One File to Rule Them All

And with Composer, Install Them

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Pronouns: they/them

Slides Here!

PHP Dependency Management

- Handles PHP dependency installation and maintenance on a per-project basis much like NPM does for JavaScript.

- Project requirements listed in composer.json.

- For WordPress projects, dependencies can include plugins, themes, and even WordPress core itself.

Some Statistics...

GU WordPress: DP

- 69.6 MB Zipped
- 18,440 Files
- 87.7% 3rd Party (16,175 files)
- Plugins updated via Dashboard
- Can use any WP plugin
- 0 GU dependencies

GU WordPress: NG

- 160 KB Zipped
- 36 Files
- 2.8% 3rd Party (1 file)
- Plugins updated in composer.json w/ SemVer
- Easiest to use .Org plugins
- ~30 GU Dependencies

For example ...

Composer.json Schema

The important bits:

1. Basic Information: **name**, **description**, **type**, **license**, **authors**, and (rarely) **version**.
2. The list of dependencies, split into the **require** and **require-dev** properties.
3. The list of non-standard **repositories.**
4. Additional **config** information,
5. Custom **scripts**.
6. And, **"extra"** information.

NB: you may also want to use the autoload property in some projects. And, these don't have to be in this order; this is just the order Dash likes.

It's Code Time!

Well, it's actually JSON 😅

You can switch and look at the following slides in the composer.json file for my own website, and one for a theme and a plugin, which can be found at those links or by scanning the following QR codes.

Site   Theme   Plugin

Basic Information

```json
{
  "name": "dashifen/dashifen.com",
  "description": "Composer based dev and deployment process for dashifen.com.",
  "type": "wordpress-project",
  "license": "MIT",
  "authors": [
    {
      "name": "David Dashifen Kees",
      "email": "dashifen@dashifen.com",
      "role": "developer"
    }
  ]
```

Requirements

```
"require": {
    "dashifen/abbreviator": "^2.0",                      "dashifen/sr5-limit-calculator": "^2.0",
    "dashifen/acf-sharing-settings": "^2.1",             "jaybizzle/crawler-detect": "1.2.116",
    "dashifen/acf-contact-form": ">=0.10 <2.0",          "johnpbloch/wordpress": "6.2.2",
    "dashifen/anti-brute-squad": "^3.0.1",               "timber/timber": "1.22.1",
    "dashifen/ceremonies": "^2.0.1",                     "wpackagist-plugin/advanced-forms": "1.9.3.2",
    "dashifen/conscientious-contact-form": "^2.2.1",     "wpackagist-plugin/coblocks": "3.0.4",
    "dashifen/dashifen2022": "dev-main",                 "wpackagist-plugin/enable-media-replace": "4.1.2",
    "dashifen/deck-block": "^2.0",                        "wpackagist-plugin/otter-blocks": "2.3.2",
    "dashifen/firefly-theme": "dev-main",                "wpackagist-plugin/themeisle-companion": "2.10.26",
    "dashifen/iliffhealers": "^3.0",                     "wpackagist-plugin/redirection": "5.3.10",
    "dashifen/iliff-healers-videos": "^2.2",             "wpackagist-plugin/wordpress-importer": "0.8.1",
    "dashifen/login-required": "^2.0",                   "wpackagist-theme/go": "1.8.5",
    "dashifen/mu-plugin-loader": "^2.0.1",               "wpackagist-theme/neve": "3.6.6",
    "dashifen/simple-events": "dev-main",                "wpackagist-theme/twentytwenty": "^2.2"
                                                     },
```

Repositories

```json
"repositories": [
  {
    "type": "composer",
    "url": "https://wpackagist.org"
  },
  {
    "url": "git@github.com:dashifen/abbreviator.git",
    "type": "vcs"
  },
  {
    "url": "git@github.com:dashifen/ceremonies.git",
    "type": "vcs"
  },
  {
    "url": "git@github.com:dashifen/conscientious-contact-form.git",
    "type": "vcs"
  }
]
```

Custom Scripts

```json
"scripts": {
    "post-update-cmd": "cp public_html/wp-content/mu-plugins/mu-plugin-loader/mu-plugin-loader-loader.php
        public_html/wp-content/mu-plugins/mu-plugin-loader-loader.php",

    "reset": "rm -rf public_html && rm composer.lock"
},
```

Additional Configuration

```json
"config": {
    "optimize-autoloader": true,
    "preferred-install": "dist",
    "process-timeout": 300,
    "sort-packages": true,
    "vendor-dir": "public_html/wp-content/vendor",
    "allow-plugins": {
      "composer/installers": true,
      "johnpbloch/wordpress-core-installer": true
    }
  },
```

(NB: The full list of configuration options can be found by clicking that link or scanning the QR code to the right.)

Extra Information

```json
"extra": {
  "wordpress-install-dir": "public_html",
  "installer-paths": {
    "public_html/wp-content/plugins/{$name}/": [
      "type:wordpress-plugin"
    ],
    "public_html/wp-content/themes/{$name}/": [
      "type:wordpress-theme"
    ],
    "public_html/wp-content/mu-plugins/{$name}/": [
      "type:wordpress-muplugin"
    ],
    "public_html/wp-content/{$name}": [
      "type:wordpress-dropin"
    ]
  }
}
```

A theme's composer.json

```json
{
  "license": "MIT",
  "name": "dashifen/dashifen2023",
  "description": "A theme for dashifen.com",
  "minimum-stability": "stable",
  "type": "wordpress-theme",
  "authors": [
    {
      "name": "David Dashifen Kees",
      "email": "dashifen@dashifen.com",
      "role": "developer"
    }
  ],
  "autoload": {
    "psr-4": {
      "Dashifen\\Dashifen2023\\": "src"
    }
  },
  "require": {
    "php": "^8",
    "dashifen/bumper": "^1.0",
    "dashifen/wp-handler": "^10.11",
    "dashifen/wp-templates": "^5.1",
    "timber/timber": "^1.19"
  },
  "config": {
    "optimize-autoloader": true,
    "sort-packages": true,
    "allow-plugins": {
      "composer/installers": true
    }
  },
  "extra": {
    "bump": [
      "style.css",
      "package.json"
    ]
  },
  "scripts": {
    "bumper": "php vendor/dashifen/bumper/bump.php"
  }
}
```

A plugin's composer.json

```json
{
  "name": "dashifen/simple-symposia",
  "description": "A WordPress plugin...",
  "minimum-stability": "stable",
  "type": "wordpress-plugin",
  "license": "MIT",
  "authors": [
    {
      "name": "David Dashifen Kees",
      "email": "dashifen@dashifen.com",
      "role": "developer"
    }
  ],
  "autoload": {
    "psr-4": {
      "Dashifen\\SimpleSymposia\\": "src"
    }
  },
  "require": {
    "php": ">=7.4",
    "dashifen/acf-agent": "^2.1",
    "dashifen/wp-handler": "^9.7"
  },
  "config": {
    "sort-packages": true,
    "optimize-autoloader": true
  }
}
```

WordPress & Composer

A Summary

- Specify the location for WordPress Core, plugins and themes in the `extra` property.

- Include wpackagist.org as a repository from which to pull plugins and themes.

- Include WP Core: johnpbloch/wordpress or the similarly maintained Bedrock repo.

- Remember to specify your types!

Upsides & Downsides

Upsides

- Ensure homogeneity across environments.
- Semantic versioning for fine-tuned control.
- Smaller repos
- Separated repos

Downsides

- Another tool to maintain
- Possibilities of malicious package and other supply-chain attacks
- Tightly bound relationships between repos
- Composer can get confused; clearing caches usually gets it back on track.

Questions?

If not, I can be reached with any follow-ups at dashifen@dashifen.com.

I'm also @dashifen in the Making WordPress slack if you prefer to find me there.

Thank you so much for spending a bit of WCUS with me and I hope you enjoy the rest of your time here in the DC Area. I actually live here, so if you have any questions about getting around the DMV, just let me know!