

A Walk Around The Loop

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?

WP_Query

password query

```
$args = array(  
    'has_password' => false,  
    'post_type' => 'post',  
    'post_status' => 'publish',  
);  
$query = new WP_Query( $args );
```

password query

```
SELECT SQL_CALC_FOUND_ROWS wp_posts.ID
FROM wp_posts
WHERE 1=1
      AND wp_posts.post_password = ''
      AND wp_posts.post_type = 'post'
      AND wp_posts.post_status = 'publish'
ORDER BY wp_posts.post_date DESC LIMIT 0, 10
```

password query

Elapsed time: **10,651.6** ms

author query

```
$args = array(  
    'author' => 81,  
    'post_type' => 'post',  
    'post_status' => 'publish',  
);  
$query = new WP_Query( $args );
```

author query

```
SELECT SQL_CALC_FOUND_ROWS wp_posts.ID
FROM wp_posts
WHERE 1=1
      AND wp_posts.post_author IN (81)
      AND wp_posts.post_type = 'post'
      AND wp_posts.post_status = 'publish'
ORDER BY wp_posts.post_date DESC LIMIT 0, 10
```


author query

Elapsed time: **155.8** ms

Indexes

Indexes

“Indexes are used to find rows with specific column values quickly. [...] If the table has an index for the columns in question, MySQL can quickly determine the position to seek to in the middle of the data file without having to look at all the data.”

Indexes

Indexed fields in wp_posts

post_name

post_parent

post_author

(post_type, post_status, post_date, ID)

Index fields in wp_postmeta

post_id

meta_key

Indexes

Indexed fields in wp_posts

post_name

post_parent

post_author

(post_type, post_status, post_date, ID)

Index fields in wp_postmeta

post_id

meta_key

category query

```
$args = array(
    'tax_query' => array(
        array(
            'taxonomy' => 'category',
            'field' => 'slug',
            'terms' => 'business'
        )
    ),
    'post_type' => 'post',
    'post_status' => 'publish',
);
$query = new WP_Query( $args );
```

category query

```
SELECT SQL_CALC_FOUND_ROWS wp_posts.ID
FROM wp_posts
INNER JOIN wp_term_relationships
    ON (wp_posts.ID = wp_term_relationships.object_id)
WHERE 1=1
    AND wp_term_relationships.term_taxonomy_id IN (12)
    AND wp_posts.post_type = 'post'
    AND wp_posts.post_status = 'publish'
GROUP BY wp_posts.ID
ORDER BY wp_posts.post_date DESC LIMIT 0, 10
```

category query

Elapsed time: **2,134.7** ms

multiple taxonomy query

```
$args = array(  
    'tax_query' => array(  
        'relation' => 'OR',  
        array(  
            'taxonomy' => 'category',  
            'field' => 'slug',  
            'terms' => 'business'  
        ),  
        array(  
            'taxonomy' => 'post_tag',  
            'field' => 'slug',  
            'terms' => 'technology'  
        ),  
    ),  
),
```

multiple taxonomy query

```
SELECT SQL_CALC_FOUND_ROWS wp_posts.ID
FROM wp_posts
INNER JOIN wp_term_relationships
    ON (wp_posts.ID = wp_term_relationships.object_id)
INNER JOIN wp_term_relationships AS tt1
    ON (wp_posts.ID = tt1.object_id)
WHERE 1=1
    AND ( wp_term_relationships.term_taxonomy_id IN (73)
        OR tt1.term_taxonomy_id IN (2118) )
    AND wp_posts.post_type = 'post'
    AND wp_posts.post_status = 'publish'
GROUP BY wp_posts.ID
ORDER BY wp_posts.post_date DESC LIMIT 0, 10
```

multiple taxonomy query

Elapsed time: **2,949.9** ms

JOINs

get all posts

```
$args = array(  
    'post_type' => 'post',  
    'post_status' => 'publish',  
    'posts_per_page' => -1,  
);  
$query = new WP_Query( $args );
```

get all posts

```
SELECT wp_posts.*  
FROM wp_posts  
WHERE 1=1  
      AND wp_posts.post_type = 'post'  
      AND wp_posts.post_status = 'publish'  
ORDER BY wp_posts.post_date DESC
```

get all posts

Elapsed time: **61,482.2** ms

Be aware how much data
you're requesting

What I haven't
mentioned...

SQL_CALC_FOUND_ROWS wp_posts.ID

```
$query->found_posts = SELECT FOUND_ROWS();
```

editing the SQL query via filters

posts_where

posts_groupby

posts_distinct

post_limits

posts_fields

posts_clauses

posts_request

posts_selection

Performance

(when you need to do “bad” queries)

don't create more
queries than you need

do more work in PHP

cache

transient vs object cache

```
$start_time = wp_cache_get( $key, CACHE_GROUP );
if ( ! is_numeric( $start_time ) ) {
    $on_air = get_posts(array(
        'post_type' => 'uni10up-calu',
        'numberposts' => 1,
        'meta_query' => array(
            array(
                'key' => '_calu_tv_full_date',
                'type' => 'NUMERIC',
                'compare' => 'BETWEEN',
                'value' => array( $current_time - (3600*4) , $current_time ),
            ),
        ),
        'meta_key' => '_calu_tv_full_date',
        'orderby' => 'meta_value_num',
        'supress_filters' => false,
    ));
    if ( ! empty( $current_unit ) ) {
        $start_time = get_post_meta( $on_air[0]->ID, '_calu_tv_full_date', true );
        wp_cache_set( $key, $start_time, CACHE_GROUP, MINUTE_IN_SECONDS * 15 );
    } else {
        return false;
    }
}
```

```
$start_time = wp_cache_get( $key, CACHE_GROUP );
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            array(
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        ),
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        'orderby' => 'meta_value_num',
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        ),
        'meta_key' => '_calu_tv_full_date',
        'orderby' => 'meta_value_num',
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    ));
    if ( ! empty( $current_unit ) ) {
        $start_time = get_post_meta( $on_air[0]->ID, '_calu_tv_full_date', true );
        wp_cache_set( $key, $start_time, CACHE_GROUP, MINUTE_IN_SECONDS * 15 );
    } else {
        return false;
    }
}
```

Caching issues

- Invalidation
- Item might not exist
- Takes time to build cached items
- Only cache the information you need

get more posts than
necessary

```
$current_post_id = get_the_ID();

$selected_recommended_query = new WP_Query( array(
    'meta_query' => array(
        array( 'key' => '_thumbnail_id' ),
        array( 'key' => 'recommended_news', 'value' => 1 )
    ),
    'cat' => $display_category_id,
    'posts_per_page' => 2,
    'post_type' => array( 'post', 'oz-video' )
) );

while ( $selected_recommended_query->have_posts() ) :
    $selected_recommended_query->the_post();

    if ( get_the_ID() == $current_post_id ) continue;
    // Do your post stuff and break out of the loop
```

```
$current_post_id = get_the_ID();

$selectd_recommended_query = new WP_Query( array(
    'meta_query' => array(
        array( 'key' => '_thumbnail_id' ),
        array( 'key' => 'recommended_news', 'value' => 1 )
    ),
    'cat' => $display_category_id,
    'posts_per_page' => 2,
    'post_type' => array( 'post', 'oz-video' )
) );

while ( $selectd_recommended_query->have_posts() ) :
    $selectd_recommended_query->the_post();

    if ( get_the_ID() == $current_post_id ) continue;
    // Do your post stuff and break out of the loop
```


Questions?

References

- http://codex.wordpress.org/Class_Reference/WP_Query
- <http://vip.wordpress.com/documentation/database-queries/>
- [wp-includes/query.php](#), `parse_query()`, L1454