



# Beginners Guide To Drupal

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Your first step towards publishing with the most powerful open source web content management system.

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Updated on 01/07/2011. You can always find the latest downloadable version of Beginner's Guide To Drupal at <http://learnbythedrop.com/beginners-guide-to-drupal>.



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This very basic guide is intended to give beginning Drupal developers information to help them get started with the platform. It is barely possible to provide all the information necessary to excel at Drupal in just a few pages so I recommend that you dedicate some time each week to searching out new resources and tips on how to improve your knowledge of the platform.

This guide is a living document. As the Drupal platform changes I fully intend to update the document. This guide can also benefit from reader feedback. If you see inaccuracies or think that a particular piece of information should be added to the guide please [email me](#) with the details of your input.

## **Background**

The [Drupal](#) project was started in 2000 by a student in Belgium named Dries Buytaert. The code was originally designed for a site called Drop.org. In 2001 the source code for this project was released as Drupal. More information on Drupal history is available at <http://drupal.org/node/769>. In 2007, Dries announced the launch and venture funding of [Acquia](#). Acquia is a commercial project that aims to “provide value-added software products and services” for Drupal.

## **Major Release History**

- [Drupal 4.7](#) - May 1, 2006
  - Auto-complete Forms
  - Multiple Block Regions
  - Free Tagging
  - Aggregator Enhancements
- [Drupal 5.0](#) - January 15, 2007
  - Web-based Installer
  - Updated Admin Pages
  - URL Filtering
  - Custom Content Types
- [Drupal 6.0](#) - February 13, 2008
  - Open ID Support
  - Localization Features
  - Actions and Triggers
  - Drag-and-Drop Admin
- [Drupal 7.0](#) – January 5, 2011
  - Improved image handling
  - More secure scheduling of tasks

- Better what you see is what you get (WYSIWYG) editor support
- Redesigned administrative user interface
- New default theme

## ***What You Can Do With Drupal***

Drupal is an extremely flexible system that allows you to create a wide variety of websites, some of which are summarized below.

### *Website with Static Content*

Drupal is a great tool for creating traditional websites that have a relatively static set of content. The core release of Drupal allows you to create as many unique pages as you like. Drupal also gives you the opportunity to set any particular page you create as the home page.

### *Website with Dynamic Content*

In addition to static pages, the core Drupal release allows you to create a blog, upload file attachments and aggregate content from other sites. It's easy to add a blog or news updates to your static content. You could upload and share press releases or other company documents. You can pull in news that relates to your site from an RSS feed by using the aggregator module. People can subscribe to your dynamic content by utilizing one of the many RSS feeds made available by the system.

### *Single or Multi-Author Blog*

The Drupal blog module allows each site user to have a blog. Even if the site has only one author, Drupal contains great features that allow you to get the full experience. Each blog has its own RSS feed for easy subscription via a feed reader. Drupal allows you to freely add tags to each post, which you can display as a cloud using the [tagadelic](#) module. Good spam protection is available as well. You can require that visitors sign up before commenting. Or you can use the [Captcha](#), [Mollom](#) or [Spam](#) modules to provide stronger spam protection.

### *Community Website*

Drupal contains a wide variety of features that make a community publishing site possible. The Drupal core release includes a user account system. This allows users to register for an account with your site. Drupal core also includes a custom profile module that allows a site developer to set the types of information they would like to capture in a user's profile. Users may also upload a small photo to represent their profile. Modules such as [Organic Groups](#) allow you to create a full-featured community website.

## *Open Data Platform*

Drupal can be used to import and serve data from the database in the form of tables, file downloads and charts. Contributed modules such as [Charts and Graphs](#), [Data](#), [Feeds](#) and [Views Bonus Pack](#) go a long way in helping you to build this type of site.

Drupal also contains robust user access features that allow a site administrator to specify the types of content a user can create on the site. Site administrators can create various user access levels so that some users can have access to different features than others. A wide variety of contributed modules extend the community experience with [private messaging](#), [user relationships](#), [content ratings](#), [content forwarding](#) and a lot more.

## **Why You Should Use A System Like Drupal**

Notice that the title says, “a system like Drupal.” There are a wide variety of community and content management platforms available today. After you perform a detailed analysis you might decide that Drupal is not for you. That's ok but you shouldn't settle for a system that doesn't have the characteristics of a Drupal-based site.

## **Economics**

Since Drupal is an open source project you don't have to pay any sort of license fee to access the software. You may want to pay someone to help customize features and theme your site. But if you're willing to dive in and learn about the system you can do it all yourself.

## **Expandability**

A Drupal site can start out as a single author blog, migrate to a multi-author blog and then expand into a user generated content community without changing platforms. You simply make the switch by turning on and configuring new features and defining new access roles.

## **Features**

Between the core and contributed modules the Drupal platform allows you to do almost anything you will need to do with your website. And if Drupal doesn't excel at a particular function it probably integrates with a service that can provide the function for you. One very good example of third-party service support involves integration with [Google Analytics](#) for advance statistics on your Drupal site activity. Drupal also integrates with anti-spam services like [Akismet](#) and [Mollom](#), allowing the data intensive task of content filtering to be handled by another server.

## **Community**

With many commercial systems you have to rely on the company that built the system to provide support. With Drupal and other open source systems you can have the opportunity to get help from a very large community of developers and users of the system. The main Drupal community website at [Drupal.org](http://Drupal.org) contains community generated documentation and a lively forum section where you can find answers to your questions about the platform.

## **Technical Requirements**

Beginners should know some important information about Drupal requirements before they get started developing a site. You're going to need a web hosting account in order to get a website based on Drupal up and running. This will cost you anywhere from \$7.95 to \$50 per month depending on the features of the account. You can do more research in the [hosting forum](#) at Drupal.org. Whichever host you choose there are two hosting features that are essential to building a Drupal site.

1. **MySQL Database** - The database stores all of the essential information about the configuration and content on your site. MySQL version 4.1 or higher is highly recommended. Drupal 7 requires MySQL 5.0.15 or higher.
2. **PHP** - PHP provides the necessary functions for the Drupal software code to run on your website. PHP version 5.2 or higher is recommended, although PHP version 4.3.5 should work with Drupal version 5 or 6. Drupal 7 requires PHP 5.2.5 or higher.

You will also need **FTP** (short for File Transfer Protocol) access to your site. This is a standard feature of all hosting accounts and allows you to upload or download files between the web server and your local machine. If you are new to FTP then you will need to install a program that allows you to interface with your web server. [Filezilla](#) is a free FTP program that I use and recommend for you as well.

More detailed information on Drupal technical requirements is available at [drupal.org/requirements](http://drupal.org/requirements).

## **Drupal Knowledge**

One of the great challenges of a system like Drupal is the fact that universe of features, which is large to begin with, is always expanding. As such, the many sources of knowledge about the platform are very important to anyone researching or implementing the system.

## Drupal.org

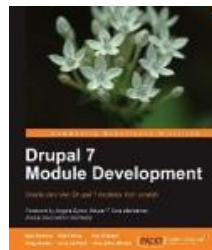
The official hub of the Drupal community is always the best place to start when searching for Drupal knowledge. The [forum section](#) contains active discussions on just about every Drupal topic that you can think of. The [Drupal Handbooks](#) are a source of relatively static documentation about the platform. The handbooks also contain a section for listing [Drupal videocasts](#). Videocasts allow you to watch step-by-step tutorials on customizing your Drupal install.

## Books

As Drupal has grown in popularity the system has gained the attention of technical writers, some of whom have published print and e-books about Drupal. Here are some of the books available as of January 2011.



[Foundation Drupal 7](#)



[Drupal 7 Module Development](#)



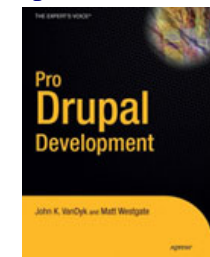
[Drupal 6 Java Script](#)



[Drupal Multimedia](#)



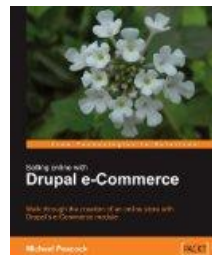
[Drupal 6 Site Builder Solutions](#)



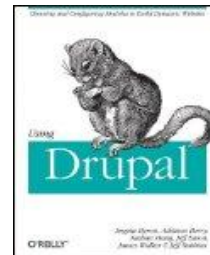
[Pro Drupal Development](#)



[Drupal 6 Themes](#)



[Selling Online with Drupal](#)



[Using Drupal](#)

*Note: The above images contain affiliate links which help to compensate me for the time spent keeping this document up to date.*

## **Enthusiast Websites**

A very large community of Drupal enthusiasts has chosen to share knowledge and provide support for Drupal via their personal websites. Here is a list of just a few destinations where you can find additional knowledge and support on the platform.

- [Drupal Dojo](#) - Drupal lessons and videocasts. Forty-two lessons available as of April 2008.
- [Lullabot Podcasts](#) - Audio and video discussion and instruction focused on the Drupal platform.
- [Mastering Drupal](#) - Blog posts, interviews and videocasts about Drupal.
- [Drupal Ace](#) – Online Drupal administration manual.
- [Drupal Planet](#) – An aggregation of Drupal blog posts from many sources.
- [Learn By The Drop](#) – Drupal learning videocasts and blog posts.<sup>1</sup>
- [Mustardseed Media](#) – Drupal learning videocasts.

## **Other Resources**

[Slideshare](#) is a site that enables the sharing of slide presentations on the web. Searching on the [Drupal tag](#) provides a wide variety of presentations. Some of the popular presentations are [Introduction To Drupal](#), [Drupal 6 Theming](#) and [Drupal Best Practices](#). A wide variety of Drupal videos can also be found on [YouTube](#). Some Drupal videos currently popular on YouTube are [Implementing Drupal](#), [Drupal Taxonomy](#) and [Drupal Overview](#). [Scribd](#) is a document hosting site that has many Drupal documents.

## **The Community**

The Drupal community is a large, vibrant one that represents a great resource for anyone who gets involved with the platform. I've already mentioned the main community website at [Drupal.org](#) whose forums are a great way to introduce yourself to the community experience. There are several other opportunities for you to connect with the Drupal community as indicated below.

## **Drupal Groups**

[Drupal groups](#) is a place where you can get involved with existing groups or organize your own. You can search the Drupal groups website to find Drupal events, knowledge and even [Drupal-related job postings](#). If you're interested in meeting local Drupal users in person then consider searching Drupal Groups for a local group in your area. The groups feature eases the process of entering and engaging with the community. Each group has its own RSS feed. I recommend subscribing to the feeds of any

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<sup>1</sup> I am the maintainer of author of posts on [Learn By The Drop](#).



groups for whom you want to get regular updates without having to visit their web page. Drupal groups are powered by the [Organic Groups](#) module, which means that you can have the same functionality on your site that you experience on Drupal groups.

## ***The Drupal Association***

If you want to take your involvement with the Drupal community to the next level then consider becoming a member of the [Drupal Association](#). The Drupal Association is a non-profit entity whose mission is to help Drupal flourish via funding, events, infrastructure development and more. The Drupal Association accepts donations and those who desire to support the association can sign up for [a membership](#). If you find yourself benefiting from Drupal you should consider becoming a member. Subscribing to the Drupal Association [staff blog](#) is recommended for those who want to keep up with what's happening and what's important in the world of Drupal.

## ***Drupalcon Events***

Meet members of the Drupal community (also known as Drupallers) in person at [Drupalcon](#). According to the official Drupalcon website, "Drupalcon is the twice-yearly gathering of Drupalers to learn about, discuss, and advance Drupal, and to network with other Drupal community members. There, you will have the opportunity to meet Drupal community leaders, top developers, your favorite module maintainers, dojo trainers, members of the Drupal association, potential business partners, and future employees!"

## ***Local Events***

In addition to the occasional major Drupal events there are also many local Drupal oriented events occurring each month. Some of these events are informal meetups. Others are mini-conferences called Drupal Camps. And others are specifically geared towards developers who are working on software code. You can find out about these events by utilizing a variety of websites that list events and meetups. [Drupal groups](#) can help you to find local groups that may or may not have regular meetings. [Upcoming.org](#) is an events site where Drupal event planners sometimes list events. [Meetup.com](#) is another good resource for finding local Drupal events.

## ***A Primer***

Now that you know a bit about Drupal it's time to take a closer look at the system. The goal of this section is to provide you with an understanding of some of the key elements of the platform. Drupal is very similar to other popular open source publishing platforms, but also has its own unique terminology to describe features and functions. Here are some of the key terms, features and functions that you need to know about.

## Nodes

Nodes are the basic building blocks of all Drupal sites. Every item of content that you add to a Drupal site becomes a node. When you create a page you have created a node. When you create a blog post you have created a node. A basic node has a title and a description just like you're used to if you've ever posted to a blog.

One differentiating feature of Drupal is the fact that you have the ability to create custom node types by using the [Content Construction Kit](#) (CCK) module. CCK allows you to build a node type that meets your exact specifications. So instead of just the standard title and description you can also add fields specifically for an address, a web link, an email address, a file upload and much more. Custom content types allow you to streamline your workflow and also create forms that allow users to submit different types of content to your site. CCK node types can be displayed on your Drupal site in almost any way you want by using the [Views](#) module. You can find more information on the standard Drupal node types on [Drupal.org](#).

## Taxonomy

Drupal comes with a built in taxonomy system. The taxonomy system allows you to categorize the nodes on your site. The taxonomy system allows you to define vocabularies which consist of one or more terms. Vocabularies allow you to organize your terms into groups. Each term is essentially a category. There is no limit to the number of vocabularies you can create. There is also no limit to the number of terms that you can include in each vocabulary. Your vocabulary can also have free tagging. So instead of entering specific terms ahead of time users may enter tags freely at the time the post is written and those tags automatically become terms in that vocabulary.

Name	Type	Operations		
Borough	Event, Events, Food, Night Life	<a href="#">edit vocabulary</a>	<a href="#">list terms</a>	<a href="#">add terms</a>
Communities	User Profile	<a href="#">edit vocabulary</a>	<a href="#">list terms</a>	<a href="#">add terms</a>
Cost	Food	<a href="#">edit vocabulary</a>	<a href="#">list terms</a>	<a href="#">add terms</a>

*Vocabularies and Types of Nodes They Are Assigned To*

Name	Operations
Bronx	<a href="#">edit</a>
Brooklyn	<a href="#">edit</a>
Manhattan	<a href="#">edit</a>
Queens	<a href="#">edit</a>
Staten Island	<a href="#">edit</a>

*Terms For Vocabulary Shown Above*

This taxonomy system makes Drupal very flexible and very powerful because you can use your categories and terms to display the content on your site in a variety of different ways. For example, a contributed module called [Tagadelic](#) allows you to display categories as a tag cloud. You can also use your site categories to generate custom views and RSS feeds.


**Blog Tags**

300 Wins amazin moments  
 audio Braves bullpen  
 Carlos Beltran David Wright  
 disappointment Duane Sanchez El  
 Duque fantasy baseball  
 hitting injuries Johan  
 Santana John Maine Jose  
 Reyes Lastings Milledge  
 losses mets mike pelfrey  
 mlb Oliver Perez omar omar  
 minaya opening day Orlando  
 Hernandez pedro martinez perez  
 phillies pitching players  
 playoffs podcast  
 predictions roger clemens rotation  
 san diego Shawn Green shea  
 stadium slump spring  
 training steroids sweep  
 tickets Tom Glavine  
 trades video willie  
 randolph WINS yankees

*Tag Cloud by Tagadelic*

## **RSS Feeds**

Drupal generates a wide variety of RSS feeds. RSS allows site administrators and visitors to keep track of new content by subscribing in a feed reader. Some popular feed readers are [Google Reader](#), [My Yahoo](#) and [Feed Demon](#).

Every Drupal site has a site level RSS feed that shows at the address *www.yoursite.com/rss.xml*. RSS feeds are generated by each category you create as well. When viewing a particular category look for the feed icon () at the bottom of the page. The feed icon will link to the feed for the category currently being displayed.

The types of feeds that I just mentioned are generated automatically by Drupal. You also have the option to generate custom feeds by using the Views RSS module which is included in the previously mentioned views module. Views RSS allows you to generate an RSS feed for each custom content type that you create using Drupal. A little more information on generating RSS feeds for views can be found [on Drupal.org](#). Also see [Understanding RSS On Your Drupal Site](#).

## **Modules**

Modules add functionality to your Drupal site. The core installation of Drupal includes several modules which are known as *core modules*. There are several key core modules that you should consider enabling on any Drupal-powered website. A list of the core modules that I recommend activating for most basic sites follows.

- [Path](#) - Allows you to manually set the path for any node that you create. For example, if you create an 'about' page for your site you can set the path to *yoursite.com/about* or *yoursite.com/about-us*. The choice is yours.
- [Menu](#) - Gives you control over the menu system for your site.
- [Blog](#) - A must if you are using Drupal as a blog site. Also very helpful if you're building a personal or corporate website and want to have a blog as part of the final product.
- [Comments](#) - Gives you the power to allow comments on any type of node.
- [Search](#) - Provides site visitors with the ability to search for content in nodes published on your site.
- [Upload](#) - Allows you to attach a variety of different files types to nodes of your choosing.

Many people choose Drupal because of its powerful user generated content features. If you are constructing a website that aims to provide social networking or user generated content features then you'll probably want to activate a few more modules from the list below.

- [Forum](#) - Allows site users to create threaded discussions.

- [Poll](#) - Create polls and get responses from your community.
- [Profile](#) - Adds the ability to customize the information that users can add to their accounts.
- [Tracker](#) - Creates a view that allows users to see a list of the latest posts from the entire community or for an individual user.

A detailed list of the modules included in the current core release of Drupal can be found at <http://drupal.org/handbook/modules>.

Drupal features a vast array of modules that are contributed by the community. Modules contributed by the community are known as *contributed modules*. Contributed modules allow you to extend Drupal by adding almost any feature you can think of. I mention a number of contributed modules throughout this guide. I recommend clicking through to view the details on any that interest you. I also recommend that you spend some time checking out the [module repository](#) on Drupal.org. Once there you can view modules by category, name or date added. The module repository should be your first stop if you desire a feature for your site that does not exist in core.

## Project Information

Maintenance status: [Actively maintained](#)

Development status: [Under active development](#)

Module categories: [Content](#)

Reported installs: **92966** sites currently report using this module. [View usage statistics](#).

Last modified: October 26, 2010

## Downloads

### Recommended releases

Version	Downloads	Date	Links
<a href="#">7.x-3.4-beta1</a>	<a href="#">tar.gz (334.3 KB)</a>   <a href="#">zip (378.78 KB)</a>	2010-Oct-20	<a href="#">Notes</a>
<a href="#">6.x-3.4</a>	<a href="#">tar.gz (339.32 KB)</a>   <a href="#">zip (384.52 KB)</a>	2010-Oct-20	<a href="#">Notes</a>

### Other releases

Version	Downloads	Date	Links
<a href="#">6.x-2.10</a>	<a href="#">tar.gz (300.29 KB)</a>   <a href="#">zip (340.7 KB)</a>	2010-Aug-14	<a href="#">Notes</a>
<a href="#">5.x-2.10</a>	<a href="#">tar.gz (242.58 KB)</a>   <a href="#">zip (280.03 KB)</a>	2010-Aug-14	<a href="#">Notes</a>

[View all releases](#) 

*Contributed Module On Drupal.org*

Since the Drupal module pool expands daily, I suggest that you subscribe to the module repository [RSS feed](#) so you can keep track of the latest updates as they occur.

## *Installing Modules*

Drupal modules are very easy to install. Any contributed modules should first be un-zipped onto your computer's hard drive. Once un-zipped you should upload (using your FTP program) the module folder to the 'sites/all/modules' directory. If this directory doesn't exist then you should create it. It is considered a best practice to keep the contributed modules separate from your core modules.

Once the module is uploaded you can activate it via the Drupal Administration section of your website. Click on the *Modules* link (in the Site Building section) and you will see a list of every module available along with a checkbox. Search for the title of the module you uploaded. Click the checkbox for that module. Then scroll down to the bottom and click the *Save Configuration* button. Keep an eye out for any error messages. Error messages aside, your next step will be to configure the module as indicated in the developer's instructions.

## *Developing Modules*

If you have PHP and MySQL skills and want to make Drupal do something different or better then you should consider developing a contributed module.



Released in May 2008, [Learning Drupal 6 Module Development](#) provides a practical tutorial for creating your first Drupal 6 modules with PHP.

## *Keeping Track of Modules*

Module development for Drupal is typically fast and furious. New modules and updates to existing modules are added daily. You can keep up with new modules by subscribing to the Drupal modules RSS feed at <http://drupal.org/taxonomy/term/14/0/feed>. This field only gives updates on brand new modules. If you want release updates for a particular module you can subscribe to the module RSS feed which will be linked on the module page.

One of the great features added to core in Drupal 6 is Drupal module status updates. Any module that you have uploaded to your site should be listed on a dashboard which can be found at '*admin/reports/updates*'. If a new version of the module is available you will get a notice on the Drupal administration section and can also configure notifications by email.

Core - optional

Enabled	Name	Version	Description
<input type="checkbox"/>	<b>Aggregator</b>	6.0	Aggregates syndicated content (RSS, RDF, and Atom feeds).
<input type="checkbox"/>	<b>Blog</b>	6.0	Enables keeping easily and regularly updated user web pages or blogs.
<input type="checkbox"/>	<b>Blog API</b>	6.0	Allows users to post content using applications that support XML-RPC blog APIs.
<input type="checkbox"/>	<b>Book</b>	6.0	Allows users to structure site pages in a hierarchy or outline.
<input checked="" type="checkbox"/>	<b>Color</b>	6.0	Allows the user to change the color scheme of certain themes.
<input checked="" type="checkbox"/>	<b>Comment</b>	6.0	Allows users to comment on and discuss published content. Required by: Forum ( <b>disabled</b> ), Tracker ( <b>disabled</b> )
<input type="checkbox"/>	<b>Contact</b>	6.0	Enables the use of both personal and site-wide contact forms.
<input type="checkbox"/>	<b>Content translation</b>	6.0	Allows content to be translated into different languages. Depends on: Locale ( <b>disabled</b> )
<input checked="" type="checkbox"/>	<b>Database logging</b>	6.0	Logs and records system events to the database.
<input type="checkbox"/>	<b>Forum</b>	6.0	Enables threaded discussions about general topics. Depends on: Taxonomy ( <b>enabled</b> ), Comment ( <b>enabled</b> )

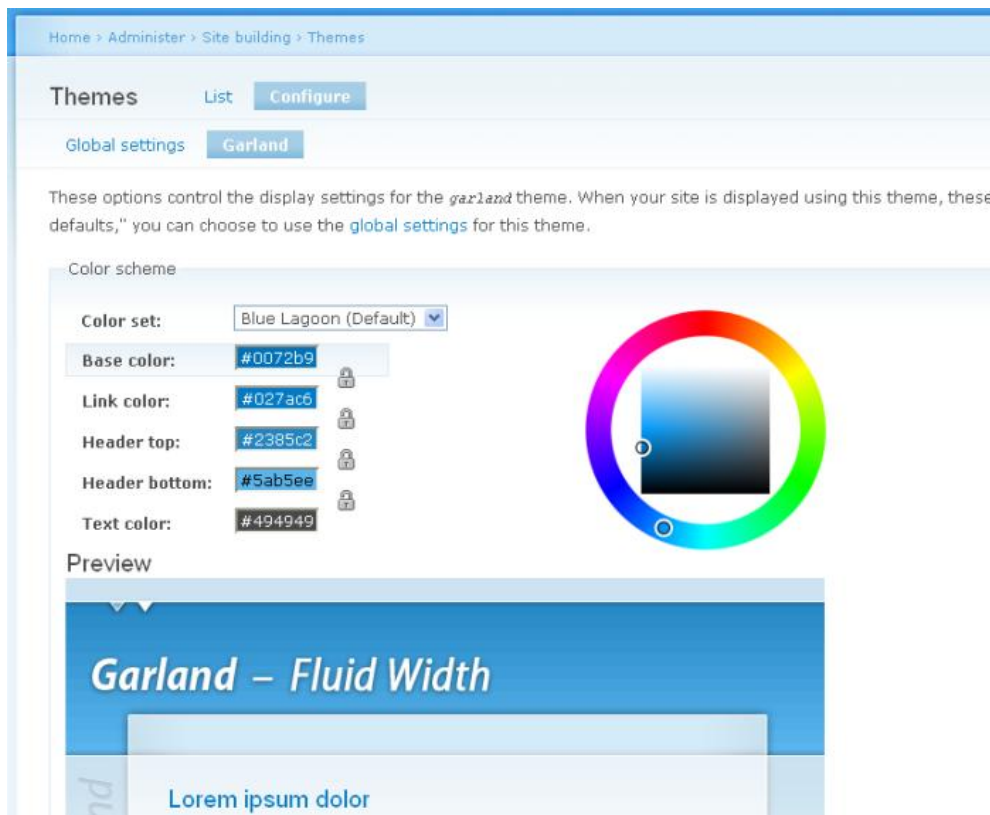
*Module Admin View (Drupal 6)*

### *Other Module Resources*

An alternative place to find and research Drupal modules exists at [drupalmodules.com](http://drupalmodules.com). The Drupal Modules website is an un-official resource that provides search tools and allows registered users to download, rate and comment on Drupal modules.

### **Themes**

Themes create the visual experience for your Drupal site. The standard theme that you will see when you first install Drupal is called Garland. The Garland theme is unique because a user can easily change the color scheme of the entire theme via a color wheel. An example of the wheel can be seen in the image below.



*The Garland Theme and Color Wheel*

### *Finding New Themes*

Many people feel that the Garland theme is too pedestrian for their needs. Thankfully you have the option to very easily switch to another theme. You can make the [Drupal Theme Repository](#) your first stop when searching for a new theme for your site. Once there you will find a list of themes contributed by the community. One shortcoming of the Drupal Theme Repository is the fact that themes are listed in a way that is very similar to modules. The listings there are heavy on text and short on experiencing the themes.

The [Drupal Theme Garden](#) is an un-official site that allows you to experience many Drupal themes with a few clicks of the mouse. If you find a theme that you like on the Drupal Theme Garden you will need to go back to the Drupal Theme Repository in order to download that theme. Acquia has also launched [Beautiful Drupal](#), a site that includes design resources and [a theme gallery](#).

### *Theme Developers*

As the Drupal community grows more independent theme developers are getting involved in the effort. Two theme developers of note are [Theme Shark](#) and [Top Notch Themes](#). These design firms offer



premium configurable themes that stray a bit outside the normal level of control that the average user typically gets with most Drupal themes.

## *Installing Themes*

The process of installing a theme is very similar to the process of installing a new module with two key differences. First, you upload the theme to the 'sites/all/themes' folder on your web server. Second, in order to activate the new theme you need to click on the *Themes* link under the Site Building section. Once there you should see a list of all the available themes for your site.

Drupal allows you to have multiple themes enabled at any given time, but only one can be the default theme. Users that are not logged in will always see the default theme when they visit the site. So take a second after making theme changes to ensure you have the proper theme set as the default theme.

Like Drupal modules, the universe of themes is always changing. That's why I recommend that you follow the Drupal themes [RSS feed](#).

## **Spam Prevention**

Fighting spam is a priority for every website that accepts any kind of input from users. Comment forms, contact forms and signup pages are all susceptible to spam. That's why any content platform you use must have options for preventing malicious content from reaching your site. Drupal contains a variety of features that can help you to prevent spam from hitting your site.

### *Comment Moderation*

Drupal core contains settings that allow you to moderate comments. Drupal's user access controls allow you to specify whether or not users must already have an account before they can post comments to the site. You can also specify whether a user (logged in or anonymous) may leave a comment without approval. Comment moderation is made simpler via the contributed module called [Notify](#). Notify will send an email to the administrator whenever someone leaves a comment on their site.

### *CAPTCHA*

A [CAPTCHA](#) challenges the user to enter data in a field on a form and is meant to prevent spam bots from submitting forms to your site. CAPTCHAs can be used to protect signup forms, comments forms and site contact forms.

CAPTCHAs can take the form of images or math questions. The [CAPTCHA](#) module is a contributed module that allows you to choose between adding an image or math captcha to forms on your site. An alternative module to CAPTCHA is [reCAPTCHA](#), which utilizes images from the [reCAPTCHA](#) web

service.

## CAPTCHA

This question is for testing whether you are a human visitor and to prevent automated spam submissions.

### Math Question: \*

4 + 2 =

Solve this simple math problem and enter the result. E.g. for 1+3, enter 4.

*Math Captcha*



*reCAPTCHA*

## *Anti-Spam Services*

Drupal has the ability to connect with anti-spam services via contributed modules. When utilizing an anti-spam service you typically need to sign up with the service for a free API key which allows you to send requests to their servers. When a form is submitted on your site the information is sent to the service which then decides whether the content is spam or not.

[Akismet](#) is a service provided by [Automattic](#). The [AntiSpam](#) module allows you to connect to Akismet servers when node and comment forms are submitted to your site. Akismet screens submissions for potential spam and creates a moderation queue for submissions that are not positively identified as spam. Akismet is free for non-commercial users but you must obtain an API key by signing up for an account at [WordPress.com](#).

[Mollom](#) is a service that was launched in March of 2008 by Drupal founder Dries Buytaert. The [Mollom](#) module has similar functions to Akismet but there are a few differences. Mollom is free for personal use. In order to connect to the Mollom service you need a free API key which is available by registering for an account on the [Mollom](#) website. Mollom protects node, comment and signup forms from spam and content of dubious quality. This is achieved via a combination of selective CAPTCHA usage and analysis of the content in each submission. The chief goal of Mollom is an ambitious one because it attempts to completely eliminate your spam moderation queue.

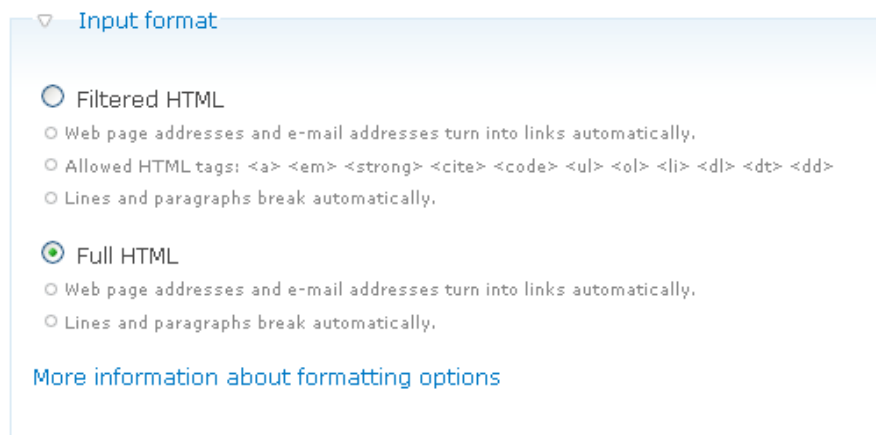
## Managing Media

An ever increasing number of people seek to utilize Drupal to build media rich websites. These people seek to develop sites where audio, video or photo publishing by users is commonplace. And while Drupal core does not contain many features that are built in with these types of media in mind, there are a number of contributed modules that can help turn your Drupal site into a media platform.

### Core Features

Drupal core has two key features that assist with the integration of rich media, the Upload module and embedding. The [Upload module](#) allows users to attach different types of files to node types of your choosing. This feature allows for very basic integration with media files. There are two limitations that you will deal with when using the upload module. The size of file uploads may be limited by your web host which could limit what types of media you can upload to the site. If you are able to upload the file you want the upload function does not provide any post upload processing (like generating thumbnails for images or converting videos to flash) or embed the media within your posts.

Drupal core also allows you to embed media within nodes that is hosted on other websites. So if you have photos hosted on [Flickr](#) or videos hosted on [YouTube](#) (or any other site that allows off-site embedding) you can paste the provided embed code into your posts. And you are also free to create a link to the original location of the media in your post. It is important to note that if you wish to embed media from other sites you must have the "Full HTML" input format selected. The standard "Filtered HTML" input format strips out the embed tags for security reasons.

A screenshot of the 'Input format' selector in Drupal. It shows two radio button options: 'Filtered HTML' and 'Full HTML'. 'Full HTML' is selected. Below the options are two bullet points for each: 'Web page addresses and e-mail addresses turn into links automatically.' and 'Lines and paragraphs break automatically.' A link 'More information about formatting options' is at the bottom.

Input format

Filtered HTML

- Web page addresses and e-mail addresses turn into links automatically.
- Allowed HTML tags: <a> <em> <strong> <cite> <code> <ul> <ol> <li> <dl> <dt> <dd>
- Lines and paragraphs break automatically.

Full HTML

- Web page addresses and e-mail addresses turn into links automatically.
- Lines and paragraphs break automatically.

[More information about formatting options](#)

*Input Format Selector*

## *Contributed Features*

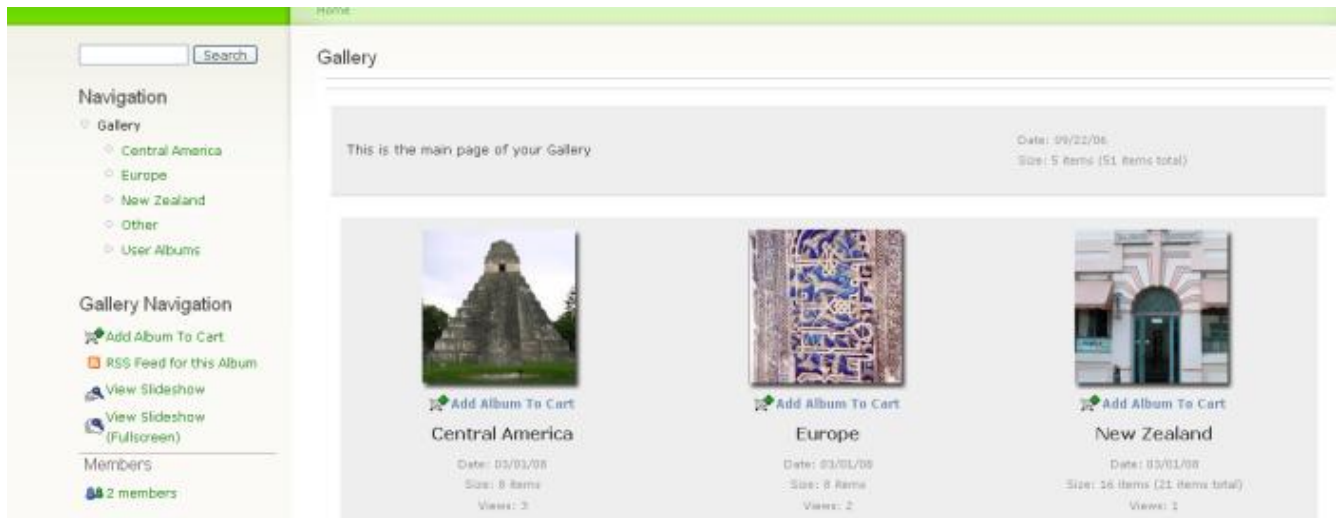
There are a wide variety of contributed modules that extend the media management capabilities of a Drupal site. This fact often causes a bit of confusion for new users because there are usually multiple ways that you can achieve the same goal. The solution that you choose really depends on your specific needs. I'm going to present you with some of the more basic options for including images, video and audio.

## *Images*

The [Image module](#) (Drupal 6) allows users to upload images directly to either a specific image node type or by attaching to other types of nodes such as blog posts or pages. This module also handles the task of creating thumbnails for images and assists with the creation of photo galleries. If you're using Drupal 7 then you don't have to download the Image module because the features of Image have been moved into the core Drupal release.

Site builders who want to integrate images into custom content types can use the [ImageField](#) (Drupal 6) module. ImageField only handles the upload of the file and relies on the CCK module mentioned earlier in this guide. As with Image, the features in ImageField have been integrated into the core Drupal 7 code. The features of ImageField can be extended by adding the [ImageCache](#) and [ImageField Gallery](#) modules. Once again Drupal 7 users are in luck because ImageCache is now a core feature in Drupal 7.

If you are a serious image publisher then you might want to consider the [Gallery module](#) for your site. The Gallery module embeds the open source [Gallery2](#) software into your Drupal site. Gallery2 is a feature rich photo album and organizer that includes just about any feature required by serious image publishers. While Gallery2 provides a wide variety of features, the implementation requires attention to detail and patience as there are many steps and many settings to be configured. You can see an example of Gallery2 integration with Drupal at <http://drupalgallery.com>.



*Gallery Integration*

If you want to learn how to build a custom image gallery in Drupal I recommend that you review the [Create an image gallery using only CCK and Views](#) tutorial on Drupal.org.

## *Video*

Directly integrating video in a Drupal site (or any type of site for that matter) is a tricky proposition for several reasons. First, video files tend to be larger than other forms of media. So unless your videos are short and small in viewing size you may have problems actually getting them uploaded via the browser on a shared web host. Second, video typically requires more processing on the server side than either audio or images. That means more configuration and additional processing power required if you want to upload in one format (like Apple's QuickTime) and convert to another (like Flash) to simplify viewing in the browser. Adobe Flash is the preferred format for embedding because of its compatibility across web browsers. It is recommended that you consider your specific needs and work with different options to include video on a test site prior to finalizing an approach for integrating video in your Drupal site.

The [Video module](#) offers a very simple approach for adding video to your site. This module creates a special video node type which supports the most popular (QuickTime, Windows Media, FLV) online video types. You can either upload a file or link to a file that has already been uploaded to your site. This module automatically embeds the video in the browser window and also provides the option to allow users to download each video. The Video module can also provide very basic statistics by showing the user the number of web plays and number of downloads for each video.



*Video Module Node*

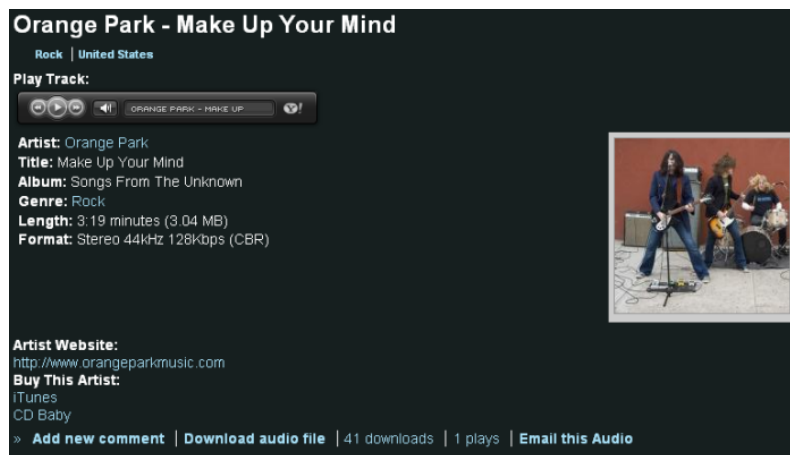
The [Flash Video module](#) provides a set of tools designed to allow Drupal site builders to create a YouTube-like process flow. This module provides support for uploading and embedding of videos while also integrating with a tool called [FFMPEG](#) to support conversion of videos to the flash format. Proper use of this module involves a number of detailed steps. Luckily, the module developer has documented the entire process with [a multimedia tutorial](#). Once working this appears to be an excellent flash video solution for Drupal. I recommend giving yourself an ample amount of time to proof the process and get familiarized with the various tools used to implement this video solution.

The [FLV Media Player module](#) provides similar features as the FlashVideo module with fewer steps involved. The FLV Media Player module does not manage the conversion of files to flash. Instead it simply provides the ability to display flash videos that are attached to nodes. This module will also display videos via a link provided in a CCK field. Use of this module requires you to download the [FLV Media Player](#) which is free for non-commercial use but only requires a small license fee when used for commercial purposes. Also required are the [XSPF Playlist](#) module and the [SWF Object API](#) module. This method also includes steps that may cause some difficulties for novice Drupal administrators so pre-install planning and experimentation are highly recommended.

In December 2008 a video hosting company called Kaltura released their [All-In-One Video Module](#) which, "... handles every aspect of video and rich-media functionalities, including transcoding, uploading and importing content, user management and permissions, hosting and streaming on Kaltura's servers."

## Audio

The [Audio module](#) provides the basic features necessary for publishing audio using the Drupal platform. This contributed module adds a special audio node that contains fields for uploading audio files as well as cover art. This module uses the getID3 library to read and write meta-data information (such as artist, title, track #, etc) to and from the audio files. This module also provides a choice of flash audio players which are automatically embedded in the published node. Additional features provide the ability to provide a download link as well as separate statistics for web based plays and file downloads. More information on the audio module can be found in the [Drupal handbook](#).



*Audio Module Node with Custom Flash Player*

If you're looking for a simplified approach to adding audio you should also investigate the [MP3Player module](#). The module developer was nice enough to create [a short videocast](#) that shows how to implement the module on your Drupal site.

## All-In-One Solutions

The [Embedded Media Field](#) (Drupal 6) module is designed to ease the insertion of audio, video or images from third-party media hosting sites such as [Flickr](#), [YouTube](#) and many others. Use of this module eliminates the input format issues related to pasting embed codes into node bodies. This module also allows you to control the list of third-party services that are available when your users are publishing content to your site.

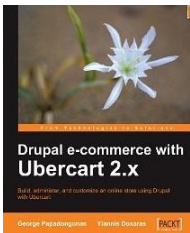
Drupal 7 site builders should have a look at the [Media](#) module. Media assists in the creation of multimedia galleries that allow the user to browse for and insert images, audio, video and documents into nodes.

## Commerce

Since Drupal is such a great platform for developing websites many people are also turning to Drupal to assist them with creating online stores. Thankfully, Drupal does offer contributed modules that allow you to sell both physical and digital goods from your website.

The [e-Commerce module](#) has features that allow you to sell file downloads, shippable items, bundles or even customizable products. The e-Commerce module also offers the ability to adjust the look and feel of both products and the shopping cart. The e-Commerce module has built in support for payment via the PayPal, Authorize.net and eWay systems.

The [Ubercart module](#) is another contributed module that adds e-commerce capabilities to the Drupal platform. Ubercart functionality focuses on three key areas: store configuration, product and catalog creation, and order administration. Ubercart has built in support for accepting payment via a variety of popular payment gateways including PayPal, Authorize.net, CyberSource and PayflowPro.



Site developers interested in serious e-commerce support should consider reading [Drupal e-commerce with Ubercart 2.x](#). Released in March 2010, this book can help you to set up and manage an online store using Drupal 6 and the Ubercart module.

## Statistics

Once you get your Drupal website up and running you're likely to be curious about what type of traffic your site is getting. Drupal offers a mix of core features and contributed modules to provide you with information about the traffic coming to your site.

The core statistics module will gather basic information on the number of visitors to each node and how they were referred to your site. The information is presented in text format without any graphs or visual cues. [Statistics Advanced Settings](#) is a contributed module that extends the core statistics module by adding useful features including tracking of unique content views.

### Google Analytics

Google Analytics is a popular, free web service that can provide you more detailed statistics about visitors to your Drupal site via the [Google Analytics](#) module. Google Analytics provide a graphical representation of site visits, node views, referring sites and more. You can also have different traffic reports sent to you via email on a regular schedule.



In order to use the Google Analytics module you need a free account which you can sign up for at <http://www.google.com/analytics>.

## ***Social Networking***

Drupal is a great tool for building your own web based community but it can also connect to some of the most popular social networks on the web, including [Facebook](#), [Twitter](#) and [Google Friend Connect](#). By connecting to popular social networking sites you can increase promotion of your Drupal-powered website, improve your site content and provide more convenience for visitors to your site.

### *Facebook*

Facebook has over 200 million users so it's very likely that someone visiting your Drupal site is also a Facebook member. The [Facebook Connect module](#) allows site visitors to login with their Facebook credentials and import their Facebook picture and profile information. In addition, this module allows your site members to invite their Facebook friends to your site and also updates their feed on Facebook when they post a comment on your site.

The [Facebook Social Plugins module](#) assists with the integration of the [Facebook Like Button](#) for nodes on your site. Addition Facebook social features, including comments and activity feeds are supported by this module as well.

See Also: [Connecting With Facebook](#)

### *Twitter*

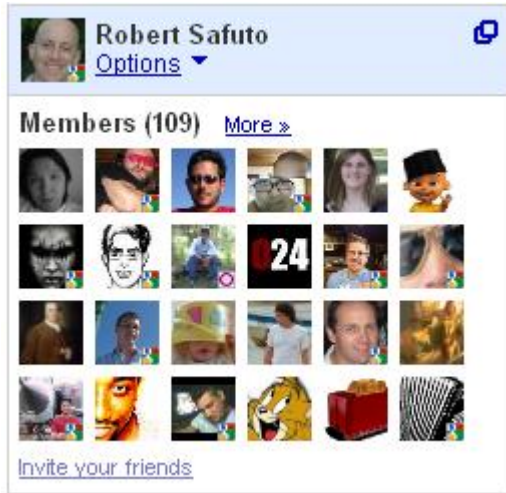
Twitter is growing fast and can be integrated with your Drupal site to import relevant content or allow users to connect their Twitter account to their profile and share the most recent updates on your site. You can also publish links to new posts on your site on Twitter. The [Twitter module](#) allows you to do all the things just mentioned on your Drupal site.

The [Tweet module](#) makes it very easy for visitors to your site to share links to posts on Twitter. And you can use the [FeedAPI](#) and [Views](#) modules to capture content generated from the RSS feeds related to Twitter searches. The [Tweet Button](#) module makes it easy for you to add a button to your posts that allows for easy tweeting of a post while also showing the number of times the post has been linked to on Twitter.

See Also: [Twitter And Your Drupal Site](#)

## Google Friend Connect

Friend Connect is Google's entry into the social networking space. Friend Connect is not a site but rather a set of tools that allows website builders to make their sites more social by allowing people to use Google profiles as their membership identity on your site.



The Members Gadget (*example pictured on the left*) is the simplest way to get started with Friend Connect on your Drupal site. Copy and paste the code provided by Google into a block on your site and users can “join” your site as well as browse the Google profiles of other site members. Deeper integration can be achieved via the [Friend Connect module](#) for Drupal. This module allows visitors to sign in to your site with their Google credentials and leave comments that include their Google profile photo. This module differs from the members gadget in that it actually creates a user account on your site. In addition this module allows you to integrate the [Friend Connect toolbar](#).

See Also: [Integrating Google Friend Connect](#)

## Gravatar

The service is a very simple service that can help to spice up the content section of your site. Gravatar hosts “Globally Recognized Avatars” (or profile photos) that are connected to an email address. Sites that connect to the Gravatar service can display user photos for those who leave comments on your site even if they aren't site members. The [Gravatar module](#) helps you to make the proper connection between your Drupal site and the Gravatar service.

See Also: [Putting A Face With A Name Using Gravatar](#)

## Hosting

Choosing a web host is the next step that many people take when they decide to move forward with the development of a Drupal site. For some this will be an easy task. If you already host a website then there's no reason to switch providers as long as that provider meets the requirements detailed earlier in this guide. If hosting is new to you then you will want to do a little research. I recommend spending a little time in the [Drupal hosting forum](#).

There are three types of hosting accounts that you will want to consider for your Drupal site.

1. **Shared** hosting gives you space within a large web server that is hosting many other websites. Shared hosting is economical and makes sense for most personal and low traffic small business websites. Shared hosting performance varies and can be slow at times since your site is sharing resources with many others. If you need fast performance you may want to consider one of the other two options.
2. **Virtual Dedicated Server** (VDS) hosting is similar to shared hosting in that other websites will still be on the same physical server. A VDS separates your account from other accounts on the server, allowing you access to the operating system and providing the ability to re-boot only your portion of the server. VDS hosting is considerably more expensive than shared hosting but should provide better performance to support growing communities or web applications.
3. **Dedicated Server** hosting provides you with a server that will host only your websites. This service provides you full control over the server, allowing you to choose the hardware, operating system, amount of disk space, RAM and more. Dedicated servers will provide better performance than the other two options, but you will also pay more money and need a higher level of technical expertise to manage the server. Dedicated servers are recommended for websites where a very high level of traffic is expected.

If you are looking for a simpler approach to deploying a Drupal site then you may want to investigate the services that offer hosted versions of Drupal. A hosted version of Drupal offers less control over customizing the application but eliminates many of the most technical setup requirements like creating a database and installing the application.



[WebEnabled](#) offers a free plan as well as plans for developers and Amazon EC2 cloud hosting.



[Dreamhost](#) offers a free hosted version of Drupal.



[Acquia](#) offers hosted Drupal via their [Drupal Gardens](#) platform which is based on Drupal 7. Acquia has produced [a videocast](#) that shows off their progress with the platform.



[Buzzr](#) offers a hosted version of Drupal that has user interface upgrades which are designed to make the process of building a professional looking social website a simpler one.

## ***Service Providers***

At some point in your Drupal project you may decide to enlist the help of someone else to accomplish your goals. If this is the case then the first step I recommend is to do some research in the [Drupal paid services forum](#). You can also post specific requests for help and begin the process of negotiating to pay someone to help you with your site.

If your budget is significant you might want to consider a Drupal development shop. There are several formal Drupal development shops that have appeared in recent years. [Lullabot](#) is well known and has developed some high profile sites for large media companies including MTV UK and Lifetime Television. [Acquia](#), the company founded by Dries Buytaert, has begun offering their services in recent months. Their current slate of offerings includes [Acquia Drupal](#), the [Acquia Network](#) and [Drupal Technical Support](#).

The amount that you pay for Drupal services depends on the size of the project, the skill of the developer and the size of the firm you are dealing with. Established development shops are likely to charge more than individual contract developers. Before you begin making inquiries I recommend that you developed a basic specification for the work you would like to be completed. Also consider your budget prior to soliciting Drupal services.

I would like to offer a couple of notes of caution on contracting for Drupal-related services. Be aware that contracting for software development and support involves risk. So make sure you set aside appropriate time to check references prior to beginning your project. If you pay someone to build out a site you should also plan on learning the intimate details on how to administer your Drupal-powered website. It's likely that when the developer is finished working you will be left to run the site on your own. For that reason you should consider having your contracted developer provide some training and documentation to help you manage the features unique to your Drupal install.

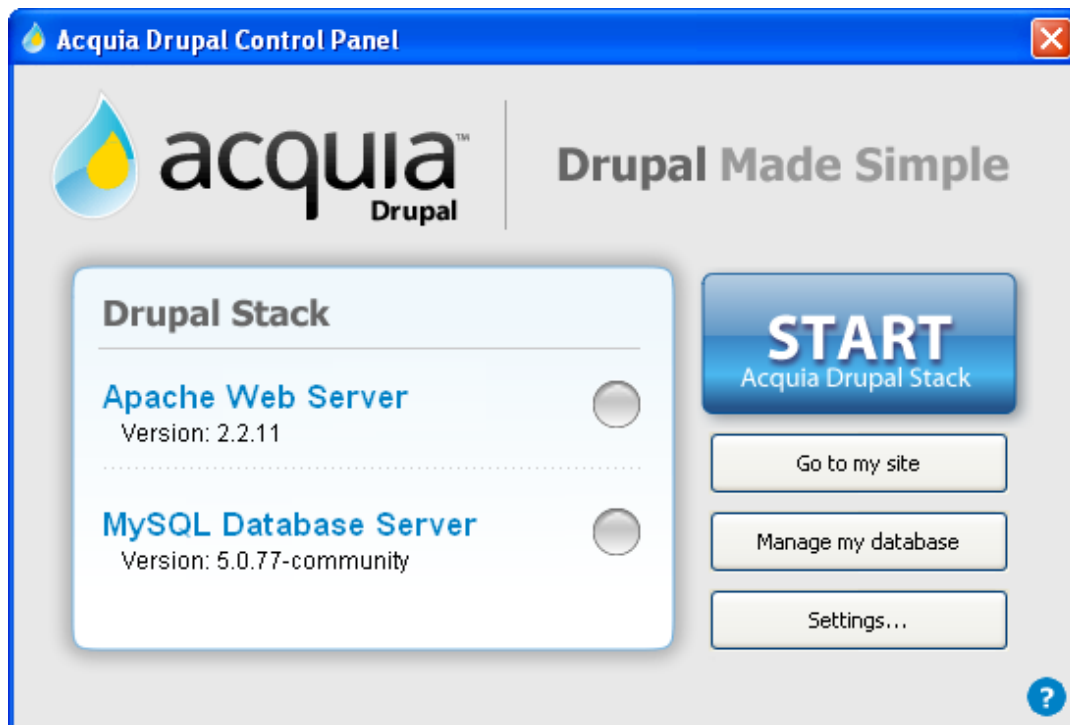
## ***Getting Started With Drupal***

Perhaps reading this document has helped convince you that you want to get started using Drupal. Many people who make that decision then ask, "Where do I start?" Start by downloading the latest version of Drupal from [Drupal.org](#). Then install Drupal on your local machine. Installing Drupal on a localhost is one of the best ways to get to know the system without having to pay for hosting costs.

Those who are not technically inclined may feel a little queasy when considering what they'll need to do in order to get Drupal installed locally. Take comfort in knowing that if you have a little patience and can follow directions then you can do it. I have created a video aptly titled "[How To Install Drupal On A Localhost](#)" to help get you started. The instructions in the video are applicable for Windows users

and recommend a tool called [Wampserver](#) to create a web server on your local machine. Mac users can achieve similar results using a free tool called [Mamp](#).

Using a stack installer you can streamline the process of installing Drupal on your local machine. A stack installer will contain all the necessary components to get up and running with Drupal on a local machine very quickly. Acquia has [a stack installer](#) that will install everything you need to run Acquia's customized version of Drupal on a Mac or a PC. The Acquia stack includes a simple control panel that you can use to quickly start or stop the server and manage the local database.



*Acquia Stack Control Panel*

You can also find a local stack installer for Drupal at [Bitnami.org](#). The Bitnami installer will work on Mac, PC and Linux based systems. You can also run Acquia Drupal on a Windows-based machine as a [Windows Web App](#). Windows Web Apps run on the [Microsoft Web Platform](#) which is a stack that relies on the Microsoft version of a web server.

Once you have installed Drupal locally you should then take the time to explore and learn more about it. Some of the resources, like books and the Drupal.org website, mentioned in this guide can help you in your exploration and learning. I'm also developing a series of videos to assist with continued learning of the Drupal platform. This Drupal 6 focused video tutorial series can be found at <http://learnbythedrop.com/gettingstarted>.

## ***About Awakened Voice***

Awakened Voice is a web-based learning center for new media technology. Awakened Voice founder Robert Safuto is an expert on new media and Web2.0. He has been blogging since 1999 and podcasting since February 2005. Robert is a very strong resource on how to get the most out of tools (especially [WordPress](#) and [Drupal](#)) and services that allow people to publish rich media content and build communities on the web.



Find out much more about Robert and explore his online media portfolio at [www.awakenedvoice.com](http://www.awakenedvoice.com).