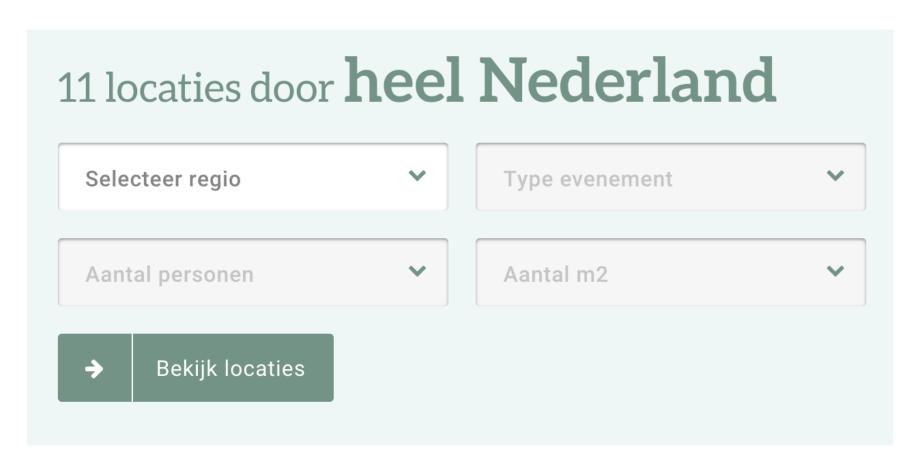
## Requests through wp-ajax.php

How to speed it up...

#### **Problem**

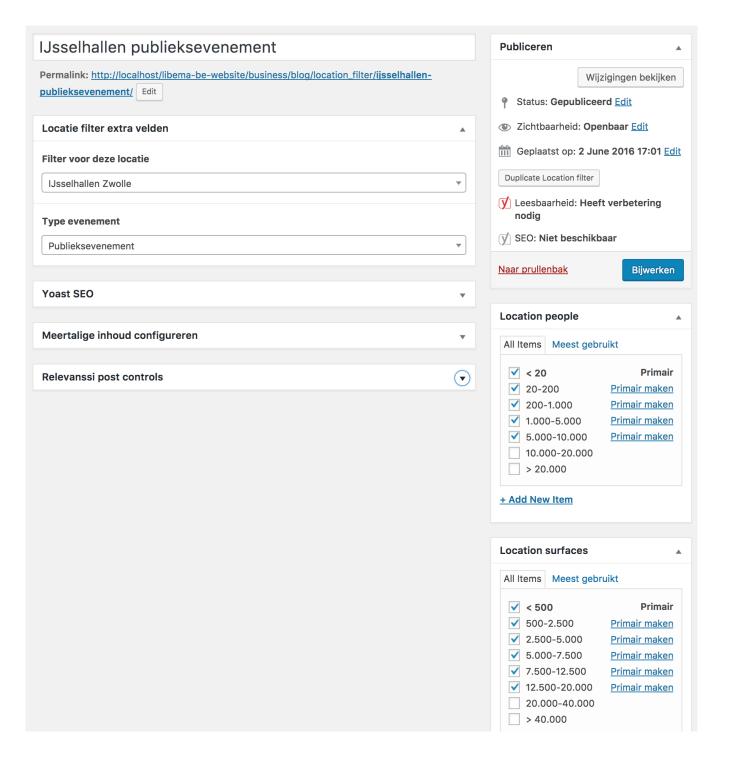
- post requests to wp-ajax.php are not cached by supercache or our cache server
- requests (depending on complexity) might take a while

### Example



#### **WP Structure**

- CPT: location
  - TAX: location\_region
- CPT: event\_type
- CPT: location\_filter
  - TAX: location\_people
  - TAX: location\_surface



### Request

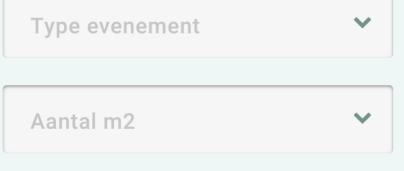
action:iv\_location\_filter

do:findEventsInRegion

id:19

# 11 locaties door heel Nederland





```
public static function get_all_for_region( $region_id ) {
    $location_args = array(
        'post_type' => 'location',
        'posts_per_page' => -1,
        'tax_query' => array(
            arrav(
                'taxonomy' => 'location_region',
                'key' => 'term_id',
                'terms' => $region id
    $locations = get_posts( $location_args );
   $location_ids = wp_list_pluck( $locations, 'ID' );
    $args = array(
        'post_type' => 'location_filter',
        'posts_per_page' => -1,
        'meta_query' => array(
            array(
                'key' => 'location_filter_location',
                'value' => $location_ids,
               'compare' => 'IN'
   $filters = get_posts( $args );
    $types = array();
    foreach( $filters as $filter ) {
       $type_id = get_field( 'location_filter_event_type', $filter->ID );
       if ( !in_array( $type_id, $types ) ) {
            $event_type = get_post( $type_id );
           $types[] = array( 'id' => $type_id, 'name' => $event_type->post_title );
    return $types;
```

Should probably write a custom query, but anway...

# No optimization

Name	Status	Туре	Initi	Size	Time	'
admin-ajax.php	200	xhr	<u>VM</u>	502 B		2.38 s
admin-ajax.php	200	xhr	<u>VM</u>	502 B		2.33 s
info?t=1506544057420	200	xhr	<u>VM</u>	423 B		5 ms
admin-ajax.php	200	xhr	<u>VM</u>	1.6 KB		2.93 s
admin-ajax.php	200	xhr	<u>VM</u>	2.1 KB		3.06 s
admin-ajax.php	200	xhr	<u>VM</u>	806 B		2.79 s
admin-ajax.php	200	xhr	<u>VM</u>	656 B		2.50 s
admin-ajax.php	200	xhr	<u>vm</u>	1.6 KB		2.74 s

## W3 Total cache with WP Object Cache

Name	Sta	Type	 S	Time	
admin-ajax	200	xhr	 5		1.90 s
admin-ajax	200	xhr	 5		1.88 s
info?t=1506	200	xhr	 4		13 ms
admin-ajax	200	xhr	 7	;	3.71 s
admin-ajax	200	xhr	 7		1.80 s
admin-ajax	200	xhr	 7		1.52 s
admin-ajax	200	xhr	 7		1.57 s
admin-ajax	200	xhr	 7		1.55 s
admin-ajax	200	xhr	 7		1.54 s
admin-ajax	200	xhr	 7		1.53 s
admin-ajax	200	xhr	 7		1.53 s

### 'Self made' option cache

admin-ajax.php	200	xhr	<u>V</u>	2.4	2.68	s
admin-ajax.php	200	xhr	<u>V</u>	1.6	2.61	s
admin-ajax.php	200	xhr	<u>V</u>	2.4	2.64	s
admin-ajax.php	200	xhr	<u>V</u>	2.4	2.66	s
admin-ajax.php	200	xhr	<u>V</u>	2.4	2.58	s
admin-ajax.php	200	xhr	<u>V</u>	1.6	2.75	s

```
// try to fetch from cache
$cache_field = 'cache_get_all_for_region_'.$region_id;
$cache = get_option( $cache_field );
if ( $cache ) {
    return $cache;
}
```

# iv-minimal-ajax.php

iv-minimal-ajax.php	200	xhr	<u>V</u>	731 B	3.43 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	2.2	3.27 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	1.4	2.94 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	2.2	3.17 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	1.4	3.01 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	730 B	2.96 s

.. worse..

## define('SHORTINIT', TRUE);

and require needed files myself... (long list...)

iv-minimal-ajax.php	200	xhr	<u>V</u>	3.3	3.23 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	3.3	3.13 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	3.3	3.17 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	3.3	3.16 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	3.3	3.17 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	3.3	3.08 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	3.3	3.19 s

## Redis Object Cache

admin-ajax.php	200	xhr	<u>V</u>	2.4	1.44 s
admin-ajax.php	200	xhr	<u>V</u>	1.6	1.45 s
admin-ajax.php	200	xhr	<u>V</u>	2.4	1.46 s
admin-ajax.php	200	xhr	<u>V</u>	1.6	1.43 s
admin-ajax.php	200	xhr	<u>V</u>	2.4	1.45 s
admin-ajax.php	200	xhr	<u>V</u>	1.6	1.44 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	2.2	2.63 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	1.4	1.11 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	2.2	1.10 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	1.4	1.08 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	2.2	1.14 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	1.4	1.14 s
iv-minimal-ajax.php	200	xhr	<u>V</u>	2.2	1.06 s

#### Conclusion

- 2 to 3 times faster with object cache
- haven't investigated possible downsides
- quick win:
  - do a GET-request instead of a POST-request
  - GET-requests are cached by the caching server