Setting up a PHP development checkout

A working checkout for PHP work on Exponential - clone, Composer, a SQLite installation, the dev environment name, the development tools in .devtools/, the git hooks, debug settings and the commands you run every day.

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This page is for PHP developers who want a checkout of Exponential to write and test PHP code in: kernel fixes, extensions, tests. It goes a step further than the application creators' setup page (Setting up a development environment): the development tools, the git hooks and a PHP 8.0 binary for compatibility checks.

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What you need

Tool	Why
PHP 8.0 or newer on the command line	the kernel supports 8.0 to 8.5; PHPUnit 13 in the installed `vendor/` needs 8.4
Composer 2	the dependencies and the development tools
Git	the hooks and the change-based checks compare against `origin/main`
Node.js (optional)	`node --check` of changed JavaScript in the pre-commit hook
A second PHP, 8.0 (optional)	`make lint80`, the oldest supported syntax

Clone and install

Shell

```
git clone https://github.com/se7enxweb/exponential.git exp-dev
cd exp-dev
composer install
php bin/php/console exp:install --apply --package=sevenx_multisite_clean --url=http://127.0.0.1:8088
```

`composer install` runs `bin/php/ezpgenerateautoloads.php` afterwards (`"post-install-cmd"` in `composer.json`). The install uses SQLite unless you pass `--db=` (The console install). Reinstall with `--force` when you need a clean state.

Name the environment

Copy `config.env.php.example` to `config.env.php` and set the environment name of this machine:

PHP

```
<?php
define( 'EXP_ENV', 'dev' );
```

With `dev` (or `test`), `index.php` shows PHP errors in the browser, and `eZINI` also reads a variant of every settings file with the name after `.ini`, for example `settings/override/site.ini.dev.append.php`, after the standard file of the same layer. Each environment has its own INI cache. `config.env.php` is listed in `.gitignore`; never commit it.

The development tools

Shell

```
make devtools   # PHP_CodeSniffer, PHPCompatibility and PHPStan into .devtools/ (composer.dev.jso
n), never into vendor/
```

The tools are resolved for PHP 8.0.30 from `composer.dev.json`, so they run on every supported PHP. After this, `.devtools/vendor/bin/phpcs` and `.devtools/vendor/bin/phpstan` exist and the make targets use them (Git hooks and make targets).

The git hooks

Shell

```
make hooks      # git config core.hooksPath .githooks
```

Hook	Checks
pre-commit	`php -l` of staged PHP files, PHP 8.0 syntax when a PHP 8.0 binary is found, `node --check` of staged JavaScript, the file manifest, the code style of staged PHP files
commit-msg	the subject starts with `Added:` , `Updated:` , `Fixed:` , `Removed:` or `Renamed:`
pre-push	PHPStan against the baseline

Without `make devtools` the hooks still check syntax, the manifest and the message, and skip code style and PHPStan with a hint.

A PHP 8.0 binary

PHP 8.0 is the oldest supported version (the stock PHP of RHEL 9); PHP 7.4 is usable without support (`make lint74` checks it). The pre-commit hook and `make lint80` find PHP 8.0 as `EXP_PHP80`, `php8.0` or `php80` on the `PATH`, or `/opt/plesk/php/8.0/bin/php`:

Shell

```
make lint80                                  # PHP 8.0 syntax of the files changed since origin/
main
make lint80-all PHP80=/path/to/php8.0        # every PHP file in git, as CI runs it
```

Without one, CI's `php80` job is your only PHP 8.0 check (Writing code that runs on PHP 8.0).

Debug settings for development

In `settings/override/site.ini.append.php` of the development machine only:

INI

```
[DebugSettings]
DebugOutput=enabled

[TemplateSettings]
DevelopmentMode=enabled
ShowTemplatePathComments=enabled
```

The debug bar then shows queries, templates, timings and settings for each page (The debug bar for PHP developers). Put these lines in a `site.ini.dev.append.php` instead, and they can never reach a machine whose environment is not `dev`.

Daily commands

Command	When
`php -l <file.php>`	after every edit
`php bin/php/ezpgenerateautoloads.php -e`	after adding, renaming or moving an extension class
`php bin/php/ezcache.php --clear-tag=ini`	after a settings change
`php bin/php/ezcache.php --clear-all`	after a class or template path change, when output looks stale
`vendor/bin/phpunit <test file>`	the tests of what you changed
`make check`	syntax, manifest, code style and PHPStan before you push
`php bin/php/console exp:velocity deploy`	under Velocity: autoloads, caches, workers, in the right order

Add `--allow-root-user` to the cache and console commands only when you work as root.

Related pages

- Develop with Git
- Setting up a development installation
- Environment settings
- Free documentation: this page is free to copy, translate and improve under the GNU FDL 1.3.

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