
General

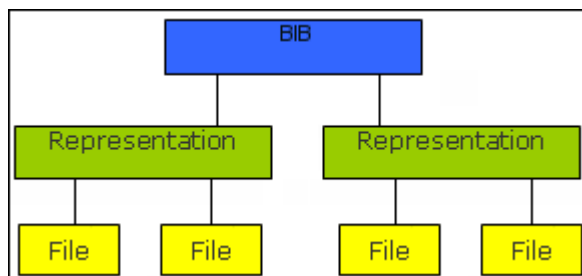
General

Does Alma support the management of digital resources?

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Digital resources are organized in Alma in a three-tiered hierarchy:

- Bibliographic record – The top level consists of the bibliographic record which contains the metadata of the resource. (This is also true for physical and electronic resources.)
- Representation – Under the bibliographic record level is the representation level. This level acts as a container for the digital files. Multiple representations can be attached to the bibliographic record. One representation can be the master copy and another a derivative copy and can differ in format, resolution, or size.
- File – The third level is the file level—that is, the digital files of the resource. There can be several files in each representation.



One feature unique to Alma is the Collections capability. A collection in Alma is an entity that can aggregate all three resource types (physical, digital, and electronic) into one entity with its own bibliographic record. It can be based entirely upon topic or subject matter, such as, for example, a collection titled “Art Collection” which would hold records of physical items including biographies of artists, images of their works, sub-collections by genre (e.g. Picasso’s blue period) and so forth.

Structurally, collections can have child- or sub-collections and parent collections that behave in hierarchical relationships to each other. An example of an Art Collection with two sub-collections:

Within this hierarchy, the Picasso collection has two sub-collections:

Collections can be used in searches (as facets and in searching by collections) and in other areas of the system such as publishing: resources of all types can be published with their collection details, including parent and child collections.

There are two paradigms of how Alma maintains digital resources:

- Remotely - Alma allows you to store your digital files remotely in a digital management system system while maintaining the bibliographic records in Alma.
- Non-Remotely - You maintain all of the digital resource information in Alma, such as bibliographic records, representations, and files.

Does Alma support the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) for import and export of data?

Alma includes the ability to integrate with digital repositories such as: Fedora, DSpace, Rosetta, DigiTool and CONTENTdm using standard OAI-PMH functionality.

For Alma to be able to import your repository's objects, the repository must be able to publish the objects according to the OAI-PMH protocol. So while Alma comes pre-configured for importing digital objects from some notable repositories, any repository that supports OAI-PMH and standard metadata formats can be used.

What flows do Alma and Primo support in order to manage digital resources?

(Clarification: Digital resources refers to files which are owned by the library, as opposed to electronic resources.)

1. **Alma repository:** Files are uploaded to Alma's storage layer (Amazon S3) and fully managed by Alma as digital inventory, in addition to metadata management. Alma publishing can be enriched to include links to these resources.

Read further [here](#) regarding services and flows provided by Alma for this model.

2. **Remote repository:** Institutions can integrate their local Digital Asset Management System (such as Rosetta or DSpace) within Alma. The remote digital system provides bibliographic metadata records via the OAI-PMH protocol, which is then synced with Alma's catalog. The digital files continue being maintained in the remote repository, while the metadata could be managed and published to discovery from Alma. Read further [here](#) regarding services and flows provided by Alma for this model.
3. **Bibliographic reference:** URLs cataloged in bibliographic records, e.g. the MARC 856 field or Dublin Core dc:identifier field, pointing to files stored on the library's local servers. These can be managed and published in Alma, similar to any bibliographic field. However Alma does not provide any digital-specific services for the resources.
4. **Primo harvesting:** Digital repositories can publish records directly to Primo in order to expose content publicly. Published metadata can be normalized in Primo VE's configuration in Alma. Read further [here](#).

The first two models require an Alma Digital license, as described [here](#).

Should we be concerned with data privacy?

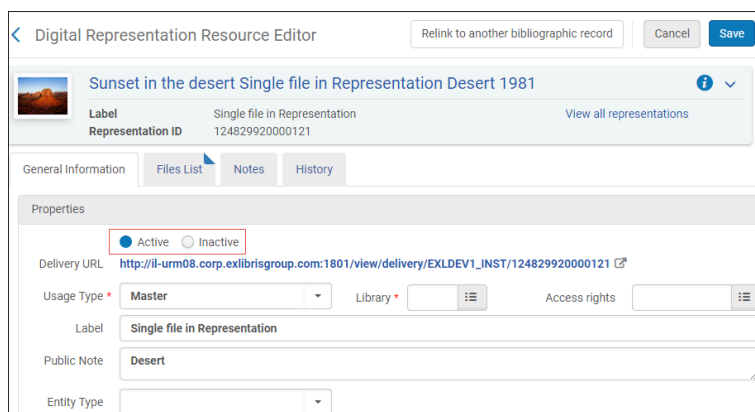
No – there are no data privacy issues as we are just using Amazon for storage of digital objects. We don't store in Amazon any metadata or personal data of users.

Can digital representations be hidden from patrons?

You can mark a digital representation as active or inactive. Inactive representations are hidden from patrons in their discovery systems.

The active/inactive button is available in the following:

- Digital Representation Resource Editor
- Staff Mediated Deposit page
- Add Digital Representation page
- Digital import profile – Inventory tab



The screenshot shows the 'Digital Representation Resource Editor' interface. At the top, there is a title bar with a back arrow, the text 'Digital Representation Resource Editor', and buttons for 'Relink to another bibliographic record', 'Cancel', and 'Save'. Below the title bar, there is a header section with a small image of a sunset, the title 'Sunset in the desert Single file in Representation Desert 1981', and an information icon. Underneath, there are fields for 'Label' (Single file in Representation) and 'Representation ID' (124829920000121), along with a 'View all representations' link. The main content area has tabs for 'General Information', 'Files List', 'Notes', and 'History'. The 'Properties' section is expanded, showing 'Active' and 'Inactive' radio buttons, with 'Active' selected. Below this are fields for 'Delivery URL', 'Usage Type' (set to 'Master'), 'Library', 'Access rights', 'Label' (Single file in Representation), 'Public Note' (Desert), and 'Entity Type'.

Where can I find information about relevant external interfaces?

Please refer to the Ex Libris Developer Network - <https://developers.exlibrisgroup.com/alma/integrations/digital> and <https://developers.exlibrisgroup.com/blog/tag/Digital>

Storage

How is the storage of digital objects handled in Alma?

While Alma manages the metadata and workflows related to print and electronic resources, digital resources are unique in that the objects themselves are stored in Alma. Alma provides library staff with the ability to manage digital workflows and objects through its user interface, hiding the complexity of cloud storage, and offers integrated resource delivery to patrons via Primo.

Alma uses the Amazon Web Services (AWS) Simple Storage Solution (S3) cloud storage service as the backend for digital resources stored in Alma. AWS is a best-of-breed cloud service, and S3 offers a reliable, durable storage solution. S3 is deeply integrated into Alma workflows, so there's no need to interact with it directly from the Alma user interface. Those institutions that require access to the files stored in Alma have the option of using third party tools to communicate directly with the S3 service.

Digital resources in Alma are stored in the relevant AWS region, depending on the location of the Alma data center.

How will storing digital objects affect Alma's response time?

Ex Libris uses Amazon S3 as the cloud storage for the digital objects deposited in Alma, thus leveraging Amazon's storage and bandwidth. This means that core Ex Libris services and data centers are not affected.

Where are digital objects stored?

Ex Libris is using Amazon S3 as the cloud storage for the digital objects deposited in Alma. Ex Libris decided to use Amazon S3 for the digital storage because Amazon is known to provide highly scalable, fast access and durable infrastructure (designed for durability of 99.999999999% of objects). Amazon S3 is available globally in multiple AWS regions, allowing fast access and compliance with data residency requirements.

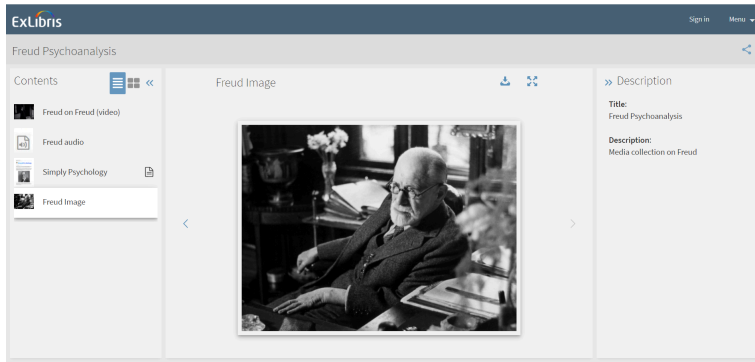
Is storing objects in Amazon a cost effective solution?

Storage is a commodity and prices are coming down. Storage and bandwidth costs are cheaper than storing in a private cloud

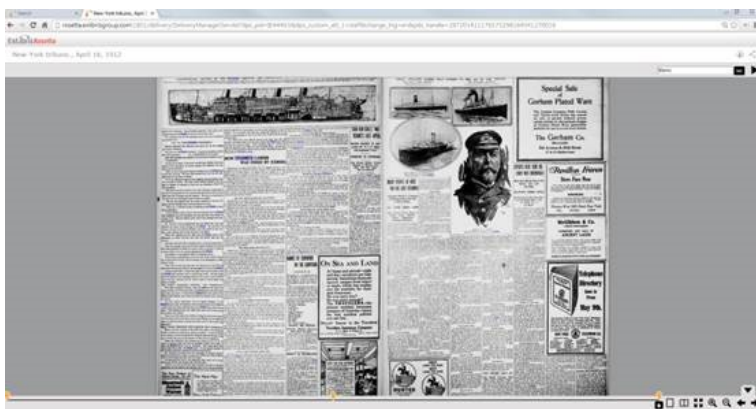
Viewers

Does Alma support the viewing of digital files?

Digital content which is published to external discovery systems holds a delivery URL which points to the digital objects. For objects stored locally in Alma, the Alma viewers can be used. The Alma viewer, which can be seen below, can render any format displayed natively by the browser. Other formats can be downloaded and opened by the patron in dedicated software:



In addition, Alma supports the International Image Interoperability Framework (IIIF) and enables viewing digital images in Alma using a built-in image server and the Universal Viewer. The Universal Viewer has the ability to display and zoom in on high-resolution images and supports formats such as tiff, jpeg, and jpeg2000. The advanced Internet Archive Book Reader has also been embedded into Alma, based on the IIIF framework and supporting full-text search:

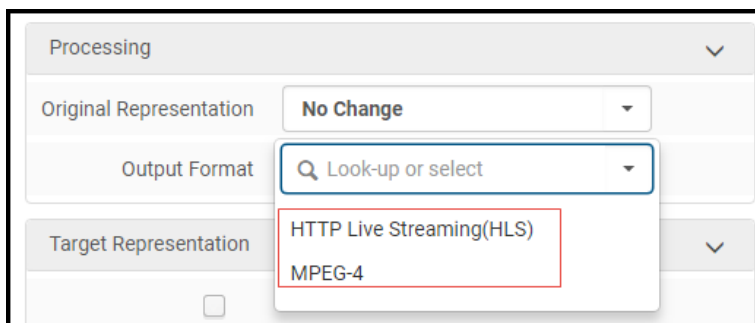


Alma supports also the use of third-party digital viewers, which enables customers to use their own viewers for viewing digital content managed in Alma.

Does Alma support streaming video and audio for the Alma Viewer?

The Alma Viewer supports streaming video and audio. You can convert existing digital representations to streaming format using the Media Conversion Job. The job creates a new representation for the converted format that Alma can use to display streaming video and audio.

The job has two output formats, **HTTP LiveStreaming (HLS)** and **MPEG-4**.



Is there support for native IIIF viewers?

Alma supports the International Image Interoperability Framework (IIIF) and enables viewing digital images in Alma using a

built-in image server and the Universal Viewer. The Universal Viewer has the ability to display and zoom in on high-resolution images and supports formats such as tiff, jpeg, and jpeg2000.

Does Alma support third-party digital viewers?

Alma supports the use of third-party digital viewers, which enables customers to use their own viewers for viewing digital content managed in Alma. For more information, see the [Developer's Network](#).

Total views:

3055