

Intro to Drupal

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Agenda

- **Installation**
- **Anatomy**
- **Terminologies**

Installation

System Requirements

- **Web Server – Apache, Nginx, IIS, Lighttpd**
- **Database Server**
 - **Drupal 6: MySQL 4.1 or higher, PostgreSQL 7.1,**
 - **Drupal 7: MySQL 5.0.15 or higher with PDO, PostgreSQL 8.3 or higher with PDO, SQLite 3.3.7 or higher**
 - **Drupal 8: MySQL 5.0.15/MariaDB/Percona/equivalent or higher with PDO and an InnoDB-compatible primary storage engine, PostgreSQL 8.3 or higher with PDO, SQLite 3.3.7 or higher**
 - **Microsoft SQL Server and Oracle are supported by additional modules.**
 - **More details about database requirements .**

System Requirements

- **PHP**

- **Drupal 6: PHP 5.2.x only. Warning: support for PHP 4.x has been dropped. PHP 5.3 and later may produce errors or unexpected behaviour.**
- **Drupal 7: PHP 5.2.5 or higher (5.3 recommended).**
- **Drupal 8: PHP 5.4 or higher.**
- **More details about PHP requirements, including PHP memory.**

Download and extract Drupal

Drupal is available in two supported versions (the most recent and the previous). The "recommended release" is the latest stable release of that version. To learn more about versions, see the **Drupal version information** page.

On many *nix computers the path from the server's root will be `/var/www/`, so `cd /var/www/`. On a shared server, or a server that hosts multiple domains, the path will be different (try `cd ~/www` or `cd ~/public_html`).

Download and extract Drupal

Download Drupal using any download utility, the two most popular of which are `wget` and `curl`. Not every computer has both.

The commands are, respectively:

```
$ wget http://ftp.drupal.org/files/projects/drupal-x.x.tar.gz
```

or

```
$ curl -O http://drupal.org/files/projects/drupal-x.x.tar.gz
```

Note: The option for the curl command is the upper case letter "O" and not the numeral that stands for zero.

Download and extract Drupal

Replace the "http://drupal.org/files/projects/drupal-x.x.tar.gz" string in the commands with the link for the version you will be installing. To get links to recent versions, visit <https://drupal.org/project/drupal>. Don't visit <http://ftp.drupal.org/files/projects> unless you have to, because it takes long to serve (it lists many files).

Download and extract Drupal

Extracting Drupal

Type the following command (replacing "x.x" with your downloaded version's number):

```
$ tar -xzf drupal-x.x.tar.gz
```

Remove the compressed version of the file by using the following command:

```
$ rm drupal-x.x.tar.gz
```

Download and extract Drupal

Moving Drupal to its intended location

Now you need to move the contents of the `drupal-x.x` directory one level "up" into the web server's document root or your public HTML directory:

```
$ mv drupal-x.x/* drupal-x.x/.htaccess ./
```

For Drupal 7 also add

```
$ mv drupal-x.x/.gitignore ./
```

Delete drupal-x.x

```
$ rmdir drupal-x.x
```

Create the database

Note: Since 8.x, Drupal can create the database itself if its database user has enough privileges. See the relevant change notice.

Before running the installation script, you must create an empty database and database user (a user name assigned the rights to use the Drupal database).

Create the database

Tools you can use to create database.

- **PHPMyAdmin**
- **MySQL shell**
- **mysqladmin command**

Create the database

MySQL shell

```
$ mysql -u root -p
```

```
mysql> CREATE DATABASE db_name;
```

Create a new user called YOURNAME **for database called** DB_NAME:

```
mysql> GRANT ALL ON db_name.* TO your_name@localhost IDENTIFIED BY  
'change_me';
```

How do I connect to MySQL database DB_NAME **using** YOURNAME **account?**

```
$ mysql -u your_name -p db_name
```

Create the settings.php file

Your Drupal download comes with a sample configuration file at `sites/default/default.settings.php`.

Before you run the installation script, you must copy the configuration file as a new file called `settings.php` **file and then set some permissions.**

```
$ cp sites/default/default.settings.php sites/default/settings.php
```

To make the settings.php file writeable and to allow the installer to edit the file, use:

```
$ chmod a+w sites/default/settings.php
```

Create the settings.php file

Note: Be sure to change the file's permissions back after you have run the installation script. Those permissions should be:

```
$ chmod 644 settings.php
```

```
$ chmod 755 ../default
```

Create the files directory

To let the files directory be created automatically, give the web server write privileges to the sites/default directory.

```
$ chmod a+w sites/default
```

Or you can create it manually

```
$ mkdir sites/default/files
```

```
$ chmod o+w sites/default/files
```


Run the installation script

You can run the installation script by simply calling

http://localhost. If you created a VirtualHost then you have an option to define your ServerName (domain name).

Installation Process

Select an installation profile



☒ Standard

Install with commonly used features pre-configured.

☐ Minimal

Start with only a few modules enabled.

► Choose profile

Choose language

Verify requirements

Set up database

Install profile

Configure site

Finished

Save and continue

Installation Process

Choose language



☒ English (built-in)

[Learn how to install Drupal in other languages](#)

Save and continue

✓ Choose profile

► Choose language

Verify requirements

Set up database

Install profile

Configure site

Finished

Installation Process

Requirements problem



- ✓ Choose profile
- ✓ Choose language
- **Verify requirements**

Set up database

Install profile

Configure site

Finished

| | |
|---|------------------------|
| Web server | Apache |
| PHP | 5.2.6 |
| PHP register globals | Disabled |
| PHP extensions | Enabled |
| Database support | Enabled |
| PHP memory limit | 64M |
| ✗ File system The directory <i>sites/default/files</i> does not exist. An automated attempt to create this directory failed, possibly due to a permissions problem. To proceed with the installation, either create the directory and modify its permissions manually or ensure that the installer has the permissions to create it automatically. For more information, see INSTALL.txt or the online handbook . | |
| Unicode library | PHP Mbstring Extension |
| ✗ Settings file The settings file does not exist. The Drupal installer requires that you create a settings file as part of the installation process. Copy the <i>./sites/default/default.settings.php</i> file to <i>./sites/default/settings.php</i> . More details about installing Drupal are available in INSTALL.txt . | |

Check the error messages and [proceed with the installation](#).

Installation Process

Database configuration



- ✓ Choose profile
- ✓ Choose language
- ✓ Verify requirements

► Set up database

Install profile

Configure site

Finished

Database type *

- ☒ MySQL, MariaDB, or equivalent
- ☐ PostgreSQL
- ☐ SQLite

The type of database your Drupal data will be stored in.

Database name *

The name of the database your Drupal data will be stored in. It must exist on your server before Drupal can be installed.

Database username *

Database password

► ADVANCED OPTIONS

Save and continue

Installation Process

Installing Drupal



Completed 20 of 28.
Installed *Menu* module.

- ✓ Choose profile
- ✓ Choose language
- ✓ Verify requirements
- ✓ Set up database

► Install profile

Configure site

Finished

Installation Process

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

Finished

SITE INFORMATION

Site name *

Site e-mail address *

Automated e-mails, such as registration information, will be sent from this address. Use an address ending in your site's domain to help prevent these e-mails from being flagged as spam.

SITE MAINTENANCE ACCOUNT

Username *

Spaces are allowed; punctuation is not allowed except for periods, hyphens, and underscores.

E-mail address *

Password *

Password strength:

Confirm password *

Installation Process

Drupal installation complete



Congratulations, you installed Drupal!

[Visit your new site.](#)

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

Changing settings.php permission

Secure your site

After the installation is complete, you will want to change the permissions on the settings.php file back so that it is protected:

```
$ chmod u=rw,o=r,a=r sites/default/settings.php
```

OR

```
$ chmod 644 sites/default/settings.php
```

If you make manual changes to the settings.php file later, be sure to protect it again after making your modifications.

Important: Failing to remove write permissions to the settings.php file is a security risk.

Set up cron

Setting up cron is an important step in the installation of the website and assists in the maintenance of the site's assets for search results, checking for updates to Drupal core and modules, and removing temporary files.

A properly configured cron job can manage a variety of tasks:

- The Search module that indexes the website's content.**
- The Aggregator module's that retrieves feeds.**
- The Ping module that notifies other sites of updates.**
- The System module that performs routine maintenance tasks, such as pruning of logs.**

Set up cron

Enabling cron

In Drupal 8 you can enable cron via Menu > Configuration > System > Cron (admin/config/system/cron). **The default frequency is every three hours. Cron will then be triggered by end users visiting your site, no more frequently than every three hours. Note that for low-traffic sites it can also be desirable to create a cron job.**

In Drupal 7 you can enable cron via the Administration > Configuration > System > Cron (admin/config/system/cron).

In Drupal 6 you need to create a cron job or use Poormanscron.

Set up cron

Disabling cron

For performance reasons it may be desirable to disable cron.

You can disable cron (e.g., at Administration > Configuration > System > Cron (admin/config/system/cron), by setting the "Run cron every" value to "Never".

Another way to disable cron is to add the following line to your settings.php:

```
$conf['cron_safe_threshold'] = 0;
```

Note that this fixes the setting at admin/config/system/cron to "Never", and administrative users cannot override it.

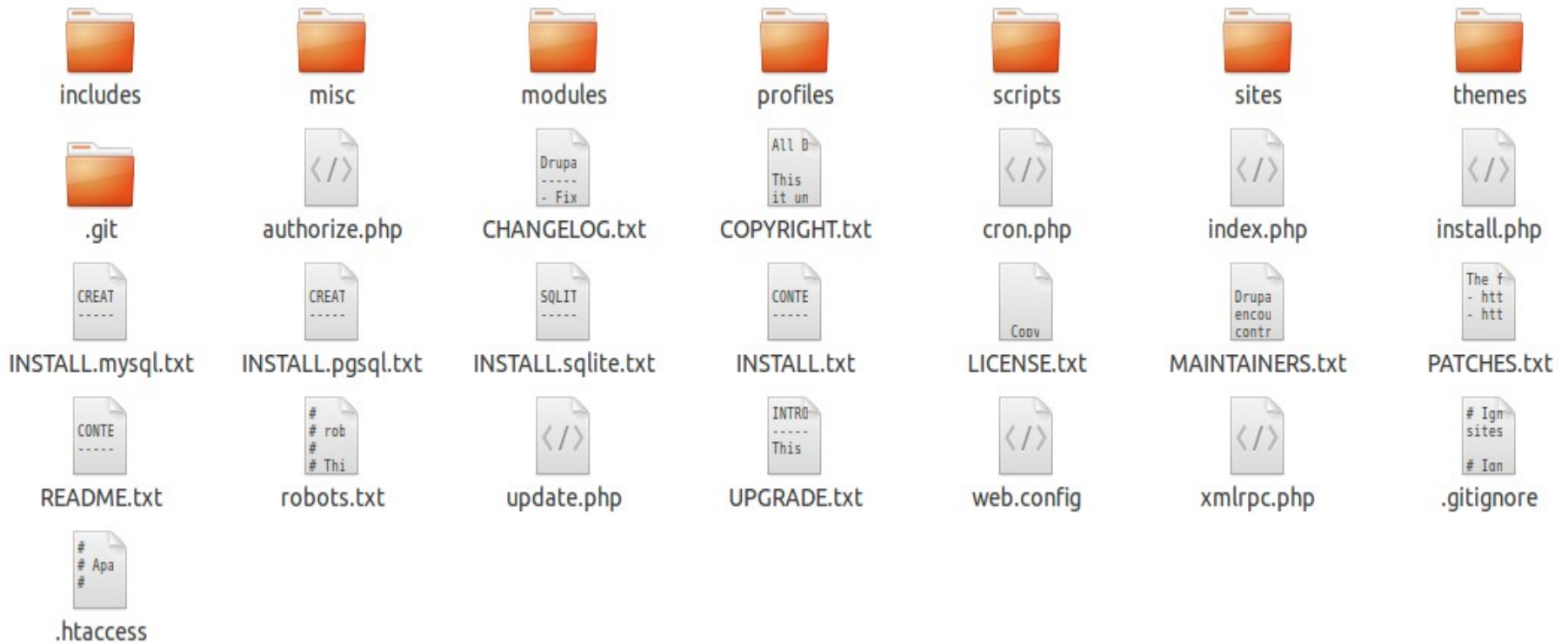
Configure clean URLs

By default, Drupal uses and generates URLs for your site's pages that look like "http://www.example.com/?q=node/83".

With so-called clean URLs this would be displayed without the "?q=" as "http://www.example.com/node/83".

Anatomy

Drupal Structure



Note: Do not touch anything other than sites folder, unless you have to upgrade or update the core.

Drupal Structure



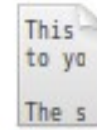
all



default



example.sites.php



README.txt

Drupal Structure



libraries



modules



themes

Drupal Structure



files



default.settings.
php



settings.php

Drupal Structure



contrib



custom



custom_features



development



README.txt

Terminologies

anonymous

A visitor to a Drupal website who is not currently logged in. Drupal considers any such visitor as being the anonymous user, with the user ID 0, and belonging to the anonymous user role.

API

An application programming interface (API) is a particular set of rules (“code”) and specifications that software programs can follow to communicate with each other. Within Drupal there is the API Reference which contains documentation for developers. There is also a Form API and Field API

argument

A section of the path for a page on a Drupal website. In the path `/node/937` the first argument is “node”, and the second is “937”. Some modules, most notably Views, allow the use of “wildcard” arguments that allow a particular page to vary depending on context.

Basic page

One of two content types that are enabled in the standard installation profile. Typically basic pages are used for static content that can (but are not required to) be linked into the main navigation bar. This content type is called "Basic page" in Drupal 7 and later, and "Page" in earlier versions of Drupal.

Base theme

A Base theme is a well-written set of CSS and template files that a theme developer can make use of in a new custom theme. Theme developers can make sub themes to override the default base theme. Some of the popular base themes include Zen, Omega and AdaptiveTheme

block

The boxes visible in the regions of a Drupal website. Most blocks (e.g. recent forum topics) are generated on-the-fly by various Drupal modules, but they can be created in the administer blocks area of a Drupal site. See the documentation for more information on blocks.

cache

The core Drupal cache stores assembled pages and blocks for anonymous visitors in the cache tables in the database. Other popular Drupal caching options include boost, memcache, and authcache.

Content type

Every node belongs to a single “node type” or “content type”, which defines various default settings for nodes of that type, such as whether the node is published automatically and whether comments are permitted. Common "Content Types" that just about any website would have include: blog post and page. Content types can have different fields and modules can define their own content types. The core Drupal Book and Poll modules are two examples of modules that define content types.

contrib

Contributed modules or themes that are not part of the core Drupal product. Contributed modules and themes are available for separate download from the modules and themes sections of Drupal.org downloads. These are separate from the Drupal “core”, although over time they can become part of it. Similar concepts exist in other software and are sometimes called “plugins”, “add-ons” or “extensions”.

core

The files and modules included with the Drupal project download.

cron

A command scheduler that executes commands or scripts (e.g. scripts to backup a database) automatically at specified time and date intervals. Drupal uses a “cron job” to perform periodic tasks that help Drupal to run smoothly and efficiently.

fields

Elements of data that can be attached to a node or other Drupal entities. Fields commonly contain text, image, or terms.

hook

A PHP function that is named `foo_bar()`, where “foo” is the name of the module (whose filename is thus `foo.module`) and “bar” is the name of the hook. Each hook has a defined set of parameters and a specified result type.

NID

Node ID. The unique identifier for each node. It can be found in the path to the node. For example, a node with path, “<http://drupal.org/node/937>”, has a node ID of “937”.

permission

In Drupal, a tool for controlling access to content creation, modification and site administration at the application level. Administrators assign permissions to roles, then assign roles to users. The first user of a Drupal site (User1) automatically receives all permissions.

In operating systems like UNIX, permissions are security settings restricting or allowing users to access information or perform certain functions at the operating system level. In the case of files on UNIX systems, there are three types of permissions: read, write and execute.

published

The state of a node that can be viewed by visitors to the website. To easily hide nodes from the public (i.e. anonymous role), make the node unpublished by unchecking “Published” in the node add/edit form.

region

Defined areas of a page where content can be placed. Basic regions include: Header, Footer, Content, Left sidebar, Right Sidebar. Different themes can define different regions so the options are often different per-site. Content is assigned to regions via blocks. They can be ordered by weight within regions to define the order in which they display.

roles

Sets of permissions that can be applied to individual users. Users can belong to more than one role. Two roles, authenticated users (those users that sign up for an account) and anonymous users (those either without an account or not logged in), are supplied by default with Drupal installations. Drupal allows creating additional roles.

taxonomy

In Drupal, "Taxonomy" is the name of a powerful core module that gives your sites use of terms. In Drupal, these terms are gathered within vocabularies which the Taxonomy module allows you to create, manage and apply.

teaser

A short introductory sentence or paragraph about a piece of content that informs readers about the subject of the content. By default, the first paragraph or two of the content is used (there is a setting for how much), usually with a link to the complete node.

template

**A file to express presentation (vs. program logic).
Templates are mostly HTML with special PHP variables.
The variables in templates substitute in values provided
by a theme.**

term

An organizational keyword, known in other systems as categories or metadata. A term is a label that can be applied to a node. They are also known as tags.

theme

A file or collection of files (PHP, INFO, CSS, JPG, GIF, PNG), which together determine the look and feel of a site. A theme contains elements such as the header, icons, block layout, etc. Drupal modules define themeable functions which can be overridden by the theme file. There are additional themes available in the themes section of downloads.

uid

User ID. The unique identifier for each user. It can be found in the path to the user profile, e.g.

`"http://drupal.org/user/1"`

user1

The first user created on installation and granted additional (all) permissions. This user is referred to as the site maintenance account in Drupal 7.

vocabulary

A vocabulary is a collection of terms.

weight

A term used by Drupal to define the priority or order in which a function is processed or a block / node is displayed. From Drupal 6, the weight field is adjusted dynamically using a drag-and-drop interface. Note: A lower weight value (-10) will float to the top of lists, while heavier (+10) weights will appear lower in lists.

Thank You

Credits

- Drupal Documentation Team