# **Open Seadragon**

#### Overview

SeaDragon is a zoomable viewer available for Book/Newspaper Pages and Large Images. The viewer supports a custom Djatoka tilesource and a IIIF tilesource, based in spirit from the JS component of Kevin Clarke's FreeLib-Djatoka. Instead of "synthesizing" the info for DZI this module creates the path to access Djatoka directly and obtain different regions for the tiles.

# **Dependencies**

- Islandora
- Tuque
- OpenSeadragon
- Islandora Paged Content (Conditional: please see note below)
- Drupal.org modules:
  - Libraries
  - Token

# **OpenSeadragon**

Download and install the Openseadragon library to your sites/libraries folder, or run drush openseadragon-plugin. Openseadragon 2.2.1 is known to work well with Islandora. Note: If you use the Drush command, it is advisable to Move (not copy) the install script to your .drush folder and run it.

If you have an existing install it's required to update Openseadragon to it's latest version. You can do this quickly with the provided Drush command.

drush openseadragon-plugin

#### **Reverse Proxy**

We make the assumption that we (reverse) proxy Djatoka, to fix the same-origin issue.

For Apache, with Drupal running on the same box as Apache, a couple lines like:

```
ProxyPass /adore-djatoka http://localhost:8080/adore-djatoka ProxyPassReverse /adore-djatoka http://localhost:8080/adore-djatoka
```

in the Apache config somewhere (either the main apache.conf, httpd.conf, or in and arbitrarily named \*.conf in your Apache's conf.d directory should suffice to establish the reverse proxy.

In Debian derived systems one will need to create location entries for each proxy or remove the Deny from All in mod\_proxy's conf file.

# Configuration

Set the paths for your chosen Image Server in admin » Islandora » islandora\_viewers » openseadragon

#### Djatoka Image Server

Set the paths for 'Djatoka server base URL'

# **IIIF Server**

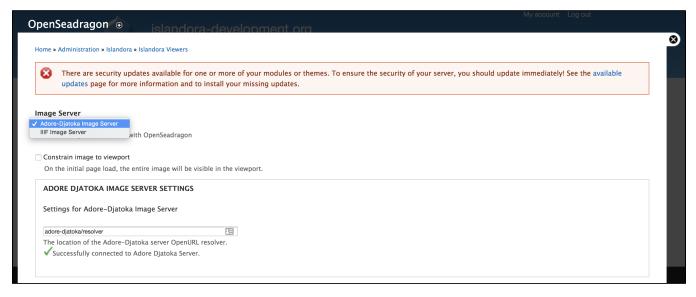
Set the path for your IIIF server. Any IIIF image server can be used the the IIIF tile source. The IIIF tile source provides a full URL to the datastream to be displayed as the IIIF identifier. The IIIF server needs to be configured to resolve this full URL to retrieve the image.

The Cantaloupe IIIF image server can be configured to resolve these identifiers using the HttpResolver with no prefix specified.

#### **Configuration Screenshots**

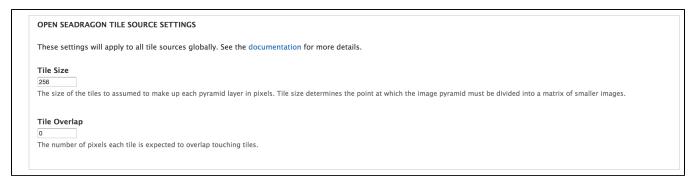
There are a lot of options to configure Open Seadragon. Here are screenshots to every available option in the current version.

#### **Configure Image Server**



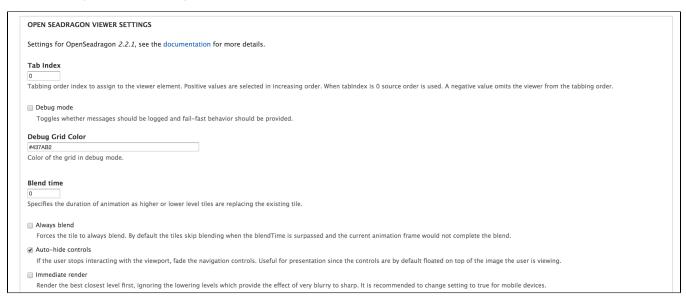
• Note the option to select either an adore-Djatoka Image Server or a IIIF Image server - you will be prompted after selecting with a field where you can enter your image server URL.

## **Configure Open Seadragon Tile Source Settings**



• Note that interface documentation links will take you to relevant Seadragon documentation, not back to this page.

## **Open Seadragon Viewer Settings**



section continues...

Default zoom level
0
Zoom level to use when image is first opened or the home button is clicked. If 0, adjusts to fit viewer.
Opacity
1
Default opacity of the tiled images (1=opaque, 0=transparent)
Composite Operation
•
Select the image server to use with OpenSeadragon
Placeholder Fill Style
Draws a colored rectangle behind the tile if it is not loaded yet. You can pass a CSS color value like "#FF8800".
Draws a Coloreu rectaligie periniu the tile in it is not toaueu yet. Tou can pass a CSS Color value like #FF6000 .
Initial Rotation
Initial rotation in degrees.
Minimum Zoom Level
Minimum Zoom Level (Integer).
Maximum Zoom Level
Maximum Zoom Level (integer).

## section continues...

<ul> <li>Home Button Fills Viewer</li> <li>Make the "home" button fill the viewer and clip the image, instead of fitting the image to the viewer and letterboxing.</li> <li>Pan horizontal</li> <li>Allow horizontal pan.</li> </ul>
⊛ Pan vertical     Allow vertical pan.
Constrain During Pan
<ul> <li>Wrap horizontal</li> <li>Set to true to force the image to wrap horizontally within the viewport. Useful for maps or images representing the surface of a sphere or cylinder.</li> <li>Wrap vertical</li> </ul>
Set to true to force the image to wrap vertically within the viewport. Useful for maps or images representing the surface of a sphere or cylinder.
Minimum zoom image ratio  0.9  The minimum percentage (expressed as a number between 0 and 1) of the viewport height or width at which the zoom out will be constrained. Setting it to 0, for example will allow you to zoom out infinity.
Maximum zoom pixel ratio  1.1  1.1  1.1  1.1  1.1  1.1  1.1  1
The maximum ratio to allow a zoom-in to affect the highest level pixel ratio. This can be set to Infinity to allow "infinite" zooming into the image though it is less effective visually if the HTML5 Canvas is not available on the viewing device.
Smooth Tile Edges Minimum Zoom  1.1  A zoom percentage (where 1 is 100%) of the highest resolution level. When zoomed in beyond this value alternative compositing will be used to smooth out the edges between tiles. This will have a performance impact. Can be set to Infinity to turn it off. Note: This setting is ignored on iOS devices due to a known bug (See https://github.com/openseadragon/openseadragon/issues/952).
■ Auto Resize     ■ Control of the control
Set to false to prevent polling for viewer size changes. Useful for providing custom resize behavior.
Preserve Image Size On Resize  Set to true to have the image size preserved when the viewer is re-sized. This requires Auto Resize to be enabled (default).

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Minimum Scroll Delta Time
50
Number of milliseconds between canvas-scroll events. This value helps normalize the rate of canvas-scroll events between different devices, causing the faster devices to slow down enough to make the zoom control more manageable.
Pixels Per Wheel Line 40
For pixel-resolution scrolling devices, the number of pixels equal to one scroll line.
Visibility ratio
0.5
The percentage ( as a number from 0 to 1 ) of the source image which must be kept within the viewport. If the image is dragged beyond that limit, it will 'bounce' back until the minimum visibility ratio is achieved. Setting this to 0 and wrapHorizontal ( or wrapVertical ) to true will provide the effect of an infinitely scrolling viewport.
Image loader limit
The maximum number of image requests to make concurrently. By default it is set to 0 allowing the browser to make the maximum number of image requests in parallel as allowed by the browsers policy.
Click time threshold
300
The number of milliseconds within which a pointer down-up event combination will be treated as a click gesture.
Click distance threshold
5
The maximum distance allowed between a pointer down event and a pointer up event to be treated as a click gesture.
Double click distance threshold
300
The number of milliseconds within which two pointer down-up event combinations will be treated as a double-click gesture.

#### section continues...



# **Expanded Mouse Pointer Gesture Settings**

```
MOUSE POINTER GESTURE SETTINGS

Settings for gestures generated by a mouse pointer device. (See OpenSeadragon.GestureSettings)

- Scroll To Zoom
Zoom on scroll gesture.
- Click To Zoom
Zoom on click gesture.
- Double Click To Zoom
Zoom on double-click gesture. Note: If set to true then clickToZoom should be set to false to prevent multiple zooms.
- Pinch To Zoom
Zoom on pinch gesture.
- Flick Gesture
Enable flick gesture.
- Flick Gesture
Enable flick gesture.
- Flick Minimum Speed
- IZO
```

#### **Expanded Touch Pointer Gesture Settings**

#### **Expanded Pen Pointer Gesture Settings**

```
Settings for gestures generated by a pen pointer device. (See OpenSeadragon.GestureSettings)

. Scroll To Zoom
    Zoom on scroll gesture.

. Click To Zoom
    Zoom on click gesture.

. Double Click To Zoom
    Zoom on dick gesture.

. Pinch To Zoom
    Zoom on double-click gesture. Note: If set to true then clickToZoom should be set to false to prevent multiple zooms.

. Pinch To Zoom
    Zoom on pinch gesture.

. Finck Gesture

. Finck Minimum Speed
. Filck Gesture.

. Filck Gesture

. Filck Gesture

. Filck Gesture

. Filck Minimum Speed
. To Zoom
```

#### **Expanded Unknown Pointer Gesture Settings**

```
UNKNOWN POINTER GESTURE SETTINGS

Settings for gestures generated by a unknown pointer device. (See OpenSeadragon.GestureSettings)

- Scroll To Zoom
Zoom on scroll gesture.
- Click To Zoom
Zoom on click gesture.
- Josuble Click To Zoom
Zoom on double-click gesture.
- Nich To Zoom
Zoom on double-click gesture. Note: If set to true then clickToZoom should be set to false to prevent multiple zooms.
- Pinch To Zoom
Zoom on pinch gesture.
- Flick Gesture
- Enable flick gesture.
- Flick Minimum Speed
- IZO
- If flick Minimum speed to initiate a flick gesture (pixels-per-second).
- Flick Momentum
- Zes
- If flick Montae
- If pinchRotate is true, the user will have the ability to rotate the image using their fingers.
```

## **Open Seadragon Viewer Settings (Continued)**

Zoom per click
2
The "zoom distance" per mouse click or touch tap. Note: Setting this to 1.0 effectively disables the click-to-zoom feature (also see gestureSettings[Mouse Touch Pen].clickToZoom/dblClickToZoom).
Zoom per scroll
The "zoom distance" per mouse scroll or touch pinch. Note: Setting this to 1.0 effectively disables the mouse-wheel zoom feature (also see gestureSettings[Mouse]Touch[Pen].scrollToZoom]).
Zoom per second
1
The number of seconds to animate a single zoom event over.
NAVIGATOR OPTIONS
Show Navigator
Set to true to make the navigator minimap appear.
Controls Fade Delay
2000
The number of milliseconds to wait once the user has stopped interacting with the interface before begining to fade the controls. Assumes showNavigationControl and autoHideControls are both true.
Controls Fade Length
1600
The number of milliseconds to animate the controls fading out.
Controls Fade Delay
The max number of images we should keep in memory (per drawer).
timeout
30000

# section continues...

Use Canvas
Set to false to not use an HTML canvas element for image rendering even if canvas is supported.
inimum Pixel Ratio
5
ne higher the minPixelRatio, the lower the quality of the image that is considered sufficient to stop rendering a given zoom level. For example, if you are targeting mobile devices with less bandwith you may try setting is to 1.5 or higher.
Enable Mouse Navigation
Is the user able to interact with the image via mouse or touch. Default interactions include dragging the image in a plane, and zooming in toward and away from the image.
NAVIGATION CONTROLS
✓ Show Navigation Control
Set to false to prevent the appearance of the default navigation controls. Note that if set to false, the customs buttons set by the options zoomlnButton, zoomOutButton etc, are rendered inactive.
Navigation Control Anchor
TOP_LEFT •
Placement of the default navigation controls. To set the placement of the sequence controls, see the sequenceControlAnchor option.
✓ Show Zoom Control
If true then + and - buttons to zoom in and out are displayed. Note: OpenSeadragon.Options.showNavigationControl is overriding this setting when set to false.
Show Home Control
documentation
Show Full Page Control
If true then the rotate left/right controls will be displayed as part of the standard controls. This is also subject to the browser support for rotate (e.g., viewer.drawer.canRotate()). Note: OpenSeadragon.Options.showNavigationControl is overriding this setting when set to false.
Show Rotation Control
If sequenceMode is true, then provide buttons for navigating forward and backward through the images.
equence Control Anchor
IOP_LEFT
acement of the default sequence controls.

# section continues...

Navigation Previous/Next Wrap  If true then the "previous" button will wrap to the last image when viewing the first image and the "next" button will wrap to the first image when viewing the last image.
SEQUENCE MODE
Sequence Mode
Set to true to have the viewer treat your tilesources as a sequence of images to be opened one at a time rather than all at once.
COLLECTION MODE
☐ Enable Collection Mode
Set to true to have the viewer arrange your Tiledimages in a grid or line.
Save configuration Reset to defaults

# Troubleshooting/Issues

Having problems? Check out the Islandora google groups for a solution. Have a solution (or a problem with these docs)? Share it with the community!

- Islandora GroupIslandora Dev Group