

Rewrite Recipes

Advanced Permalinks and Rewrites by Example

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Recipe 1: Adding custom taxonomies to custom post type rewrites

Website for car dealership

Goal URI: /inventory/toyota/camry/

Taxonomy: make (e.g. Toyota)

Post Type: model (e.g. Camry)

Step 1: Alter the post type & taxonomy slugs

```
register_taxonomy( 'make', 'model', array(
    'rewrite' => array(
        'slug' => 'inventory'
    )
) );

register_post_type( 'model', array(
    'public' => true,
    'rewrite' => array(
        'slug' => 'inventory/%make%'
    )
) );
```

Step 2: Filter post_type_link

Right now, the custom post type links have the literal %make% in them.

```
function modify_model_links( $link, $post ) {  
    if ( 'model' == $post->post_type ) {  
        if ( $makes = get_the_terms( $post->ID, 'make' ) ) {  
            return str_replace( '%make%', array_unshift( $makes )->slug, $link );  
        }  
    }  
    return $link;  
}  
add_filter( 'post_type_link', 'modify_model_links', 10, 2 );
```

Step 3: Flush Rewrites

Any changes to rewrite rules require flushing them.

1. Go to **Settings** → **Permalinks**
2. Click **Save Changes**

Proof is in the pudding, so let's try it
out!

Psst, Matt, that's you.

Awesome.



What's happening here?

1. Request comes in
2. **WP::parse_request converts the URL to query args**
3. Other stuff happens, covered in other talks

WP::parse_request

1. "Normalizes" the URI
2. Loops over all rewrite rules for a match
3. Replaces the \$matches with regex captures

Anatomy of a Rewrite Rule

Array key => value

Regular expression (the rule) => Redirect (default URL)

Since this is an array, note that you can't have the same rule twice

Storage

- Rewrite rules are stored in wp_options
- Serves as a cache
- "Flushing" rules deletes it

\$wp_rewrite->rules

```
array(
    'category/(.+?)/feed/(feed|rdf|rss|rss2|atom)/?$'
=> 'index.php?category_name=$matches[1]&feed=$matches[2]',
    'category/(.+?)/(feed|rdf|rss|rss2|atom)/?$'
=> 'index.php?category_name=$matches[1]&feed=$matches[2]',
    'category/(.+?)/page/?([0-9]{1,})/?$'
=> 'index.php?category_name=$matches[1]&paged=$matches[2]',
    'category/(.+?)/?$'
=> 'index.php?category_name=$matches[1]',
    'tag/([^\/]+)/feed/(feed|rdf|rss|rss2|atom)/?$'
=> 'index.php?tag=$matches[1]&feed=$matches[2]',
    'tag/([^\/]+)/feed/(feed|rdf|rss|rss2|atom)/?$'
=> 'index.php?tag=$matches[1]&feed=$matches[2]',
    'tag/([^\/]+)/page/?([0-9]{1,})/?$'
=> 'index.php?tag=$matches[1]&paged=$matches[2]',
    'tag/([^\/]+)/?$'
=> 'index.php?tag=$matches[1]',
    'robots\.\txt$'
```

Recipe 2: Making one custom taxonomy a "parent" of another

What if we wanted to separate by body type?

Let's make body type a taxonomy, too.

Post Types and Taxonomies

Goal URI: /inventory/sedans/toyota/camry/

Taxonomy: body_type (e.g. sedans)

Taxonomy: make (e.g. Toyota)

Post Type: model (e.g. Camry)

Step 1: Alter rewrite slugs

```
register_taxonomy( 'body_type', 'model', array(
    'rewrite' => array( 'slug' => 'inventory' )
) );

register_taxonomy( 'make', 'model', array(
    'rewrite' => array( 'slug' => 'inventory/%body_type%' )
) );

register_post_type( 'model', array(
    'public' => true,
    'rewrite' => array( 'slug' => 'inventory/%body_type%/%make%' )
) );
```

Step 2: Filter post_type_link

```
function modify_model_links( $link, $post ) {  
    if ( 'model' == $post->post_type ) {  
        if ( $body_types = get_the_terms( $post->ID, 'body_type' ) ) {  
            $link = str_replace( '%body_type%', array_unshift( $body_types ), $link );  
        }  
        if ( $makes = get_the_terms( $post->ID, 'make' ) ) {  
            $link = str_replace( '%make%', array_unshift( $makes )->slug, $link );  
        }  
    }  
    return $link;  
}  
add_filter( 'post_type_link', 'modify_model_links', 10, 2 );
```


Dealing with term links

Need to replace `%body_type%` in the **make** URIs,
e.g. `/inventory/%body_type%/.../`

This is a little trickier... **Why?**

Which body type do we want to be the default?

Enter **add_permastruct** and our first real contact with
the Rewrite API!

Step 3: Add "all" body type

WordPress makes this super easy!

```
function add_permastruct( $name, $struct, $args = array() ) { }
```

```
add_permastruct( "all_makes", "inventory/all/%make%" );  
register_taxonomy( 'make', 'model', array(  
    ...
```

Caveat: Order is everything!

Must come before 'make' taxonomy

Step 4: Filter term_link

```
function modify_make_links( $termlink, $term, $taxonomy ) {  
  if ( 'make' == $taxonomy ) {  
    return str_replace( '%body_type%', 'all', $termlink );  
  }  
  return $termlink;  
}  
add_filter( 'term_link', 'modify_make_links', 10, 3 );
```

Step 5: Flush Rewrites

Always. Flush. Your. Rewrites.

Was the term_link stuff necessary?

Could we have simply done the following?

```
register_taxonomy( 'make', array(
    'rewrite' => array(
        'slug' => 'inventory/all'
    )
) );
```

Yes and no. It would work in showing all body types, but wouldn't allow us to restrict by them.

Detour: Helpful Tools

- **Rewrite Rules Inspector**
wordpress.org/plugins/rewrite-rules-inspector/
- **Debug Bar** (& friends)
wordpress.org/plugins/debug-bar/
- **Regular Expressions Pocket Reference**
By Tony Stubblebine, oreil.ly.com

Rewrite Rules Inspector

Let's look at the last set of rewrite rules.

Recipe 3: Creating Post "Sections"

Website for WordCamps.

Each WordCamp has the same sections:

- Schedule
- Speakers
- Sponsors
- Tickets
- Location

Recipe 3: Creating Post "Sections"

Goal URIs: /wordcamp/portland/

/wordcamp/portland/schedule/

/wordcamp/portland/speakers/

??? wordcamp (e.g. portland)

??? section (e.g. schedule)

Recipe 3: Creating Post "Sections"

Taxonomy: wordcamp (e.g. portland)

Post Type: section (e.g. schedule)

Result: /wordcamp/portland/schedule/

/wordcamp/san-francisco/schedule-2/

/wordcamp/boston/schedule-3/

Sections [New Section](#)

Screen Options ▼

All (8) | Published (8)

Search Sections

Bulk Actions

Apply

Show all dates

Filter



8 items

[illegible]

Recipe 3: Creating Post "Sections"

Goal URIs: /wordcamp/portland/

/wordcamp/portland/schedule/

/wordcamp/portland/speakers/

??? wordcamp (e.g. portland)

??? section (e.g. schedule)

Recipe 3: Creating Post "Sections"

Goal URIs: /wordcamp/portland/

/wordcamp/portland/schedule/

/wordcamp/portland/speakers/

Post Type: wordcamp (e.g. portland)

??? section (e.g. schedule)

Recipe 3: Creating Post "Sections"

Goal URIs: /wordcamp/portland/

/wordcamp/portland/schedule/

/wordcamp/portland/speakers/

Post Type: wordcamp (e.g. portland)

Post Meta: section (e.g. schedule)



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Behind the Scenes

Source: <https://gist.github.com/mboynes/6180890>
Fieldmanager.org

Step 1: Add Rewrite Tag

```
function add_rewrite_tag( $tag, $regex, $query = '' ) { }
```

```
add_rewrite_tag(  
    '%wc_section%',  
    '(schedule|speakers|sponsors|tickets|location)'  
);
```

Step 2: Add Rewrite Rule

```
function add_rewrite_rule( $regex, $redirect, $after = 'bottom' ) { }
```

```
add_rewrite_rule(  
    'wordcamp/([^\s]+)/(\schedule|speakers|sponsors|tickets|location)/?$',  
    'index.php?wordcamp=$matches[1]&wc_section=$matches[2]',  
    'top'  
);
```

Step 3: Templates

`wordcamp.php`

`wordcamp-schedule.php`

`wordcamp-speakers.php`

`wordcamp-sponsors.php`

`wordcamp-tickets.php`

`wordcamp-location.php`

Step 3: Templates

single-wordcamp.php:

```
<?php  
get_template_part( 'wordcamp', get_query_var( 'wc_section' ) );  
?>
```

Step 4: Flush!

Demo



Permanence

Recipe 4: 301 Ways to Update your Permalinks

Not 404 ways to break things

Or 418 ways to make tea

4.1 Core Permalink Structures

Change core permalinks, what happens to old ones?

Demo

4.1 Core Permalink Structures

Some permalink changes will automatically 301 old structures!

When? When the post name ends the old permalinks (some exceptions)

How? By selling your soul to the devil.

4.1 Core Permalink Structures

		FROM					
		Default	Day and Name	Month and Name	Numeric	Post Name	/category%/postname%/
TO	Default						
	Day and Name						
	Month and Name						
	Numeric						
	Post Name						
	/category%/postname%/						

redirect_guess_404_permalink

The Good

This magical, very cool function is what handles the auto 301s.

redirect_guess_404_permalink

The How

Page rewrite matches

Gets the "basename" of the page
e.g. /2013/07/21/**something**/

```
SELECT ID
FROM wp_posts
WHERE post_name LIKE 'something%'
AND post_status = 'publish'
```

redirect_guess_404_permalink

The Bad (and Ugly)

Have you ever had WordPress redirect a URL to a post or page that made no sense at all?

This was probably why.

4.2 Better Automatic Redirects

```
function recipe_4_2() {
    if ( is_404() ) {
        $redirects = wcpdx_get_redirects();
        $matched_rule = false;
        $request = wcpdx_get_request();
        foreach ( (array) $redirects as $match => $query ) {
            if ( preg_match("#^$match#", $request, $matches) ||
                preg_match("#^$match#", urldecode($request), $matches) )

                // Got a match.
                $matched_rule = true;
                break;
        }
    }
    if ( $matched_rule ) {
        $query = preg_replace("!^.+\?!", '', $query);
        $redirect = addslashes(WP_MatchesMapRegex::apply($query, $match));
        if ( $redirect ) {
```

4.3 Options for Custom Redirects

- Plugins
 - **Simple 301 Redirects**
 - **Safe Redirect Manager**

4.4 Replacing Old Permalinks

- Your content is riddled with old links
- Is it worth changing them?
- Enter wp-cli!

About Alley Interactive

- Multi-platform development agency based in New York City, with team members around the country
- Clients in news media, entertainment, non-profit, and education
- We strive to advance WordPress's credibility as a platform for large projects
- WordPress.com VIP Partner
- **We're hiring!**

Questions?

This: <http://boyn.es/wcpdx/>