

Features & Drush

Building a professional, “no touch”
workflow

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Features & Drush

1. What are features? What is Drush?
2. Create a feature that includes a content type, a view, and some settings.
3. How to get that feature on a different server.
4. How to update the feature once it's in place.
5. Tricks to make working with features even easier.
6. Potential issues.

FEATURES!!!!

Features module

Drupal™

[Drupal Homepage](#) [Your Dashboard](#) Logged in as [jrb](#) [Log out](#) [Refine your search](#) ▼

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- [Distributions](#)
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- [Themes](#)

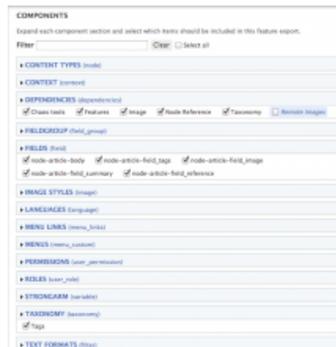
Features

- View**
- [Version control](#)
- [Revisions](#)
- [Automated Testing](#)

Posted by [mpotter](#) on *March 13, 2009 at 6:02pm*

The features module enables the capture and management of features in Drupal. A feature is a collection of Drupal entities which taken together satisfy a certain use-case.

Features provides a UI and API for taking different site building components from modules with exportables and bundling them together in a single feature module. A feature module is like any other Drupal module except that it declares its components (e.g. views, contexts, CCK fields, etc.) in its `.info` file so that it can be checked, updated, or reverted programmatically.



Maintainers for Features

[hefox](#) – 32 commits
last: 3 weeks ago, first: 2 years ago

[mpotter](#) – 188 commits
last: 3 weeks ago, first: 1 year ago

[tim.plunkett](#) – 11 commits
last: 7 months ago, first: 2 years ago

[febrero](#) – 53 commits
last: 1 year ago, first: 2 years ago

[hyrcan](#) – 1 commit
last: 2 years ago, first: 2 years ago

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[View commits](#)

Drush

DrupalTM

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Drupal Homepage Your Dashboard Logged in as jrb Log out Refine your search ▼

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Drush

[View](#) [Version control](#) [Revisions](#) [Automated Testing](#)

Posted by [moshe weitzman](#) on *November 12, 2006 at 9:00pm*

The Drush project has moved to Github.

- Use our [Github project](#) for contributing code, or reporting bugs, or requesting features.
- Please ask support questions on [Drupal Answers](#).
- Please see the [Migration wiki page](#) for more information.

Drush was originally developed by [Arto](#) for Drupal 4.7. In May 2007, it was partly rewritten and redesigned for Drupal 5 by [frando](#). Drush is maintained by [Moshe Weitzman](#), [Owen Barton](#), [greg.1.anderson](#), [jhedstrom](#), [jonhattan](#), and [Mark Sonnabaum](#).

Project Information

Maintenance status: [Actively maintained](#)

Maintainers for Drush

[moshe weitzman](#) – 1677 commits
last: 2 months ago, first: 6 years ago

[View all committers](#)
[View commits](#)

Resources

[Home page](#)
[Read documentation](#)

Development

Drush on GitHub

GitHub

This repository

Search or type a command



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Sign up

Sign in

drush-ops / drush

★ Star 359

🍴 Fork 140

Drush is a command-line shell and scripting interface for Drupal, a veritable Swiss Army knife designed to make life easier for those who spend their working hours hacking away at the command prompt.

<http://drupal.org/project/drush>

📄 3,532 commits

🌿 8 branches

📦 160 releases

👤 33 contributors



branch: master

drush / +

Fix #249. Update pm-download and friends with the new XML update form...



weltzman authored 5 days ago

latest commit 198eb08f31

classes	Update role and user commands for Drupal 8.	14 days ago
commands	Fix #249. Update pm-download and friends with the new XML update form...	5 days ago
docs	README.txt has changed to README.md; update various references to m...	3 months ago
examples	#165: Correct documentation regarding custom locations for drushrc.p...	a month ago

Code

Issues 109

Pull Requests 22

Wiki

Pulse

Graphs

Network

HTTPS clone URL

<https://github.com/>

You can clone with HTTPS or

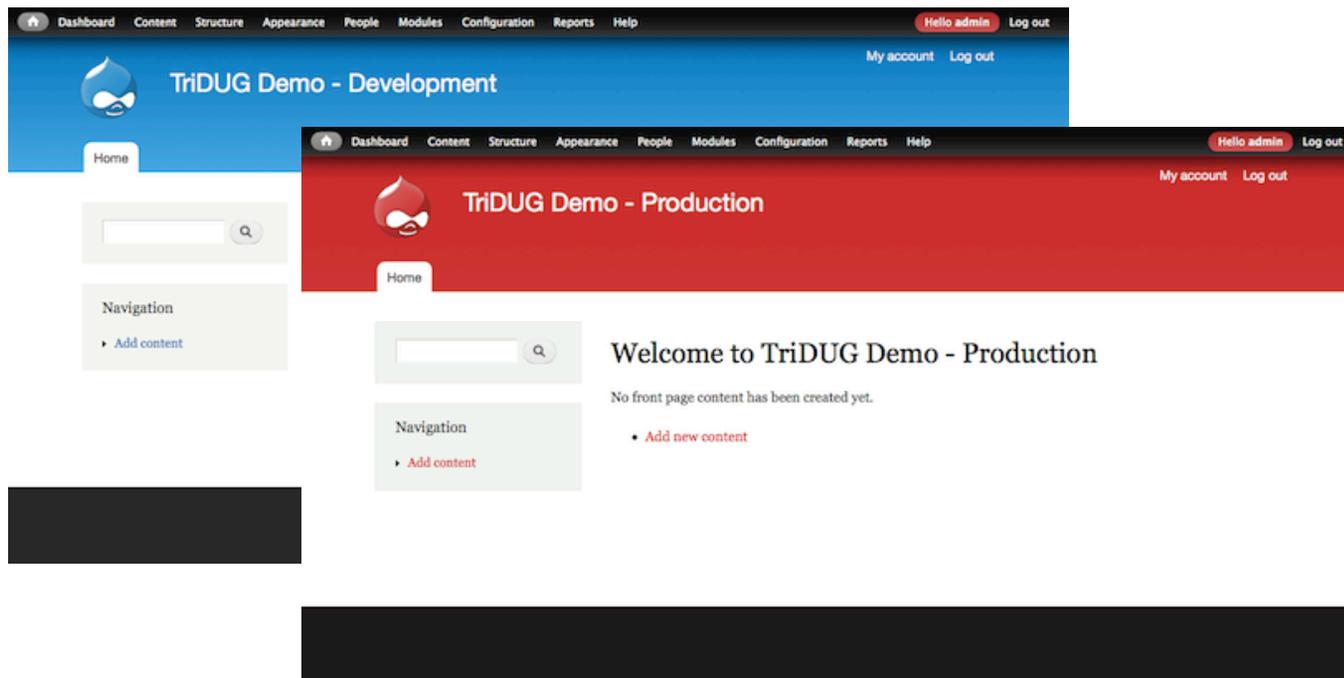
Use cases for features

1. More than one person working on a site.
2. Development / Stage / Production servers.
3. You have a Drupal website!

Demo

Two sites:

1. Dev (blue theme)
2. Production (red theme)



Add a new content type with a view
and some settings on Dev site.

Kittens!



Welcome to TriDUG Demo - Development | TriDUG Demo - Development

dev.tridugdemo.com

Dashboard Content **Structure** Appearance People Modules Configuration Reports Help

Hello admin Log out

My account Log out



TriDUG Demo - Development

Home

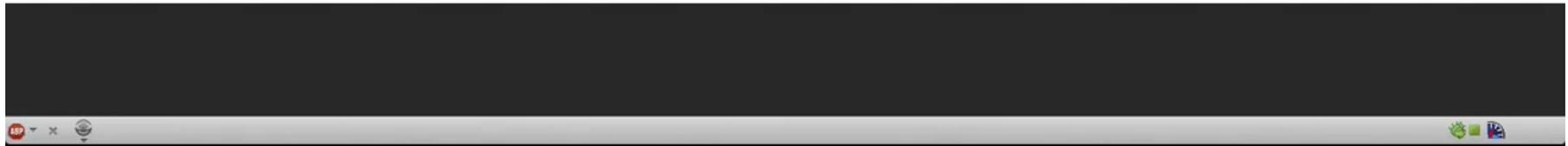
Welcome to TriDUG Demo - Development

No front page content has been created yet.

- [Add new content](#)

Navigation

- ▶ [Add content](#)



How do we get this new content
type to our production site?

FEATURES!!!

Dashboard Content Structure Appearance People **Modules** Configuration Reports Help

Hello admin Log out

My account Log out

TriDUG Demo - Development

Home Kittens

Home » Administration

Modules

List Uninstall

Download additional [contributed modules](#) to extend Drupal's functionality.

Regularly review available updates to maintain a secure and current site. Always run the [update script](#) each time a module is updated. Enable the Update manager module to update and install modules and themes.

All

54 of 100

Filter list

Administration

Chaos tool suite

Enabled Disabled Required Unavailable

Enabled	Name	Version	Description	Operations
---------	------	---------	-------------	------------

Drush commands

\$ drush en MODULENAME

Enables a module.

\$ drush fl

Lists all features, shows their current state.

\$ drush cc all

Flushes all caches.

\$ drush dl MODULENAME

Downloads a module.

\$ drush fd MODULENAME

Shows differences between the feature as defined in code and the database.

\$ drush fu MODULENAME

Updates the feature code to match what's in the database.

\$ drush updb

Runs any outstanding Drupal update scripts. Same as update.php.

\$ drush fr MODULENAME

Reverts the feature to match what's in code.

Regularly review available updates to maintain a secure and current site. Always run the [update script](#) each time a module is updated. Enable the Update manager module to update and install modules and themes.

All
54 of 101

Filter list

Enabled Disabled Required Unavailable

Enabled	Name	Version	Description	Operations
<input type="checkbox"/>	Content Type: Kitten	7.x-1.0	A feature to provide the Kitten content type. Requires: Features (enabled), Image (enabled), File (enabled), Field (enabled), Field SQL storage (enabled), Strongarm (enabled), Chaos tools (enabled), Text (enabled), Views (enabled)	

Drush commands

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`$ drush dl MODULENAME`

Downloads a module.

`$ drush fd MODULENAME`

Shows differences between the feature as defined in code and the database.

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Updates the feature code to match what's in the database.

`$ drush updb`

Runs any outstanding Drupal update scripts. Same as `update.php`.

`$ drush fr MODULENAME`

Reverts the feature to match what's in code.

```
homer-wired:htdocs jrb$ drush fl
Name           Feature           Status  Version  State
Content Type: Kitten  ct_kitten         Enabled  7.x-1.0
Date Migration Example date_migrate_example Disabled 7.x-2.6
Features Tests      features_test     Disabled 7.x-2.0-rc3
FlexSlider Example  flexslider_example Disabled 7.x-2.0-alpha3
homer-wired:htdocs jrb$ git add sites/all/modules/features/
homer-wired:htdocs jrb$ git commit -m "add feature"
[master 4922774] add feature
7 files changed, 474 insertions(+)
create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.features.field_base.inc
create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.features.field_instance.inc
create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.features.inc
create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.info
create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.module
create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.strongarm.inc
create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.views_default.inc
homer-wired:htdocs jrb$ git push origin master
```

Drush commands

\$ drush en MODULENAME

Enables a module.

\$ drush fl

Lists all features, shows their current state.

\$ drush cc all

Flushes all caches.

\$ drush dl MODULENAME

Downloads a module.

\$ drush fd MODULENAME

Shows differences between the feature as defined in code and the database.

\$ drush fu MODULENAME

Updates the feature code to match what's in the database.

\$ drush updb

Runs any outstanding Drupal update scripts. Same as update.php.

\$ drush fr MODULENAME

Reverts the feature to match what's in code.

Flush!

- Always good to flush the cache before checking the status of features.
- Will sometimes clear up any differences you may see.



Welcome to TriDUG Demo - Production | TriDUG Demo - Production

Features | TriDUG Demo - Deve... | Welcome to TriDUG Demo - Pro... | +

tridugdemo.com

Disable | Cookies | CSS | Forms | Images | Information | Miscellaneous | Outline | Resize | Tools | View Source | Options

Dashboard Content Structure Appearance People Modules Configuration Reports Help

Hello admin Log out

My account Log out



TriDUG Demo - Production

Home Kittens

Navigation

- ▶ [Add content](#)

Welcome to TriDUG Demo - Production

No front page content has been created yet.

- [Add new content](#)

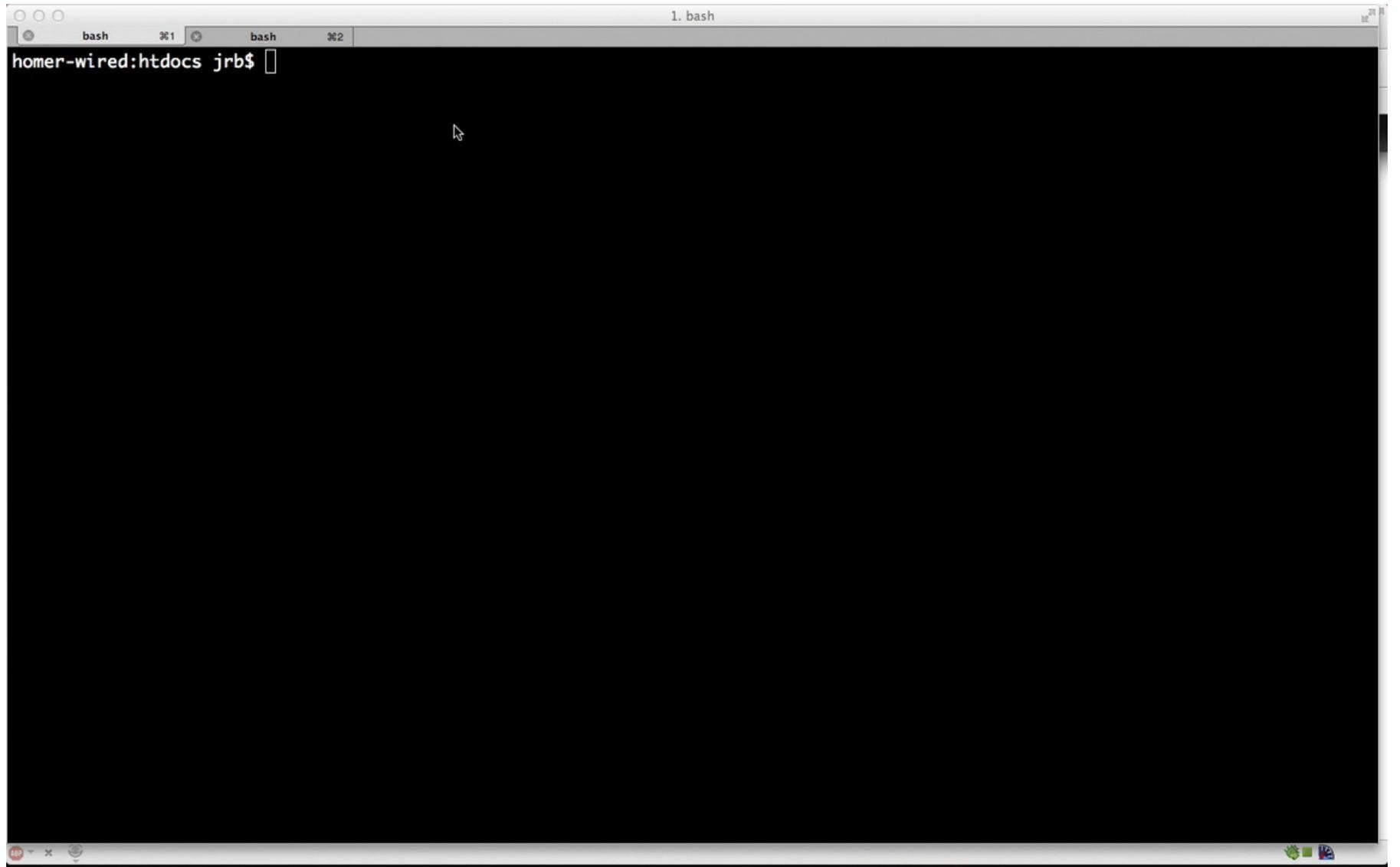


Changes!

Need to change Kitten content type.

1. Add a "color" field.
2. Add an "email" field*
3. Add "Image" to teaser.

* Requires email contrib module.



Drush commands

\$ drush en MODULENAME

Enables a module.

\$ drush fl

Lists all features, shows their current state.

\$ drush cc all

Flushes all caches.

\$ drush dl MODULENAME

Downloads a module.

\$ drush fd MODULENAME

Shows differences between the feature as defined in code and the database.

\$ drush fu MODULENAME

Updates the feature code to match what's in the database.

\$ drush updb

Runs any outstanding Drupal update scripts. Same as update.php.

\$ drush fr MODULENAME

Reverts the feature to match what's in code.

Overridden?!?!



```
homer-wired:htdocs jrb$ drush dl email
Project email (7.x-1.2) downloaded to sites/all/modules/contrib/email.
homer-wired:htdocs jrb$ drush en email
The following extensions will be enabled: email
Do you really want to continue? (y/n): y
email was enabled successfully.
homer-wired:htdocs jrb$ drush fl
Name          Feature          Status  Version  State
Content Type: Kitten  ct_kitten        Enabled  7.x-1.0  Overridden
Date Migration Example  date_migrate_example  Disabled  7.x-2.6
Features Tests          features_test        Disabled  7.x-2.0-rc3
FlexSlider Example     flexslider_example   Disabled  7.x-2.0-alpha3
homer-wired:htdocs jrb$
```

Drush commands

\$ drush en MODULENAME

Enables a module.

\$ drush fl

Lists all features, shows their current state.

\$ drush cc all

Flushes all caches.

\$ drush dl MODULENAME

Downloads a module.

\$ drush fd MODULENAME

Shows differences between the feature as defined in code and the database.

\$ drush fu MODULENAME

Updates the feature code to match what's in the database.

\$ drush updb

Runs any outstanding Drupal update scripts. Same as update.php.

\$ drush fr MODULENAME

Reverts the feature to match what's in code.

Overridden?!?!



Now what?

```
features[field_base] = body
> features[field_base] = field_color
> features[field_base] = field_email
features[field_base] = field_image
features[field_instance] = node-kitten-body
> features[field_instance] = node-kitten-field_color
> features[field_instance] = node-kitten-field_email
features[field_instance] = node-kitten-field_image
features[node] = kitten

Component: field_instance
    ),
    'type' => 'text_summary_or_trimmed',
>    'weight' => 1,
    ),
  ),
  ),
  'teaser' => array(
<    'label' => 'above',
<    'type' => 'hidden',
---
>    'label' => 'hidden',
>    'module' => 'image',
>    'settings' => array(
>      'image_link' => 'content',
>      'image_style' => 'thumbnail',
>    ),
>    'type' => 'image',
  ),
),
),

homer-wired:htdocs jrb$
```

Drush commands

`$ drush en MODULENAME`

Enables a module.

`$ drush fl`

Lists all features, shows their current state.

`$ drush cc all`

Flushes all caches.

`$ drush dl MODULENAME`

Downloads a module.

`$ drush fd MODULENAME`

Shows differences between the feature as defined in code and the database.

`$ drush fu MODULENAME`

Updates the feature code to match what's in the database.

`$ drush updb`

Runs any outstanding Drupal update scripts. Same as `update.php`.

`$ drush fr MODULENAME`

Reverts the feature to match what's in code.

hook_update_N()

```
/**  
 * Enable email module.  
 */  
function ct_kitten_update_7000() {  
    module_enable(array('email'));  
} // end ct_kitten_update_7000()
```


Drush commands

\$ drush en MODULENAME

Enables a module.

\$ drush fl

Lists all features, shows their current state.

\$ drush cc all

Flushes all caches.

\$ drush dl MODULENAME

Downloads a module.

\$ drush fd MODULENAME

Shows differences between the feature as defined in code and the database.

\$ drush fu MODULENAME

Updates the feature code to match what's in the database.

\$ drush updb

Runs any outstanding Drupal update scripts. Same as update.php.

\$ drush fr MODULENAME

Reverts the feature to match what's in code.

```
homer-wired:htdocs jrb$ pwd
/app/jbc/tridugdemo/dev/htdocs
homer-wired:htdocs jrb$ drush updb
  Ct_kitten 7000 Enable email module
Do you wish to run all pending updates? (y/n): y
Performed update: ct_kitten_update_7000
'all' cache was cleared in self
Finished performing updates.
homer-wired:htdocs jrb$ git add sites/all/modules/contrib/email sites/all/modules/features/ct_kitten/ct_kitten.install
homer-wired:htdocs jrb$ git commit -am "add/enable email module, add new fields to feature"
[master b5979fc] add/enable email module, add new fields to feature
 10 files changed, 1023 insertions(+)
 create mode 100644 htdocs/sites/all/modules/contrib/email/LICENSE.txt
 create mode 100644 htdocs/sites/all/modules/contrib/email/README.txt
 create mode 100644 htdocs/sites/all/modules/contrib/email/email.feeds.inc
 create mode 100644 htdocs/sites/all/modules/contrib/email/email.info
 create mode 100644 htdocs/sites/all/modules/contrib/email/email.install
 create mode 100644 htdocs/sites/all/modules/contrib/email/email.migrate.inc
 create mode 100644 htdocs/sites/all/modules/contrib/email/email.module
 create mode 100644 htdocs/sites/all/modules/features/ct_kitten/ct_kitten.install
homer-wired:htdocs jrb$ git push origin master
Counting objects: 28, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (17/17), done.
Writing objects: 100% (19/19), 7.13 KiB | 0 bytes/s, done.
Total 19 (delta 5), reused 0 (delta 0)
To ssh://git@bitbucket.org/jaybeaton/tridug-demo.git
   c5ee247..b5979fc  master -> master
homer-wired:htdocs jrb$
```

[ok]
[success]
[ok]

✓ The configuration options have been saved.

[Home](#) » [Administration](#) » [Configuration](#) » [Search and metadata](#) » [URL aliases](#)

URL aliases

List Patterns Settings Bulk update Delete aliases

Content paths

Default path pattern (applies to all content types with blank patterns below)

Pattern for all Article paths

Editing the .info file

```
name = Content Type: Kitten
description = A feature to provide the Kitten content type.
core = 7.x
package = Features
version = 7.x-1.0
project = ct_kitten
dependencies[] = email
dependencies[] = features
dependencies[] = image
dependencies[] = strongarm
dependencies[] = text
dependencies[] = views
features[ctools][] = strongarm:strongarm:1
features[ctools][] = views:views_default:3.0
features[features_api][] = api:2
features[field_base][] = body
features[field_base][] = field_color
features[field_base][] = field_email
features[field_base][] = field_image
features[field_instance][] = node-kitten-body
features[field_instance][] = node-kitten-field_color
features[field_instance][] = node-kitten-field_email
features[field_instance][] = node-kitten-field_image
features[node][] = kitten
features[variable][] = comment_anonymous_kitten
features[variable][] = comment_default_mode_kitten
features[variable][] = comment_default_per_page_kitten
features[variable][] = comment_form_location_kitten
```

- user_picture_file_size
- user_picture_style
- user_pictures
- user_register

- comment_anonymous_kitten
- comment_default_mode_kitten
- comment_default_per_page_kitten
- comment_form_location_kitten
- comment_kitten
- comment_preview_kitten
- comment_subject_field_kitten
- field_bundle_settings_node_kitten
- menu_options_kitten
- menu_parent_kitten
- node_options_kitten
- node_preview_kitten
- node_submitted_kitten
- pathauto_node_kitten_pattern

► Taxonomy (taxonomy)

► Text formats (filter)

► Views (views_view)

- Kittens (kittens)

► Wysiwyg profiles (wysiwyg)

Legend

- Normal
- Changed**
- Auto detected
- Conflict

```
bash 361 bash 362 1. bash
features[variable] = node_submitted_kitten
+features[variable] = pathauto_node_kitten_pattern
features[views_view] = kittens
features_exclude[dependencies][ctools] = ctools
diff --git a/htdocs/sites/all/modules/features/ct_kitten/ct_kitten.strongarm.inc b/htdocs/sites/all/modules/features/ct_kitten/ct_kitten.strongarm.inc
index 31334fd..ef5b590 100644
--- a/htdocs/sites/all/modules/features/ct_kitten/ct_kitten.strongarm.inc
+++ b/htdocs/sites/all/modules/features/ct_kitten/ct_kitten.strongarm.inc
@@ -119,5 +119,12 @@ function ct_kitten_strongarm() {
    $strongarm->value = 1;
    $export['node_submitted_kitten'] = $strongarm;

+   $strongarm = new stdClass();
+   $strongarm->disabled = FALSE; /* Edit this to true to make a default strongarm disabled initially */
+   $strongarm->api_version = 1;
+   $strongarm->name = 'pathauto_node_kitten_pattern';
+   $strongarm->value = 'kitten/[node:title]';
+   $export['pathauto_node_kitten_pattern'] = $strongarm;
+
    return $export;
}
homer-wired:htdocs jrb$ git commit -am "add pathauto setting to feature"
[master daff970] add pathauto setting to feature
2 files changed, 8 insertions(+)
homer-wired:htdocs jrb$ git push origin master
Counting objects: 31, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (18/18), done.
Writing objects: 100% (20/20), 1.81 KiB | 0 bytes/s, done.
Total 20 (delta 12), reused 0 (delta 0)
To ssh://git@bitbucket.org:jaybeaton/tridug-demo.git
 b5979fc..daff970 master -> master
homer-wired:htdocs jrb$
```

Drush commands

`$ drush en MODULENAME`

Enables a module.

`$ drush fl`

Lists all features, shows their current state.

`$ drush cc all`

Flushes all caches.

`$ drush dl MODULENAME`

Downloads a module.

`$ drush fd MODULENAME`

Shows differences between the feature as defined in code and the database.

`$ drush fu MODULENAME`

Updates the feature code to match what's in the database.

`$ drush updb`

Runs any outstanding Drupal update scripts. Same as `update.php`.

`$ drush fr MODULENAME`

Reverts the feature to match what's in code.

(Even more) Drush commands

```
$ drush sql-dump --result-file=PATH
```

Dumps the SQL for the entire database to a file.

```
$ drush sqlq --file=PATH
```

Executes the specified SQL file.

```
homer-wired:htdocs jrb$ pwd
/app/jbc/tridugdemo/production/htdocs
homer-wired:htdocs jrb$
```

Missing images on Dev (Stage) servers



Where are our kittens?

Missing images/files

What can we do?

1. Make a tarball, copy to dev server, untar it there.
2. Use some fancy Apache tricks to use production images.

<http://www.lullabot.com/blog/article/using-remote-image-files-when-you-develop-locally>

Edit sites/default/files/.htaccess

.htaccess

```
### Apache Rewrite
<IfModule mod_rewrite.c>
  RewriteEngine on
  # Force image styles that have local files that exist to be generated.
  RewriteCond %{REQUEST_URI} ^/sites/([^\/]*)/files/styles/([^\/]*)/public/((.*))$
  RewriteCond %{DOCUMENT_ROOT}/sites/%1/files/%2 -f
  RewriteRule ^(.*)$ $1 [QSA,L]
  # Otherwise, send anything else that's in the files directory to the
  # production server.
  RewriteCond %{REQUEST_URI} ^/sites/([^\/]*)/files/.*$
  RewriteCond %{REQUEST_URI} !^/sites/([^\/]*)/files/css/.*$
  RewriteCond %{REQUEST_URI} !^/sites/([^\/]*)/files/js/.*$
  RewriteCond %{REQUEST_FILENAME} !-f
  RewriteCond %{REQUEST_FILENAME} !-d
  RewriteRule ^(.*)$ http://tridugdemo.com/sites/default/files/$1 [QSA,L]
</IfModule>
```

```
8 dependencies[] = features
9 dependencies[] = image
10 dependencies[] = strongarm
11 dependencies[] = text
12 dependencies[] = views
13 features[ctools] [] = strongarm:strongarm:1
14 features[ctools] [] = views:views_default:3.0
15 features[features_api] [] = api:2
16 features[field_base] [] = body
17 features[field_base] [] = field_color
18 features[field_base] [] = field_email
19 features[field_base] [] = field_image
20 features[field_instance] [] = node-kitten-body
21 features[field_instance] [] = node-kitten-field_color
22 features[field_instance] [] = node-kitten-field_email
23 features[field_instance] [] = node-kitten-field_image
24 features[node] [] = kitten
25 features[variable] [] = comment_anonymous_kitten
26 features[variable] [] = comment_default_mode_kitten
27 features[variable] [] = comment_default_per_page_kitten
28 features[variable] [] = comment_form_location_kitten
29 features[variable] [] = comment_kitten
30 features[variable] [] = comment_preview_kitten
31 features[variable] [] = comment_subject_field_kitten
32 features[variable] [] = field_bundle_settings_node__kitten
33 features[variable] [] = menu_options_kitten
34 features[variable] [] = menu_parent_kitten
35 features[variable] [] = node_options_kitten
36 features[variable] [] = node_preview_kitten
37 features[variable] [] = node_submitted_kitten
38 features[variable] [] = pathauto_node_kitten_pattern
39 features[views_view] [] = kittens
40 features_exclude[dependencies][ctools] = ctools
41
```

Issues with features

1. Field groups with new version of features.
2. Order of "git pull", "drush fr" / "drush fu".
3. Run "drush updb" first to avoid database errors with permissions.
4. Won't handle blocks.
 - a) Use Context module
 - b) Use Boxes module
5. Can do content, BUT not sure if it's a good idea.
6. Can do menus and taxonomies, BUT not sure if it's a good idea.

System feature

1. Site name
2. Site email
3. Home page
4. Text formats
5. WYSIWYG settings

Features

Manage

Create feature

Settings

General Information

Name

TriDUG Demo System

Example: Image gallery (Do not begin name with numbers.)

Machine-readable name *

tridugdemo_system

Example: image_gallery

May only contain lowercase letters, numbers and underscores. **Try to avoid conflicts with the names of existing Drupal projects.**

Description

Holds basic settings for the TriDUG site

Provide a short description of what users should expect when they enable your feature.

Package

Features

Organize your features in groups.

Version

7.x-1.0

Examples: 7.x-1.0, 7.x-1.0-beta1

Advanced Options

Download feature

Components

Expand each component section and select which items should be included in this feature export.

Search Clear Select all

Content types (node)

Dependencies (dependencies)

Chaos tools Features Strongarm Wysiwyg

Field Bases (field_base)

Field Instances (field_instance)

Menu links (menu_links)

Menus (menu_custom)

Permissions (user_permission)

Roles (user_role)

Strongarm (variable)

site_frontpage site_mail site_name

Taxonomy (taxonomy)

Text formats (filter)

Filtered HTML Full HTML Plain text

Wysiwyg profiles (wysiwyg)

Filtered HTML Full HTML

Legend

Normal **Changed** Auto detected **Conflict**

Questions?

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