

# Large Image Solution Pack

## Introduction

The Large Image Solution Pack loads all required Fedora objects and creates an empty collection object to accept TIFFs and JPEG2000s (JP2) and create derivatives, and also supports the installation of image viewers that can accommodate the larger resolution.

## Requirements

This module requires the following modules/libraries:

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

*To successfully create derivative data streams, ImageMagick (for TN & JPG) and Kakadu (for JP2) need to be installed on the server.*

## Configuration

Configure the image-toolkit 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.

[blocked URL](#)

Select configuration options and viewer in Administration > Islandora > Large Image Collection (admin/islandora/large\_image).

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](#). 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 affect. Also, make sure the php settings allow for enough memory and upload size: `upload_max_filesize`, `post_max_size` and `memory_limit`.

[blocked URL](#)

## Troubleshooting/Issues

Having problems or solved a problem? Check out the Islandora google groups for a solution.

- [Islandora Group](#)
- [Islandora Dev Group](#)

## Maintainers/Sponsors

Current maintainers:

- [Alan Stanley](#)

## Development

If you would like to contribute to this module, please check out [CONTRIBUTING.md](#). In addition, we have helpful [Documentation for Developers](#) info, as well as our [Developers](#) section on the [Islandora.ca](#) site.

## License

[GPLv3](#)

## Additional Usage

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](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.

## Viewers

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](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, 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.