Drupal 8 Migrate API

Bulk-Loading Content into Islandora 8 IslandoraCon 2019 Seth Shaw

The Drupal 8 Migrate API...

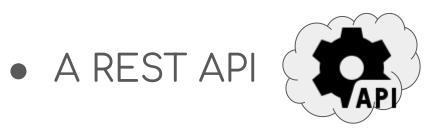
"...provides services for migrating data from a source system to Drupal 8."

"Source Systems" include things like...



A pile of scans and a CSV



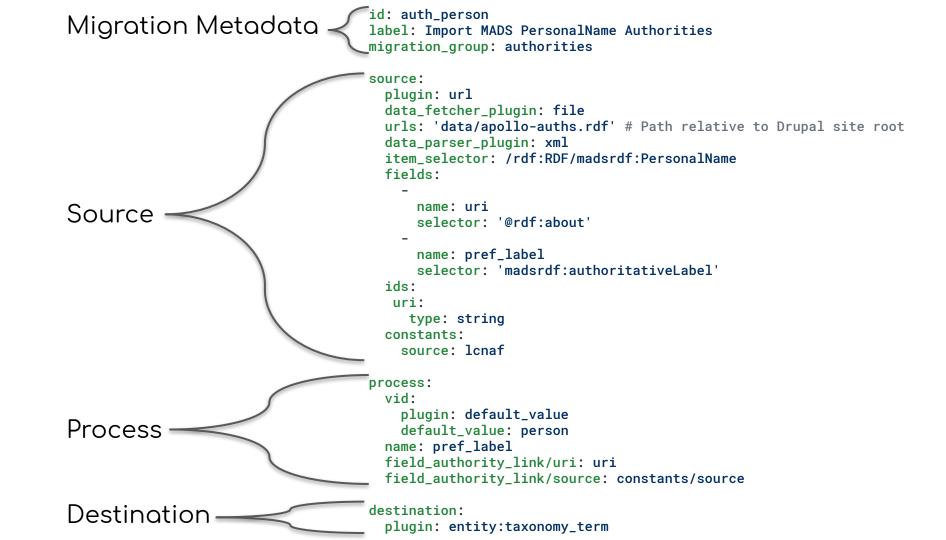


A Migration Configuration

.. defines an Extract, Transform, Load (ETL) process.

- Source plugins extract data from a source
- Process plugins transform the data
- Destination plugins load the data (create new entities)

Examples can be found at https://github.com/seth-shaw-unlv/claw-migrate-files-poc



Easy to run once configured!

\$ drush migrate:status --group=authorities

```
Group Migration ID Status Total Imported Unprocessed Last Imported

authorities (authorities) auth_complex Idle 1 0 1
authorities (authorities) auth_geographic Idle 1 0 1
authorities (authorities) auth_person Idle 2 0 2
authorities (authorities) auth_topic Idle 1 0 1
```

```
$ drush migrate:import --group=authorities
```

```
[notice] Processed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'auth_complex'
[notice] Processed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'auth_geographic'
[notice] Processed 2 items (2 created, 0 updated, 0 failed, 0 ignored) - done with 'auth_person'
[notice] Processed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'auth_topic'
```

\$ drush migrate:status --group=authorities

Group	Migration ID Status Total		Imported	Unprocessed	Last Imported	
authorities (authorities)	auth_complex	Idle	1	1	0	2019-09-18 15:49:42
authorities (authorities)	auth_geographic	Idle	1	1	0	2019-09-18 15:49:42
authorities (authorities)	auth_person	Idle	2	2	0	2019-09-18 15:49:42
authorities (authorities)	auth_topic	Idle	1	1	0	2019-09-18 15:49:42

Creating Islandora 8 Repository Items

Repository Items are composed of three parts:

- 1. File (the actual file)
- Node (descriptive metadata)
- 3. Media (links Nodes and Files; stores technical metadata)

Group	Migration ID	Status	Total	Imported	Unprocessed	Last Imported
apollo (apollo)	islandora8_file	Idle	7	0	7	
apollo (apollo)	islandora8_metadata	Idle	7	0	7	
apollo (apollo)	islandora8_media	Idle	7	0	7	

```
## islandora8_media snippet ##
```

migration_dependencies:

required:

- islandora8_files # so we can lookup the value for field_media_file
- islandora8_metadata # so we can lookup the value for field_media_of

Beyond simple mappings...

```
## snippet from islandora8_metadata ##
 temp_subjects_person: # Temporary array of person entity reference identifiers
     plugin: skip_on_empty # Don't bother if the source field is blank
     source: subject_person
     method: process # Only skip this field, not the whole record (CSV row)
     plugin: explode # Account for multiple entries in a cell delimited by ;
     delimiter: ':'
     plugin: entity_generate # Make a new entity if you can't find a match
     value_key: name
     bundle_key: vid
     bundle: person
     entity_type: taxonomy_term
     default_values:
      vid: person
```

```
temp_subjects: # Temporary field of subjects
     plugin: skip_on_empty
     source: subjects
     method: process
     plugin: explode
     delimiter: ';'
     plugin: entity_generate
     value_key: name
     bundle: subject
     bundle_key: vid
     entity_type: taxonomy_term
     default_values:
       vid: subject
field_subjects: # Gather temp arrays into the destination field
     plugin: get
     source:
       - '@temp_subjects_person'
       - '@temp_subjects'
   - # an array of arrays to a flat array of entity refs
     plugin: flatten
```

Make your own plugins!

```
<u>ListToRange</u>: e.g. "1991; 1992; 1993;" -> "1991/1993"
```

```
public function transform($value, MigrateExecutableInterface $migrate_executable,
    Row $row, $destination_property){
  // Config and sanity checking trimmed for brevity...
  $list = explode($this->configuration['source_delimiter'], $value, PHP_INT_MAX);
  if ( count($list) < 2 ){</pre>
    return $list[0];
  } else {
    return implode( $this->configuration['range_delimiter'],
                    [trim($list[0]), trim($list[count($list)-1])]
```

Why use the Migrate API?

- You can (potentially) do everything with configs!
- Leverage contrib module plugins.
- Making plugins for more complex sources and processes is (relatively) simple.
- Updating metadata is as simple as:
 - `drush mim islandora8_metadata --update`