



DRUPALCON
ASIA
2016



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Migrating Legacy.com

Migrating a top 50
most visited site in
the U.S. onto Drupal -
Legacy.com

Case Study



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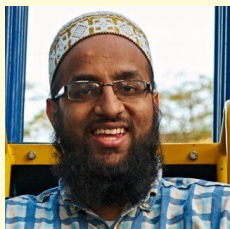
Migrating Legacy.com



Jordan Ryan
Product Owner



Bassam Ismail
Front-end



Hussain Abbas
Migration

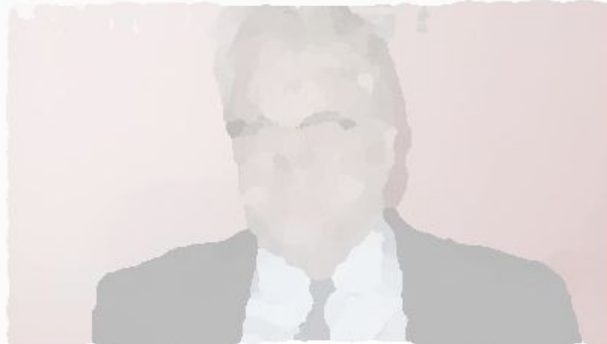
Ankur Gupta
Lead Developer



Lakshmi Narasimhan
RESTful Services



Who is Legacy?



Why Drupal



Why Decoupled

Legacy looks to innovate on
the Front-End

The background of the slide is a blurred image of a whiteboard. It features several colorful sticky notes in shades of purple, yellow, and blue, some with handwritten text. A horizontal line, possibly a string or a piece of tape, runs across the top of the whiteboard.

Why Decoupled

Content was a small part of a
much larger ecosystem

Why Decoupled

Using React/Node lent itself to
componentized widgets that
needed services

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Why Decoupled

Legacy wanted to own the data
and platform

- Discovery
- Architecture
- Site building and development
- Migration
- API development
- Performance optimization
- FE/BE Staff Augmentation

DELIVERY TIMELINE < 6 months

What
we did

The background of the slide is a blurred image of a Kanban board. It features several vertical lanes with colorful sticky notes (yellow, pink, blue) attached to them. The text is overlaid on this background.

Key Challenges

Managing teams with different
velocities

The background of the slide is a blurred image of a whiteboard. It features several colorful sticky notes in shades of purple, yellow, and blue, some with handwritten text. A horizontal line, possibly a string or a piece of tape, runs across the top of the whiteboard.

Key Challenges

Managing presentation in a
decoupled system

Key Challenges

Managing SEO Value in
Decoupled system - how to
deliver SEO value to a headless
application

The background of the slide is a blurred image of a whiteboard. It features several colorful sticky notes in shades of yellow, pink, and blue, each containing illegible handwritten text. The whiteboard is mounted on a wall, and the overall scene is brightly lit.

Key Challenges

Versioning API's

The background of the slide is a blurred image of a whiteboard. It features several colorful sticky notes in shades of purple, yellow, and blue, some with handwritten text. A horizontal line with colored segments (green, orange, blue) runs across the top of the whiteboard.

Key Challenges

Varying page elements
depending on affiliates

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Key Challenges

Cache Invalidation

Key Challenges

React doesn't like HTML.
Componentized HTML for
react elements.

Our Methods

Discovery

- Value Driven Development
- API designs first
- Drupal as a platform solution
- Extracting 15 years of complex business logic
- Infrastructure
 - Akamai
 - AWS
 - Latisys, .NET

Our Methods

Development

METHODOLOGY: SCRUM

Our Methods

Development

Overcommunicate

Development

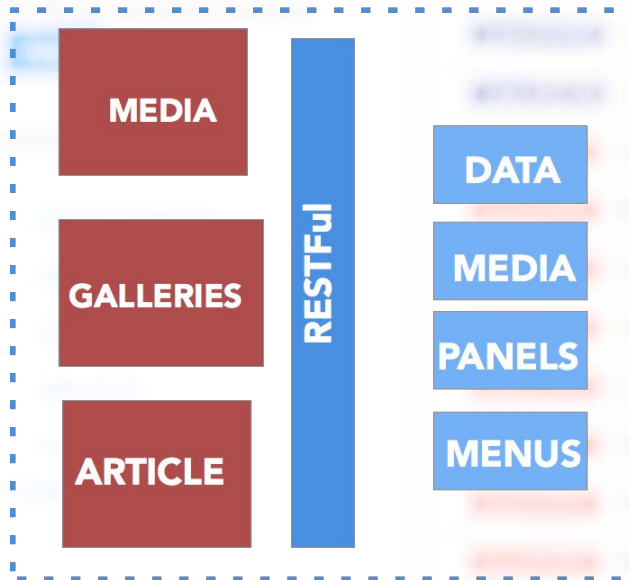
Few Drupal best practices

- Consistent environments
- Established git workflow
 - Release notes
- Drush build script
- Feature driven development
- Checklists
- Environment module

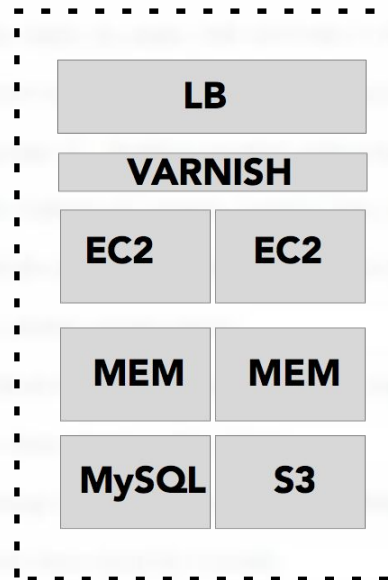
80+ CONTRIBS 40+ CUSTOM

Development

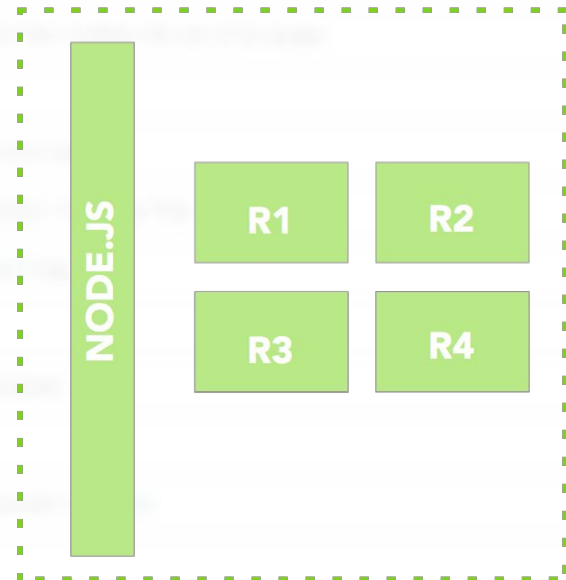
Drupal



Acquia



Node.js



AKAMAI

RESTful

Why choose RESTful?

- Developer friendly.
- Allows customizing every aspect of API, like auth, headers, versioning, caching.

RESTful

Specifications and testing

- An API is only as good as its documentation.
- [RAML](#) - standard format to share and maintain API specs.
- It is possible to write Drupal Web test cases over RAML!

RAML

```
##%RAML 0.8
title: Legacy RESTful endpoints
version: v1.3
baseUri: http://localhost/legacy/api/{version}
mediaType: application/json
traits:
- secured:
  usage: Apply this to any method that needs to be secured
  description: Most requests require an authentication token in the request.
  queryParameters:
    access_token:
      description: Access Token
      type: string
      example: jbCftaZJ5QqdL1ru90UZLo07UTxReGuN-4UnzLF07eE
      required: true

/menus:
  /header:
    description: Get affiliate header menu's default header terms.
    get:
      is: [ secured ]
  /{affiliateName}:
    description: Get the affiliate header menu for a given affiliate name.
    get:
      is: [ secured ]

/footer:
  description: Get affiliate header menu's default footer terms.
  get:
    is: [ secured ]
  /{affiliateName}:
    description: Get the affiliate footer menu for a given affiliate name.
    get:
      is: [ secured ]

/subfooter:
  description: Get affiliate header menu's default sub-footer terms.
  get:

--- legacy.raml Top L1 (YAML MRev yas)
Beginning of buffer
```

RESTful

Authentication

- RESTful allows any kind of authentication scheme
- We wrote our own for performance reasons.

RESTful

Versioning

- serves same purpose as interfaces, i.e. honor a contract.
- RESTful allows versioning on a per resource basis
- Each payload change bumps up minor version number.

RESTful

Challenges

- Problem statement: given a URL alias, fetch the corresponding resource
- Hard bits: handle redirects, 404s, get metatags

RESTful

Caching

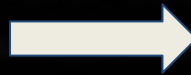
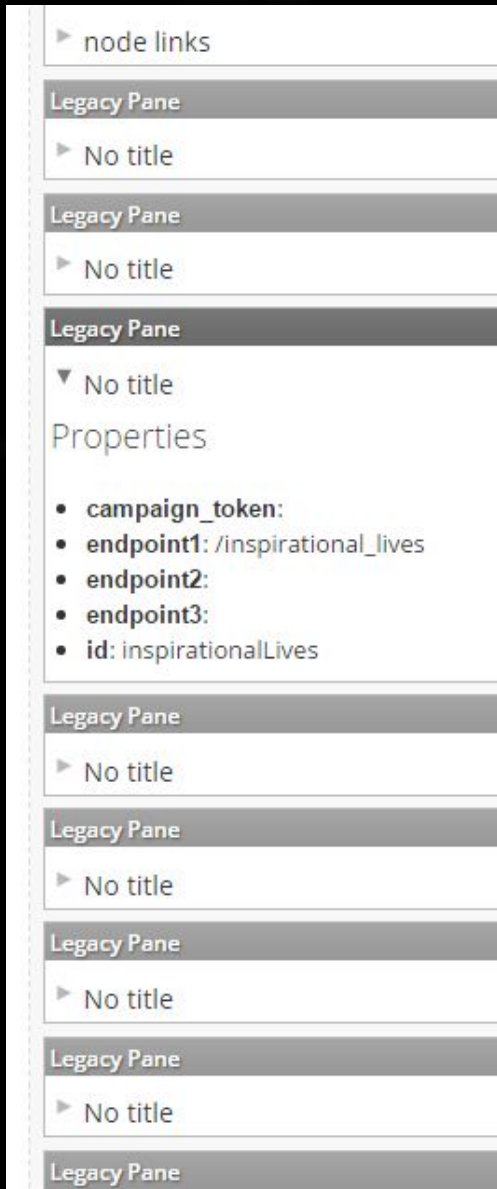
- RESTful ships with batteries included caching
- The need to intelligently purge cache
- RESTful cache purge, https://www.drupal.org/project/restful_purge

Our Methods

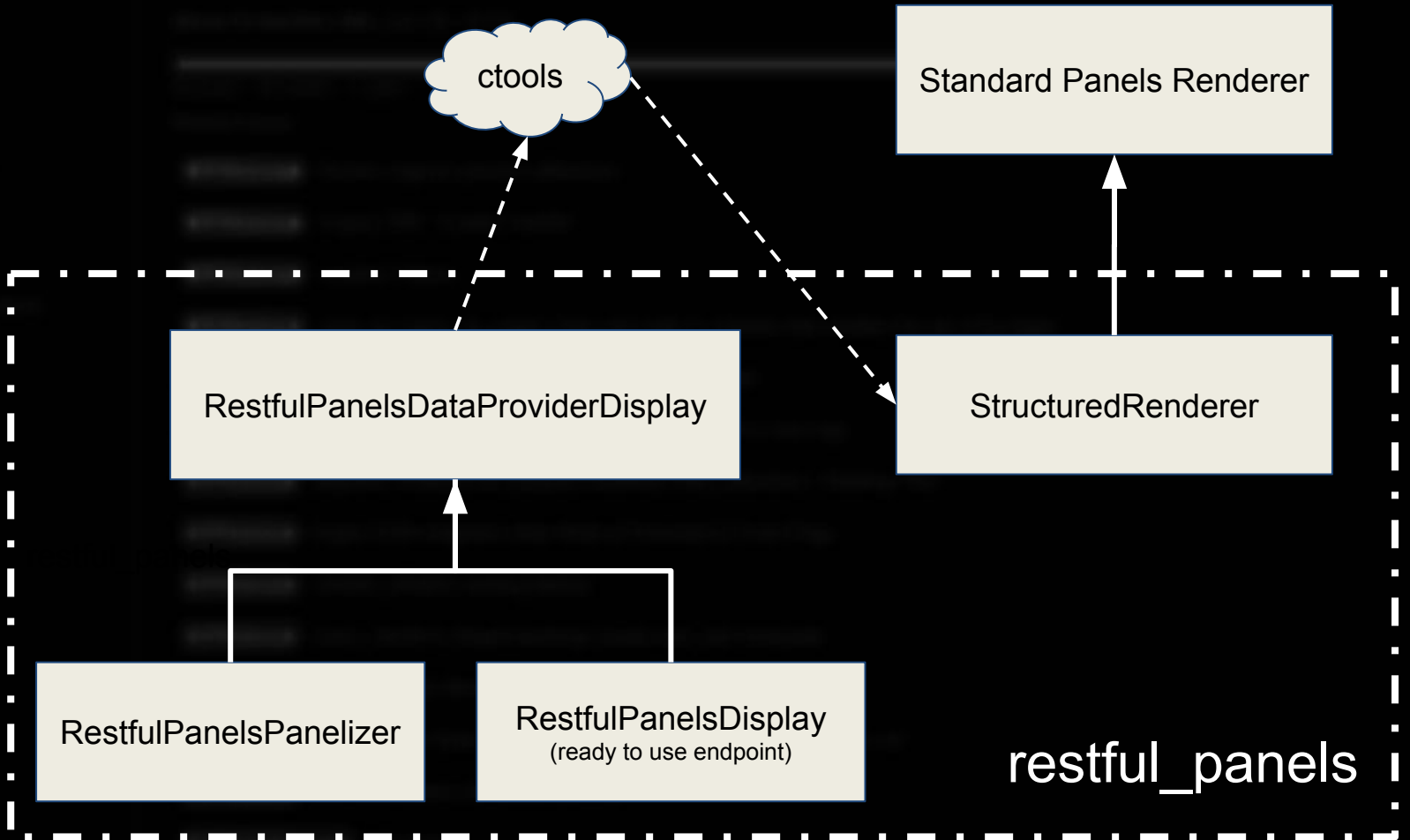
RESTful Panels

- Presentation Framework
- Use Panels to administer content and layout on a decoupled Drupal website.
- Supports Panelizer.

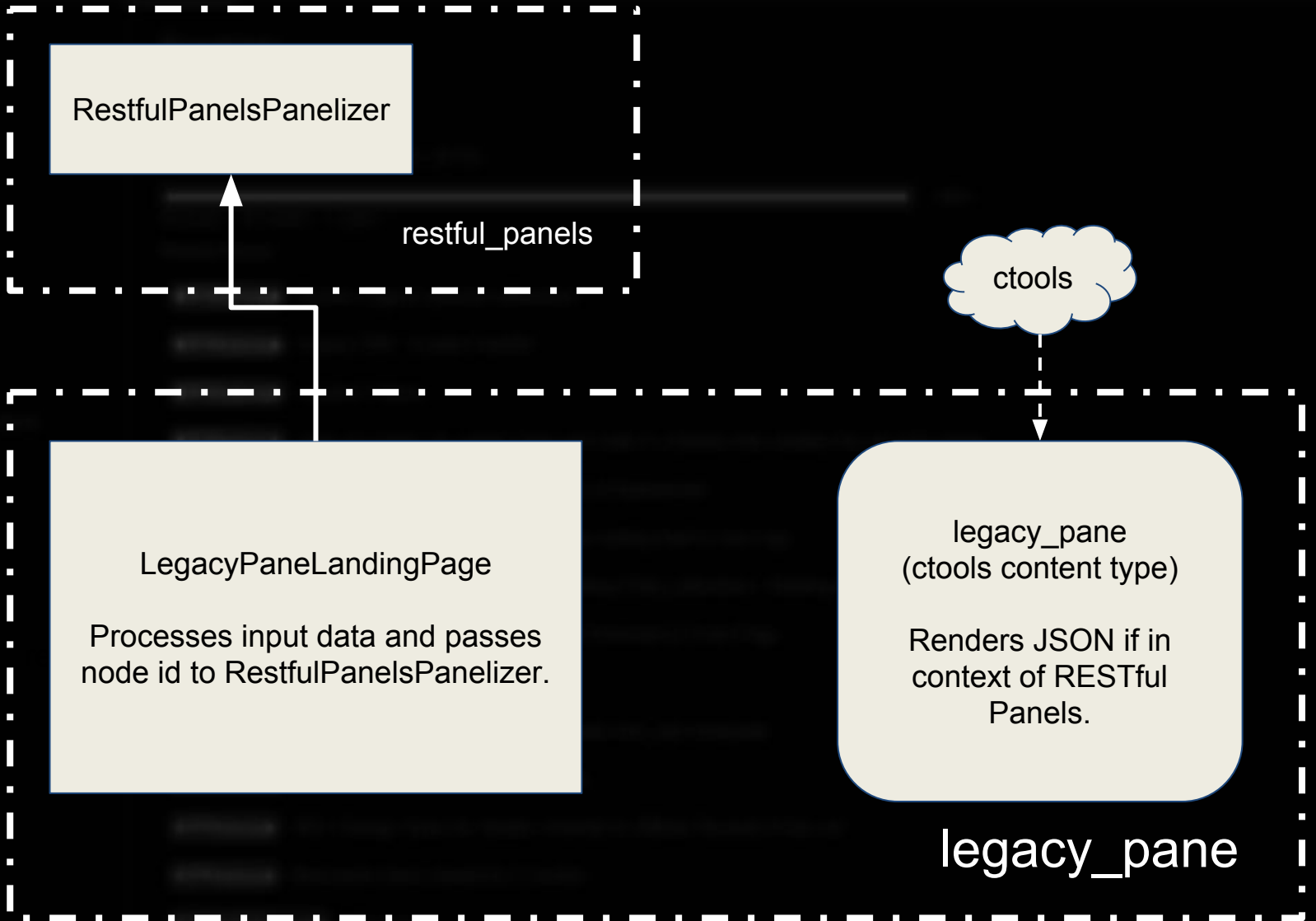
RESTful Panels



RESTful Panels



RESTful Panels



RESTful Panels

- Contributed and available for use:
https://www.drupal.org/project/restful_panels
- Future plans
 - Usage with context
 - Metatags
 - Panels Variants

Our Methods

Migration

- Migration from MSSQL Server
- Transforming content structure
- Map everything based on complex business logic
- Migration groups
- Some numbers:
 - ~2500 articles
 - ~5,000 media items
 - ~200 galleries
 - ~4,000 gallery items
 - ~1,100 affiliates



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Front-end





Front-end

Why

- Performance
- Developer Productivity



Front-end

Why: Performance

- Performance*
 - Page load time
 - Native (*like*) experience on the web



Front-end

Why: Developer Productivity

- Composition
 - Easy to compose
 - Event delegation and inline styles
 - No global scope in pre CSS-Modules era using Stylus
- Testing
 - $ui = f(state, [...actions])$
 - Easy to simulate events
 - Testing against virtual and real DOM



Front-end

Solutions

- Server-side rendering
 - SEO for SPA
 - Improved *Initial page load time*
 - Easy to *Cache*



Front-end

Solutions

- Drupal
 - Data source
 - Layout configuration source



Front-end

Solutions

- React
 - Parsing raw HTML on Drupal Layer
 - Schema.org compliance
 - Help avoid content injection



Final Thoughts

- CI/CD best practices
- Personalized Decoupled Drupal requires specialized infrastructure / middleware
- Architecture across 2 systems
- Considerations with points of failure
- Progressively develop Decoupled solutions



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QUESTIONS?



WHAT DID YOU THINK?
EVALUATE THIS SESSION

<https://events.drupal.org/node/7536>