## **Upgrading to Drupal 8**

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# Drupal 8!

- It's been out for over a year now.
- Lots of progress has been made in both core and contrib.
- The general recommendation right now is:

*"If you're building a new site, build it in D8." -Someone who knows what they're talking about.* 

### New features

- Better caching = Faster site
- Responsive out of the box.
- Big Pipe (like Facebook).
- Content moderation.
- Nicer admin interface.
- Code is Symfony-based\*.
- Theme engine now uses Twig\*.

# **Contributed Projects**

- Modules must be re-written.
- Good list of status of modules here:
- https://www.bluespark.com/status-top-100contributed-modules-drupal-8
- Themes
  - Custom themes will need to be rebuilt.
  - Off-the-shelf themes can be swapped out.
     Customizations may need to be re-done.

# Do you really need that module?

- Google Fonts module not available for D8.
- Could be replaced by one entry in a theme configuration file (THEME.libraries.yml):

#### Your old D7 site:



#### A new Drupal 8 site:



#### How do you get there?



# No! The answer is Migration!

- We'll talk about two different paths for migration.
  - 1. A very simple site, using the built-in migration with the UI.
  - 2. A more complicated migration with some changes along the way.

# Old D7 site

- Basic site
- Several content types:
  - Page
  - Article
  - Kitten
  - Dog
- A couple Views
- Some Blocks
- Tags

#### Old D7 site





- Install D8 without making any other changes.
- Install all the modules you'll need.
- Go to "Extend", and enable the migration modules: *Migrate*, *Migrate Drupal*, and *Migrate Drupal UI*.





- Go to /upgrade
- Click "Continue".
- Enter database info for old site.
- Enter path to the base of the old Drupal installation (not to the files directory): /app/jbc/tridugdemo/production/htdocs
- Click "Review upgrade".

Jay
- → C 🛈 upgrade.tridugdemo.com/∯dmin/modules 📩 😵 🥌 🌶 😢 🔨 O 🔝 🗠 📓 📓 👘 💟 🎯 🧔 🤹
3 Back to site 😑 Manage 🔺 Shortcuts 👤 admin
S Content A Structure Appearance F Extend Configuration L People I Reports O Help
Extend 🖧
List Uninstall
Home » Administration
<b>A</b> Experimental modules are provided for testing purposes only. Use at your own risk.
<ul> <li>The Migrate Drupal UI module has been enabled. Proceed to the upgrade form.</li> <li>3 modules have been enabled: <i>Migrate, Migrate Drupal, Migrate Drupal UI</i>.</li> </ul>
Download additional contributed modules to extend your site'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. Filter by name or description Enter a part of the module name or description
▼ CORE
Actions  Perform tasks on specific events triggered within the system.
<ul> <li>Activity ► Enables tracking of recent content for users.</li> <li>Tracker</li> </ul>
□ Aggregator ► Aggregates syndicated content (RSS, RDF, and Atom feeds) from external sources.

- It will show all the items that won't be migrated and everything that will.
- Click "Perform upgrade".



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ck to site 📃	Manage ★	Shortcuts 🧕 👤 ad	dmin					
Content	Structure	Appearance	📥 Extend	🔧 Configuration	Le People	Reports	🕜 Help	
comment			comment					
dblog			dblog					
field			field					
file			file					
filter			filter					
image			image					
menu			menu_link menu_ui system	_content				
node			node					
path			path					
search			search					
system			file system					
taxonomy			taxonomy					
text			text					
user			user					

# Yay! It's Done!

- Content types created.
- Users and content migrated.
- Blocks created.
- Settings transferred over.
- And more!

#### Yay, It's Done!



## Yay! It's Done!



#### Not so fast, Joan!



### Not so fast, Joan!

- It doesn't create Views.
- Does some weird stuff with blocks (they're everywhere).
- Doesn't set image styles correctly.
- Doesn't set text formats correctly.
- Need to recreate Pathauto settings.
- May duplicate menu items.
- Adds comments field even when hidden on old site.

#### Not so fast, Joan!



# It was migrated, though!

- You can then clean things up, delete blocks, create views, etc.
- This is really just meant to be done once.
- Not for a site with content being actively added.
- Would need to bring site down, perform upgrade, then bring it back up.
- Could do this in development one time, build new theme, get that ready, then do it again.
- May be good enough!

#### It was migrated, though!



# Not good enough?

- What if you need something a little more complicated?
- This will involve drush, YAML files, and some PHP, but will probably be closer to a real-life migration for a bigger site.

### More complicated!?!?



## Developers...



## Stick with me!

- Maybe (hopefully) you learned a lot since the old site was created and want to build something better.
- Maybe you want to change some content types.
- Maybe you don't want to migrate blocks or other items.
- Maybe content and/or comments are being added continuously.

# A Better Way

- Build the site from scratch.
- Migrate the content over.
- Work on theme, etc.
- Migrate again, getting any content that was added since last time.
- Repeat migrations until ready to go live.
- Do final migration.
- Go live!

# Build your new D8 site

- First, install D8 and build the new site.
- Build Content types
  - Page
  - Article
  - Pet (replaces Kitten and Dog) Has a new Type field that can be set to Kitten, Dog, Snake, etc.
- Create Views
- Create/configure new theme.
- Take snapshot of database before migrating.

## Build your new D8 site



### Add Database Settings

 Now, add some database connection into (for the old site) to your settings.php

```
// Database entry for `drush migrate-upgrade --configure-only`
$databases['upgrade']['default'] = array (
    'database' => 'tridugdemo_prod',
    'username' => 'tridugdemo',
    'password' => 'myReallySecurePasswordHere!',
    'host' => 'localhost',
    'port' => '3306',
    'driver' => 'mysql',
    'prefix' => '',
    'collation' => 'utf8mb4_general_ci',
);
```

```
// Required for actual migration.
$databases['drupal 7']['default'] = $databases['upgrade']['default'];
```

### **Create Custom Module**

• Create Info file:

modules/custom/tridug\_rebuild\_migrate/tridug\_rebuild\_migrate.info.yml

```
name: tridug_rebuild_migrate
type: module
description: A custom Drupal-to-Drupal migration for TriDUG
core: 8.x
package: Custom
dependencies:
    - migrate_drupal
    - migrate_plus
    - migrate_tools
```

 Create Directory here for config files: modules/custom/tridug\_rebuild\_migrate/config/install/

# **Create Configuration Files**

- Install and enable migrate\_tools migrate\_upgrade migrate\_plus modules
- \$ drush en migrate\_tools migrate\_upgrade migrate\_plus
- Create D8 configurations in the database:
- \$ drush migrate-upgrade --legacy-root=/app/jbc/ tridugdemo/production/htdocs --configure-only
- Export these to the file system:
- \$ drush config-export --destination=/tmp/migrate
### **Create Configuration Files**

		4. htdocs (bash)	
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-rw-rr-=-0(1×jrb	staff	262 Dec 7 13:31 autoload.php	
	staff		
-rw-rr-+-1-jrb	staff	187794 Jan 24 22:41 composer.lock	
drwxr-xr-x 32 jrb	staff	1088 Dec 17 13:31 200 / /	
-rw-rr 1 jrb	staff	1346 Dec 17 13:31 example.gitignore	
-rw-rr 1 jrb	staff	549 Dec 7 13:31 index.php bots but	
drwxr-xr-x 6 jrb	staff	5 5204 Jan 25 21:32 modules/ 100/	
drwxr-xr-x 3 jrb	staff	5 st102 Dec 17/13:31 profiles/	
-rw-rr-+W-1-jrb	staff	51596 Dec 57 13:31 robots.txtdate.php	
drwxr-xr-x 7 jrb	staff	5 \$1238 Jan 23 22:14 sites/3 and 7	
drwxr-xr-x 4 jrb	staff	b st136 Jan 25 21:48 themes/ web.config	
	staff		
drwxr-xr-x 40 jrb			
-rw-rr 1 jrb			
jrb in /app/jbc/tri	dugdemo	o/rebuild/htdocs Nov 16 18:57 LICENSE.txt	
\$ 11 -rw-rr			
total 488			
	staff		
drwxr-xr-x 32 jrb			
	staff		
drwxr-xr-x 40 jrb			
	staff		
\$	auguemo	io/rebuild/htdocs	
-			

# Move Configuration Files

- That export will actually give us all of the configurations for the entire D8 site. We'll just need the migration configurations for the parts of the migration we want to do:
  - Files
  - Content (page, article, kitten, dog)
  - Taxonomy terms
  - Users
- Move these files only to our module.

# **Move Configuration Files**

X htdocs (bash) 361	4. htdocs (bash)	
Exporting d7_field as up Exporting d7_field as up Exporting d7_field as up Exporting d7_node tune of Exporting d7_node tune of Exporting d7_field as up Exporting d7_fie	migrate         migrate         migrate         com.applefy1FyLCVf         com.appleLFkZ5pjR         block_content.type.basic.yml         com.applechqPHSm         block.block.bartik_account_menu.yml         com.appleBL2G13K         block.block.bartik_breadcrumbs.yml         block.block.bartik_breadcrumbs.yml         block.block.bartik_footer.yml         block.block.bartik_footer.yml         block.block.bartik_local_actions.yml         block.block.bartik_local_actions.yml         block.block.bartik_page_title.yml         block.block.bartik_page_title.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_page_title.yml         block.block.bartik_page_title.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_page_title.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml         block.block.bartik_tools.yml	<ul> <li>Q. Search</li> <li>≥ Search</li> <li>&gt; Duild_migrate ▶</li> </ul>
<pre>jrb in /app/jbc/tridugdes \$ drush config-export Configuration successful jrb in /app/jbc/tridugdes \$ f /tmp/migrate/ jrb in /app/jbc/tridugdes \$ f modules/custom/tridu jrb in /app/jbc/tridugdes &lt; f</pre>	w/rebuild/htdocs       Image: Pictures       LICENSE.IXI         lestination=/tmp/ y exported to /t       Downloads       README.txt         image: Pictures       Do Not Backup       update.php         image: Pictures       Dropbox       web.config         w/rebuild/htdocs       Screenshots       3 items, 4	163.73 GB available

# **Edit Configuration Files**

- Change the filters so we manually map them. By default, it will migrate the filters from the old site and create new ones. D8 has its own. Remove dependencies.
- Change the dog and kitten content types so they migrate to our new Pets content type. Set the Type field based on the source content type
- Remove dependency on *upgrade\_d7\_node\_type* because we're not going to create content types via migration.

# **Edit Configuration Files**





# Add Custom Source Plugin

- Want to pre-process rows to change the incoming data in some way.
- Create custom source plugin in our module:

modules/custom/tridug\_rebuild\_migrate/src/Plugin/migrate/source/Node.php

- For this demo, we're only going to implement the prepareRow() method.
- We can change values in the incoming data row and skip it, if we want.
- We're going to check to see if it's the old home page and skip it because we want to create a new version.
- To skip a row, just return FALSE from the method.

# Add Custom Source Plugin

#### <?php

namespace Drupal\tridug\_rebuild\_migrate\Plugin\migrate\source; use Drupal\migrate\Row; use Drupal\node\Plugin\migrate\source\d7\Node as D7Node; /\*\* \* Extends Drupal 7 node source from database. \* <u>@MigrateSource(</u> ...id.=."custom\_page", source\_provider = "node" class Node extends D7Node { /\*\* \* {@inheritdoc} public function prepareRow(Row \$row) { // Get the old Node ID. \$nid = \$row->getSourceProperty('nid'); **if** (\$nid == 59) { //.If.it's the old home page, don't bother importing because we'll have // a new one on the D8 site. return FALSE; } // Call the parent method. return parent::prepareRow(\$row);

## Need to update Configuration

Tell it to use our plugin for Pages.
 migrate\_plus.migration.upgrade\_d7\_node\_page.yml

uuid: 3f27ec36-b1c8-4cf0-bf5c-9dcacd8759e8	uuid: 3f27ec36-b1c8-4cf0-bf5c-9dcacd8759e8
langcode: en	langcode: en
status: true	status: true
<pre>dependencies: { }</pre>	dependencies: {}
id: upgrade_d7_node_page	
	<pre>id: upgrade_d7_node_page</pre>
<pre>pmigration_tags:</pre>	<pre>migration_tags:</pre>
<pre></pre>	<b>−</b> .'Drupal.7'
<pre>migration_group: migrate_drupal_7</pre>	<pre>migration_group: migrate_drupal_7</pre>
label: 'Nodes (Basic page)'	label: 'Nodes (Basic page)'
<b>⇒source:</b>	source:
plugin: d7_node	plugin: custom_page
<pre>node_type: page</pre>	node_type: page
process:	
nid: nid	<pre>process:</pre>
vid: vid	<b>nid:</b> nid
	<b>vid:</b> .vid
<b>⇒</b> langcode:	🗦 langcode:
<pre>plugin: default_value</pre>	<b>plugin:</b> default_value
a a source: language	source: language
<pre>     default_value: und </pre>	adefault_value: und
title: title	title: title
uid: node_uid	uid: node_uid

### Run migration via drush

- # Enable our custom module:
- \$ drush en tridug\_rebuild\_migrate -y
- # Check to see the status of our migrations
- \$ drush migrate-status
- # Run the migrations
  drush migrate-import --all

### Run migration via drush

4. htdocs (bash)	
X htdocs (bash) 901	
Exporting user_picture_entity_form_display as upgrade_user_picture_entity_form_display	
Exporting d7_field as upgrade_d7_field	
Exporting d7_node_type as upgrade_d7_node_type	
Exporting d7_comment_type as upgrade_d7_comment_type	
Exporting d7_field_instance as upgrade_d7_field_instance	
Exporting d7_user as upgrade_d7_user	
Exporting d7_node:article as upgrade_d7_node_article	
Exporting d7_node:dog as upgrade_d7_node_dog	
Exporting d7_node:kitten as upgrade_d7_node_kitten	
Exporting d7_node:page as upgrade_d7_node_page	
Exporting d7_comment as upgrade_d7_comment	
Exporting d7_comment_field as upgrade_d7_comment_field	
Exporting d7_comment_field_instance as upgrade_d7_comment_field_instance	
Exporting d7_comment_entity_display as upgrade_d7_comment_entity_display	
Exporting d7_comment_entity_form_display as upgrade_d7_comment_entity_form_display	
Exporting d7_comment_entity_form_display_subject as upgrade_d7_comment_entity_form_display_subject	
Exporting d7_view_modes as upgrade_d7_view_modes	
Exporting d7_field_formatter_settings as upgrade_d7_field_formatter_settings Exporting d7_field_instance_widget_settings as upgrade_d7_field_instance_widget_settings	
Exporting d7_rieia_instance_wiaget_settings as upgrade_d7_rieia_instance_wiaget_settings	
Exporting d7_node_revision:dog as upgrade_d7_node_revision_dog	
Exporting d7_node_revision:kitten as upgrade_d7_node_revision_kitten	
Exporting d7_node_revision:page as upgrade_d7_node_revision_page	
Exporting d7_node_title_label as upgrade_d7_node_title_label	
Exporting d7_menu as upgrade_d7_menu	
Exporting d7_menu_links as upgrade_d7_menu_links	
jrb in /app/jbc/tridugdemo/rebuild/htdocs	
\$ drush config-exportdestination=/tmp/migrate	
Configuration successfully exported to /tmp/migrate.	[success]
jrb in /app/jbc/tridugdemo/rebuild/htdocs	
\$ f /tmp/migrate/	
jrb in /app/jbc/tridugdemo/rebuild/htdocs	
<pre>\$ f modules/custom/tridug_rebuild_migrate/</pre>	
jrb in /app/jbc/tridugdemo/rebuild/htdocs	
s []	

# Migration Complete!

- We've got all the content from the old site.
- Kittens and Dogs are now Pets with the Type set correctly.
- Our views work.
- It's using the right image styles and text formats.

### **Migration Complete!**









Type: Kitten New kitten in town. Found on the side of the road while biking. Read more

#### lvy

Submitted by admin on Mon, 01/23/2017 - 20:25



**Type:** Dog Ivy is a very good guard dog. Read more

#### Decet Hendrerit

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### **Migration Complete!**



### New Content Added to Old Site, But...

- Now people keep adding content to the old site because that's still the live site.
- We need to make sure migrate that, too.

## New Content Added to Old Site



tridugdemo.com/admin/content

### Migrate New Content

- # Check to see the status
- \$ drush migrate-status

### New content! Need to run some migrations again.

# Re-run some migrations
drush migrate-import upgrade d7 file,upgrade d7 node dog

### Migrate New Content

<pre>htdocs(bash) #1 you really want to drop all tables in the database embdev_tridugdemo_rebuild? (y/n): y in /app/jbc/tridugdemo/rebuild/htdocs drush en tridug_rebuild_migrate -y e following extensions will be enabled: tridug_rebuild_migrate, migrate_tools, migrate_plus, migrate, migrate_drupal you really want to continue? (y/n): y</pre>	[ok]				
b in /app/jbc/tridugdemo/rebuild/htdocs drush en tridug_rebuild_migrate -y me following extensions will be enabled: tridug_rebuild_migrate, migrate_tools, migrate_plus, migrate, migrate_drupal	Cal-1				
drush en tridug_rebuild_migrate -y ne following extensions will be enabled: tridug_rebuild_migrate, migrate_tools, migrate_plus, migrate, migrate_drupal	Fabil				
drush en tridug_rebuild_migrate -y ne following extensions will be enabled: tridug_rebuild_migrate, migrate_tools, migrate_plus, migrate, migrate_drupal	Feki				
e following extensions will be enabled: tridug_rebuild_migrate, migrate_tools, migrate_plus, migrate, migrate_drupal	Feld				
	Fek/l				
you really want to continue? (v/n): v	Fakil				
	<b>Fold</b>				
grate was enabled successfully.					
grate_drupal was enabled successfully.	[ok]				
grate_plus was enabled successfully.	[ok]				
grate_tools was enabled successfully.	[ok]				
grate_tools defines the following permissions: administer migrations					
idug_rebuild_migrate was enabled successfully.	[ok]				
b in /app/jbc/tridugdemo/rebuild/htdocs					
drush migrate-status					
roup: Import from Drupal 7 (migrate_drupal_7) Status Total Imported Unprocessed Last imported					
pgrade_d7_file Idle 16 0 16					
pgrade_d7_taxonomy_vocabulary Idle 1 0 1					
pgrade_d7_taxonomy_term Idle 7 0 7					
pgrade_d7_user Idle 2 0 2					
pgrade_d7_node_article Idle 10 0 🗤 10					
pgrade_d7_node_dog Idle 1 0 1					
pgrade_d7_node_kitten Idle 6 0 6					
pgrade_d7_node_page Idle 2 0 2					
b in /app/jbc/tridugdemo/rebuild/htdocs					
drush migrate-importall					
ocessed 16 items (16 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_file'	[status]				
ocessed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_taxonomy_vocabulary'	[status] [status]				
Processed 7 items (7 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_taxonomy_term'					
Processed 2 items (2 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_user'					
Processed 10 items (10 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_article'					
Processed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_dog'					
Processed 6 items (6 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_kitten'					
ocessed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_page'	[status]				
b in /app/jbc/tridugdemo/rebuild/htdocs					

## **New Content Migrated**



### Now, we're really done!



# **Problems Encountered**

- Things are still changing.
- Current, correct documentation is hard to find.
- Once I got it running, the main problem I had was that I couldn't have any preexisting content. It would get mangled.

### Resources

Overview on d.o:

https://www.drupal.org/docs/8/upgrade/brief-overview-andhistory-of-automated-upgrading-to-drupal-8

Nice basic tutorial:

https://drupalize.me/blog/201604/custom-drupal-drupalmigrations-migrate-tools

Lots of info from a maintainer of Migrate modules: <u>http://mikeryan.name/blog/mikeryan/drupal-8-migration-all-modules</u>

Very helpful advanced tutorial: https://cheppers.com/blog/migrate-d8-pt2

# Go forth and Migrate!



### 0 🔴 🔴



An older item named "cat-typing.gif" already exists in this location. Do you want to replace it with the newer one you're moving?

