Who makes Drupal

- Project lead
  - Dries Buytaert
- Branch maintainer
  - Angela Byron (Drupal 7)
  - Gábor Hojtsy (Drupal 6)
  - Neill Drumm (Drupal 5)
- Contributors

Committers
Changes for Users
Our UX Principles: 1. Make the most frequent tasks easy and less frequent tasks achievable. 2. Design for the 80%. 3. Privilege the Content Creator 4. Make the default settings smart.
New Information Architecture

• New IA separates administrative tasks into “contexts”:
  – I’m dealing with **content**.
  – I’m building out site **structure**.
  – I’m changing my site’s **appearance**.
  – I’m managing the **people** who come to my site.
  – I’m **configuring** modules and settings.
Drupal 6

Welcome to your new Drupal website!

Please follow these steps to set up and start using your website:

1. Configure your website
   Once logged in, visit the administration section, where you can customize and configure all aspects of your website.

2. Enable additional functionality
   Next, visit the module list and enable the Drupal modules download section.

3. Customize your website design
   To change the "look and feel" of your site, you can choose themes or download additional themes.

4. Start posting content
   Finally, you can create content for the front page.

For more information, please refer to the Drupal forum, or view the wide range of resources available.

Drupal 7

Welcome to localhost

No front page content has been created yet.

- Create content
- Change the default front page
# Help

Follow these steps to set up and start using your website:

1. **Configure your website** Once logged in, visit the administration section, where you can customize and configure all aspects of your website.
2. **Enable additional functionality** Next, visit the module list and enable features which suit your specific needs. You can find additional modules in the Drupal modules download section.
3. **Customize your website design** To change the "look and feel" of your website, visit the themes section. You may choose from one of the included themes or download additional themes from the Drupal themes download section.
4. **Start posting content** Finally, you can add new content for your website.

For more information, refer to the specific topics listed in the next section or to the online Drupal handbooks. You may also post at the Drupal forum or view the wide range of other support options available.

## Help topics

Help is available on the following items:

<table>
<thead>
<tr>
<th>Block</th>
<th>Field UI</th>
<th>Number</th>
<th>Taxonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>File</td>
<td>Options</td>
<td>Text</td>
</tr>
<tr>
<td>Comment</td>
<td>Filter</td>
<td>Overlay</td>
<td>Toolbar</td>
</tr>
<tr>
<td>Contextual links</td>
<td>Help</td>
<td>Path</td>
<td>Update manager</td>
</tr>
<tr>
<td>Dashboard</td>
<td>Image</td>
<td>RDF</td>
<td>User</td>
</tr>
<tr>
<td>Database logging</td>
<td>List</td>
<td>Search</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Menu</td>
<td>Shortcut</td>
<td></td>
</tr>
<tr>
<td>Field SQL storage</td>
<td>Node</td>
<td>System</td>
<td></td>
</tr>
</tbody>
</table>
Users can cancel own accounts

A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.

Password: Confirm password:

Password strength:
To change the current user password, enter the new password in both fields.

Status:
- Blocked
- Active

Locale setting:
Your time zone is America/New York.

Time Zone:
- America/New York

Are you sure you want to cancel your account?

When cancelling your account:
- Disable the account and keep all content.
- Disable the account and unpublish all content.
- Delete the account and make all content belong to the Anonymous user.
- Delete the account and all content.

Select the method to cancel the account above. This action cannot be undone.

Cancel account
Edit in place
Admin Theme: “Seven”
Toolbar & Shortcuts

Toolbar shows new IA along the top

User account-related info easily accessible

User specific admin shortcuts
Administrative Dashboard
Overlays
Vertical tabs

Drupal 6
- Revision information
- Comment settings
- File attachments
- Authoring information
- Publishing options

Drupal 7

E-mails

Welcome (new user created by administrator)
Welcome (awaiting approval)
Welcome (no approval required)
Account activation
Account blocked

Edit the welcome e-mail message. It is not required. You can use the following tokens: [user:mail], [site:login-url], [user:name], [user:password]

Subject
Account details for [user:name]

Body
[user:name],
<table>
<thead>
<tr>
<th>ENABLED</th>
<th>NAME</th>
<th>VERSION</th>
<th>DESCRIPTION</th>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aggregator</td>
<td>7.0-alpha2</td>
<td>Aggregates syndicated content (RSS, RDF, and Atom feeds).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Block</td>
<td>7.0-alpha2</td>
<td>Controls the visual building blocks a page is constructed with. Blocks are boxes of content rendered into an area, or region, of a web page. Required by: Dashboard (enabled)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blog</td>
<td>7.0-alpha2</td>
<td>Enables multi-user blogs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Book</td>
<td>7.0-alpha2</td>
<td>Allows users to create and organize related content in an outline.</td>
<td></td>
</tr>
<tr>
<td>✓</td>
<td>Color</td>
<td>7.0-alpha2</td>
<td>Allows administrators to change the color scheme of compatible themes.</td>
<td></td>
</tr>
<tr>
<td>✓</td>
<td>Comment</td>
<td>7.0-alpha2</td>
<td>Allows users to comment on and discuss published content. Required by: Forum (disabled), Tracker (disabled)</td>
<td></td>
</tr>
</tbody>
</table>
### Permission screen

<table>
<thead>
<tr>
<th>PERMISSION</th>
<th>ANONYMOUS USER</th>
<th>AUTHENTICATED USER</th>
<th>ADMINISTRATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administer blocks</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Select which blocks are displayed, and arrange them on the page.</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td><strong>Comment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administer comments</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Manage and approve comments, and configure comment administration settings.</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Access comments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>View comments attached to content.</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Post comments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add comments to content (approval required).</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>
Default/Minimal Profile

- **Drupal**: Create a Drupal site with the most commonly used features pre-installed.
- **Drupal (minimal)**: Create a Drupal site with only required modules enabled.

[Save and continue]
Timezone and Country support

Regional settings

LOCALE
Default country
France

First day of week
Sunday

TIME ZONES
Default time zone
Europe/Paris: Wednesday, September 2, 2009 - 00:48 +0200

Users may set their own time zone.
Remind users at login if their time zone is not set.

Time zone for new users
Default time zone.
Empty time zone.
Users may set their own time zone at registration.
New Minimum Requirements

- PHP 5.2
- MySQL 5.0
- PostgreSQL 8.3
Changes for site builders
Mix and Match Public and Private files

**Private file system path**
/Users/webchick/private_files

A local file system path where private files will be stored. This directory must exist and be writable by Drupal. This directory should not be accessible over the web.
Internationalization

- New translation interface
- Search module supports language-aware searches
- Individual fields can be marked translatable/untranslatable
- Support for message contexts (msgctxt) to make translation of short words like “View” much easier.
New translation interface

This page allows a translator to search for specific translated and untranslated strings, and is used when creating or editing translations. (Note: For configure block translation tasks involving many strings, it may be more convenient to export strings for offline editing in a desktop Gettext translation editor.) Searches may be limited to strings found within a specific text group or in a specific language.

**FILTER TRANSLATABLE STRINGS**

String contains

Leave blank to show all strings. The search is case sensitive.

<table>
<thead>
<tr>
<th>Language</th>
<th>Search in</th>
<th>Limit search to</th>
</tr>
</thead>
<tbody>
<tr>
<td>All languages</td>
<td>Both translated and untranslated</td>
<td>All text groups</td>
</tr>
</tbody>
</table>

**TEXT GROUP** | **STRING** | **CONTEXT** | **LANGUAGES** | **OPERATIONS**
---|---|---|---|---
Built-in interface | Unspecified error misc/drupal.js | | | edit delete |
Built-in interface | An error occurred. \nPath: @uri \nMessage: text misc/drupal.js | | | edit delete |
Built-in Interface | An error occurred. \nPath: @uri \n(no information available). misc/drupal.js | | | edit delete |
Built-in interface | An HTTP error @status occurred. \nPath: @uri | | | edit delete |
Native image handling

Image style name

thumbnail

The name is used in URLs for generated images. Use only lowercase alphanumeric characters, underscores (_), and hyphens (-).

<table>
<thead>
<tr>
<th>EFFECT</th>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale and crop 85x85</td>
<td>edit</td>
</tr>
<tr>
<td>Desaturate</td>
<td>delete</td>
</tr>
</tbody>
</table>

Select a new effect

Add

Preview

original (view actual size)

600px

800px

thumbnail (view actual size)

85px

85px

Update style
Security

• Prompted for e-mail notifications of security updates upon installation.
• PHP filter module now global “kill-switch” for “enter some PHP here” functionality.
• Cron.php requires key in URL to be run.
• New permission for running site updates.
• Limit login attempts, better flood control.
• Stronger, pluggable password hashing algorithm.
Field UI (nee CCK)
Field Types in Core

- Boolean
- Decimal/Float/Integer
- File
- Image
- List
- Text/Textarea
- Taxonomy term
- Node Body (long text and summary)
Fields apply to:

- Nodes
- Users (retires Content Profile)
- Comments (retires Node Comment & Comment Upload)
- Taxonomy terms (retires Taxonomy Image)
- Objects from contributed modules
Update Manager

Install and update modules and themes from drupal.org!
Changes for designers and front-end developers
Old table-based themes removed from core
Many page elements assignable

<table>
<thead>
<tr>
<th>Block</th>
<th>Region</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Header</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User login</td>
<td>Header</td>
<td>configure</td>
</tr>
<tr>
<td><strong>Left sidebar</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Navigation</td>
<td>Left sidebar</td>
<td>configure</td>
</tr>
<tr>
<td><strong>Right sidebar</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No blocks in this region</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Highlighted content</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mission statement</td>
<td>Highlighted content</td>
<td>configure delete</td>
</tr>
<tr>
<td><strong>Help</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System help</td>
<td>Help</td>
<td>configure</td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main page content</td>
<td>Content</td>
<td>configure</td>
</tr>
<tr>
<td><strong>Footer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Footer message</td>
<td>Footer</td>
<td>configure delete</td>
</tr>
<tr>
<td>Powered by Drupal</td>
<td>Footer</td>
<td>configure</td>
</tr>
</tbody>
</table>
Re-vamped *.tpl.php

```php
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
'http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd'>
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="<?php print $language->
>$language->dir ?>">
<head>
  <?php print $head; ?>
  <title><?php print $head_title; ?></title>
  <?php print $styles; ?>
  <?php print $scripts; ?>
  <script type="text/javascript"><?php /* Needed to avoid Flash of Unstyled
  Content in IE */ ?></script>
</head>
<body class="<?php print $body_classes; ?>">
<div id="page">
  <div id="header">
    <div id="logo-title">
      <?php if (!empty($logo)): ?>
      <a href="<?php print $front_page; ?>" title="<?php print
        t('Home'); ?>" rel="home" id="logo">
        <img src="<?php print $logo; ?>&gt; alt="<?php print t('Home'); ?>"
      </a>
      <?php endif; ?>
```
Re-vamped *.tpl.php

```php
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML+RDFa 1.0//EN" "http://www.w3.org/MarkUp/DTD/xhtml-rdfa-1.dtd">
<?php print $rdf_namespaces; ?>

<head profile="<?php print $grddl_profile; ?>">
<title><?php print $head_title; ?></title>
<?php print $head; ?>
<?php print $styles; ?>
<?php print $scripts; ?>
</head>
<body class="<?php print $classes; ?>">
<?php print $page_top; ?>

<div id="page-wraper"><div id="page">
<div id="header"><div class="section clearfix">
<?php if ($logo): ?>
  <a href="<?php print $front_page; ?>" title="<?php print t('Home'); ?>" rel="home" id="logo">
    <img src="<?php print $logo; ?>" alt="<?php print t('Home'); ?>" />
  </a>
<?php endif; ?>
```
Re-vamped *.tpl.php

- Re-engineered XHTML structure to facilitate CSS-only design.
- Standard, semantic class/ID names (.section, #navigation, etc.)
- Improved consistency throughout
- Enables designers to create CSS-only themes without touching PHP
- No more box.tpl.php
Stark: Naked Drupal

User login

Username *
[Input field]

Password *
[Input field]

Log in
- Create new account
- Request new password

Welcome to Drupal 7 demo

No front page content has been created yet.

Powered by Drupal
Granular theming of content

Drupal 6

- $content was a big string of XHTML
- Fine-grained control over where *one* part of content goes means being responsible for *all* parts of content
- Security averse
- Even comments are in this mix
Granular theming of content

Drupal 7

```php
<div class="content clearfix">
 <?php
     // We hide the comments and links now so that we can render them later.
     hide($content['comments']);
     hide($content['links']);
     print render($content);
  ?>
</div>

<?php if (!empty($content['links'])): ?>
  <div class="links"><?php print render($content['links']); ?></div>
<?php endif; ?>

<?php print render($content['comments']); ?>
```

- $content is now an array of page properties that keeps track of what’s been printed so far.
- Selectively hide parts until you’re ready to print them where YOU want.
<?php
$type->rdf_mapping = array(
    'rdftype'  => array('sioc:Item', 'foaf:Document'),
    'title'   => array('dc:title'),
    'created' => 'dc:created',
    'changed' => 'dc:modified',
    'body'    => 'content:encoded',
    'uid'     => 'sioc:has_creator',
    'name'    => 'foaf:name',
);
?>
JavaScript improvements

- jQuery 1.3, jQuery Forms 2.2, jQuery UI 1.7
- drupal_add_library() for adding related js/css files
- New AJAX framework (from cTools) in core
- drupal_add_js/css() improved
- Use jQuery alongside other JS frameworks
- Form API dependencies (show box B when box A is checked)
Changes for coders
SimpleTest

Testing

Select the tests you would like to run, and click Run tests.

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregator</td>
<td></td>
</tr>
<tr>
<td>Block</td>
<td>Add, edit and delete custom block. Configure and move a module-defined block.</td>
</tr>
<tr>
<td>Non default theme admin</td>
<td>Check the administer page for non default theme.</td>
</tr>
<tr>
<td>Blog</td>
<td></td>
</tr>
<tr>
<td>Blog API</td>
<td></td>
</tr>
<tr>
<td>Book</td>
<td></td>
</tr>
<tr>
<td>Bootstrap</td>
<td></td>
</tr>
<tr>
<td>Cache</td>
<td></td>
</tr>
<tr>
<td>Comment</td>
<td></td>
</tr>
</tbody>
</table>
testing.drupal.org

• “Patch (code needs review)” and “Patch (reviewed & tested by community)” statuses can now be trusted.
• Reviewers no longer getting carpal tunnel clicking through all the basic stuff.
• Running the full test suite takes a long time; let a computer do it for you!
• Notifies author within 24 hours if patch no longer applies or breaks tests.
Database
The next generation
The who in the what now?

• Database abstraction layer utilizing PHP’s Data Objects (PDO)
• Theoretical support for any PHP supported database
• mysql, sqlite, and pgsql drivers included
• Support for master/slave replication, transactions, multi-insert queries, delayed inserts, and other features
Drupal 6:

```php
$result = db_query("SELECT nid, title FROM {node} WHERE type = '%s' AND nid = %d", array($type, $nid));

$node = db_fetch_object($result);
```

Drupal 7:

```php
$node = db_query('SELECT nid, title FROM {node} WHERE type = :type AND nid = :nid', array(':type' => $type, ':nid' => $nid))->fetchObject();
```
Dynamic Select Queries

Drupal 6:

```php
$result = pager_query(db_rewrite_sql('SELECT n.nid FROM {node} n
WHERE n.promote = 1 AND n.status = 1 ORDER BY n.sticky DESC,
n.created DESC'), variable_get('default_nodes_main', 10));
```

Drupal 7:

```php
$select = db_select('node', 'n')
    ->fields('n', array('nid'))
    ->condition('promote', 1)
    ->condition('status', 1)
    ->orderBy('sticky', 'DESC')
    ->orderBy('created', 'DESC')
    ->extend('PagerDefault')
    ->limit(variable_get('default_nodes_main', 10))
    ->addTag('node_access');
```
Drupal 6:

```php
function hook_db_rewrite_sql($query, $primary_table, $primary_field, $args) {
    switch ($primary_field) {
        case 'nid':
            $return = array();
            if ($primary_table != 'n') {
                $return['join'] = "LEFT JOIN {node} n ON $primary_table.nid = n.nid";
            }
            $return['where'] = 'created >' . time() - 3600;
            return $return;
            break;
    }
}
```

Drupal 7:

```php
function hook_query_alter(&$query) {
    if ($query->hasTag('node_access')) {
        $query->condition('created', time() - 3600, '>');
    }
}
```
File System
File API improvements

• Files are now first-class objects
• hook_file_load(), hook_file_save(), hook_file_move(), etc.
• Files are managed automatically; no need to deal with {files} table yourself
• hook_file_url_alter() for CDN support
Stream wrapper support

• Rather than referencing files by path, you now reference them by URI: schema:///file/path/file.ext
• Allows you to change location of files directory without a database update.
• public://, private://, temp:// supported in core.
• Contributed modules can also create s3://, flickr://, etc.
APIs
APIs

- Roles/Permissions API
- Filter/Format API
- Centralized static caching mechanism
- Locking framework
- Job queue
Field API

- Not node-specific
- Declare any entity in Drupal as “fieldable”
- Swappable storage back-ends (currently, SQL but potentially web services, etc.)
- Supports translatable content.
Image API

• Image toolkits now implemented as modules, rather than .inc files that users need to copy over.
• Supports image manipulation effects: scale, crop, resize, rotate...
• Can combine these into “image styles” that can be applied to any image (user pictures, file uploads...)
Registry

• Auto-parses and caches list of all **functions**, classes, and interfaces in all files

• Facilitates faster hook calls; only loop through modules that implement a hook
Class registry

• Auto-parses and caches list of all classes and interfaces in all files

• Allows you to do:

  $foo = new Foo;

• ...from anywhere
Speed and scalability

- Proxy and reverse-proxy support: serve anonymous page requests entirely via proxy
- Many micro-optimizations through XDebug profiling
- Smarter look-ahead system for grabbing path aliases
- InnoDB default storage system (MySQL)
- CDN support for files
Node Access Improvements

• “administer nodes” and “bypass node access” two separate permissions
• Alter hook_node_grants and hook_node_access_records
• Node access applies to unpublished nodes
• hook_node_access() allows modules to influence access on nodes defined by other modules
Install Profiles

Drupal 6

default.profile

```php
function PROFILE_profile_modules() {
    return array('module1', 'module2');
}

function PROFILE_profile_details() {
    return array(
        'name' => 'Example',
        'description' => 'Description.',
    );
}

function PROFILE_profile_task_list() {
}

function PROFILE_profile_tasks(...) {
    // Start-up tasks...
}

function PROFILE_form_alter(...) {
    // Alterations to set-up form...
}
```

Drupal 7

default.info

```plaintext
name = Example
description = Description
core = 7.x
dependencies[] = module1
dependencies[] = module2 (>=2.4-beta2)
files[] = example.profile

default.install

function PROFILE_install() {
    // Start-up tasks...
}

default.profile

function PROFILE_form_alter(...) {
    // Alterations to set-up form...
}
```
Backup and Migrate

By ronan on the 3rd of November, 2007

#D7CX: I pledge that Backup and Migrate will have a full Drupal 7 release on the day that Drupal 7 is released.

Backup and Migrate simplifies the task of backing up and restoring your Drupal database.
The bottom line

• Easier to get started
  – Check requirements
  – Download Drupal 7
  – Create database
  – Install
  – Add themes & modules from interface

• Easier to build out
  – Improved administration
  – Themer friendly

• Easier to develop
  – More consistent and flexible

• Easier to integrate
  – RDFa
Thanks to”
Angela “webchick” Byron
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