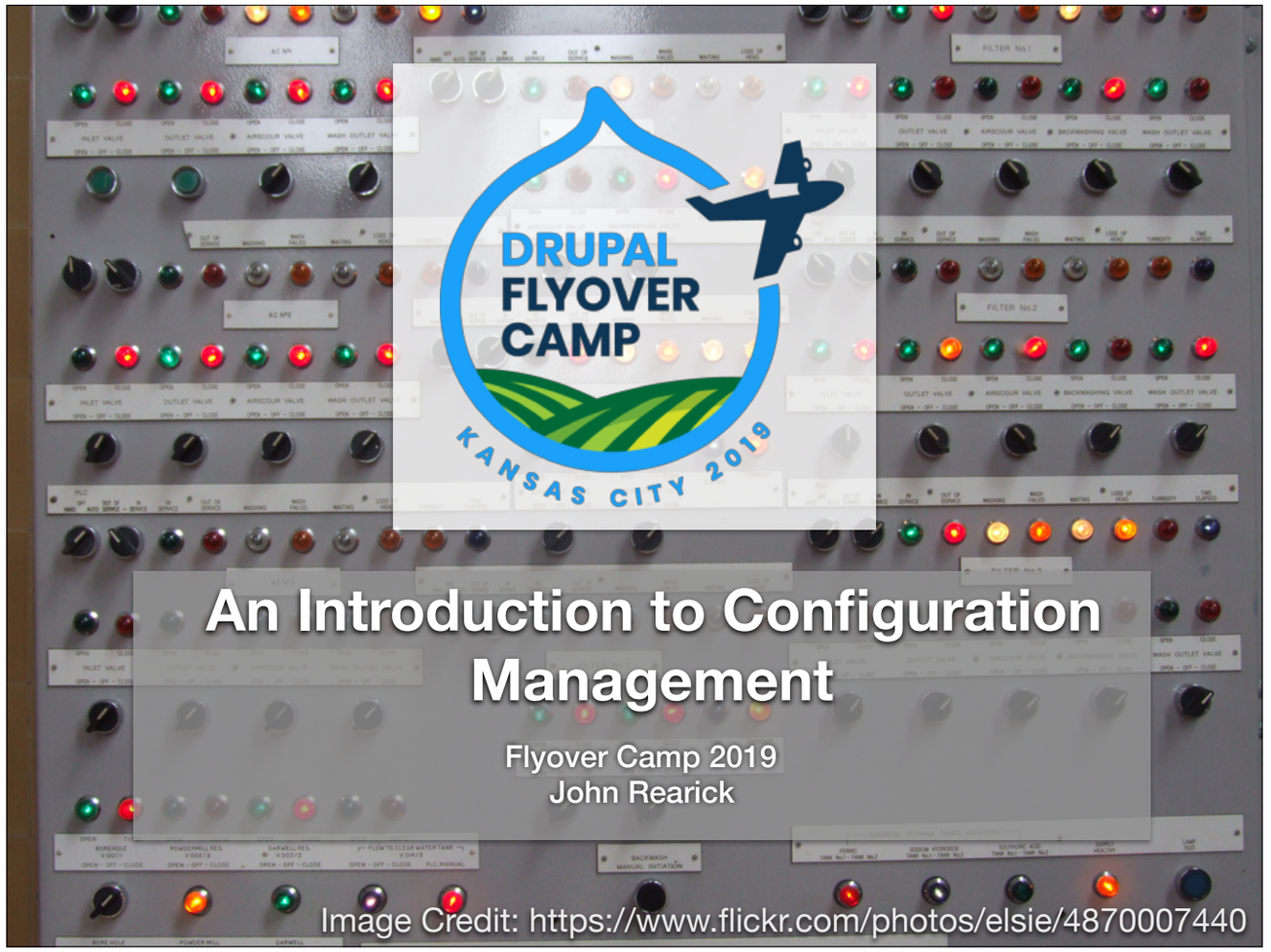



# An Introduction to Configuration Management

Flyover Camp 2019
John Rearick

Image Credit: https://www.flickr.com/photos/elsie/4870007440

# John Rearick

IOWA STATE UNIVERSITY

DrupalCorn Camp

@jrearick bobbis.com

* Iowa State University - Drupal one-click install D8 sites for faculty
* DrupalCorn Camp - Iowa Drupal camp. Planning just starting for Fall camp
* jrearick on twitter and Drupal slack (find me in #DrupalCorn or this weekend in #flyovercamp)
* Website bobbis.com (a few blog posts)

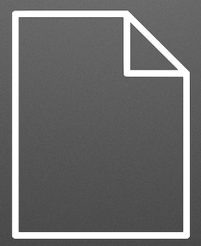
# Overview

- What problem does Configuration Management Solve?
- What is Configuration Management?
- How do I use it?

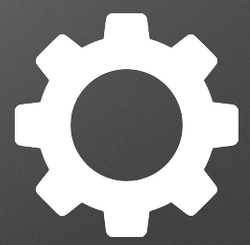
# What problem does Configuration Management Solve?

# Components of a Site

Code



Content



Configuration

# Components of a Site

**Code**

- Drupal Core
- Modules
- Themes
- Dependencies
- Stored in the filesystem

# Components of a Site

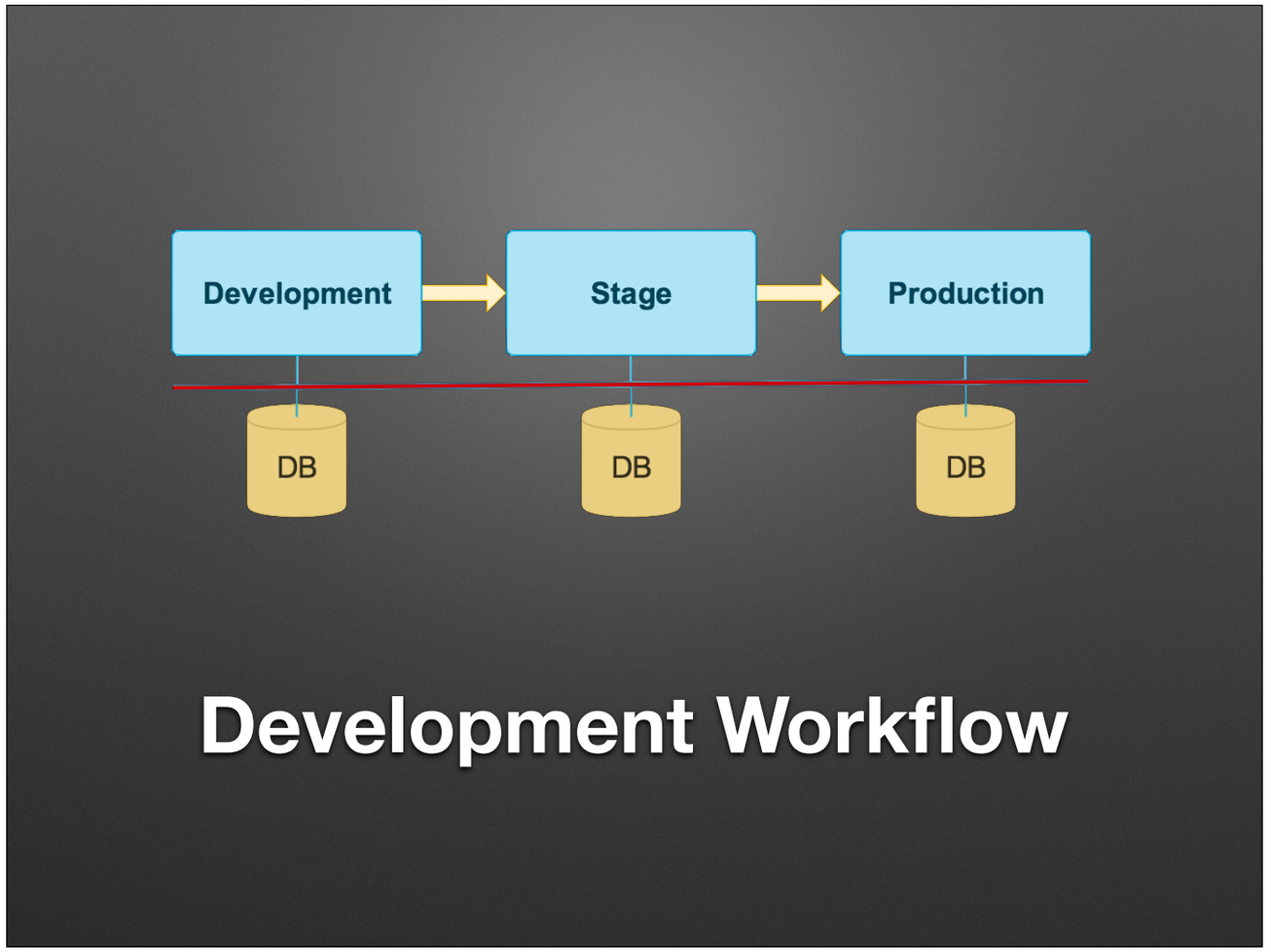
**Content**

- Nodes
- Entities
- Images
- Stored in the database
- Stored in the files folder

# Components of a Site

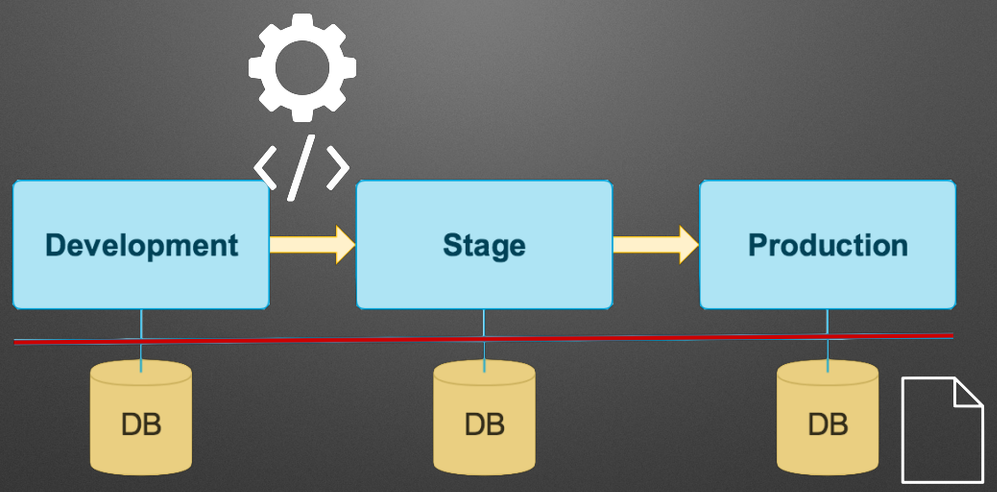
**Config**

- Site Name
- Views
- Content Types
- Fields
- Stored in the database



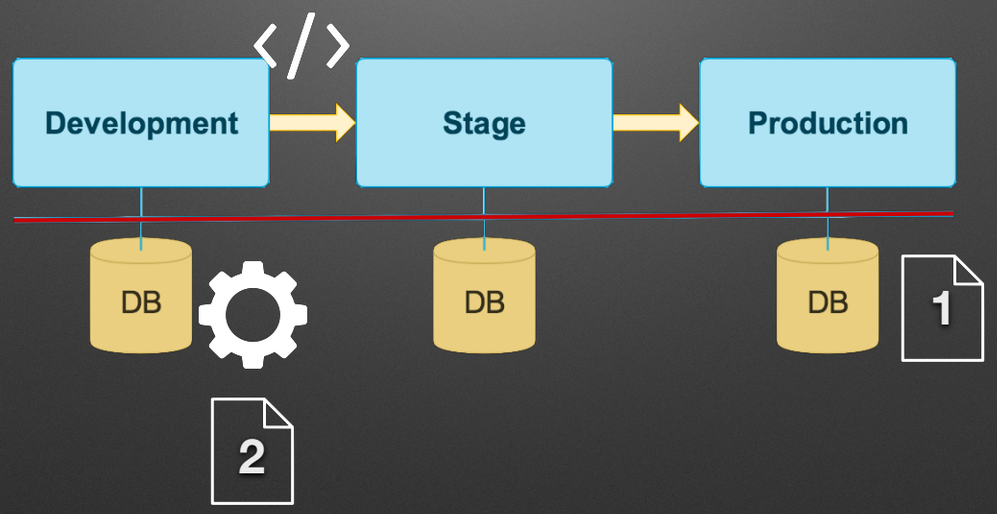

* Ask familiar with this workflow?

# Ideally




Move code and config towards production
Don’t mess with content on production
Content may move from production to stage or development

# Reality

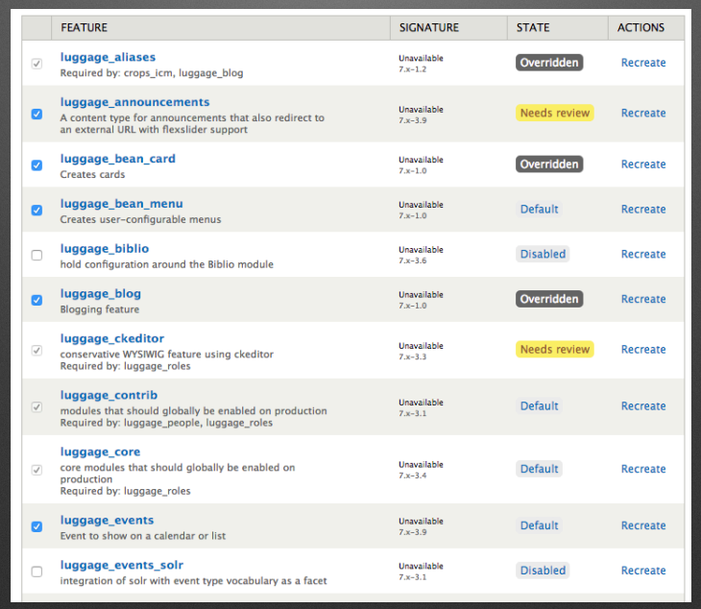



* Config is in the database! With the content
* Notice Production has content and dev/stage have different content
* Can’t easily merge databases (they are more or less a single thing)
* So, when you deploy the database from stage to production,
* [CLICKs]
* you blow away the production content and replace it with “foos” and “bars” and references to cat pictures (that may or may not be in the files directory [different story])

# What is Configuration Management?

Tries to manage this by removing configuration from the database.

# Drupal 7 “Solution”: Features



| | FEATURE | SIGNATURE | STATE | ACTIONS |
|---|---|---|---|---|
| ☑ | **luggage_aliases**<br>Required by: crops_icm, luggage_blog | Unavailable<br>7.x-1.2 | Overridden | Recreate |
| ☑ | **luggage_announcements**<br>A content type for announcements that also redirect to an external URL with flexslider support | Unavailable<br>7.x-3.9 | Needs review | Recreate |
| ☑ | **luggage_bean_card**<br>Creates cards | Unavailable<br>7.x-1.0 | Overridden | Recreate |
| ☑ | **luggage_bean_menu**<br>Creates user-configurable menus | Unavailable<br>7.x-1.0 | Default | Recreate |
| ☐ | **luggage_biblio**<br>hold configuration around the Biblio module | Unavailable<br>7.x-3.6 | Disabled | Recreate |
| ☑ | **luggage_blog**<br>Blogging feature | Unavailable<br>7.x-1.0 | Overridden | Recreate |
| ☑ | **luggage_ckeditor**<br>conservative WYSIWIG feature using ckeditor<br>Required by: luggage_roles | Unavailable<br>7.x-3.3 | Needs review | Recreate |
| ☑ | **luggage_contrib**<br>modules that should globally be enabled on production<br>Required by: luggage_people, luggage_roles | Unavailable<br>7.x-3.1 | Default | Recreate |
| ☑ | **luggage_core**<br>core modules that should globally be enabled on production<br>Required by: luggage_roles | Unavailable<br>7.x-3.4 | Default | Recreate |
| ☑ | **luggage_events**<br>Event to show on a calendar or list | Unavailable<br>7.x-3.9 | Default | Recreate |
| ☐ | **luggage_events_solr**<br>integration of solr with event type vocabulary as a facet | Unavailable<br>7.x-3.1 | Disabled | Recreate |

Export configurations into a module
Enable the module to import the configuration

# Drupal 7 “Solution”: Drawbacks

- Intended to be able to copy “features” between sites, not to manage a single site configuration between environments.
- Exports sometimes picked up unintended configuration
- Not all configurations available for export

# Drupal 8 “Solution”: Configuration Management

- Core has system for configuration
- Configuration can be written to .yml files and stored with the code.
- Intended to copy configuration between environments
- Not intended to share config across sites

* With system in Core all modules are expected to use it. It is pretty easy to use too.
* .yml files can be revisioned and stored in git
* Configuration Management 2.0 initiative is here to help with cross-site configuration

# Drupal 8
# Configuration Management

- Active configuration is in the DB and managed by core's config system
- Configuration can be exported to .yml files and stored with the code.
- Configuration can be imported from .yml files into the Active configuration

* Config in DB is faster and easier. - Can be cached with memcache or redis, doesn't have to read thousands of files on every request
*

# Where are config files?

- Site configuration
  - **sites/{site}/files/config{hash}/sync** - Change this in settings.php

- Modules, Themes, Profiles
  - **config/install** - Config imported on install
  - **config/optional** - Config imported if dependencies are met

* Site config sync with has tries to hide these files from the public
* Change the location in settings.php to something outside of the web root

# How do I use it?

DEMO TIME

# Limitations

- Intended to copy configuration between environments
- Not intended to share config across sites
- Features still exists for its intended purpose of sharing features between sites

* Though there are ways around sharing between sites, like Features for D8, or installing config with a profile or developing your own modules with hook_updates
* See some more development of this with the configuration management 2.0 initiative currently in progress

# Useful Configuration Modules

- config_override_warn - If config is overridden in settings.php it will let you know if you try to change it in the UI.
- config_readonly - Adds settings.php config to lock down config changes from the UI.
- config_split - Alternate config for specific environments

* config_override_warn - Thanks Dave Ried!
* config_readonly - If you really don’t want config to change in production
* config_split - Eg. you want devel module enabled on dev, but not production. See the next presentation

# Using Config Split to Split Your Config Across Environments and Sites

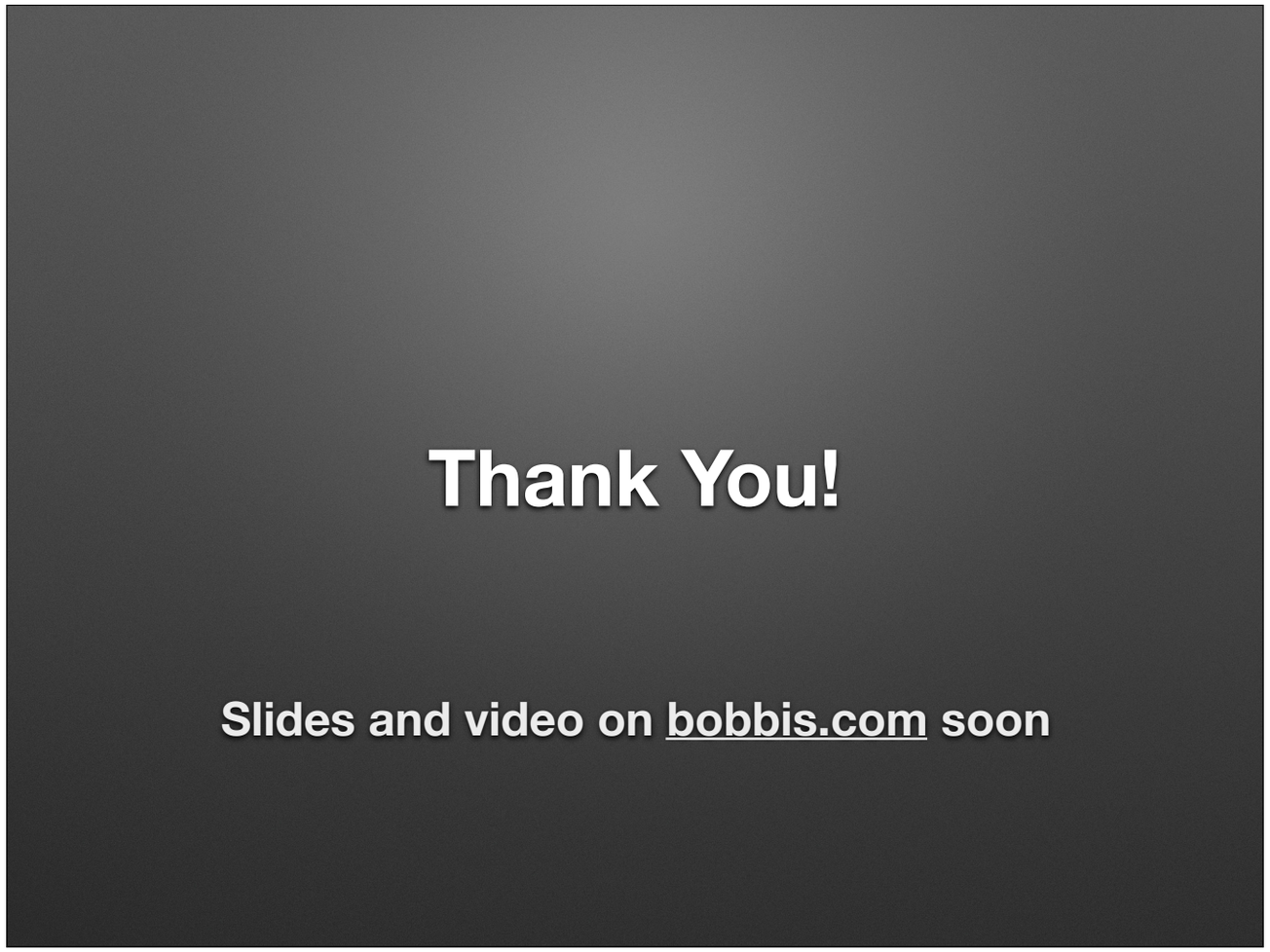
Josh Fabean

3:00

Room 237

# Interesting Reads

- Drupal Docs - Excellent documentation 😲
- Dries Blog Post on CMI 2.0
- Stop Using Features: A Guide To Drupal 8 Configuration Management




I’ll get the slides and video posted on my website bobbis.com soon