

# Video Solution Pack

## Overview

The Islandora Video Solution Pack is used to ingest digital videos into Fedora. It supports creation of derivatives in various different video formats, and requires the server-side installation of accompanying codecs to enable this functionality. It can also be configured to stream the video to a player window on-site using JWPlayer.

## Dependencies

- [Islandora](#)
- [Tuque](#)
- [FFmpeg](#) is required if MKV and MP4 derivatives are to be created on the same server as Islandora. Compilation guides: [Ubuntu](#), [CentOS](#)
- [ffmpeg2Theora](#) (optional) is only necessary if OGG audio and thumbnail derivatives are to be created on the same server as Islandora ( [Instructions](#)).
- The Islandora [Islandora JWPlayer](#) library (and the [Libraries API](#) module) or the [Video.js](#) player are required to play videos in a video object's 'View' tab

FFmpeg version 1.1.4 has been tested. It can be downloaded [here](#)

```
FFmpeg sample compile flags: --prefix=/usr/local/stow/ffmpeg-1.1.4 --enable-gpl --enable-version3 --enable-nonfree --enable-postproc --enable-libopencore-amrnb --enable-libopencore-amrwb --enable-libdc1394 --enable-libfaac --enable-libgsm --enable-libmp3lame --enable-libopenjpeg --enable-libschrödinger --enable-libspeex --enable-libtheora --enable-libvorbis --enable-libvpx --enable-libx264 --enable-libxvid
```

remove the `--enable-x11grab` flag on the ffmpeg configure.

## Downloads

[Release Notes and Downloads](#)

## Installation

This installation can be very tricky, and possibly the most difficult of all components of the Islandora stack. Please see this post regarding past installs on the Islandora Google Group for details: <https://groups.google.com/forum/#!topic/islandora/wuOjmRTY5Rs>

## Configuration

Set the path for FFmpeg, select configuration options and viewer in Administration » Islandora » Video Solution Pack (admin/islandora/video).

The Islandora Video Solution pack can be configured at [http://path.to.your.site/admin/islandora/solution\\_pack\\_config/video](http://path.to.your.site/admin/islandora/solution_pack_config/video), and includes the following options:

### Viewers

If players have been correctly installed on the server, you will be able to select which one to use here.

- **Keep original file after ingest?** - Check this option to retain files uploaded to a video collection as a datastream appended to the video object.

VIEWERS

Select a viewer

DEFAULT	LABEL	DESCRIPTION	CONFIGURATION
<input type="radio"/>	None	Don't use a viewer for this solution pack.	
<input type="radio"/>	JW Player	JW Player for audio and video.	
<input checked="" type="radio"/>	video.js player	video.js for video.	

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

☒ Keep original file after ingest  
Stores the originally uploaded video file for archival purposes.

**Path to ffmpeg executable. \***  
  
 Path to ffmpeg on your server.

- ☒ Create .mkv derivative  
Appends a video datastream to the object using the Matroska container.
- ☒ Create display MP4 locally  
Leave this box checked unless processing of files is done on an external server.

**MP4 audio codec**  
  
 Defaults to libfaac, a non-free encoder. Ffmpeg must have been compiled from source with that encoder enabled. See [Ffmpeg's AAC encoding guide](#) for more info.

- ☐ Create OGG locally  
Check this box if an optional OGG archival datastream is desired and should be created locally. Please note that OGG derivatives are no longer used within Islandora and this option remains to be consistent.
- ☒ Create thumbnail locally  
Leave this box checked unless processing of files is done on an external server.

Creating OGGs locally only exists for legacy compatibility. Unless you have a very good reason for doing so, you should not use this option. If necessary, view [ffmpeg2Theora documentation](#) for more on creating OGG derivatives.

## Paths to FFmpeg/Theora executables

For derivative creation, the Video Solution Pack needs to know the location of the binaries that perform conversion. On Unix-based systems, this can often be done by running:

```
whereis ffmpeg ffmpeg2theora
```

Check for binary package files located in folders called 'bin' (such as /usr/bin, /usr/local/bin, etc.).

Video conversion in any context is an extremely resource-heavy task that can be very taxing on the computer performing it. In the case of Islandora, when using these derivative creation options, the task is called upon and performed by the 'apache' user on the same server Islandora is running on and that users are performing other tasks with. When creating video derivatives on ingest, please consider either delaying ingest to a low-traffic period of time, or performing derivative creation on another machine altogether.

## Content Models, Prescribed Datastreams and Forms

The Video 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 Video Content Model (islandora:sp\_videoCModel)
- Video Collection (islandora:video\_collection)

A collection created using the Video Solution Pack's content model will have the following datastreams:

RELS-EXT	Default Fedora relationship metadata
MODS	MODS descriptive metadata record created during ingest
DC	Dublin Core descriptive metadata record
OBJ	The original video file ingested
TECHMD	FITS technical metadata record created during ingest
TN	Thumbnail image pulled from a frame of the video by ffmpeg2theora
MP4	MP4 derivative created during ingest by FFmpeg and used by JWPlayer if no suitable video exists
MKV	MKV derivative created during ingest by FFmpeg

The Video Solution Pack comes with the Video MODS Form.

## 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.

The Video Solution Pack includes an ingest/purge load test that is disabled and unusable by default. This particular solution pack was chosen for load testing due to the resource-heavy process of creating video derivatives and ingesting several potentially-massive files. To enable and use it:

1. Make sure that the Testing module is enabled and that all prerequisites for derivative creation are satisfied for the Video Solution Pack.
2. Edit the [islandora\\_video.info](#) file in this folder, removing the ; and whitespace before the line `files[] = tests/islandora_video_load_test.test`
3. Create a folder in the `tests/fixtures/` called `load`, and place as many videos in that folder as you would like to ingest. These files all must fit within the size specified by your `php.ini` file's maximum post size, and they must have a file extension supported by the Video Solution Pack, otherwise they will not be picked up by the load test.
4. Clear the Drupal cache.

The video load test should now be available to use by navigating to <http://path.to.your.site/admin/config/development/testing>, checking 'Video Load Test' in the Islandora Video section, and then clicking 'Run tests'. The test will compare the original file to the file ingested into Fedora to see if they match.

THIS WILL NOT WORK ON OPERATING SYSTEMS THAT DO NOT SUPPORT THE PHP GLOB\_BRACE FLAG (E.G. SOLARIS).