

What's New in Drupal 7

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Who makes Drupal



Committers



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



Gratuitous Catfish Shot



Changes for Users

D7UX

Drupal 7 User Experience Project

making Drupal7 an amazing user experience

[About](#) [Project Framework](#)

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

Media Library Microproject - Update & Feedback Please!

Posted: July 3rd, 2009 | **Author:** [Leisa Reichelt](#) | **Filed under:** [4.0 Content](#), [designing together](#) | **Tags:** [media](#), [media library](#), [microprojects](#) | [10 Comments »](#)



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- [Media Library Microproject - Update & Feedback Please!](#)
- [D7UX Information Architecture - A detailed view](#)
- [Information Architecture Strategies](#)
- [Understanding the D7UX Information Architecture Approach](#)

<http://www.d7ux.org/>

New Information Architecture

A decorative graphic in the top right corner consisting of two red circles connected by a thin grey line. The left circle contains a white wireframe cube icon, and the right circle contains a white telephone handset icon.

- 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.

Default front page



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 modules you need. For more information, see the [Drupal modules download section](#).
- 3. Customize your website design**
To change the "look and feel" of your website, visit the [themes page](#) to view the available themes or download additional themes from the [Drupal theme directory](#).
- 4. Start posting content**
Finally, you can [create content](#) for your website. For more information, see the [Drupal content creation guide](#).

For more information, please refer to the [Drupal documentation](#), the [Drupal forum](#), or view the wide range of [Drupal resources](#).

Drupal 7

Welcome to localhost

No front page content has been created yet.

- [Create content](#)
- [Change the default front page](#)

Help

Help

Dashboard

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:

- [Block](#)
- [Color](#)
- [Comment](#)
- [Contextual links](#)
- [Dashboard](#)
- [Database logging](#)
- [Field](#)
- [Field SQL storage](#)
- [Field UI](#)
- [File](#)
- [Filter](#)
- [Help](#)
- [Image](#)
- [List](#)
- [Menu](#)
- [Node](#)
- [Number](#)
- [Options](#)
- [Overlay](#)
- [Path](#)
- [RDF](#)
- [Search](#)
- [Shortcut](#)
- [System](#)
- [Taxonomy](#)
- [Text](#)
- [Toolbar](#)
- [Update manager](#)
- [User](#)

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

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.

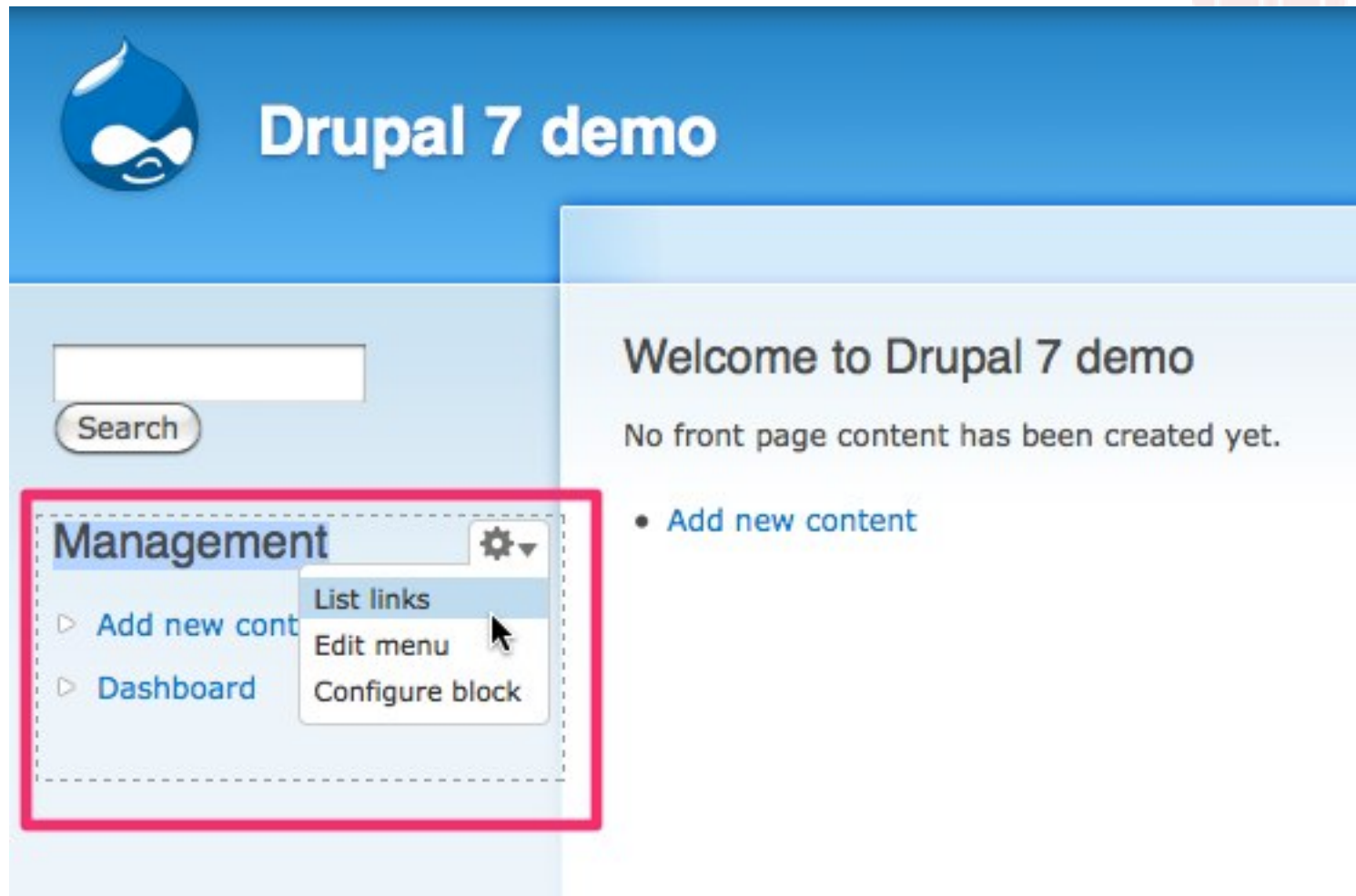
Delete the account and make all content belong to the *Anonymous* user.

Delete the account and all content.

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

[Cancel](#)

Edit in place



The screenshot shows the Drupal 7 demo interface. At the top left is the Drupal logo and the text "Drupal 7 demo". Below this is a search bar with a "Search" button. A "Management" menu is highlighted with a red dashed box. The menu items are "Add new content" and "Dashboard". A sub-menu is open, showing "List links", "Edit menu", and "Configure block". A mouse cursor is pointing at "Edit menu". To the right of the menu is a "Welcome to Drupal 7 demo" message and a link to "Add new content".

Drupal 7 demo

Search

Management

- ▶ Add new content
- ▶ Dashboard

- List links
- Edit menu
- Configure block

Welcome to Drupal 7 demo

No front page content has been created yet.

- [Add new content](#)

Admin Theme: "Seven"



[Home](#) » [Administer](#)

Content

CONTENT

COMMENTS

[+ Add new content](#)

SHOW ONLY ITEMS WHERE

status is

type

UPDATE OPTIONS

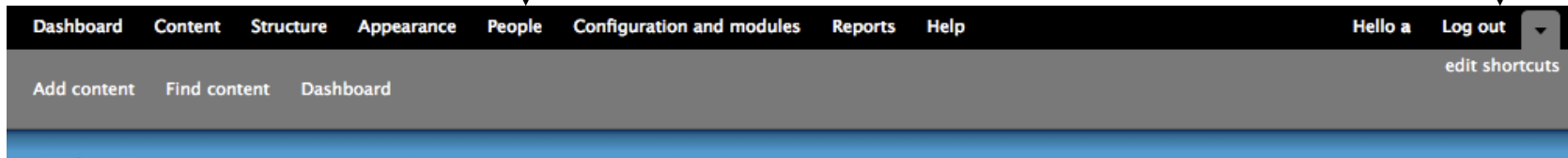
<input type="checkbox"/>	TITLE	TYPE	AUTHOR	STATUS	UPDATED	OPERATIONS
<input type="checkbox"/>	A piece of content	Article	a	published	08/30/2009 - 17:18	edit
<input type="checkbox"/>	A page!	Page	a	published	08/30/2009 - 17:19	edit

Toolbar & Shortcuts



Toolbar shows new
IA along the top

User account-related
info easily accessible



User specific admin shortcuts

Administrative Dashboard

Dashboard Content Structure Appearance People Configuration and modules Reports Help

Hello a Log out edit shortcuts

Add content Find content Dashboard

Home » Administer

Dashboard ↻

Drag and drop dashboard blocks to their place. Changes are automatically saved. You can also [add a custom block](#). Done

Recent comments Administration shortcuts Syndicate Search form Shortcuts Powered by Drupal Navigation

User menu Main menu

Management List links Edit menu Configure block

- ▶ Add new content
- ▼ Administer
 - ▼ Dashboard
 - Content
 - ▶ Structure
 - Appearance
 - People
 - ▶ Configuration and modules
 - ▶ Reports
 - Help

Who's new Configure block

a

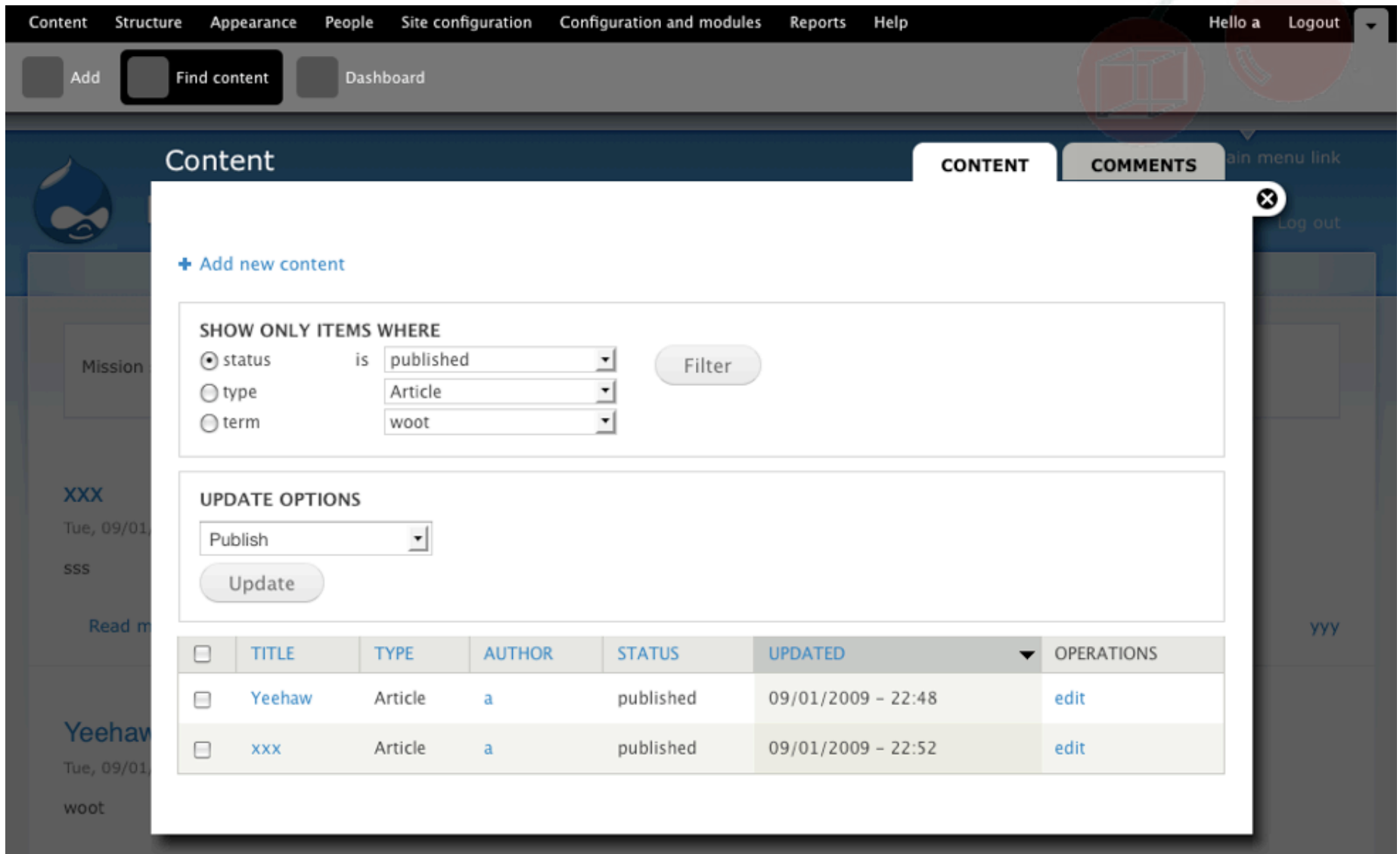
Secondary menu

Who's online

There is currently 1 user online.

a

Overlays



The screenshot displays a Drupal administration interface with a content overlay. The overlay is titled "Content" and has a close button (X) in the top right corner. It contains the following sections:

- + Add new content**
- SHOW ONLY ITEMS WHERE**
 - status is
 - type
 - term
- UPDATE OPTIONS**
 -
 -
- Table of Content Items:**

<input type="checkbox"/>	TITLE	TYPE	AUTHOR	STATUS	UPDATED	OPERATIONS
<input type="checkbox"/>	Yeehaw	Article	a	published	09/01/2009 - 22:48	edit
<input type="checkbox"/>	xxx	Article	a	published	09/01/2009 - 22:52	edit

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 required. You can use the following [user:mail], [site:login-url], [use

Subject

Account details for [user:na

Body

[user:name],

Module screen



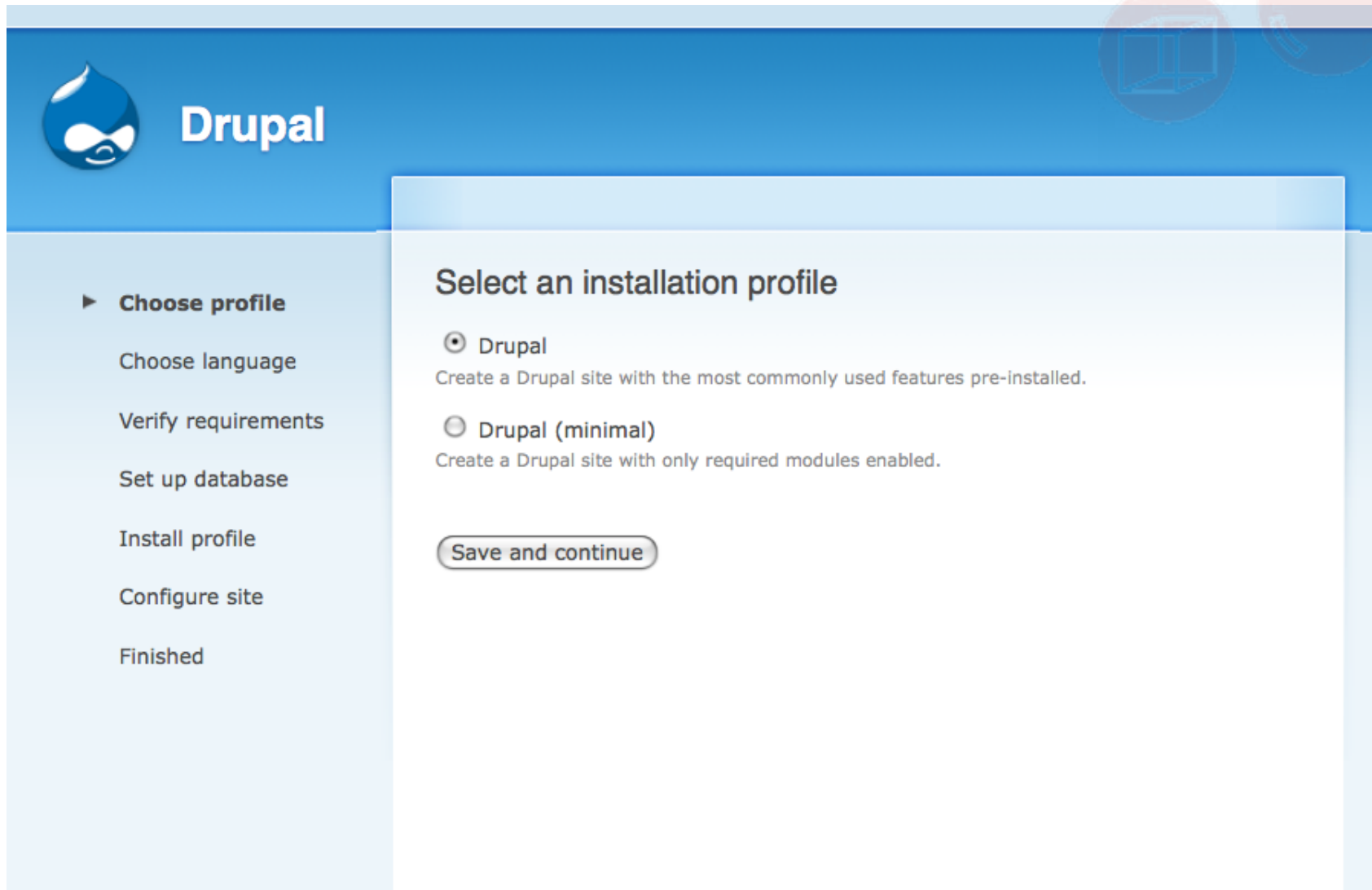
ENABLED	NAME	VERSION	DESCRIPTION	OPERATIONS
<input type="checkbox"/>	Aggregator	7.0-alpha2	Aggregates syndicated content (RSS, RDF, and Atom feeds).	
<input checked="" type="checkbox"/>	Block	7.0-alpha2	Controls the visual building blocks a page is constructed with. Blocks are boxes of content rendered into an area, or region, of a web page. Required by: Dashboard (enabled)	? Help 🔍 Permissions ⚙️ Configure
<input type="checkbox"/>	Blog	7.0-alpha2	Enables multi-user blogs.	
<input type="checkbox"/>	Book	7.0-alpha2	Allows users to create and organize related content in an outline.	
<input checked="" type="checkbox"/>	Color	7.0-alpha2	Allows administrators to change the color scheme of compatible themes.	? Help
<input checked="" type="checkbox"/>	Comment	7.0-alpha2	Allows users to comment on and discuss published content. Required by: Forum (disabled), Tracker (disabled)	? Help 🔍 Permissions ⚙️ Configure

Permission screen



PERMISSION	ANONYMOUS USER	AUTHENTICATED USER	ADMINISTRATOR
Block			
Administer blocks Select which blocks are displayed, and arrange them on the page.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comment			
Administer comments Manage and approve comments, and configure comment administration settings.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Access comments View comments attached to content.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Post comments Add comments to content (approval required).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Default/Minimal Profile



The image shows a screenshot of the Drupal installation process. At the top left, the Drupal logo and the word "Drupal" are displayed. On the right side, there are two red circular icons connected by a line, one showing a building and the other a document. Below the header, a sidebar on the left lists the installation steps: "Choose profile" (highlighted with a right-pointing triangle), "Choose language", "Verify requirements", "Set up database", "Install profile", "Configure site", and "Finished". The main content area is titled "Select an installation profile" and contains two radio button options. The first option is "Drupal", which is selected (indicated by a filled radio button), with the description "Create a Drupal site with the most commonly used features pre-installed." The second option is "Drupal (minimal)", which is not selected (indicated by an empty radio button), with the description "Create a Drupal site with only required modules enabled." At the bottom of the main content area, there is a button labeled "Save and continue".

Drupal

► **Choose profile**

- Choose language
- Verify requirements
- Set up database
- Install profile
- Configure site
- Finished

Select an installation 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

[Home](#) » [Administer](#) » [Configuration and modules](#) » [Regional and language](#)

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.

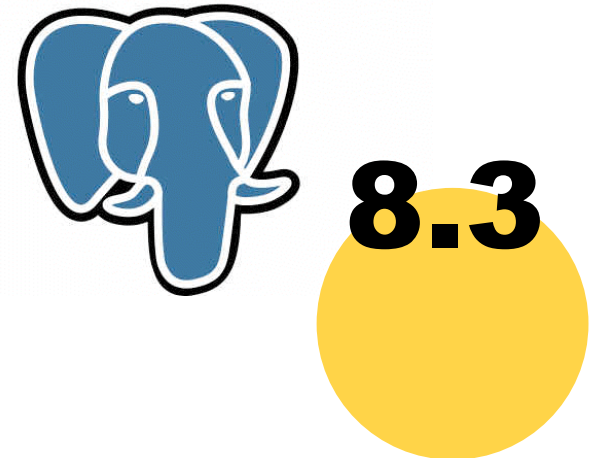
Time zone for new users

- Default time zone.
- Empty time zone.
- Users may set their own time zone at registration.

New Minimum Requirements



PostgreSQL





Changes for site builders

Mix and Match Public and Private files



[Home](#) » [Administer](#) » [Configuration and modules](#) » [Media](#)

File system

Public file system path

A local file system path where public files will be stored. This directory must exist and be writable by Drupal. This directory must be relative to the Drupal installation directory and be accessible over the web.

Private file system path

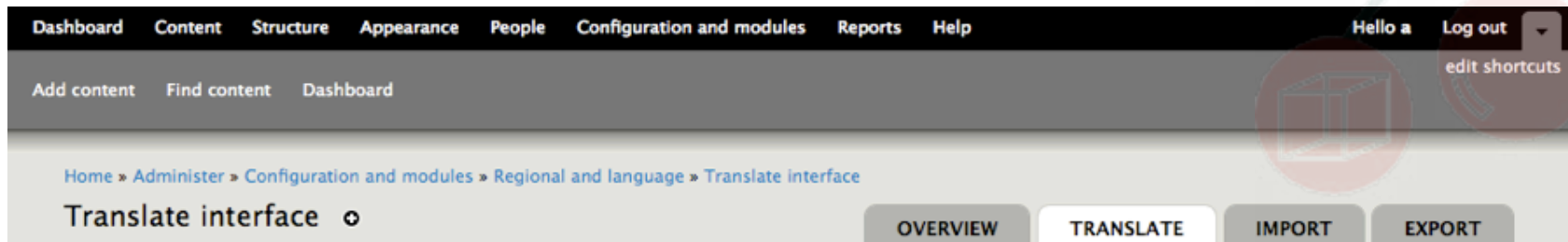
A local file system path where private files will be stored. This directory must exist and be writable by Drupal. This directory should not be accessible over the web.

Internationalization



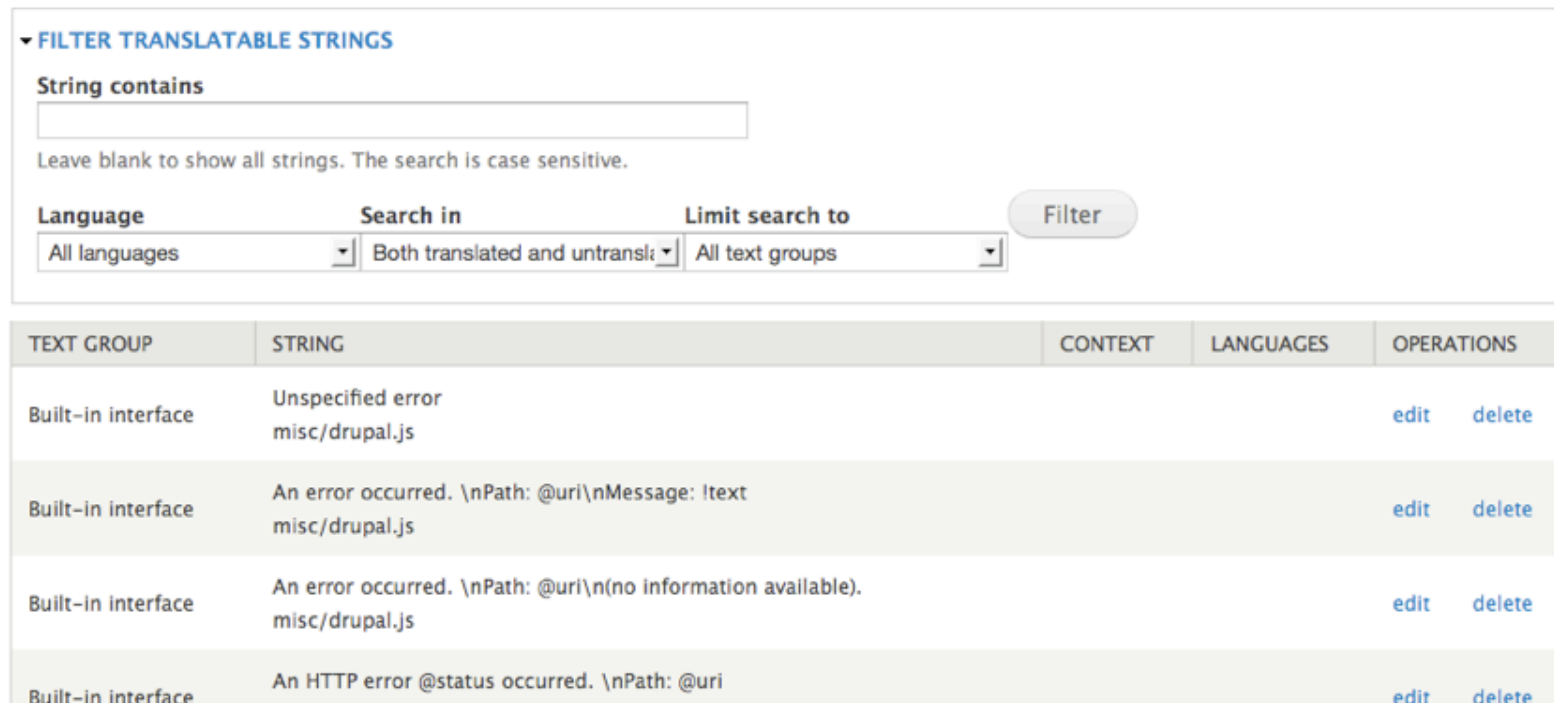
- New translation interface
- Search module supports language-aware searches
- Individual fields can be marked translatable/untranslatable
- Support for message contexts (msgctxt) to make translation of short words like “View” much easier.

New translation interface



The screenshot shows the top navigation bar of the Drupal Translate interface. The main menu includes Dashboard, Content, Structure, Appearance, People, Configuration and modules, Reports, and Help. A secondary menu below it contains Add content, Find content, and Dashboard. The breadcrumb trail is Home » Administer » Configuration and modules » Regional and language » Translate interface. The page title is 'Translate interface' with a search icon. There are four tabs: OVERVIEW, TRANSLATE (active), IMPORT, and EXPORT. On the right, there is a user profile 'Hello a', a 'Log out' button, and a link to 'edit shortcuts'.

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.



The 'FILTER TRANSLATABLE STRINGS' section contains a search form. It has a text input field for 'String contains' with a placeholder. Below it is the instruction: 'Leave blank to show all strings. The search is case sensitive.' There are three dropdown menus: 'Language' (set to 'All languages'), 'Search in' (set to 'Both translated and untransl'), and 'Limit search to' (set to 'All text groups'). A 'Filter' button is to the right of the dropdowns.

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 *

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

EFFECT	OPERATIONS
<input type="checkbox"/> Scale and crop 85x85	edit delete
<input type="checkbox"/> Desaturate	delete
<input type="checkbox"/>	
<input type="text" value="Select a new effect"/>	
<input type="button" value="Add"/>	

Preview

original (view actual size)



600px

800px

thumbnail (view actual size)

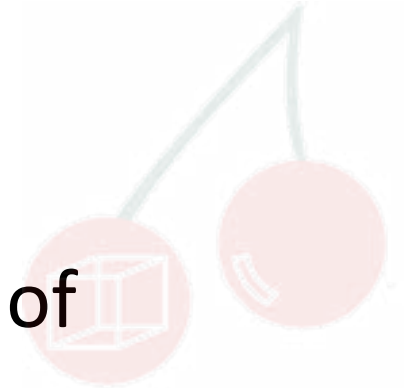


85px

85px

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)

Dashboard Content Structure Appearance People Configuration and modules Reports Help Hello a Log out
Add content Find content Dashboard edit shortcuts

Home » Article

Article

EDIT MANAGE FIELDS DISPLAY FIELDS

LABEL	NAME	FIELD	WIDGET	OPERATIONS
+ Title	title	Text	Text field	
+ Body	body	Long text and summary	Text area with a summary	edit delete
+ Add new field				

New field
Label

field_ new_field
Field name (a-z, 0-9, _)

Long text

Text area (multiple rows)
Form element to edit the data.

Save

- Select a field type -
- Boolean
- Decimal
- File
- Float
- Image
- Integer
- List
- List (numeric)
- List (text)
- Long text
- Long text and summary
- Taxonomy term
- Text

Field Types in Core



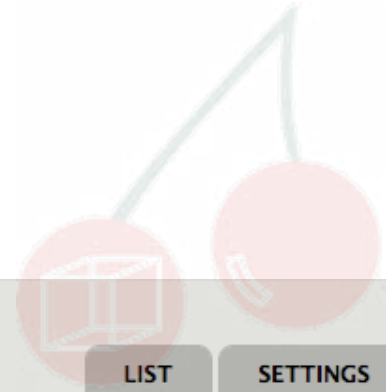
- Boolean
- Decimal/Float/Integer
- File
- Image
- List
- Text/Textarea
- Taxonomy term
- Node Body (long text and summary)

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



[Home](#) » [Administer](#) » [Reports](#) » [Available updates](#)

Available updates

Last checked: 6 sec ago [\(Check manually\)](#)

Disabled add-ons

<input checked="" type="checkbox"/>	NAME	INSTALLED VERSION	RECOMMENDED VERSION
<input checked="" type="checkbox"/>	Taxonomy CSV import	7.x-4.5	7.x-4.6 (Release notes)

[Download these updates](#)

Add-ons requiring manual updates

Updates of Drupal core or development releases are not supported at this time.


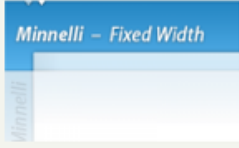
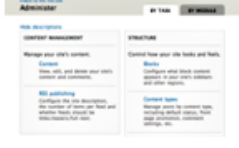

NAME	INSTALLED VERSION	RECOMMENDED VERSION
Drupal	7.0-dev	7.x-dev (Release notes)

Install and update modules
and themes from drupal.org!



Changes for designers and front-end developers

Old table-based themes removed from core

SCREENSHOT	NAME	VERSION	ENABLED	DEFAULT	OPERATIONS
	Garland Tableless, recolorable, multi-column, fluid width theme.	7.0-dev	<input checked="" type="checkbox"/>	<input type="radio"/>	configure
	Minnelli Tableless, recolorable, multi-column, fixed width theme.	7.0-dev	<input type="checkbox"/>	<input type="radio"/>	
	Seven A simple one-column, tableless, fluid width administration theme.	7.0-dev	<input checked="" type="checkbox"/>	<input type="radio"/>	configure
	Stark This theme demonstrates Drupal's default HTML markup and CSS styles. To learn how to build your own theme and override Drupal's default code, you should start reading the Theming Guide .	7.0-dev	<input type="checkbox"/>	<input type="radio"/>	

ADMINISTRATION THEME

Administration theme

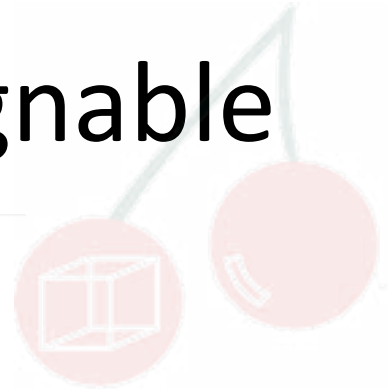
Seven

Choose "Default theme" to always use the same theme as the rest of the site.

Use the administration theme when editing or creating content

Many page elements assignable

Block	Region	Operations
Header		
+ User login	Header	configure
Left sidebar		
+ Navigation	Left sidebar	configure
Right sidebar		
<i>No blocks in this region</i>		
Highlighted content		
+ Mission statement	Highlighted content	configure delete
Help		
+ System help	Help	configure
Content		
+ Main page content	Content	configure
Footer		
+ Footer message	Footer	configure delete
+ Powered by Drupal	Footer	configure



Re-vamped *.tpl.php

```
78 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
79   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
80 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="<?php print $language-
  . >language ?>" lang="<?php print $language->language ?>" dir="<?php print
  . $language->dir ?>">
81
82 <head>
83   <?php print $head; ?>
84   <title><?php print $head_title; ?></title>
85   <?php print $styles; ?>
86   <?php print $scripts; ?>
87   <script type="text/javascript"><?php /* Needed to avoid Flash of Unstyled
  . Content in IE */ ?> </script>
88 </head>
89 <body class="<?php print $body_classes; ?>">
90   <div id="page">
91     <div id="header">
92       <div id="logo-title">
93
94         <?php if (!empty($logo)): ?>
95           <a href="<?php print $front_page; ?>" title="<?php print
  . t('Home'); ?>" rel="home" id="logo">
96             " />
97           </a>
98         <?php endif; ?>
```

Re-vamped *.tpl.php

```
100 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML+RDFa 1.0//EN"
101   "http://www.w3.org/MarkUp/DTD/xhtml-rdfa-1.dtd">
102 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="<?php print $language-
. >language; ?>" dir="<?php print $language->dir; ?>"
103   <?php print $rdf_namespaces; ?>>
104
105 <head profile="<?php print $grddl_profile; ?>">
106   <title><?php print $head_title; ?></title>
107   <?php print $head; ?>
108   <?php print $styles; ?>
109   <?php print $scripts; ?>
110 </head>
111 <body class="<?php print $classes; ?>">
112
113   <?php print $page_top; ?>
114
115   <div id="page-wrapper"><div id="page">
116
117     <div id="header"><div class="section clearfix">
118
119       <?php if ($logo): ?>
120         <a href="<?php print $front_page; ?>" title="<?php print t('Home'); ?
. >" rel="home" id="logo">
121           " />
122         </a>
123       <?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

```
<body class="<?php print $body_classes; ?>">
  <div id="page">
    <div id="header">
      <div id="logo-title">
        <php if (empty($logo)): ?>
          <a href="<?php print $front_page; ?>" title="<?php print t('Home'); ?>">
            <img alt="<?php print t('Home'); ?>" />
          </a>
        <?php endif; ?>
      </div>
      <div id="name-and-slogan">
        <?php if (!empty($site_name)): ?>
          <a href="<?php print $front_page; ?>" title="<?php print t('Home'); ?>">
            <span><?php print $site_name; ?></span></a>
          <?php if (!empty($site_slogan)): ?>
            <div id="site-slogan"><?php print $site_slogan; ?></div>
          <?php endif; ?>
        </div> <!-- /name-and-slogan -->
      </div> <!-- /logo-title -->
    </div>
    <?php if (empty($search_box)): ?>
      <div id="search-box"><?php print $search_box; ?></div>
    </div>
  </div>
</body>
```

Stark: Naked Drupal

[Skip to main content](#)



[Drupal 7 demo](#)

User login

Username *

Password *

- [Create new account](#)
- [Request new password](#)

Powered by [Drupal](#)

Welcome to Drupal 7 demo

No front page content has been created yet.

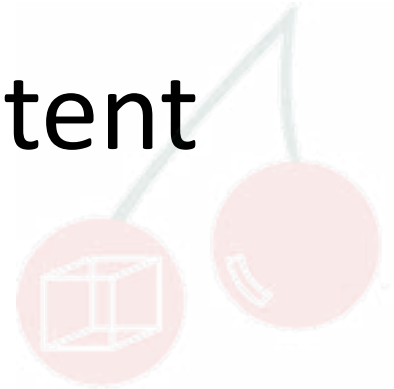


Granular theming of content

Drupal 6

```
<div class="content clear-block">  
  <?php print $content ?>  
</div>
```

- \$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

```
<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.

RDFa

Default mapping for nodes:

```
<?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



home > Administer > Site building

Testing

Tests

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

<input type="checkbox"/>	Test	Description
<input type="checkbox"/>	▶ Aggregator	
<input checked="" type="checkbox"/>	▼ Block	
<input checked="" type="checkbox"/>	Block functionality	Add, edit and delete custom block. Configure and move a module-defined block.
<input checked="" type="checkbox"/>	Non default theme admin	Check the administer page for non default theme.
<input type="checkbox"/>	▶ Blog	
<input type="checkbox"/>	▶ Blog API	
<input type="checkbox"/>	▶ Book	
<input type="checkbox"/>	▶ Bootstrap	
<input type="checkbox"/>	▶ Cache	
<input type="checkbox"/>	▶ Comment	

a

- My account
- ▶ Create content
- ▼ Administer
 - ▶ Content management
 - ▼ Site building
 - Blocks
 - Content types
 - ▶ Menus
 - Modules
 - Testing
 - Themes
 - ▶ Site configuration
 - ▶ User management
 - ▶ Reports
 - Help
- Log out

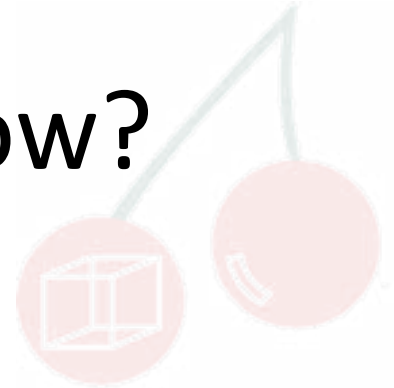
testing.drupal.org

- “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

Static Select Queries



Drupal 6:

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

Drupal 7:

```
$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:

```
$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:

```
$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');
```

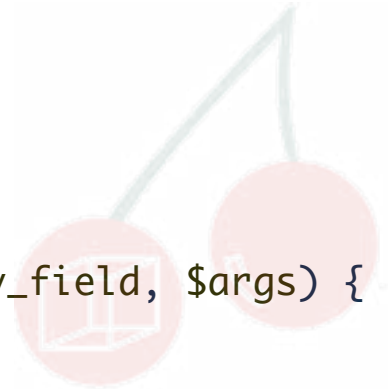

hook_query_alter()

Drupal 6:

```
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;
  }
}
```

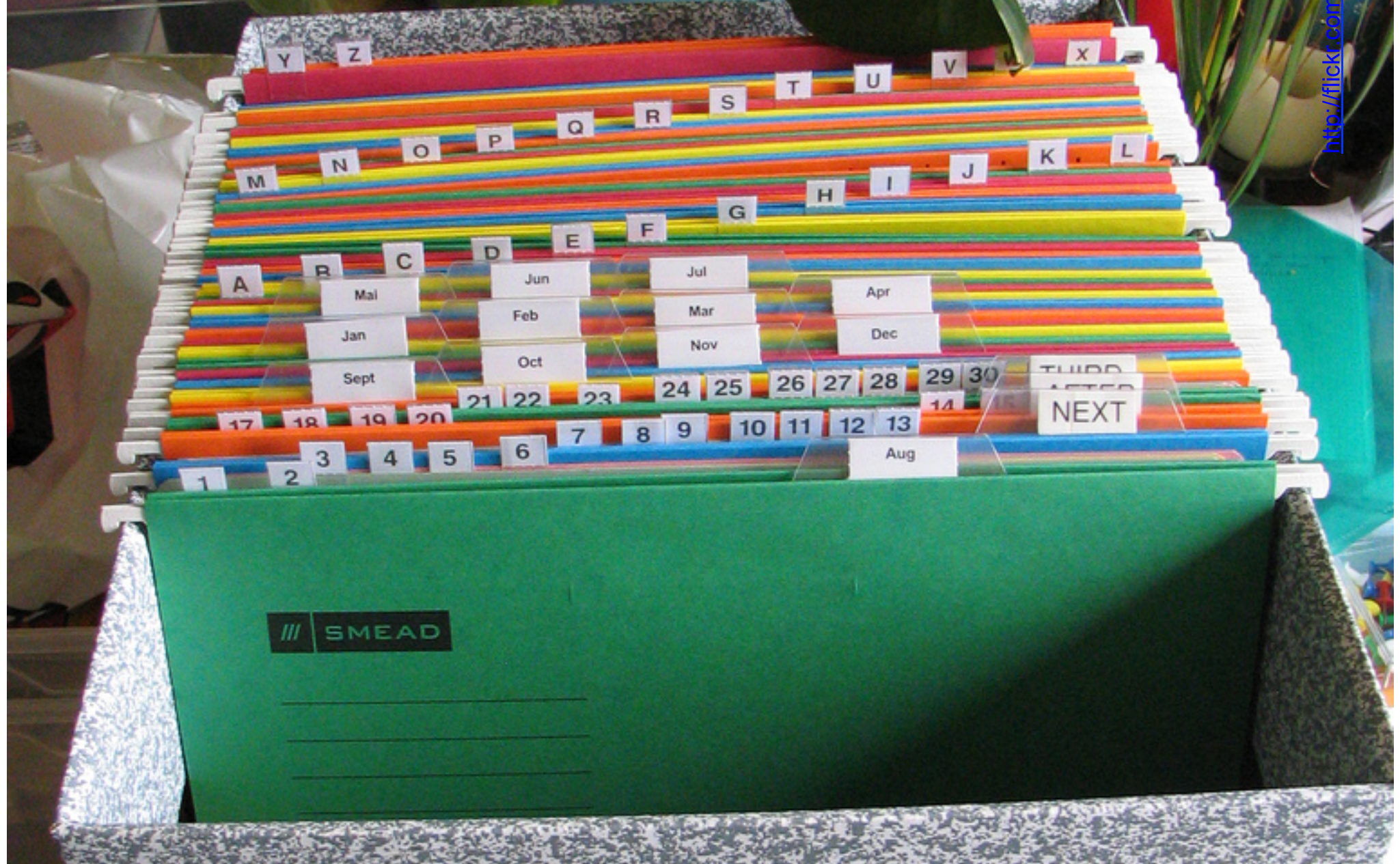
Drupal 7:

```
function hook\_query\_alter(&$query) {
  if ($query->hasTag('node_access')) {
    $query->condition('created', time() - 3600, '>');
  }
}
```



File System

<http://flickr.com/photos/bunny/>



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



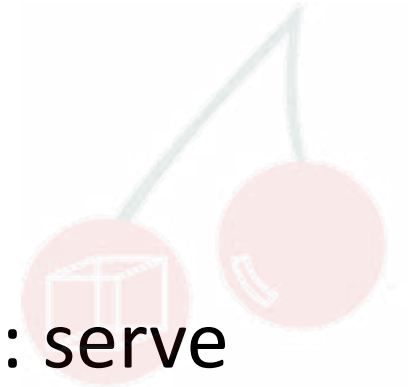
- Auto-parses and caches list of all classes and interfaces in all files
- Allows you to do:

```
$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

```
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

```
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...
}
```



#D7CX



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
for many of the slides!



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