Composer for PHP developers

How Exponential uses Composer - the root composer.json with PHP 8.0 to 8.5 (PHP 7.4 usable without support), required extensions and packages, the legacy-scripts hook that regenerates autoloads, the installer plugin...

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This page is for PHP developers who add a dependency, package an extension or read the root `composer.json`. Exponential installs with Composer from Packagist, but it is not a PSR-4 Composer project: Composer installs the extensions and the libraries, and the kernel's own class maps load the classes.

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The root composer.json

Part	Holds
`name`, `type`	`se7enxweb/exponential`, type `ezpublish-legacy`
`license`	`GPL-2.0-or-later`
`require php`	`^8.0 || ^8.1 || ... || ^8.5` (and forward-looking ranges to 8.8)
`require ext-*`	`dom`, `libxml`, `mbstring`, `pcre`, `json`, `iconv`, `reflection`, `session`, `spl`, `simplexml`
`require` packages	the installer plugin, Velocity (`se7enxweb/exponential-velocity`), the shipped `se7enxweb/*` extensions, the kernel's libraries `se7enxweb/expcomponents-*` (the expcomponents, Exponential's fork of the Zeta Components, since 6.0.15)
`require-dev`	`phpunit/phpunit` (`^9.6 || ^10.5 || ^11.5 || ^12.0 || ^13.4`)
`suggest`	database extensions (`ext-sqlite3`, `ext-pgsql`, `ext-mysqli`, `mongodb/mongodb`), `ext-gd`, `ext-curl`, optional extensions
`autoload`	`files: autoload.php`, so Composer's autoloader loads the kernel's
`scripts`	`legacy-scripts` runs `@php bin/php/ezpgenerateautoloads.php` after `install` and `update`

How extensions are installed

Packages of type `ezpublish-legacy-extension` are put into `extension/<name>/` (not `vendor/`) by the installer plugin `se7enxweb/exponential-legacy-installer`, which `config.allow-plugins` permits. After the install the `legacy-scripts` hook regenerates the class maps, so the extension's classes are found. Libraries (`se7enxweb/expcomponents-*`, `mongodb/mongodb`) go to `vendor/` and are loaded by Composer's own autoloader.

The development tools

PHP_CodeSniffer, PHPCompatibility and PHPStan are **not** in the root `require-dev`. They live in `composer.dev.json`, resolved for PHP 8.0.30 and installed into `.devtools/vendor` by `make devtools` (`COMPOSER=composer.dev.json composer install`), so they never touch the site's `vendor/` (Git hooks and make targets).

An extension's composer.json

JSON

```
{
    "name": "acme/acmereport",
    "description": "Monthly reports for Exponential",
    "type": "ezpublish-legacy-extension",
    "license": "GPL-2.0-or-later",
    "require": {
        "php": "^8.0",
        "se7enxweb/exponential-legacy-installer": "*"
    }
}
```

- `type` makes the installer put it into `extension/`; the directory name is the part of the package name after the `/`, unless `extra.ezpublish-legacy-extension-name` names another one (`LegacyExtensionInstaller::getInstallPath()`).
- Declare `php` `^8.0` unless you need more (Supported PHP versions: 8.0 to 8.5).
- Declare the libraries your code uses; do not ship `vendor/` inside the extension.
- Keep `ezinfo.php` and `extension.xml` versions equal to the release (composer.json for extensions, Composer packages and Packagist).

Version constraints

Exponential packages use three- and four-part versions (`6.0.15`, `0.0.4.54`). The tilde floats the last position:

Constraint	Allows
`~6.0.15`	`>=6.0.15 <6.1.0`
`~0.0.4.57`	`>=0.0.4.57 <0.0.5.0`
`^8.0`	`>=8.0 <9.0`

After `.9` comes `.10` in the last position (`0.0.4.9`, `0.0.4.10`). Packagist compares each position as a number; a plain lexical sort of tags does not, so use `sort -V` or `git tag`

`--sort=version:refname` when a script picks the newest tag (Versioning rules).

Rules

- **A published version never changes.** A tag on Packagist is read once and cached; fix a mistake with the next version (Tags are permanent).
- **Check Packagist before repinning.** CI's PHPUnit job resolves dependencies fresh; a constraint pointing to a release that is not on Packagist yet fails every leg.
- **Do not edit** `vendor/`, and be careful with `composer update` on an installed site: some installations keep extensions as live git checkouts that Composer would replace.

Related pages

- PHP, PHP-FIG and Composer standards
- Modernizing composer.json
- The Packagist webhook
- Free documentation: this page is free to copy, translate and improve under the GNU FDL 1.3.

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