Large Image Solution Pack

Introduction

The Large Image Solution Pack adds the ability to create Large Image collections, which are capable of displaying high resolution TIFFs and JPEG 2000s (JP2). This module also creates derivatives and supports the installation of image viewers.

Requirements

This module requires the following modules/libraries:

- Islandora
- Tuque
- ImageMagick is required to create TN and JPG image derivatives

This module requires one of the following to create JP2 derivatives from TIFFs, or to create derivatives of JP2s:

- Kakadu (bundled with Djatoka)
- ImageMagick with JPEG 2000 support

Configuration

Creating image derivatives

To create image derivatives, configure the image processing toolkit to use ImageMagick rather than the GD2 image manipulation toolkit in Administration > Configuration > Media > Image Toolkit (admin/config/media/image-toolkit). If GD2 is selected, TN and JPG datastreams will not be generated.

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Derivative Options

Configure derivative options in Administration > Islandora > Solution Pack configuration > Large Images (admin/islandora/solution_pack_config/large_image).

- **Create Lossless Derivatives**: Enable this option to use reversible lossless compression when creating JP2 derivatives. When a JP2 original is uploaded, a second "use" copy is created for the JP2 datastream.
- **Use Kakadu for Image Compression:** The Kakadu software suite can be installed on your server to take advantage of its much faster kdu_compress program. Users often use the copy of kdu_compress that comes bundled with Djatoka (see below), but you can also go to the official website at http://www.kakadusoftware.com/ for download and installation instructions.
    - To use Kakadu, make sure that `kdu_compress` is available to the Apache user. Often users will create symbolic links from `/usr/local/bin/kdu_compress` to their installation of Kakadu that comes bundled with Adore-Djatoka. If the executable resides elsewhere on the server and no soft link has been created, be sure to provide the full path to the executable on the configuration page. Make sure that the required dynamic libraries that come with Kakadu are accessible to `kdu_compress` and `kdu_expand`. If they are not present, attempting to run either command from the terminal will inform you that the libraries are missing. You can also use a symbolic link from `/usr/local/lib` to include these libraries. Remember to restart the terminal so your changes take effect. Also, make sure the php settings allow for enough memory and upload size: `upload_max_filesize`, `post_max_size` and `memory_limit`.

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Configure viewer options in Administration > Islandora > Solution Pack configuration > Large Images (admin/islandora/solution_pack_config/large_image).

- If no viewer is selected, Large Image objects will display as a JPG preview on the View tab.
- To display a large image with zoom and pan options, follow the instructions to install the OpenSeadragon viewer. If it is installed, OpenSeadragon can be selected and configured from the Large Image configuration page.

Content Models, Prescribed Datastreams and Forms

The Large Image Solution Pack comes with the following objects in http://**path.to.your.site**/admin/islandora/solution_pack_config/solution_packs:

- Islandora Large Image Content Model (islandora:sp_large_image_cmodel)
- Islandora Large Image Collection (islandora:sp_large_image_collection)

An image ingested using the Large Image Solution Pack's content model using ImageMagick will have the following datastreams:

RELS-EXT	Default Fedora relationship metadata
MODS	MODS record filled out during ingest
DC	Dublin Core record
OBJ	Original TIFF or JP2 file uploaded

JP2	JPEG 2000 derivative created by ImageMagick or Kakadu
JPG	Medium-sized JPEG created by ImageMagick and used in the standard image viewer
TN	Thumbnail icon created from the image during the ingest process

The Large Image Solution Pack comes with the Large image MODS form.

To successfully create derivative datastreams (TN & JPG), ImageMagick needs to be installed on the server. To create JP2 datastreams, Kakadu is the preferred solution, but ImageMagick can be used if it has been built with JPEG2000 support.