Rosetta Viewers

Rosetta Viewers

Rosetta viewers are used by the Delivery Manager to enable content consumers to view, print, and save objects. Information accessed in this way is read-only and cannot be modified in the viewer.

A viewer displays a representation or a group of representations as defined in the Representation Profile specified by the delivery rules. (For more information, see **Delivery Rules Manager**.)

Note

The Representation Profile determines which representation(s) of the IE should be delivered. The Delivery Rule finds the matching representation(s) of the processed IE. For example, the first Representation Profile is the Low Resolution Derivative Copy Representation. If it is determined that this doesn't exist, the Preservation Master Representation is delivered.

To display different types of content (such as images, text, or video content) for IEs, representations, and files, the Rosetta system provides these different types of viewers out-of-the-box. (Additional viewers can be added and configured.)

The general viewer toolbar and the IE/Rep viewers display a Share icon that displays a URL that you use to share digital files. To prevent the display of the Share icon, enter the parameter share=false either in the delivery rule for the file, the configuration of the viewer, or directly on the URL of the file.

Managing Viewers

Rosetta uses two types of viewers:

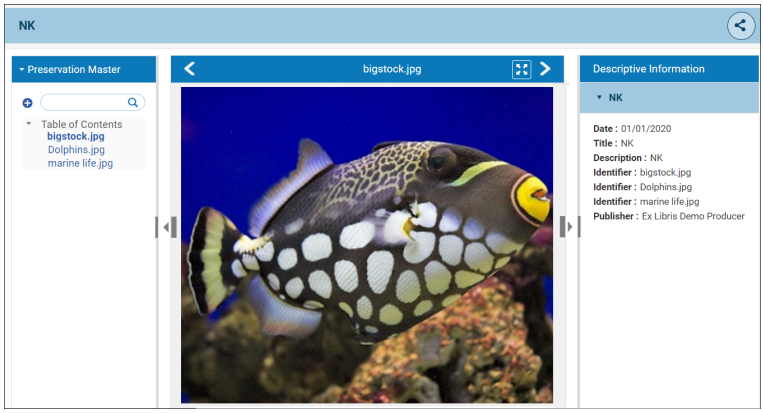
- Bundled: These viewers are part of Rosetta and can only be viewed by the users. For example, FlexPaper and Book Reader viewers.
- External: Users can add new viewers as external viewers. For technical details about external viewers, see External Viewers.
  The viewer entity includes the following attributes:
- Name and Description: for identifying the viewer
- URL: for redirecting the files
- Level: IE or file
- VPP (Plugin): The viewer pre-processor. The tool that is used to fetch the files from the storage (operational or permanent) and the metadata (based on the information in the METS XML file) and to prepare it for the viewer, based on the specific capabilities of the viewer.

General IE Viewer for Mixed Content

An enhanced General IE Viewer is used as the default IE viewer for IEs and representations that contain mixed content (for example, sets of research data, audio albums with music files, and images) or in any other case in which there is no commercial (or in-house) viewer that can handle the set of files.

The General IE Viewer is based on the structural map in the METS XML file, and each file can be viewed separately.

The new General IE Viewer looks like the following:



General IE Viewer, Image

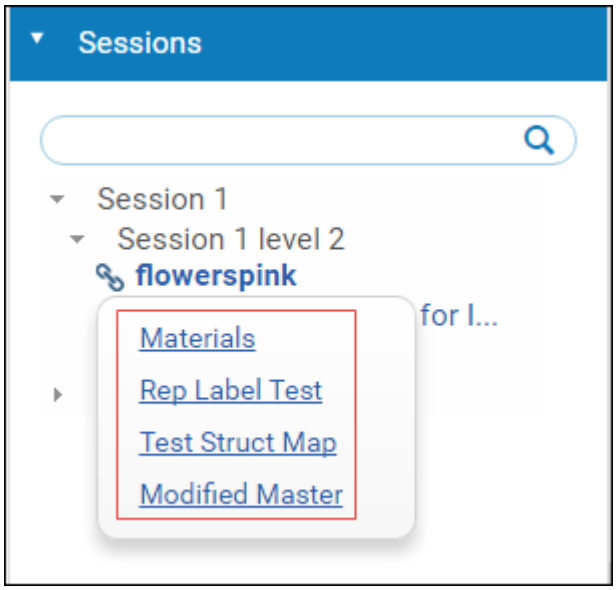
The General IE viewer shows one structural map (logical or physical) of one representation at a time. If the General IE viewer receives a list of representations, the representations appear in drop-down drawers on the left pane of the viewer. The user can open each one and select a structural map. The right pane of the viewer displays the descriptive metadata of the file.

From the top-right of the viewer, the user can:

- Click the Download icon to download the files of the IE. If configured, you have the option of downloading a single file or all of the files in the IE. (For information on configuring the Download icon, see **Representation Profiles**.)
- Click the Folder icon to open a list of links to the collections associated with the IE. The collection viewer opens in a new tab.
- Click the Share icon to share the delivery URL of the IE.

When more than one copy of a file is associated with a representation, Rosetta provides the means to navigate multiple images in the same object view. Multiple images are associated through a Group ID and can be browsed through the viewer. Their identification codes allow them to retain their association no matter where they may be distributed in the system or an export.

Object viewers have a table of contents in the left column with an link icon next to items containing links to associated objects. You can link several files by assigning them the same Group ID in the object Characteristics section of the file level DNX. Hovering over a linked file displays the list of linked files.



Information for Other Versions

Metadata for the files appears in the right pane.

The IE Viewer is supported for mobile devices. Downloading files is supported for mobile devices with the android operating system.

Article Viewer

The Rosetta Article Viewer allows you to view PDFs of scholarly articles in Rosetta, and complies with Google Scholar indexing requirements of article metadata and full text. The viewer uses source MD of type=OTHER and subtype=article, according to the specified structure, to generate HTML meta tags in order to comply with Google Scholar requirements. If no such MD is provided, Rosetta uses specified DC fields.

Scholarly material IEs should all belong to one or more collection. These collections should be exposed to Google using a sitemap with deeplinking URLs (for example: http://rosetta.university.edu:1801/delivery/action/collectionViewer.do?collectionId=15584175).

You must configure the Article Viewer as the delivery method for scholarly material in order for Google crawlers to reach and index it.

General Representation Viewer for Mixed Content

An HTML5 viewer that accepts a single representation (provided by the delivery rule representation profile). It can display only formats that are supported by HTML5. For other formats, the viewer supports download only. Click the Download icon to download the files of the IE. If configured, you have the option of downloading a single file or all of the files in the IE. (For information on configuring the Download icon, see **Representation Profiles**.)

The representation viewer is supported for mobile devices. Downloading files is supported for mobile devices with the android operating system.

For information on configuring the metadata fields that appear in the General Representation Viewer, see the **Delivery Metadata Fields** section of the *Rosetta Configuration Guide*.

Photo Album Viewer

The Rosetta Photo Album viewer allows you to view images in photo album style by flipping through images. Supported formats are png, gif, and jpg.

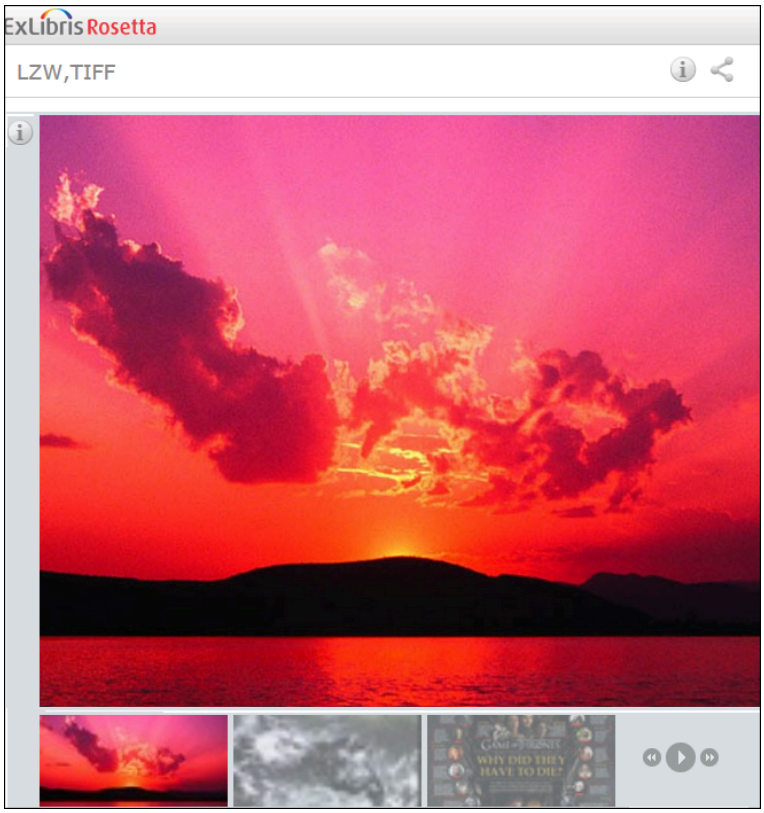


Photo Album Viewer

Universal Viewer

The Universal Viewer has the ability to display and zoom in on high-resolution images and supports formats such as tiff, jpeg2000, PDF, 3D model formats (.glb, .gltf), and audio and video formats. The Universal Viewer supports closed captions in .vtt format.

To add closed captions to a video representation, the user must add another representation with a new entity type labeled "Closed Captions" (code: **CLOSED_CAPTIONS**). The closed captions representation must have the same file name as the video. For example, if the video file is named **video_name.mp4**, the caption file must be named **video_name.vtt**. A two-letter language code can be added before the .vtt extension to denote the language of the closed captions. For example, **video_name.en.vtt**.

Note

Adding the language code is optional, but it must follow the system's predetermined language codes.

You have the option to download the original high-resolution file, and captions, when you click the **Download** button.

Note

The Universal Viewer does not support representations of mixed content. All the files in the representation must be the same format for the viewer to work.

To support the Universal Viewer, Rosetta provides a IIIF image server and publishes a IIIF manifest for representations.

Videojs Viewer

The Videojs viewer is an AV viewer that includes streaming support and allows you to change the speed of the playback.

Streaming Viewer

The streaming viewer supports streaming video and audio files that were created by the Video to HLS Streaming transformation profile.

OpenSeadragon Viewer

The OpenSeadragon viewer is a viewer for high-resolution zoomable images. With this viewer images can be rotated and printed. The print function uses the print.xsl file that you can configure to include specific metadata.

XSL Viewer

The XSL viewer displays XML files in HTML by using a stylesheet that you can configure.

FlexPaper Viewer

The FlexPaper viewer is a viewer to display PDF files.

Embedded Viewers

Rosetta Delivery supports embedding viewers as components in Web pages that display digital objects.

Rosetta allows configuring the viewers to be embedded in other ways, by setting the parameters of the viewer URL. These parameters control the appearance of the header, toolbar, and footer around the viewer.

When adding to the URL the parameter `embedded=true`, the image appears without the Rosetta header and footer:

Embedded Viewer

To display the object without the title and top toolbar (folder, information, and share icons), an additional parameter of `toolbar=false` must be added to the `embedded=true` parameter (shown above).

dps_func parameter

The `dps_func` parameter is used for getting access to the file(s) without using the Delivery chrome (e.g. header, footer, toolbar, logo, and background colors). It can be used for getting the thumbnail of the IE `(dps_func=thumbnail)` or the file itself streamed to the user's browser `(dps_func=stream)` .

Note

The list of parameters for some of the viewers are documented in Viewer Parameters.

Image-Based File Viewer

When the IE or representation contains a single file, this file is displayed without the tree structure on the left.

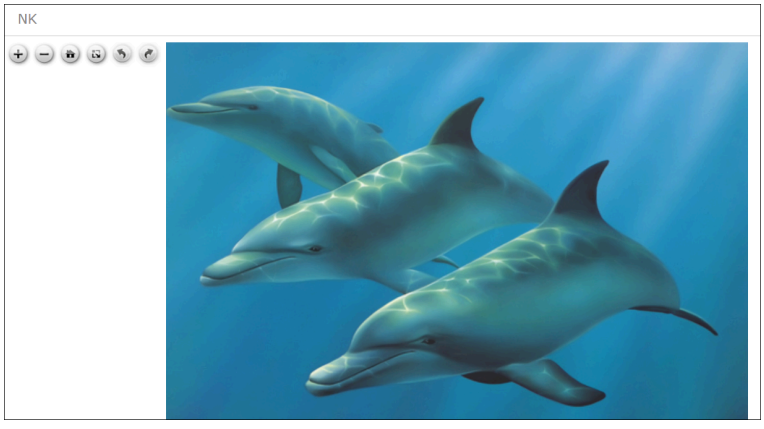


Image-Based File Viewer

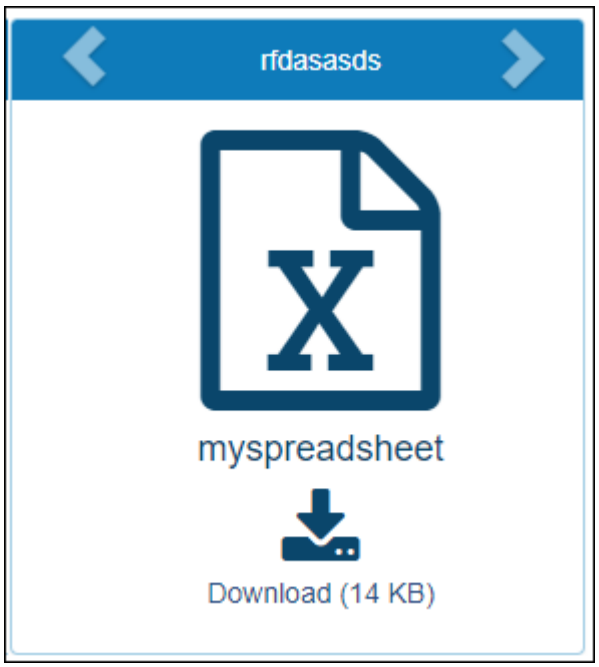
This viewer displays image files and enables users to perform the following actions on the image:

- Zoom in and out
- Rotate 90 degrees in either direction
- Display image metadata
- Open a print-friendly version of the image in a new browser window by clicking the print icon on the toolbar
- Save a copy of the image to their own local or network drive using the download button beside the print button.

Web Browser-Based File Viewer

If there is no viewer that supports the file format of the delivered file, you can configure how Rosetta handles the file. By default, Rosetta's file viewer streams the file to the browser and the user can download it or use a plug-in on the local computer to render the file. For example, Office documents are streamed to the user's browser for download and opened locally on the user's PC.

Alternatively you can configure the file viewer to display a thumbnail (or icon if no thumbnail is available) with a download link. For example:



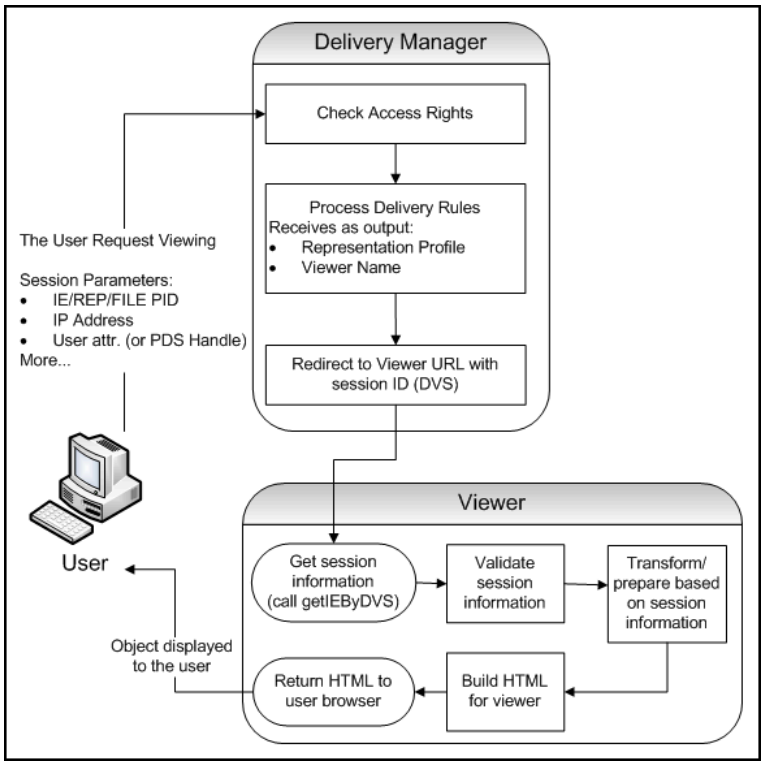
There are three ways to configure the file viewer to display the download link instead of sending the file to the browser.

- Create a delivery rule for the file (see File Delivery Rules) with a parameter of `direct=false`.
- Add the suffix `direct=false` to the URL of the file.
- On the Viewer Management page (**Administration > Delivery > Viewer Management**) add the suffix `direct=false` to the URL field of the viewer.

External Viewers

Data Flow

The diagram below shows the flow of the delivery request between the user, the Delivery Manager, and the external viewer.



External Viewer, Data Flow

Viewer Preprocessor

In the figure above, the external viewer obtains all the information from the delivery session.

Note

If needed, a VPP plug-in can be used by the Delivery Manager to prepare the files for viewing by the external viewer.

External Viewer Methods

The two methods described below are part of a Web service:

- Get IE by DVS Method
  This method is used by the external viewer for getting the content of the IE as it is stored in the Delivery session. The method uses the session ID (called dvs) sent by the Delivery Manager. In response, the delivery session sends the IE (METS XML) as a string. The METS file can be parsed by the IE Parser (which is available in the Rosetta SDK). The string includes the IE and representation metadata (Source DC, Descriptive, and DNX) and a list of structural maps which include file path and label for each file.
- Get Full IE by DVS Method
  This method, the getFullIEByDVS, returns the full IE including all the information (DNX) on every file.

APIs for External Viewers

The following are examples in which the API is used to integrate an external viewer:

- Wowza – Used by an Ex Libris partner for viewing video and audio files. As shown in the figure above, the Delivery Manager redirects the files to the server on which the viewer resides, and the viewer streams the video or audio file to

the user's browser.

- DFG Viewer – A custom-made Web service designed by an Ex Libris partner to create an object view outside of Rosetta and independent from any internal Rosetta viewer. It interacts with the Deliver Manager by using the API to retrieve the files (PDF, images) from the delivery session.

Adding an External Viewer

External viewers are added through the Rosetta user interface (UI).

Users must create a new viewer and enter its URL. If the viewer requires specific processing of the IE, a VPP can be plugged in as well using the plug-in management UI.

After adding the viewer record, users can create delivery rules that redirect to the external viewer. For example, viewers such as Wowza can be used for streaming a video file.

Note

All viewers that are not in-house developments (e.g. commercial or open source tools developed by other software developers/companies) are implemented as external viewers and are not part of Rosetta source code.

Customizing the Viewer Header

Delivery viewers use the logo and background colors specified for the IE's institution. For information on how logos and colors are associated with institutions, see **UI Customization Per Institution**.

Delivery Parameters

The following table describes delivery parameters for URL viewers. These parameters can be added either to the Delivery URL or as the Viewer parameters in the Delivery rule. With the exception of the list specified in the table below, any querystring parameter can be appended to the delivery request (either directly on the request URL or via the delivery rules) and is forwarded to the viewer.

Delivery URL Parameters

Parameters	Level	Result
toolbar=true	IE/ Rep/ File	Default settings including: • Header • Toolbar • Viewer iFrame • Footer
embedded=false	IE/ Rep/ File	Default settings including: • Header • Toolbar • Viewer iFrame • Footer
direct=false	File	A download link is displayed, giving the user the option to download the file. By default, the file is sent to the browser for display or download if display is not possible.

Parameters	Level	Result
toolbar=false AND embedded=true	IE/ Rep/ File	IFrame with only keep-alive functionality and the Viewer IFrame
dps_func=stream	File	Stream file
dps_func=thumbnail	IE/ Rep/ File	Stream thumbnail directly
dps_frame	IE/ Rep/ File	When false, redirection to an external viewer does not include a Rosetta wrapper. **Note** The number of concurrent users is not checked when set to `false`. Access rights policies that are based on this condition will pass.
dps_func=mets	IE	METS XML

Viewer Parameters

The following table describes the parameters for the General IE viewer:

General IE Viewer Parameters

Name	Default Value	Description
AUTOMATIC_ LOADING	True	When opening the IE Viewer, the first file will not be delivered. Can be used when a thumbnail is preferred, or when files are exceptionally large and the user is not expected to necessarily request the first file.
use_arrows	True	Can be used to hide arrows that allow navigation between files in a representation, specifically when the file viewer functionality is affected by their presence.
dps_file={file PID}	First file of the IE	When provided, the viewer opens the requested IE/REP at the requested file.
toc_pane	show	Possible values: • Show – display the TOC, can be hidden • hide – hide the TOC, can be opened • none – no option to display the TOC
md_pane	show	• show – display the MD pane, can be hidden • hide – hide the MD pane, can be opened • none – no option to display MD pane
search	show	• show – display the search box • hide, none – do not display the search box

The following table describes the parameters for the General Representation Viewer:

General Representation Viewer Parameters

Name	Default Value	Description
dps_file={file PID}	First file of the Representation	When provided, the viewer opens the requested REP at the requested file.

The following table describes the parameters for the XSL Viewer.

XSL Viewer Parameters

Name	Default Value	Description
xsl_file		The XSL stylesheet used to display XML files.

The following table describes the parameters for the FlexPaper Viewer.

FlexPaper Viewer Parameters

Parameter	Default Value	Description
read_only	false	When read_only=true, the FlexPaper viewer opens without print functionality. OTB remains with print functionality ('read_only=false').
init_view_ mode	portrait	Possible values: • portrait – displays one page at a time • thumb_view – displays the file as thumbnails • two_page – displays two pages at a time.

The following parameters apply to the Video Player Viewer.

Viewer Parameters: Video Player - JWPlayer

Name	Description	Example
Volume	The volume the player will start playing. Default value is 50 and it can be between 0 and 100.	volume=75
autoStart	By default you need to press play for a file to start playing. By setting this parameter to true, the file starts playing automatically on load, and if there's a playlist the next file will automatically start after the previous one has finished.	autoStart=True
Metadata	A Boolean value indicating whether or not to activate the metadata plugin that creates a sidebar showing the metadata extracted on the fly. To see its affect add: "metadata=true" to the url.	metadata=true
audioView	By default the audio viewer will only display the player tray. To view visualization effects for audio file playback set this parameter to true.	audioView=true
skin	The design of the viewer. the following skins are supported by Rosetta: • kleur.zip • vector01.zip • niion.zip • moderngreen.zip • anoto.zip • cassette.zip • jump.zip • yellowish.zip • nature01.zip	skin=kleur

Name	Description	Example
	• videosmartclassic.zip • nexus.zip • grungetape.zip • snel.zip • fs40.zip • playcasso.zip	

The following parameters apply to the photo album viewer.

The Photo Album viewer is strict regarding parameter syntax. For example, no spaces are allowed around the equal sign, and the parameter value must be quoted with single quotation marks.

Viewer Parameters - Photo Album

Name	Default Value	Description
transition_ speed	2000	Duration of panel/frame transition (in milliseconds)
transition_ interval	2000	Delay between panel/frame transitions (in milliseconds)
easing	swing'	Easing method is used for animations (jQuery provides 'swing' or 'linear', more available with jQuery UI or Easing plugin)
show_ panels	true	Flag to show or hide panel portion of gallery
show_ panel_nav	true	Flag to show or hide panel navigation buttons
enable_ overlays	true	Flag to show or hide panel overlays
panel_width		Width of gallery panel (in pixels)
panel_ height		Height of gallery panel (in pixels)
panel_ animation	slide	Animation method for panel transitions (crossfade, fade, slide, none)
panel_scale	crop	Cropping option for panel images (crop = scale image and fit to aspect ratio determined by panel_width and panel_height, fit = scale image and preserve original aspect ratio)
overlay_ position	top	Position of panel overlay (bottom, top)
pan_ images	true	Flag to allow user to grab/drag oversized images within gallery
pan_style	drag	Panning method (drag = user clicks and drags image to pan, track = image automatically pans based on mouse position
pan_ smoothness	15	Determines smoothness of tracking pan animation (higher number = smoother)

Name	Default Value	Description
start_frame	1	Index of panel/frame to show first when gallery loads
show_ filmstrip	true	Flag to show or hide filmstrip portion of gallery
show_ filmstrip_ nav	true	Flag indicating whether to display Navigation buttons
enable_ slideshow	true	Flag indicating whether to display slideshow play/pause button
autoplay	false	Flag to start slideshow on gallery load
show_ captions	true	Flag to show or hide frame captions
filmstrip_ size	3	Number of frames to show in filmstrip-only gallery
filmstrip_ style	scroll	Type of filmstrip to use (scroll = display one line of frames, scroll filmstrip if necessary, showall = display multiple rows of frames if necessary)
filmstrip_ position	bottom	Position of filmstrip within gallery (bottom, top, left, right)
frame_ width	164	Width of filmstrip frames (in pixels)
frame_ height	80	Width of filmstrip frames (in pixels)
frame_ opacity	0.5	Transparency of non-active frames (1.0 = opaque, 0.0 = transparent)
frame_ scale	crop	Cropping option for filmstrip images (same as above)
frame_gap	5	Spacing between frames within filmstrip (in pixels)
show_ infobar	false	Flag to show or hide info bar
infobar_ opacity	1	Transparency for info bar

The following parameters apply to the JP2000 viewer.

Viewer Parameters - JP2000 Viewer

Parameter	Default Value	Description
read_only	false	When read_only=true, the download and print buttons are hidden.

About Viewer Preprocessors

To display content successfully, viewers (especially third-party viewers) can impose special requirements on content, such

as format or file location. For example, if a content consumer requests XML content, an XSL transformation must be performed in order to show the content in a Web browser.

To enable correct display of any content, the Rosetta system prepares the content using viewer preprocessors, which are implemented as plug-ins.

The table below describes the viewer preprocessors that the Rosetta system uses:

Viewer Preprocessors

Viewer Preprocessor	Description
XSLViewerPreProcessor	This viewer preprocessor performs XSL transformation of XML files to HTML that is displayed in a Web browser.
DefaultViewerPreProcessor	The requested content can be displayed in a Web browser without any additional transformation.
FullTextViewerPreProcessor	Converts all PDF files in representation into a single HTML file. Use with the StreamGate viewer to provide a fulltext representation to a harvester (for example, Primo).
StreamingHLSViewerPreProcessor	Prepares the video tar file for streaming format

Viewer preprocessors are provided with the Rosetta system as a part of installation. New preprocessors can be added as plug-ins via the plug-in management UI.