

Large Image Solution Pack

Overview

The Large Image Solution Pack module supports ingesting and viewing TIF/TIFF files, which by nature tend to be extremely large in both filesize and resolution. The module supports creation of derivatives for use when a smaller filesize is necessary, and also supports the installation of image viewers that can accommodate the larger resolution.

Dependencies

- [Islandora](#)
- [Tuque](#)
- [ImageMagick](#) is required to create image derivatives
- [Kakadu](#) (bundled with Djatoka)

To successfully create derivative datastreams, ImageMagick (TN & JPG) 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.

Downloads

[Release Notes and Downloads](#)

Configuration

The Large Image Solution Pack module's configuration page can be found at http://path.to.your.site/admin/islandora/solution_pack_config/large_image, and contains the following settings:

- **Lossless Derivative Creation?:** Enabling this will force the Large Image Solution Pack 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 check out the official website at <http://www.kakadusoftware.com/> for download and installation instructions.

Configure the image-tool kit to use ImageMagick rather than GD in Administration > Configuration > Media > Image Toolkit (admin/config/media/image-toolkit). If GD is selected, TN and JPG datastreams will not be generated.

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Image toolkit

Select an image processing toolkit

☒ ImageMagick

☐ GD2 image manipulation toolkit

Image quality

75

%

Define the image quality of processed images. Ranges from 0 to 100. Higher values mean better image quality but bigger files.

IMAGEMAGICK

ImageMagick is a stand-alone program for image manipulation. It must be installed on the server and you need to know where it is located. Consult your server administrator or hosting provider for details.

Path to the "convert" binary *

/usr/bin/convert

The complete path and filename of the ImageMagick convert binary. For example: /usr/bin/convert or C:\Program Files\ImageMagick-6.3.4-Q16\convert.exe

☐ Enable GraphicsMagick support

Version information

Version: ImageMagick 6.7.7-10 2014-03-06 Q16 http://www.imagemagick.org
Copyright: Copyright (C) 1999-2012 ImageMagick Studio LLC
Features: OpenMP
ImageMagick was found and returns this version information.

☐ Display debugging information

Shows ImageMagick commands and their output to users with the *Administer site configuration* permission.

Save configuration

ect configuration options and viewer in Administration > Islandora > Solution pack configuration > Large Image Collection (admin/islandora/solution_pack_config/large_image). Sel

To use Kakadu, make sure that kdu_compress and kdu_expand are 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](#). 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 it's 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 affect. 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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Large Images

☒ Create Lossless Derivatives

Lossless derivatives are of higher quality but adversely affect browser performance.

☒ Use Kakadu for image compression

Kakadu offers faster derivative creation than the standard ImageMagick package. *ImageMagick reports support for JPEG 2000.*

☒ Uncompress TIFF files prior to creating JP2 datastreams

The version of Kakadu shipped with djatoka does not support compressed TIFFs; therefore, it is likely desirable to uncompress the TIFF so Kakadu does not encounter an error. This will not change the original TIFF stored in the OBJ datastream. Only disable this if you are completely sure!

Path to Kakadu

Path to the kdu_compress executable.

☒ Executable found at /usr/bin/kdu_compress

VIEWERS

Select a viewer

DEFAULT	LABEL	DESCRIPTION	CONFIGURATION
<input type="radio"/>	None	Don't use a viewer for this solution pack.	
<input checked="" type="radio"/>	OpenSeadragon	OpenSeadragon viewer with djabatoka as tilesource.	configure

Preferred viewer for your solution pack. These may be provided by third-party modules.

Save configuration

Reset to defaults

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If no viewers are installed, the Large Image Solution Pack module will use its standard viewer to display images. For better results, the [Open Seadragon](#) library can be installed; check that page for further instructions. If it is installed, it can be selected here.

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.