Using Composer

> **eZ Publish Platform 5.3 and higher**
> This page only applies to eZ Publish Platform 5.3 and higher, for earlier versions of the Enterprise version of eZ Publish consult *Service Portal user guide* available for download at support.ez.no. This page is also generic about using Composer, for instructions specific to a release, see release notes.

Keeping your system up-to-date is important, to make sure your it is running optimally and securely. The update mechanism in eZ Publish Platform is using the *de facto* standard PHP packaging system called Composer.
This makes it easy to adapt package installs and updates to your workflow, allowing you to test new/updated packages in a development environment, put the changes in your version control system (git, Subversion, Mercurial, etc.), pull in those changes on a staging environment and, when approved, put it in production.

- Installing Composer
- Prerequisite to using composer
  - Setting up Authentication tokens for access to commercial updates
    - Optional: Save authentication information in auth.json to avoid repeatedly typing it
- Update workflow Using composer
  - 1. Running composer update and version changes in development
  - 2. Installing versioned updates on other development machines and/or staging -> production
- General notes on use of composer
  - Installing additional eZ packages via composer
  - Using Composer with Legacy
  - Dump autoload
  - Common errors
    - Cloning failed using an ssh key
  - Best practice for Bundles
    - Documentation
    - Composer Metadata

Error rendering macro 'excerpt-include' : User 'null' does not have permission to view the page 'glossary:Composer'.

Installing Composer

This step is only needed once per machine (per project by default, but installing globally on the machine is also possible. For alternatives see: https://getcomposer.org/download/).
Composer is a command line tool, so the main way to install it is via command-line, example:

composer download in current folder:

```
php -r "readfile('https://getcomposer.org/installer');" | php
```

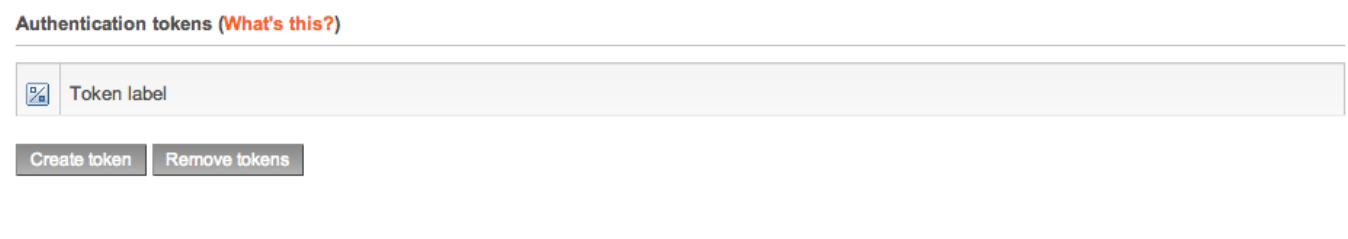
NB: this should be executed in the root directory of your eZ Publish installation.

Prerequisite to using composer

Setting up Authentication tokens for access to commercial updates

Out of the box composer uses a packaging repository called packagist.org to find all open source packages and their updates. Additional commercial packages are available for the eZ Publish Platform at updates.ez.no/bul/ *(which is password protected, you will need to set up authentication tokens as described below to get access)*.

To get access to these updates log in to your service portal on support.ez.no. If your project is configured for eZ Publish Platform 5.3 or higher, you will see the following on the *"Maintenance and Support agreement details"* screen:



1. Click "Create token" (This requires the "Portal administrator" access level.)
2. Fill in a label describing the use of the token. This will allow you to revoke access later
    - Example, if you need to provide access to updates to a third party a good to example would be "53-upgrade-project-by-partner-x"
3. Copy the password, **you will not get access to this again**!

When running composer to get updates, you will be asked for a Username and Password. Use:

as Username: your Installation key found higher up on the *"Maintenance and Support agreement details"* page in the support portal

as Password: the token password you retrieved in step 3.

> **Support agreement expiry**
> If your Support agreement expires, your authentication token(s) will no longer work. They will become active again if the agreement is renewed, but this process may take up to 24 hours. (If the agreement is renewed before the expiry date, there will be no disruption of service.)

Optional: Save authentication information in auth.json to avoid repeatedly typing it

Composer will ask to do this for you on updates, however if it is disabled you can create `auth.json` file manually in one of the following ways:

Option A: Store your credentials in project directory:

```
composer config http-basic.updates.ez.no <installation-key> <token-password>
```

Option B: If you rather want to install it globally in COMPOSER_HOME directory for machine-wide use:

```
composer config --global http-basic.updates.ez.no <installation-key> <token-password>
```

Update workflow Using composer

This section describes a best practice for use of composer, essentially it suggests treating updates like other code/configuration/* changes on your project tackling them on a development machine before staging them for roll out on staging/production.

1. Running composer update and version changes in development

Updating eZ Publish Platform via composer is nothing different then updating other projects via composer, but for illustration here is how you update your project locally:

composer update

```
php -d memory_limit=-1 composer.phar update --no-dev --prefer-dist
```

Tip
Tip: This will load in all updated packages, from eZ as well as third party libraries both used by eZ and others you may have added. So when updating like this it is recommended to take note of what was updated so you have an idea of what you should test before putting the updates into production.

At this stage you might need to manually clear Symfony's `prod` environment class cache (cached interfaces and lazy services) in case the classes/interfaces in it has changed, this can be done in the following way:

optional prod class cache clearing

```
rm -f ezpublish/cache/prod/*.php
```

When update has completed, and local install is verified to work, make sure to version (assuming you use a version control system like *git*) changes done to `composer.lock` file. This is the file that contains **all details of which versions are currently used** and makes sure the same version is used among all developers, staging and eventually production when current changes are approved for production (assuming you have a workflow for this).

Tip
Tip2: In large development teams make sure people don't blindly update and install third party components, this might easily lead to version conflicts on composer.lock file and can be tiring to fix-up if happening frequently. A workflow involving composer install and unit test execution on proposed changes can help avoid most of this, like available via Github/Bitbucket Pull Request workflow.

2. Installing versioned updates on other development machines and/or staging -> production

Installing eZ Publish Platform packages via Composer is nothing different then installing vanilla packages via Composer, and for illustration here is how you install versioned updates:

composer install (package installation)

```
php -d memory_limit=-1 composer.phar install --no-dev --prefer-dist
```

Tip
Tip: Here the importance of composer.lock comes in as this command will tell composer to install packages in exactly same version as defined in composer.lock. If you don't keep track of composer.lock it will instead just install always latests version of a package, hence not allow you to stage updates before moving it towards production.

General notes on use of composer

Installing additional eZ packages via composer

Also requiring eZ Publish Platform packages via composer is nothing different then requiring vanilla packages via Composer, and for illustration here is how you install a eZ package:

composer install (package installation)

```
php -d memory_limit=-1 composer.phar require --prefer-dist ezsystems/ezfind-ls:5.3.*
```

Using Composer with Legacy

(eZ Publish) Legacy by design places all important customizable folders within it's own structure. This is not ideal with Composer, as installation and updates might cause them to become as provided by packages again.
To make sure you are safe from this, and to allow you to version these custom folders independently, **it is recommended that you use symlinks** and keep your custom settings, extensions and design **outside of the ezpublish_legacy folder**. To not have to manually deal with these symlinks it is recommended to use Composer `post-install-cmd` and `post-update-command` script commands to make this automated.

> **Affected extensions**
> All extensions not provided via composer is affected by this, currently the following extensions from eZ is not provided via composer and needs to be setup like proposed in this section: *eznetwork, ezrecommendation* and *ezma*.

Below is a illustration on how this can be setup, see Composer documentation for further info.

Example on composer.json symlinking

```
{
    "scripts": {
        "post-install-cmd": [
            "MyVendor\\MyClass::symlinkLegacyFolders"
        ],
        "post-update-cmd": [
            "MyVendor\\MyClass::symlinkLegacyFolders"
        ]
    }
}
```

> This functionality is desirable to have out of the box in the future, so community contributions on this topic is welcome to find a good standard convention and script to handle it.

Dump autoload

Avoid to use the following command:

```
php -d memory_limit=-1 composer.phar dump-autoload --optimize
```

> **Warning**
> It causes a PHP Warning "Ambiguous class resolution". For further information this issue to Stash Github repository.

The dumped file will be too big and can cause an overhead for any request, even Cache.

Common errors

Cloning failed using an ssh key

When dealing with updates.ez.no packages, you might get this if you somehow tell composer to download dev packages, or tell it to download from source. Currently our updates.ez.no service only support distribution packages in alpha stability or higher, so make sure to check what stability and avoid use of `--prefer-source` *(this is the reason examples above are using `--prefer-dist`).*

Best practice for Bundles

Best practice for Bundles is described in Symfony documentation under Best Practices for Reusable Bundles, with eZ bundles there is some notable exceptions:

Documentation

- You may write your documentation using markdown (.md) if you prefer, however .rst is recommended if you plan to use writethedocs.org, as heavily used by many open source projects.

Composer Metadata

- For defining `"type"`, the following are at the moment known valid values:
    - `ezpublish-legacy-extension` | For standalone 4.x (legacy) extensions, to be used with ezpublish-legacy-installer
    - `ezpublish-bundle` | For eZ Publish Platform 5.x bundles, may optionally be a `"legacy bundle"`.
    - `symfony-bundle` | Standard symfony bundles as described in Symfony doc.
- For eZ Platform and eZ Studio there is also:
    - `ezplatform-bundle` | Symfony bundles that uses eZ Platform features (may also be used by bundles that work across 5.x and 6.x `ezpublish-kernel`)
    - `ezstudio-bundle` | Symfony bundles that uses eZ Studio features *(and optionally also eZ Platform features)*
        - *Deprecated: Please use ezplatform-bundle and add dependencies on the ee packages you depend on instead.*