# Managing Projects Using Drupal 8's Configuration Management System

Presented in Technicolor by

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This session is brought to you by G0VC0N & the Drupal 8 CMS





### Drupal 8 Will Have Something for Everyone to Love

With more than 200 new features and improvements, the upcoming release of the world's leading open source web content management platform will win you over.



#### Why You Will Love Drupal 8

Drupal 8 will set a new standard for ease of use, while offering countless new ways to tailor and deploy your content to the Web. Easily customize data structures, listings, and pages, and take advantage of new capabilities for displaying data on mobile devices, building APIs, and adapting to multilingual needs.

With a leaner and meaner core, easier migration process from earlier versions, in-place content editing tools and loads more power for modules and themes thanks to a modern Object Oriented Programming (OOP) approach on the backend, there is something for everyone to love in Drupal 8. When will it be released? See the FAQ.

#### Drupal 8 Critical Countdow

Drupal 8 enters release candidate phase once there are zero critical issues.

#### 32 critical issues remaining

Read more about how to help Drupal 8

#### What makes Drupal 8 great

Check out the Drupal 8 overview

#### **Drupal 8 for developers**

Modern OOP Approach, Built-in Web Services & More

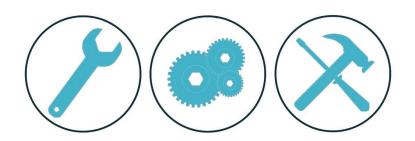
#### **Drupal 8 for sitebuilders**

Powerful Content Customization Features, Simpler Config Tools

### Configuration



#### **Content**





- Content Types
- Image Styles
- Fields
- Views
- Settings

- Nodes
- Users
- Comments
- Menu Items
- Taxonomy Terms



### The Problem Is That Drupal Doesn't Care

MariaDB [pantheon]> show	tables;			l queue	ı
Tables_in_pantheon	i	<pre>I field_config_instance</pre>	1	rdf_mapping	I
+	+	field_data_body	1	l registry	I
_pantheon_heartbeat	1	field_data_comment_body	1	registry_file	1
l actions	1	field_data_field_image	1	I role	-
l authmap	1	<pre>  field_data_field_tags</pre>	1	<pre>l role_permission</pre>	1
l batch	1	field_revision_body	1	l search_dataset	- 1
block	1	<pre>  field_revision_comment_body</pre>	y I	search_index	I
block_custom	1	<pre>  field_revision_field_image</pre>	1	<pre>l search_node_links</pre>	I
block_node_type	1	field_revision_field_tags	1	search_total	I
block_role	1	file_managed	1	l semaphore	I
blocked_ips	1	file_usage	1	l sequences	- 1
l cache	1	filter	1	l sessions	1
I cache_block	1	filter_format	1	shortcut_set	1
l cache_bootstrap	1	flood	1	shortcut_set_users	I
cache_field	1	history	1	l system	I
cache_filter	1	<pre>l image_effects</pre>	1	<pre>l taxonomy_index</pre>	I
cache_form	1	image_styles	1	l taxonomy_term_data	I
l cache_image	1	menu_custom	1	<pre>l taxonomy_term_hierarchy</pre>	I
I cache_menu	1	menu_links	1	<pre>l taxonomy_vocabulary</pre>	I
l cache_page	1	menu_router	1	url_alias	I
I cache_path	1	l node	1	lusers	I
l cache_update	1	l node_access	1	users_roles	I
l comment	1	<pre>l node_comment_statistics</pre>	1	I variable	I
date_format_locale	1	<pre>l node_revision</pre>	1	l watchdog	I
date_format_type	1	l node_type	1	+	+
date_formats	1			75 rows in set (0.00 sec)	
field_config	1				

#### The World Until Yesterday

```
* Setup default config for 'manualcrop' on the Media browser.
function panopoly_images_update_7102() {
 variable_set('manualcrop_file_entity_settings_image', array(
    'manualcrop_enable' => $focal_point_enabled ? 0 : 1,
   'manualcrop_keyboard' => 1,
   'manualcrop_thumblist' => 0,
   'manualcrop_inline_crop' => 0,
   'manualcrop_crop_info' => 1,
   'manualcrop_instant_preview' => 1,
   'manualcrop_instant_crop' => 0,
   'manualcrop_default_crop_area' => 0,
   'manualcrop_maximize_default_crop_area' => 0.
   'manualcrop_styles_mode' => 'include',
   'manualcrop_styles_list' => array(
      'panopoly_image_full' => 'panopoly_image_full',
    'manualcrop_require_cropping' => array(),
```

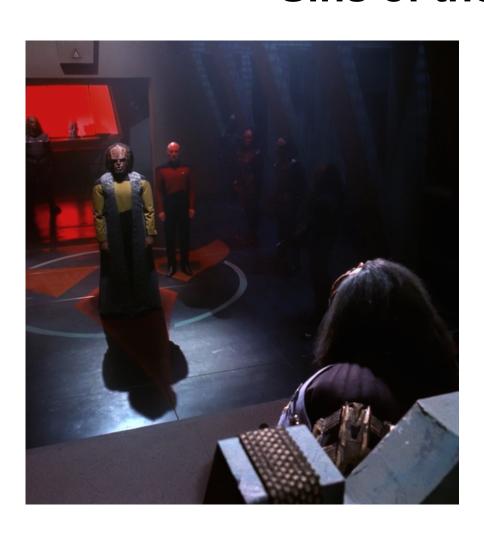
hook\_update\_n()



features.module



#### Sins of the Father



- Features Module is **not** intended to be the solution for storing your Drupal configuration in code.
- Status as a contrib project limited its ability to be a fully integrated solution for all ones Drupal development needs.
- Variety of technical limitations around support for unique identifiers, ability to deal with state, constantly changing data structures, less than comprehensive support for contrib.



"Today is a good day to start putting all of our config in code."

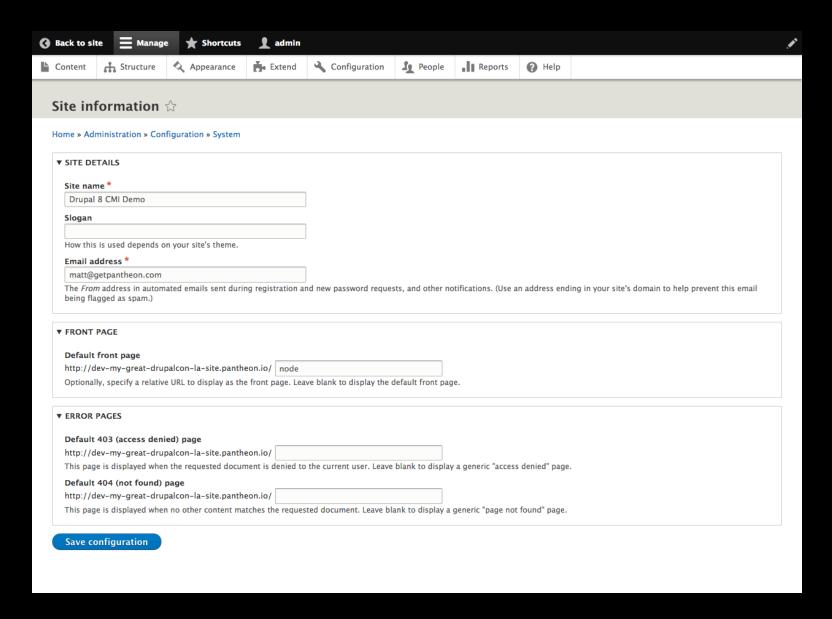
- Greg Dunlap (rumoured) in March 2011

#### **Drupal 8 CMI: Maximizing P.I.E.**



- Proudly Invented Elsewhere (P.I.E.)
  - Use what's already implemented, tested, familiar
  - We're not any smarter than most people who have worked on the problem before
- Pre-Symfony P.I.E.
  - No custom format and parser (unlike .info files)
  - Initially chose XML
    - Built-in parsing support
    - Consistent UTF-8 for i18n support
    - Support for comments
- Post-Symfony P.I.E.
  - Switched to Symfony YAML parser
  - Considered Config library, but no GUI support





#### admin/config/system/site-information



```
uuid: f3cf1bea-b55c-4de5-9a07-7ca6d97bf1af
name: 'Drupal 8 CMI Demo'
mail: matt@getpantheon.com
slogan:
page:
 403: ''
 404: ''
  front: node
admin_compact_mode: false
weight_select_max: 100
langcode: en
```

#### system.site.yml



```
uuid: 27e09a2e-a781-4a58-a728-4058b478dcd7
langcode: en
status: true
dependencies:
  module:
    - menu_ui
name: Blog
type: blog
description: 'A message to your fans and followers.'
help: ''
new_revision: false
preview_mode: 1
display_submitted: true
third_party_settings:
 menu_ui:
    available menus:
      - main
    parent: 'main:'
node.type.blog.yml (END)
```

```
uuid: 1fa5900a-8c01-46dd-bb00-cd5770d59140
langcode: en
status: true
dependencies:
  entity:
    - field.storage.node.body

    node.type.blog

id: node.bloa.body
field_name: body
entity_type: node
bundle: blog
label: Body
description: ''
required: false
translatable: true
default value: { }
default_value_function: ''
settings:
  display_summary: true
third_party_settings: { }
field_type: text_with_summary
field.instance.node.blog.body.yml (END)
```

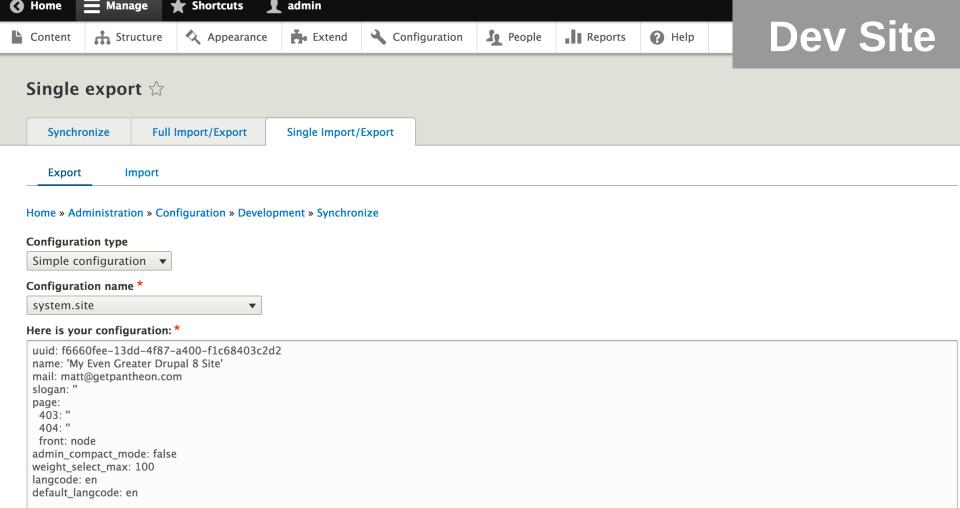
#### node.type.blog.yml + field.instance.node.blog.body.yml

README.txt	block.block.bartik_account_menu.yml	block.block.bartik_breadcrumbs.yml
block.block.bartik_content.yml	block.block.bartik_footer.yml	block.block.bartik_help.yml
block.block.bartik_login.yml	block.block.bartik_main_menu.yml	block.block.bartik_messages.yml
block.block.bartik_powered.yml	block.block.bartik_search.yml	block.block.bartik_tools.yml
block.block.seven_breadcrumbs.yml	block.block.seven_content.yml	block.block.seven_help.yml
block.block.seven_login.yml	block.block.seven_messages.yml	block_content.type.basic.yml
comment.type.comment.yml	contact.form.feedback.yml	contact.form.personal.yml
contact.settings.yml	core.base_field_override.node.page.promote.yml	core.date_format.fallback.yml
core.date_format.html_date.yml	core.date_format.html_datetime.yml	core.date_format.html_month.yml
core.date_format.html_time.yml	core.date_format.html_week.yml	core.date_format.html_year.yml
core.date_format.html_yearless_date.yml	core.date_format.long.yml	core.date_format.medium.yml
core.date_format.short.yml	core.entity_form_display.block_content.basic.default.yml	core.entity_form_display.comment.comment.default.yml
core.entity_form_display.node.article.default.yml	core.entity_form_display.node.page.default.yml	core.entity_form_display.user.user.default.yml
core.entity_form_mode.user.register.yml	core.entity_view_display.block_content.basic.default.yml	core.entity_view_display.comment.comment.default.yml
core.entity_view_display.node.article.default.yml	core.entity_view_display.node.article.rss.yml	core.entity_view_display.node.article.teaser.yml
core.entity_view_display.node.page.default.yml	core.entity_view_display.node.page.teaser.yml	core.entity_view_display.user.user.compact.yml
core.entity_view_display.user.user.default.yml	core.entity_view_mode.block_content.full.yml	core.entity_view_mode.comment.full.yml
core.entity_view_mode.node.full.yml	core.entity_view_mode.node.rss.yml	core.entity_view_mode.node.search_index.yml
core.entity_view_mode.node.search_result.yml	core.entity_view_mode.node.teaser.yml	core.entity_view_mode.taxonomy_term.full.yml
core.entity_view_mode.user.compact.yml	core.entity_view_mode.user.full.yml	core.extension.yml
core.menu.static_menu_link_overrides.yml	dblog.settings.yml	editor.editor.basic_html.yml
editor.editor.full_html.yml	field.field.block_content.basic.body.yml	field.field.comment.comment_body.yml
field.field.node.article.body.yml	field.field.node.article.comment.yml	field.field.node.article.field_image.yml
field.field.node.article.field_tags.yml	field.field.node.page.body.yml	field.field.user.user_picture.yml
field.settings.yml	field.storage.block_content.body.yml	field.storage.comment.comment_body.yml
field.storage.node.body.yml	field.storage.node.comment.yml	field.storage.comment.comment_body.yml
field.storage.node.field_tags.yml	field.storage.user_user_picture.yml	field_ui.settings.yml
file.settings.yml	filter.format.basic_html.yml	filter.format.full_html.yml
	filter.format.restricted_html.yml	filter.settings.yml
filter.format.plain_text.yml	•	
image.settings.yml	image.style.large.yml	image.style.medium.yml
image.style.thumbnail.yml	menu_ui.settings.yml	node.settings.yml
node.type.article.yml	node.type.page.yml	rdf.mapping.comment.comment.yml
rdf.mapping.node.article.yml	rdf.mapping.node.page.yml	rdf.mapping.taxonomy_term.tags.yml
rdf.mapping.user.user.yml	search.page.node_search.yml	search.page.user_search.yml
search.settings.yml	seven.settings.yml	shortcut.set.default.yml
system.action.comment_publish_action.yml	system.action.comment_save_action.yml	system.action.comment_unpublish_action.yml
system.action.node_delete_action.yml	system.action.node_make_sticky_action.yml	system.action.node_make_unsticky_action.yml
system.action.node_promote_action.yml	system.action.node_publish_action.yml	system.action.node_save_action.yml
system.action.node_unpromote_action.yml	system.action.node_unpublish_action.yml	system.action.user_add_role_action.administrator.yml
system.action.user_block_user_action.yml	system.action.user_cancel_user_action.yml	system.action.user_remove_role_action.administrator.yml
system.action.user_unblock_user_action.yml	system.authorize.yml	system.cron.yml
system.date.yml	system.diff.yml	system.file.yml
system.filter.yml	system.image.gd.yml	system.image.yml
system.logging.yml	system.mail.yml	system.maintenance.yml
system.menu.account.yml	system.menu.admin.yml	system.menu.footer.yml
system.menu.main.yml	system.menu.tools.yml	system.performance.yml
system.rss.yml	system.site.yml	system.theme.global.yml
system.theme.yml	taxonomy.settings.yml	taxonomy.vocabulary.tags.yml
text.settings.yml	tour.tour.views-ui.yml	update.settings.yml
user.flood.yml	user.mail.yml	user.role.administrator.yml
user.role.anonymous.yml	user.role.authenticated.yml	user.settings.yml
views.settings.yml	views.view.archive.yml	views.view.comments_recent.yml
views.view.content.yml	views.view.content_recent.yml	views.view.files.yml
views.view.frontpage.yml	views.view.glossary.yml	views.view.taxonomy_term.yml
views. <u>v</u> iew.user_admin_people.yml	views.view.who_s_new.yml	views.view.who_s_online.yml





## Using Configuration Management to Import a Single Config Value (featuring the Drupal UI)

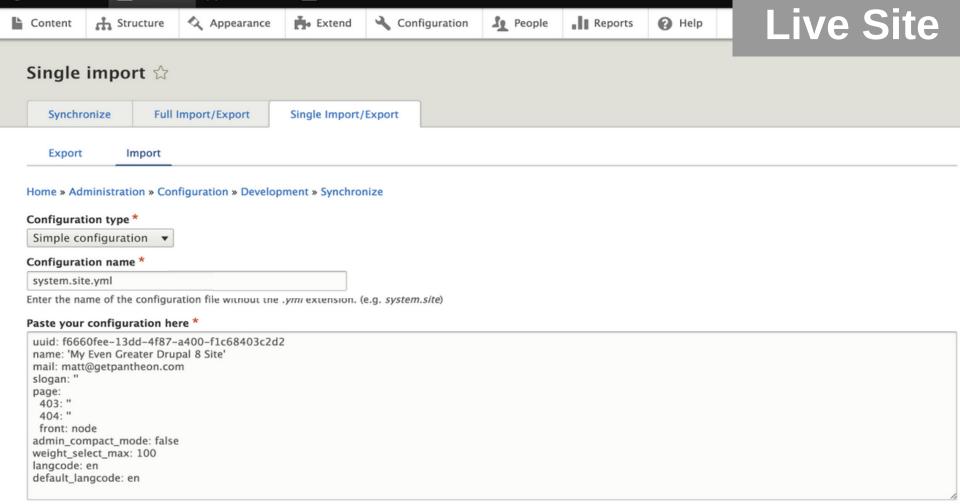


### Configuration Manager Module (Single export) admin/config/development/configuration/single/export

Filename: system.site.yml

```
uuid: f6660fee-13dd-4f87-a400-f1c68403c2d2
name: 'My Even Greater Drupal 8 Site'
mail: matt@getpantheon.com
slogan: "
page:
    403: "
    404: "
    front: node
admin_compact_mode: false
weight_select_max: 100
langcode: en
default_langcode: en
```

### YML File system.site.yml



Import

Back to site

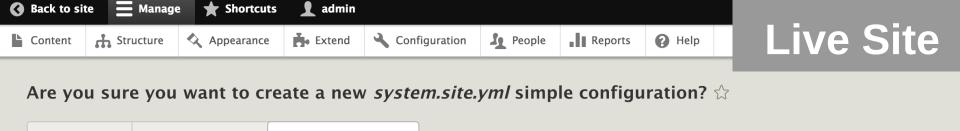
Manage

\* Shortcuts

👤 admin

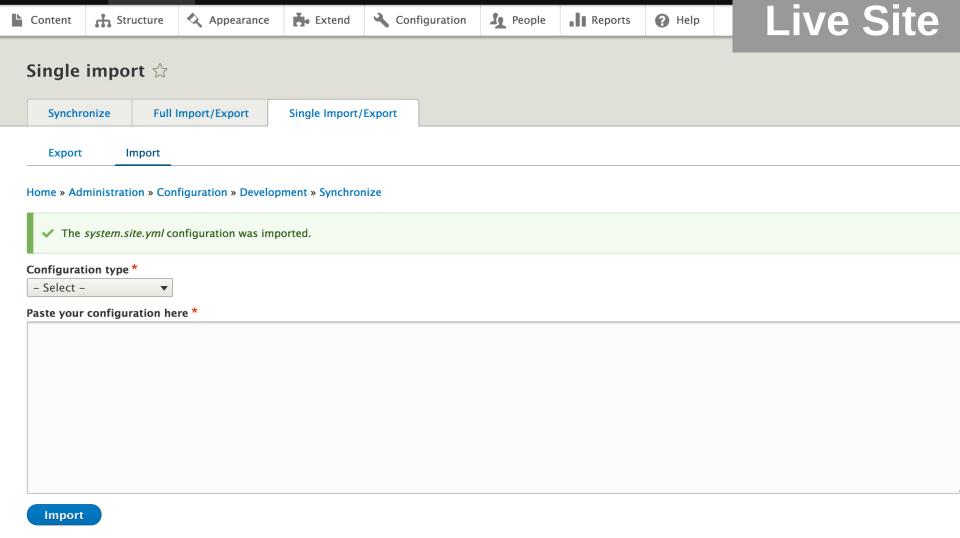
### Configuration Manager Module (Single import) admin/config/development/configuration/single/import





Synchronize	Tull illiport/Export	Single import/Export
Export I	mport	
Home » Administrati	on » Configuration » Deve	lopment » Synchronize
This action cannot b	e undone.	
Confirm Ca	ancel	

### Configuration Manager Module (Import confirm) admin/config/development/configuration/single/import



### Configuration Manager Module (Import finished) admin/config/development/configuration/single/import

Back to site

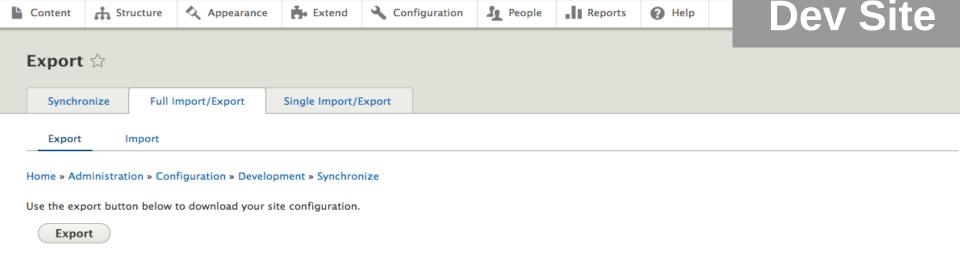
**Manage** 

**★** Shortcuts

👤 admin



## Using Configuration Management to Import All Config Values (featuring the Drupal UI)



### Configuration Manager Module (Export) admin/config/development/configuration/full/export

Back to site

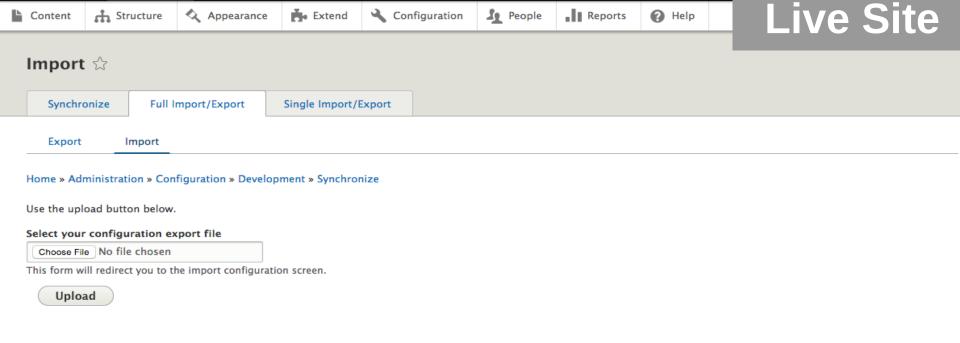
Manage

Shortcuts

admin



### Downloaded File config.tar.gz



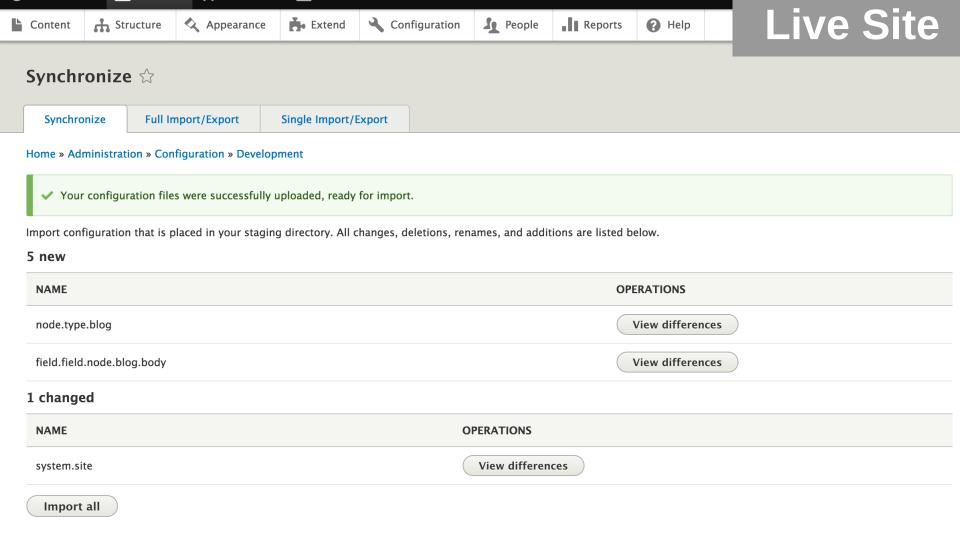
### Configuration Manager Module (Import) admin/config/development/configuration/full/import

Back to site

Manage

Shortcuts

admin



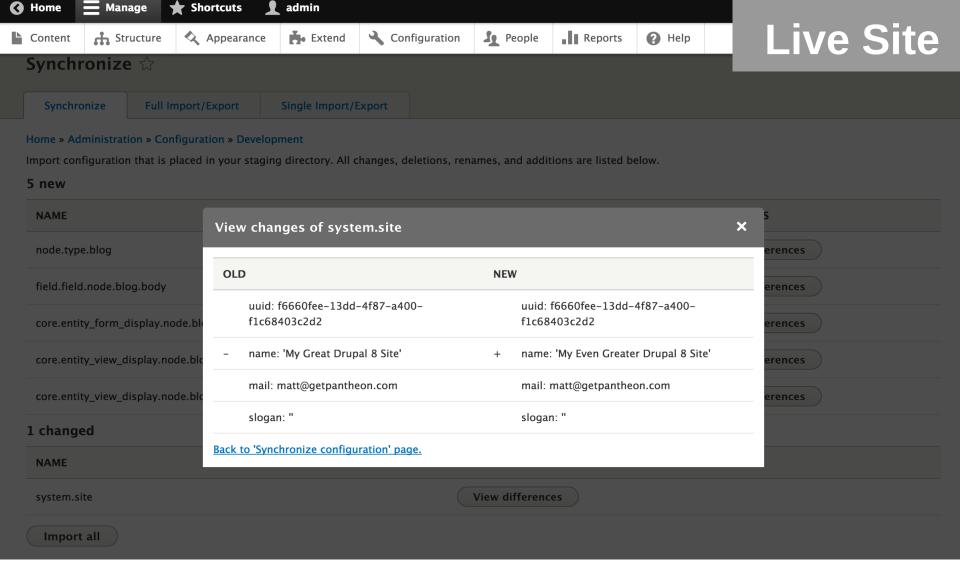
### Configuration Manager Module (Synchronize) admin/config/development/configuration

Back to site

**—** Manage

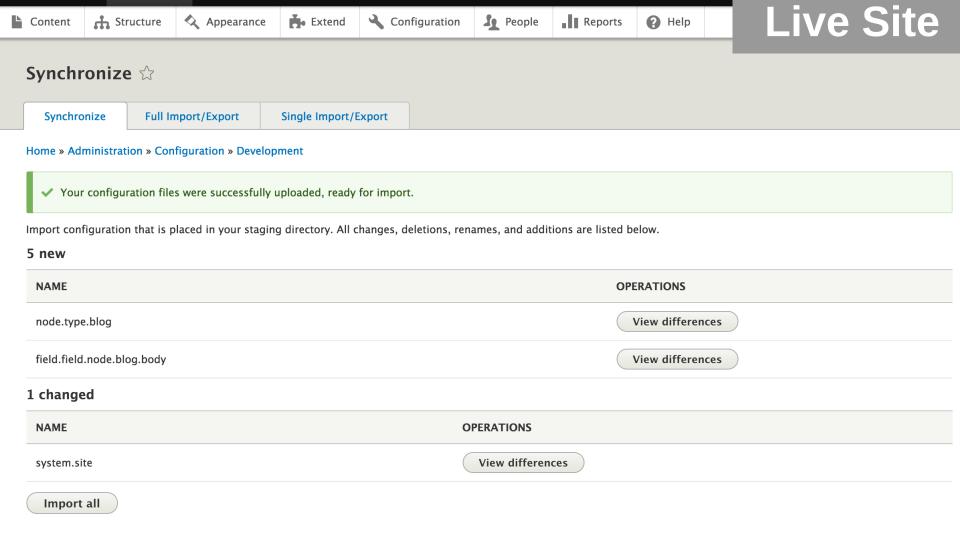
**Shortcuts** 

admin



### Configuration Manager Module (View differences) admin/config/development/configuration





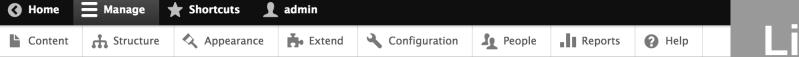
### Configuration Manager Module (Synchronize) admin/config/development/configuration

Back to site

**—** Manage

**Shortcuts** 

admin



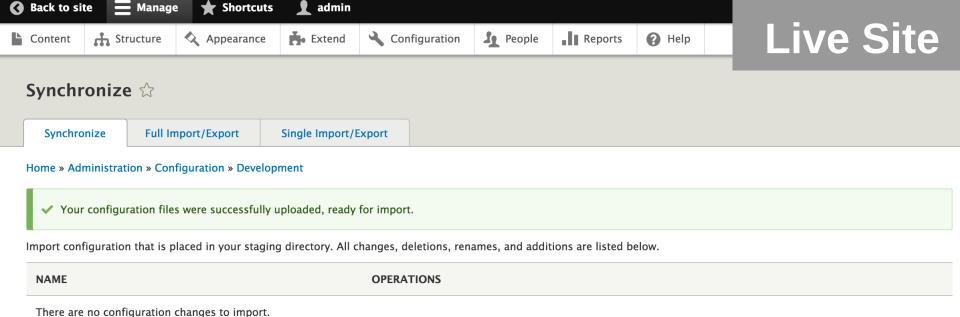
Live Site

#### Synchronizing configuration $\diamondsuit$

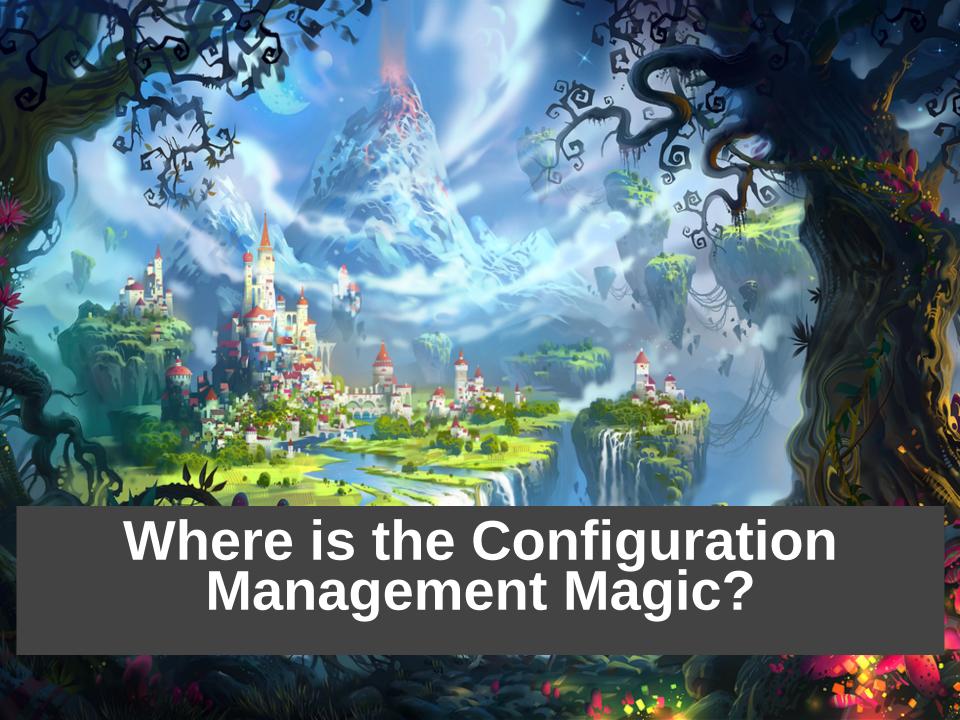
Finalizing configuration synchronization.

Completed 2 step of 2.

### Configuration Manager Module (Import all) admin/config/development/configuration



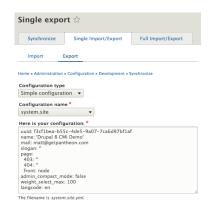
### Configuration Manager Module (Import finished) admin/config/development/configuration











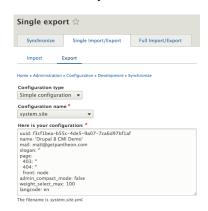




```
uuid: 27e09a2e-a781-4a58-a728-4058b478dcd7
langcode: en
status: true
dependencies:
 module:
   - menu_ui
name: Blog
type: blog
description: 'A message to your fans and followers.'
help: ''
new_revision: false
preview_mode: 1
display_submitted: true
third_party_settings:
   available_menus:
     - main
    parent: 'main:'
node.type.blog.yml (END)
```









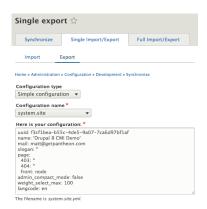


	Single Import/Export	Full Import/Export	
Import E	Export		
Home » Administration	> Configuration > Development > S	iynchronize	
Configuration type	*		
Simple configurat	ion 🔻		
Configuration nam	.e.*		
system.site			
	configuration file without the .y/	m/ extension (e.g. system site)	
	-	m extension: (e.g. system.site)	
Paste your configu			
	5c-4de5-9a07-7ca6d97bf1a		
name: 'Drupal 8 CM	theon com		
name: 'Drupal 8 CN mail: matt@getpan slogan: "	theon.com		
mail: matt@getpan slogan: " page:	theon.com		
mail: matt@getpan slogan: " page: 403: "	theon.com		
mail: matt@getpan slogan: " page: 403: " 404: "	theon.com		
mail: matt@getpan slogan: " page: 403: " 404: " front: node			
mail: matt@getpan slogan: " page: 403: " 404: "	ode: false		

## The Magic is in the Workflow













	Single Import/Export	Full Import/Export
Import Ex	port	
ome » Administration »	Configuration » Development » :	Conchroniza
onfiguration type	-	ynemonice
Simple configuration		
Configuration name		
onfiguration name system.site		
	onfiguration file without the	ml extension. (e.g. system.site)
	,	im extension. (e.g. system.site)
aste your configur		
uuid: f3cf1bea-b55g name: 'Drupal 8 CMI	-4de5-9a07-7ca6d97bf1a	f
mail: matt@getpantl		
slogan: "		
page:		
403: "		
404: " front: node		
admin_compact_mo	de: false	
weight select max:		
weight_select_max: langcode: en		

## The Magic is in the Workflow













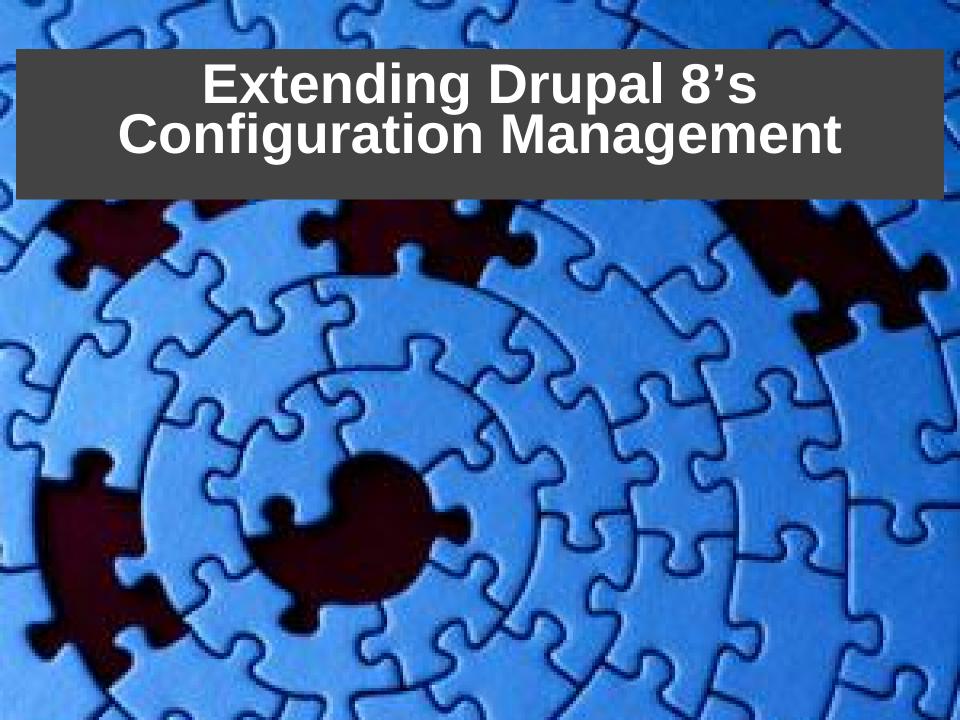
Synchronize	Single Import/Export	Full Import/Export
Import	Export	
ome » Administration	» Configuration » Development »	Synchronize
onfiguration type	-	
Simple configura		
onfiguration nan	ne *	
system.site		
	configuration file without the .)	ml extension. (e.g. system.site)
nter the name of the	configuration file without the .y	vml extension. (e.g. system.site)
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taste your configured in the state your configured in the state of the	configuration file without the .)  aration here *  5c4de5-9807-7ca6d97bf1a  MI Demo'	
aste your configuuid: f3cf1bea-b5 name: 'Drupal 8 C mail: matt@getpar	configuration file without the .)  aration here *  5c4de5-9807-7ca6d97bf1a  MI Demo'	
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So Let's Try a Live Demo with Drupal 8 Beta 12 (try it yourself at https://pantheon.io/d8)



Hopefully the Demo was Cool (if not blame barbarian invasions, the reliance on slave and mercenary labor, militaristic overexpansion, the rise of the influence of Byzantium, and, of course, the conference wifi)



### **Handling Different Languages**

```
locale.hu.block.block.bartik.login.yml
block.block.bartik.login.yml
                                settings:
id: bartik.login
uuid: 7012ebfd-7083-47ef-b...
                                  label: 'Belépés'
weight: '0'
status: '1'
langcode: en
region: sidebar first
plugin: user login block
                                locale.nl.block.block.bartik.login.yml
settings:
  label: 'User login'
 module: user
                                settings:
                                  label: 'Inloggen'
  label display: visible
  cache: '-1'
```

This is how Configuration Management handles configuration values in **different languages** 



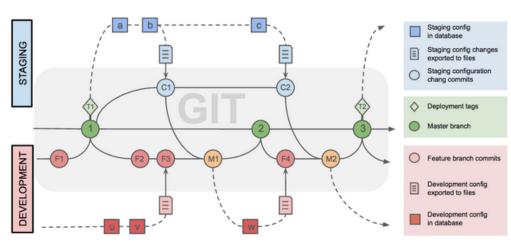
## Dealing with Configuration Over Multiple Git Branches & Developers is Hard!



And it requires typing **lots and lots of** different **Drush and Git commands** 

### Check out Drush's config-merge Command





Grab Drush 8 and get started today!



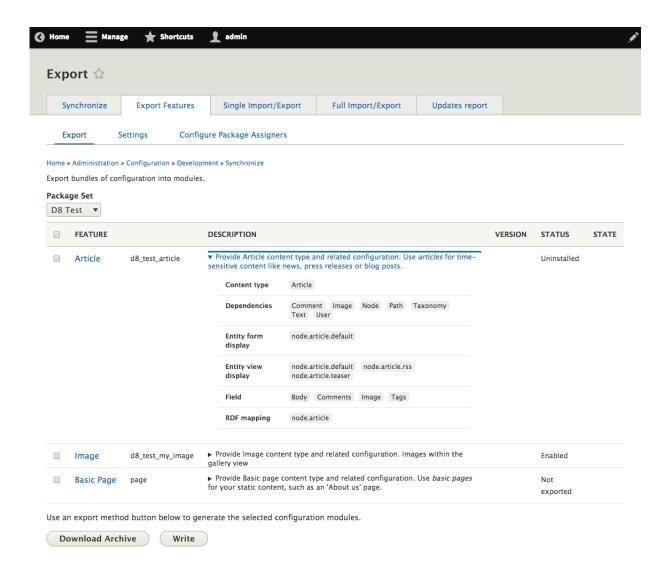
# Drupal 8's Configuration Management is Designed to Manage a Full Site's Config

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Sharing configuration across multiple sites is not a support used case



### **Luckily there is Features for Drupal 8!**



### **Learn More from Drupalcon's Video!**

### Features for Drupal 8

#### **MPOTTER**

The Features module has played in important role in deploying site configuration for Drupal 7. Now that Drupal 8 has configuration management (CMI) built into core, what's the role of the Features module in Drupal 8? In Drupal 8, Features will return to it's original mission of bundling functionality rather than just managing configuration. We will demo the latest development version of the D8 Features module.

#### What you will learn:

- The architecture of Features in Drupal 8
- The difference between Modules, Features, and Apps
- How Features integrates with D8 CMI and other modules such as config\_devel and config\_packager
- · How to create a new Feature
- · How to manage existing Features
- · When and How to override Features

### **Drupal Version**

Drupal 8.x

### Session Time Slot(s)

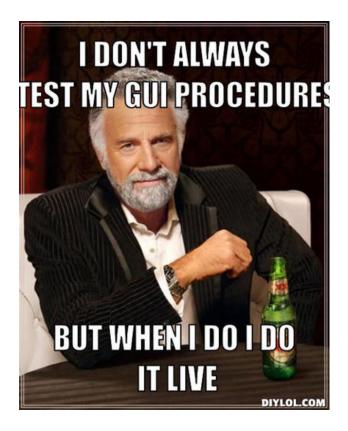
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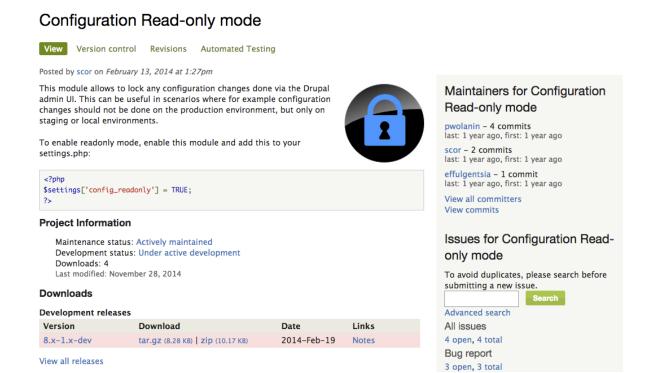
Petree C -Acquia

# Configuration Management Doesn't Prevent You From Changing Config in Live



And it is important to you that all configuration be in version control and be tested before going live

### There is a Drupal 8 Module for that!



https://www.drupal.org/project/config\_readonly



