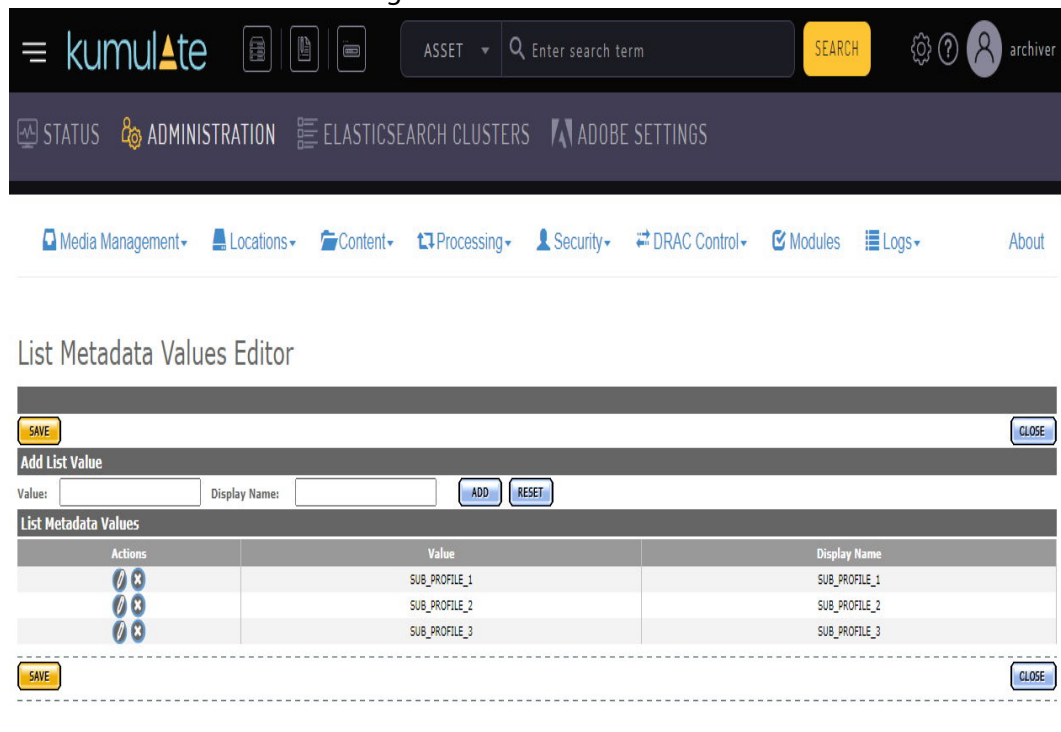
Display Mode: Read only

Mandatory: NO

Metadata Group: Default CREATE NEW GROUP

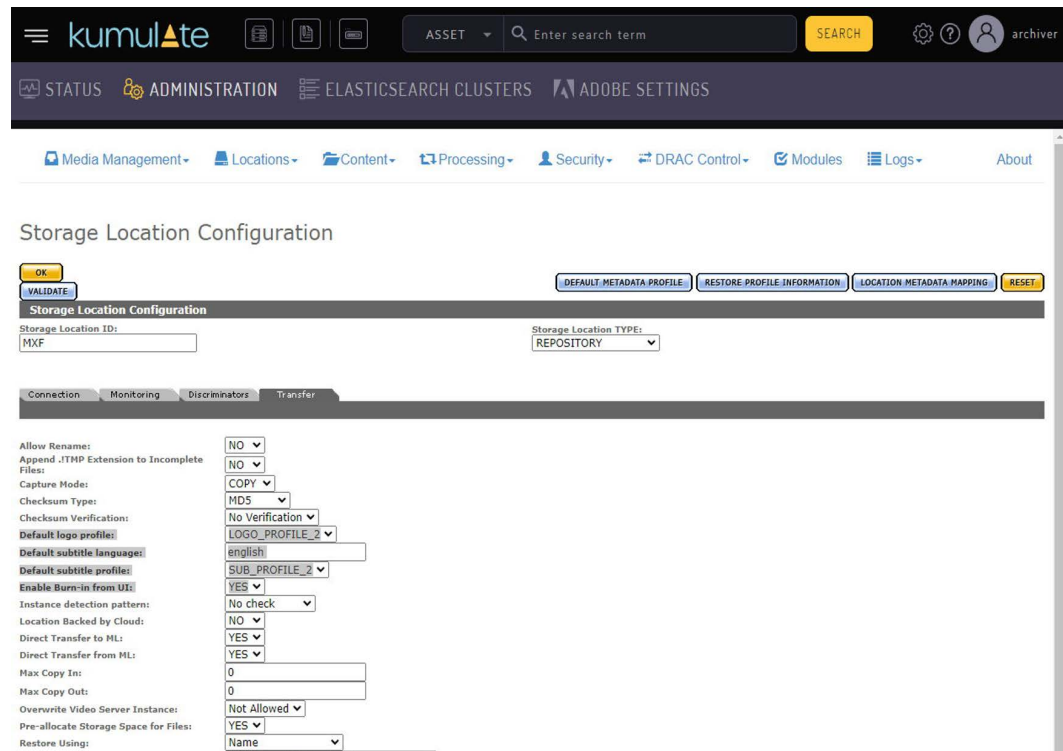
OK DELETE

3. Select Modify List Value > Add new profiles. Enter the burn-in profiles configured in the Masstech Transcode Engine.

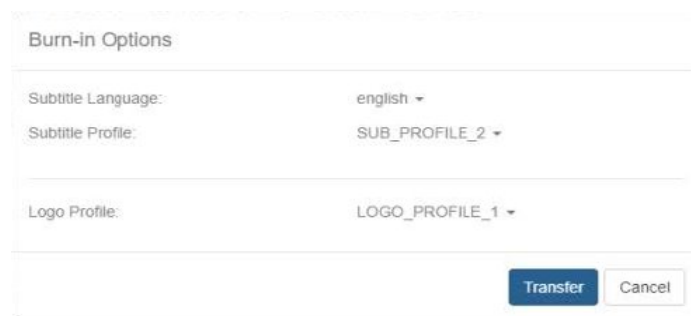


After this is done, the storage location(s) must be set up. The burn-in options work with video servers, but not the cache or a media library. There are two modes that can be used to generate a burned-in file:

- **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 appear related to Burn-in options that are configurable defaults for the UI:
 - Subtitle Language
 - Default Subtitle Profile
 - Logo Profile



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 will appear that has the burn-in options available for selection.



- **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 Information, select a profile and then select Modify Profile. Set Burn In Enabled to **ENABLED**.

The screenshot shows the 'Add New Restore Profile' form in the Kumulate Administration interface. The form is titled 'Restore Profile Information' and contains the following fields and options:

- Name:** Profile_MXF_BurnIn (Required)
- Description:** (Empty text field)
- Storage Location Id:** MXF
- Status:** ENABLED (Required)
- Destination Filter:** DestFilter_MXF (Required, with a MODIFY button)
- Burn In Enabled:** A dropdown menu with options: DISABLED, ENABLED (highlighted), and DISABLED.

Buttons for OK, RESET, and MODIFY are visible.

This adds the options this restore profile will use 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

Restore Profile Information

Name: Profile_MXF_BurnIn < Required

Description:

Storage Location Id: MXF

Status: ENABLED < Required

Destination Filter: DestFilter_MXF < Required **MODIFY**

Burn In Enabled: ENABLED

Subtitle language: english

Subtitle Profile: SUB_PROFILE_1

Logo Profile: LOGO_PROFILE_1

Attached Storage Locations

Attached Storage Locations
MXF

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 will be executed as part of the transfer.

Note: Multiple restore profiles with different settings can be configured on the same location.

Restore Priority in Web App

In previous versions of Kumulate, it was not possible to change a storage location or the priority of transfers from tape to cache. The system now allows the priority of these activities to be changed from the Jobs page.

Ignoring Specific Files

When configuring a storage location, it is now possible to specify a list of files that should be ignored during the discovery process and a list of file patterns to exclude. This list is specified for each location in the Monitoring section.

Action Status Automatically Removed

In previous versions of Kumulate, the action status pop-up dialog would appear to provide status after an action (that is, transfer, transcode, bulk metadata modification, etc.) was initiated in the Web App. The pop-up dialog would need to be manually closed by the user. This behavior has been changed so that the action status pop-up dialog now disappears after 1-2 seconds.

Transcode Engine Maximum Priority Field

In order to properly filter and control the transcode engines, a Maximum Priority field has been added to the Transcode Engine Configuration, similar with the existing Minimum Priority field. Only operations that have priority greater than or equal to the Minimum Priority value and lower than or equal to the Maximum Priority value will be executed with this Transcode Engine.

Character Percent Encoding

Kumulate now uses percent encoding to deal with special characters in filenames and pathnames. This deals with an issue where these characters could make a tape impossible to mount.

Consul Service Mesh Solution

Kumulate is now registered as a service in Consul and is capable of looking up other services registered in Consul, enabling a common framework for service discovery.

New REST API Calls

The following REST API calls have been added:

- Create Asset
- Create Asset Marker
- Create Asset Segment
- Get Instance Metadata Definitions (list of possible values for LIST/COMBO metadata fields)
- Delete Attachment

Query Multiple Assets in Single XMMPI Call

The XMMPI protocol now includes the option to use an anyword condition in queries, so that multiple values can be provided as part of a single search. The values must be separated by a space, as in the following example:

```
<queryInstance>
  <max_per_page>#MAX_PER_PAGE#</max_per_page>
```

```
<search_criteria>
  <asset_id
_cond="anyword">0x060A2B340101010001010D1113FFFFFF05030E0481890506
5331AABBCCDDEEFF
0x060A2B340101010001010D1113FFFFFF05080203818905062551AABBCCDDEEFF
</asset_id>
</search_criteria>

<response_fields>
  <program_instance_num/>
  <storage_unit_id/>
</response_fields>
</queryInstance>
```

Cluster Configuration and Failover

In a clustered configuration, two Kumulate servers are connected to each other to ensure redundancy and continuation of business. The two clustered servers operate as a Master and Backup. Services are installed on both servers, but only run on the Master server. During failover, services are shut down on the Master and restarted on the Backup.

Kumulate cluster services are managed using the Windows Failover Cluster Manager. Services can be failed over either from the Kumulate Web Interface, or from the Master or Backup server using Windows Failover Cluster Manager.

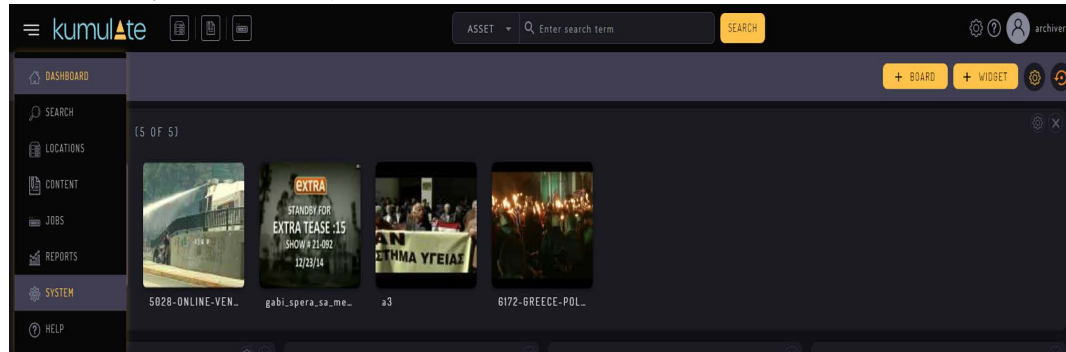
This chapter includes the following information:

- [Failover using the Web Interface](#)
- [Windows Failover Cluster Manager](#)
- [Cluster Internal Data Mover](#)

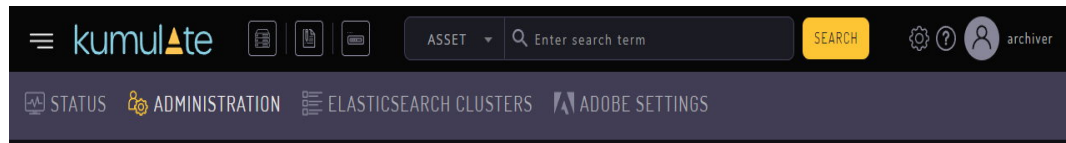
Failover using the Web Interface

Use the following procedures to failover Kumulate to or from the Master Server:

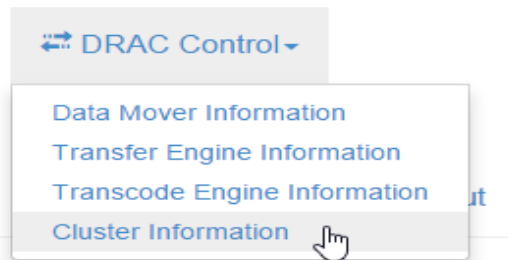
1. Open the Kumulate web interface in your browser and log into the system.
2. Select System in the right frame of the Kumulate interface.



3. Select Administration.



4. Select DRAC Control > Cluster Information.



5. The Master and Backup servers will be listed in the information as shown in the following figure.

Cluster Information

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

6. Click the Play button next to the Backup Server Name to trigger the failover.

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

Make Master

7. Click OK when the confirmation dialog appears.



8. Kumulate will be unavailable after clicking the OK button. It will remain unavailable until all services have been failed over. The failover process takes approximately three minutes.

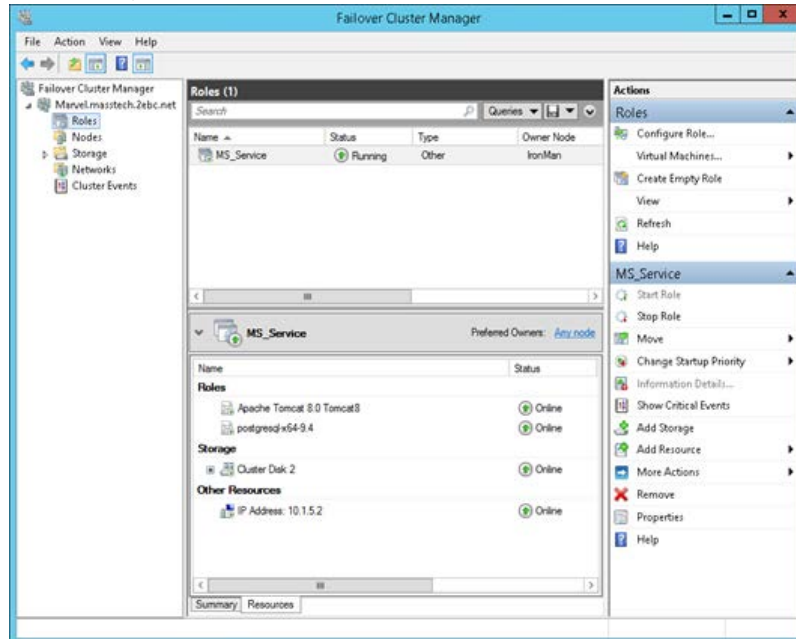
9. Reload the web page. When Kumulate comes back online the server roles will be reversed and the failover is complete.

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

Windows Failover Cluster Manager

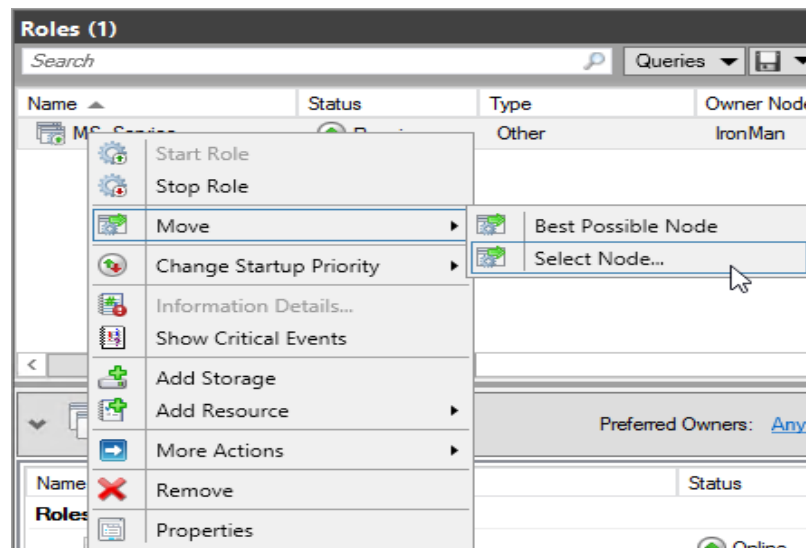
Use the following procedure to failover services from the Windows Failover Cluster Manager.

1. Log in to either the Master or Backup server and open Windows Failover Cluster Manager.

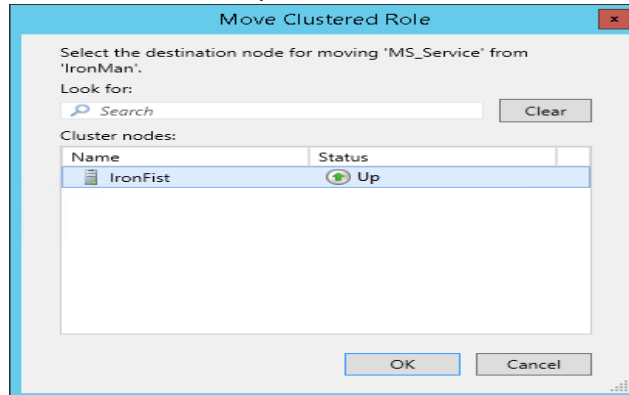


2. Right-click the cluster service named either MS_Services or MS_Service.

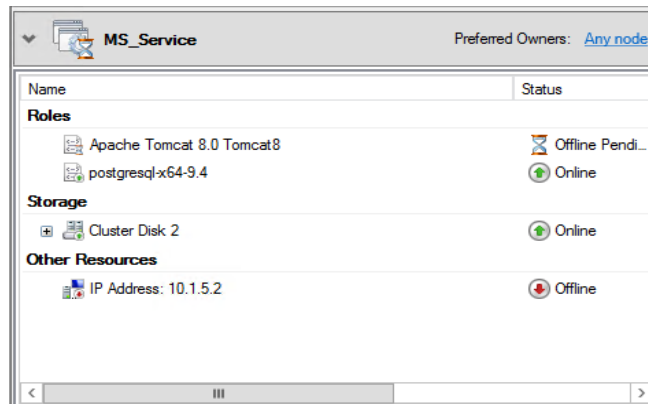
3. Select Move> Node.



4. Select the Backup Server from the node list.

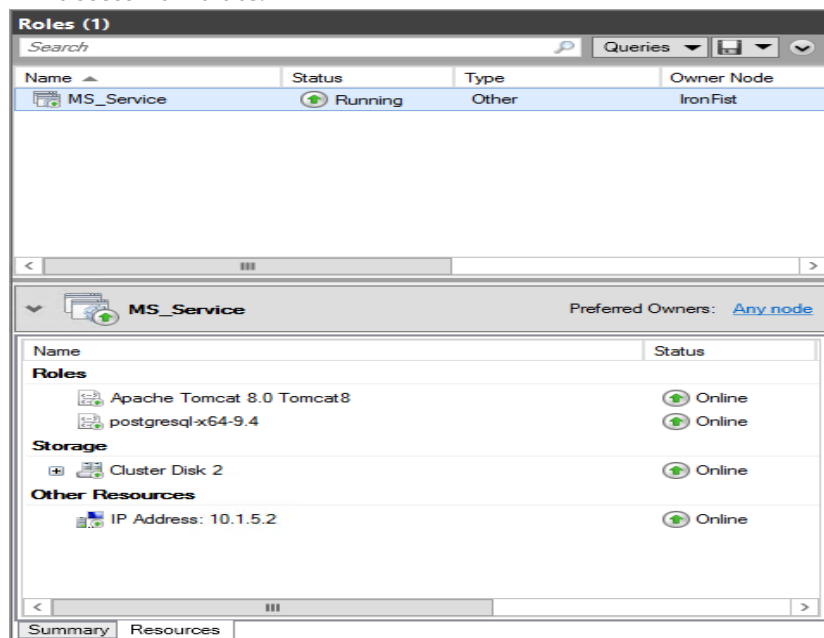


5. Click OK to take the services offline.





6. Kumulate will be unavailable while the services are moved between nodes. The failover should take approximately three minutes.

7. Wait until the services are running on the Backup server before attempting to access Kumulate.



8. After the services are running, log into the Kumulate web interface and navigate back to the Cluster Information page. The backup server will now be the master.

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

Cluster 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 failover, 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.

A new flag, named Disable for Local DM, has been added to internal data mover endpoint configuration. When set, this flag disables the endpoint when the data mover assumes the role of the internal data mover.

See [Add a Data Mover Endpoint](#) for more information.

Repository Storage Locations

This chapter describes different types of storage locations available for use with Kumulate and includes the following information:

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

Repository Storage Locations

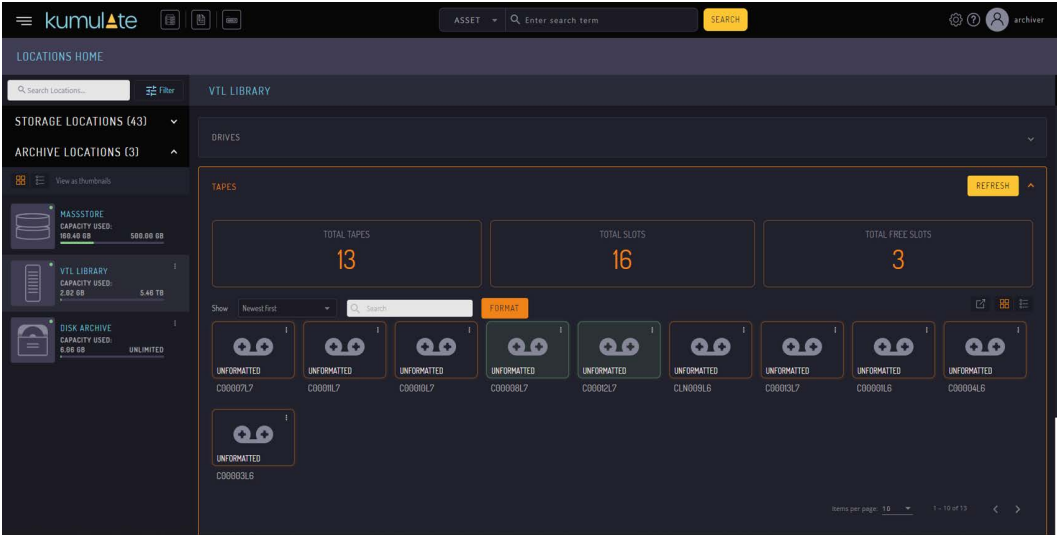
Repository locations use either a UNC or an FTP transfer protocol. Each storage location is configured based on the media stored on it and the transfer mode used to transfer the media.

Storage locations are configured to expect a specific instance format. Instances that do not 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, and they need to be explicitly added to user groups.

In Kumulate release 2.0 the Locations page was completely redesigned. The following administration capabilities have been added to it:

- 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



Avid Standalone Storage Locations

Avid Standalone storage locations consist of an Avid Media Composer workstation connected to the 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.

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 will be named MyMedia_1, MyMedia_2, MyMedia_3, and so on.

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

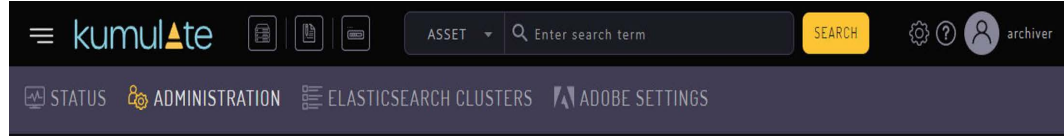
The Folder Pattern Separator can be a period (.), an underscore (_), or a dash (-). If PMRUpdater is being used, the Folder Pattern Separator must be a period (.), and the Interplay Repository Folder Pattern must be the Media Composer workstation's name.

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`.

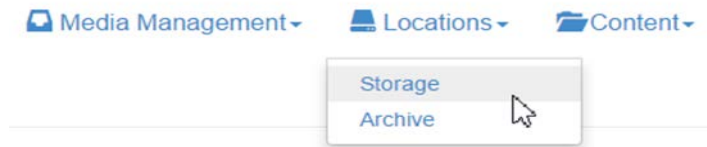
Configuration

Use the following procedure to configure the Avid Standalone Storage Locations:

1. Click System > Administration in the menu bar in the Kumulate web interface.

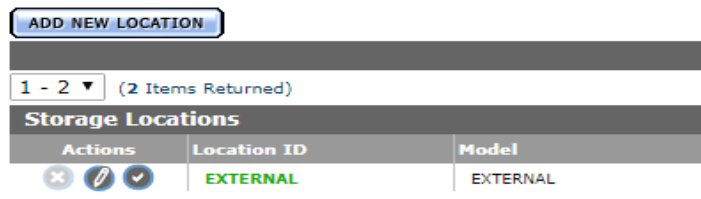


2. From the top menu, select Locations > Storage.

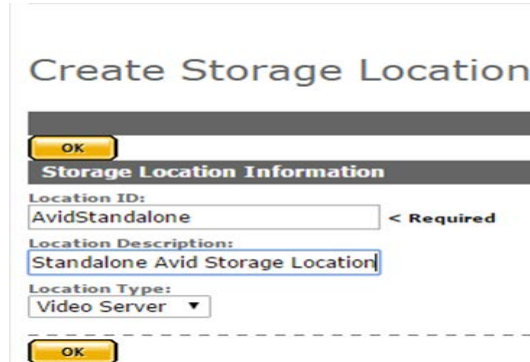


3. Click Add New Location to create a new storage location.

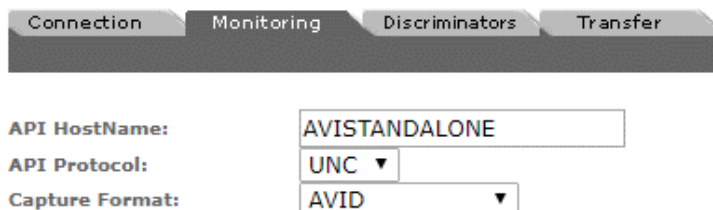
Storage Location Manager



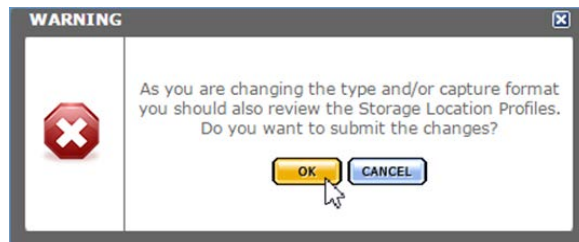
4. Enter a name and description for the storage location, then click OK.



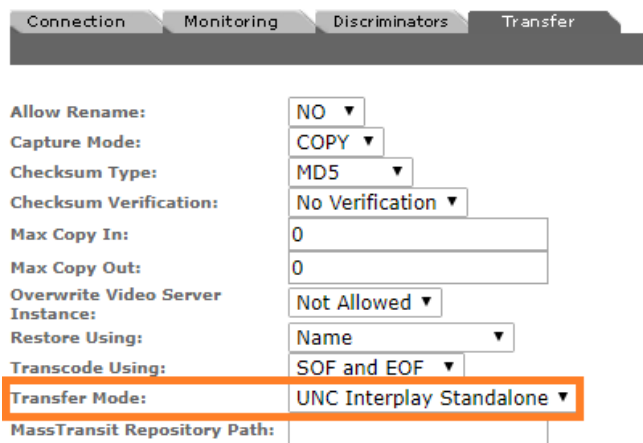
5. Select the Monitoring tab. Set API Protocol to *UNC*, and Capture Format to *AVID*.



- Click OK to continue. A warning dialog appears asking if you want to submit the change to the storage location. Click OK to continue. You will be returned to the Connection tab.



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



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

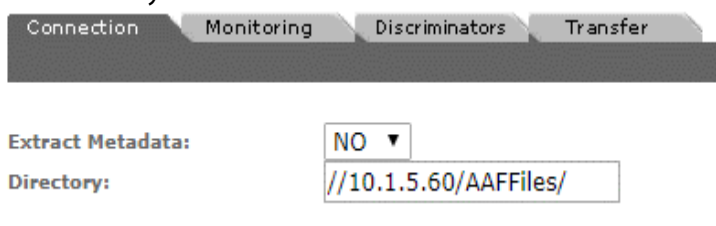
Continue to [Instance Discovery Configuration](#) if the storage location will be used to discover new instances.

Continue to [Instance Transfer Configuration](#) if the locations will be used to copy instances from Kumulate to a physical location.

Instance Discovery Configuration

Use the following procedure to set the parameters under the Connection and Monitoring tabs to discover new instances and copy them into Kumulate:

- On the Connection tab, enter the path to the AAF files. Kumulate will monitor this directory for new AAF files.



2. On the Monitoring tab, set the Files Dir Enable, Media Repository Path, Media Repository String to Replace (regex), and Monitoring parameters as shown in the following figure.

3. After the storage location has been configured, set the metadata mapping for the location.

Parameter	Value
Files Dir Enable	Must be set to <i>YES</i> .
Media Repository Path	The path to the Avid MediaFiles\MXF\ folder on the Media Composer workstation relative to Kumulate.
Media Repository String to Replace (regex)	Regular expression that matches the local path to the Avid MediaFiles\MXF\ folder used in the AAF file. The matched string is replaced by Media Repository Path. By default this is set to (.*\), matching any drive letter. This should only be changed if Media Composer is running on a workstation running MacOS.
Monitoring	This must be set to <i>ON</i> .

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

Caution: Do not forget to set the Metadata Mapping.

Instance Transfer Configuration

Set these parameters under the Transfer tab so that instances transferred to this storage location are copied to a physical location. Navigate to the Transfer tab and set the required parameters as shown the following figure:

The screenshot shows the 'Transfer' configuration tab with the following parameters and values:

- 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: (empty)
- MassTransit Repository Path: (empty)

Parameter	Value
Interplay AAF Root Folder	Path to the folder where Kumulate will write 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. Can be period (.), underscore (_), or dash (-). If it is omitted, and Interplay Media Repository Folder Pattern is not left blank, MS is used. Must be set to period (.) when using PMRUpdater.

Parameter	Value
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	The prefix name used with the indexed subfolders of the Interplay Media Root Folder. Must be set to the Media Composer workstation name when using PMRUpdater.

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

Monitoring Parameters

The following parameters under the Monitoring tab are used by Avid Standalone storage locations.

**Caution: Do not modify any parameter that does not appear 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

When discovering instances on the location, the AAF file used may point to files that are located on offline media.

When this parameter is set to *YES*, instances will be discovered even if the files are located on offline media. Setting this parameter to *NO* will not discover instances if the files are located in offline media.

This is set to *YES* by default.

■ Files Dir Enable

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

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

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

■ 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. To add files to Kumulate, the paths must be changed to be relative to the Kumulate server.

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

■ 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. For the files to be discovered by Kumulate, the paths must be changed to be relative to the Kumulate server.

This parameter is a 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.

This parameter is set to (. * \\) by default and selects a drive letter. The result is that the drive letter before Avid MediaFiles\MXF\ is replaced with Media Repository Path.

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

■ Monitor Timeout (min)

A possibly deprecated parameter that may or may not have an effect on some function. **Do not change this parameter.**

■ Monitoring

This parameter indicates whether this storage location is to be monitored if the storage location will be used to copy in files. If the storage location will only be 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 through 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 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

The following parameters under the Transfer tab are used by Avid Standalone storage locations.

Caution: Do not modify any parameter that does not appear 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 will be 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 does not match the checksum in the database, the transfer will fail.

- Delete Source AAF file after copy in

This parameter only 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**

This is the 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**

This is the 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 does not exist, it will be created by Kumulate.

■ **Folder Pattern Separator**

This setting can 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`, and so on will be created under the root folder.

If this setting is left blank, Kumulate will use MS as the separator. For example, `MyFilesMS1`, `MyFilesMS2`, `MyFilesMS3`, and so on.

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\`, and so on.

■ **Interplay Maximum Files**

This is the maximum number of files per numbered subfolders. A new numbered subfolder is created when the maximum is reached.

Technical Support 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**

This parameter is only used when PMRUpdater is installed.

When set to *YES*, PMRUpdater will be used to update PMR files. The PMR files will be 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 does not already exist.

■ **Interplay Media Repository Folder Pattern**

This setting is 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`, and so on will be 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\`, and so on.

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**

This setting 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: It is **strongly recommended** to 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: It is **strongly recommended** to 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.

■ **Preserve Cache Structure**

Preserve Cache Structure is 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 *AssetID/Metadata/* while the media files are stored under *AssetID/Media/*.

When the files need to be transferred to another Kumulate system, the *AssetID* 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**

This parameter specifies how to name the physical file when an instance is transferred to this storage location. There are four options for Restore Using as follows:

Option	Description
Asset ID	The file is named using the transferred instance's asset's Asset ID.
Name	The file is named using the transferred instance's asset's Asset Name.
Original Name	The file is named using the transferred instance's asset'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 will not be applicable when this option is used. If the storage location configuration is saved after setting this option then Restore Extension will be 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

This parameter is always set to *UNC Interplay Standalone*.

PMRUpdater Module

Media Composer PMR files are used to keep track of the online resources available to the 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 do 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 will be significant.

The 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

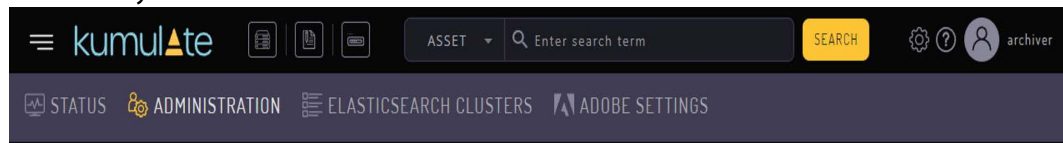
The PMRUpdater is installed on the Kumulate Server. PMRUpdater is only available for 64bit architectures. Use the following procedure to install PMRUpdater:

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.

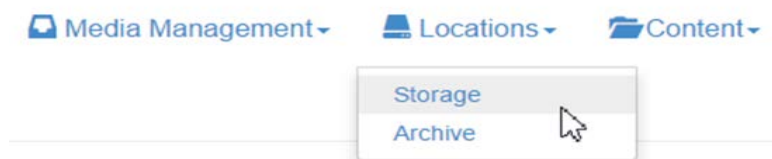
Configure Avid Standalone Storage Locations

Use the following procedure to configure the Avid Standalone storage locations:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. From the topmost menu, select Locations > Storage Locations.



3. Click the pencil icon next to the Avid Standalone storage location to modify. If a new location needs to be created, follow the instructions in [Avid Standalone Storage Locations](#).
4. Click the Transfer tab.

- Set Folder pattern separator to a period (.), and set Interplay Media Reconcile After Transfer to YES.

Note: If PMRUpdater is not installed, but Interplay Media Reconcile After Transfer is set to YES, transfers to and from the storage location will fail.

The screenshot shows the 'Transfer' configuration tab with the following settings:

- 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: (empty)
- 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: (empty)
- MassTransit Repository Path: (empty)

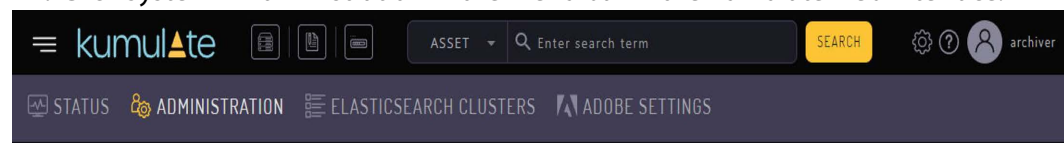
- Click OK to save the changes.
- Modify all the Avid Standalone Storage that will be using the PMR Updater.

MMC Module Configuration

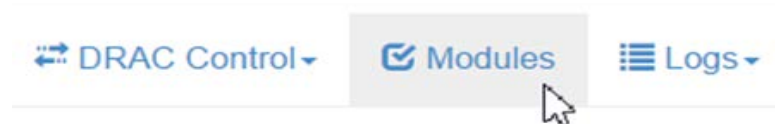
Use the following procedure to configure the MMC Module:

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

- Click System > Administration in the menu bar in the Kumulate web interface.



- Select Modules from the topmost menu.



3. Click the pencil next to the MMC module to open 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
	REPORTS MANAGER	RUNNING	STOP
	RESOURCE MANAGER	RUNNING	STOP
	SSC	RUNNING	STOP
	SSI	RUNNING	STOP
	WORKFLOW MANAGER	RUNNING	STOP
	XMMPI	RUNNING	STOP
	XMTI	RUNNING	STOP

4. Enter the path of the PMRUpdater executable in the PMRUpdater Path text box.

<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"/>

5. 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 (regex) set to `(.*\\)`.

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

For example, to change:

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

to

`\\10.1.4.1\Avid MediaFiles\MXF\5\tvo1345.mxf`

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

Media Repository Path	<code>\\10.1.4.1\</code>
-----------------------	--------------------------

Media Repository String to Replace (regex)	<code>(.*\\)</code>
--	---------------------

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 (regex):

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

or

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

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 will be 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 the following for Media Repository Path and Media Repository String to Replace (regex):

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

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

Regular Expression Does Not Match Root Path

If Media Repository String to Replace (regex) does not 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) does not 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

the path will still 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 (regex), the Media Repository Path will be added to the beginning of the path. The files listed in the AAF files will not be found 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

the new path will be

\\NewPath\SomeOtherPath\Avid MediaFiles\MXF\5\tvo1345.mxf

Note: The files will not be found in this case and the transfer will fail.

Log and Operator Messages

In all cases where Media Repository String to Replace (regex) does not match the paths in the AAF file, an error will be logged in the Montana logs, and an operator message will be generated.

For example, the operator message would be as follows:

Media Repository String to Replace (<\\OriginalPath\>) does not 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

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 contents of the ISIS unit.

Kumulate communicates with the Interplay server through 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.

The files are moved to and 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 the Interplay server'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 through 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 through 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 host. 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 will be named MyMedia_1, MyMedia_2, MyMedia_3, and so on.

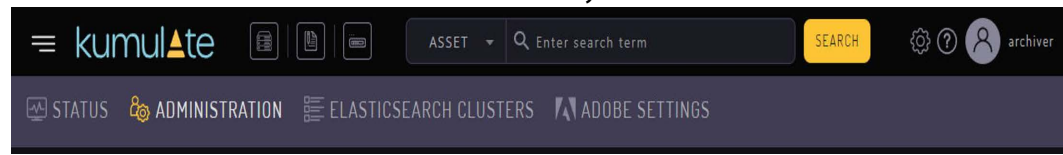
If Interplay Repository Folder Pattern is left blank, no separator will be used even if one is specified. In this case, the subfolders will simply be numbers: 1, 2, 3, and so on.

Instance Discovery Configuration

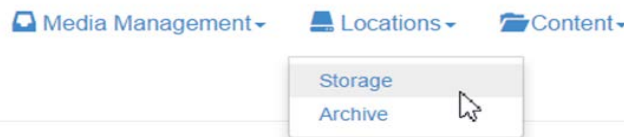
Note: Avid Interplay Storage Locations cannot be configured to both copy in new instances and copy out existing instances. Separate storage locations must be created for these two scenarios regardless of whether the same physical location is used for both.

Use the following procedure to configure Interplay Storage Locations to be used for instance discovery:

1. In the Kumulate web interface menu click System > Administration.

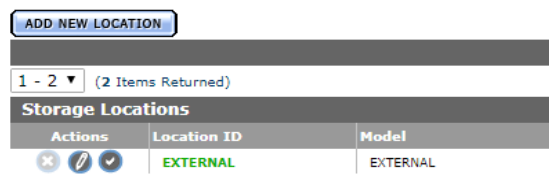


2. Select Locations > Storage.



3. Click the Add New Location button to create a new storage location.

Storage Location Manager



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

Create Storage Location

OK

Storage Location Information

Location ID: < Required

Location Description:

Location Type:

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

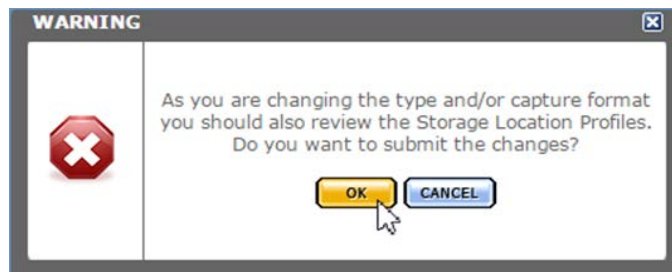
Connection **Monitoring** Discriminators Transfer

API HostName:

API Protocol:

Capture Format:

6. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue. You will be returned to the Connection tab.



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

Connection **Monitoring** Discriminators Transfer

API Protocol:

Capture Format:

Delete From Video Server:

Discover Avid Sequences with Media Offline:

Files Dir Enable:

Monitor Timeout (min):

Monitoring:

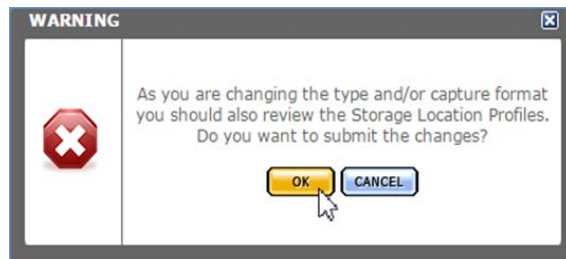
Interplay WS Mode:

Polling Begin Time:

Polling End Time:

Polling Interval(sec):

- Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue. You will be returned to the Connection tab.



- 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

- Click OK to continue. You will be returned to the Connection tab.
- Select 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 you are returned to the Connection tab.

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



Extract Metadata:

NO ▼

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

Instance Discovery Monitoring Parameters

The following parameters under the Monitoring tab are used by Avid Interplay copy in storage locations:

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

- API Protocol
Always set to *UNC*.
- Capture Format
Avid Interplay storage locations that are 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
When discovering instances on the location, the AAF file used may point to files that are located on offline media.
When this parameter is set to *YES*, instances will be discovered even if the files are located on offline media.
Setting this parameter to *NO* will not discover instances if the files are located in offline media.
The default is *YES*.
- 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: It is strongly recommended that Files Dir Enable be set to YES when the storage location is configured for discovery; otherwise it can be left set to NO.

■ Interplay WS Mode

Indicates whether Kumulate communicates with the storage location through the Interplay Web Services interface. Kumulate always communicates through 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, and 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 Tempo-

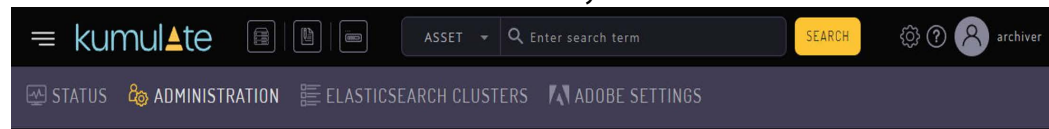
rary AAF Repository Path; which is a fully qualified path to a location on the Kumulate cache.

Instance Transfer Configuration

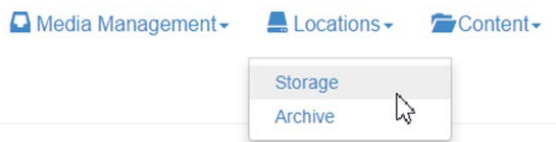
Note: Avid Interplay Storage Locations cannot be configured to both copy in new instances and copy out existing instances. Separate storage locations must be created for these two scenarios regardless of whether the same physical location is used for both.

Use the following procedure to configure an Avid Interplay storage location for instance transfers:

1. In the Kumulate web interface menu click System > Administration.

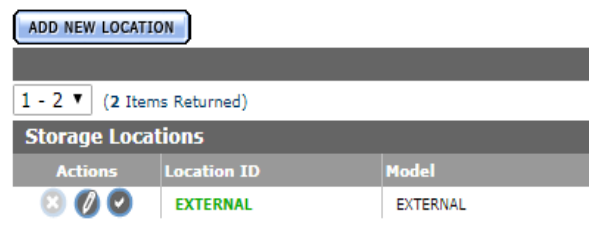


2. Select Locations > Storage.



3. Click the Add New Location button to create a new storage location.

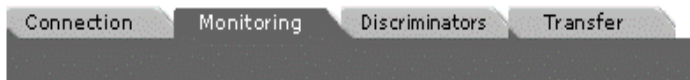
Storage Location Manager



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



5. Select the Monitoring tab. Set API Protocol to *UNC* and Capture Format to *MXF_OP_ATOM*.

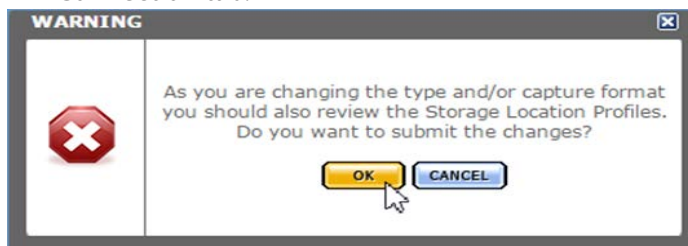


API HostName:

API Protocol:

Capture Format:

6. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue. You will be returned to the Connection tab.



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



API Protocol:	<input type="text" value="UNC"/>
Capture Format:	<input type="text" value="MXF_OP_ATOM"/>
Check Asset Uniqueness:	<input type="text" value="NO"/>
Date Format:	<input type="text" value="MM/dd/yyyy"/>
Delete From Video Server:	<input type="text" value="Not Allowed"/>
Delete timeout:	<input type="text" value="30"/>
Delete Content From Archive:	<input type="text" value="NO"/>
Discovery method:	<input type="text" value="Open for read"/>
Export Metadata:	<input type="text" value="NO"/>
Files Dir Enable:	<input type="text" value="NO"/>
Files Patterns (Include):	<input type="text" value=".MPG"/>
Files Patterns (Exclude):	<input type="text"/>
File Pre-Filter:	<input type="text"/>
Ignore List:	<input type="text"/>
Import Metadata:	<input type="text" value="NO"/>
Monitor Timeout (min):	<input type="text" value="45"/>
Monitoring:	<input type="text" value="OFF"/>
Naming Schema:	<input type="text" value="UMID"/>
Polling Begin Time:	<input type="text" value="0"/>
Polling End Time:	<input type="text" value="24"/>
Polling Interval(sec):	<input type="text" value="0"/>
Recursive Discovery:	<input type="text" value="NO"/>
Release State:	<input type="text" value="Ignore"/>
Type Of Content:	<input type="text"/>
Windows File Naming Check:	<input type="text" value="NO"/>

8. Click OK to continue. You will be returned to the Connection tab.
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 menu is highlighted with an orange border and is set to 'UNC Interplay'. 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; Restore Extension: Preserve original extension; Transcode Using: SOF and EOF; Transfer timeout(sec): 7200; MassTransit Repository Path: (empty text box).

10. Click OK to continue. You will be returned to 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 will be copied.

The screenshot shows the 'Transfer' tab configuration window. The 'Extract Metadata' dropdown is set to 'NO'. The 'Directory' text box contains the path '//isis123/workspace3/Avic'. Other settings are not visible in this view.

11. Click OK to continue. You will be returned to the Connection tab.

12. Select the Transfer tab and set the following parameters (see [Copy In and Copy Out Transfer Parameters](#) for the complete list of Transfer parameters):

Parameter	Description
Interplay Check In Folder	The fully qualified path to the folder on the Interplay server where metadata about the transferred files will be 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. Any 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 <i>Name</i> .
DataMover Repository Path	The UNC path to the location on the ISIS storage unit where the media files will be copied. This must be the same path used for the Directory parameter in the Connection tab.

The screenshot shows the 'Transfer' tab of a configuration window. The following parameters are highlighted with orange boxes:

- Instance detection pattern: No check
- Interplay Check In Folder: interplay://AvidWorkGroup
- Interplay Maximum Files: 5000
- Interplay Repository Folder Pattern: MS
- Interplay Root Path: \\isis123\workspace3\Avid
- Interplay WS Password: passwd
- Interplay WS Address: http://10.1.4.41:81/service
- Interplay WS User: Admin
- Interplay Work Group: AvidWorkgroup
- Restore Using: Name
- DataMover Repository Path: \\isis123\workspace3\Avid

13. Click OK to save and continue.

Instance Transfer Monitoring Parameters

The following parameters under the Monitoring tab are used by Avid Interplay copy out storage locations:

Caution: Do not modify any parameter that does not appear 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: It is strongly recommended that Files Dir Enable be set to YES when the storage location is configured for discovery; otherwise, the parameter can be left set to NO.

■ 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

The following parameters under the Transfer tab are used by Avid Interplay storage locations:

Caution: Do not modify any parameter that does not appear 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 does not 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 will be 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 does not 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

This parameter can be left blank or set to dash (-), underscore (_), or period (.).

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

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, and so on will be created under the root folder.

If Folder Pattern Separator is left blank, Kumulate will use MS as the separator. For example, MyFilesMS1, MyFilesMS2, MyFilesMS3, and so on.

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\, and so on.

■ Interplay Maximum Files

This parameter is 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

This parameter is 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, and so on will be 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\, and so on.

■ 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 (sec) and Interplay WS Check In Retry Number

In the event that a transfer is not successful, the transfer will be retried Interplay WS Check In Retry Number times, every Interplay WS Check In Retry Interval (sec). 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

This 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: It is **strongly recommended** to change this to a non-zero value.

■ Max Copy Out

This 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: It is **strongly recommended** to 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

This parameter specifies how to name the physical file when an instance is transferred to this storage location. There are three options for Restore Using as follows:

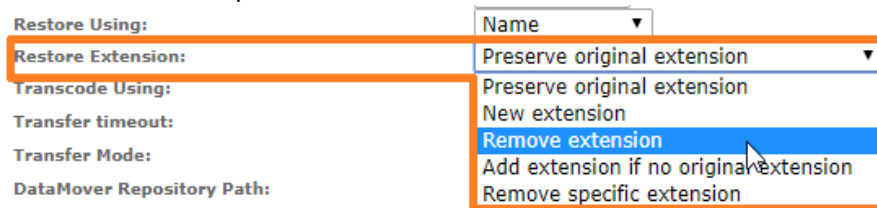
Asset ID	The file is named using the transferred instance's Asset ID.
Name	The file is named using the transferred instance's Asset Name.
Original Name	The file is named using the transferred instance's Original Name. Original Name contains the name of the asset when its source instance was discovered.
Preserve Filenames	The file name is not modified after transfer. The Restore Extension parameter will not be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension will be 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

This parameter determines how file extensions are handled when files are copied to the storage location.

Filenames and their extensions are preserved when instances are copied between locations by default. The Restore Extension parameter allows extensions to be added, removed, or replaced.



The following **Restore Extension** options are available:

Value	Behavior
Preserve original extension	The extension does not 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 does not 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 work with the Extension parameter. This parameter is not visible by default. If the Extension parameter is not visible, click OK to save the configuration, then navigate back to the Transfer tab. The Extension parameter should now be visible.

Restore Using:

Restore Extension:

Extension:

■ Extension

The Extension parameter works with the Restore Extension parameter to replace file extensions when instances are copied to the storage location.

This parameter is not visible by default. It only becomes visible 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 become visible.

■ 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*.

■ DataMover Repository Path

Provides the DataMover 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.

Avid Storage Location Metadata Mapping

When Avid instances 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\AAFPProcessor\ folder.

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

For example:

```
<AAFPProcessor 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>
      <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

Use the following procedure to add a metadata mapping to a storage location:

1. Click the Location Metadata Mapping button 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 as shown in the following figure:

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:

Column	Description
Location Metadata ID	The path to the metadata in the AAF file.
KUMULATE METADATA ID	The Kumulate metadata that will be 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 a metadata mapping needs to be changed, it can be modified by clicking the pencil icon.

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.

Actions	Location Metadata ID	MASSSTORE_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
	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 will show the current metadata mapping.

Location Metadata Mapping

Location Metadata ID: metadata.userComments.name < Required

MassStore Metadata ID: Asset/Asset Information/Asset Id < Required

Mapping Type: Direct < 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 pull down menu as shown.

Location Metadata Mapping

Location Metadata ID: metadata.userComments.name < 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
- extractGroup.name
- extractGroup.metadataID.type
- extractGroup.metadataID.typeString
- metadata.userComments.name

Note: If the AAF metadata that needs to be mapped is not in the pull down 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 pull down menu. If the metadata does not exist in the drop down menu, it must be added.

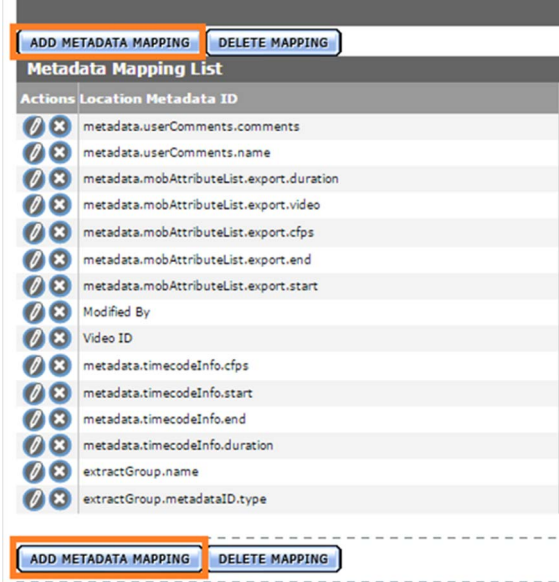
Use the following procedure to create a new metadata mapping:

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

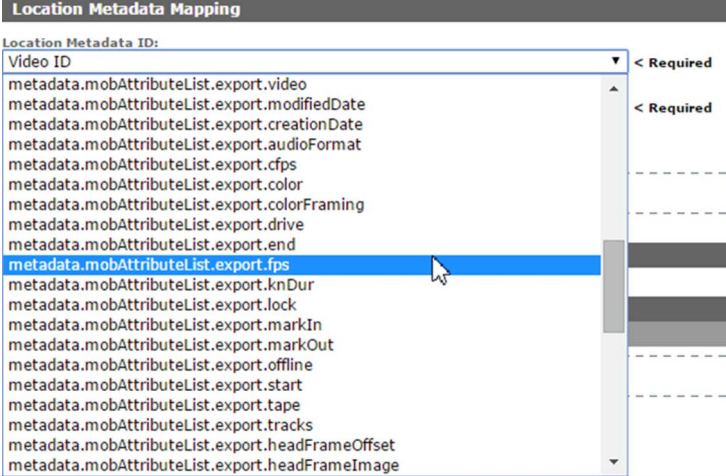
Storage Location Configuration



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



- 3. Select the AAF file metadata from the Location Metadata ID pull down menu.



4. From the Kumulate Metadata ID pull down menu, select the Kumulate metadata that will be assigned the AAF metadata.

Location Metadata Mapping

Location Metadata ID: metadata.mobAttributeList.export.fps < Required

MassStore Metadata ID: < Required

- Asset/Asset Information/Asset Id
- Instance/Summary/Instance Format
- Instance/Summary/Instance Status
- Instance/Summary/Last Update
- Instance/Summary/Name
- Instance/Summary/SOM
- Instance/Summary/Storage Location Name
- Instance/Summary/Storage Media
- Instance/Summary/Storage Unit Id
- Instance/Summary/Wrapper
- Instance/Video/AFD
- Instance/Video/Aspect Ratio
- 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
- Instance/Video/Video Width

5. Select the mapping type from the Mapping Type pull down menu.

Location Metadata Mapping

Location Metadata ID: metadata.mobAttributeList.export.fps

MassStore Metadata ID: Instance/Video/Frame Rate

Mapping Type: < Required

- Direct
- Date
- Mapped value**
- Unix Timestamp

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 box, and add the value to use in the Kumulate metadata in the Kumulate value text box.

Location: AVIDSTANDALONE

OK

Metadata Mapping Attribute

Location value: 23.876 < Required

MassStore value: 24 < Required

OK

7. Click OK to save.

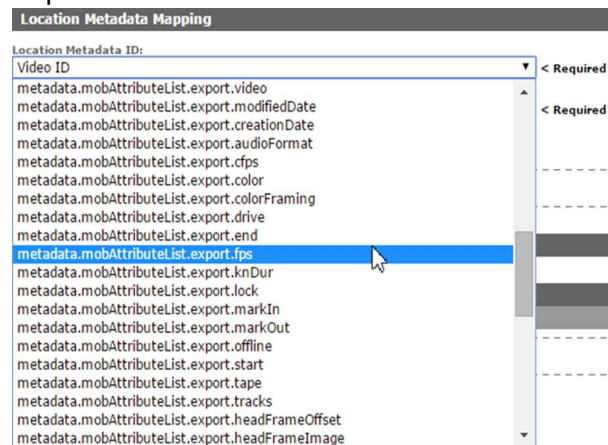
8. Click OK to save. The mapping will appear in the Metadata Mapping List.

Metadata Mapping List			
Actions	Location Metadata ID	MASSTORE_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 is visible from the Location Metadata ID pull down menu.



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

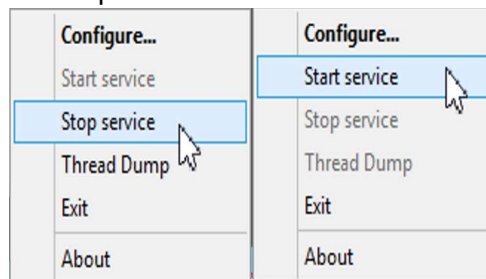
Use the following procedure to add the AAF Metadata:

1. On the Kumulate server host, change 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><DescriptiveMarker><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 Tomcat server to restart Kumulate.



11. The newly-added metadata ID will now appear in the pull down list.

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 through location on an FTP server. Kumulate monitors the FTP server location for new instances.

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.

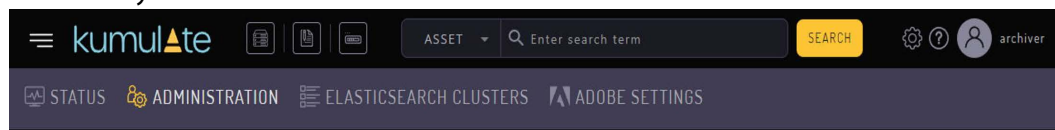
The reference MOV files are generally located under the *clip.dir* directory. The media files referenced by the MOV files are located in the *clip.dir/media.dir* directory.

Configuration

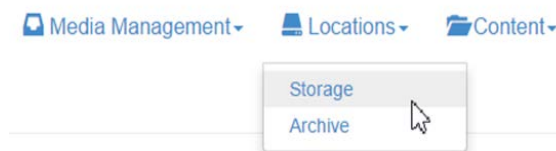
An Omneon FTP storage location is typically configured as both a copy-in and a copy-out location. Each Omneon FTP storage location is configured to discover MXF, self-contained MOV, or reference MOV files. An Omneon FTP storage location can handle either self-contained MOV files or reference MOV files,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

Use the following procedure to configure an Omneon FTP Storage Location:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.

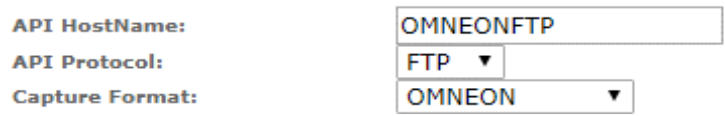
Storage Location Manager



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

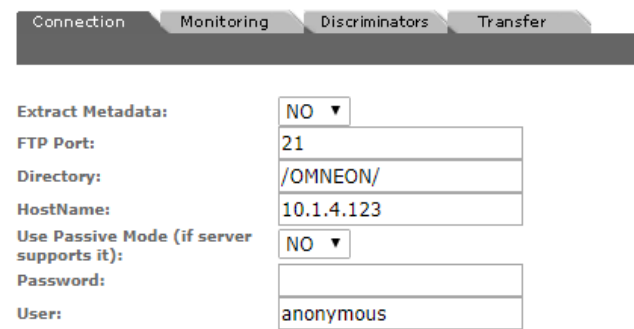


5. Select the Monitoring tab and set Capture Format to OMNEON.



6. Click OK to continue and you will be returned to the Connection tab.

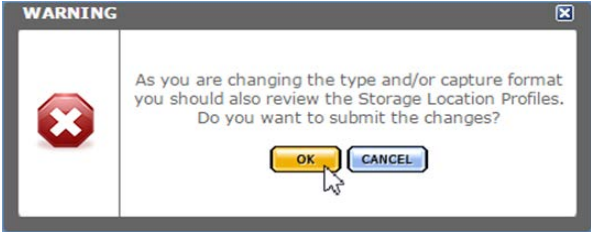
Enter the FTP credentials in the text boxes. The Directory parameter must point to the FTP root directory. Extract Metadata must be set to NO.



7. 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.

- 8. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue and you will be returned to the Connection tab.



- 9. Navigate to the Monitoring tab and set API Hostname, Clip Dir (Omneon), Files Dir Enable, Files Patterns (Include), Media Dir (Omneon), and Monitoring.

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:	

Parameter	Description
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 <i>YES</i> .
Files Patterns (Include)	The file type extensions to discover on the storage location. The extensions should be separated by a comma (,) if both MXF and MOV files will 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 <i>ON</i> .

See [Monitoring Parameters](#) and [Transfer Parameters](#) for the complete list of applicable parameters.

10. Click OK to save the configuration.

Monitoring Parameters

The following parameters under the Monitoring tab are used by Omneon FTP storage locations.

Caution: Do not modify any parameter that does not appear 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

Delete Content From Archive sets whether an asset's archived instances 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 Delete Content From Archive to *YES* will also delete all instances located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Instances parameter in the Asset Manager module is set to *ON*, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be created for the changed instance.

Delete Content From Archive is set to *NO* by default.

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 will no longer be visible. 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 will not copy-in any files that appear 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 instances.

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 will not be used to discover and copy-in instances.

- 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 will be 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

The following parameters under the Transfer tab are used by Omneon FTP storage locations.

Caution: Do not modify any parameter that does not appear 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 will be 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 does not 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: It is **strongly recommended** to 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: It is **strongly recommended** to 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

This parameter specifies how to name the physical file when an instance is transferred to this storage location. There are four options 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 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 will not be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension will be 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*.

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 2.1 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. Instances are never transferred to Pitchblue storage locations.

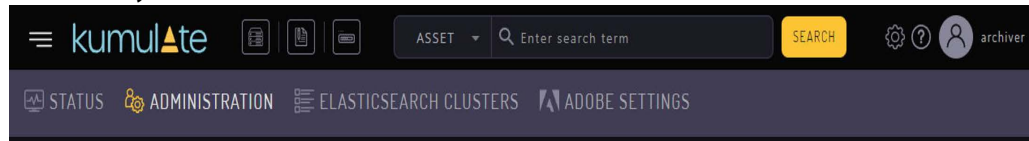
Pitchblue storage locations expect each media file to have a corresponding formatsheet file. The formatsheet file is an xml file that contains information on how to segment their associated media files. It can be saved as an attachment by using the Attach XML to asset parameter.

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 formatsheets are located in the *xml* directory. These are searched recursively by Kumulate for media files.

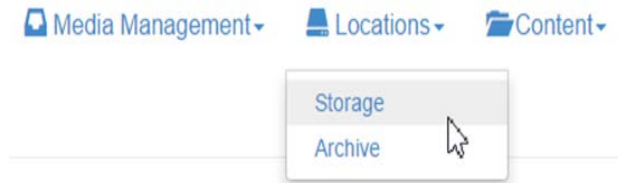
Note: If a media file does not have a corresponding formatsheet file, the file will not be copied in, and no new asset will be created.

Configuration

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.

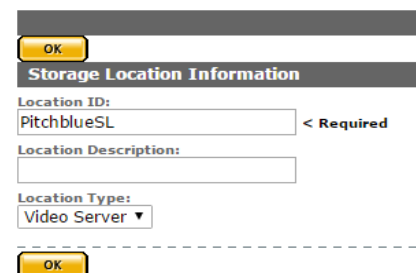


3. Create a new storage location by clicking the Add New Location button.

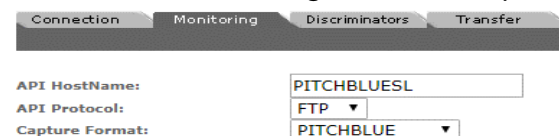


4. Enter a name and description for the storage location, then click OK.

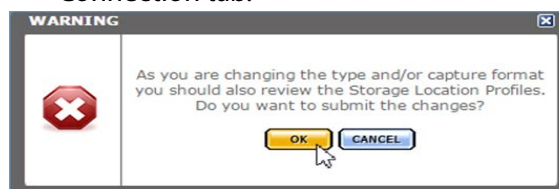
Create Storage Location



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



6. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue and you will be returned to the Connection tab.



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

8. Active FTP is used by default. Set Use Passive Mode (if server supports it) to YES to use passive FTP. Click OK to continue and you will be returned to the Connection tab.

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

9. Navigate to the Monitoring tab and 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 formatsheets are located.

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

Parameter	Description
API HostName	The FTP hostname or IP address. Must be the same as that used under 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 <i>YES</i> to upload the formatsheet associated with the media to the asset as an attachment. Set this to <i>NO</i> to discard the formatsheet 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 formatsheets relative to the root FTP directory.

10. Click OK to save the configuration.

Monitoring Parameters

The following parameters under the Monitoring tab are used by Pitchblue FTP storage locations.

Caution: Do not modify any parameter that does not appear 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 formatsheet 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 formatsheet will still be used, but the file will not 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 formatsheet. There are four options as follows:

Naming Option	Description
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

Delete Content From Archive sets whether an asset's archived instances 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 Delete Content From Archive to *YES* will also delete all instances located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Instances parameter in the Asset Manager module is set to *ON*, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be created for the changed instance.

This parameter is set to *NO* by default.

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 will not copy in any files that appear 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 will be 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.

■ Remove Segment with ID in (list)

A comma-separated list of event IDs that need to be excluded from segments.

When the formatsheet is parsed to create segments, any events that include these IDs will not be included in a segment. If an event with the listed ID is present in a segment, the segment will be 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 formatsheets associated with the media files. The path must be in relation to the root directory.

Project FTP Storage Locations

Kumulate monitors Project 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 storage location 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.

Note: As of Kumulate 8.1, 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 whenever possible.

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. It is **strongly recommended** that projects only be uploaded to the monitored location after the project is complete and no more changes will be 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.

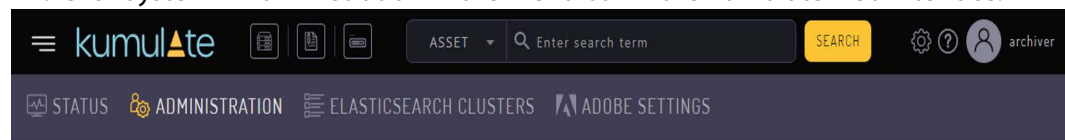
Configuration

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.

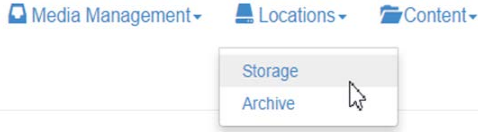
Note: As of Kumulate 8.1, Project locations can also be configured as UNC locations. UNC locations offer better performance over FTP locations, and should be used instead of FTP locations when possible.

Use the following procedure to configure Project FTP Locations:

1. Click System > Administration in the menu bar in the Kumulate web interface.



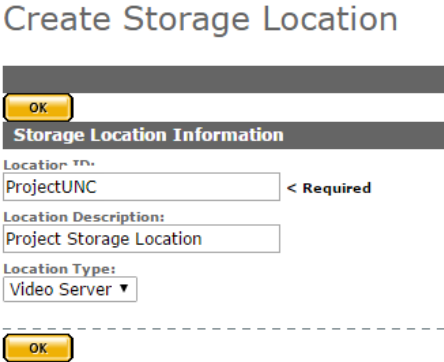
2. Select Locations > Storage.



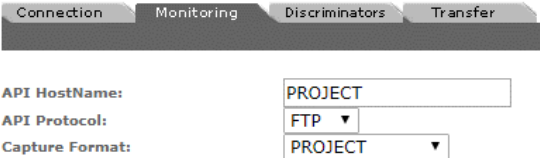
3. Create a new storage location by clicking the Add New Location button.



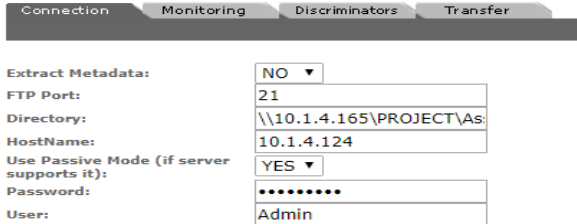
4. Enter a name and description for the storage location, then click OK.



5. Select the Monitoring tab and set Capture Format to PROJECT.



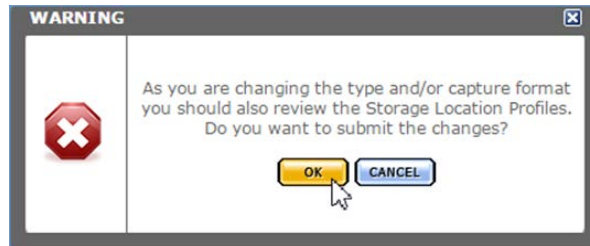
6. Click OK to return to the Connection tab and enter the FTP credentials in the text boxes. The Directory parameter must point to the FTP root directory. Extract Metadata must be set to NO.



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. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue and you will be returned to the Connection tab.



- Navigate to the Monitoring tab and 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 that will be used for transcodes, metadata extractions, and thumbnail extractions.

Connection	Monitoring	Discriminators	Transfer
API HostName:	PROJECT		
API Protocol:	FTP		
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		
Export Metadata:	NO		
Files Dir Enable:	YES		
Files Patterns (Include):	.MPG		
Files Patterns (Exclude):			
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		
Release State:	Ignore		
Type Of Content:			

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

Parameter	Description
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 will be used for transcodes, metadata extractions, and thumbnail extractions. Set this to <i>All Folders</i> to search the project directory recursively for the file. Set this to <i>Root folder</i> to search only the top-level project directory for the file.
Dominant File Pattern	A regular expression that matches the file that will be used for transcodes, metadata extractions, and thumbnail extractions. If more than one file matches the regular expression the largest of the matched files will be used. If the parameter is left empty the largest file found will be used. If the dominant file is not a media file, the Transcode, Extract Thumbnail, and Extract Metadata operations for that asset's instances will be disabled.
Files Dir Enable	This parameter must be set to <i>YES</i> .
Monitoring	Set this parameter to <i>ON</i> .

9. Click OK to save the configuration.

Monitoring Parameters

The following parameters on the Monitoring tab are used by Project FTP storage locations.

Caution: Do not modify any parameter that does not appear 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

This parameter sets whether an asset's archived instances 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 Delete Content From Archive to *YES* will also delete all instances located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Instances parameter in the Asset Manager module is set to *ON*, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be created for the changed instance.

The default setting is *NO*.

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 will 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 meta-data extraction.

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

The largest file found will be 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 instances will be 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 will not 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 will be 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(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

The following parameters on the Transfer tab are used by Project FTP storage locations.

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

■ Capture Mode

This 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.

■ 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 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 does not 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 will be 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 does not 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: It is **strongly recommended** to 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: It is **strongly recommended** to 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**

This parameter 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 Asset ID.
Name	The file is named using the transferred instance's asset 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 will not 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*.

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 storage location is useful for archiving and restoring DPX projects. In the case of the 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. It is **strongly recommended** that projects only be uploaded to the monitored location after the project is complete and no more changes will be made to it.

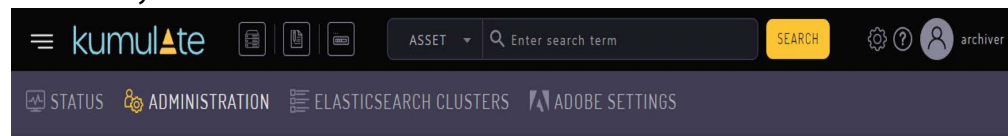
A dominant file is selected to be used for transcodes, metadata, and thumbnail extractions. This file is specified by the Dominant File Location and Dominant File Pattern parameters. If Dominant File Pattern is left blank, the largest file in the directory is used.

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

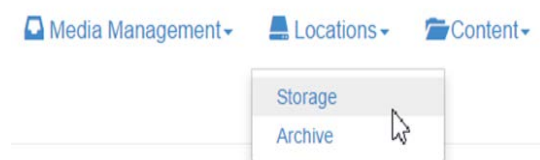
Configuration

A Project 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. Use the following procedure to configure a Project UNC Storage Location:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.

Storage Location Manager



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

Create Storage Location

OK

Storage Location Information

Location ID: < Required

Location Description:

Location Type:

OK

5. Select the Monitoring tab. Set Capture Format to *PROJECT* and API Protocol to *UNC*.

Connection Monitoring Discriminators Transfer

API HostName:

API Protocol:

Capture Format:

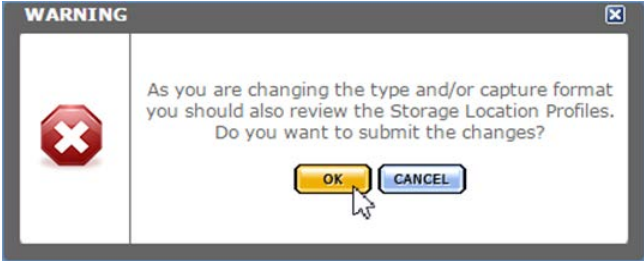
6. Click OK to return to the Connection tab and enter the FTP credentials in the text boxes. The Directory parameter must point to the FTP root directory. Extract Metadata must be set to *NO*.

Connection Monitoring Discriminators Transfer

Extract Metadata:

Directory:

- 7. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue and you will be returned to 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 that will be used for transcodes, metadata extractions, and thumbnail extractions.

Connection Monitoring Discriminators Transfer

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.

Parameter	Description
Dominant File Location	<p>The directory to search for the file that matches Dominant File Pattern. This file will be used for transcodes, metadata extractions, and thumbnail extractions.</p> <p>Set this to <i>All Folders</i> to search the project directory recursively for the file.</p> <p>Set this to <i>Root folder</i> to search only the top-level project directory for the file.</p>
Dominant File Pattern	<p>A regular expression that matches the file that will be used for transcodes, metadata extractions, and thumbnail extractions.</p> <p>If more than one file matches the regular expression the largest of the matched files will be used.</p> <p>If the parameter is left empty the largest file found will be used.</p> <p>If the dominant file is not a media file, the Transcode, Extract Thumbnail, and Extract Metadata operations for that asset's instances will be disabled.</p>
Files Dir Enable	This parameter must be set to <i>YES</i> .
Monitoring	Set this parameter to <i>ON</i> .

9. Click OK to continue. You will be returned to the Connection tab.
10. Select the Transfer tab and set the Transfer Mode parameter to *UNC* to use the Kumulate DataMovers 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:

11. Click OK to continue. You will be returned to the Connection tab.

12. Select the Transfer tab and set DataMover 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:

13. Click OK to save the changes.

Monitoring Parameters

The following parameters on the Monitoring tab are used by Project storage locations.

Caution: Do not modify any parameter that does not appear 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

This parameter sets whether an asset's archived instances 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 instances located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Instances parameter in the Asset Manager module is set to *ON*, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be 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 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 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 will not 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 that will be used 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 will be used if more than one file matches Dominant File Pattern.

If Dominant File Pattern is left blank, the largest file found will be 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's instances will be 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 will not 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 will be 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(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

The following parameters on the Transfer tab are used by Project storage locations.

Caution: Do not modify any parameter that does not appear 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 does not 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 will be 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 does not match the checksum in the database, the transfer will fail.

- DataMover 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: It is **strongly recommended** to 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: It is **strongly recommended** to 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**

This parameter 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 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 will not be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension will be 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.

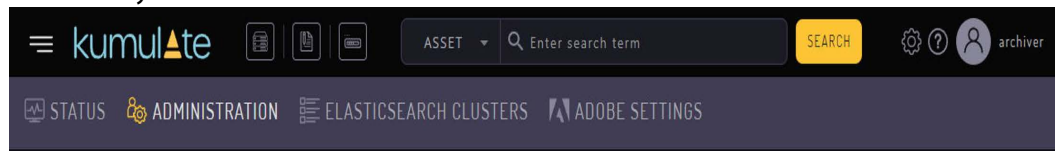
UNC Storage Locations

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.

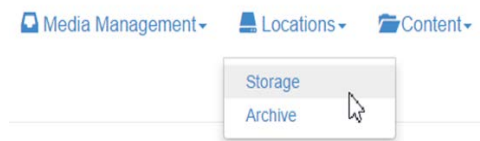
Configuration without Metadata Sidecar Files

A UNC storage location is typically configured as both a copy-in and a copy-out location. Use the following procedure to configure UNC without metadata sidecar files:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.



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



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

Connection Monitoring Discriminators Transfer

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): .MPG
 Files Patterns (Exclude):
 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
 Release State: Ignore
 Type Of Content:

See [Monitoring Parameters](#) for details.

6. Click OK to return to the Connection tab.
7. Select the Monitoring tab and confirm that the Vendor Id parameter (now visible) is set to *SPOT*.

Connection Monitoring Discriminators Transfer

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:
 Vendor Id: SPOT
 Windows File Naming Check: NO
 Xml Path:

8. Click OK to return to the Connection tab and enter the FTP credentials. Directory must point to the shared UNC directory and Extract Metadata must be set to *NO*.

Connection Monitoring Discriminators Transfer

Extract Metadata: NO
 Directory: \\MediaServer\MasstechFi

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 DataMovers 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.

The screenshot shows a configuration window with four tabs: Connection, Monitoring, Discriminators, and Transfer. The Transfer tab is active. The following parameters are visible:

- 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** (highlighted with an orange box)
- MassTransit Repository Path: (empty)

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 (visible 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

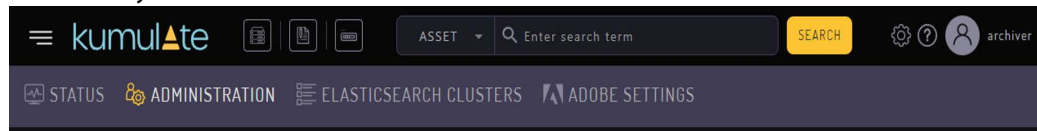
The SPOT UNC storage location configuration is used specifically for storage locations containing media files with Extreme Reach sidecar metadata files.

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,

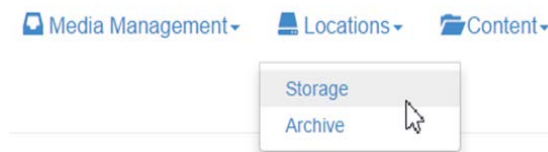
these additional frames contain advertising agency information and do not need to be transcoded. These frames are removed automatically when transcoding the file by setting the TranscodeUsing parameter to *SOM* and *EOM*.

Use the following procedure to configure UNC using Extreme Reach:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.

Storage Location Manager



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

Create Storage Location

OK

Storage Location Information

Location ID:
 < Required

Location Description:

Location Type:

OK

5. Select the Monitoring tab. Set API Protocol to *UNC*, Capture Format to *GENERIC*, Import Metadata to *YES*, and Monitoring to *ON*.

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:	

See [Monitoring Parameters](#) for details.

6. Click OK to continue and then select the Monitoring tab. Confirm that the Vendor Id parameter (now visible) is set to *SPOT*.

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:	
Vendor Id:	SPOT
Windows File Naming Check:	NO
Xml Path:	

- Click OK to return to the Connection tab and enter the FTP credentials in the text boxes. The Directory parameter must point to the shared UNC directory. Extract Metadata must be set to *NO*.

- Click OK to continue and return to the Connection tab.
- Select the Transfer tab and set the Transfer Mode parameter to *UNC* to use the Kumulate DataMovers 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.

- Click OK to continue. You will be returned to the Connection tab.
- Select the Transfer tab and 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.

- Click OK to continue and then select the Transfer tab and set DataMover Repository Path and MassTransit Repository Path to the same UNC location used for the Directory parameter.

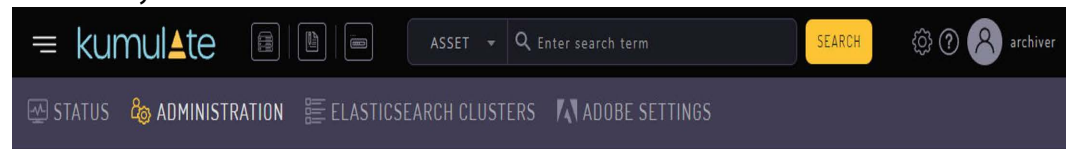
The screenshot shows the 'Transfer' tab of a configuration window. The 'DataMover Repository Path' and 'MassTransit Repository Path' fields are highlighted with an orange border and both contain the text '\\MediaServer\MasstechFI'. Other fields include 'Allow Rename' (NO), 'Capture Mode' (COPY), 'Checksum 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 extension), 'Transcode Using' (SOF and EOF), and 'Transfer timeout' (7200).

- Click OK to save the changes.

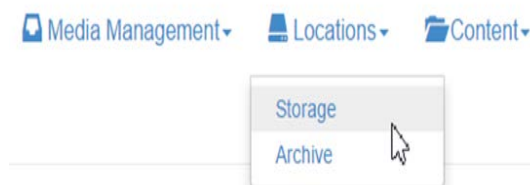
Configuration Using Generic Metadata Sidecar Files

The Generic XML UNC storage location configuration is used to extract additional metadata from sidecar files. Any sidecar file can be used provided it is in xml format. The structure of the expected xml files must be known.

- Click System > Administration in the menu bar in the Kumulate web interface.



- Select Locations > Storage.



- Create a new storage location by clicking the Add New Location button.



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

Create Storage Location

OK

Storage Location Information

Location ID: < Required

Location Description:

Location Type:

OK

- Select the Monitoring tab. Set API Protocol to *UNC*, Capture Format to *GENERIC*, Import Metadata to *YES*, and Monitoring to *ON*.

Connection Monitoring Discriminators Transfer

API HostName:

API Protocol:

Capture Format:

Check Asset Uniqueness:

Date Format:

Delete From Video Server:

Delete timeout:

Delete Content From Archive:

Discovery Iterations:

Export Metadata:

Files Dir Enable:

Files Patterns (Include):

Files Patterns (Exclude):

Ignore List:

Import Metadata:

Monitor Timeout (min):

Monitoring:

Naming Schema:

Polling Begin Time:

Polling End Time:

Polling Interval(sec):

Release State:

Type Of Content:

See [Monitoring Parameters](#) for details.

- Click OK to continue and then select the Monitoring tab. Confirm that the Vendor Id parameter (now visible) is set to *GENERIC XML*.

Connection Monitoring Discriminators Transfer

API Protocol:

Capture Format:

Check Asset Uniqueness:

Date Format:

Delete From Video Server:

Delete timeout:

Delete Content From Archive:

Discovery Iterations:

Discovery method:

Export Metadata:

Files Dir Enable:

Files Patterns (Include):

Files Patterns (Exclude):

File Pre-Filter:

Ignore List:

Import Metadata:

Find Media From XML:

Monitor Timeout (min):

Monitoring:

Naming Schema:

Polling Begin Time:

Polling End Time:

Polling Interval(sec):

Recursive Discovery:

Release State:

Type Of Content:

Vendor Id:

Windows File Naming Check:

Xml Path:

- Click OK to return to the Connection tab and enter the FTP credentials in the text boxes. The Directory parameter must point to the shared UNC directory. Extract Metadata must be set to *NO*.

Connection Monitoring Discriminators Transfer

Extract Metadata: NO

Directory: \\MediaServer\MasstechFi

- Click OK to continue and return to the Connection tab.
- Select the Transfer tab and set the Transfer Mode parameter to *UNC* to use the Kumulate DataMovers 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:

- Click OK to continue and then select the Transfer tab and set DataMover 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

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

- 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 will not generate any errors or messages in the event that any of these conditions are not met.

Use the following procedure to create a mapping:

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

Storage Location Configuration



2. Click Add Mapping to add a mappings.



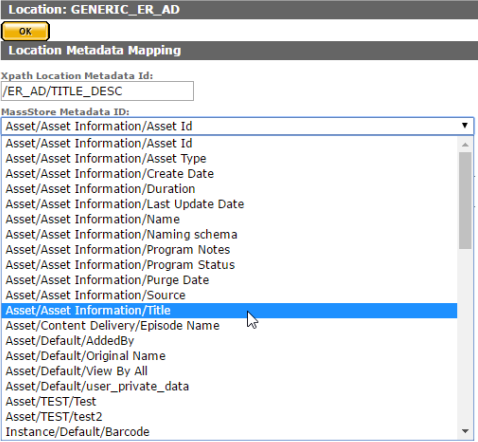
3. In the Xpath Location Metadata ID, add the xpath to the metadata in the sidecar file. For example, enter `/ER_AD/TITLE_DESC` in Xpath Location Metadata ID to extract the TITLE_DESC metadata from a sidecar file that looks like this:

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>
```

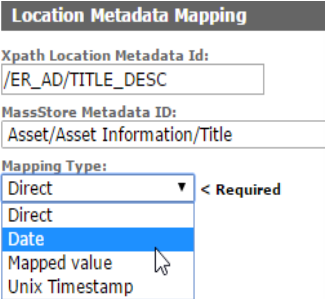
4. Select the Kumulate metadata to populate with the selected sidecar metadata from the Kumulate Metadata ID pull down menu.

For example, to populate the Asset Title with the sidecar metadata, select Asset/Asset Information/Title from the pull down menu.

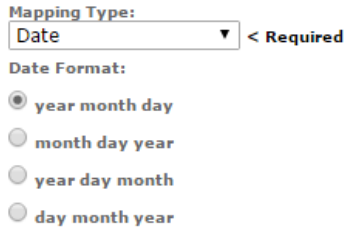


5. Choose the mapping type from the Mapping Type pull down menu.

Note: The Unix Timestamp type is not used.



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



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 the Add Mapping Attribute button.







- 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 in the following figure:

- b. Click OK to save.
- c. Click OK to save.
- d. The list of mappings will appear on the Metadata Mapping page as shown in the following figure:

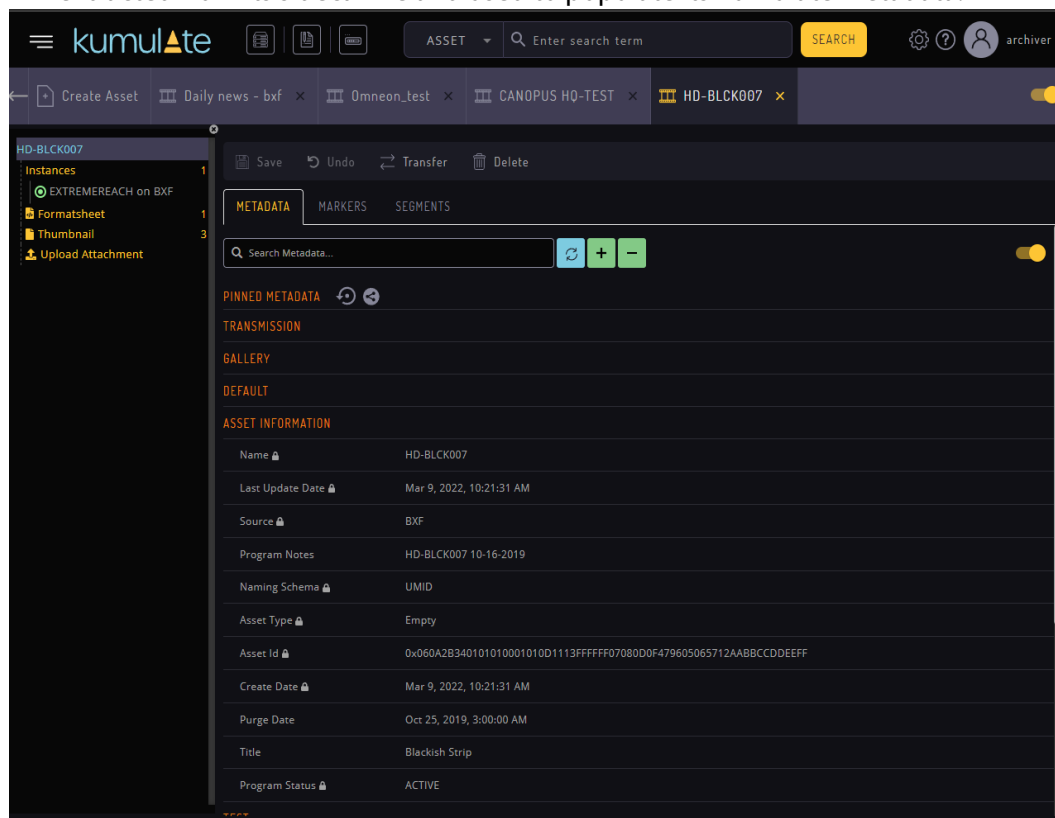
Metadata Mapping for location:
 GENERIC_ER_AD

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 will be used, xpaths for different file structures can be mapped to the same Kumulate metadata. Kumulate will search for the xpaths in the file, and, if one matches, it will be mapped to the Kumulate metadata as shown in the following figure:

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 will be extracted from its sidecar file and used to populate its Kumulate metadata.



Monitoring Parameters

The following parameters on the Monitoring tab are used by UNC storage locations.

Caution: Do not modify any parameter that does not appear 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 will be 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
 Delete Content From Archive sets whether an asset's archived instances 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 instances located on archive locations when the physical instance on the storage location changes.
 If the Delete Asset With No Instances parameter in the Asset Manager module is set to *ON*, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be created for the changed instance.
 This parameter is set to *NO* by default.

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 will not 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 will not copy-in any files that appear in this list. Ignore List can be a list of filenames, or a regular expression.

■ Import Metadata

Indicates that additional metadata will be 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.

If this parameter is set to *YES* to import metadata from sidecar files, the Vendor Id parameter must 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 10s.

■ Recursive Discovery

If instances 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

Note: This parameter is only visible when Import Metadata is set to *YES*.

This parameter indicates the type of sidecar metadata files to expect.

Set Vendor Id to *SPOT* if Extreme Reach sidecar files will be 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 does not appear 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 if it does not exist in the database. The transfer will fail and an error will be 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 does not match the checksum in the database.

■ DataMover 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: It is **strongly recommended** to 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: It is **strongly recommended** to 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.

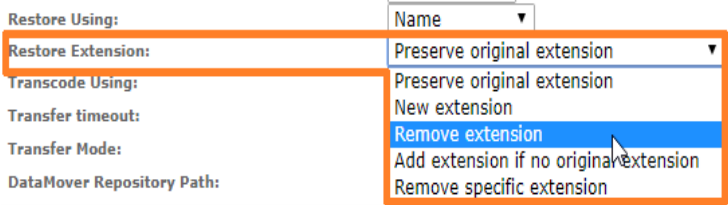
There are four options for Restore Using as follows:

Asset ID	The file is named using the transferred instance's asset's Asset ID.
Name	The file is named using the transferred instance's asset's Asset Name.
Original Name	The file is named using the transferred instance's asset'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 will not be applicable when this option is used. If the storage location configuration is saved after setting this option, Restore Extension will be hidden.

■ Restore Extension

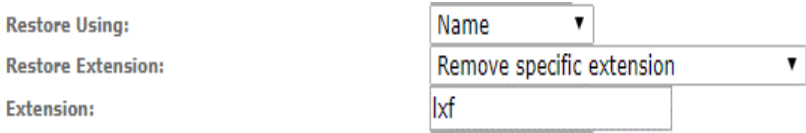
The Restore Extension parameter determines how file extensions are handled when files are copied to the storage location.

File names and their extensions are preserved when instances are copied between locations by default. The Restore Extension parameter allows extensions to be added, removed, or replaced.



Value	Behavior
Preserve original extension	Default behavior. The extension does not 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 does not 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, though, is not visible by default. If the Extension parameter is not visible, click OK to save the configuration, then navigate back to the Transfer tab. The Extension parameter should now be visible.



■ Extension

The Extension parameter works with the Restore Extension parameter to replace file extensions when instances are copied to the storage location.

This parameter is not visible by default. It only becomes visible 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 become visible.

■ **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**

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@extremereach.com</SUPPORT_EMAIL>
</ER_AD>
```

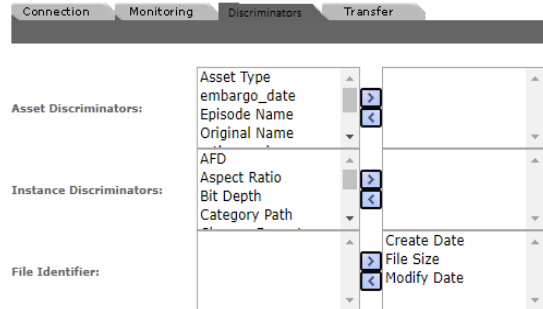
2. The start time and length of the clip must be explicitly mapped to the SOM and Duration Kumulate metadata fields.

Metadata Mapping List		
Actions	Location Metadata ID	MASSTORE_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.

Discriminators and File Identifiers

The following parameters under the Discriminators tab are used to differentiate between instances with the same name on the storage location.



Asset and Instance Discriminators

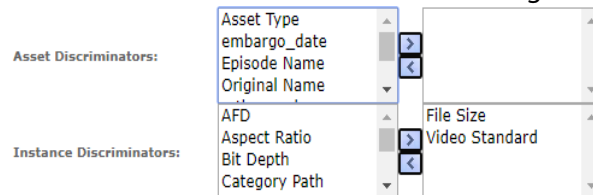
Note: Discriminators override the storage location's Delete Contents From Archive setting.

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 instances are compared. If any of the discriminator metadata values do not match, a new asset will be created for the changed instance.

Discriminator metadata is selected from the left list and moved to the right list using the right-facing arrow.

For example, to compare instances based on file size and video standard, select File Size and Video Standard and add them to the right list as shown in the following figure.



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 instances. A new asset will be created 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 instances will be discovered on the storage location if discriminators are used but the storage location's naming schema is not set to *UMID*.

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 2.1 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 pull down list. All instances 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:

Connection Monitoring Discriminators Transfer

API HostName:

API Protocol:

Capture Format:

Attach XML to asset:

Check Asset Uniqueness:

Type Of Content:

Date Format:

Delete From Video Server:

Delete Content From Archive:

Delete timeout:

Discovery Iterations:

Exclude Trade/Barter segments:

Exclude EOM from duration:

Export Metadata:

Files Dir Enable:

Files Patterns (Include):

Files Patterns (Exclude):

Set ISCI as Title for Commercial segments:

Ignore Files With Leading Space:

Ignore List:

Import Metadata:

Find Media From XML:

Monitor Timeout (min):

Monitoring:

Naming Schema:

Instance Format:

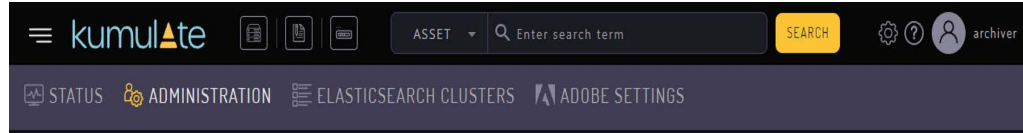
Polling Begin Time:

Polling End Time:

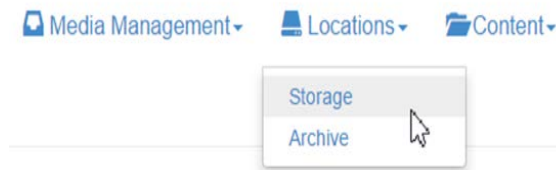
Configuration

Use the following procedure to configure BXF Storage Locations:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.



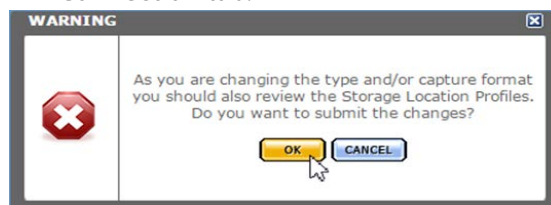
4. Enter a name and description for the storage location, then click OK.



5. Select the Monitoring tab and set Capture Format to *ExtremeReach*.



6. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue and you will be returned to the Connection tab.



7. Enter the UNC directory or FTP credentials and set Extract Metadata to *NO*.



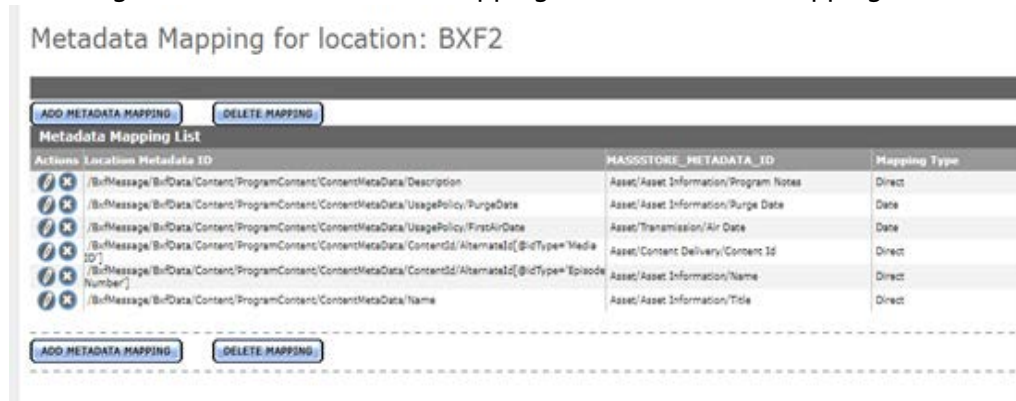
8. Navigate to the Monitoring tab and set Vendor Id to *GENERIC XML*.
9. Navigate to the Transfer tab and set the input path for the DataMover. If UNC is used as the protocol then set the input path for the Transcode Engine.
10. Click OK to continue.
11. Add the appropriate permissions in the Security area and the endpoint to your DataMover.

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.



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.

Video Server Storage Locations

This chapter describes the various Video Server 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. Instances that do not 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, and they need to be explicitly added to user groups.

- [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 Video Server connected to Kumulate. Communication between the video server and Kumulate is done through API calls using libraries installed on the Kumulate server.

Media transfers between Kumulate and the video server are done through 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 does not 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.

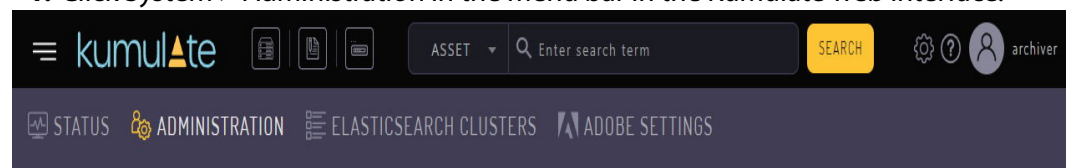
Kumulate can only monitor one wrapper type per K2 storage location.

Note: K2 does not 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.

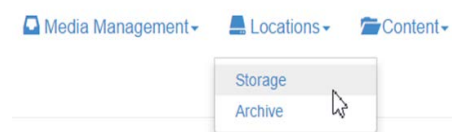
K2 Configuration

A K2 storage location is typically configured as both a copy-in and copy-out location. Use the following procedure to configure a K2 storage location:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.

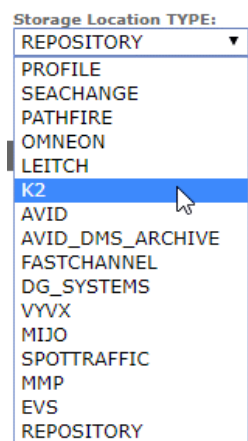
Storage Location Manager



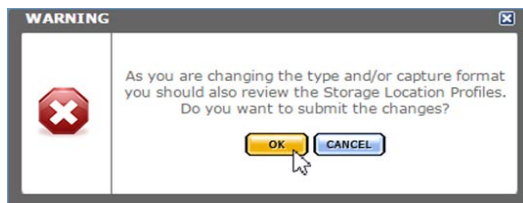
4. Enter a name and description for the storage location, then click OK.



5. From the Storage Location Configuration page, set Video Server Type to K2.



6. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue. You will be returned to the Connection tab.



7. Set the following minimum parameters (see [K2 Parameters](#) for the complete list of K2 storage location configuration parameters).

Parameter	Description
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 FTP server used to transfer files.
Max Copy In	<p>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.</p> <hr/> <p>Note: It is recommended to change this to a non-zero value.</p> <hr/>
Max Copy Out	<p>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.</p> <hr/> <p>Note: It is recommended to change this to a non-zero value.</p> <hr/>

Parameter	Description
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	<p>Sets whether assets are named using an Asset ID or using a UMID.</p> <hr/> <p>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.</p> <hr/>
Remote Dir	The server directory monitored by Kumulate. This directory must correspond to the directory where the K2 server stores its clips.

K2 Parameters

The following parameters are used by K2 storage locations.

Caution: Do not modify any parameter that does not appear 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.

- 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 does not already exist. The transfer will fail and an error will be 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 does not match the checksum in the database.

■ Delete Content From Archive

This parameter sets whether an asset's archived instances 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 Delete Content From Archive to *YES* will also delete all instances located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Instances parameter in the Asset Manager module is set to ON, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be 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 file that will be 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**

These parameters are 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: 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 will not copy-in any files that appear 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 does not need to be transcoded, or if a proxy does not 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: It is **strongly recommended** to 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: It is **strongly recommended** to change this to a non-zero value.

■ Monitoring

Specifies whether Kumulate is monitoring the location to discover and copy-in new instances.

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 will not be used to discover and copy-in instances.

■ 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 the Kumulate system.

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 will be 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(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.

■ Remote Dir

The directory on the K2 server where unwrapped clips are kept. Kumulate queries the K2 server through the API for clips in this directory.

■ 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's Asset ID.
Name	The file is named using the transferred instance's asset's Asset Name.
Original Name	The file is named using the transferred instance's asset'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 will not be applicable when this option is used. Restore Extension will be 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 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 done through API calls using libraries installed on the Kumulate server.

Media transfers between Kumulate and the video server are done through the video server's FTP service.

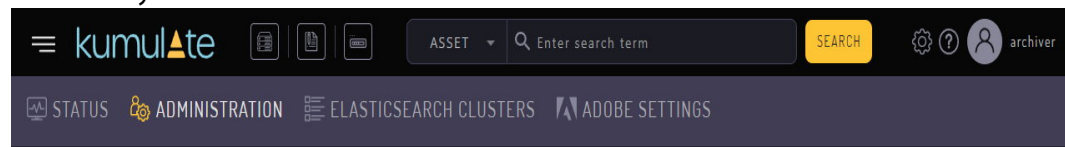
Leitch File and Folder Formats

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 through the FTP server.

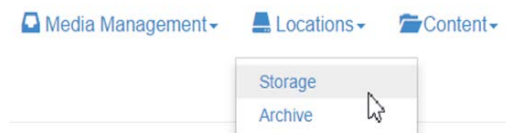
Leitch Configuration

A Leitch storage location consists of a Leitch video server connected to Kumulate. Files are copied in and copied out through the video server's FTP service. Leitch storage locations are typically configured as both a copy-in and a copy-out location. Use the following procedure to configure a Leitch storage location:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.



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

Create Storage Location

OK

Storage Location Information

Location ID: LEITCH < Required

Location Description: Leitch Storage Location

Location Type: Video Server

OK

5. From the Storage Location Configuration page, set Video Server Type to *LEITCH*.

Storage Location TYPE:

- REPOSITORY
- PROFILE
- SEACHANGE
- PATHFIRE
- OMNEON
- LEITCH**
- K2
- AVID
- AVID_DMS_ARCHIVE
- FASTCHANNEL
- DG_SYSTEMS
- VYVX
- MIJO
- SPOTTRAFFIC
- MMP
- EVS
- REPOSITORY

6. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue. You will be returned to the Connection tab.

WARNING

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?

OK CANCEL

7. Set the following minimum parameters (see [Leitch Parameters](#) for the complete list of K2 storage location configuration parameters).

Parameter	Description
API HostName	The hostname or IP address of the video server. This address is used by the API.
HostName, Password, Port, User	<p>Connection credentials for the FTP server used to transfer files.</p> <hr/> <p>Note: The Leitch FTP service uses port 2098.</p>
Max Copy In	<p>Sets the maximum number of concurrent transfers from the storage location to Kumulate.</p> <p>The default value is 0 and allows an unlimited number of concurrent transfers.</p> <hr/> <p>Note: It is recommended to change this to a non-zero value.</p>
Max Copy Out	<p>Sets the maximum number of concurrent transfers from Kumulate to the storage location.</p> <p>The default value is 0 and allows an unlimited number of concurrent transfers.</p> <hr/> <p>Note: It is recommended to change this to a non-zero value.</p>
Marking Key	<p>Used to mark instances on the video server once they are discovered.</p> <p>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.</p>

Parameter	Description
Monitoring	K2 storage locations are generally used to both copy-in and copy-out media. Monitoring should be kept <i>ON</i> unless the storage location will only be used for copy-out.
Monitored Extension	Wrap discovered instances in the format specified by this extension. Only one extension is permitted. Allowed extensions are MOV, MXF, GXF, and LXF. Defaults to LXF if left blank.
Naming Schema	Sets whether assets are named using an Asset ID or using a UMID. <hr/> Note: Instance metadata discriminators cannot be used when Naming Schema is set to <i>Asset ID</i> . See Fast Initialization & Delete Content From Archive for more information. <hr/>

Leitch Parameters

The following parameters are used by Leitch storage locations.

Caution: Do not modify any parameter that does not appear 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 does not change.

This parameter only applies to MMP requests and does not apply to requests made through the Kumulate UI.

- 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 does not already exist. The transfer will fail and an error will be gener-

ated 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 does not match the checksum in the database.

■ **DefaultVideoBitrate**

This bitrate is used if the API does not 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 more information.

■ **Delete Content From Archive**

This parameter sets whether an asset's archived instances 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 *Delete Content From Archive* to *YES* will also delete all instances located on archive locations when the physical instance on the storage location changes.

If the *Delete Asset With No Instances* parameter in the *Asset Manager* module is set to *ON*, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be 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.

■ **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 (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. 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 will not copy-in any files that appear 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 does not exceed this maximum. Kumulate will not attempt to copy out a file if its filename exceeds 32 characters; in this case Kumulate will generate 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

The Marking Key is used to mark instances on the video server after they are discovered. This prevents the same instance from being discovered multiple times as Kumulate will ignore instances 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

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: It is **strongly recommended** to 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: It is **strongly recommended** to change this to a non-zero value.

■ Monitoring

Specifies whether Kumulate is monitoring the location to discover and copy-in new instances.

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 will not be used to discover and copy-in instances.

■ 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 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 instances in this wrapper format, if possible. The transfer will fail if the instances cannot be wrapped in this format.

Supported wrapper formats are LXF, MXF, GXF, and MOV and defaults to LXF if it is 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 will be 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(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.

■ **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's Asset ID.
Name	The file is named using the transferred instance's asset's Asset Name.
Original Name	The file is named using the transferred instance's asset'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 will not be applicable when this option is used. Restore Extension will be 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 the following procedure to verify that the VIDEO_BIT_RATE metadata is present:

1. Click the Location Metadata Mapping button at the top of the Storage Location Configuration page to open the metadata mappings for the storage location.

Storage Location Configuration

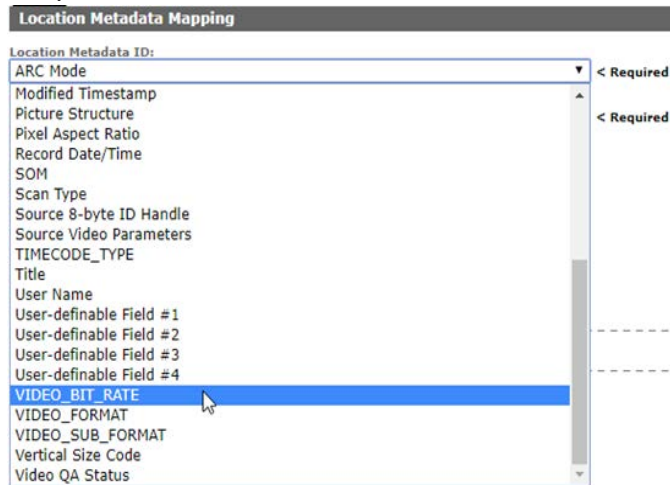


3. Verify that VIDEO_BIT_RATE is present in the Metadata Mapping List and is mapped directly to *Instance/Video/Video Bitrate*.

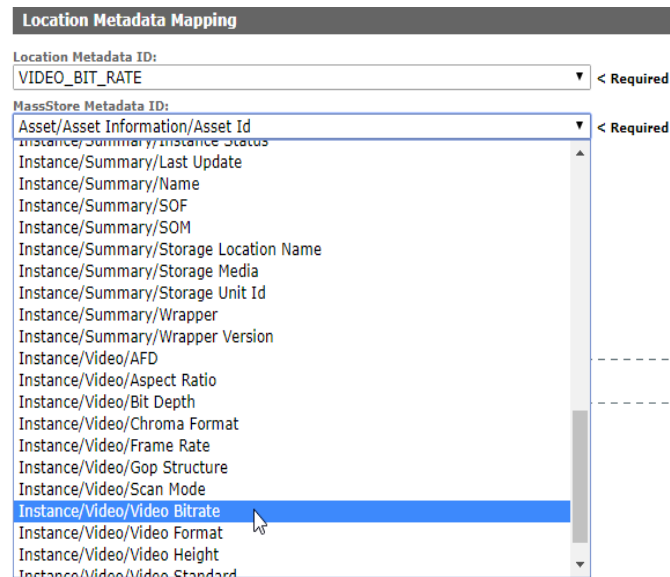
The screenshot shows the 'Metadata Mapping List' table. The table has four columns: 'Actions', 'Location Metadata ID', 'MASSTORE_METADATA_ID', and 'Mapping Type'. The row for 'VIDEO_BIT_RATE' is highlighted with an orange box. The 'VIDEO_BIT_RATE' row shows 'Instance/Video/Video Bitrate' in the 'MASSTORE_METADATA_ID' column and 'Direct' in the 'Mapping Type' column.

Actions	Location Metadata ID	MASSTORE_METADATA_ID	Mapping Type
[X] [Refresh]	DURATION	Asset/Asset Information/Duration	Direct
[X] [Refresh]	Scan Type	Instance/Video/Scan Mode	Mapped value
[X] [Refresh]	Frame Rate Code	Instance/Video/Frame Rate	Mapped value
[X] [Refresh]	Vertical Size Code	Instance/Video/Video Height	Mapped value
[X] [Refresh]	VIDEO_FORMAT	Instance/Video/Video Format	Mapped value
[X] [Refresh]	VIDEO_FORMAT	Instance/Video/Chroma Format	Mapped value
[X] [Refresh]	VIDEO_SUB_FORMAT	Instance/Video/Gop Structure	Direct
[X] [Refresh]	VIDEO_BIT_RATE	Instance/Video/Video Bitrate	Direct
[X] [Refresh]	TIMECODE_TYPE	Instance/Video/Video Standard	Mapped value
[X] [Refresh]	ASPECT_RATIO	Instance/Video/Aspect Ratio	Mapped value
[X] [Refresh]	SOM	Instance/Summary/SOF	Direct

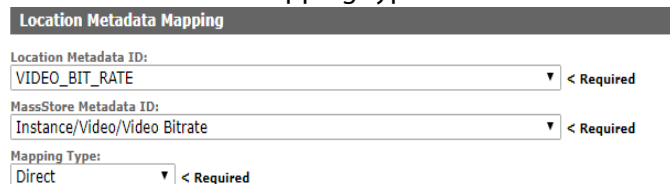
- If VIDEO_BIT_RATE is not in the list of mapped metadata, add it by clicking the ADD METADATA MAPPING button and selecting it from the Location Metadata Mapping pull down menu.



- Map it to *Instance/Video/Video Bitrate* from the Kumulate Metadata ID pull down menu.



- Ensure that the Mapping Type is set to *Direct* and click OK to save.



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 through API calls using libraries installed on the Kumulate server. Media transfers between Kumulate and the video server are completed through 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 through 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.

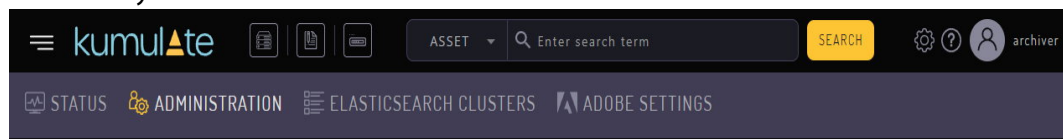
Files that are transferred from Kumulate to the video server are placed on the FTP server. Files are generally located under the clip.dir directory. If the media files are reference MOV files, the media files referenced by the MOV files are located in the clip.dir/media.dir directory.

Omneon Configuration

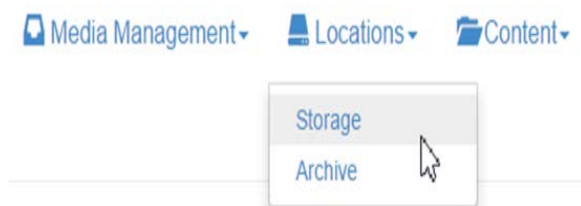
An Omneon storage location is typically configured as both a copy-in and a copy-out location. Each Omneon storage location is configured to discover MXF, self-contained MOV, or reference MOV files.

Use the following procedure to configure an Omneon storage location:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Create a new storage location by clicking the Add New Location button.

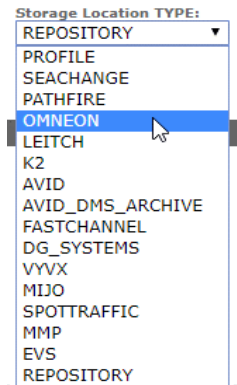
Storage Location Manager



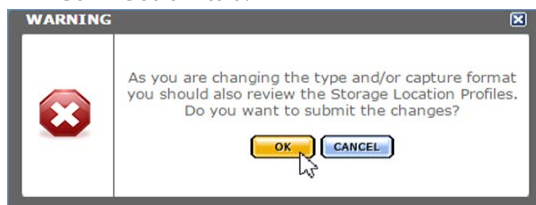
4. Enter a name and description for the storage location, then click OK.



5. From the Storage Location Configuration page, set Video Server Type to K2.



6. Click OK to continue. A warning will appear asking if you want to submit the change to the storage location. Click OK to continue. You will be returned to the Connection tab.



7. Set the following minimum parameters (see [Omneon Parameters](#) for the complete list of Omneon storage location configuration parameters).

Parameter	Description
API HostName	The hostname or IP address of the video server. This address is used by the API.
Clip Directory	The 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	<p>Sets the maximum number of concurrent transfers from the storage location to Kumulate.</p> <p>The default value is 0 and allows an unlimited number of concurrent transfers.</p> <hr/> <p>Note: It is recommended to change this to a non-zero value.</p> <hr/>
Max Copy Out	<p>Sets the maximum number of concurrent transfers from Kumulate to the storage location.</p> <p>The default value is 0 and allows an unlimited number of concurrent transfers.</p> <hr/> <p>Note: It is recommended to change this to a non-zero value.</p> <hr/>
Media Directory Version	Always set this to <i>4.0 or higher</i> .
Media Directory	The directory used for media files referenced by reference MOV files. The directory is usually clip.dir\media.dir.

Parameter	Description
Monitoring	Omneon storage locations are generally used to both copy-in and copy-out media. Monitoring should be kept <i>ON</i> unless the storage location will only be used for copy-out.
Naming Schema	<p>Sets whether assets are named using Asset ID or using UMID.</p> <hr/> <p>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.</p> <hr/>
Player Version	Always set this to <i>4.6 or higher</i> .

Omneon Parameters

The following parameters are used by Omneon storage locations.

Caution: Do not modify any parameter that does not appear 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 does not change.

This parameter only applies to MMP requests and does not apply to requests made through the Kumulate UI.

- 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 does not already exist. The transfer will fail and an error will be 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 does not 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 can refer to either self-contained or reference MOV files.

Note: If two files have the same name except for their extensions, only one file will be discovered. For example, if instance.mxf and instance.mov exist on the video server, only one of those files will be discovered.

■ Delete Content From Archive

This parameter sets whether an asset's archived instances 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 the Delete Content From Archive parameter to *YES* will also delete all instances located on archive locations when the physical instance on the storage location changes.

If the Delete Asset With No Instances parameter in the Asset Manager module is set to *ON*, and the asset does not contain any other storage location instances in addition to the one that has changed, the asset will be deleted and a new asset will be 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.

■ 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: 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 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 instances 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 will not copy-in any files that appear 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: It is **strongly recommended** to 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: It is **strongly recommended** to 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 instances.

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 will not be used to discover and copy-in instances.

■ 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 will be 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 DAL.0 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's Asset ID.
Name	The file is named using the transferred instance's asset's Asset Name.
Original Name	The file is named using the transferred instance's asset'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 will not be applicable when this option is used. Restore Extension will be 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 instances 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.

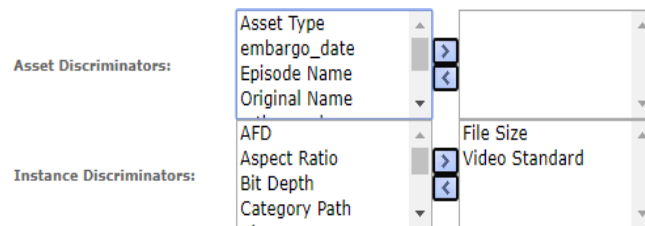
Note: Delete Content From Archive has no effect when discriminators are used.

When an instance has changed, the instance discriminator metadata values of the original and changed instances 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 will be deleted if the original instance is the only instance in its asset and Delete Assets with No Instances 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 instances 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 instances. If either of the two metadata values do not match, then the current instance in Kumulate will be deleted and a new asset will be 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 instances will be 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 instances when an instance with the same name as an existing asset is discovered on a storage location.

The Delete Content From Archive determines whether an asset's archived instances 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 instances on a storage location once; then subsequently only cataloging changes to the instances.

Delete Content From Archive Setting	Fast Initialization Setting	Result
No	No	Kumulate deletes the existing archived instances. The discovered instance is added to the asset. The existing asset is deleted if the Asset Manager Delete Asset With No Instances parameter is set to ON and the asset has no other instances on storage locations. A new asset is created, and the new instance is added to this asset. If the Naming Schema parameter is set to UMID, there may be more than one asset with the same name. In this case, Kumulate will generate an exception.
Yes	No	Kumulate deletes all the instances in the existing asset, and creates a new asset for the newly-discovered instance. The asset will be deleted if the Asset Manager Delete Asset With No Instances parameter is set to ON.
Yes	Yes	Kumulate will delete all instances in the existing asset. The existing asset will be deleted if the Asset Manager Delete Asset With No Instances parameter is set to ON. A new asset will be created for the newly-discovered instance.
No	Yes	Kumulate will ignore the newly-discovered instance. No changes will be made to the existing asset.

Archive Locations

Data libraries and the cache are classified 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.

In general, archive locations are connected to the Kumulate server and the data movers through fiber channels rather than through a network connection. A notable exception are StorageTek libraries using LibAttach. These are connected to Kumulate through a network connection.

- [Cache Configuration](#)
- [Add A Tape Library](#)
- [Registering LibAttach for StorageTek/Oracle Network Libraries](#)
- [Configuring the Archive Location](#)
- [Formatting Tapes](#)
- [Defragmenting Tapes](#)
- [Adding Group Access to a Location](#)
- [Import LTFS Tapes](#)
- [Archive Search](#)

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.

The physical cache location is generally connected to the data movers and the Kumulate server through fiber channels. The cache can also be connected to a network, and a UNC path can be used to ensure that a connection to it 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.

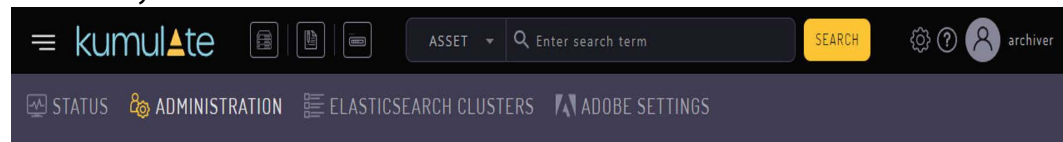
Four directories must be created on the physical cache:

Directory Name	Description
Media	Main cache directory. Any instance that is located on the cache, with the possible exception of proxy instances, will be 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 instances 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 instances is also used to configure Tomcat 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 instances and attachments are discovered or uploaded.

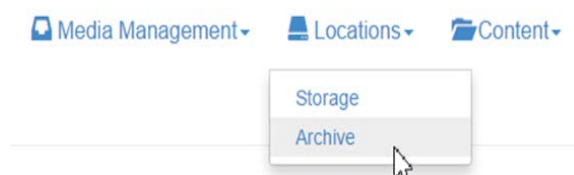
The cache information is entered into Kumulate from the Administration page during installation. The cache information can be viewed from the Administration pages.

Use the following procedure to configure the cache:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Archive.



3. Click the pencil to open the Cache Location Manager and click Configure (pencil icon).

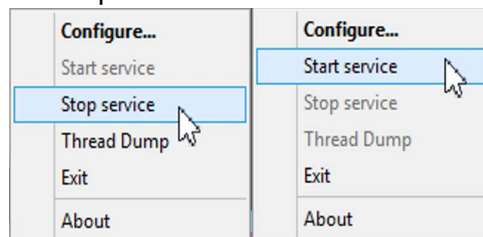
Archive Locations						
Actions	Location ID	Model	Comment	Status ▲	Validation Process	
	MASSTORE	Cache	MASSTORE	ONLINE	N/A	

4. The Main Cache Path, Proxy Cache Path and, Attachment Path as well as their corresponding UNC paths should be filled in correctly.

Cache Type:	Windows ▼
Checksum Type:	MDS ▼
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

5. Click OK to save the configuration if changes have been made.

6. Stop and restart the Tomcat service on the Kumulate server host.

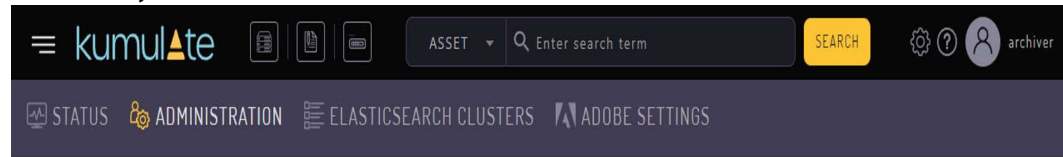


Add A Tape Library

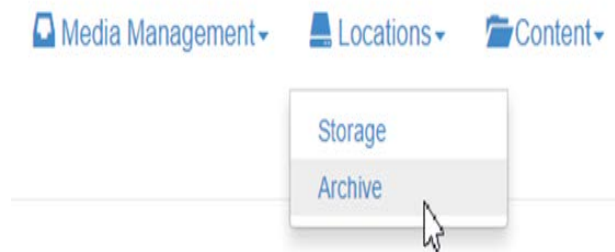
When creating a new archive location, Kumulate will automatically detect the libraries connected to it. Before creating a new archive location, make sure that the model of any library connected to Kumulate is known.

Use the following procedure to create a new archive location:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Archive.



3. Click Add New Location to open the Create Archive Location page. Kumulate will detect the devices connected to it and list them under Device Information.

Create Archive Location

Device ID	Model	Status	Vendor	Product/Model	Serial Number	Element Address	SCSI Path(s)
SPECTRA_MC	SPECTRA_T120	ONLINE	SPECTRA	P1740N	01100381C	1	[MBA = 0, SCSI ID = 0, LUN = 0] [MBA = 0, SCSI ID = 0, LUN = 1] [MBA = 0, SCSI ID = 1, LUN = 0] [MBA = 0, SCSI ID = 1, LUN = 1]
SPECTRA_DRV-HH7	LTO7	ONLINE	IBM	U17420H-HH7	101100381C	204	[MBA = 0, SCSI ID = 1, LUN = 0] [MBA = 0, SCSI ID = 1, LUN = 1]

The SCSI_CHANGER data library type is selected by default. When SCSI_CHANGER is selected, Kumulate will automatically detect all the devices connected through the SCSI connection.

Selecting the NETWORK data library type will automatically discover all the StorageTek libraries connected to Kumulate through LibAttach. See [Registering LibAttach for StorageTek/Oracle Network Libraries](#) for more details on using the NETWORK library type.

- Select the device to use with the location, provide the location with a name, then click OK to create the location.

Create Archive Location

Device ID	Model	Status	Vendor	Product/Model	Serial Number	Element Address	SCSI Path(s)
SPECTRA_MC	SPECTRA_T120	ONLINE	SPECTRA	P1700S	91100381C	1	(HBA = 0, SCSI ID = 0, LUN = 0) (HBA = 0, SCSI ID = 0, LUN = 1) (HBA = 0, SCSI ID = 1, LUN = 0)
SPECTRA_DRV-0007	LTO7	ONLINE	IBM	Ultrium-HM7	101100381C	296	(HBA = 0, SCSI ID = 1, LUN = 1)

The location will open in the Manage Archive Location page. Before the location can be used, it must be validated to discover all the tapes in the library.

- Click Validate in the Manage Archive Location menu.

Manage Archive Location

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
Mount Moments Count	0
Current Transfers	0
Occupied Slots	4
Status	ONLINE

Drive Slot ID	Status	Media ID	Mount/Write Operations
SPECTRA_QA_SPECTRA_DRV-0007	ONLINE		NONE

A dialog box will appear asking which validate action to use. Click Validate Full to discover all the tapes in the library.

- Click Storage Units in the Manage Archive Location to get a list of all the tapes in the library.

Manage Archive Location

The tapes will be in the unformatted state when the library is first validated. Instances cannot be copied to the library until at least one of its tapes is formatted.

Note: Do not format tapes that will be added manually to a media group. See [Media Groups](#) for details.

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	UNFRMTE	LTO6
 	<input type="checkbox"/>	011838L7	LTO7		0	UNFRMTE	LTO7
 	<input type="checkbox"/>	011839L7	LTO7		0	UNFRMTE	LTO7
 	<input type="checkbox"/>	CLN07WDLX	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 will send commands to the ACSLS using the LibAttach API.

To use the NETWORK library type, the LibAttach API needs to be registered before Tomcat starts. An error will be generated if LibAttach is not registered as shown in the following figure:

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 64bit architectures is installed on the Kumulate host. Use the following procedure to register the LibAttach API:

1. Shutdown Tomcat if it is running.
2. Open a command prompt and change directory to `C:\Masstech\bin\dll\x64\`.
3. Execute the `ComStoragetek.exe` command as follows:


```
ComStoragetek.exe /regserver
```
4. Restart Tomcat after the API is registered; the NETWORK library type can now be used.

Configuring the Archive Location

Use the following procedure to configure the archive location:

- 1. Click Configure in the Manage Archive Location page.

Manage Archive Location



Archive Location ID:
SPECTRA_QA

- 2. Set all parameters that need changing from the defaults.

Caution: Take special care when setting parameters related to defragmenting.

Archive Location Configuration

OK RESTORE PROFILE INFORMATION RESET

Archive Location ID: SPECTRA_QA Archive Location Type: Data Library Data Library Type: SCSI_CHANGER

LibraryUsage:	NONE
Medium Changer:	SPECTRA_T120
ScsiTransferLength:	65536
Auto Clean Enable :	FALSE
Automatic Defragmentation includes readonly tapes:	YES
Automatic Defragmentation :	EnabledOnSameTape
Checksum Type:	MD5
Checksum Verification:	No Verification
Device Operation Timeout(sec):	7200
Drive Unload Time Out:	120000
Fragmentation Level:	20
Grouping Category:	Media
Grouping Pattern:	
MediaWarningNotification:	FALSE
Num Of Format Drives:	1
Override Remaining Capacity:	FALSE
Number of Drives for Read:	100
ReadOnly Threshold :	500000000
Tape Recovery Threshold:	3
Transfer timeout(sec):	7200

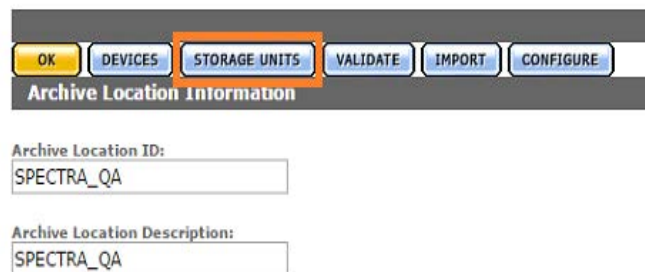
Parameter	Description
LibraryUsage	The name of the library being used by the archive location.
Medium Changer	The name of the medium changer being used by the archive location.
ScsiTransferLength	The maximum length for transfers across the SCSI interface.
ACSL5 Commands Timeout (in seconds)	<p>The time in seconds to wait for an ACSLS to respond when connected to a StorageTek/Oracle library.</p> <hr/> <p>Note: Only visible when configuring StorageTek/Oracle libraries.</p>
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 will not be defragmented automatically.
Checksum Type	<p>Generate a checksum using the specified algorithm.</p> <p>This is set to MD5 by default.</p>
Checksum Validation	<p>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 does not exist in the database. The transfer will fail and an error will be generated if the instance's checksum does exist in the database, but the two checksums do not match.</p> <p>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 does not match the checksum in the database.</p> <p>This is set to No Verification by default.</p>

Parameter	Description
Automatic Defragmentation	<p>When enabled, tapes in the library will be defragmented automatically when the library's fragmentation level is reached.</p> <p>Two options are available for defragmenting tapes:</p> <p>EnabledOnSameTape copies the undeleted contents of a tape to the cache, defragments the tape, then recopies the contents back to the same tape.</p> <p>EnabledUsingGroupPattern copies the undeleted contents back to any tape in the media group specified in Grouping Pattern.</p>
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	<p>The media group category to use when defragmented content is recopied to tape.</p> <p>Used with the Automatic Defragmentation EnabledUsingGroupPattern option.</p>
Grouping Pattern	<p>The media group to use when defragmented content is recopied to tape.</p> <p>Used with the Automatic Defragmentation EnabledUsingGroupPattern option.</p>
MediaWarningNotification	
Num Of Format Drives	
Override Remaining Capacity	
Number of Drives for Read	
ReadOnly Threshold	The tape will be marked as read after the amount of 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 the Storage Units button as shown in the following figure:

Manage Archive Location



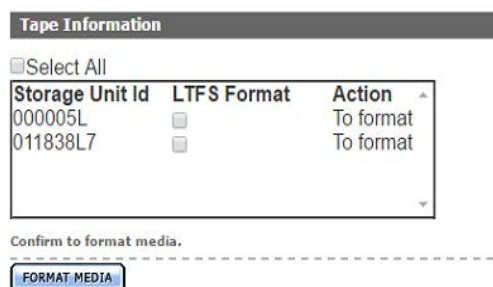
Tapes can also be accessed by performing a search through the Archive Search. Select all or some of the tapes to format, then click the Format Media button as shown in the following figure.

Actions	Select	ID	Tape Generation	System	Frag. Level	Status	CommentGroup Name	Location
	<input type="checkbox"/>	000001L6	LT06		0	UNFRMTD	LT06	QUALSTAR
	<input type="checkbox"/>	000002L6	LT06		0	UNFRMTD	LT06	QUALSTAR
	<input type="checkbox"/>	000003L6	LT06		0	UNFRMTD	LT06	QUALSTAR
	<input checked="" type="checkbox"/>	000005L	LT06	LTFS	0	UNFRMTD	DEFAULT_GROUP	SPECTRA_QA
	<input checked="" type="checkbox"/>	011838L7	LT07		0	UNFRMTD	DEFAULT_GROUP	SPECTRA_QA
	<input type="checkbox"/>	011839L7	LT07		0	OFFLINE	LT07	SPECTRA_QA
	<input type="checkbox"/>	011848L7	LT07	LTFS	0	ONLINE	DEFAULT_GROUP	QUALSTAR
	<input type="checkbox"/>	011849L7	LT07		0	OFFLINE	DEFAULT_GROUP	QUALSTAR
	<input type="checkbox"/>	012519L7	LT07		0	UNFRMTD	LT07	QUALSTAR
	<input type="checkbox"/>	CLN07W5LX	N/A		0	ONLINE	CLEANING TAPE	SPECTRA_QA

The Media Format page will open. Select the tapes that need LTFS formatting before clicking Format Media.

Note: If the tape is not an LTFS tape, Kumulate will not use LTFS formatting, even if LTFS Format is selected.

Media Format

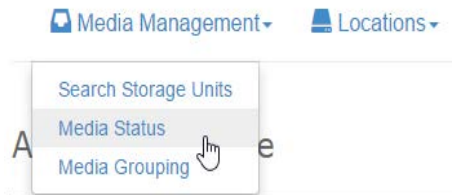


The Formatting Status page will open.

Format

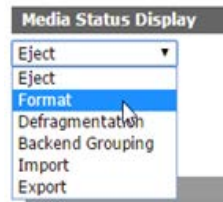
StorageUnitID	Comment	Status	Action
011838L7	LT07	To format	
000005L	LT06	Fetching	

The tape statuses will go 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 from the Media Status page.



From the Media Status page, select the operation to monitor. To monitor tape formatting, select Format from the pull down menu.

Media Status



A list of tapes that are in the process of being formatted and their statuses will be displayed.

Media Status



The status of the tapes changes to FRMTTED after the formatting is complete. Tapes will not 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	LT06		0	UNFRMTED	LT06
	<input type="checkbox"/>	011838L7	LT07		0	UNFRMTED	LT07
	<input type="checkbox"/>	011839L7	LT07		0	UNFRMTED	LT07
	<input type="checkbox"/>	CLJN07W0LX	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.

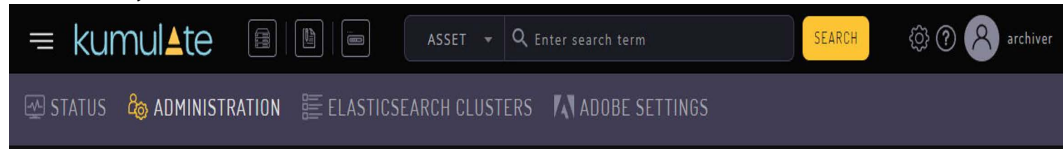
Automatic defragmenting can be disabled for read only tapes using the Automatic Defragmentation includes readonly tapes parameter. This prevents content that has been deleted in Kumulate from being overwritten on the tape.

Adding Group Access to a Location

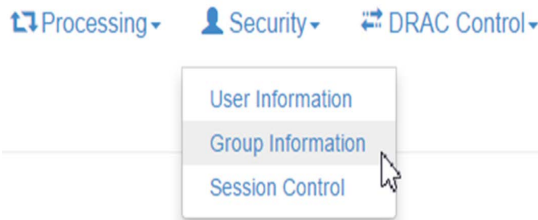
Storage and archive locations are not automatically visible to users. A location must be added to a user's Group ACL (Access Control List) for the user to have access to it.

Use the following procedure to add group access to a location:

1. Click System > Administration in the menu bar of the Kumulate web interface.



2. From the menu bar select Security, then Group Information to open the Group Information page.



3. The default view in the User Group Information page does not allow the user to create or edit groups. Selecting Future from the See rights pull down menu enables editing.

User Group Information



4. Click the Pencil icon to the left of the group to select the group to edit.

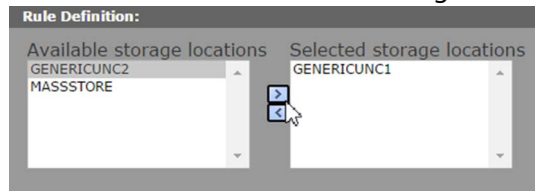
Existing User Group				
Actions	Group Name ▲	Storage Unit	Asset	Instance
	Montana User Group	Full Control	Full Control	Full Control
	News Group	Read	Full Control	Full Control
	Regular User	Read	Read	Read

5. 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

6. Select locations from the Available storage locations list, then use the right arrow to add them to the Selected storage locations list.



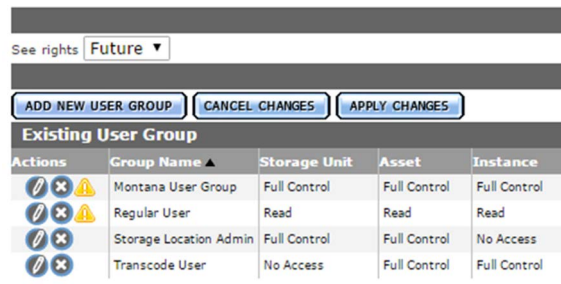
7. Click Add to add the location to the filter. The location will be added to the Matching Rule Set list.

Matching Rule Set:

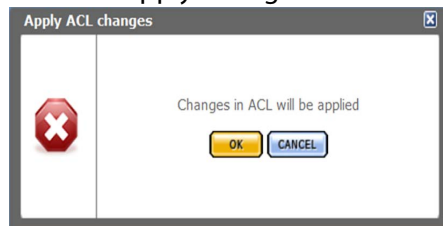
Actions	Select	Metadata	Matching Rule Set	Lower Value
	<input type="checkbox"/>	MASSSTORE	N/A	
	<input type="checkbox"/>	GENERICUNC1	N/A	
	<input type="checkbox"/>	GENERICUNC2	N/A	

8. Click OK to save the changes and return to the User Group Information page.
9. An attention symbol will remain next to the group until all the changes are applied or canceled.

User Group Information



10. Click Apply Changes. A confirmation dialog will open; click OK to continue.



11. The new storage location will appear in the Kumulate web interface.



Import LTF5 Tapes

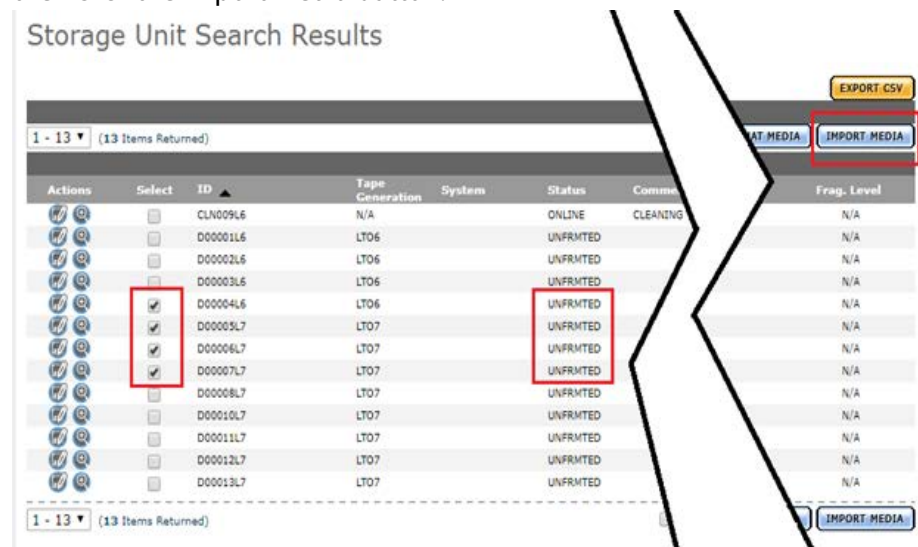
Kumulate can import tapes written in LTF5 format by other systems. When importing projects from LTF5 tapes, the system now supports the ability to choose the parent folder for the assets to be imported. The LTF5 structures are saved in the database (for future use) after they have been read. Users can 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 will be executed, regardless of whether the drives are available for import. A successful import will not 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.

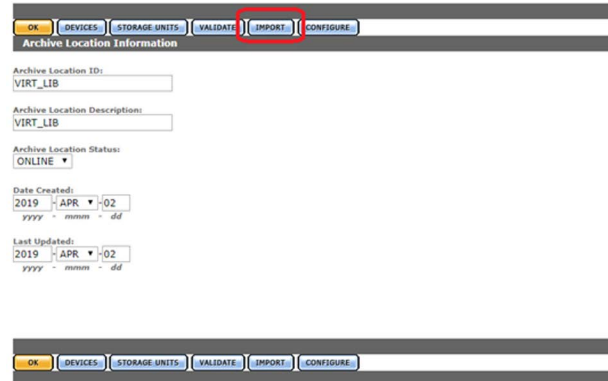
To access this function navigate to System > Administration > Locations > Archive and select Storage Units. From this page, you will be able to select the tapes to import and then click the Import Media button.



After clicking the Import button, you will be presented with 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.

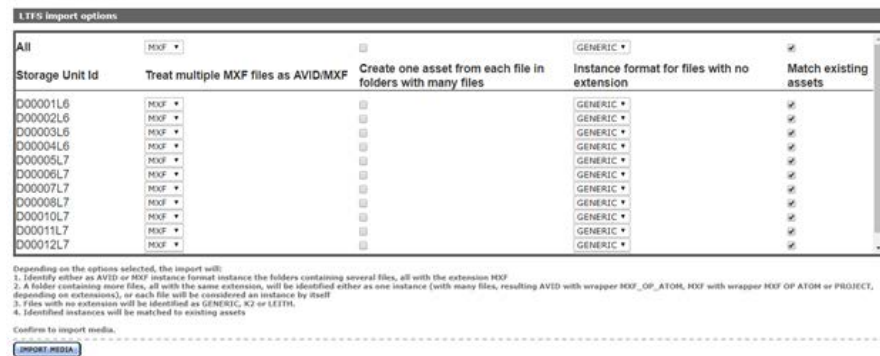
You can also access the LTF5 content import by navigating to System > Administration > Locations > Archive, then selecting the library and clicking Import.

Manage Archive Location



Individual parameters can be set for each tape selected after the selection of tapes to import is determined.

Media Import



Parameter	Description
Treat multiple MXF files as AVID/ MXF	Applies to folders with multiple files with mxf extensions and instructs the system to identify these files as either AVID or as MXF instances.

Parameter	Description
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 instances 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 instances to existing assets based on the original name or, if not filled, on the alias. If no match is found, a new asset will be created.

The system will attempt to determine what kind 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.

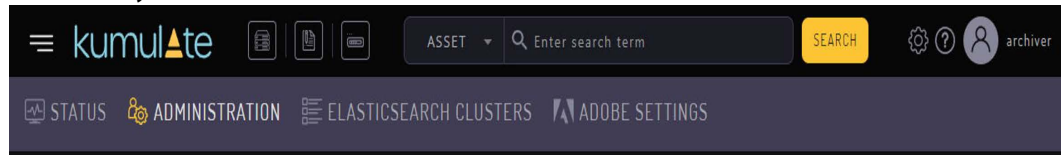
Use the appropriate button as shown to perform the desired operation.

The screenshot shows the 'Storage Unit Search Results' page in a web application. At the top, there are navigation tabs: Media Management, Locations, Content, Processing, Security, DRAC Control, Modules, and Logs. Below the navigation is a search bar and a 'Select all' button. A row of action buttons is visible: REFRESH, EXPORT, DEFRAGMENT, MODIFY, DELETE, ERASE MEDIA, FORMAT MEDIA, IMPORT MEDIA, READ LTFS DATA, DELETE LTFS DATA, and DOWNLOAD LTFS DATA. The main part of the page is a table with columns: Actions, Select, ID, Bin, Generation, System, Status, Comment, Group Name, Location, Capacity, Used, Usage, and Frag. Level. The table contains 10 rows of data for storage units. At the bottom, there is a 'Select all' checkbox and another row of action buttons: REFRESH, EXPORT, DEFRAGMENT, MODIFY, DELETE, ERASE MEDIA, FORMAT MEDIA, IMPORT MEDIA, READ LTFS DATA, DELETE LTFS DATA, and DOWNLOAD LTFS DATA.

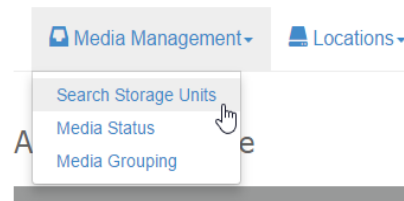
Archive Search

A dedicated archive search is available. Use the following procedure to perform an archive search:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Media Management > Search Storage Units.



Note: The terms storage units, media, and tapes are sometimes used interchangeably.

3. The search returns tapes that match the search criteria. Clicking Search without any criteria returns all the tapes in the system.

Advanced Search

Media Groups

Media groups are groups of tapes within the same archive location where instances 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 instances can be copied. When an instance is copied to the location it will be copied to a tape from the location's pool of formatted tapes. That tape will be 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.

Instances that are stored on tapes belonging to the wrong group can be moved to tapes belonging to the appropriate group using back end grouping.

- [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 instances will belong to DEFAULT_GROUP.

If tapes belonging to a particular archive location have been grouped, but the instance being copied to the location does not have metadata that matches any of the groups, Kumulate will copy the instance to an unassigned formatted tape and assign it to DEFAULT_GROUP.

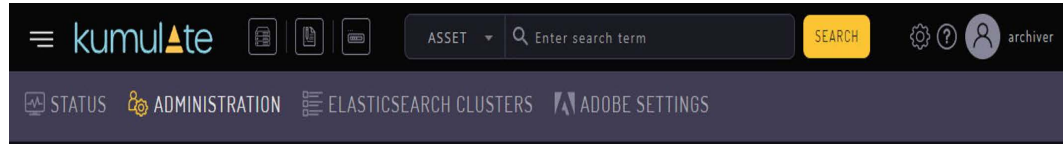
Actions	Select	ID	Tape Generation	System	Frag. Level	Status	CommentGroup Name	Location
 	<input type="checkbox"/>	000022L3	N/A		0	UNFRMTD		STK SL150
 	<input type="checkbox"/>	80000901	N/A		0	ONLINE	Reurtable DL-600GB cartridge	DEFAULT_GROUP SONY_ODA
 	<input type="checkbox"/>	80001001	N/A		0	UNFRMTD	Writesonce QL-1.5TB	SONY_ODA
 	<input type="checkbox"/>	80001101	N/A		0	UNFRMTD	Reurtable SL-300GB	SONY_ODA

Creating a Media Group

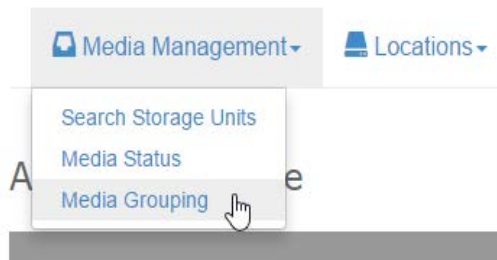
Media groups are groups of tapes that will be used to store instances with certain metadata values. Determining which instances to store on specific groups of tapes is accomplished using instance and asset resource filters. Add any new metadata needed before creating the grouping.

Use the following procedure to create a media group:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Media Management > Media Grouping.



3. On the Media Grouping page, enter the information needed to create the tape group, and select which instances 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

ADD VIEW INSTANCES

Parameter	Description
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 instances 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 instances 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 appear 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 will 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

- Select the tapes to add to the group on the Group Media Assignment page and click OK.

Note: All unformatted tapes in the system will be shown 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"/>	B0001101	SONY_ODA	
<input type="checkbox"/>	B0001201	SONY_ODA	
<input type="checkbox"/>	B0001301	SONY_ODA	
<input type="checkbox"/>	ISR232	S_TEK_NET	
<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	

- The selected tapes will appear 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	

- 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	Comment/Group Name	Location	
<input type="checkbox"/>	<input type="checkbox"/>	000022L3	N/A		0	UNFRMTD		STK_SL150	
<input type="checkbox"/>	<input type="checkbox"/>	B0000901	N/A		0	ONLINE	ReWritable DL-600GB cartridge	DEFAULT_GROUP	SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	B0001001	N/A		0	UNFRMTD	Write-once Qz-1.5TB		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	B0001101	N/A		0	UNFRMTD	ReWritable SL-300GB		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	B0001201	N/A		0	UNFRMTD	ReWritable DL-600GB		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	B0001301	N/A		0	UNFRMTD	ReWritable DL-600GB		SONY_ODA
<input type="checkbox"/>	<input type="checkbox"/>	CLN413	N/A		0	ONLINE	CLEANING TAPE		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	CLN414	N/A		0	ONLINE	T10000CL CLEANING TAPE		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	F50725	LTO5		0	ONLINE	T10000CL LTO-1.5T cartridge	DEFAULT_GROUP	S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR034L5	LTO5		0	ONLINE		DEFAULT_GROUP	STK_SL150
<input type="checkbox"/>	<input type="checkbox"/>	ISR231	LTO5		0	FRMTD	LTO-2.5T cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR232	N/A		0	UNFRMTD	LTO-2.5T cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR233	N/A		0	UNFRMTD	LTO-2.5T cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR234	N/A		0	UNFRMTD	LTO-2.5T cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR235	N/A		0	UNFRMTD	LTO-2.5T cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR505L5	N/A		0	UNFRMTD	LTO-1.5T cartridge		STK_SL150
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ISR507	N/A		0	UNFRMTD	LTO-1.5T cartridge	COPY_ONE	S_TEK_NET
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ISR912	N/A		0	UNFRMTD	T10000T2 cartridge	COPY_ONE	S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR915	N/A		0	UNFRMTD	T10000T2 cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR916	N/A		0	UNFRMTD	T10000T2 cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR917	N/A		0	UNFRMTD	T10000T2 cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR918	N/A		0	UNFRMTD	T10000T2 cartridge		S_TEK_NET
<input type="checkbox"/>	<input type="checkbox"/>	ISR919	N/A		0	UNFRMTD	T10000T2 cartridge		S_TEK_NET

- 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 appear 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"/>	ISR231	S_TEK_NET

- 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	Frag. Level	Status	Comment	Group Name	Location
	<input type="checkbox"/>	00022L3	N/A		0	UNWRITED			STK_SL150
	<input type="checkbox"/>	B000901	N/A		0	ONLINE	ReWritable DL-6000B cartridge	DEFAULT_GROUP	SOIV_ODA
	<input type="checkbox"/>	B0001001	N/A		0	UNWRITED	Writeonce QJ1.5TB		SOIV_ODA
	<input type="checkbox"/>	B0001101	N/A		0	UNWRITED	ReWritable SL-3000B		SOIV_ODA
	<input type="checkbox"/>	B0001201	N/A		0	UNWRITED	ReWritable DL-6000B		SOIV_ODA
	<input type="checkbox"/>	B0001301	N/A		0	UNWRITED	ReWritable DL-6000B		SOIV_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	DEFAULT_GROUP	S_TEK_NET
	<input type="checkbox"/>	ISR034L3	LTO5		0	ONLINE		DEFAULT_GROUP	STK_SL150
	<input type="checkbox"/>	ISR231	LTO5		0	ONLINE	LTO-1.5T cartridge	COPY_ONE	S_TEK_NET
	<input type="checkbox"/>	ISR232	N/A		0	UNWRITED	LTO-1.5T cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR233	N/A		0	UNWRITED	LTO-1.5T cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR234	N/A		0	UNWRITED	LTO-1.5T cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR235	N/A		0	UNWRITED	LTO-1.5T cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR055L3	N/A		0	UNWRITED			STK_SL150
	<input type="checkbox"/>	ISR507	N/A		0	UNWRITED	LTO-1.5T cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR912	N/A		0	UNWRITED	T1000072 cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR913	N/A		0	UNWRITED	T1000072 cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR916	N/A		0	UNWRITED	T1000072 cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR917	N/A		0	UNWRITED	T1000072 cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR918	N/A		0	UNWRITED	T1000072 cartridge		S_TEK_NET
	<input type="checkbox"/>	ISR919	N/A		0	UNWRITED	T1000072 cartridge		S_TEK_NET

Back End Grouping

Back end grouping is used to reorganize instances 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 instances 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	LT05	0	ONLINE	LTO-1.5T cartridge	DEFAULT_GROUP S_TEK_NET
		<input type="checkbox"/>	ISR034L5	LT05	0	ONLINE		DEFAULT_GROUP STK SL150
		<input type="checkbox"/>	ISR231	LT05	0	ONLINE	LTO-2.5T cartridge	COPY_ONE S_TEK_NET
		<input type="checkbox"/>	ISR232	LT05	0	FRMTTED	LTO-2.5T cartridge	ROUGH_DRAFT S_TEK_NET
		<input type="checkbox"/>	ISR233	LT05	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	LT05	0	ONLINE	LTO-1.5T cartridge	DEFAULT_GROUP S_TEK_NET
		<input type="checkbox"/>	ISR034L5	LT05	0	ONLINE		DEFAULT_GROUP STK SL150
		<input type="checkbox"/>	ISR231	LT05	0	ONLINE	LTO-2.5T cartridge	COPY_ONE S_TEK_NET
		<input type="checkbox"/>	ISR232	LT05	0	FRMTTED	LTO-2.5T cartridge	ROUGH_DRAFT S_TEK_NET
		<input type="checkbox"/>	ISR233	LT05	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

Use the following procedure to move the instance to the appropriate group:

1. Click the Show Instances 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	LT05
		<input type="checkbox"/>	ISR034L5	LT05
		<input type="checkbox"/>	ISR231	LT05
		<input type="checkbox"/>	ISR232	LT05
		<input type="checkbox"/>	ISR233	LT05
		<input type="checkbox"/>	ISR234	N/A

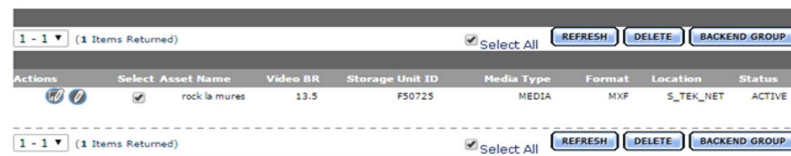
- On the Instance Search Results page, select the instance to move, then click Backend Group.

Instance Search Results



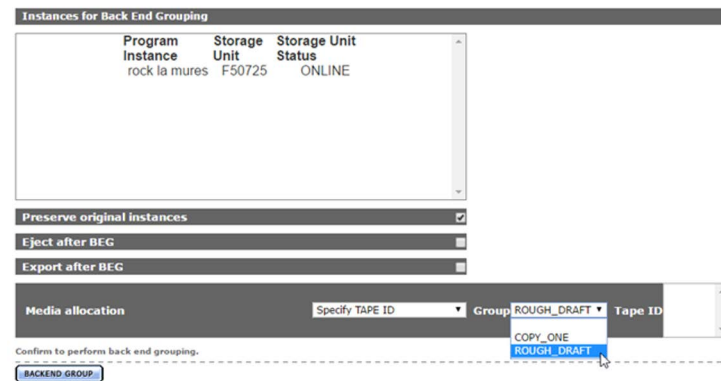
- On the Backend Group page, select the instance to move again, then click Backend Group again.

Back End Group



- On the Backend Group screen, select Specify Tape ID from the pull down menu; then select the tape group the instance should be on.

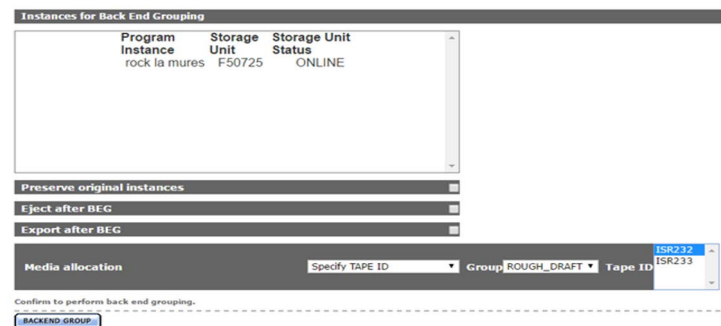
Back End Group



- Select Preserve original instances to keep the instance on the source tape. Select Eject after BEG to eject the source tape after the instance has been moved.

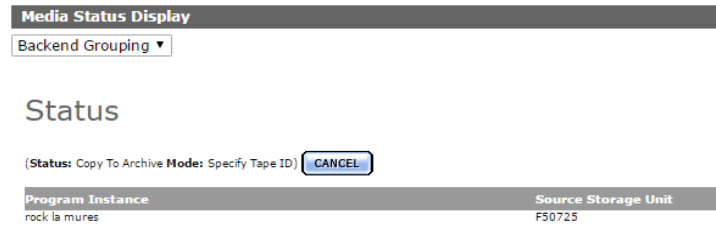
- Select the tape in the group to move the instance to, then click Backend Group.

Back End Group



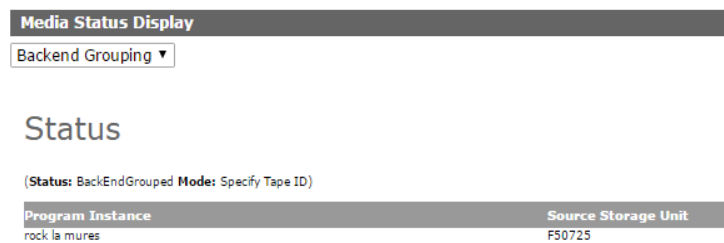
7. The Media Status page will open. The status will be Copy to Archive while the instance is being copied.

Media Status



8. After the instance has been copied the status will change to BackEndGrouped.

Media Status



9. The instance's Storage Unit ID will now show the new tape ID.



Attachment Templates

Attachments are additional files associated with assets. Captions, formatsheets, 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, formatsheet, mark, segment, and thumbnail attachments.

- [Built-In Attachment Templates](#)
- [Creating an Attachment Template](#)
- [Add Attachment Template Access to Groups](#)
- [Delete an Attachment Template](#)

Built-In Attachment Templates

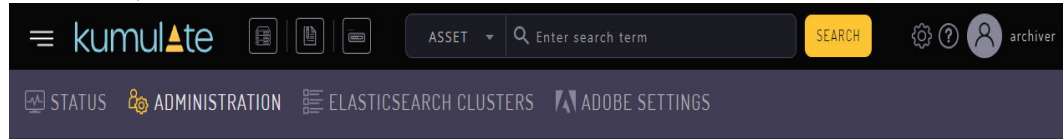
Kumulate includes built-in attachment templates for certain file types. These templates cannot be modified.

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.
Formatsheet	XML attachments that provide information on run orders. The formatsheet attachment type is used internally by Kumulate, but users can also use it to upload formatsheet files to assets.

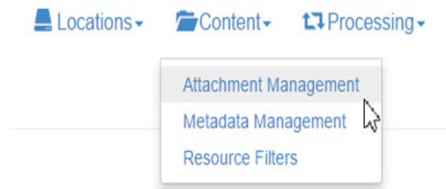
Creating an Attachment Template

Attachment templates must be created to upload files other than caption and formatsheet 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. Use the following procedure to create an attachment template:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select **Content**, then **Attachment Management**.



3. Click Add Attachment Type to create a new attachment type.
4. 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 appear in a pull down menu in the Kumulate user web interface. If it is omitted, the template name will be used instead.

OK

Attachment Template information

Attachment Template name: pdf Description: PDF Attachments Class: pdf

Select the file type for this attachment template.

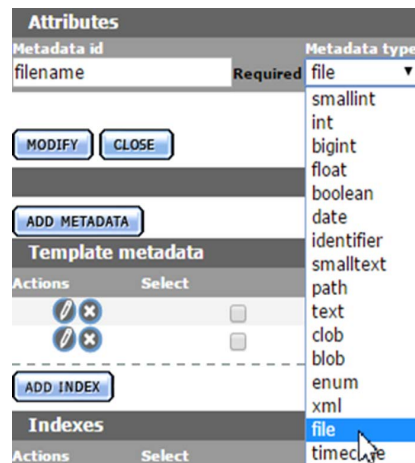
Note: Using the exact file type in an attachment template optimizes indexing of the file and improves attachment searches. Use the *free* and *text* classes only when absolutely necessary.

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

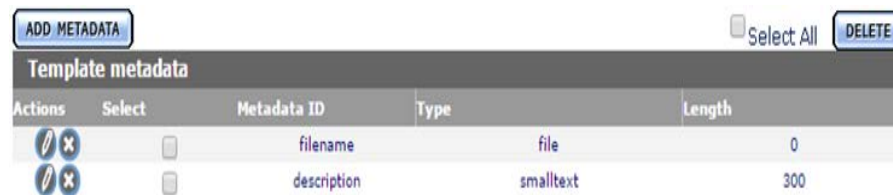
Class	Description
excel	Excel document
binary	Binary file: Use this class only if the attachments will not be Word, PDF, or Excel files.
text	Text file: Use this class only if the attachments will not be xml files.

- 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 [Add Attachment Template Access to Groups](#) for more details.

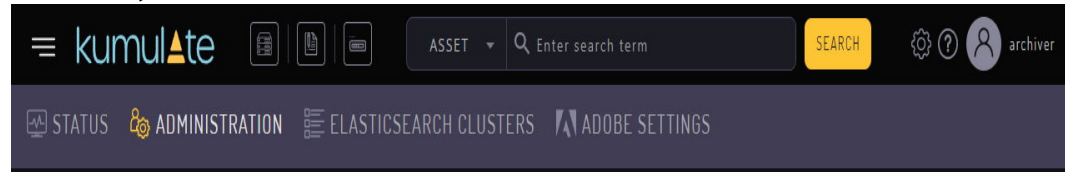
Add Attachment Template Access to Groups

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.

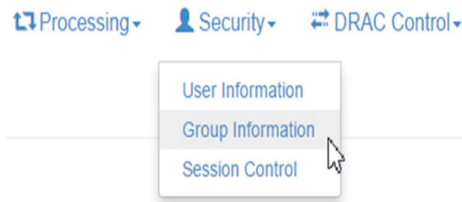
For more information on groups, see [Groups and Users](#).

Use the following procedure to add attachment template access to a group:

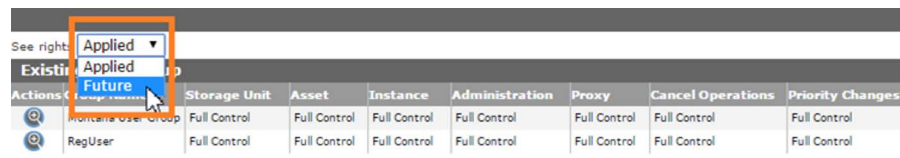
1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Security > Group Information.



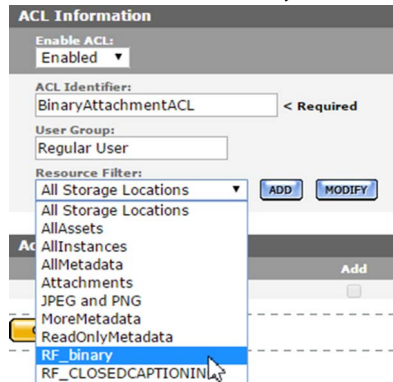
3. The default view in the User Group Information page does not allow the user to create or edit groups. Enable editing by selecting Future from the See rights pull down menu.



4. Select a group to edit. Click Add New ACL on the Modify User Group page.



- 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.

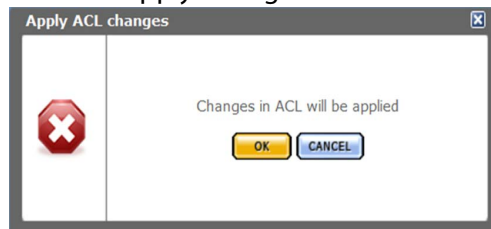


- Set the access rights to the template. See [Access Control Lists and Access Privileges](#) for more information.



- 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.

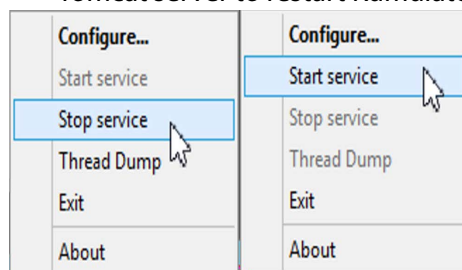
- Click Apply Changes. A confirmation window will open; click OK to continue.



The message Changes are scheduled to be applied will appear after the dialog box closes.



- Kumulate must be restarted for the changes to take effect. Stop and start the Tomcat server to restart Kumulate.



- After Kumulate has restarted, return to the Groups page to verify that the changes were applied.

Delete 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.

Use the following procedure 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 currently 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

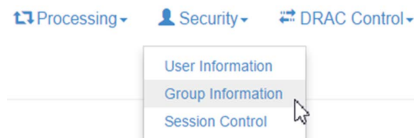
2. Delete the attachment template by clicking on the X icon next to the template.

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.

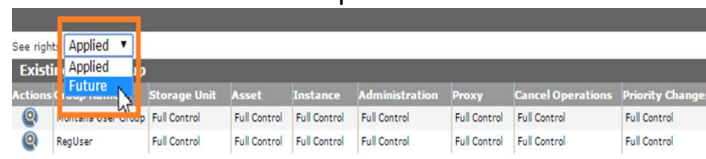
Remove an Attachment Template Resource Filter From a Group (Optional)

Use the following procedure 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 pull down menu.



3. Select the group to edit.

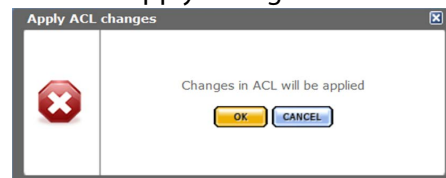
4. Under Attachment Template ACL, click the X icon to delete the ACL identifier associated with the deleted template's resource filter.

Note: Resource filters created automatically by Kumulate will be named RF_<TemplateName>. For example, the resource filter associated with the binary attachment template will be named RF_binary.

Attachment Template ACL		
Actions	ACL Identifier	Resource Filter
	other	RF_other
	PDF	RF_pdf
	JPEG	RF_jpeg
	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.

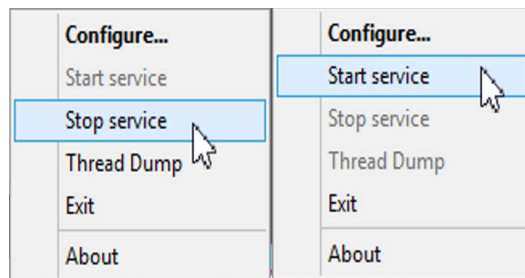
6. Click Apply Changes. A confirmation window will open; click OK to continue.



The message Changes are scheduled to be applied will appear after the dialog box closes.



7. Kumulate must be restarted for the changes to take effect. Stop and start the Tomcat server to restart Kumulate.

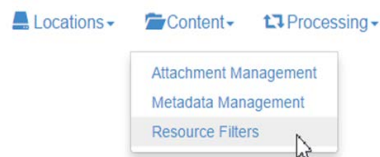


8. After Kumulate has restarted, return to the Groups page to verify that the changes were applied.

Delete the Resource Filter (Optional)

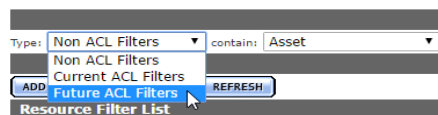
Use the following procedure to delete the resource filter; this is optional:

1. Open the list of resource filters by selecting Content > Resource Filters from the top menu.



2. Select Future ACL from the Type pull down 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 will be named RF_<TemplateName>. For example, the resource filter associated with the binary attachment template will be named RF_binary.

Resource Filter List	
Actions	Name ▲
	All Storage Locations
	AllAssets
	AllInstances
	AllMetadata
	ReadOnlyMetadata
	RF_binary
	RF_CLOSEDCAPTIONING
	RF_ipeg
	RF_MARKER
	RF_other
	RF_pdf
	RF_png
	RF_SEGMENT
	RF_text
	RF_vword

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.

Data Movers

Data movers are used to transfer media between locations.

One data mover is installed by default on the Kumulate server host. Additional data movers can be deployed to other machines and added to the list of data movers.

Instances can only be transferred between locations if both locations are endpoints of the same data mover. Locations must be added to data movers manually.

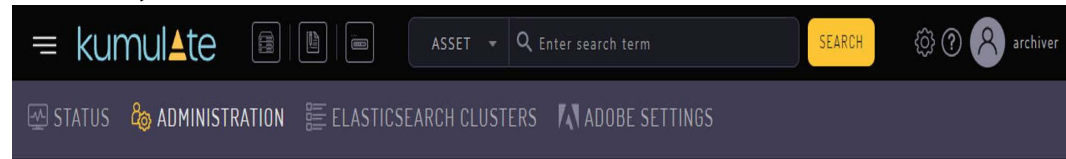
- [Add an External Data Mover](#)
- [Add a Data Mover Endpoint](#)

Add an External Data Mover

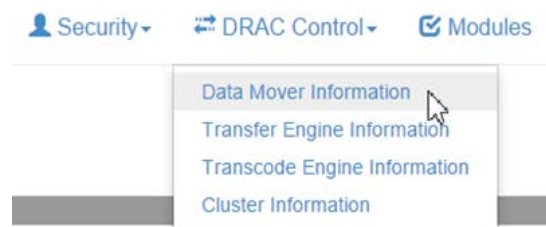
Additional data movers can be installed on hosts other than the Kumulate server host. These external data movers must be added to the Kumulate system before they can be used. Information on installing external data movers is available in the Kumulate Deployment document.

Use the following procedure to add an external data mover:

1. Click System > Administration in the menu bar in the Kumulate web interface.

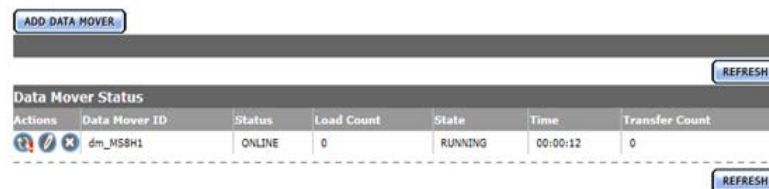


2. Select DRAC Control > DataMover Information.

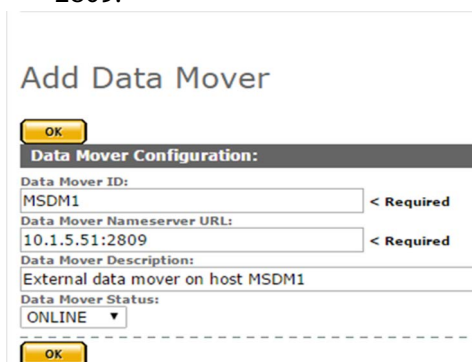


3. The list of data movers will open. The internal data mover is always named with the prefix dm. Click the Add Data Mover button to add a new data mover.

Data Mover Information



4. Give the data mover a name that easily identifies it. Set the nameserver URL to the data mover's IP address and its listener port. The default data mover listener port is 2809.



- 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 instances between locations that are in its list of endpoints.

Modify Data Mover

OK
RESET

Data Mover Configuration:

Data Mover ID: < Required

Data Mover Nameserver URL: < Required

Data Mover Description:

Data Mover Status: ONLINE ▾

OK
RESET

Endpoint Management:

ADD
 Select All
DELETE

Actions	SelectEndpoint ID	Disable for local DM	Status	Connection Status
	<input type="checkbox"/> MASSSTORE	<input type="checkbox"/>	ONLINE	UNCONFIGURED

ADD
 Select All
DELETE

- The newly added data mover will appear 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

REFRESH

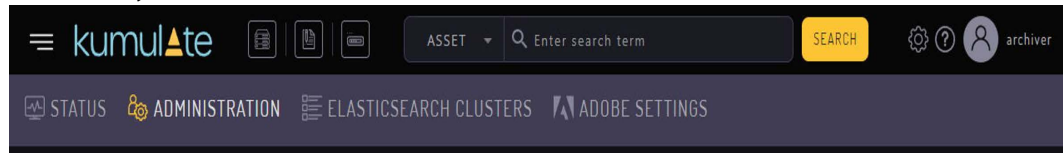
Add a Data Mover Endpoint

Data movers are used to transfer instances between locations. Locations must be added as data mover endpoints for instances to be transferred between them.

The internal data mover runs on the Kumulate server host. 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.

Use the following procedure to add an end point to a data mover:

1. Click System > Administration in the menu bar in the Kumulate web interface.

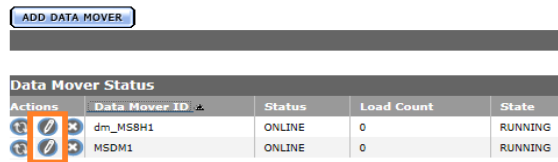


2. Select DRAC Control > DataMover Information.



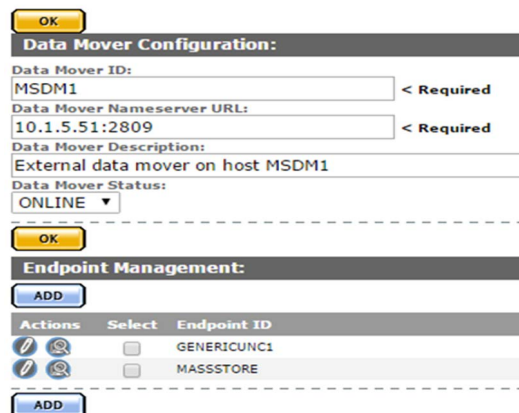
3. Click the Pencil icon next to the data mover to modify it.

Data Mover Information



4. Click ADD under Endpoint Management.

Modify Data Mover



- Select the storage location from the Endpoint ID pull down 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 appear 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"/>	MASSSTORE	MASSSTORE	ONLINE

ADD

Metadata Management

All the metadata in Kumulate can be viewed through Metadata Management. Additional custom metadata can also be added to Kumulate from the Metadata Management page. Administrators can assign a default set of pinned metadata fields starting with release 2.1.

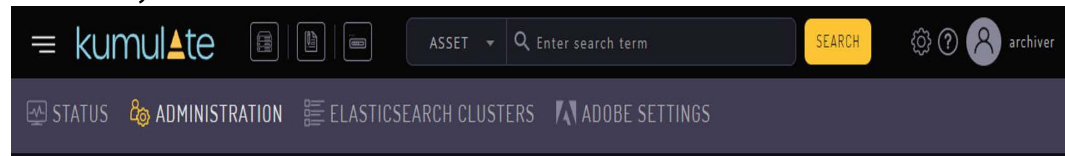
- [Accessing the List of all Metadata](#)
- [Add Custom Metadata](#)
- [Create List Metadata](#)
- [Add Custom Asset Metadata to an ACL](#)
- [Delete Unused Combo Metadata](#)

Accessing the List of all Metadata

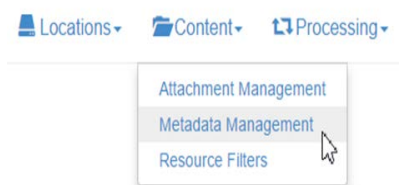
Metadata Management is used to view and edit asset and instance metadata, and create custom instance and asset metadata.

Use the following procedure to access the list of all metadata:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Content > Metadata Management.



3. Expanding the asset or instance headers shows all metadata, including custom metadata. For example, in this case, the is_proxy and is_temporary metadata were custom created for this installation of Kumulate.

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

The fields in the table provide the following 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 Group	The group to which the metadata belongs. Groups can be added as needed. Metadata will appear under its group in the Asset or Instance view.

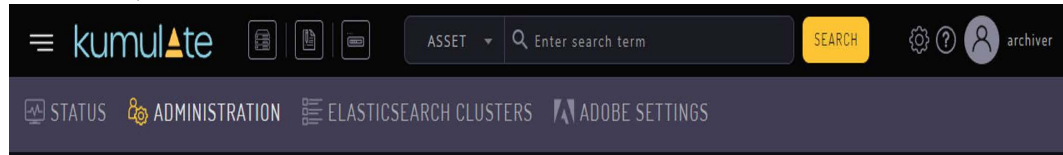
Metadata Parameter	Description
Format	The format of the metadata. The following options are available: Free: The metadata can have any value assigned by the user. Combo: The metadata value can be selected from a list of values or entered by the user. List: The metadata value can only be selected from 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. Use the Add Metadata button to add new asset or instance metadata.

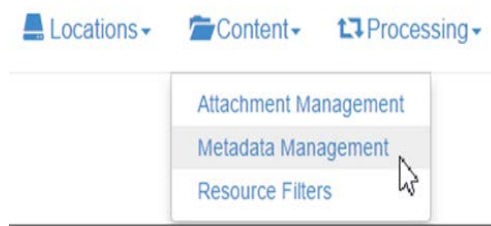
Add Custom Metadata

Custom metadata can be added from the Metadata Management screen. Administrators can now assign a default set of pinned metadata fields. Use the following procedure to add custom metadata:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Content > Metadata Management.



3. Click Add Metadata and enter the parameters for the new metadata element.

Add Metadata

OK

Metadata Management

Metadata ID: < Required

Metadata Name:

Metadata Format: Combo

Length: 20

Default Value:

Type: Asset

Display Mode: Visible

Mandatory: NO

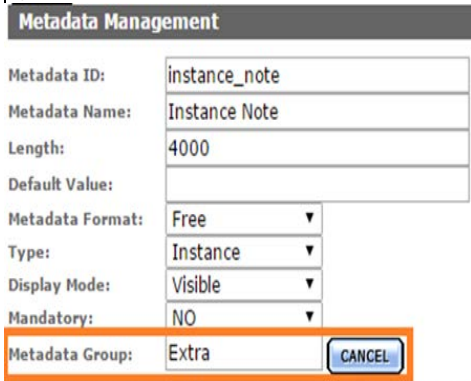
Metadata Group: Default

OK

The fields in the following table provide information about the metadata:

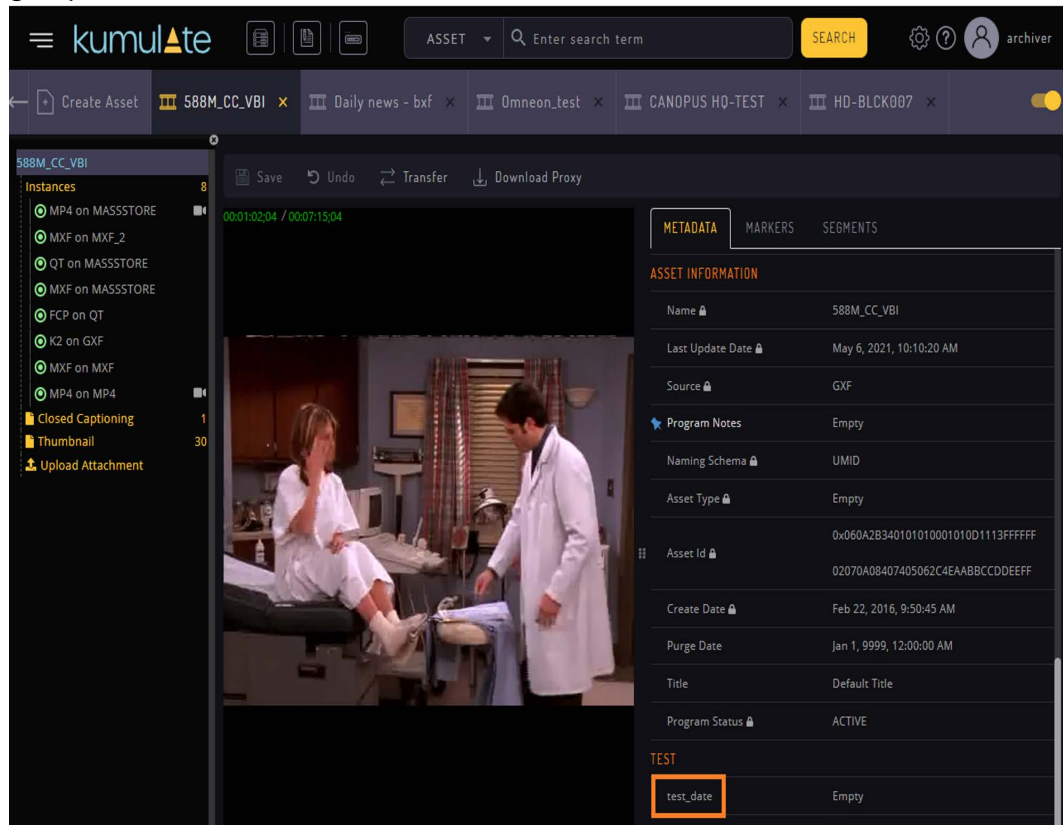
Metadata Parameter	Description
Metadata ID	The unique, internal metadata identifier. By convention, the ID is in lowercase characters with words separated by underscores (_).
Metadata Name	The name used to identify the metadata. This is the name used when the metadata is displayed and is the name that 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 Create 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>
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> 

4. Click OK to save.

If new asset metadata was added, it must be added to a group ACL to be visible by users. When viewing an asset or instance, the new metadata will be visible under its group.



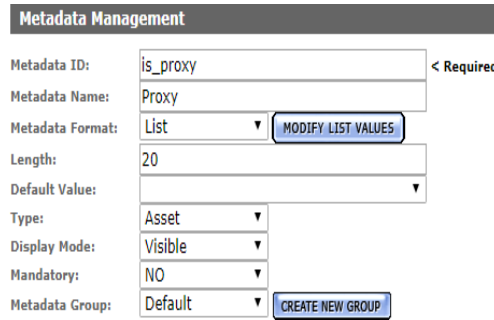
The screenshot shows the Kumulate interface with the following details:

- Asset Name:** 588M_CC_VBI
- Asset Information:**
 - Name: 588M_CC_VBI
 - Last Update Date: May 6, 2021, 10:10:20 AM
 - Source: GXF
 - Program Notes: Empty
 - Naming Schema: UMID
 - Asset Type: Empty
 - Asset Id: 0x060A2B340101010001010D113FFFFFF
 - Asset Id: 02070A08407405062C4EAABCCDDEEFF
 - Create Date: Feb 22, 2016, 9:50:45 AM
 - Purge Date: Jan 1, 9999, 12:00:00 AM
 - Title: Default Title
 - Program Status: ACTIVE
- TEST Section:**
 - test_date: Empty (highlighted with an orange box)

Create List Metadata

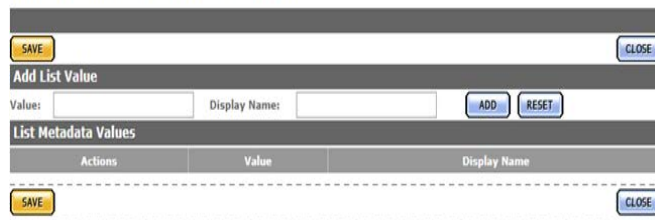
List metadata is metadata that uses pre-set values that can be selected from a list. Use the following procedure to create list metadata:

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 that will 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.

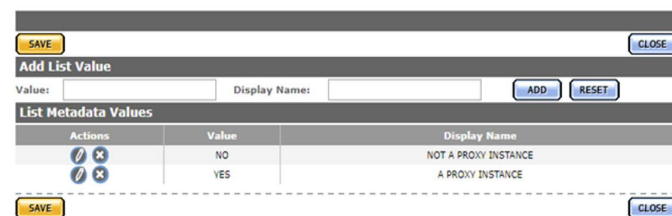
4. Click ADD to add the value to the list of values.

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

Metadata Management

Metadata ID: is_proxy < Required

Metadata Name: Proxy

Metadata Format: List

Length: 20

Default Value: **A PROXY INSTANCE**

Type: NOT A PROXY INSTANCE

Display Mode: A PROXY INSTANCE

Mandatory:

Metadata Group: Default

7. Set the rest of the parameters as required, then click OK to save.

Add Metadata

Metadata Management

Metadata ID: is_proxy < Required

Metadata Name: Proxy

Metadata Format: List

Length: 20

Default Value: NOT A PROXY INSTANCE

Type: Instance

Display Mode: Visible

Mandatory: NO

Metadata Group: Custom Metadata

The metadata can be set by choosing from the values in the list.

Kumulate interface showing metadata for 'Proxy'.

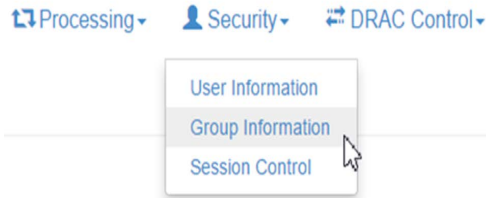
Metadata Name	Value
ÓÈÙÙáéíñóú	Empty
DAL	Empty
Subtitle Profile	Empty
Proxy	<ul style="list-style-type: none"> EMPTY NOT A PROXY INSTANCE PROXY INSTANCE NOT A PROXY INSTANCE
Defrag ID	
Storage Unit Status	
Storage Location Status	
VIDEO	
Video Height	1080
Frame Rate	29.97
Scan Mode	INTERLACED
Bit Depth	8
AFD	20
Video Width	1920
Gop Structure	IBBPBBBPBPB
Video Format	XDCAM

Add Custom Asset Metadata to an ACL

When new custom asset metadata is created, it must be added to group ACLs for users to be able to see the new metadata.

Use the following procedure to add custom asset metadata to an ACL:

1. After creating the new custom asset metadata, click Security > Group Information.

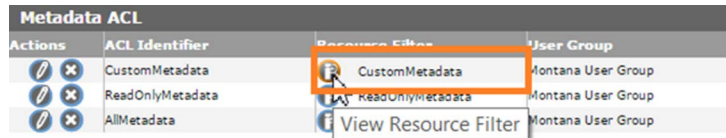


2. Select Future from the See rights pull down menu.

User Group Information

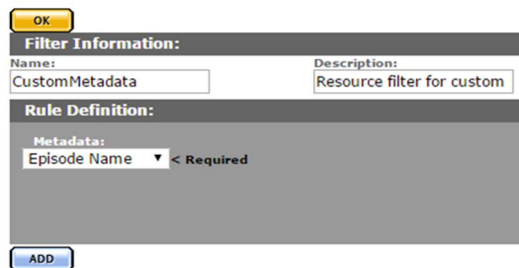


3. Click the Pencil icon next to the user group to modify.
4. Under Metadata ACL, click the metadata Resource Filter to add the new metadata to.



5. Select the new asset metadata to add to the ACL on the Modify Resource Filter page, then click ADD.

Modify Resource Filter



6. Click OK to save changes and return to the Modify User Group page.
7. Click OK to save changes to the user group and return to the User Group Information page.











Note: A hazard sign may appear next to the groups affected by the change to the resource filter.

8. Click Apply Changes for the changes to take effect.

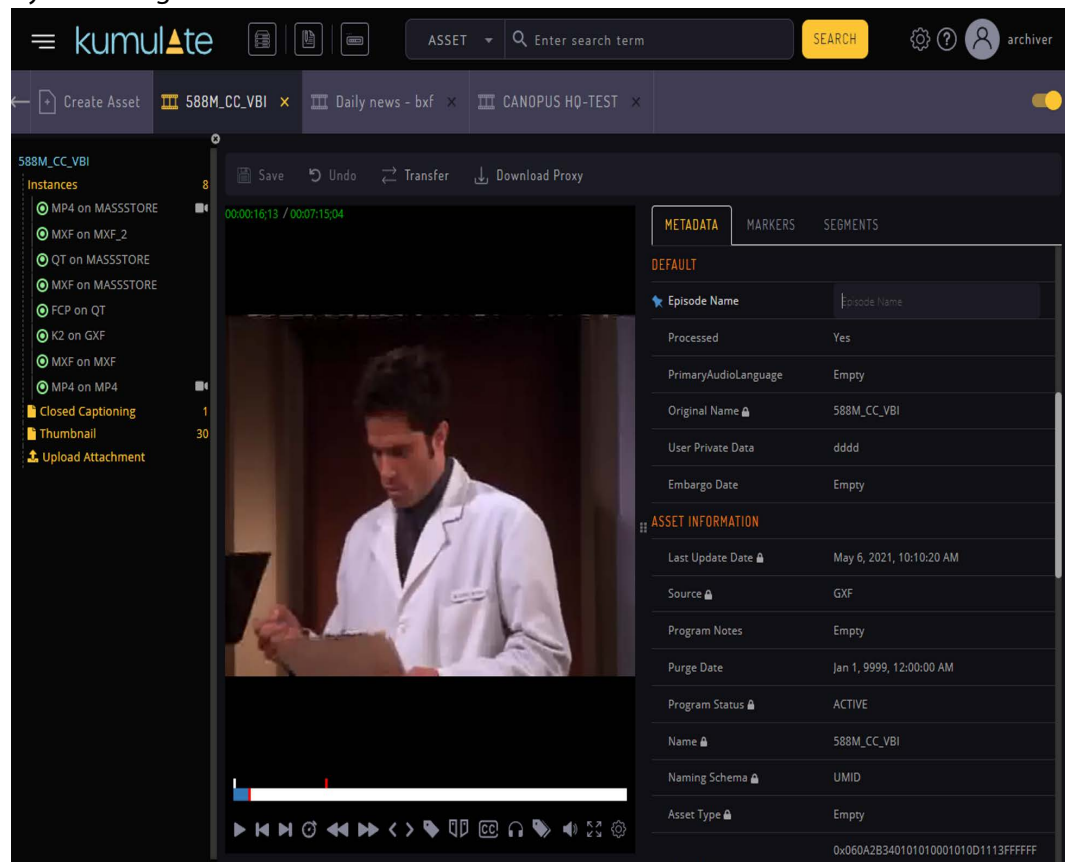
User Group Information

See rights: **Future**

ADD NEW USER GROUP CANCEL CHANGES APPLY CHANGES

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

The new asset metadata will now be visible to users belonging to the groups affected by the change.

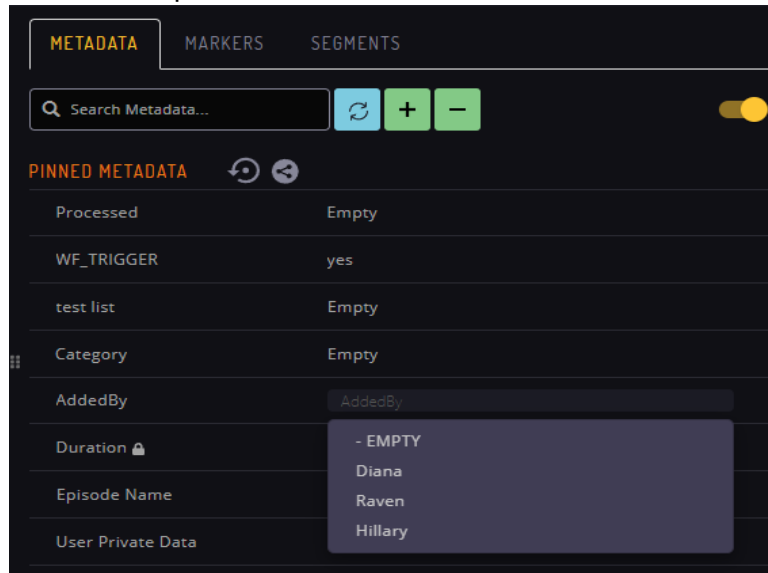


The screenshot shows the Kumulate web interface. At the top, there's a search bar and user profile for 'archiver'. Below that, a navigation bar shows 'Create Asset' and several asset tabs: '588M_CC_VBI', 'Daily news - bxf', and 'CANOPUS HQ-TEST'. The main content area is split into three parts:

- Left Panel:** A tree view for '588M_CC_VBI' showing various instances like 'MP4 on MASSSTORE', 'MXF on MXF_2', etc., along with 'Closed Captioning', 'Thumbnail', and 'Upload Attachment' options.
- Center Panel:** A video player showing a man in a white lab coat. The timeline at the bottom indicates '00:00:16:13 / 00:07:15:04'.
- Right Panel:** A metadata editor for the selected asset. It has tabs for 'METADATA', 'MARKERS', and 'SEGMENTS'. Under 'METADATA', there are sections for 'DEFAULT' (with fields like Episode Name, Processed, PrimaryAudioLanguage, Original Name, User Private Data, Embargo Date) and 'ASSET INFORMATION' (with fields like Last Update Date, Source, Program Notes, Purge Date, Program Status, Name, Naming Schema, Asset Type, and Asset Id).

Delete Unused Combo Metadata

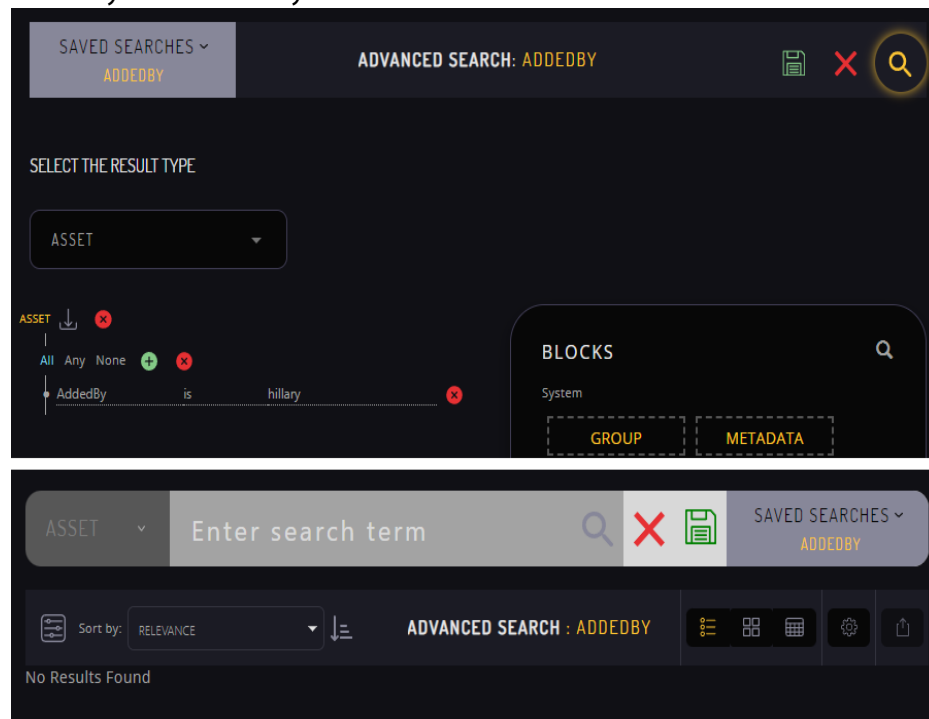
Combo metadata is metadata where the value is entered manually and then stored in the database. When editing a combo metadata, any previously used values will be available in a pull down menu.



All previously-used values will be available in the pull down menu regardless of whether these values are currently assigned to the metadata.

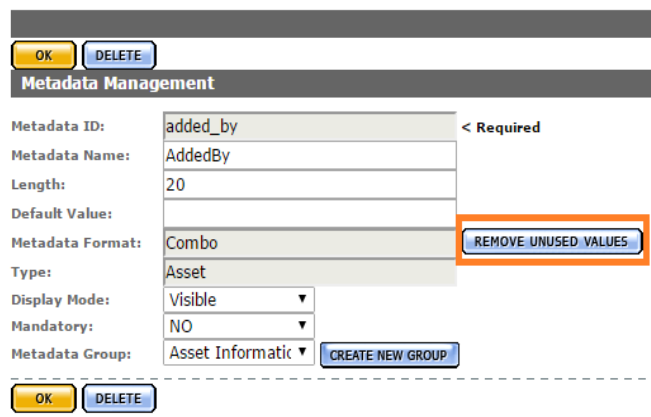
For example, if the AddedBy metadata had once been assigned three different values, all three of these values are made available as options in the pull-down menu.

The search will return no results if a search is performed for a metadata value that is not used anywhere in the system.

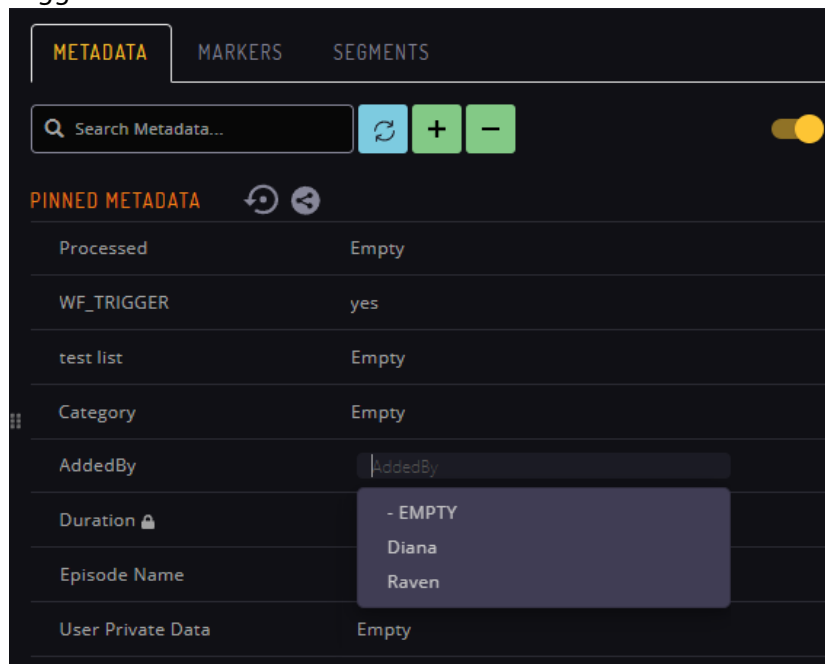


The Remove Unused Values button removes any combo metadata values that are no longer assigned to the metadata.

Modify Metadata



These values will no longer appear in any pull down menus of metadata value suggestions.



Note: The Kumulate web interface will need to be reloaded for the changes to take effect. The cache may also need to be cleared.

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 will not impact workflows, transcodes, or groups.

- [Adding an Asset Resource Filter](#)
- [Add an Instance Resource Filter](#)
- [Audio Metadata in Non-ACL Instance Resource Filters](#)
- [Add a Metadata Resource Filter](#)
- [Add a Storage Location Resource Filter](#)
- [Add an Attachment Template Resource Filter](#)
- [Add a Video Essence Resource Filter](#)
- [Add an Audio Essence Resource Filter](#)
- [Using Date Metadata in a Resource Filter](#)
- [Metadata-Based Resource Filter Search](#)

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.

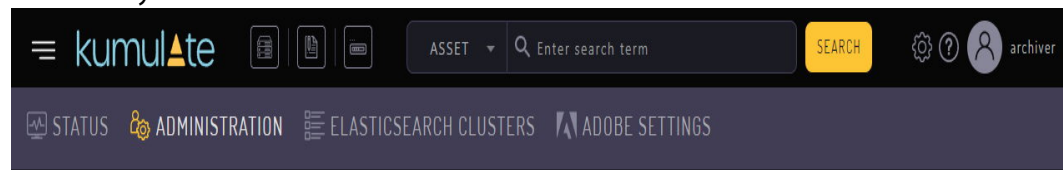
Type of Resource Filter	Description
Asset	Selects assets with metadata that matches the defined criteria.
Instance	Selects instances with metadata that matches the defined criteria.
Metadata	Selects only the listed metadata elements.
Storage Location	Selects only the listed storage locations.
Attachment 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

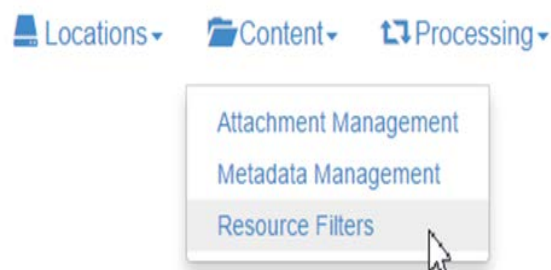
Asset Resource Filters select assets based on metadata values. They are used in workflows and group ACLs (Access Control Lists). Always ensure that any changes made to an Asset Resource Filter will not negatively affect existing workflows or groups.

Use the following procedure to create an Asset Resource Filter from the Resource Filters page:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Content > Resource Filters.



- Asset Resource Filters can be used in workflows and ACLs. If the resource filter will be used in a group ACL, select Future ACL Filters from the Type pull down menu.

Resource Filters

- If the resource filter will be used in a workflow, select Non ACL Filters from the Type pull down menu.

Resource Filters

- Click Add New Resource Filter and give the resource filter a useful name and description. Select Asset from the Type pull down menu.

- Click OK.
- On the Modify Resource Filter page, enter the asset metadata to use as a filter.
 - Select the metadata from the Metadata pull down menu.

- Enter the metadata value. The resource filter will select instances that satisfy the metadata conditions.

The Program Status metadata value can be selected from a pull down menu, or entered using the text box.

All other metadata values are entered using the text box.

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.

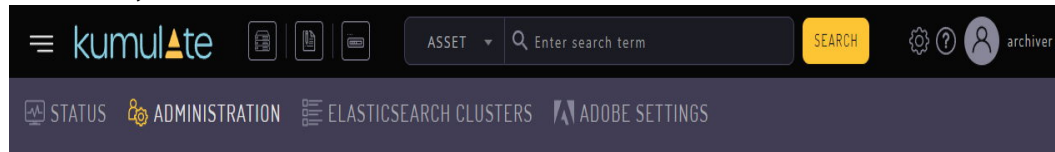
- c. Click Add to save the metadata condition.
 - d. Repeat these steps for each attachment to include in the resource filter.
8. Click OK to save the resource filter.

Add an Instance Resource Filter

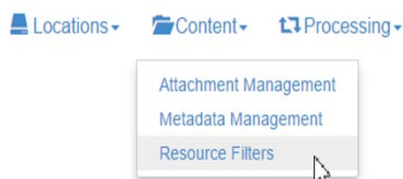
Instance Resource Filters select instances based on metadata values. They are used in workflows and group ACL (Access Control Lists). Always ensure that any changes made to an Instance Resource Filter will not negatively affect existing workflows or groups.

Use the following procedure to create an Instance Resource Filter from the Resource Filters page:

1. Click System > Administration in the menu bar in the Kumulate web interface.

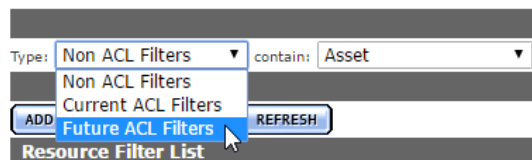


2. Select Content > Resource Filters.



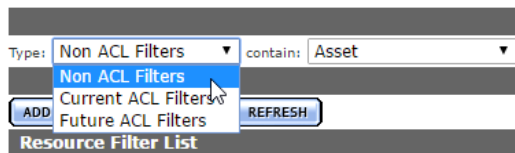
3. Instance Resource Filters can be used in workflows and ACLs. If the resource filter will be used in a group ACL, select Future ACL Filters from the Type pull down menu.

Resource Filters



4. If the resource filter will be used in a workflow, select Non ACL Filters from the Type pull down menu.

Resource Filters

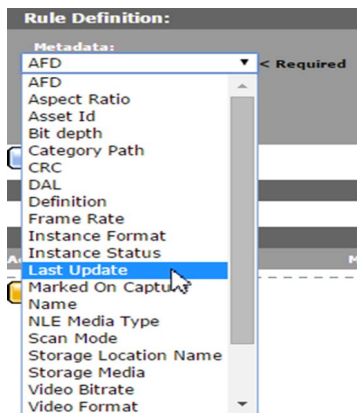


5. Click Add New Resource Filter and give the resource filter a useful name and description. Select Instance from the Type pull down menu.



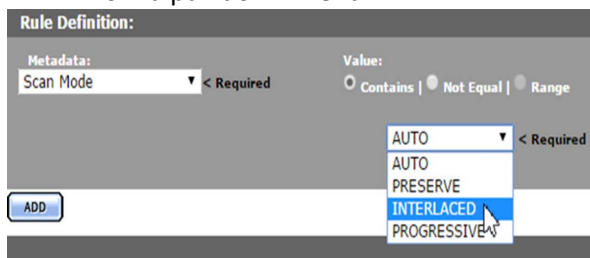
6. Click OK.

7. On the Modify Resource Filter page, enter the asset metadata to use as a filter.
 - a. Select the metadata from the Metadata pull down menu.

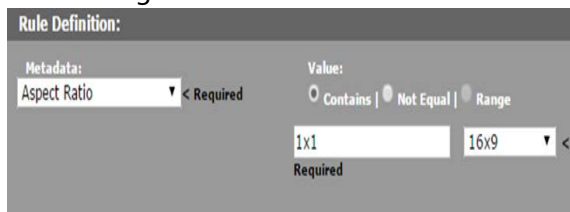


- b. Enter the metadata value. The resource filter will select instances that satisfy the metadata conditions.

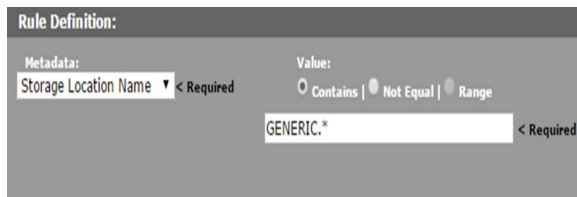
The AFD, Frame Rate, and Scan Mode metadata values are selected exclusively from a pull down menu.



The Aspect Ratio, Instance Format, Instance Status, Storage Media, and Video Format metadata values can be selected from a pull down menu, or entered using the text box.



All other metadata values are entered using a text box.



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.

Rule Definition:

Metadata: Last Update < Required

Value: Contains | Not Equal | Range

From: Current Date - 24 hours

To: Current Date + 0 hours

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.
8. Click OK to save the resource filter.

Audio Metadata in Non-ACL Instance Resource Filters

Audio metadata can be used to select instances in non-ACL Instance Resource Filters.

Note: Metadata must be extracted from instances before using these resource filters.

Types of Audio Metadata

Instances 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 an instance.

Metadata	Description
Audio.Bit depth	Used to filter instances by the bit depth of one or more of their audio essences.
Audio.Bitrate	Used to filter instances by the bitrate of one or more of their audio essences.
Audio.Block align	Used to filter instances by the block align of one or more of their audio essences.
Audio.Sample rate	Used to filter instances by the sample rate of one or more of their audio essences.
Audio.Codec	Used to filter instances by the codec used in one or more of their audio essences.
Audio.Channels	Used to filter instances by the number of channels in one or more of their audio essences.
Audio.Channel count	Used to filter instances by the total number of channels over all its essences.
Audio.Essence count	Used to filter instances 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 visible 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 instances 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 instances 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 instances 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, meaning that the lower and upper limits will be included in the range.

Use the * to match the metadata to any essence in the instance.

For example, to select instances that have at least one essence with a bit depth of 16, enter * in the Essence no: field.

Rule Definition:

Metadata: < Required



Value: Contains | Not Equal | Range

Essence no:



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 appear 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 appear 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 appear 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 appear in the value:

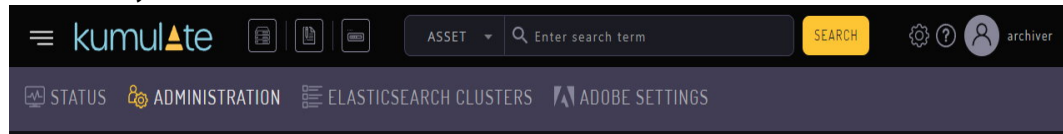
Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
 	<input type="checkbox"/>	Audio.Bit depth	Contains	*,16

Add a Metadata Resource Filter

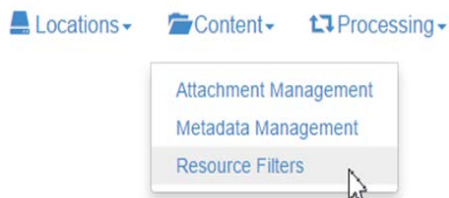
Metadata Resource Filters select the listed metadata elements and are used to limit the metadata elements a user group can access. They are generally used in ACLs.

Use the following procedure to create a Metadata Resource Filter from the Resource Filters page:

1. Click System > Administration in the menu bar in the Kumulate web interface.

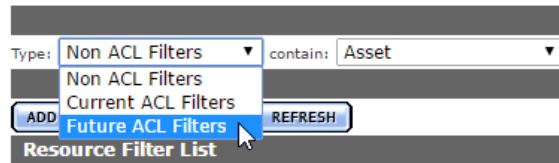


2. Select Content > Resource Filters.



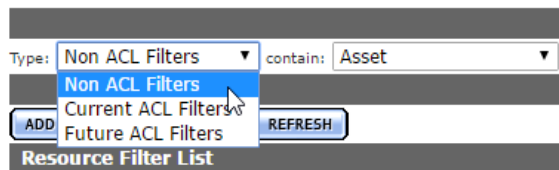
3. Metadata Resource Filters can be used in workflows and ACLs. If the resource filter will be used in a group ACL, select Future ACL Filters from the Type pull down menu.

Resource Filters

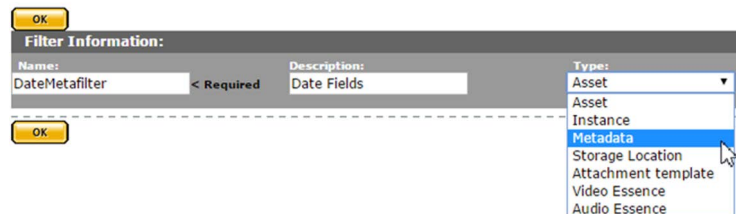


4. If the resource filter will be used in a workflow, select Non ACL Filters from the Type pull down menu.

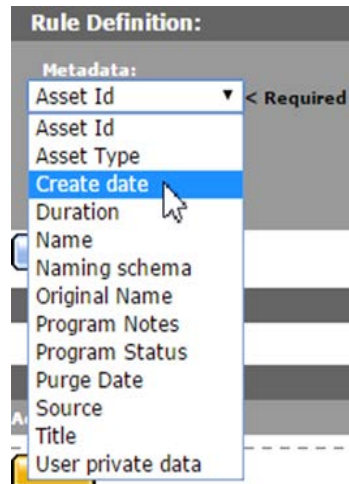
Resource Filters



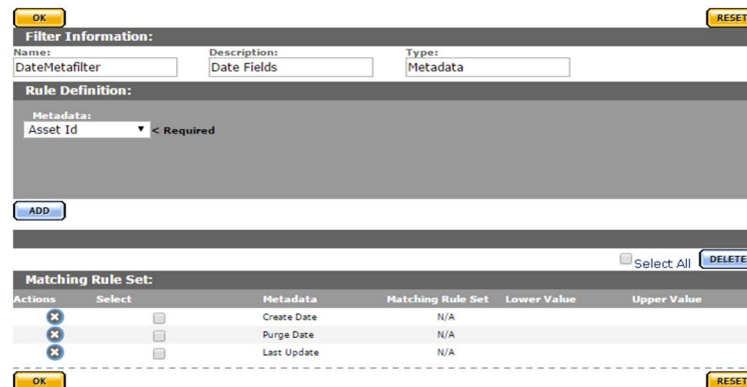
5. Click Add New Resource Filter and give the resource filter a useful name and description. Select Metadata from the Type pull down menu.



6. Click OK.
7. On the Modify Resource Filter page, enter the asset metadata to use as a filter.
 - a. Select the metadata from the Metadata pull down menu.



- b. Click Add to save the metadata element.
 - c. Repeat these steps for each attachment to include in the resource filter.
8. Click OK to save the resource filter.

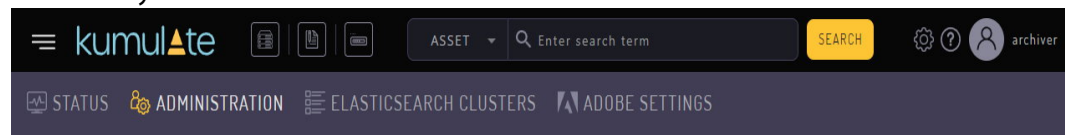


Add a Storage Location Resource Filter

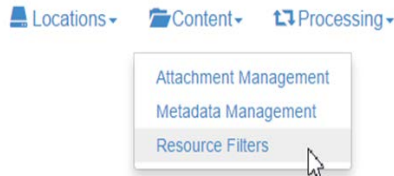
Storage Location Resource Filters are a list of storage locations. They can be modified from Group Settings or from the Resource Filters page. Always ensure that any changes made to a Storage Location Resource Filter will not negatively affect group configurations.

Use the following procedure to create a Storage Location Resource Filter from the Resource Filters page:

1. Click System > Administration in the menu bar in the Kumulate web interface.

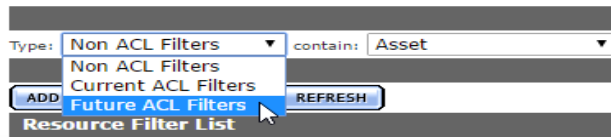


2. Select Content > Resource Filters.



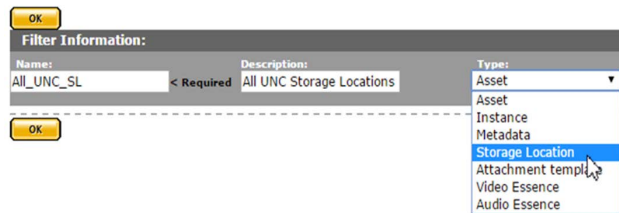
3. Storage Location Resource Filters are used exclusively in group ACLs (Access Control Lists). Select Future ACL Filters from the Type pull down menu.

Resource Filters



4. Click Add New Resource Filter.

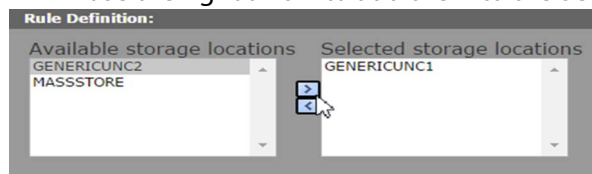
5. Give the resource filter a useful name and description. Select Storage Location from the Type pull down menu.



6. Click OK.

7. On the Modify Resource Filter page, select the storage locations returned by this filter.

a. Select storage locations from the left hand 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 will be added to the Matching Rule Set list.

Matching Rule Set:

Actions	Select	Metadata	Matching Rule Set	Lower Value
<input checked="" type="checkbox"/>	<input type="checkbox"/>	MASSSTORE	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	GENERICUNC1	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	GENERICUNC2	N/A	

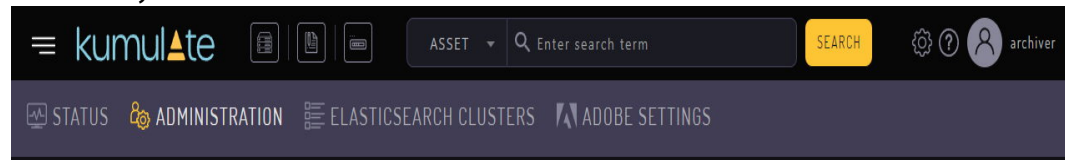
8. Click OK to save the resource filter.

Add an Attachment Template Resource Filter

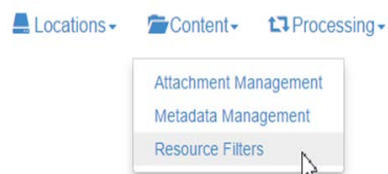
Attachment Template Resource Filters select attachments created by specific user groups, using specific templates. They are used by ACLs (Access Control Lists). Always ensure that any changes made to an Attachment Template Resource Filter will not negatively affect group configurations.

Use the following procedure to create an Attachment Template Resource Filter from the Resource Filters page:

1. Click System > Administration in the menu bar in the Kumulate web interface.

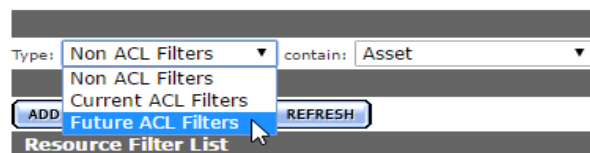


2. Select Content > Resource Filters.



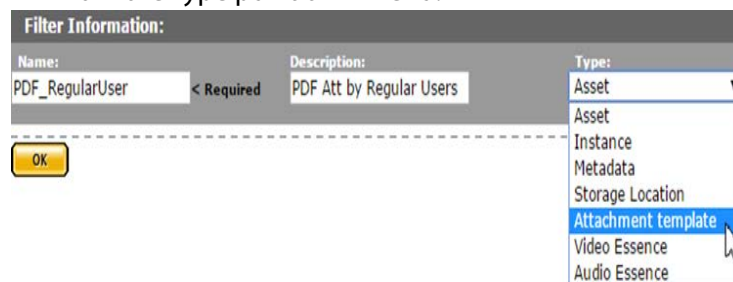
3. Attachment Template Resource Filters are used exclusively in group ACLs (Access Control Lists). Select Future ACL Filters from the Type pull down menu.

Resource Filters



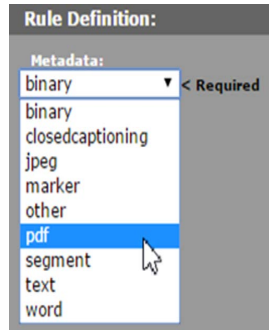
4. Click Add New Resource Filter.

5. Give the resource filter a useful name and description. Select Attachment Template from the Type pull down menu.

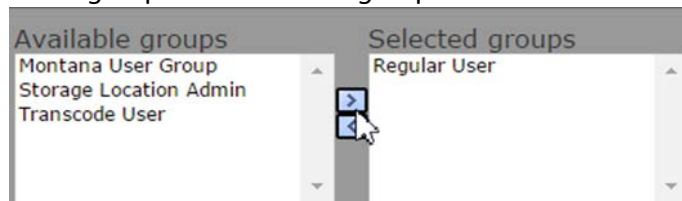


6. Click OK.

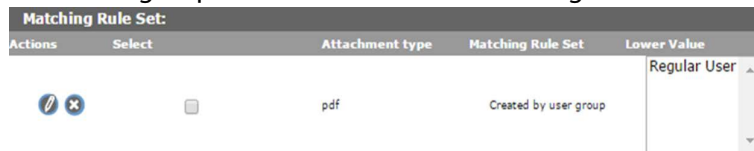
7. On the Modify Resource Filter page, add the attachments created by the specific user groups that will be returned by this filter.
 - a. Select an attachment template from the Metadata pull down menu. The menu will show all built-in attachment templates, as well as any user-created templates.



- 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.
 - d. The group will be added to the Matching Rule Set list.



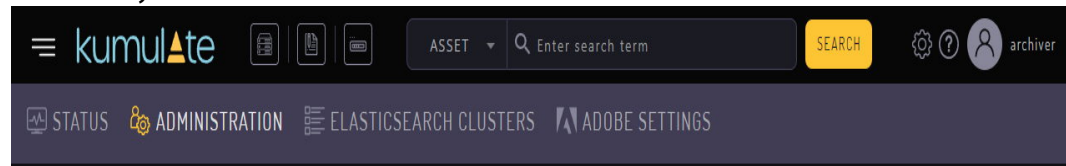
- e. Repeat these steps for each attachment to include in the resource filter.
8. Click OK to save the resource filter.

Add a Video Essence Resource Filter

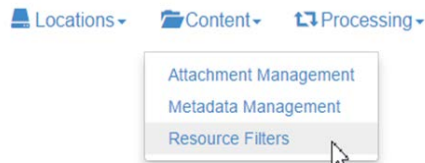
Video Essence Resource Filters select instances based on their video metadata. They are used in workflows and transcode profiles. Always ensure that any changes made to a Video Essence Resource Filter will not negatively affect existing workflows and transcode profiles.

Use the following procedure to create a Video Essence Resource Filter from the Resource Filters page:

1. Click System > Administration in the menu bar in the Kumulate web interface.

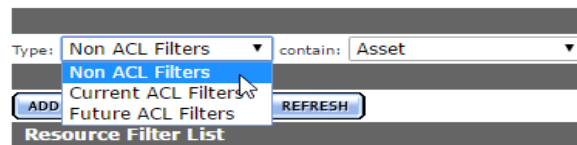


2. Select Content > Resource Filters.



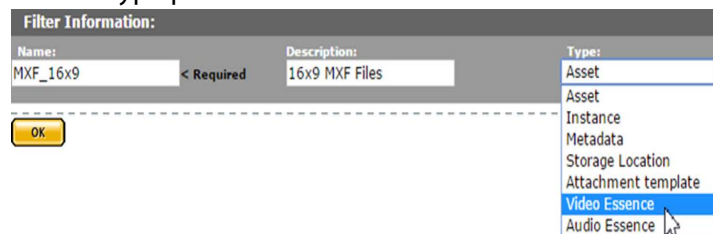
3. Video Essence Resource Filters are not used in ACLs. Select Non ACL Filters from the Type pull down menu.

Resource Filters



4. Click Add New Resource Filter.

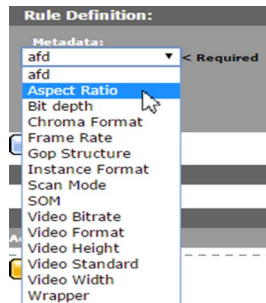
5. Give the resource filter a useful name and description. Select Video Essence from the Type pull down menu.



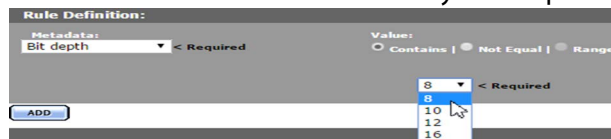
6. Click OK.

7. On the Modify Resource Filter page, add the attachments created by the specific user groups that will be returned by this filter.

a. Select the metadata from the Metadata pull down menu.

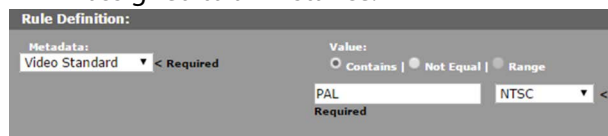


b. Enter the metadata value. The resource filter will select instances that satisfy the metadata conditions. The afd, Bit depth, Frame Rate, and Scan Mode metadata values are selected exclusively from a pull down menu.



The Aspect Ratio, Chroma Format, GOP Structure, Instance Format, Video Format, and Video Standard metadata values can be selected from a pull down menu, or entered using the text box.

A value entered into the text box will be added to the pull down menu if it is also assigned to an instance.



The SOM, Video Bitrate, Video Height, Video Width, and Wrapper metadata values are entered in the text box.



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.

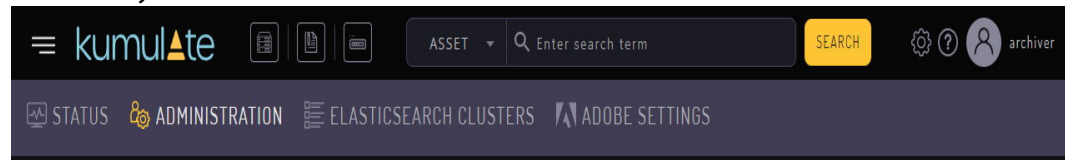
8. Click OK to save the resource filter.

Add an Audio Essence Resource Filter

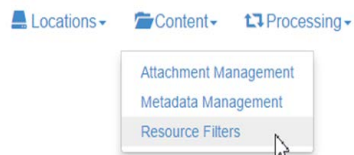
Audio Essence Resource Filters select instances based on their audio metadata. They are used in workflows and transcode profiles. Always ensure that any changes made to an Audio Essence Resource Filter will not negatively affect existing workflows and transcode profiles.

Use the following procedure to create an Audio Essence Resource Filter from the Resource Filters page:

1. Click System > Administration in the menu bar in the Kumulate web interface.

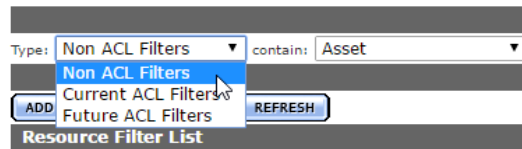


2. Select Content > Resource Filters.



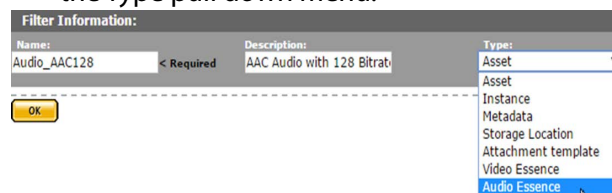
3. Audio Essence Resource Filters are not used in ACLs. Select Non ACL Filters from the Type pull down menu.

Resource Filters



4. Click Add New Resource Filter.

5. Give the resource filter a useful name and description. Select Audio Essence from the Type pull down menu.



6. Click OK.

7. On the Modify Resource Filter page, enter the audio metadata to use to filter instances.

a. Select the metadata from the Metadata pull down menu.

Rule Definition:

Metadata: Bit Depth < Required

Bit Depth

Bitrate

Codec

Number of channels

Sample Rate

b. Enter the metadata value. The resource filter will select instances 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.

Rule Definition:

Metadata: Bitrate < Required

Value: Contains | Not Equal | Range

128 < Required

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 pull down menu or entered in the text box. The Range option is disabled for codec metadata.

Rule Definition:

Metadata: Codec < Required

Value: Contains | Not Equal | Range

AAC < Required

MPEG

MPEG

PCM

AIFF

AES3

AAC

AC3

WMA

ADD

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; meaning the metadata contains date, hour, minute, and second information.

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 does not 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 with a '< Required' label. 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 a '<' symbol. Below this, the format 'yyyy mmm dd' is shown. The 'To' field is set to 'Date' with a dropdown menu, followed by '2016 - Jan - 02' and a '<' symbol. Below this, the format 'Required yyyy mmm dd' is shown.

Because the upper limit of the range is not included, this range only matches assets with a Create Date of January 1, 2016.

Metadata-Based Resource Filter Search

In some cases it may be necessary to find all the resource filters that use specific metadata. For example, this may be necessary in cases where metadata needs to be deleted or replaced.

Searching for resource filters is accomplished using the search bar at the top of the Resource Filter list.

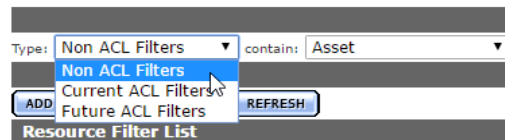
Resource Filters



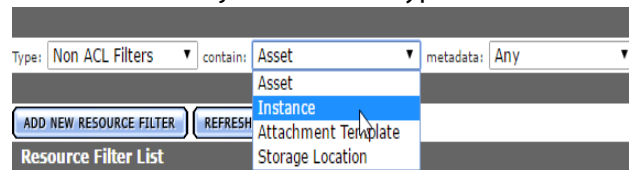
Use the following procedure to search resource filter metadata:

1. Select the type of resource filter to search.

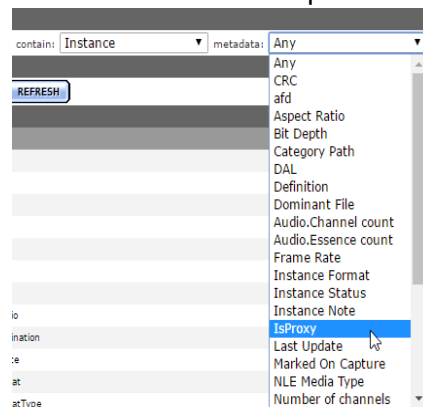
Resource Filters



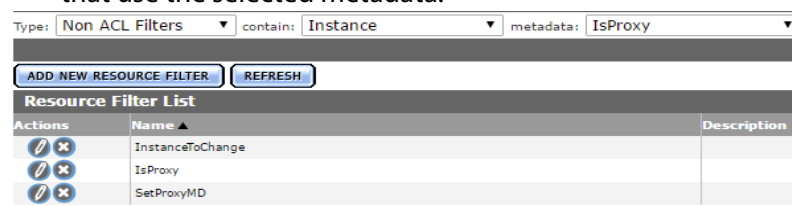
2. Select the object metadata type.



3. Select the metadata. Only the metadata associated with the object type selected will be visible in the pull down menu.



4. After the metadata is selected, the Resource Filter list will only show resource filters that use the selected metadata.



Access Control Lists and Access Privileges

User access to Kumulate is regulated by the access controls and privileges assigned to groups.

ACLs (Access Control Lists) use resource filters to give groups access to specific assets, instances, attachments, locations, and metadata. Access Privileges are used to give group access to administrative tasks.

It is important to understand how ACLs and access privileges work together before creating a user group.

- [Access Control Lists](#)
- [Access Privileges](#)
- [Privileges and Permissions for Common Operations](#)

Access Control Lists

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](#)
- [Metadata](#)
- [Attachment Template](#)
- [Asset and Instance](#)

Storage Location

The ACL for storage locations 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 does not have modify access to a location they will not see the location as a transcode or transfer destination.

Metadata

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

Attachment Template ACLs give a group's users permission to access asset attachments. These include marks, segments, closed captions, formatsheets, 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

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 visible unless the asset is visible. Assets must have at least View permissions for the instances within them to be visible.

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](#)
- [Instance Access](#)
- [Administrative Functions](#)
- [Proxy Access](#)
- [Cancel Operations and Priority Changes](#)

Storage Location Administration

A Storage Administrator group and a default Storage User were added in release 2.0 to 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

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

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 Functions

The Administration Privileges set the access privileges for the entire administration section of the Kumulate web interface. 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, and so on.
Modify	Users in the group can modify and view configurations, but cannot create nor delete elements such as storage locations, groups, resource filters, and so on.
Read	Users in the group can only view configurations, but cannot modify, create, or delete elements such as storage locations, groups, resource filters, and so on.
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 will be 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

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 sections outline the minimum group privileges and permissions needed for common operations.

Privileges and Permissions for Searching

Searching requires access to the metadata of the objects being searched and read access to the objects 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 does not have access to will not 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 does not have access to will not 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 does not 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 does not have permission to access the cache, users in the group will be 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 does not 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 [Add 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 will be unable to view, modify, or delete the marks they have created if the Group Name is not added to the resource filter. See [Add 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 [Add 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 will be unable to view, modify, or delete the segments they have created. See [Add 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 an 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 for details.

Groups and Users

Access to Kumulate is accomplished through its groups.

Each Kumulate group specifies how users assigned to it interact with Kumulate. Access privileges and controls are used to grant access to features, assets, instances, attachments, locations, and metadata.

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

The Montana User Group, Transcode Engine Group, and News Group are created by default.

The Montana User Group gives users full read and write administration privileges for the entire Kumulate system.

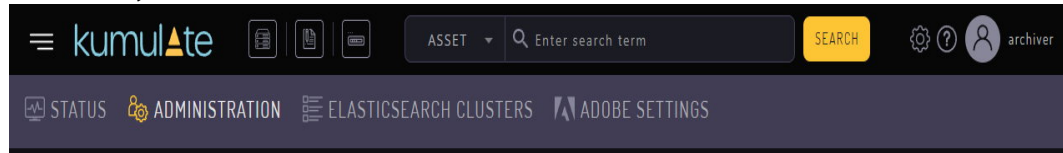
The Transcode Engine Group is used internally by the transcode engine.

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

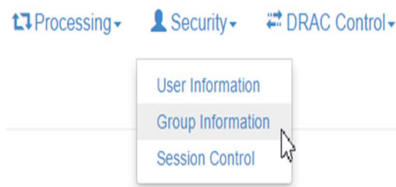
Creating a New Group

Use the following procedure to create a new group:

1. Click System > Administration in the menu bar in the Kumulate web interface.

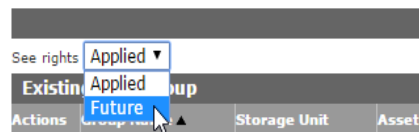


2. Select Security > Group Information.



3. Enable editing by selecting Future from the See rights pull down menu.

User Group Information



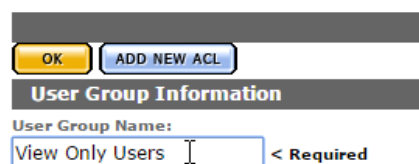
4. Click Add New User Group to create a new group.

User Group Information



5. On the Create User Group page enter a name for the group in the User Group Name text box and then continue to the following section describing [Setting Group Privileges and Permissions](#).

Add User Group



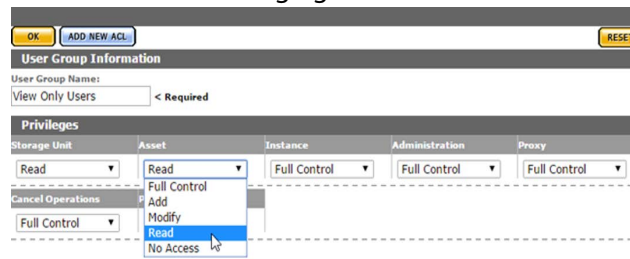
Setting Group Privileges and Permissions

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.

Access privileges control which parts of the Kumulate system users in the group can access.

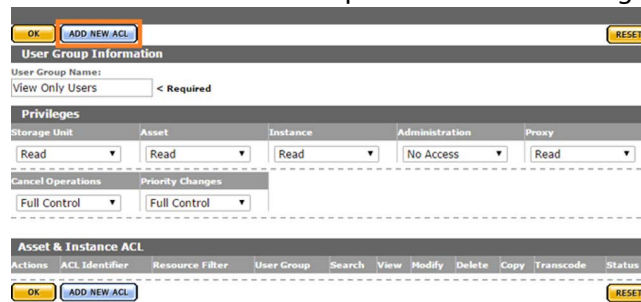
Group access to administrative functions is set using the privilege pull down menus as shown in the following figure:



After the privileges are set, you must add permissions to particular resources by adding ACLs. ACLs need to be set for storage locations, metadata, attachments, assets, and instances. If an ACL is not set for any of these items, the users will not have access to them at all.

Use the following procedure to add an ACL to a group:

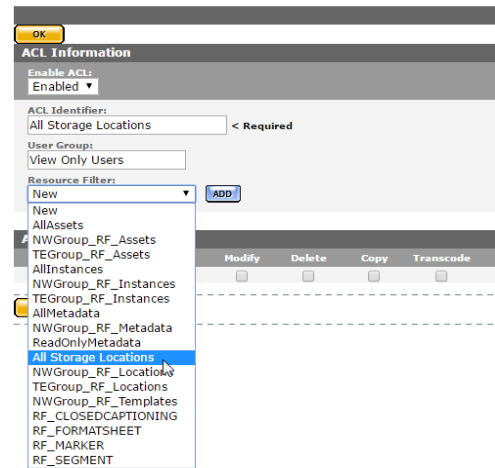
1. Click Add New ACL to open the Add ACL dialog.



2. 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 pull down menu.

Resource filters are used to select particular assets, instances, storage locations, metadata, and attachments based on a set of requirements.

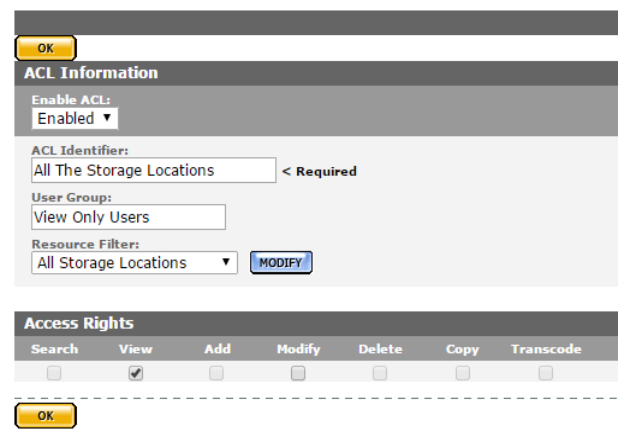
Add ACL



Note: The selected Resource Filter can be modified. However, modifying a resource filter will modify all ACLs and groups that use that filter. It is recommended to 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



Add as many ACLs as required. The ACLs will be grouped according to type.

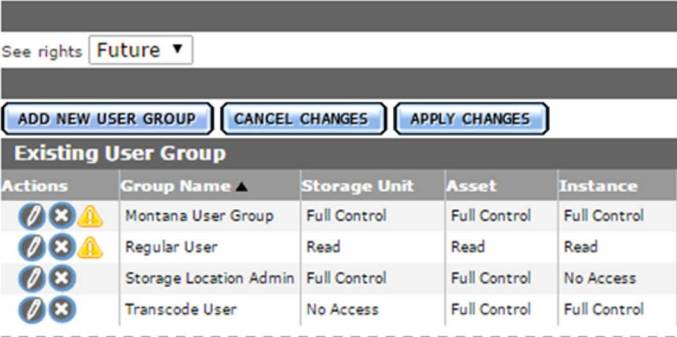
User Group Information									
User Group Name: <input type="text" value="MS RESTRICTED"/> Required									
Privileges									
Storage Unit	Asset	Instance	Administration	Proxy					
<input type="text" value="Read"/>	<input type="text" value="Read"/>	<input type="text" value="Read"/>	<input type="text" value="No Access"/>	<input type="text" value="Read"/>					
Cancel Operations		Priority Changes							
<input type="text" value="No Access"/>		<input type="text" value="No Access"/>							
Storage Location ACL									
Actions	ACL Identifier	Resource Filter	User Group	View	Status				
<input type="checkbox"/>	Storage Locations	All Storage Locations	MS RESTRICTED	<input checked="" type="checkbox"/>	Enabled				
Metadata ACL									
Actions	ACL Identifier	Resource Filter	User Group	Search	View	Modify	Status		
<input type="checkbox"/>	Metadata	AllMetadata	MS RESTRICTED	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Enabled		
Attachment Template ACL									
Actions	ACL Identifier	Resource Filter	User Group	Add	View	Modify	Delete	Status	
<input type="checkbox"/>	Closed_Caption	RF_CLOSEDCAPTIONING	MS RESTRICTED		<input checked="" type="checkbox"/>			Enabled	
<input type="checkbox"/>	Segments	RF_SEGMENT	MS RESTRICTED		<input checked="" type="checkbox"/>			Enabled	
<input type="checkbox"/>	Markers	RF_MARKER	MS RESTRICTED		<input checked="" type="checkbox"/>			Enabled	
Asset & Instance ACL									
Actions	ACL Identifier	Resource Filter	User Group	View	Modify	Delete	Copy	Transcode	Status
<input type="checkbox"/>	Assets	AllAssets	MS RESTRICTED	<input checked="" type="checkbox"/>					Enabled
<input type="checkbox"/>	Instances	AllInstances	MS RESTRICTED	<input checked="" type="checkbox"/>					Enabled
<input type="button" value="OK"/>		<input type="button" value="VIEW USERS"/>	<input type="button" value="ADD NEW ACL"/>				<input type="button" value="RESET"/>		

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

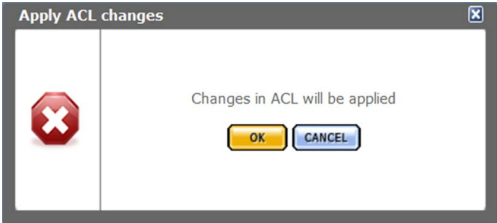
Applying Changes Made to a Group

Clicking OK will not 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 will remain next to the group until all the changes are either applied or canceled.

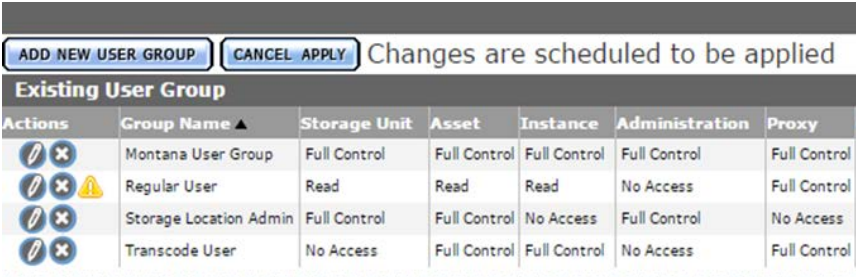
User Group Information



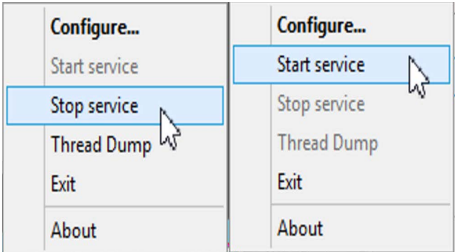
Click Apply Changes. A confirmation dialog will open; click OK to continue.



Changes to the Asset and Instance 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 appears after the dialog box closes.



Stop and start the Tomcat server to restart Kumulate.











The attention symbol will disappear after the changes are applied.

See rights **Future** ▼

ADD NEW USER GROUP

Existing User Group

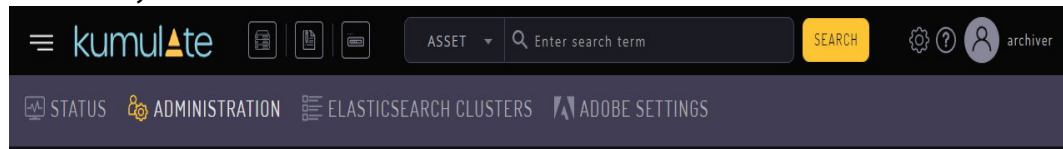
Actions	Group Name ▲	Storage Unit	Asset	Instance
 	Montana User Group	Full Control	Full Control	Full Control
 	Regular User	Read	Read	Read
 	Storage Location Admin	Full Control	Full Control	No Access
 	Transcode User	No Access	Full Control	Full Control

Creating a New Kumulate User

When a user is created, it is assigned to a group which controls its access and privileges. Because of this workflow, users should be added to Kumulate after their groups have been created. A user's group can be changed after the user has been created.

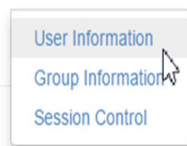
Use the following procedure to create a new user:

1. Log in to the Kumulate web interface with the mntn account, or any account with full administrative privileges.
2. Click System > Administration in the menu bar in the Kumulate web interface.



3. Select Security > User Information.

Processing Security DRAC Control



4. Click Add New User on the User Information page and enter the following information for the user:

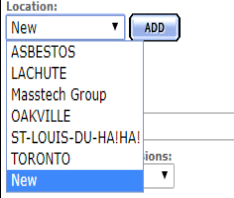
Add New User

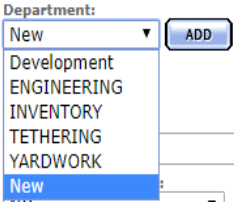
OK
RESET

User Information

<p>User ID: <input type="text"/> < Required</p> <p>Password: <input type="password"/> < Required</p> <p>User Name: <input type="text"/></p> <p>Location: <input type="text"/> ADD</p> <p>Language: <input type="text"/> EN_US</p> <p>Phone Number: <input type="text"/></p> <p>Allow multiple login sessions: <input type="text"/> NO</p>	<p>Use Alias on MMP query: <input type="text"/> NO</p> <p>Re Enter Password: <input type="password"/> < Required</p> <p>User Group: <input type="text"/> Montana User Group</p> <p>Department: <input type="text"/> ADD</p> <p>Email Address: <input type="text"/></p> <p>Active Directory User: <input type="text"/> NO</p>
--	--

OK
RESET

Parameter	Description
User ID	The ID the user will use to log in to Kumulate. This is required.
Password	The user's Kumulate password. This is required.
User Name	The user's actual name. This is not the name used to log in.
Location	<p>The user's location. The pull down menu is populated with Masstech Group by default, and by any previously-entered locations.</p> <p>A new location can be entered by selecting New, then clicking ADD and entering the new location in the text box.</p> <p>This is required.</p> 
Allow multiple login sessions	Allows the user to be logged in to Kumulate multiple times simultaneously. This is useful in cases where the user may be logged in through the web interface from multiple locations.
Use Alias on MMP query	Allows using an alias for MMP queries rather than the User ID.

Parameter	Description
User Group	The group assigned to this user; this is required.
Department	<p>The user's department. The pull down menu is populated with Development by default, and by any previously-entered departments.</p> <p>A new department can be entered by selecting New, then clicking ADD and entering the new department in the text box.</p> <p>This is required.</p>  <p>The screenshot shows a 'Department:' label above a dropdown menu. The dropdown menu is open, showing 'New' at the top, followed by 'Development', 'ENGINEERING', 'INVENTORY', 'TETHERING', and 'YARDWORK'. The 'New' option is highlighted in blue. To the right of the dropdown menu is a blue 'ADD' button. Below the dropdown menu are two empty text input fields.</p>
Active Directory User	Identifies whether the user is an Active Directory user.

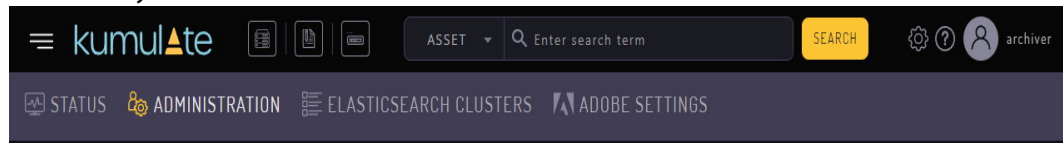
5. Click OK to create the user.

Managing User Sessions

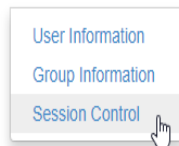
A list of all users connected to the Kumulate system can be viewed from the Session Control page.

Use the following procedure to view the Session Control page:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Security > Session Control.



3. A list of all users currently connected to Kumulate will be visible as shown on the following figure:

Session Control

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

Parameter	Description
User ID	The user connected to Kumulate.
IP Address	The IP address from where the user has connected to Kumulate.
Connections	The number of connections this user has made from this IP address to Kumulate.
Time Out	The amount of 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. The system will not ask for confirmation of this action.

Authentication, Authorization, and Access Control

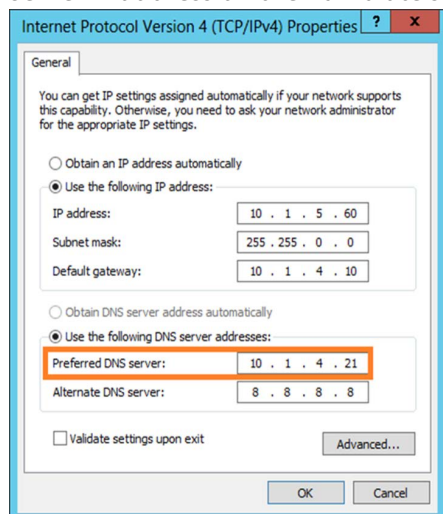
Kumulate User Groups control access to the Kumulate system. Each group sets privileges and access levels for the users in the group. Authentication is accomplished either through Kumulate, or optionally, through LDAP or SSO (Single Sign On).

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 host.

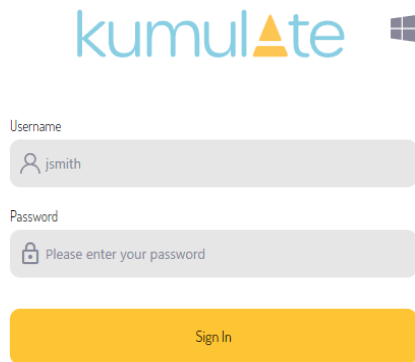


Enable Optional Single Sign-On Authentication

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, the 'kumulate' logo is displayed in blue, followed by a small Windows logo icon. Below the logo, there are two input fields: 'Username' with the text 'jsmith' and a person icon, and 'Password' with a lock icon and the placeholder text 'Please enter your password'. A yellow 'Sign In' button is positioned below the password field.

Clicking the Windows icon from the standard login screen passes the user to the SSO login screen.



The image shows the SSO login interface. At the top, the 'kumulate' logo is displayed in blue, followed by a small Windows logo icon. Below the logo, there is a single yellow 'Sign In' button.

Transcode Engines, Transcode Profiles, and Thumbnail Profiles

A Transcode Engine and a Transcode Profile are required to successfully transcode media. A Thumbnail Extraction Profile is required to successfully extract thumbnails.

The transcode engine is the external application that transcodes video and extracts thumbnails. A 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.

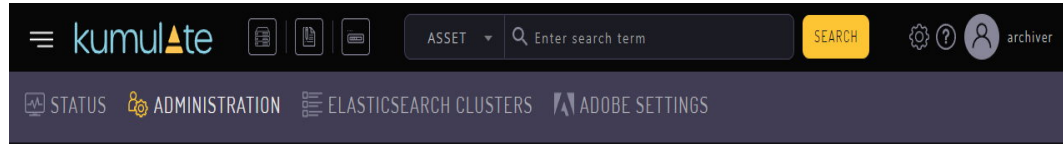
- [Adding a Transcode Engine](#)
- [Add a Transcode Profile](#)
- [Restore Profiles](#)
- [Add a Thumbnail Extraction Profile](#)

Adding a Transcode Engine

Transcode engines are external applications used to transcode instances and extract thumbnails. Kumulate must be configured to connect to a transcode engine before it can be used. More than one transcode engine can be connected to the same Kumulate system.

Use the following procedure to add a transcode engine to Kumulate:

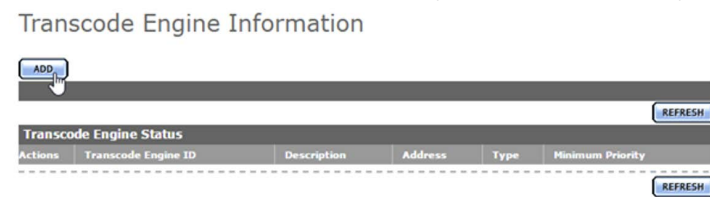
1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select DRAC Control > Transcode Engine.



3. Click ADD on the Transcode Engine Information page.



4. Enter values for the Transcode Engine and click OK to add the engine.

Parameter	Description
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 IP address of the transcode engine.
Transcode Engine Port	The transcode engine's connection port.

Parameter	Description
For transcode	The transcode engine can be used to transcode instances when this option is selected. When the option is deselected, transcode jobs will not be sent to this engine.
For extract metadata	The transcode engine can be used to extract metadata from instances when this option is selected. When the option is deselected, extracted metadata jobs will not be sent to this engine.
Minimum Priority	The minimum priority job this transcode engine will accept. The transcode engine will not accept any job with a priority below this value. This is useful for creating dedicated transcode engines that only process high-priority jobs.

Transcode Engine Add

Transcode Engine Configuration

Transcode Engine ID: <input type="text" value="MTE"/> < Required	Transcode Engine Hostname/IP: <input type="text" value="10.1.5.60"/> < Required
Description: <input type="text"/>	Transcode Engine Port: <input type="text" value="2047"/> < Required

For transcode
 For extract metadata

Minimum Priority
 < Required

Add a Transcode Profile

Transcode Profiles are used to provide a template for transcodes to Kumulate.

The Source Filter option provides information about what type of instances are handled by this profile. The profile is only made visible to instances that satisfy the source criteria.

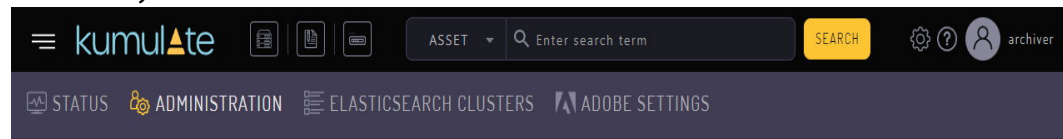
The Destination Filter provides information about the format to transcode the source instance into.

A Transcode Profile provides the option of performing additional metadata mapping, as long as this mapping is supported by HQS.

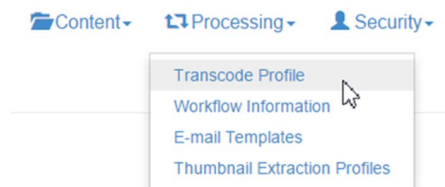
A default Transcode Profile is available for creating proxy instances.

Use the following procedure to create additional profiles:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Processing > Transcode Profile.



3. Click Add Transcode Profile on the Transcode Information page.

4. Enter the configuration parameters for the transcode profile and click OK to add the profile.

Add New Transcode Profile

OK

Transcode Information

Name: < Required

Description:

Operation:
 Transcode Rewrap

Status: < Required

Source Filter: < Required **MODIFY**

Destination Filter: < Required **MODIFY**

Extended Metadata:

Rename:

Attribute:

OK

Parameter	Description
Name	Provide a unique name for the transcode profile.
Description	Provide an optional description of the profile.
Status	The status is Enabled by default. Select <i>Disabled</i> to prevent users from using the profile.
Source Filter	Select a resource filter that returns the type of instances to transcode.
Destination Filter	Select a resource filter that defines the parameters of the final result of the transcode.
Transcode/Rewrap	Select Rewrap to rewrap MXF instances with additional metadata without modifying the video essence. Rewrap can only be used when rewrapping MXF OP_ATOM and MXF OP_1A instances. This is set to Rewrap by default.
Extended Metadata	Use this parameter to set metadata values for the destination. Extended metadata must agree with the HQS parameters.
Rename	This parameter has been deprecated.
Attribute	Select 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 has been deprecated.

5. Select Set Audio Mapping if audio channels need to be remapped.

Set Audio Mapping Set Audio Metadata

Audio Filter: <

Required

Select an audio essence resource filter from the Audio Filter pull down menu. The audio essence filter selected must only contain the Number of channels metadata. The pull down 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 box.

Modify Resource Filter

Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value

- 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 checked="" 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 pull down menu on the Transcode Profile page (in the following figure this is audioMapping).

Set Audio Mapping Set Audio Metadata

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.

Restore Profiles

Restore Profile configurations are used by storage locations to specify the instance formats that can be copied to them.

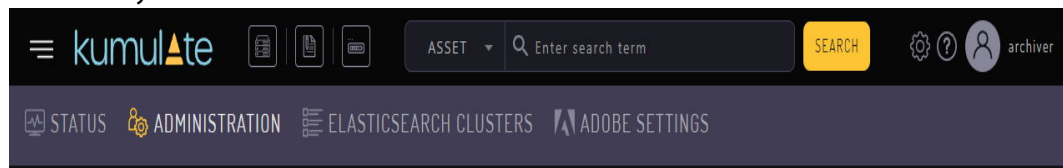
When an instance does not match a storage location's Restore Profile is copied to the storage location, Kumulate searches for a transcode profile that matches the source and destination instance and uses it to transcode the instance to the appropriate format before copying it.

Note: A storage location can use more than one Restore Profile and each can describe a different instance format.

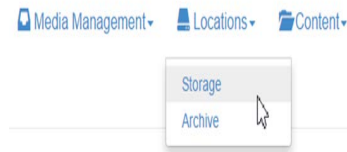
Restore Profiles can be created from a storage location's configuration page, or from the Restore Profile Information page.

Use the following procedure to create a Restore Profile:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Locations > Storage.



3. Click Restore Profile Information on the Storage Location Manager page.



All Restore Profiles available in Kumulate are visible on this page.

Restore Profile Information

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_OHNEONFTP	Default profile for OHNEONFTP	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

Restore Profiles can be created, modified, and deleted from this page. However, since Restore Profiles are used by individual storage locations, technical support

advises creating them from the storage location where they are intended to be used.

- Open the Storage Location Configuration page of the storage location that will use the Restore Profile and click Restore Profile Information.



- One profile is always created by default with the storage location. However, The default profile does not 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



- 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.
- Provide the new profile a name in the Name text box.

Add New Restore Profile



- Select a Destination Filter to use with the Restore Profile, or click ADD to add a new Destination Filter. The Destination Filter is a Video Essence Resource Filter that describes the target instance.

Note: Do not use the default Resource Filter created with the storage location.

- If a new Destination Filter is being used, provide the filter with a name and (optionally) a description, then click OK.

Add Resource Filter

- Set the metadata for the filter.

Modify Resource Filter

Actions	Select	Metadata	Matching Rule Set	Lower Value	Upper Value
<input type="checkbox"/>	<input type="checkbox"/>	Video Format	Contains	H264	
<input type="checkbox"/>	<input type="checkbox"/>	Instance Format	Contains	QT	

- Click OK to return to the Restore Profile page after all metadata has been set.

Add New Restore Profile

- Click OK to save the profile. It will appear 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
<input type="checkbox"/>	Profile_QT	Default profile for QT	ENABLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	ToQT		ENABLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Transcode Dissimilar For Transfer checkbox 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 will be kept unless the Delete Dissimilar From Cache check box is selected.

If a Transcode Profile that can convert instances 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



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:

Required

Description:

Status: < Required

Source Filter: < Required

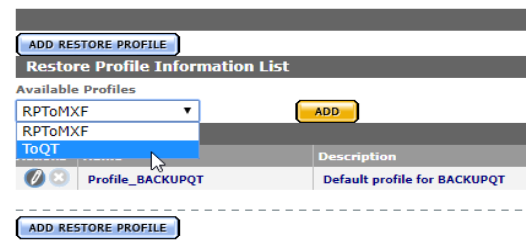
Destination Filter: < Required

Extended Metadata:

Rename:

Attribute:

Restore Profiles will be visible in the Available Profiles pull down menu and can be used by any storage location after the profile has been created.



Profiles can be edited by clicking the Pencil icon.

A list of storage locations that use the Restore Profile is located on the right of the Modify Resource Profile dialog.

Modify Restore Profile

Restore Profile Information

Name: ToQT < Required

Description:

Status: ENABLED < Required

Destination Filter: RP_QuickTime < Required MODIFY

Attached Storage Locations
QT
BACKUPQT

Note: Any changes to the Restore Profile will affect all listed storage locations.

Add a Thumbnail Extraction Profile

Thumbnail Extraction Profiles are used to specify how to extract thumbnails from an instance.

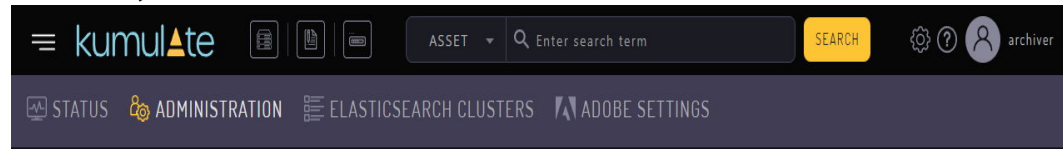
The default Thumbnail Extraction Profile uses scene detection to create up to ten thumbnails per video. This profile is not suitable for instances that are longer than five minutes.

New Thumbnail Extraction Profiles can be created that are better suited to different types of instances.

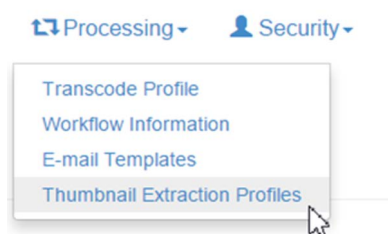
Caution: Do not edit the default Thumbnail Extraction Profile.

Use the following procedure to create a Thumbnail Extraction Profile:

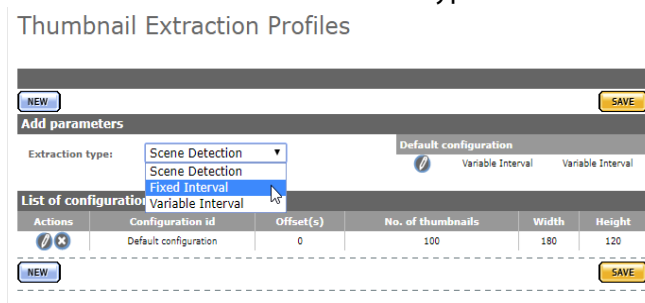
1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Processing > Thumbnail Profile.



3. Select a Thumbnail Extraction Type from the Extraction type pull down 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.

4. 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

Parameter	Description
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	The resolution to extract the thumbnails (width x height)

Fixed Interval Profiles

Fixed Interval extracts thumbnails at fixed intervals in the video source.

Add parameters

Extraction type:

Configuration id: < Required

Offset(s): < Required

Interval(s): < Required

No. of thumbnails: < Required

Resolution: x < Required

Parameter	Description
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	The resolution to extract the thumbnails (width x height)

Workflows

Workflows automate operations on assets and instances. Each workflow consists of one or more profiles, each consisting of a trigger and a command.

Profiles are triggered on Kumulate events, such as creating new instances 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.

A workflow is considered completed once all its profiles are completed.

Note: If a workflow includes a profile that deletes an asset, the workflow will not enter the completed state even if the asset was successfully deleted.

- [Profiles](#)
- [Triggers](#)
- [Commands](#)
- [Create a Workflow](#)

Profiles

A workflow profile consists of a trigger and a command. The command is executed when the conditions for the trigger are met.

Processing Profile Information

Profile Information

Profile ID: ExtractMetadata Description: Extract metadata from discovered
 Retry: Unlimited Priority: Normal

Triggers

Configured Triggers: DiscoverOnGenericUNC1 Filter: OnGenericUNC1

Trigger ID: DiscoverOnGenericUNC1

Events: Add Instance

Commands

Configured Commands: ExtractMetadata

Command ID: ExtractMetadata

Number of executions: 1 Action: Extract Metadata

Attributes: Audio_MP364, AvidLocation, AvidPlusAudioMD, DefaultProxyDestI, DestFilter_AVIDIN, DestFilter_AVIDIN

Selected Attributes: AllInstances

Attribute

Transient

Email Notifications

Send e-mail on:

	Email template:	Asset/Instance filter:	Priority:
<input checked="" type="checkbox"/> Completed	Completed Profile	<No filter>	Normal
<input checked="" type="checkbox"/> Failed	Failed Profile	<No filter>	Normal
<input type="checkbox"/> In Progress	Completed Profile	<No filter>	Normal
<input checked="" type="checkbox"/> Cancelled	Cancelled Profile	<No filter>	Normal

A workflow consists of one or more profiles.

Workflow Definition

Workflow Definition

ID: TranscodeCopyExtract < Required

Description: Proxy,Copy,Thumbnails

Exclusive Workflow

Status: Active

Processing Profiles

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 will have its own entry on the Jobs page when the workflow executes. However, individual profile commands cannot 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		Done 100%	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 100%	Internal	Jul 19, 2018 12:35:09 PM	Apr 13, 2022 8:38:33 PM	Normal
CopyHDTtoCache ^									
00182K	Copy	dm_PARAMECIU	QT	MASSSTORE [...]	Copied 100%	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 100%	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 100%	Internal	Apr 13, 2022 8:38:52 PM	Apr 13, 2022 8:38:52 PM	High
SetProxyFlag									
					Completed 100%				
ExtractThumbnails ^									
00182K	Extract Thum...	TR-Local	FCP QT - DV_PRO - 10		Done 100%	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 will not appear in the Jobs view.

Triggers

A workflow profile's command executes on the event defined by the trigger. If the trigger is not configured properly, the command will not execute, or will not execute under the right conditions.

Triggers are configured 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.

The following events can be used as triggers:

Trigger	Description
Add Instance	The command is triggered when an 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 an 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 an 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.

In this case, the command is triggered when a new low-resolution proxy is created on the cache.

The ProxyOnCache resource filter is an 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	MASSTORE

More than one filter can be used instead of one specific filter and shown in the following figure:

In this case, the OnCache filter selects instances on the cache, and the MP4Instance filter selects instances with MP4 instance format. The command will be 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.

In this case, the command will be 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', 'New Asset' is selected with an 'ADD' button. Under 'Filter:', 'AllAssets' is selected with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. The 'Trigger ID:' field contains 'New Asset'. The 'Event:' dropdown 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', 'New Asset' is selected with an 'ADD' button. Under 'Filter:', 'AvidLocation' is selected with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. The 'Trigger ID:' field contains 'New Asset'. The 'Event:' dropdown 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
		Storage Location Name	Contains	AVIDSTANDALONE

More than one filter can be used as shown in the following figure:

The screenshot shows the 'Triggers' configuration window. Under 'Configured Triggers', 'New Asset' is selected with an 'ADD' button. Under 'Filter:', 'AvidLocation' is selected with 'ADD' and 'MODIFY' buttons. Below it, 'OR' is selected in a dropdown, followed by 'OnGenericUNC1' selected with 'ADD', 'MODIFY', and 'REMOVE' buttons. The 'Trigger ID:' field contains 'New Asset'. The 'Event:' dropdown 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 will be 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 the 'Triggers' configuration window. Under 'Configured Triggers', 'CreateSegment' is selected with an 'ADD' button. Under 'Filter:', 'AllAssets' is selected with 'ADD', 'MODIFY', and 'ADD FILTER' buttons. 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.

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.

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 an instance is deleted. This event is used when a command must be executed when an instance that satisfies the conditions of the filter is deleted.

In this case, the command is triggered when a low-resolution proxy is deleted from the cache. The ProxyOnCache resource filter is an 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.

In this case, the OnCache filter selects instances on the cache, and the MP4Instance filter selects instances with MP4 instance format. The command will be triggered when an instance selected by both resource filters is deleted.

To trigger the command if an instance is deleted on either of two storage locations, use two instance resource filters that select instances on specific storage locations.

In this case, the command will be triggered when an 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.

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 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.

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.

WORKFLOW MANAGER Module Configuration

WORKFLOW MANAGER Information

- Command Retry Interval (sec): 600
- Dub List Refresh Interval (sec): 60
- E-mail Queue Capacity: 500
- Prepare Completed Asset Metadata:
 - Available asset metadata:
 - __ASSET_FREE
 - __ASSET_LIST
 - __ASSET_TEXT
 - __ASSET_NUMBER
 - Asset Id
 - Asset Type
 - Selected asset metadata:
 - AddedBy
- Prepare Completed Instance Metadata:
 - Available instance metadata:
 - __INST_COMBO
 - __INST_DATE
 - __INST_FREE
 - __INST_LIST
 - __INST_NUMBER
 - AFD
 - Selected instance metadata:
- Trace Level: NORMAL

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.

View By All	YES
AddedBy	Sandra

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.

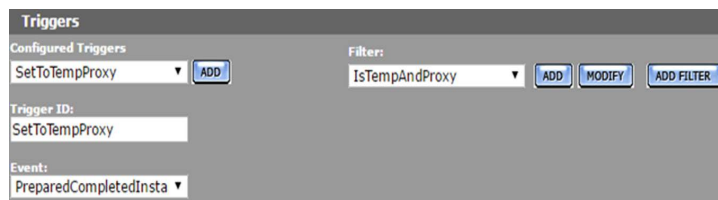
In this case, the command is triggered when an instance's IsTemporary custom metadata element has been set to YES.

Matching Rule Set:				
Actions	Select	Metadata	Matching Rule Set	Lower Value
		IsTemporary	Contains	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.

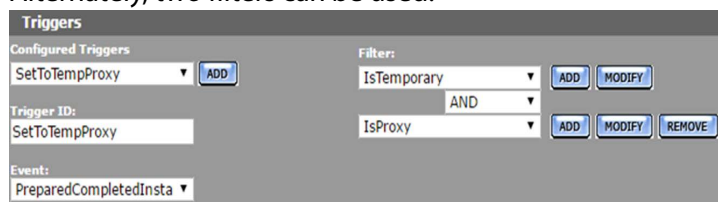
In this case, the PreparedCompletedInstance trigger can use changes to the IsTemporary and IsProxy custom metadata to trigger the command. If changes to both the metadata are required to trigger the event, both metadata can be set in the same filter.



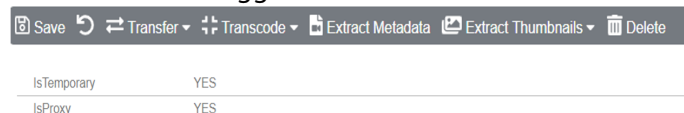
In this case, the IsTempAndProxy instance resource filter filters both AddedBy and IsProxy custom metadata.

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:



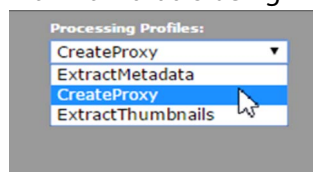
In either case, all the metadata listed must be modified at the same time for the command to be triggered.



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 pull down menu will list the profiles used in the workflow that is being modified. Select the profile that will trigger this profile.

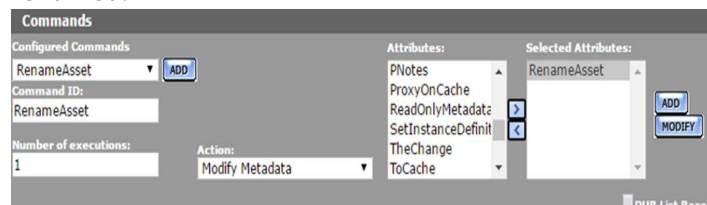


For example, a profile that extracts thumbnails will be executed after CreateProxy, a profile that creates a low-resolution proxy, completes.

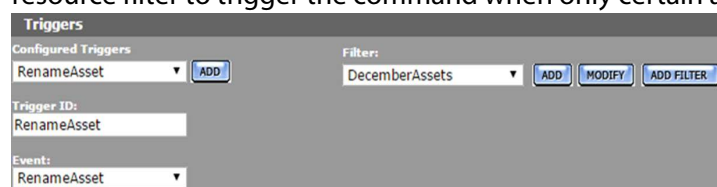


Rename Asset Event

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 using the Start button.

Actions	ID	Description	Trigger	Command	Attribute	
	TimedRename	Renames assets	TimerTest	RenameAsset	Final	

After the Start button is pressed, the profile is triggered according to the timer configuration.

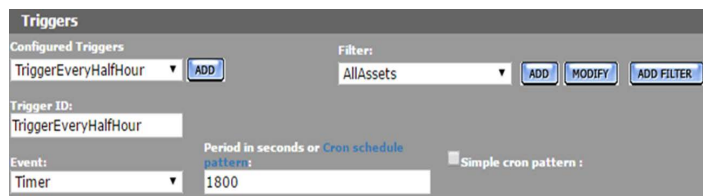
Note: The Start button is active even though it appears grayed out.

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.

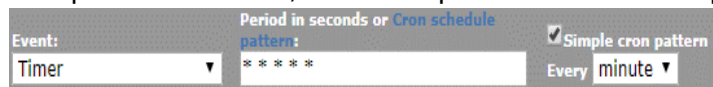
Actions	ID	Description	Trigger	Command	Attribute	
	TimedRename	Rename Assets	TriggerEveryHalfHour	RenameAsset	Final	

The Run button is used to run the profile only one time. Clicking the Run button triggers the command immediately, regardless of the timer settings.

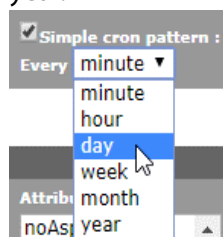
To configure the command to be triggered at specific time intervals, keep the Simple cron pattern option deselected, and add the time interval (in seconds) to the field.



To configure the command to be triggered according to a schedule, select the Simple cron pattern check box; an interval pull down menu will open.



Select whether you want the profile triggered every minute, hour, day, week, month, or year.



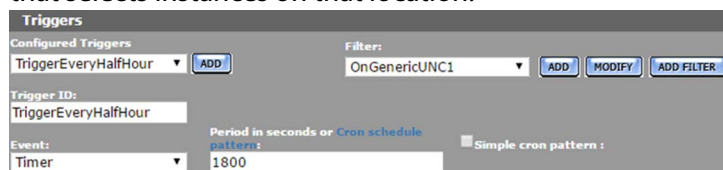
Helpful dialogs will open to help you create the cron pattern.



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 an 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 appear 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 100%	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 100%	Internal	Jul 19, 2018 12:35:09 PM	Apr 13, 2022 8:38:33 PM	Normal
CopyHDTToCache ^									
00182K	Copy	dm_PARAMECIU	QT	MASSSTORE [...]	Copied 100%	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 100%	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 100%	Internal	Apr 13, 2022 8:38:52 PM	Apr 13, 2022 8:38:52 PM	High
SetProxyFlag									
					Completed 100%				
ExtractThumbnails ^									
00182K	Extract Thum...	TR-Local	FCP QT-DV_PRO-10		Done 100%	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 an instance it creates already exists, its metadata is already extracted, or no instances or assets match its attributes, the command will not be executed, its profile will not 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 will be replaced with the upcoming Story Board feature.
Copy	Copy an instance from one storage location to another.
CreateThumbnail	Extract a thumbnail from the proxy instance.
Delete	Delete an asset or an instance.

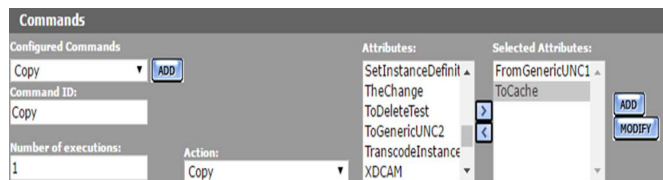
Command	Description
Extract Content Info	Extracts clip instance information.
Extract Metadata	Extract metadata from the instance that triggered the command.
Modify Metadata	Modify the metadata of the asset or instance that triggered the command, using the attributes set in the command.
Notify	Used only 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 an instance using the transcode profile specified in the command attributes.

Copy Command

The Copy command copies the instance that triggered the command, or an instance of the asset that triggered the command, from one location to another.

Note: Kumulate checks whether an instance belonging to the asset being processed exists on the destination before running the command. If an instance exists on the destination, the command will not be run. No message will be 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. An 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 does not 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 an instance.

Note: If thumbnails have already been extracted for the instance's asset, the command will not be run. No message will be generated.

The command requires an instance resource filter attribute that selects the type of instances from which to extract the thumbnails, and the thumbnail extraction profile to use.

The screenshot shows the 'Commands' configuration window. Under 'Configured Commands', 'CreateThumbnail' is selected. The 'Command ID' is 'CreateThumbnail'. The 'Number of executions' is '1'. The 'Action' is 'Create Thumbnail'. The 'Attributes' list includes 'GenericUNC2', 'InstanceMetadata', 'InstanceToChange', 'IsProxy', 'IsTempAndProxy', and 'IsTemporary'. The 'Selected Attributes' list contains 'ProxyOnCache'. Below this, the 'Create thumbnail configuration' section shows 'Extraction type' as 'Scene Detection' and 'Configuration' as 'Default configuration'.

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 pull down menu.

This screenshot is identical to the previous one, but the 'Configuration' dropdown in the 'Create thumbnail configuration' section is now set to 'ExtractFive'.

In this example (see the previous figure), the ExtractFive thumbnail extraction profile is used to extract thumbnails.

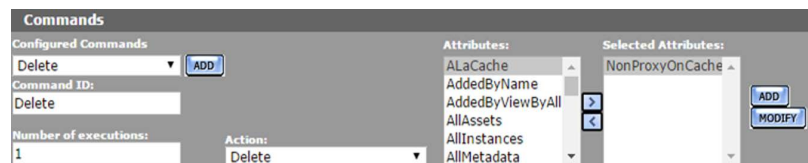
New thumbnail extraction profiles can be created by clicking Modify next to the Configuration pull down menu. Follow the instructions in the section on thumbnail extraction profiles.

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 will not run.

The Delete command requires one attribute that selects the asset or instance to delete. To delete a specific instance from the asset, select an instance resource filter from the list of attributes.



In this case, the NonProxyOnCache attribute is a resource filter that selects an 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 will not appear 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 will not run. Consequently, the workflow may not enter the completed state.

Select an 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

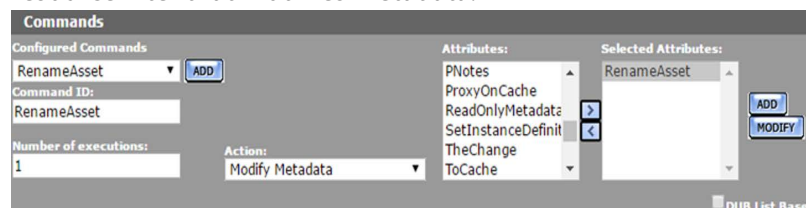
The Modify Metadata command modifies the metadata of the asset being processed, or of an instance being processed. Administrators can now assign a default set of pinned metadata fields.

Note: Kumulate checks the metadata before running the command. If the asset or instance metadata is already set, the command will not be run. No message will be 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 will not 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.

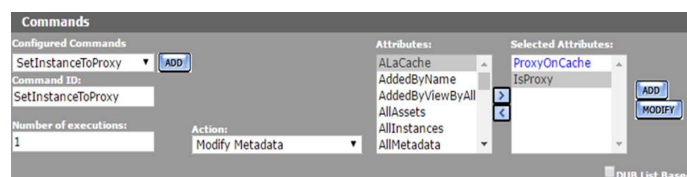


In this case (see previous figure), the RenameAsset attribute changes the asset name and title.





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 an instance. The first attribute in the list filters the instances that will be modified, and the second attribute modifies the instance metadata.

Note: If no instance satisfies the first attribute, the command will not 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	MASSTORE

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 an instance that matches the transcode profile exists on the destination before running the command. If an instance that matches the profile exists on the destination, the command will not be run. No message will be generated.

Select a transcode profile from the list of attributes.



The screenshot displays the 'Commands' configuration interface. On the left, under 'Configured Commands', a dropdown menu is set to 'Transcode' with an 'ADD' button next to it. Below this, the 'Command ID' is 'Transcode'. The 'Number of executions' is set to '1'. The 'Action' dropdown is set to 'Transcode'. On the right, there are two columns: 'Attributes' and 'Selected Attributes'. The 'Attributes' column contains 'DefaultTranscodePri'. The 'Selected Attributes' column contains 'MXF_XDCAM'. Arrows between the columns indicate the selection process.

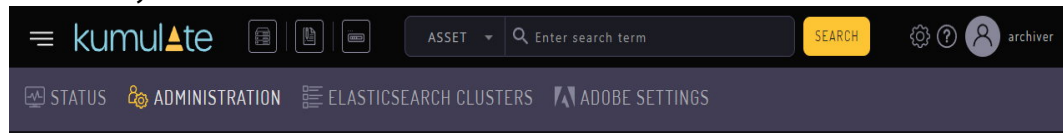
Only one transcode profile can be used at a time. If more than one transcode profile is selected, the command will not run. No message will be generated.

Create a Workflow

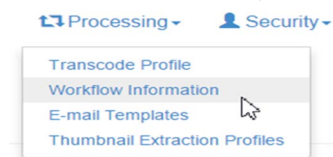
Workflows are used to automate tasks. Each workflow is composed of a set of profiles that execute commands when triggered by specific events in Kumulate.

Use the following procedure to create a workflow:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Processing > Workflow Information.



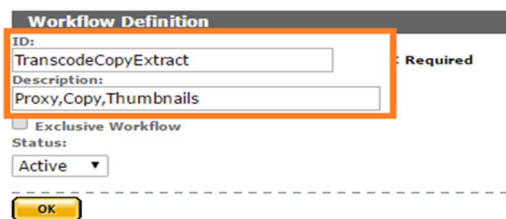
3. Click Add Workflow on the Workflow Information page.

Workflow Information



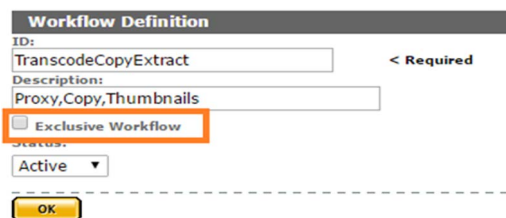
4. Use the ID field to provide a unique name for the workflow. Optionally, a description of the workflow can be added. The workflow name should reflect the actions performed by the workflow.

Workflow Definition



5. Select the Exclusive Workflow check box if this workflow should run only when no other workflow is running.

Workflow Definition



- The workflow Status can be set to Active or Inactive. An inactive workflow is not executed.

Note: Do not use the Test status.

Workflow Definition

Workflow Definition

ID: < Required

Description:

Exclusive Workflow

Status:

Active ▾

Active

Inactive

Test

- Click OK to save the workflow. You will be returned to the Workflow Information page.
- Click the Pencil icon next to the workflow to add profiles to the workflow.

Workflow Information

Workflow Definitions

[ADD WORKFLOW](#)

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

[ADD WORKFLOW](#) Modify current workflow

Create a Profile

A workflow is composed of at least one profile. Profiles execute commands when they are triggered by an event. After creating a workflow, click Add Profile from the Workflow Definition page to open the Processing Profile Information page.

Workflow Definition

Workflow Definition

ID: < Required

Description:

Exclusive Workflow

Status:

Processing Profiles

Actions	ID	Description	Trigger	Command	Attribute
<input type="button" value="ADD PROFILE"/>					

Processing Profile Information

Profile Information

Profile ID:

Description:

Retry:

Priority:

Triggers

Configured Triggers: Filter: DUB List Based

Trigger ID:

Event:

Commands

Configured Commands:

Command ID:

Number of executions: Actions:

Attributes:

Selected Attributes:

Attribute

Final

Email Notifications

Send e-mail on:	E-mail template:	Asset/Instance filter:	Priority:
<input type="checkbox"/> Completed	<input type="text" value="Completed Workflow"/>	<input type="text" value="<No filter>"/>	<input type="text" value="Normal"/>
<input type="checkbox"/> Failed	<input type="text" value="Completed Workflow"/>	<input type="text" value="<No filter>"/>	<input type="text" value="Normal"/>
<input type="checkbox"/> In Progress	<input type="text" value="Completed Workflow"/>	<input type="text" value="<No filter>"/>	<input type="text" value="Normal"/>
<input type="checkbox"/> Cancelled	<input type="text" value="Completed Workflow"/>	<input type="text" value="<No filter>"/>	<input type="text" value="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:

Description:

Retry: Times:

Priority:

The maximum number of times its command can be retried upon failure, and its priority must also be provided.

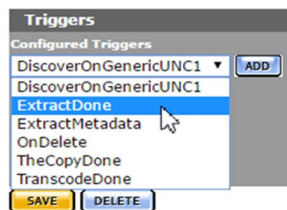
Parameter	Description
Profile ID	A unique profile name. Completed profiles can be used as triggers in their workflows. A descriptive name helps differentiate between the profiles in the workflow, making it less likely that a trigger will be misconfigured. Profiles should be named after the function they perform. For example, a profile that extracts metadata from a newly-discovered instance could be ExtractMetadataFromNew.
Description	A description of the profile can help differentiate between similar profiles. This is optional.
Retry	The number times to retry the command if it fails. By default, retry is set to unlimited, meaning that the command will be retried infinitely. The retry interval is set in the Workflow Manager Module.
Priority	The command's execution priority. This defaults to normal.

Configure 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](#) provides additional information about configuring different types of triggers.

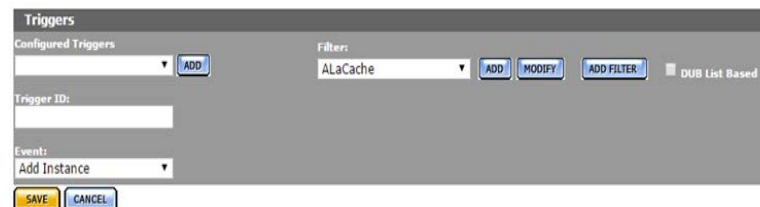
To use a previously-configured trigger, select a trigger from the Configured Triggers pull down menu.



This will automatically populate the trigger fields. Do not forget to save the trigger.

Use the following procedure 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 pull down menu. More information about events can be found in the [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.

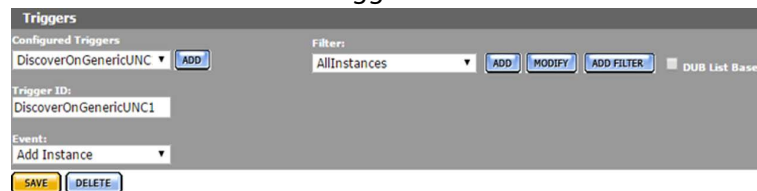
Click Add to create a new non-ACL resource filter if no suitable filter is available.

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 objects that it selects; for example, NewInstances or InstancesOnCache.

5. To add more than one filter, click Add Filter and select whether both or either filter condition must be satisfied.



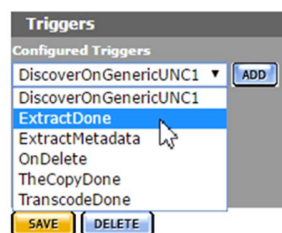
6. Click Save to save the trigger.



Configure the Command

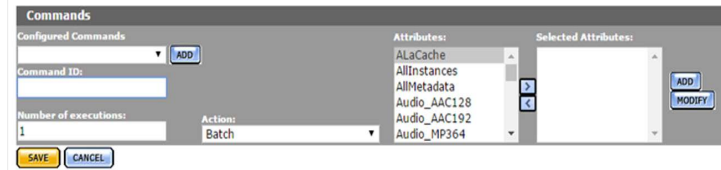
Configure the command that will execute when the trigger conditions are detected. If the command is not configured properly, it might not execute, or it may produce unexpected results. See the [Commands](#) section for more information.

To use a previously configured command, select a command from the Configured Commands pull down menu.



Use the following procedure to create a new command:

1. Click ADD on the Commands page.



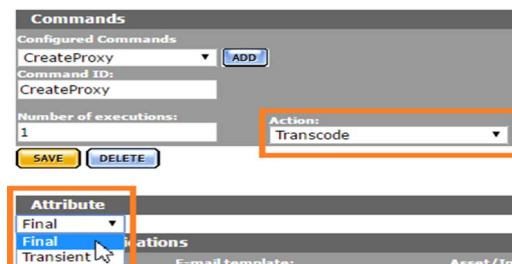
2. Enter a unique name for the command in the Command ID text box. The command's name should reflect the type of action it will execute; for example, CreateProxyInstance, or ExtractThumbnails. Because several commands may exist that perform similar actions, a naming scheme that differentiates between the similar commands should be used.
3. Enter the number of times to execute the command in the Number of executions text box.
4. Select the command to execute from the Action pull down menu. See the [Commands](#) section for more information.
5. Select a resource filter the command will act on from the Attributes pull 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. Attributes can be used in more than one command and in triggers. To prevent confusion, attribute names should reflect the types of objects 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 appear last in a workflow, or profiles that create an instance through 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 (Failed in the following figure), then select the email template to use (Failed Profile in the following figure).

Email Notifications			
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
	In Progress	<No filter>	Normal
	Cancelled 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.

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.

- [Configure the Email Service](#)
- [Email Notification Templates](#)

Configure the Email Service

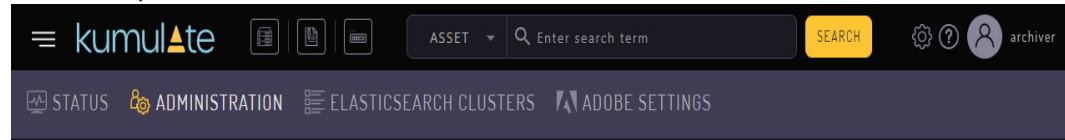
The email service that sends workflow notifications, log messages, and operator alerts is configured in the System module.

Before configuring the email service, ensure that the address that will 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.

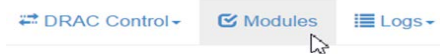
Note: The password for the address that will send email is visible in the System module.

Use the following procedure to configure the email service:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Modules.



3. Click the Advanced button on the System Control page.



4. Click the Pencil icon to the left of the SYSTEM module.

System Configuration

Modules Information	
Actions	Module
	ACI
	ALE
	ALL
	ASSET MANAGER
	CLUSTER MANAGER
	CMI
	FEDERATION MANAGER
	MEDIA LIBRARY
	MOSI
	OSH
	SDBT
	SYSTEM
	TSS
	UII

5. Enter the information in the parameters identified in the following figure (the parameter descriptions are in the table following the figure):

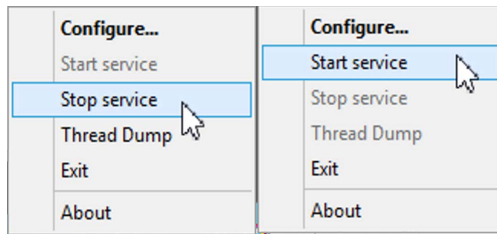
<input type="radio"/> Client Id:	8.0.3.5
<input type="radio"/> Customer Resource Location:	C:/Masstech/Customer
<input type="radio"/> Delete DVS Content Upon Asset Deletion:	Off
<input type="radio"/> Email debugging:	Off
<input type="radio"/> Email From Address:	smtp.sender@mycompany.com
<input type="radio"/> 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:	
<input type="radio"/> LDAP Single Sign-On:	off
<input type="radio"/> LDAP URL:	
<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

Parameter	Description
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 done through 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.

Parameter	Description
Email Service	<p>Turns the email service on and off. If the email service is off, no emails will be sent by the system.</p> <hr/> <p>Note: Most operator messages are not sent using email, even when the service is on.</p> <hr/>
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 <i>YES</i> to use SSL; set to <i>NO</i> if TSL will be 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	<p>Additional email address which can receive operator email. Any or all of these parameters can contain an email address.</p> <hr/> <p>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 <i>YES</i> for emails to be sent to these recipients.</p> <hr/>
Send Logs By Email	Zippered 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 <i>YES</i> to use TSL; set to <i>NO</i> if SSL will be used instead.

6. Click OK to save the configuration.

7. Restart Kumulate for the changes to take effect. On the Kumulate server host, stop and restart Tomcat.

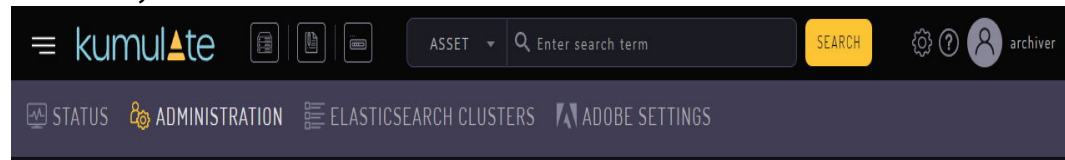


Email Notification Templates

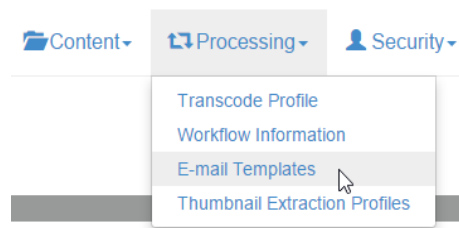
Email templates must be created for Kumulate to send workflow notifications by email. Workflows will only send notifications if the email alerts feature is enabled.

Use the following procedure to create an email template:

1. Click System > Administration in the menu bar in the Kumulate web interface.



2. Select Processing > Email Templates.



3. Click the ADD button on the E-mail Templates page.
4. 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, the email addresses must be separated by commas.

The email subject and body can include dynamic fields which specify workflow, asset, and instance information, making the email more informative.

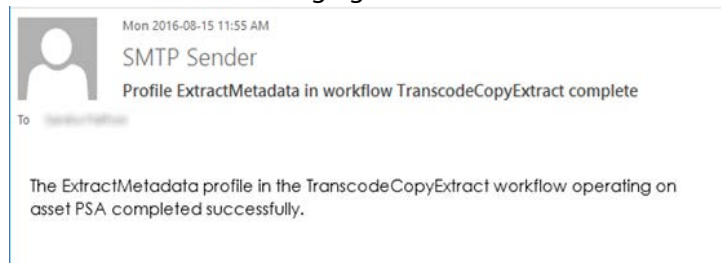
To add a dynamic field, right-click on the email subject or body where the field should appear, and select the field from the pull down menu.

The screenshot shows the 'E-mail Subject' field with a context menu open. The menu options are: Insert Workflow Field, Insert Asset Field, Insert Source Instance Field, and Insert Destination Instance Field. A sub-menu is open for 'Insert Workflow Field', showing options: Workflow_ID, Workflow_Description, Profile_ID, Profile_Description, Trigger_Event, and Command. The 'Profile_ID' option is highlighted by the mouse cursor.

The dynamic field to insert will appear enclosed in curly braces in the subject or body text.

The screenshot shows the completed email template. The 'E-mail Subject' field contains the text: 'Profile {Profile_ID} in workflow {Workflow_ID} complete'. The 'E-mail Body' field contains the text: 'The {Profile_ID} profile in the {Workflow_ID} workflow operating on asset {asset.displayName} completed successfully.' Below the body text, it says '3883 character left' and there is an 'OK' button.

5. Click OK to save the template. The email generated using the previous template will look like the following figure when it is received:



System Control and Configuration Modules

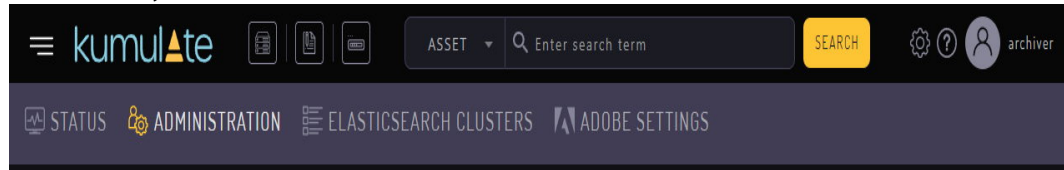
System control and configuration modules control how Kumulate operates. Settings for transcoders, indexers, loggers, email servers, and data movers are accessible through Kumulate system modules.

- [Accessing System Modules](#)
- [ALL Module Configuration](#)
- [Asset Manager Module](#)
- [CMI Module](#)
- [DM Manager Module](#)
- [Media Library Module](#)
- [MMC Module](#)
- [Reports Manager Module](#)
- [SSC Module](#)
- [System Module](#)
- [UII Module](#)
- [Workflow Manager Module](#)
- [XMTI Module](#)
- [SDBI Module](#)

Accessing System Modules

Use the following procedure to access system modules:

1. Select System > Administration from the menu in the Kumulate web interface.



2. Select Modules from the top menu.



System configuration modules, and disabled system control modules are accessible from the System Configuration page; accessible by clicking the Advanced button.

Caution: Do not use the Restart System and Halt System buttons.

System Control



ALL Module Configuration

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Default StandardID	The video system standard used in the Kumulate system. Defaults to NTSC.
Default Title	Use this as an asset's title if the information cannot be extracted from the asset itself.
Default VideoServer Type	<p>Sets the video server that is selected by default when creating a new storage location.</p> <p>The default is Repository.</p> <p>Setting this to an invalid storage location name, or simply misspelling the storage location name, will cause the following message to appear when attempting to create a new storage location:</p> <p style="text-align: center;">Unfortunately the information you requested is not available at this time... Please contact your system administrator</p> <p style="text-align: center;">We apologize for any inconvenience...</p>

Asset Manager Module

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Delete Asset with No Instances	When set to ON, Kumulate automatically deletes assets that have no instances associated with them.
Trace Level	Sets the logging level for the module. <ul style="list-style-type: none">• OFF: Only errors are logged.• NORMAL: Errors and trace messages are logged.• DEBUG: Logs all messages, including debug messages.

CMI Module

Used to mark already discovered instances.

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Processed Keyword	<p>Used as a mark that is inserted into an instance wrapper to indicate that the instance has already been discovered and copied in by the Kumulate system.</p> <p>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. This value must be unique to each Kumulate system.</p>
Trace Level	<p>Sets the logging level for the module.</p> <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

DM Manager Module

The DM Manager module is responsible for configuring the data movers.

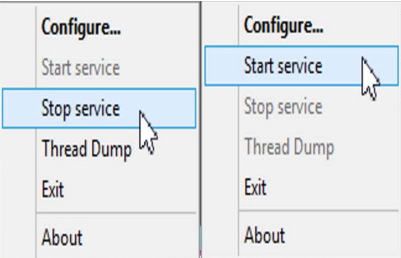
Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Local Data Mover Port	The Kumulate server data mover listening port. Defaults to port 2089.
Process Restart Timeout (seconds)	If the data mover does not restart in this time, it remains offline.
Trace Level	Sets the logging level for the module. <ul style="list-style-type: none">• OFF: Only errors are logged.• NORMAL: Errors and trace messages are logged.• DEBUG: Logs all messages, including debug messages.

Media Library Module

This module must be enabled and running to connect Kumulate to tape libraries.

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Enabled	<p>Must be set to <i>YES</i> to connect to tape libraries. Tomcat must be stopped and restarted for the change to take effect.</p>  <p>Enabled modules are visible under System Control. Disabled modules are visible under System Configuration. Make sure that the module is also running.</p>
Trace Level	<p>Sets the logging level for the module.</p> <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

MMC Module

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
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.

Parameter	Description
Trace Level	Sets the logging level for the module. <ul style="list-style-type: none"> • 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.

Reports Manager Module

The Reports Manager Module is responsible for polling the system for information used in reports.

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Cache polling interval (seconds)	Cache polling interval in seconds. Information from the cache is entered into the database each time the cache is polled. Set to 30s by default.
Maximum thread count (more than 1, less than 100)	The maximum number of database entry threads. Set to 50 threads by default.
Maximum cached assets age (minutes)	The maximum age of asset events kept in the cache, in minutes. Any events older than this value are removed from the cache during cache cleanup. Cache cleanup occurs every five minutes. Set to 30min by default.
Maximum cached assets count (less than 10000)	The maximum number of asset events than can be cached. Any additional events are removed from the cache during cache cleanup. The oldest events are removed first. Cache cleanup occurs every five minutes. Set to 1000 events by default.
Maximum cached instances age (minutes)	The maximum age of instance events kept in the cache, in minutes. Any events older than this value are removed from the cache during cache cleanup. Cache cleanup occurs every five minutes. Set to 30min by default.
Maximum cached instances count (less than 10000)	The maximum number of instance events than can be cached. Any additional events are removed from the cache during cache cleanup. The oldest events are removed first. Cache cleanup occurs every five minutes. Set to 1000 events by default.

Parameter	Description
Maximum cached transfer information age (minutes)	<p>The maximum age of transfer events kept in the cache, in minutes. Any events older than this value are removed from the cache during cache cleanup. Cache cleanup occurs every five minutes.</p> <p>Set to 10min by default.</p>
Maximum cached transfer information count (less than 2000)	<p>The maximum number of transfer events that can be cached. Any additional events are removed from the cache during cache cleanup. The oldest events are removed first. Cache cleanup occurs every five minutes.</p> <p>Set to 200 events by default.</p>
Trace Level	<p>Sets the logging level for the module.</p> <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

SSC Module

Controls cache operations, such as space management and logging.


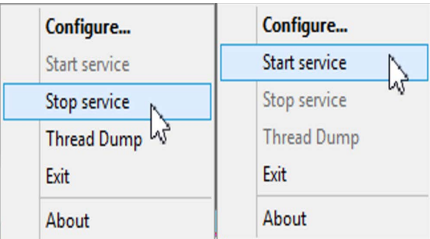
Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Free Limit	<p>Generates an operator message if the storage space on the cache drops below this percentage. The level is a percentage of the total amount of storage space on the cache.</p> <hr/> <p>Note: An operator message will be generated, but it will not be sent by email regardless of whether the email service has been enabled.</p> <hr/>
FreeSet Point	Instances will be deleted from the cache when the free space on the cache drops below this percentage.
Trace Level	<p>Sets the logging level for the module.</p> <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

System Module

This module contains configuration settings for a variety of Kumulate features.

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
AVID Interplay WebService TraceLevel	<p>Controls the logging of messages to and from the Avid Interplay web service.</p> <p>Messages are logged when set to DEBUG.</p> <p>Messages are not logged if set to NORMAL or OFF.</p> <p>Set to NORMAL by default.</p>
Client Id	<p>The client ID of the Kumulate system appears in the Kumulate UI tab; allowing you to differentiate between multiple systems.</p>  <p>The Tomcat service on the Kumulate server host must be stopped and restarted for this change to take effect.</p> 
Email debugging	This enables or disables debugging email errors; leave this disabled unless emails are not operational. Can be Off or On.
Email From Address	<p>The email address that will be used to send logs and operator messages. Credentials must be known for this email address.</p> <hr/> <p>Caution: The email user's password is visible and stored in clear text; not encrypted.</p> <hr/>
Use SMTP Auth	<p>When set to YES, authentication is done through SMTP; when set to NO SMTP authentication is disabled.</p> <p>Generally, this should be set to YES.</p>
Email SMTP Host	The SMTP server host of the sender's email.
SMTP Port	The non-SSL SMTP port; this is port 25 by default.

Parameter	Description
SMTP SSL Port	The SSL or TSL SMTP port. SSL uses port 465 by default. TLS uses port 587 by default. This parameter is set to port 465 by default. The Use SSL SMTP parameter must be set to <i>YES</i> for SSL to be used. StartTLS must be set to <i>YES</i> for TLS to be used.
Email Service	Turns the email service on and off. If the email service is <i>OFF</i> , no emails will be sent by the system. Set this to <i>ON</i> to allow Kumulate to send emails.
Email Subject	The subject line for emails containing log messages.
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 <i>YES</i> to use SSL; set to <i>NO</i> if TSL will be used instead.
Email User Name	The email address of the sender.
Email User Password	The sender's SMTP authentication password. <hr/> Caution: The email user's password is visible and stored in clear text; not encrypted. <hr/>
General TraceLevel	The logging level to use for general trace logs.
LDAP Domain	The 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	Enables the single sign-on feature when set to <i>ON</i> . This parameter is set to <i>OFF</i> by default. LDAP must be enabled to use single sign-on. If this parameter is set to <i>ON</i> , but LDAP is not configured and enabled, setting this feature will change the login screen, but single sign-on will not work. See Enable Optional Single Sign-On Authentication for more information.
LDAP URL	The customer's LDAP server location, with appropriate search terms. Used when Kumulate is configured to use LDAP. See Enable Optional Kumulate LDAP Authentication for more information.

Parameter	Description
Log Dir	The directory where the Kumulate logs are saved. This parameter is set to C:\Masstech\Logs\Montana by default.
Monitor Period	Set to <i>YES</i> to keep track of periods; otherwise, set to <i>NO</i> .
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. <hr/> 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 <i>YES</i> for emails to be sent to these recipients. <hr/>
Send Operator Email	When set to ON, operator messages will be sent to the email addresses specified in Email To Address, Operator Email, Optional Email 1, and Optional Email 2.
System Id	A unique ID generated by Kumulate used in clustering.
Trace Level	Sets the logging level for the module. <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

UII Module

Parameter	Description
Low Res Streaming Server	The streaming server to use when the Stream Proxy is set to Yes, True, or On.
Stream Proxy	<p>Set this parameter to Yes, True, or On to stream proxies using the server specified by the Low Res Streaming Server parameter when a request to <code>http://<machineName>/montana/Proxy?userID=XXX&program_instance_num=999</code> or <code>http://<machineName>/montana/Proxy?program_instance_num=999&userID=XXX&retrieveCCFileOnly=Yes</code> is made through XMMP.</p> <p>Set this parameter to <i>No</i>, <i>False</i>, or <i>Off</i> to download the proxy instead.</p>
Trace Level	<p>Sets the logging level for the module.</p> <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

Workflow Manager Module

The Workflow Manager module controls workflow operations.

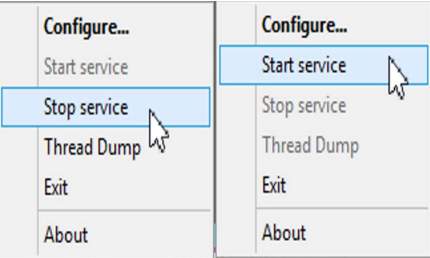
See [Workflows](#) for more information.

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Command Retry Interval (sec)	The amount of time to wait between attempts to retry a workflow command. This is set to 600 seconds (10 minutes) by default.
E-mail Queue Capacity	The total number of emails that can be queued when workflows are configured to send notification emails.
Prepare Completed Asset Metadata	The 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. See PreparedCompleted for more information.
Prepare Completed Instance Metadata	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. See PreparedCompletedInstance for more information.
Trace Level	Sets the logging level for the module. <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

XMTI Module

Caution: Do not modify any parameter not in this list without consulting Technical Support.

Parameter	Description
Delete temporary PR Instances	When an PR restore to a storage location is requested, the PR is first created on CACHE and after that the PR-ed instance is transferred to desired storage location. If this flag is set to YES, the instance from CACHE is automatically deleted at the end of restore. If set to NO, the intermediate instance from CACHE will remain in the system. This is particularly useful when you want to do a PR to multiple storage locations or if you want to preserve the PR-ed content in the archive for a period of time.
Enabled	<p>Set Enabled to <i>YES</i> to enable the module; set it to <i>NO</i> to disable the module.</p> <p>Tomcat must be stopped and restarted for the change to take effect.</p>  <p>Enabled modules are visible under System Control. Disabled modules are visible under System Configuration.</p> <hr/> <p>Note: Enabling the module does not necessarily start the module.</p>
ML partial restore max percent	This percent represents the value after a partial restore from tape is always performed as a full restore to CACHE followed by a partial restore versus a direct partial restore from tape. In this example (see the following figure), if the part to restore is greater the 30% of the full media file, the entire file will be restored from tape.

Parameter	Description
ML partial restore min size (GB)	This value represents the minimum size of a partial restore from tape to be performed directly from tape. If the partial restore section is estimated to be less than this size, then a full restore is performed to CACHE followed by a partial restore.
Omneon Proxy Timecode Offset	A value of 100 is recommended unless the version of HQS is prior to release 1.12. Omneon files include pre-frames. In versions of HQS prior to 1.12, an offset had to be specified to prevent HQS from transcoding the pre-frames. Starting with release 1.12, HQS is capable of handling the pre-frames. However, Kumulate still sends the offset to HQS. In order for HQS to ignore the offset, a number that is larger than the number of pre-frames should be used. This will effectively cause HQS to ignore the offset altogether.
Restart Transcode Engines	If this value is set to YES, all Transcode Engines connected to Kumulate will be restarted when Kumulate starts.
Trace Level	Sets the logging level for the module. <ul style="list-style-type: none"> • OFF: Only errors are logged. • NORMAL: Errors and trace messages are logged. • DEBUG: Logs all messages, including debug messages.

XMTI Module Configuration

OK DELETE KEYWORD

XMTI Information

<input type="radio"/> Allocation Timeout Period (min):	300
<input type="radio"/> Auto Release Check Interval (min):	10
<input type="radio"/> COPYMODE:	NoCopy
<input type="radio"/> Communication Timeout (min):	10
<input type="radio"/> Delete temporary PR instances:	YES
<input type="radio"/> Enabled:	YES
<input type="radio"/> Engine Keep-Alive Interval [5..30] (s):	5
<input type="radio"/> Is-Alive Check Interval [5..30] (s):	5
<input type="radio"/> Is-Alive Communication Timeout (s):	3
<input type="radio"/> ML partial restore max percent:	30
<input type="radio"/> ML partial restore min size (GB):	1.0
<input type="radio"/> ML partial restore supported formats:	MXF, FCP, FINAL CUT PRO, QT_DV, QT_IMX, DV, DVCPRO, QT_XDCAM, QT_RAW, QT_H264
<input type="radio"/> Kumulate ID:	MassStore
<input type="radio"/> Omneon Proxy Timecode Offset:	0
<input type="radio"/> Preserve Time Code:	Yes
<input type="radio"/> Print Message:	Yes
<input type="radio"/> Restart Transcode Engines:	No
<input type="radio"/> TIMEMODE:	YES
<input type="radio"/> Trace Level:	DEBUG
<input type="radio"/> Use Cache Share:	YES

OK DELETE KEYWORD

SDBI Module

Kumulate has a memory cache that maintains information about a number of assets and instances as an optimization to reduce the number of accesses to the database for frequently used assets and instances. If Kumulate needs details about an asset or instance that is found in that cache, the details are obtained directly from the cache, without querying the database. If an asset or instance is not found in the cache it will be automatically added at first use.

Sometimes it is useful to disable the caching mechanism when performing investigations related to metadata values that are not correct in Kumulate.

Parameter	Description
Asset Cache Expire Time [minutes]	The expiration time for an asset in cache. The asset is removed automatically from cache after a certain time period from when it was inserted into the cache.
Asset Cache Size	The maximum number of assets that are preserved in memory cache. If this value is set to 0, the cache for assets is disabled.
Instance Cache Expire Time [minutes]	The expiration time for an instance in cache. The instance is removed automatically from cache after a certain time period from when was inserted into the cache.
Instance Cache Size	The maximum number of instances that are preserved in memory cache. If this value is set to 0, the cache for instances is disabled.

SDBI Module Configuration

SDBI Information

Asset Cache Expire Time [minutes]: 60

Asset Cache Size: 1000

Instance Cache Expire Time [minutes]: 60

Instance Cache Size: 1000

Trace Level: DEBUG

Elasticsearch and Kibana

Kumulate uses Elasticsearch to index object metadata and system activities. These Elasticsearch indexes are used by all Kumulate searches. They are also used to create Kibana visualizations and dashboards; which are displayed in Kumulate's Reports page.

- [Elasticsearch Configuration](#)
- [Import Default Kibana Dashboards Into Kumulate](#)
- [Creating and Modifying Dashboards and Visualization](#)

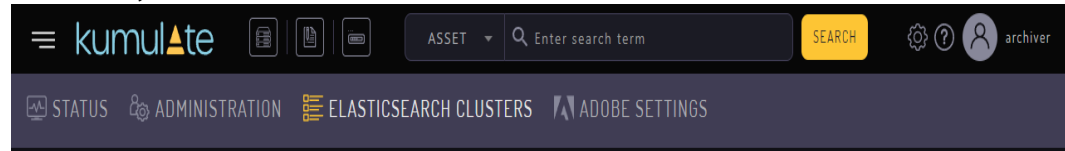
Elasticsearch Configuration

Elasticsearch will be configured as part of your initial configuration.

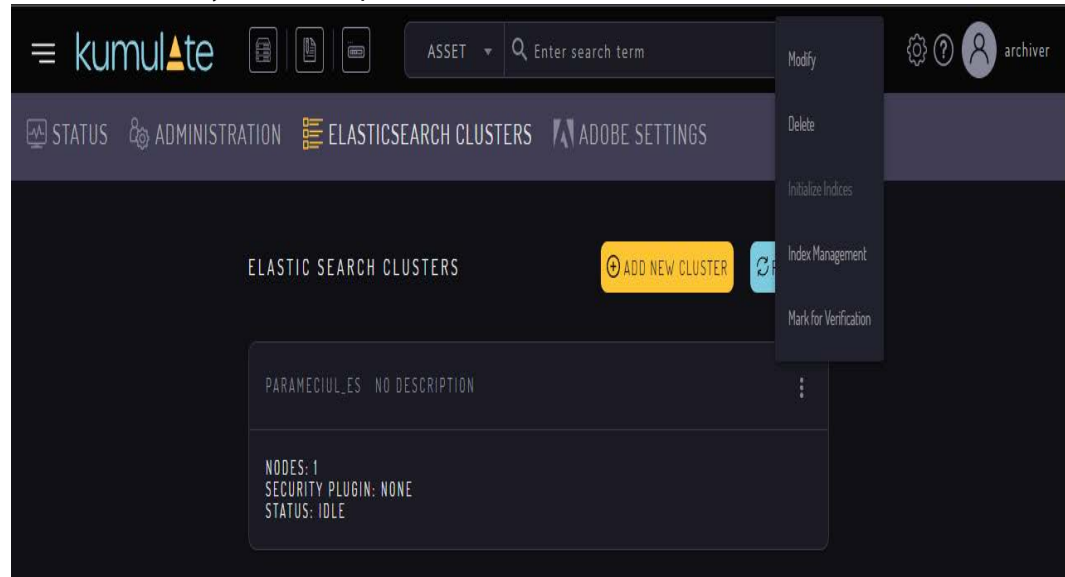
Caution: Do not modify settings without conferring with Technical Support.

Use the following procedure to configure the Elasticsearch and Kibana server:

1. Click System > Elasticsearch clusters in the menu bar in the Kumulate web interface.



2. Select Modify from the options listed.

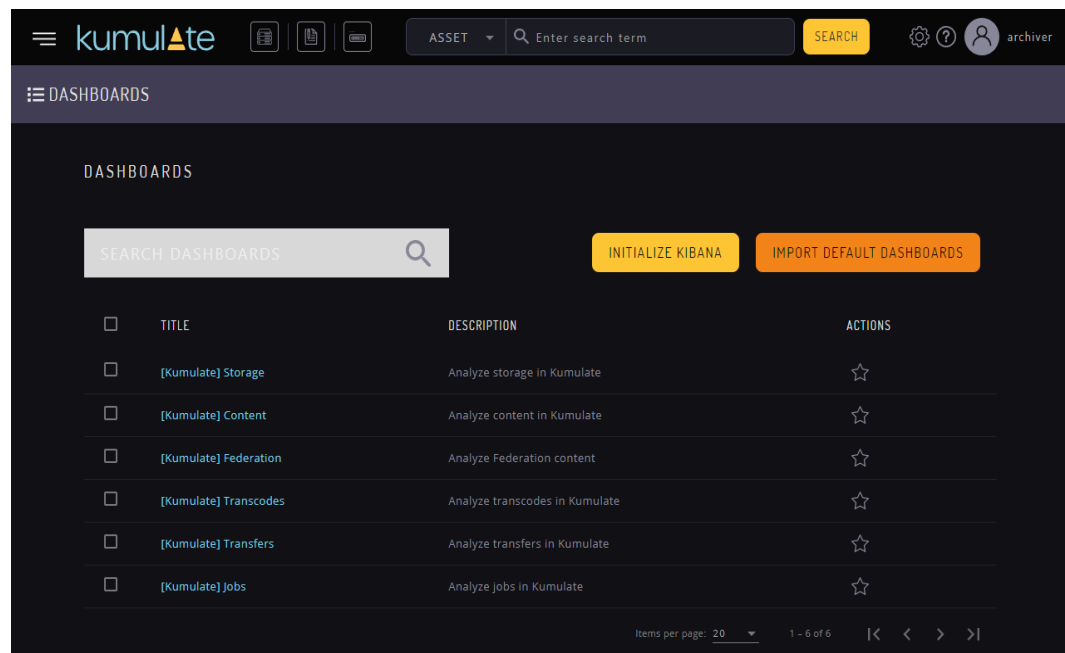
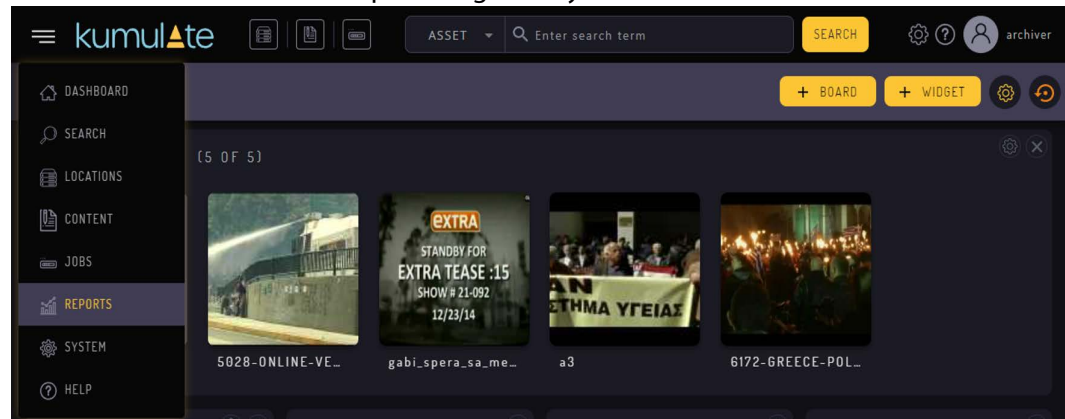


Parameter	Description
Cluster Name	The name of the Elasticsearch cluster that was created during the Kumulate system installation. The cluster name can be determined by viewing the Elasticsearch.yml file; typically found in C:\ProgramData\Elastic\Elasticsearch\config\.
Description	The descriptive name of the cluster.
Enable	Set to <i>Yes</i> .
Use Sniffer	Set to <i>No</i> .
Security Plugin	Set to <i>X-Pack Security</i> .
Authentication Scheme	Set to <i>Basic</i> .

Parameter	Description
Use SSL	Set to Yes.
Username	The user that Kumulate will use to send REST API requests to Elasticsearch.
Password	The password associated with the Username.
Kibana Server URL	The address that Kumulate will use to send REST API requests to Kibana.
Kibana Server URL (User)	The address used by Kumulate GUI to access Kibana.
Kumulate Kibana User	The user that Kumulate will use to send REST API requests to Kibana. This does not need to be configured if security plugins were not configured for Kibana.
Kumulate Kibana Password	The password that Kumulate will use to send the account above.
Elasticsearch nodes	

Import Default Kibana Dashboards Into Kumulate

When the Kumulate system is initially installed, no dashboards will be displayed 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 preconfigured 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. Tutorials can be found at www.elastic.co. Alternatively, Telestream can create custom visualizations as a professional service.

Contact your Telestream Account Manager for more information.