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Setup:Installation Guide/Advanced/Performance Optimization

A quality version of this page, approved on *29 November 2019*, was based off this revision.

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Performance Optimization: ManualRecache of LanguageCache

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To prevent Rebuilding LocalizationCache with every page call, apply the following configuration:

When following these instructions, make sure that the $wgCacheDirectory variable is set in advance. This is already the case in the BlueSpice standard delivery in the file settings.d/005-Directories.php.

This performance optimization achieves the best performance by enabling and configuring opcache in PHP.

In the `settings.d` folder of your codebase, create the file 006-ManualRecache.php with the following contents:

```
<?php
$wgLocalisationCacheConf = [
        'class' => LocalisationCache::class,
        'store' => 'array',
        'storeClass' => false,
        'storeDirectory' => $wgCacheDirectory,
        'manualRecache' => true,
];
```

Then delete all existing files in the `cache` folder of your codebase. Then manually re-create the LocalizationCache by entering the following on your console:

```
php /pfad/zur/installation/maintenance/rebuildLocalisationCache.php --force
```

Finally, make sure that this is done regularly in the background via cronjob ("Task Scheduler" under Windows). We recommend this twice a day, for example at 6am and 6pm.

Performance Optimization: MySQL (MariaDB)

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Match MySQL or MariaDB directly to your memory and CPU cores. To do this, apply the following configuration in your my.ini:

```
[mysqld]

; with 16GB RAM
innodb_buffer_pool_size=4096M
tmp-table-size=1024M
max-heap-table-size=1024M
query_cache_size=1024M

; with 12 CPU cores
innodb-buffer-pool-instances=12
max_connections=12000

; Only use "127.0.0.1", not "localhost" when accessing MySQL
; Remember to also make these changes in the $wgDBserver variable in LocalSettings.php.
skip-name-resolve
```

Performance Optimization: PHP

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opcache

Enable the Zend extension opcache in PHP. In the php.ini, we recommend the following configuration:

```
opcache.enable=1
opcache.memory_consumption=512
opcache.max_accelerated_files=100000
opcache.validate_timestamps=1
opcache.revalidate_freq=2
opcache.optimization_level=0x7FFF9FFF
```

In addition, you should include the BlueSpice configuration files (`extensions/BlueSpiceFoundation/config/*`) in the Opcache blacklist (`opcache.blacklist_filename`). You can find more information in the official PHP documentationfor configuration.php.

zlib

Activate the extension zlib. In the php.ini we recommend the following configuration:

```
zlib.output_compression = On
zlib.output_compression_level = 9
```

You can find more information in the official PHP documentation for zlib.