#### **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".

Je Extend   TriDUG Demo D8 × Jay								
- → C 🛈 upgrade.tridugdemo.com/∯dmin/modules 🖈 😵 🥩 🦉 😰 🛈 D 🗔 🗠 📓 💩 🝙 🔽 🥯 🔅 🗄								
3 Back to site 😑 Manage 🔺 Shortcuts 👤 admin								
S Content A Structure Appearance F Extend Configuration A People I Reports PHP								
Extend 🛱								
List Uninstall								
Home » Administration								
A 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								
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".



G Upgrad	e.tridugdemo.co	m/upgrade		भ ।	V 🔅 🗡 🗉			
to site 🗧	Manage 🗙	Shortcuts	admin					
Content	Structure	Appearance	📥 Extend	🔧 Configuration	Se 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	i -				
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_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	
-rw-rr 1 jrb staff 1471 Jan 24 22:37 composer.json e gitigere	
-rw-rr	
drwxr-xr-x 32 jrb staff 51088 Dec 7 13:312core/36 555 /	
-rw-rr	
-rw-rr1 jrb staffb 5549 Dec 713:31 index.php bots.txt	
drwxr-xr-x 🕫 jrb_staff 🔰 204 Jan 25 21:32 modules/	
drwxr-xr-x 3 jrb staffb 5102 Dec 7-13:31 profiles/	
-rw-rrr-1 jrb staffb \$1596 Dec \$7:13:31 robots.txtdate.php	
drwxr-xr-x 🔍 7 jrb staffb 🛸 238 Jan 23 22:14 sites/	
drwxr-xr-x 4 jrb staffb 5136 Jan 2521:48 themes/ web.config	
-rw-rr1 jrb=/staff=100_554 Dec7_13:31 update.php	
drwxr-xr-x 40 jrb staff 1360 Jan 24 22:41 vendor/	
-rw-rr-1 jrb staff 4555 Dec 7 13:31 web.config	
jrb in /app/jbc/tridugdemo/rebuild/htdocs Nov 16 18:57 LICENSE.ext	
1 -rw-rr 1 jrb staff 5889 Dec 7 13:31 README.txt	
total 488 w-rr 1 job staff 262 Dec 7 13:31 autoload.php	
-rw-rr 1 jrb staff 18092 Nov 16 18:57 LICENSE.txt	
-rw-rr 1 jrb staff 5889 Dec 7 13:31 README.txt	
-rw-rr 1 jrb staff 262 Dec 7 13:31 autoload.php	
-rw-rr 1 jrb staff 1471 Jan 24 22:37 composer.json	
-rw-rr 1 jrb staff 187794 Jan 24 22:41 composer.lock	
drwxr-xr-x 32 jrb staff 1088 Dec 7 13:31 core/	
-rw-rr 1 jrb staff 1346 Dec 7 13:31 example.gitignore	
-rw-rr 1 jrb staff 549 Dec 7 13:31 index.php 555	
drwxr-xr-x 6 jrb staff 5204 Jan 2521:32 modules/	
drwxr-xr-x 3 jrb staff 102 Dec 7 13:31 profiles/	
-rw-rr 1 jrb staff 1596 Dec 7 13:31 robots.txt	
drwxr-xr-x 7 jrb staff 238 Jan 23 22:14 sites/	
drwxr-xr-x 4 jrb staff 5136 Jan 25 21:48 themes/ web could be a second staff by the staff of the staff by the	
-rw-rr 1 jrb staff 554 Dec 7 13:31 update.php	
drwxr-xr-x 40 jrb staff 1360 Jan 24 22:41 vendor/	
-rw-rr 1 jrb staff 4555 Dec 7 13:31 web.config	
in /app/jbc/tridugdemo/rebuild/htdocs t ח	

## 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**

		4. htdocs (bash)			
× htdocs (bash) 961					
Exporting user_pictur Exporting d7_field as Exporting d7 mode tom Expor	e_entity_form_display as upgrade_user_p upgrade_d7_field as upgrade_d7_pode_type () = () =	victure_entity_form_display migrate	Q. Search		
Expor Expor	Favorites com.applefy1FyLCVf   i jrb com.applefy1FyLCVf   i app   i orm.applechqPHSm   i orm.applebl2G13K   migrate   i block.block.bartik_branding.yml   i block.block.bartik_breadcrumbs.yml   i block.block.bartik_local_actions.yml   i block.block.bartik_local_actions.yml   i block.block.bartik_local_actions.yml   i block.block.bartik_local_tasks.yml   i block.block.bartik_page_title.yml   i block.block.bartik_page_title.yml   i block.block.bartik_page_title.yml   i block.block.bartik_tools.yml				
Exporting ur_menu_tim jrb in /app/jbc/tridu \$ drush config-export Configuration success jrb in /app/jbc/tridu \$ f /tmp/migrate/ jrb in /app/jbc/tridu \$ f modules/custom/tr jrb in /app/jbc/tridu	283 items 283 items	s, 463.73 GB available  LICENSE.txt README.txt update.php web.config  3 items, 463.73 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

100	
	uuid: 3f27ec36-b1c8-4cf0-bf5c-9dcacd8759e8
langcode: en	langcode: en
status: true	status: true
<pre>dependencies: { }</pre>	<pre>dependencies: { }</pre>
<pre>id: upgrade_d7_node_page</pre>	id: upgrade d7 node page
<pre>migration_tags:</pre>	migration tags:
≙ <b>-</b> .'Drupal.7'	'Drupal.7'
<pre>migration_group: migrate_drupal_7</pre>	migration group; migrate drupal 7
label://Nodes/(Basic/page)'	label: 'Nodes (Basic page)'
source:	source:
<b>plugin:</b> .d7_node	plugin: custom_page
anode_type:.page	node_type: page
process:	process:
<b>nid:</b> nid	nid: nid
<b>vid:</b> .vid	<b>vid:</b> .vid
🗦 langcode:	🗄 langcode:
<pre>plugin: default_value</pre>	<b>plugin:</b> default_value
s. source: language	source: language
adefault_value:.und	default value: und
title: title	title: title
u.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)	
× htdocs (bash) %1		
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_f	field_instance	
Exporting d7_comment_entity_display as upgrade_d7_comment_e	entity_display	
Exporting d7_comment_entity_form_display as upgrade_d7_comm	ment_entity_form_display	
Exporting d7_comment_entity_form_display_subject as upgrade	e_d7_comment_entity_form_display_subject	
Exporting d7_view_modes as upgrade_d7_view_modes		
Exporting d7_field_formatter_settings as upgrade_d7_field_f	formatter_settings	
Exporting d7_field_instance_widget_settings as upgrade_d7_f	Field_instance_widget_settings	
Exporting d7_node_revision:article as upgrade_d7_node_revis	sion_article	
Exporting d7_node_revision:dog as upgrade_d7_node_revision_	_dog	
Exporting d7_node_revision:kitten as upgrade_d7_node_revisi	ion_kitten	
Exporting d7_node_revision:page as upgrade_d7_node_revision	n_page	
Exporting d7_node_title_label as upgrade_d7_node_title_labe	el	
Exporting d7_menu as upgrade_d7_menu		
Exporting d7_menu_links as upgrade_d7_menu_links		
<pre>jrb in /app/jbc/tridugdemo/rebuild/htdocs</pre>		
\$ drush config-exportdestination=/tmp/migrate		
Configuration successfully exported to /tmp/migrate.	[succes	<b>s</b> ]
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 II		

#### 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

5. htdocs (bash)						
X htdocs (bash) 961						
Do you really want to drop all tables in the dat	abase em	bdev_tr	idug	demo_r	ebuild? (y/n): y	
jrb in /app/jbc/tridugdemo/rebuild/htdocs						
<pre>\$ drush en tridug_rebuild_migrate -y</pre>						
The following extensions will be enabled: tridug	_rebuild	_migrat	e, m	igrate	_tools, migrate_plus, migrate, migrate_drupal	
Do you really want to continue? (y/n): y						
migrate was enabled successfully.						[ok]
migrate_drupal was enabled successfully.						[ok]
migrate_plus was enabled successfully.						[ok]
migrate_tools was enabled successfully.						[ok]
migrate_tools defines the following permissions:	adminis	ter mig	rati	ons		
<pre>tridug_rebuild_migrate was enabled successfully.</pre>						[ok]
jrb in /app/jbc/tridugdemo/rebuild/htdocs						
\$ drush migrate-status						
Group: Import from Drupal 7 (migrate_drupal_7)	Status	Total	Imp	orted	Unprocessed Last imported	
upgrade_d7_file	Idle	16	0		16	
upgrade_d7_taxonomy_vocabulary	Idle	1	0		1	
upgrade_d7_taxonomy_term	Idle	7	0		7	
upgrade_d7_user	Idle	2	0		2	
upgrade_d7_node_article	Idle	10	0	€	10	
upgrade_d7_node_dog	Idle	1	0		1	
upgrade_d7_node_kitten	Idle	6	0		6	
upgrade_d7_node_page	Idle	2	0		2	
<pre>jrb in /app/jbc/tridugdemo/rebuild/htdocs</pre>						
\$ drush migrate-importall						
Processed 16 items (16 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_file'					[status]	
Processed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_taxonomy_vocabulary'					[status]	
Processed 7 items (7 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_taxonomy_term'					[status]	
Processed 2 items (2 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_user'					[status]	
Processed 10 items (10 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_article'					[status]	
Processed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_dog'					[status]	
Processed 6 items (6 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_kitten'						[status]
Processed 1 item (1 created, 0 updated, 0 failed, 0 ignored) - done with 'upgrade_d7_node_page'						[status]
jrb 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?

