DRUPALCAMP LEUVEN

D7 configuration management

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why?

long road to Drupal 8 distributions

Drupal website structure

codebase

database

building blocks ⟵ config + settings
content + users

Drupal website structure

problem #1

configuration in database

problem #1
configuration in database

config

content

users

rage

against the database dump

Drupal website structure

problem #2

1 codebase = 1 configuration

problem #2
1 codebase = 1 configuration

test

accept

production

code	config

code	config

code	config

settings
DB credentials
cache
GA key

content
nodes
tags
menu's

CMS configuration
content types
taxonomy structure
panels
views
contexts
path patterns

users
username
password
email
last login

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goals

control configuration

facilitate teamwork

quality deployments

install profiles

settings files

features

controller modules

install profiles

FOLDERS

▼ www
  ▶ includes
  ▶ misc
  ▶ modules
  ▼ profiles
    ▶ minimal
    ▼ mint
        mint.info
        mint.install
        mint.profile
    ▶ standard
    ▶ testing
  ▶ scripts
  ▶ sites
  ▶ themes

1. clean slate

2. presets

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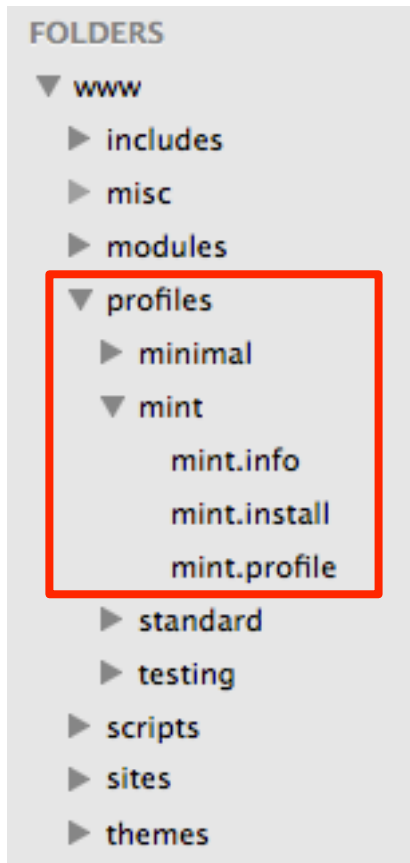
mint.info

```
name = Mint
description = Very clean install profile
core = 7.x

; Core module dependencies
dependencies[] = dblog
dependencies[] = toolbar

; Contrib module dependencies
dependencies[] = transliteration
```

mint.profile

```php
// Pre-populate site information
$form['site_information']['site_name']['#default_value'] = 'Another Drupal website';
$form['site_information']['site_mail']['#default_value'] = TERMINATOR_MAIL;

// Pre-populate maintenance account
$form['admin_account']['account']['name']['#default_value'] = 'terminator';
$form['admin_account']['account']['mail']['#default_value'] = TERMINATOR_MAIL;

// Pre-populate server settings
$form['server_settings']['site_default_country']['#default_value'] = 'BE';
$form['server_settings']['date_default_timezone']['#default_value'] = 'Europe/Brussels';
unset($form['server_settings']['date_default_timezone']['#attributes']['class']);

// Pre-populate update notifications
$form['update_notifications']['update_status_module']['1']['#default_value'] = 0;
$form['update_notifications']['update_status_module']['2']['#default_value'] = 0;
```

mint.install

```php
// Set the default front-end theme
variable_set('theme_default', 'bartik');

// Allow only administrators to create user accounts
variable_set('user_register', USER_REGISTER_ADMINISTRATORS_ONLY);
variable_set('user_email_verification', '0');

// Prevent outgoing mails on account creation
variable_set('user_mail_status_activated_notify', '0');

// Enable default permissions for system roles.
user_role_grant_permissions(DRUPAL_ANONYMOUS_RID, array('access content'));
user_role_grant_permissions(DRUPAL_AUTHENTICATED_RID, array('access content'));
```

mint.install

```php
// Create a default role for site administrators, with all available permissions assigned.
$admin_role = new stdClass();
$admin_role->name = 'administrator';
$admin_role->weight = 4;
user_role_save($admin_role);
user_role_grant_permissions($admin_role->rid, array_keys(module_invoke_all('permission')));
// Set this as the administrator role.
variable_set('user_admin_role', $admin_role->rid);

// Assign user 1 the "administrator" role.
db_insert('users_roles')
  ->fields(array('uid' => 1, 'rid' => $admin_role->rid))
  ->execute();
```
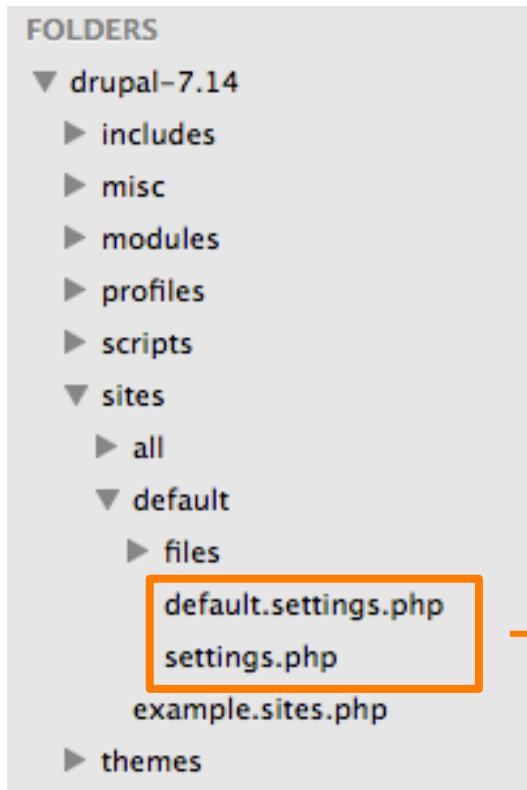
mint.install

```php
// Enable the admin theme.
db_update('system')
  ->fields(array('status' => 1))
  ->condition('type', 'theme')
  ->condition('name', 'seven')
  ->execute();
variable_set('admin_theme', 'seven');
variable_set('node_admin_theme', '1');

// Extra date settings
variable_set('date_first_day', '1');
variable_set('configurable_timezones', '0');

// Set cron to 1 hour
variable_set('cron_safe_threshold', '3600');

// Keep 100000 watchdog entries in the database
variable_set('dblog_row_limit', '100000');
```

settings files

FOLDERS
▼ drupal-7.14
  ▶ includes
  ▶ misc
  ▶ modules
  ▶ profiles
  ▶ scripts
  ▼ sites
    ▶ all
    ▼ default
      ▶ files
      default.settings.php
      settings.php
    example.sites.php
  ▶ themes

1 codebase = 1 configuration

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```php
<?php

/**
 * @file
 * Drupal site-specific configuration file.
 *
 * IMPORTANT NOTE:
 * This file may have been set to read-only by the Drupal installation program.
 * If you make changes to this file, be sure to protect it again after making
 * your modifications. Failure to remove write permissions to this file is a
 * security risk.
 *
 * The configuration file to be loaded is based upon the rules below. However
 * if the multisite aliasing file named sites/sites.php is present, it will be
 * loaded, and the aliases in the array $sites will override the default
 * directory rules below. See sites/example.sites.php for more information about
 * aliases.
 *
 * The configuration directory will be discovered by stripping the website's
 * hostname from left to right and pathname from right to left. The first
 * configuration file found will be used and any others will be ignored. If no
 * other configuration file is found then the default configuration file at
 * 'sites/default' will be used.
 *
 * For example, for a fictitious site installed at
 * http://www.drupal.org:8080/mysite/test/, the 'settings.php' file is searched
 * for in the following directories:
 *
 * - sites/8080.www.drupal.org.mysite.test
 * - sites/www.drupal.org.mysite.test
 * - sites/drupal.org.mysite.test
 * - sites/org.mysite.test
 *
```

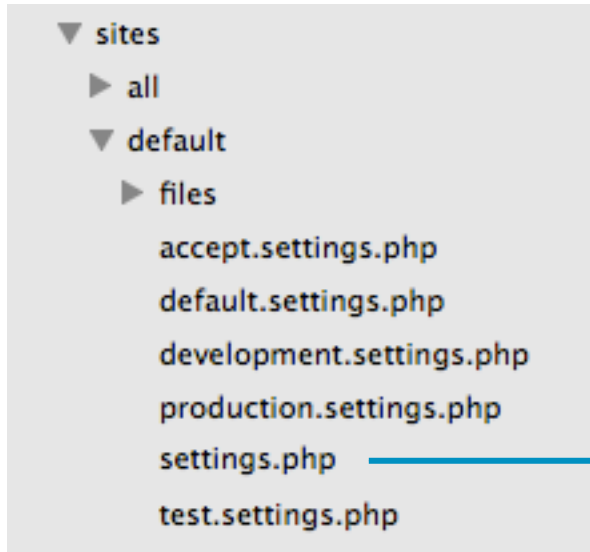# settings files

development   test   accept   production

settings files

```
▼ sites
  ▶ all
  ▼ default
    ▶ files
    accept.settings.php
    default.settings.php
    development.settings.php
    production.settings.php
    settings.php ──────────── special…
    test.settings.php
```

1 settings file per env

special…

settings.php

```php
include('production.settings.php');

if(isset($_SERVER['APPLICATION_ENV']) && !empty($_SERVER['APPLICATION_ENV'])) {
  if ($_SERVER['APPLICATION_ENV'] != 'production') {
    $settings_path = dirname(__FILE__);
    $filename = $settings_path . '/' . $_SERVER['APPLICATION_ENV'] . '.settings.php';
    if(file_exists($filename)) {
      include $filename;
    }
  }
}
```

production.settings.php by default

overrides for other environments

httpd.conf

```
<VirtualHost *:80>
    ServerName workbench.drupal.local
    DocumentRoot /Users/jan.lemmens/Projects/drupal-7.19
    SetEnv APPLICATION_ENV "accept"
    <Directory /Users/jan.lemmens/Projects/drupal-7.19/>
        Options Indexes FollowSymLinks MultiViews
        AllowOverride All
        Order allow,deny
        allow from all
    </Directory>
</VirtualHost>
```

drushrc.php

```php
<?php
// Set the application environment for Drush
$_SERVER['APPLICATION_ENV'] = 'development';
```

production.settings.php

```php
/**
 * Database settings
 */
$databases = array (
  'default' =>
  array (
    'default' =>
    array (
      'database' => 'prd_db_name',
      'username' => 'prd_db_username',
      'password' => 'prd_db_password',
      'host' => 'prd_db_host',
      'port' => '',
      'driver' => 'mysql',
      'prefix' => '',
    ),
  ),
);
```

production.settings.php

```php
// Analytics
$conf['googleanalytics_account'] = 'UA-27335262-8';

// Caching
$conf['cache'] = TRUE;
$conf['block_cache'] = TRUE;
$conf['cache_lifetime'] = 3600; // 1 hour
$conf['page_cache_maximum_age'] = 900; // 15 minutes
$conf['page_compression'] = TRUE;
$conf['preprocess_css'] = TRUE;
$conf['preprocess_js'] = TRUE;

$conf['file_temporary_path'] = '/tmpdir';
$conf['file_private_path'] = '/privatedir';
$conf['cron_safe_threshold'] = 0;
```

development.settings.php

```php
/**
 * PHP settings
 */
$conf['error_level'] = 2;
ini_set('display_errors', TRUE);
ini_set('display_startup_errors', TRUE);
error_reporting(E_ALL);


// Analytics
$conf['googleanalytics_account'] = 'UA-0000000-00';


// Caching
$conf['cache'] = FALSE;
$conf['block_cache'] = FALSE;
$conf['cache_lifetime'] = 0;
$conf['page_cache_maximum_age'] = 0;
$conf['page_compression'] = FALSE;
$conf['preprocess_css'] = FALSE;
$conf['preprocess_js'] = FALSE;
```

variables?

https://drupal.org/node/1525472

features + strongarm

▸ **CKEDITOR PROFILES** (ckeditor_profile)

▸ **DEPENDENCIES** (dependencies)

▸ **ELYSIA CRON** (elysia_cron)

▸ **LANGUAGES** (language)

▸ **MENU LINKS** (menu_links)

▸ **MENUS** (menu_custom)

▸ **PERMISSIONS** (user_permission)

▸ **REALM VARIABLES** (variable_realm)

▸ **ROLES** (user_role)

▸ **STRONGARM** (variable)

▾ **TAXONOMY** (taxonomy)
- ☐ Access control
- ☐ Banner style
- ☐ Category style

▸ **VIEWS** (views_view)

LEGEND

| Normal | **Changed** | *Auto detected* | **Conflict** |

manage CMS configuration in code

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Features

features + strongarm

Onbeschikbaar	Overridden	Recreate
Onbeschikbaar 7.x-1.0	Overridden	Recreate
Onbeschikbaar	Overridden	Recreate
Onbeschikbaar	Overridden	Recreate
Onbeschikbaar	Overridden	Recreate
Onbeschikbaar	Overridden	Recreate
Onbeschikbaar	Overridden	Recreate
Onbeschikbaar 7.x-1.0	Overridden	Recreate
Onbeschikbaar	Overridden	Recreate
Onbeschikbaar	Overridden	Recreate

architecting effort

contrib support

breaks often, breaks hard

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features + strongarm

permissions

roles

menu items

controller module

```
▼ sites
  ▼ all
    ▼ modules
      ▶ contrib
      ▼ custom
        ▼ controller
            controller.info
            controller.install
            controller.module
```

building tasks

hook_update_N()

controller.install

```
/**
 * Implements hook_install().
 */
function controller_install() {
  controller_update_7001();            !
  controller_update_7002();
}


/**
 * Enable Block module
 */
function controller_update_7001() {
  module_enable(array('block'));
}


/**
 * Enable Contact module
 */
function controller_update_7002() {
  module_enable(array('contact'));
}
```

controller.install

```
/**
 * Disable Display Suite UI module (not necessary on PRD)
 */
function mymodule_general_update_7019() {
  module_disable(array('ds_ui'), FALSE);
  drupal_uninstall_modules(array('ds_ui'), FALSE);
}


/**
 * Delete table field in paragraph and disable tablefield module
 */
function mymodule_general_update_7036() {
  field_delete_field('field_page_paragraph_table');
  field_purge_batch(1);
}
```
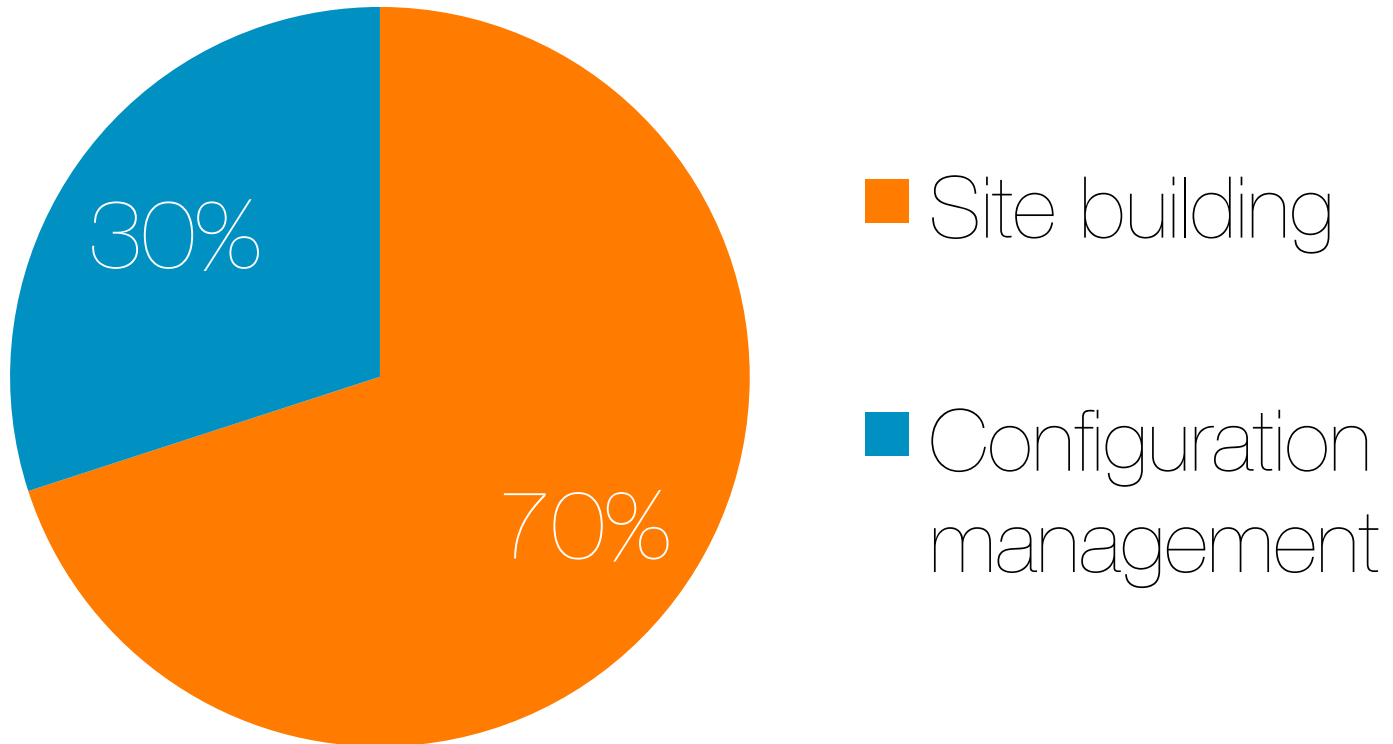
▼ drupal-7.21
  ▶ includes
  ▶ misc
  ▶ modules
  ▼ profiles
    ▶ minimal
    ▼ mint
        mint.info
        mint.install
        mint.profile
    ▶ standard
    ▶ testing
  ▶ scripts
  ▼ sites
    ▼ all
      ▼ modules
        ▶ contrib
        ▼ custom
          ▼ controller
              controller.info
              controller.install
              controller.module
          ▼ features
            ▼ homepage
                homepage.context.inc
                homepage.features.field_base.inc
                homepage.features.field_instance.inc
                homepage.features.inc
                homepage.info
                homepage.module
        ▶ themes
      ▶ default
        example.sites.php
        README.txt
  ▶ themes
    .gitignore
    .htaccess
    authorize.php
    CHANGELOG.txt
    COPYRIGHT.txt
    cron.php
    index.php
    INSTALL.mysql.txt
    INSTALL.pgsql.txt
    install.php
    INSTALL.sqlite.txt
    INSTALL.txt
    LICENSE.txt
    MAINTAINERS.txt
    README.txt

time consuming…

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time consuming…

30%

70%

■ Site building

■ Configuration management

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8
Drupal™

configuration management

better language tools

webservices

inline editing

focus on HTML5 and mobile