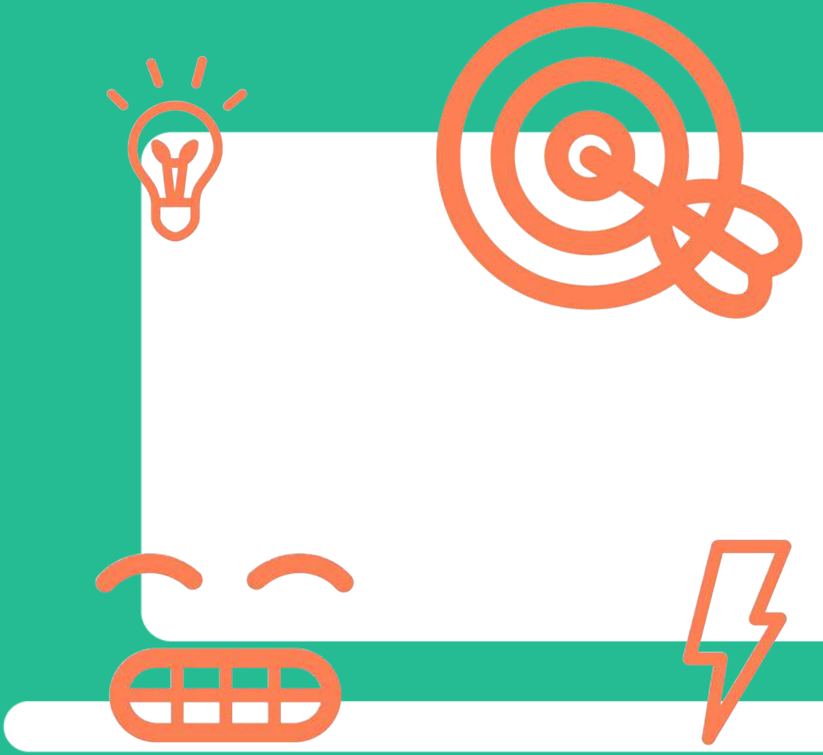
Deploy your content with Entity Share

BoF Solutions for content deployment by @Florent_Torre
DrupalCon Amsterdam 2019

WHY SHARING CONTENT ?

IN CONTEXT



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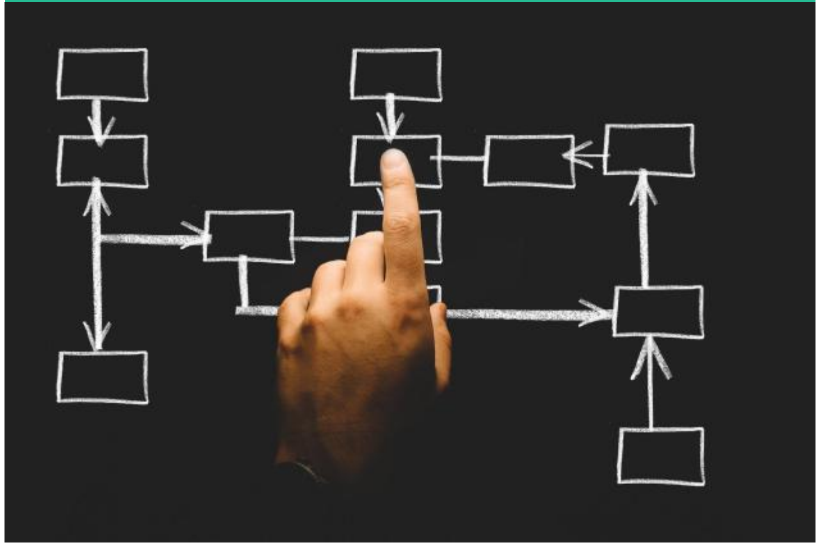
THE 2 MAIN USE CASES OF SHARING CONTENT

DEPLOY CONTENT ON MULTIPLE WEBSITES

IN INDUSTRIALIZATION PROCESS

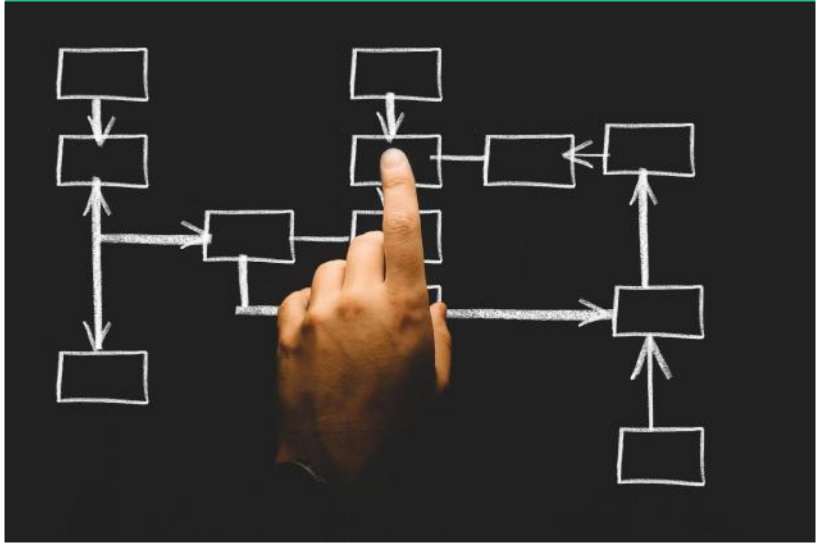


THE 2 MAIN USE CASES OF SHARING CONTENT

DEPLOY CONTENT ON MULTIPLE WEBSITES

- Either architecture with content hub
- Or cross-communications between different sites

IN INDUSTRIALIZATION PROCESS



THE 2 MAIN USE CASES OF SHARING CONTENT

DEPLOY CONTENT ON MULTIPLE WEBSITES

IN INDUSTRIALIZATION PROCESS

- Deploy content from preproduction to production (content staging), same as the content hub case
- Retrieve content from production to development environments

WHY ENTITY SHARE?

ALTERNATIVES
DISCOVERY

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Drupal™

FORCES

Contrib modules

- Webfactory
- Deploy

Acquia has a turnkey solution for

- Websites creation
- Websites cloning
- Sharing users
- Sharing content

IN SHORT

- Created in 2001
- PHP
- 100% developed by the community (3000)

Very big ecosystem, composed from a wide range of actors in size and type

CHALLENGES

The product **Acquia Content Hub** is binding

- Content storage outside of Drupal
- Non-obvious usage
- High costs

WEBFACTORY MODULE LIMITATIONS

Allows multi-site management from a central website

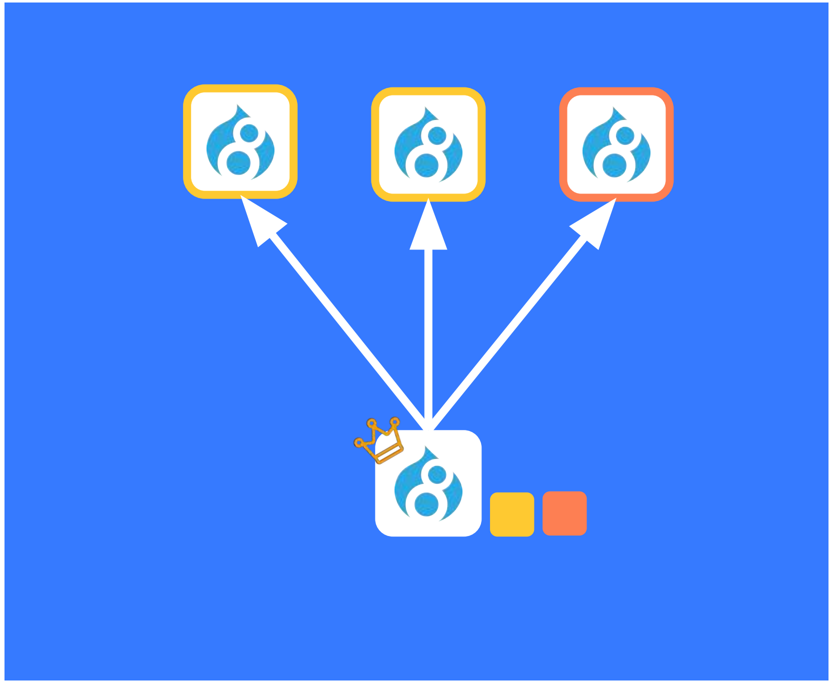
Facilitates the deployment of new sites

- Deploy a new “profile” directly from the backoffice

Sharing content from the central website

- Share entities: node
- A "channel" mechanism allows only certain entities to be shared at certain websites

Usage of Core webservices



THE DEPLOY ECOSYSTEM

Pushed by the community

Quite unstable

- At least at the beginning of 2017

Binding at the workflow level

More for content staging

ENTITY SHARE'S ARCHITECTURE

And how to help us!

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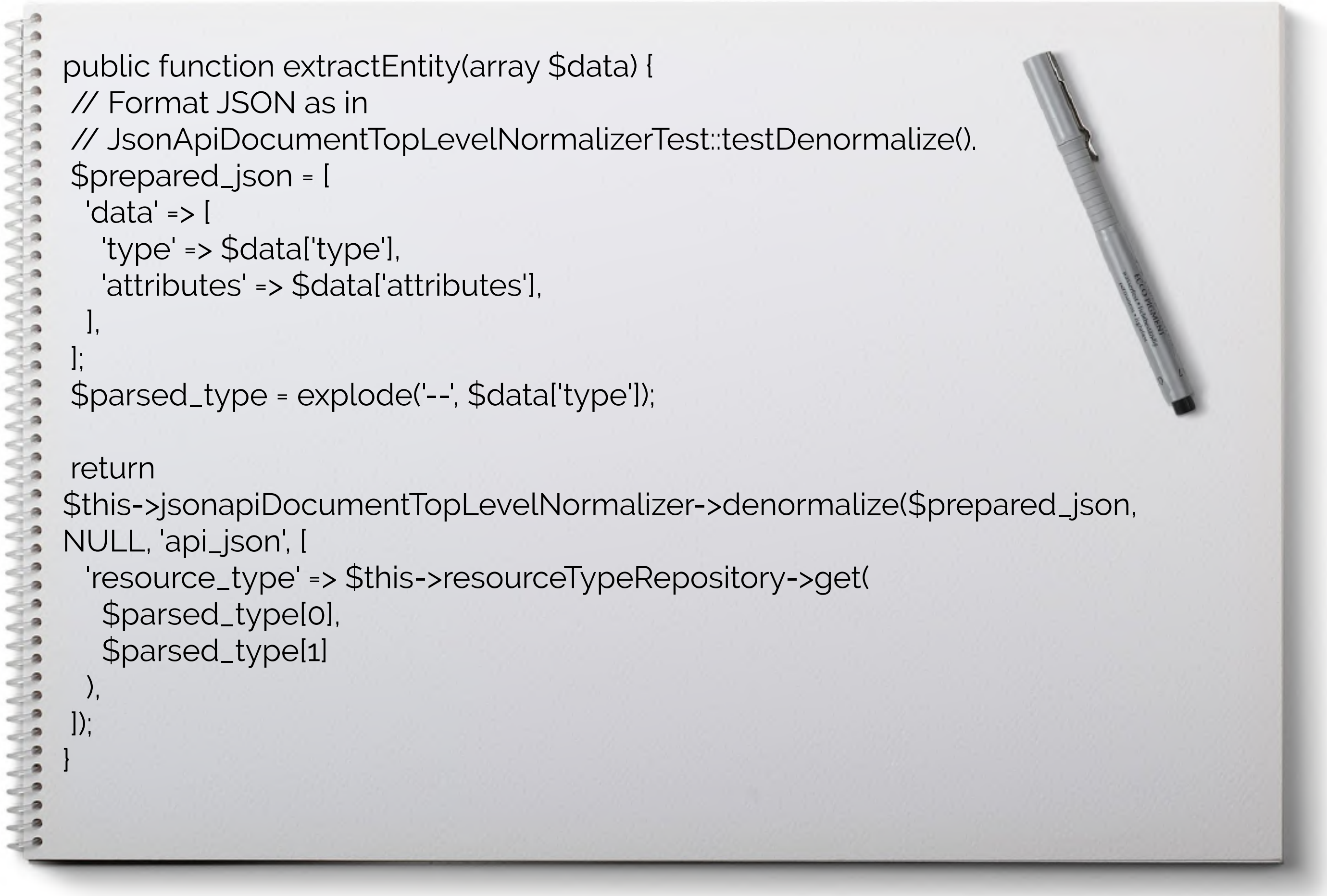
JSON:API USAGE

- To provide entities listings
- More stable and documented than GraphQL (At the beginning of 2017)
- At the beginning of 2017, already an initiative for JSON:API to become a Core module
- Easy to use

JSON:API USAGE

ENTITY SHARE PROVIDES A UI ON TOP OF THE JSON:API



```
public function extractEntity(array $data) {
 // Format JSON as in
 // JsonApiDocumentTopLevelNormalizerTest::testDenormalize().
 $prepared_json = [
  'data' => [
    'type' => $data['type'],
    'attributes' => $data['attributes'],
  ],
 ];
 $parsed_type = explode('--', $data['type']);

 return
$this->jsonapiDocumentTopLevelNormalizer->denormalize($prepared_json,
NULL, 'api_json', [
  'resource_type' => $this->resourceTypeRepository->get(
    $parsed_type[0],
    $parsed_type[1]
  ),
 ]);
}
```

ARCHITECTURE: 2 SUB-MODULES

THE 2 SUB-MODULES MAY BE ENABLED ON THE SAME SITE.

Entity share server

- Activate on the website that will provide the contents
- Provides the channel system
  - Prepare a JSON:API endpoint URL to call by the client website: entity type, bundle, language, filters, sorts
  - Plus listing of channels according to the authorized user

Entity share client

- Activate on the website that will pull (or push) content
- Allow to set the websites on which to connect to
- Provides a pull form (and push form but on an experimental branch)

ARCHITECTURE: GLOBAL VIEW OF THE PROCESS

WHEN PULLING, FOR EACH SELECTED ENTITY

Check if an entity exists with this UUID

- If no entity is found, create a new one
- If an entity exists, create or update the translation regarding the language in the JSON data.

Store the UUID in the processed entities list to avoid infinite loop

Manage entity reference fields

- For each "relationship" (JSON:API) field, request the endpoint showing the list of entities referenced by the field
  - For each of these entities, do the initial process
  - Put the ids of the processed entities in the entity reference field value

Manage physical files

- If the entity is a file, use its properties (URI) to get the content of the file

ENTITY SHARE'S ECOSYSTEM

Entity Share async (sub-module)

- To mark content to be synced later by a queue during cron execution

Entity Share cron (separated project)

- https://www.drupal.org/project/entity_share_cron
- Provides an UI to configure frequency of automated pull of channels
- For more complex usage, there is an example module in Entity Share: entity_share_client_test

KNOWN PROBLEMS

Workaround for Core limitation on link fields with internal link values: Use JSON:API Extras

Metatag field breaks the import (~~#3060702~~)

Not working when server website is behind HTTP authentication (#2856713)

Implementation relies on some JSON:API internal classes (#2939827)

Support of Dynamic Entity reference field is broken since JSON:API 2.x (#3056102)

LIMITATIONS

To avoid side effects, config entities and users are not handled

Impossible to import non-translatable entities (~~#2996220~~)

Impossible to import content in a language not enabled (#3064328)

Push form (#2856715):

- Impossible to PATCH translations (JSON:API)
- Impossible to PATCH file field (JSON:API)

FEATURE REQUESTS

Better Pull form (~~#3077808~~, ~~#3077810~~, ~~#3077815~~, #2891653, #2856719, ~~#3064252~~)

Avoid to synchronize already synced entities (#3080629, #3077976, #3009258)

Parse RTE to get referenced entities (#3056911) :

- Entity embed
- Linkit

Parse Link fields to get referenced entities (#3064276)

Allow an entity to be updated locally after being synchronized once (#2975806)

Compatibility with Block field (~~#3064331~~)

Manage Pathauto behavior (~~#3064320~~)

Better channel form (#2856717)

ROADMAP

Priority 1:

- Automated tests!!! (#2909022)
- bug reports

Priority 2:

- Rework services and tests for better architecture and DX (#3060694)
- No more depend on JSON:API internal classes (#2939827)

Priority 3:

- Feature requests depending on client needs and sponsored collaborations.
- Now a feature request must have automated tests before being merged!!!

ALL THE DETAILS ON THE PROJECT PAGE AND IN THE MODULE ISSUES QUEUE

PERSPECTIVES

Entity Share V2?:

- Availability to have multiple bundles per channel (JSON:API Cross Bundles)
- System of configurable plugins to control behavior:
  - Depth of handled relationships
  - Sync all translations at once
  - Parse RTE
  - Parse Link field
  - …

See this issue to give and discuss the ideas.

DEMO

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Thanks for your attention!

And thanks to all the contributors!

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