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Using Joomla!

EFFICIENTLY BUILD AND MANAGE
CUSTOM WEBSITES



Ron Severdia &
Jennifer Gress
Foreword by Ryan Ozimek

Using Joomla!

If you're new to content management systems—or even new to building websites—this practical guide will get you up and running in no time. You don't have to know much code, if any, to get started.

Need to build a website quickly? Have a client that requires a powerful website with lots of compelling features? Ideal for web designers and developers alike, this updated edition takes you step-by-step through site creation with Joomla, with plenty of hands-on exercises along the way.

- Build a sample site with the book to see how Joomla works
- Plan and structure categories, articles, menus, and modules
- Learn how to create, organize, and display Joomla content
- Add images, audio, and video, and produce image galleries
- Build a blog, set up an events calendar, and create user forms
- Sell merchandise by putting together your own online store
- Engage visitors by creating user profiles and hangouts
- Secure your site and keep it optimized
- Migrate to Joomla 3 and update your third-party extensions

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Jennifer Gress is an independent web developer who's been working with Joomla in a corporate environment since 2006, and building websites for clients since 2010. She co-leads the Joomla Users Group in the San Francisco Bay Area.

“Bravo, again! *Using Joomla* empowers you to create and transform Joomla 3 websites with confidence and skill, through the experienced direction of Severdia and Gress.”

—Andrew Eddie
Joomla Cofounder and contributor

“If you are searching for a definitive guide to Joomla, then look no further. This book covers everything, from core Joomla features and functionality to advanced topics, such as using the latest third-party extensions to solve your real-world problems.”

—Andy Miller
Joomla Cofounder and
RocketTheme CEO

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Ron Severdia and Jennifer Gress

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by Ron Severdia and Jennifer Gress

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Foreword

In 1999, I found myself in the middle of a war zone, embedded with a humanitarian relief organization in Eastern Europe. I was just another recent college graduate looking for ways to serve a higher purpose. During college, I'd paid my way through school by doing database consulting gigs since I had a knack for technology. In the golden era of the dot-com boom, I thought it would be great if there were a way to find affordable, effective, and open source technology that could be used to help those in need. Flash forward a few years to 2003. As I'm preparing to present a website solution to a non-governmental organization in New York, an engineer on my company's team showed me a content management system (CMS) called Mambo. At the time, trying to manage content on your website either required an engineering degree or was woefully underpowered to run even a simple blog. Mambo was different. It provided just the right balance of ease-of-use and robustness. "Power in simplicity" was the tagline. I was hooked.

Little did I know that 11 years later, more than 3% of the Web would be powered by Mambo's successor, Joomla. Joomla brought a new way of thinking about website management when it evolved from Mambo in 2005. Website creation and management was no longer the domain of software developers, and instead "accidental techies" within organizations could now create content on the Web to share with the world. It also brought with it the powerful ability to make your website more than just a blog or content. Third party extensions could be easily added to allow you to sell merchandise, create an online community, and share your message with the world in a variety of new ways.

While Joomla provided liberation from standard technology for accidental techies, its true success was in the growth of a worldwide community of developers, designers, contributors, and users. Bringing diverse backgrounds and cultures to a software project was not novel when Joomla started, but the way it attracted the nonengineer was certainly unique. Due to this community development, Joomla has continued to grow in

two directions at the same time, serving the needs of both the average end user and the software engineer.

One of the most striking differences between Joomla and any other software I've used is its focus on community. From two worldwide conferences each year to more than 40 local conferences spread around the globe, Joomla is truly a community of individuals passionate about harnessing the power of the Internet to improve the world. It's a community that speaks more than 50 languages, is used in more than 190 countries, and which actively promotes and encourages the ideas and contributions of nondevelopers. As the Internet continues to evolve, and as more technology is created to better serve a more global, mobile, and social online world, Joomla continues to change with it.

The book in your hands is a testament to Joomla's progress, as it contains the information you need not only to be successful in building and managing a Joomla website, but also the insight as to where to look for the next generation of technology to help your organization thrive online. Whether you're running a small business or operating a multinational organization, Joomla provides the tools you need to build a successful website. I met Ron at the very first JoomlaDay event on Google's campus in 2007 and we've been great friends ever since. I also met Jenn at a JoomlaDay (in San Francisco) recently and was immediately impressed by her great attitude, organizational skills, and ability to get things done. Jenn and Ron provide you with a simple step-by-step game plan to create your Joomla website—and the encouragement to go beyond the basics and explore all the richness the Joomla community has to offer.

I hope to see you in the Joomla community soon!

—Ryan Ozimek
Board Member, Open Source Matters (OSM)

Preface

Welcome to Joomla!®. If you're new to content management systems (CMSs) or even new to building websites, this book will help you get up and running in no time. Whether you're a web designer or an experienced developer, this tome will help you to use Joomla, one of the most popular content management systems available today.

Who Should (and Shouldn't) Read This Book

Have you been asked to build a website in a short period of time? Do you want to convert an existing site to a CMS? Do you have a client who needs a powerful website with lots of functionality? If any of these are true, or you just want to know more about this thing called "Joomla" that people are talking about, this book is for you.

We'd like to think Joomla is for everyone, but if you're a developer looking to create extensions or build on top of Joomla's framework, this book isn't for you. It's also not meant for those who want to build a static site that rarely needs altering, as Joomla comes with management overhead.

How This Book Is Organized

Each chapter of this book breaks down the extensive features of Joomla into easy-to-understand sections, many with hands-on exercises to help you get going quickly:

Chapter 1, Overview

Get a little background on Joomla and its history, and a tour of the administrator panel.

Chapter 2, Planning Your Website

Planning is number one in most endeavors. Plan your navigation (menus), categories, articles, modules, templates, and more in this planning chapter.

Chapter 3, A Tour of the Administrator Panel

Learn how to move around the Administrator Control Panel.

Chapter 4, Setting Up the Basics of Your Website

Create categories, articles, menus, and modules for your website. Set up your template in this chapter, too.

Chapter 5, Creating Content

Learn the ins and outs of creating content.

Chapter 6, Managing Media and Creating Galleries

Discover how to manage images, files, and videos in Joomla. Learn how to create image galleries as well.

Chapter 7, Making Your Website Speak Multiple Languages

The Internet makes a very big world small. Make your website serve content in multiple languages.

Chapter 8, Starting a Blog

You, too, can be a writer with your very own blog! Learn how to create a great blog with Joomla.

Chapter 9, Create and Share an Event Calendar

Events are fun for everyone. Keep an events calendar on your site to make your visitors aware of fun events happening in your world.

Chapter 10, Creating Forms

Very few sites exist without forms. Create contact forms or even forms that can accept payments.

Chapter 11, Building an Online Store

Sell your wares in an online store in Joomla.

Chapter 12, Engaging and Keeping in Touch with Your Users

Your website needs people. Chapter 12 helps you engage and stay in touch with your visitors in multiple ways.

Chapter 13, Solutions to Common Problems

Learn about more lengthy solutions that didn't fit into other chapters, such as SEO, User Groups, ACLs, and more.

Chapter 14, Making Your Website Secure and Optimized

Keeping your visitors and your website safe is very important. It takes diligence yet isn't difficult.

Appendix A

Here you'll find step-by-step instructions to install Joomla.

Appendix B

Keep your Joomla installation up-to-date and learn how to migrate it, which is sometimes necessary to keep it secure.

Appendix C

So many extensions, so little time. Learn how to choose the right extensions for your site. A list of extensions used in this book can be found here.

Appendix D

You may want to develop an extension or app with the Joomla Framework. Perhaps you're not a coder and want to get more involved and give back. This is the appendix for you.

Appendix E

Little snippets and goodies are here.

Conventions Used in This Book

The following typographical conventions are used in this book:

Italic

Indicates new terms, URLs, email addresses, filenames, and file extensions.

Constant width

Used for program listings, as well as within paragraphs to refer to program elements such as variable or function names, databases, data types, environment variables, statements, and keywords.

Constant width bold

Shows commands or other text that should be typed literally by the user.

Constant width italic

Shows text that should be replaced with user-supplied values or by values determined by context.



This element signifies a general note.



This element indicates a warning or caution.

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Some Basic Terminology

In dealing with any new technology, becoming familiar with the lingo can be a frustrating process. This section explains some of that lingo in plain English.

Frontend Versus Backend

If you're not familiar with Joomla, you'll quickly learn the difference between the *frontend* and *backend*. It is a very simple concept. The frontend is what visitors see when viewing your website. However, site administrators have access to a control panel they can use to build and manage the website. This is called the backend, which is sometimes referred to as the *Administrator Backend*.

Extensions

Like most modern content management systems, Joomla allows the installation of add-ons to extend the basic functionality. In Joomla, users can extend the functionality to add features like a shopping cart, discussion forum, calendar, and lots more. These add-ons are collectively referred to as *extensions*.

There are seven different types of extensions: components, modules, plugins, templates, languages, libraries, and packages. Each of these types interact with Joomla in a unique way and offer tremendous flexibility in what a user will experience on the frontend of the website. Each extension type is summarized below and will be addressed in more detail throughout this book.

Components

These are typically the most powerful of the seven types of extensions. Located in the main body of the page, a component is an application that runs within your Joomla website. Examples of a component include a discussion forum, calendar, or contact form, or even displaying a simple article of text. Every page on a Joomla website must load at least one component.

Modules

If you think of your web pages broken up into blocks or zones, most of the blocks that live outside the main page area are made up of modules. A module can display a menu, show how many items are in your shopping cart, randomly display an article, or even ask the user for certain information. Modules themselves are managed and created through the *Module Manager*. The location and position modules on the frontend are dictated by module positions in the template. The possibilities are almost endless as to what you can do with a module. Modules are optional but very useful.

Plugins

Plugins are a lot more powerful than they are given credit for. In short, they process web page information as it loads and can do just about anything, from searching content to masking email addresses to protect them from spambots. Plugins are optional extensions on the frontend, but are very powerful.

Templates

Although most people do not think of templates as extensions, they are classified as such. You can think of a template as a theme or a skin. Joomla makes it easy to change the template on your site as a whole or use templates for individual pages. At least one Site template and one Admin template must be installed on every Joomla website.

Languages

Joomla is truly an international CMS and is used by people all over the world. For instance, if you live in the Netherlands, you might prefer to have the Joomla interface in Dutch. Using the Dutch translation, this is done with only a few mouse clicks. Every page on a Joomla website must load at least one language.

Libraries

Libraries are packages of code that provide a related group of functions. Third-party extension developers can use libraries for their extensions.

Packages

Packages are a collection of extensions. For example, a package might contain a template, modules, and plugins used by that template. When a package is uninstalled, it uninstalls all the extensions in the package.

Site Content

As in other content management systems, content is the information contained on your web site. There can be many different types of content on your web site including articles, photos, calendar events, products for sale, and more.

Categories and articles

The most common type of content in a default Joomla installation are called articles. Articles are organized into categories. Categories are used to group related articles.

For many users new to Joomla, the concept of articles and categories is fairly easy to understand. We'll make it even simpler, though, to clear up any confusion. Think of your website like a filing cabinet. The file folders are the categories. The pieces of paper inside the folders are the articles. You can have multiple articles in a single category. You cannot have an article in multiple categories.

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We have a web page for this book, where we list errata, examples, and any additional information. You can access this page at <http://bit.ly/joomla-2e>.

The authors also have a companion website at <http://www.usingjoomlabook.com>.

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About the Technical Reviewers

Matt Simonsen, a systems engineer at **Khoza Technology, Inc.**, became interested in Joomla as clients needed solutions to their hosting challenges. As his team has grown and began to take on more development projects, Matt has actively participated in the **Bay Area Joomla User Group** and is a founding member of the **Central Valley Joomla Users Group**.

David Beuving is the CTO of **Khoza Technology, Inc.** and leads the company's LAMP development team. He has been using Joomla since version 1.0, has authored a number of extensions, and has contributed code to numerous third-party extensions and even the Joomla core. He lives in Jackson, California, where he enjoys spending time with his family and playing music at church.

Duke Speer is on a campaign to save the world, one nonprofit at a time. He let passion become mission a decade ago when he traded the world of being a CIO at a major Southern California-based broker-dealer for the Park City, Utah, lifestyle. As a contributor to The Joomla Project, Duke is the Manager of the Trademark and Licensing Team, serves on the Governance Working Group, and contributes articles and art to the

Marketing Team and Joomla Community Magazine. He is probably best known in the JoomlaVerse as the designer of the Joomla Framework's logo, a popular speaker at many JoomlaDays, and the Host of Joomla!Ignite at the Joomla World Conference.

Acknowledgments

I want to thank the Joomla people who got me involved in the project back at the beginning. A huge thanks goes to Louis Landry, Rob Schley, Andrew Eddie, and Andy Miller for all you've taught me about development, open source, and community. A big thanks also goes to my co-author of the first edition, Ken Crowder, who was my first Joomla "spirit guide" on what was to become quite a journey.

Also a big thanks goes to the amazing Ryan Ozimek for his tireless and endless contributions to Joomla, his relentless pursuit of ways to make it better, and for writing the foreword to this book. A debt of eternal gratitude goes to you for all you do.

—Ron Severdia

Thank you to the Joomla men who taught me so much:

- Brian Watters for introducing me to Joomla all those years ago.
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- Roland Hall for teaching me the technical side of Joomla and servers so well I could do it myself.
- James Foreman for tirelessly working with me with clients and the JUG, and for being an excellent colleague and friend.

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Additionally, I want to thank the fabulous people and developers in the Joomla community. You are inspiring, and I am grateful to be a part of such an excellent group of people.

Last but not least, thank you to the entire team at O'Reilly—you are all fantastic. Special thanks to Allyson MacDonald who rocked it doing whatever was needed to make *Using Joomla* happen and be great.

—Jennifer Gress

CHAPTER 1

Overview

There are so many great ideas and purposes for websites. Yet how do you make yours a reality without spending a ton of money? Where do you start? What resources are available to support you? Do you have to know a bunch of code that makes you feel like a deer in the headlights in order to get the result you want?

No, you don't need a lot of money. Just some time. In *Using Joomla*, we'll show you where to start and take you step-by-step along the way. You'll be given resources on where to look for further help if you need it. You won't need to know any code, though a little HTML and CSS will make your journey a bit easier.

All of this is accomplished by using Joomla for your next website.

Joomla is a content management system (CMS) which allows users to add, change, and manage website content with ease. *Using Joomla* is going to give you the directions to build a Joomla website step-by-step: from planning ([Chapter 2](#)), installation ([Appendix A](#)), setting up the structure ([Chapter 4](#)), and creating content ([Chapter 5](#)), to more complex operations such as extending Joomla with third-party extensions (chapters [7](#) to [11](#)), migration ([Appendix B](#)), multiple languages ([Chapter 7](#)), security ([Chapter 14](#)), and more. All of this will use Joomla 3.x, the latest and most exciting release to date!

A Brief History of Joomla

In 2000, the Australia-based company Miro developed a proprietary CMS called Mambo and, a year later, released it for free to the public under the GNU General Public License (GPL) (see [“Why Open Source and the GPL?”](#) on [page 3](#) for more on GPL). Mambo quickly garnered a lot of community support and enthusiasm. But in 2005, a copyright dispute with the Mambo Steering Committee caused most members of the Mambo Core Team to resign. The result was a new entity called Open Source Matters and a *code fork* (a point at which a new version of the source code “forks” in a different direction) of Mambo called Joomla. Joomla, which is a phonetic spelling of the Swahili word

“Jumla” meaning “all together,” was officially launched with version 1.0 on September 16, 2005. The first version was primarily a rebranding with a few bug fixes, but 14 updates and numerous open source awards followed over the next two years.

On January 21, 2008, the first major revision to Joomla was announced: Joomla 1.5. It was a monumental effort on the part of many and brought a whole new level of power and features to the open source CMS world. Joomla received a new API and became a truly international CMS, with support for extended character sets and right-to-left languages. It grew leaps and bounds in areas like usability, extensibility, and template control—where it was already superior to other options.

In July 2009, the Joomla Project announced a restructuring of its management to increase productivity and efficiency. The Core Team that originally led the project was replaced by the Joomla Leadership Team. This redefined the role of the team leading the project and structured it more around community involvement in events, the Google Summer of Code projects, and other activities. This somewhat federative approach to team-building was also an effort to increase community participation in the development process instead of relying on a small group of coders to do most of the work.

In January 2012, the third revision to Joomla was announced: Joomla 2.5—another fantastic effort by the Production Leadership Team and others in the Joomla Community. Joomla 2.5 brought many vital new features and a new API, giving Joomla greater ease in use, user control, multilanguage abilities, and the ability to update with one-click.

Quickly after the release of Joomla 2.5, work was under way on the Joomla 3.x series. Joomla 3.x focuses on mobile-friendly websites on the frontend, as well as backend administration. With greater ease in navigation and more user-friendly means of editing Joomla sites, Joomla 3 is fabulous and the focus of this book. As of April 2014, Joomla 3.3 is the current release within the Joomla 3 life cycle. Every two to three months there will be a new minor release within the Joomla 3.x series. Minor releases are whatever comes after the dot (3.4, 3.5, 3.6, etc.). When the last minor release for Joomla 3 is released, it will be supported for two years. We do not know how many there will be as of June 2014.

This release structure allows new features to be added to Joomla 3 as they are needed. Additional features and changes to Joomla 3 are to be fully backwards-compatible from Joomla 3.4 on. This means that updating Joomla 3 within the version won't break Joomla and won't break any break third-party extensions.

Checking the information about [Joomla CMS versions](#) will keep you up to date on Joomla versions and their support dates.

Joomla Series End-of-Life Dates

Nothing lasts forever (except maybe a Twinkie) and that goes for Joomla releases, too. The following is a list of previous Joomla releases and their end-of-life dates:

- Joomla 1.0.x: July 22, 2009. We advise you to migrate to Joomla 3.x in order to stay current.
- Joomla 1.5.x: September 2012. We advise you to migrate to Joomla 3.x in order to stay current.
- Joomla 2.5.x: December 2014. We advise you to migrate to Joomla 3.x before Joomla 2.5 is end of life.

(For more information on upgrades and migration, see [Appendix B](#).)

Why Open Source and the GPL?

The idea behind open source software—that it can be freely used, modified, or even sold—is a powerful one. This doesn't mean that open source software is always cost-free, but users like you and me are allowed to change and improve it, which spurs creativity and innovation.

The Joomla Project believes strongly in the power of the GNU GPL. It's not just because it's the most popular of the open source licenses, but the project also feels it offers the best freedoms for third-party developers and encourages them to follow the project's lead in choosing to make their software open source. Visit the [Open Source Initiative](#) for more information. For more information about the GNU GPL, visit the [Free Software Foundation](#).

The Advantages and Disadvantages of Using a CMS: Static Versus Dynamic

For many years, the traditional way of building a website has been with plain, static HTML. Whenever a change was needed, web designers used tools like Adobe Dreamweaver to perform tasks manually. If the websites were small, it was a fairly simple task. Now that even relatively small sites contain hundreds of pages and the largest ones contain hundreds of thousands, the time and expense involved in maintaining a static HTML website is much greater than when the Web was young. An advantage to static HTML sites is that they are less likely to have security vulnerabilities and require very little ongoing maintenance.

A CMS has many advantages because of its dynamic structure. You can make one simple menu change and have it reflect throughout your entire site—no matter the size. Your content is organized and maintained through a backend system, allowing you to manage

templates, content, images, and more. A CMS like Joomla has many powerful features, like contact forms and search, already built in. It can also help teams effectively collaborate, create content based on specified permissions, and manage documents and digital assets.

The disadvantage of using a dynamic CMS as opposed to a static site is that it requires commitment and ongoing maintenance. Software of a CMS must be updated to keep features and security up to date. Frequent security updates happen with the core software and third-party extensions. While some may think it is optional to do these updates, one of the top reasons for problems in a CMS is the core or third-party extensions not being properly updated in a timely fashion. Thus, your commitment is necessary. It's similar to a vehicle. Everyone knows that the oil needs to be changed regularly or the vehicle will not perform optimally or can even break. It is the same with software like Joomla. Getting the oil changed doesn't take very long. It does need to be done, though. Depending on the number of third-party extensions your website is using, your time commitment could be as small as 10 minutes every month. Not bad and very doable! Still, if you cannot commit to the necessary time, perhaps a static site is best for you.

Since you are reading this book, we'll trust that you are totally committed to your Joomla site and will be on your game keeping it up to date. You can get into planning your website in [Chapter 2](#) or you can jump in and start on [Appendix A](#) to install Joomla and take a tour of the Administrator Panel ([Chapter 3](#)).

Joomla Concepts

Joomla is database-driven. Your content is stored in a database that is created at the time of installation (see [Appendix A](#)).

Joomla is menu-based. Your content displays in various ways according to menus and menu items. This is often referred to as the *site navigation* or *site map*.

Menus give your visitors a way to reach your content. Content is most often an article or a group of articles in a specific category displayed in the main content area of your site. Third-party components like a forum or store display in the main content area by means of specific menu item types, which are as part of the component.

Often one wants to display smaller blocks of content above, below, or in the sidebars of the main content area. These blocks are called *modules*. Modules display in module positions defined by the template, and based on their menu assignment.

For example, you may want one or more modules displayed only on the home page above your main content article. You may want a specific module displayed only on your store pages to bring attention to specific products. Each module can display on one or more menu items regardless of their type.

URLs are displayed based on *menu item aliases*. The alias is set within the menu item and displayed on the frontend of your site as the URL for that page.

Figure 1-1 shows an example of a typical site page that includes a module, menu, and main content area.

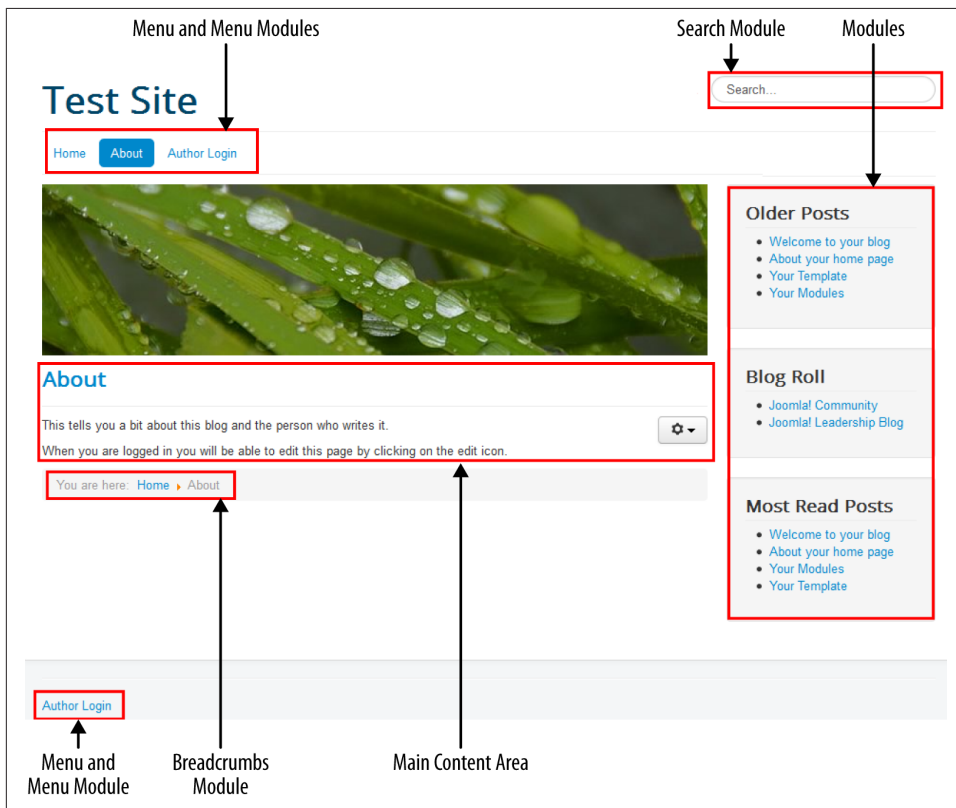


Figure 1-1. Menus, modules, and main content area of a Joomla site

As you can see, a typical page is made up of articles, menus, and modules. Understanding this will make planning your website easier and will help you know the terminology better. Check out the **Preface** for more on terminology in your Joomla site.

The first step in building a website is to plan. Planning takes patience and decision-making. It's OK for it to take time. The better you plan, the easier it will be to build your site. In **Chapter 2**, we will take a step-by-step process and plan a website.

Planning Your Website

When you first sit down to create your new Joomla site, a little bit of planning and forethought can save you a lot of time and heartache down the road. But don't worry if you haven't worked out every little detail. Joomla is flexible enough for you to be able to move things around and readjust later on.

Example Website: Joomla Pet Center

We are going to create an example website called Joomla Pet Center for fans of pets. Joomla Pet Center will include articles, a store, social community, and many other elements which together will give you a real-world example of a website with a variety of features. While Joomla Pet Center will be fairly complex, your site may be simpler. Regardless, planning is key.

Goals of the Website

Knowing your business goals is helpful when planning a website. We have to have a good handle on what we want people to do when they get to the site. If you have a marketing plan, or mission statement, this is a good time to pull those out and review them so that the website works with them and the mission of your business.

If you don't have a business plan or mission, no need to worry (though you may want to consider it for the future). Simply ask yourself, "What do I want my website visitors to do when they get to my site?"

Our Joomla Pet Center has several goals:

1. Encourage visitors to buy products from the site's online store
2. Provide helpful information via the Joomla Pet Center blog

3. Give pet lovers a community in which they can meet each other and foster relationships with people of like mind
4. Capture contact information from visitors in order to reach out to them again to achieve future sales

Now it is your turn to think about and write down the goals for your website.

Hands-On Exercise: Write Your Goals

There isn't a wrong or right way to determine your goals and record them somewhere. It is helpful to write them down and revisit them frequently. As a website progresses, sometimes we can get distracted with its functionality, or the design and goals can get lost in the shuffle.

Ask yourself some questions and note the answers. It's OK if you don't know the answers. Just asking the questions will assist in your planning process.

Ask yourself:

- What is my top business goal?
- What are my other business goals?
- What do I want people to do when they get to my website?
- What are the benefits of my product or service that visitors want?
- Do I want the website to be mobile-friendly?
- Will more than one person be administering the website? If so, what will they need to access?
- Will visitors be able to contribute to the site in any way, whether it be commenting, submitting forms, or creating a profile? How will they and their information be moderated?

Having a basic concept of what you ultimately want to achieve for your business and your site will assist you throughout the planning process. Now let's plan your site menu.

Planning Menu Items

It is easiest to begin the planning of your website by figuring out what menu items (or sections) you would like to appear on your site. The Joomla menu system manages the navigation for your website and gives it a framework. A menu can also be referred to as tabs or buttons that often exist at the top of a website and provide navigation throughout the site content. Menus can also be down the side of a page or at the bottom of a website. There can be more than one menu on a website.

In a Joomla menu, each of the linked pages of content is created by adding a new menu item to one of these menus. The *main menu* is typically where visitors will navigate to the main pages of your site. Each of these pages is a menu item within the main menu.

The importance of a good menu structure cannot be overemphasized. If users can't quickly and logically find the information they want, they'll go somewhere else. So when you're building a website, you should spend the extra time to make sure the menu structure (or site map) is just right. On smaller sites, the site map pretty much builds itself because the structure is simple. On larger sites with thousands of articles, time invested up front to get things organized in the best possible way will save a lot of time and headache down the line and also provide for a better user experience.

Joomla makes it easy to organize your information with its menu system. You can create an unlimited number of menus and menu items as needed, with the ability to nest those menu items within each other to go as deep as you want.



Some of you are probably shaking your head at the “unlimited menus” statement above. Yes, we're just like you in that we question everything, and the truth is that it's not technically unlimited. The maximum number of menu items is actually 4,294,967,295. With a number that big, we think it's safe to say that it is virtually unlimited.

When planning our Joomla Pet Center, we talked together on the phone to determine the menu items for the site and wrote them down on a piece of paper. After several website builds, this will be sufficient for you, too. However, as a beginner, it will be easier for you to draw it out in some way.

Ways to draw out your menu items:

On paper

Get a piece of paper and leave a little space at the top and then draw a line across the paper either portrait or landscape—it doesn't matter which way. Write the menu items that will appear on your site across the paper above the line. Below the line, write the items that will appear in the drop-down of that menu item. Using sticky notes is a great way to easily try different arrangements of topics to find the most effective sequence and flow of content.

In a spreadsheet

Start with the top row of the spreadsheet and in each cell type the name of the menu item across the top. Make that row bold. On the next row down under each of the bold cells, type the menu items that will be drop-down items.

Wireframing software

There are many wireframing tools that will allow you to create menus and page layouts with varying effort, complexity, and cost. You are welcome to take the plan-

ning of your site to any level you wish. In some cases, using wireframing software like wireframe.me, OmniGraffle, or Mockingbird is a very good idea. In other cases, it is overkill and could take more time than paper or a spreadsheet.

Presentation software like PowerPoint or Google Presentations

You can create a presentation-style file with boxes outlining what goes where in a Google Drive document for as many pages as you wish.



If you have a lot of ideas for your website, it might be useful to try this simple exercise: Write down all the sections and ideas you have on small index cards. Lay out all the cards (or stick them on a wall if you're using stickies) and put related items together in the same area, moving them into logical groups so they all create the least number of groups possible. This will help make your site structure and menu system more clear.

Figure 2-1 shows the menu items Joomla Pet Center will have.

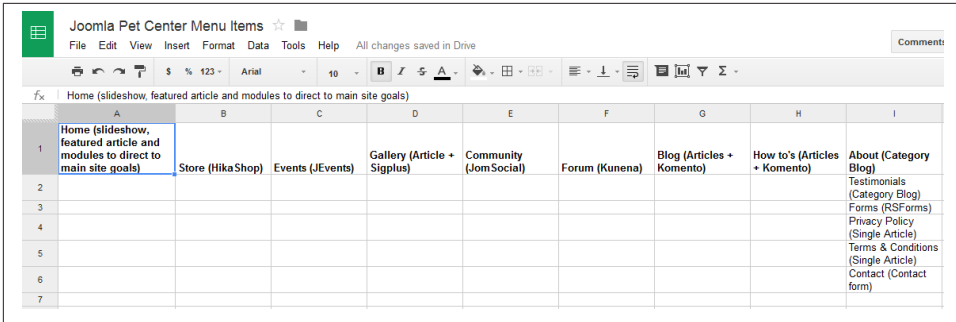
	A	B	C	D	E	F	G	H	I
1	Home	Store	Events	Gallery	Community	Forum	Blog	How to's	About
2									Testimonials
3									Forms
4									Privacy Policy
5									Terms & Conditions
6									Contact
7									

Figure 2-1. Joomla Pet Center menu items using a Google Drive spreadsheet

Next, we take it a step further and determine the type of each menu item, which will affect its layout/display on the page. The type or the component that will be used is in parentheses next to the menu item in Figure 2-2.



Menu items are likely to change as the site progresses. Flexibility is important as the site takes shape.



	A	B	C	D	E	F	G	H	I
1	Home (slideshow, featured article and modules to direct to main site goals)	Store (HikaShop)	Events (JEvents)	Gallery (Article + Sigplus)	Community (JomSocial)	Forum (Kunena)	Blog (Articles + Komento)	How to's (Articles + Komento)	About (Category Blog)
2									Testimonials (Category Blog)
3									Forms (RSForms)
4									Privacy Policy (Single Article)
5									Terms & Conditions (Single Article)
6									Contact (Contact form)
7									

Figure 2-2. Joomla Pet Center menu items with types to determine layout

Joomla Pet Center will make use of a few third-party extensions which add to the standard functionality of what comes with Joomla when it is installed. Therefore, a number of the menu items for Joomla Pet Center will display based on Component menu items.

Home

The home page of Joomla Pet Center will have a gallery, a featured article, and a number of modules guiding the visitor to the main points of the site that achieve our goals.

Store

The store will use a component called HikaShop, which is an ecommerce component to give shopping cart functionality to the website.

Gallery

We will use a module and plugin extension called Sigplus Gallery for a gallery of images of various pets.

Community

JomSocial is the top social extension for Joomla. It can be likened to a mini-Facebook for Joomla.

Forum

We will use Kunena as a forum for people to discuss various topics on Joomla Pet Center.

Blog

Joomla is great for blogs. We will use Joomla articles with Joomla's tagging component, along with an extension called Komento so that people can comment on the articles in the blog.

How to

We'll handle the "How to" section the same way as the blog.

About and Testimonials

Both the About and Testimonials pages need to display multiple articles at a time. To accomplish this, we will use the Category Blog menu item type and pull all the articles in a given category into a page on the site.

Forms

RSForm is the component that will display the various forms needed on Joomla Pet Center.

Privacy Policy and Terms & Conditions

These are both Single Article menu item types that will display one at a time when clicked.

Contact

Using Contact Enhanced, we will build a beautiful contact form for the site.

Now it is your turn.

Hands-On Exercise: Choose Menu Items and Layout

First, using whatever method works for you, draw out or make a list of all the menu items you will have on your site. If this turns into more than one menu, then make more than one list or drawing. If you plan to have a lot of content in your menu in columns, you may want to use multiple pieces of paper or tabs of a spreadsheet so that it can be clearer.

Once you are done making your list of menu items, you will go back and decide what type of content it is, what component can be used to create that content, and then what type of menu item to use to link to that content. The following list describes the most commonly used menu item types.

A page on your website can consist of a single article

As users navigate your website, they view one article at a time on each page, as seen in [Figure 2-3](#).

A page on your website can consist of multiple articles

As users navigate your website, each page they see contains several articles (e.g., an entire category of articles) (see [Figure 2-4](#)). These might be full articles or just teasers that require users to click a *Read more* link to view an entire article.

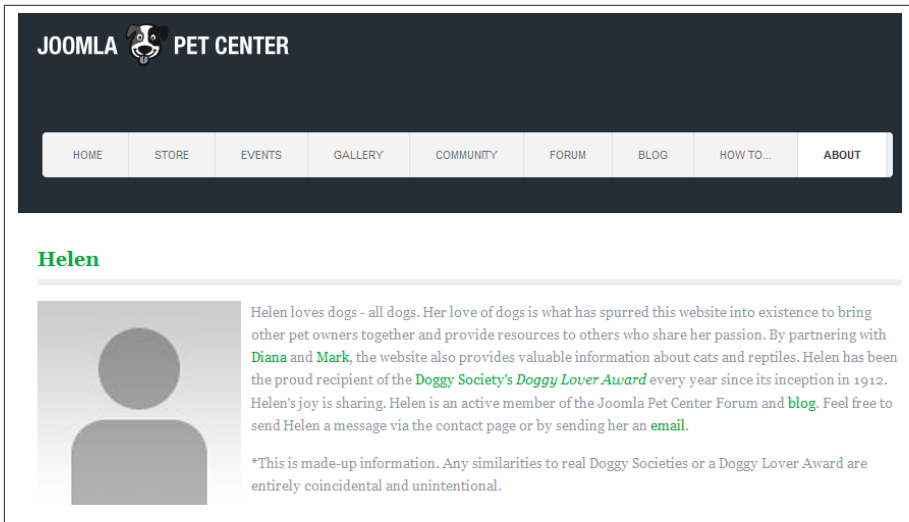


Figure 2-3. Example of a single-article display

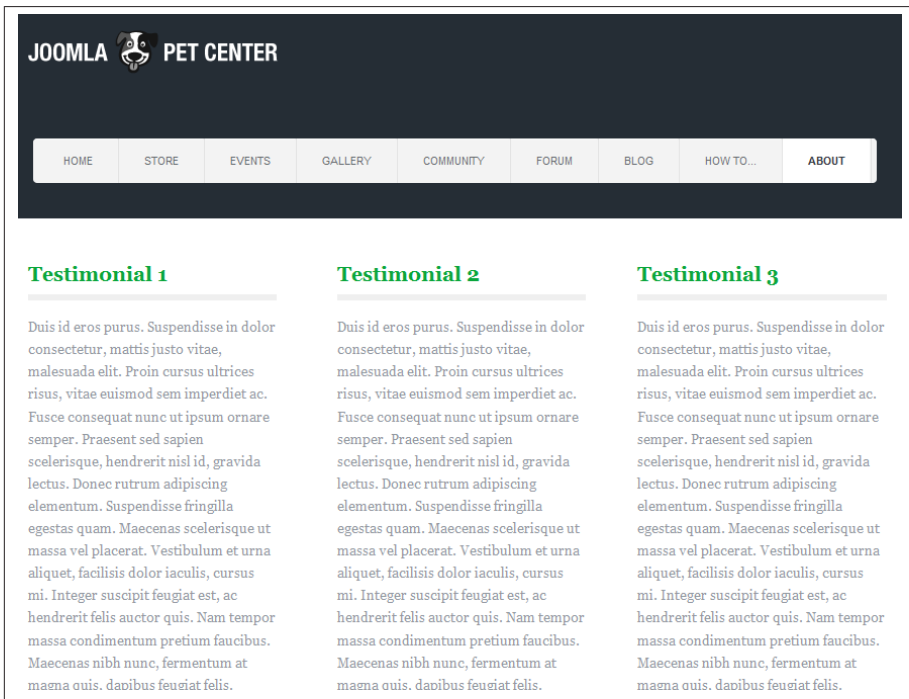


Figure 2-4. Example of multiple articles displayed on a page

A page that displays a content type produced by a different component than the Article Manager

As users navigate your website, the page displays content pulled from a component like a store or a calendar, as seen in [Figure 2-5](#).

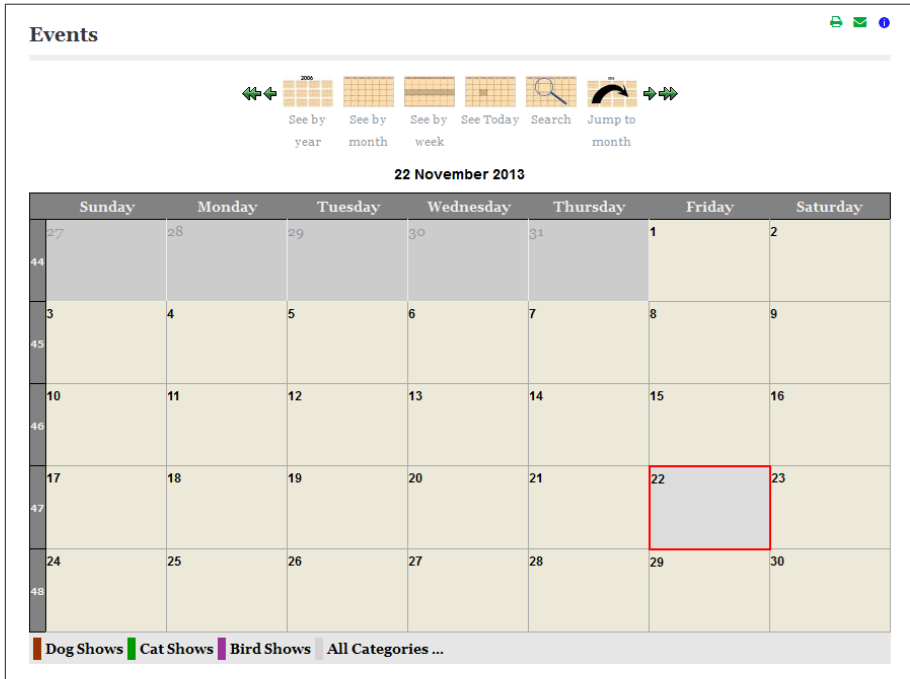


Figure 2-5. Example of the content from a calendar component displayed on a page

Most sites will likely use a combination of all of these options to display articles.

Planning Categories

Categories can be imagined like buckets. Each article (or page) is assigned to a category. You can imagine each article going into the bucket. Categories can have nested categories, or subcategories: buckets inside of buckets. You will get to see this as we create categories for Joomla Pet Center in the next chapter.

With your menu item and types in clear view, you can now plan your categories.

Joomla Pet Center will have the following categories based on the menu items we created in our spreadsheet:

- Blog
- How to
- About
- Testimonials
- Legal

In addition to these, we will have nested categories for the Blog and the “How to” sections, so we can organize the content to be easier for visitors to sort and navigate.

The Blog category will have the following nested categories or subcategories:

- Dogs
- Cats
- Reptiles
- Birds

To keep it simple, we will use the same nested categories for the “How to” category.

Hands-On Exercise: Make Your List of Categories

You can do something as simple as highlight your menu items that will be categories. You can also make a separate list, or use a combination of both. Just have them ready so that when it is time to create the categories, your list will make the process a quick one.

Because there are menu items that can pull articles from a specific category, keep your ultimate display types in mind while planning your categories.

Planning Articles

Just because we only have a few categories on Joomla Pet Center does not mean that we won't have many articles. In the About category, we will use a Category Blog menu item type and show three full articles about the Joomla Pet Center partners.

We'll have three articles for this category called:

1. Helen
2. Diana
3. Mark

Testimonials, the Blog, and the “How to” categories will also need to display multiple articles in the main content area.

In the Testimonial category, we will start out with three testimonials. The article titles will coincide with what the testimonial is about.

Because we don't yet know the titles of the articles that will appear in the Blog and "How to" categories, we will use the following placeholders:

- Testimonial 1
- Testimonial 2
- Testimonial 3
- Blog 1
- Blog 2
- Blog 3
- How to 1
- How to 2
- How to 3

Our Legal category will house the Privacy Policy and Terms & Conditions articles.

This is all just a plan. As the website progresses, it can and likely will adjust. Thank goodness Joomla is so flexible.

Hands-On Exercise: Make Your List of Articles

You can either directly create the articles in Joomla or plan a list using a variety of approaches, such as another spreadsheet tab, sheet of paper, presentation slide, or wire-framing software. Whatever approach you prefer, you might want to make some notes about the categories that you'll put the articles in.

Go ahead and make notes about your articles within their categories if you choose to at this time.

Planning Users

If you are the only one managing content on the backend, and website visitors won't need to log in to access special content or do specific actions, then you won't need to plan for additional users.

If you are planning to have multiple users, edit content on the site, or perform certain actions, you will need to think about who is doing what. Joomla is very flexible and can allow or limit permissions to specific *user groups*.

If there is special content or functions you want your visitors (users) to have access to, they will need to register for a user account to be granted specific permissions governing they can do or see.

In some cases, a third-party extension may dictate how users are handled. Each scenario is different and can be very simple or very complex. Joomla can handle both and everything in between.

See “[Hands-On Exercise: Creating Users](#)” on page 242 for an entire section to set up users, user groups, and Access Control Lists.

Hands-On Exercise: Write Out Your Users and What They Can See or Do

This is a big topic, so let’s just start with some basic definitions to help you understand.

Users

Anyone registered on the site with frontend or backend access.

User group

Determines what users can *do* and the permissions they have. Works in conjunction with ACLs.

Access Control Lists (ACLs)

Determines what users can *see* and works in conjunction with user groups.

For planning purposes—consider, decide, and document the following:

- If visitors will register (have a username and password) on your site to “unlock” content hidden to unregistered (public) visitors.
- If there will be specific content that different registered users can access on your site. For example, students see *abc* content and teachers see *xyz* content.
- If other users will add content via the frontend.
- If other users will edit existing content via the frontend.
- If other users will add or edit content, or manage extensions via the backend.

Get specific. If Helen needs to add events, she will need permissions (controlled by the user group) to do so either via the frontend, the backend, or both.

If Mark needs to edit specific articles on the frontend and not be able to edit others, he will need permissions (controlled by the user group) to do so via the frontend.

If certain visitors should never see specific content, that user group needs special ACLs to control what they are allowed to see.

For step-by-steps involving users, user groups, and ACLs, see “[Hands-On Exercise: Creating Users](#)” on page 242.

Choosing Extensions

There are literally thousands of extensions for Joomla that provide just about every feature imaginable. For our Joomla Pet Center and for the sake of this book, we chose extensions that are popular, well-tested, have good support, are ready for Joomla 3.x, and will benefit you as a student of Joomla. They are included in the later chapters of this book.

Because choosing extensions for your website can be daunting and challenging, there is a dedicated appendix to assist you in finding extensions to make Joomla do even more than it does already. Please see [Appendix C](#) to learn more about choosing extensions. There are important tips on finding and choosing extensions from third-party developers in [Appendix C](#).

Do find your extensions and plan for them, as they might change your design and site plan. That being said, attempt to use what comes with a Joomla installation first and use a third-party extension only if required.

Choosing a Template

The site template determines the look and feel of a website including colors, fonts, font sizes, and other styling aspects. There are many places to find suitable and attractive templates for your Joomla website.

Included Templates

Joomla installs with a number of default templates for you to use at no additional cost. You can customize them if you have the skillset to do so.

Third-Party Free Templates

You can find many free Joomla templates on the Internet. However, it is important to research a number of things about these before deciding to use one:

1. Does the developer continually update the template for new releases of Joomla?
2. Is there support for the template?
3. Do a Google search on the template name and read the results.
4. Do a Google search on the template name plus the word “vulnerability” and see if anything comes up. Issues should be infrequent and show that it was patched quickly.
5. Are there link-backs to the template developer’s website? If so, is that OK with you?

Third-Party Professional or Paid Templates

Joomla templates can be purchased individually or via a subscription from many template companies. Typically, it is fairly simple to alter/customize the template so

that you can have specific colors, backgrounds, fonts, etc. The good thing about paying for a template is that for the most part, these template companies continually update their extensions for the new releases of Joomla. However, if it is a very old or unpopular template, this may not be the case. As a result, research is needed with these companies as well. Here are some items to research about paid templates:

1. Does the developer have a history of providing updates for older templates for the latest releases of Joomla?
2. Most paid template companies do offer support, but you should still read the terms and conditions of the membership or purchase to make sure that support is what you are expecting.
3. Do a Google search on the template company you are considering to see what others say about it.
4. Do a Google search on the template name you are interested in to see what others say about it.

Custom Templates

You may want to employ a designer to design a custom template for you and have a Joomla template developer create it for you to use with Joomla. You may have the skillset to create your own custom template. This is the most time-consuming option and could be the most expensive, but you will be more likely to get exactly what you want with this option.

Twitter Bootstrap

A couple of guys from Twitter got tired of doing the same steps over and over to build a website from scratch so they came up with an open source framework to make things easier, faster, and more consistent. Released in 2011, they called this frontend framework **Bootstrap**. Earlier versions of Joomla (1.6–2.5, included with the *Atomic* template) used a similar framework called **Blueprint**, but Bootstrap took flexibility and mobile compatibility to the next level.

Fortunately, Bootstrap has progressed quickly since its initial release and is already at version 3.1. Joomla 3.0 was released with Bootstrap 2.1 and unfortunately, Joomla 3.2 uses the legacy Bootstrap 2.3.2 version which is incompatible with Bootstrap 3 and Joomla 3. So you can't really use the latest Bootstrap version (which has tons of improvements) without a lot of work (including modifying core Joomla files) or by using a "bridge" template containing elements and overrides from both. Templates like **Joostrap**, **T3**, or **Wright** are a great way to build your own template on the latest framework.



Not all template companies use Bootstrap. Many don't. But that doesn't mean that third-party extensions can't use Bootstrap to work with them. They still work. A few template companies may actually block certain Bootstrap files, which may require a few CSS workarounds to display correctly. This is rare, but possible.

For Joomla Pet Center, we are going to use a free template from a very reputable template company called RocketTheme. The template name is *Afterburner2*. RocketTheme has very good support and a flexible framework (the framework gives additional functionality to the template) that is easy for beginners to configure.

Home Page Layout

Going back to paper, a spreadsheet, a presentation slide, or wireframing software, we will now sketch out our home page layout. This is a guide so that we can create the elements required and have something to look at. Chances are good that the finished home page will look different than our sketch, and that is just fine.

Using a new tab of our spreadsheet called “Home page,” we will use outlined cells to lay out our home page. It is absolutely fine to use a piece of paper (perhaps even easier).

We already know that we want a gallery and an article with content for our home page. We also want to have a number of modules (think of modules as boxes) to direct people to various functions of our site that mesh with our site goals.

See [Figure 2-6](#) for our projected home page layout.

The spacing of modules is not exact. This is a quick, easy, and fairly low-tech way of sketching out a projection of what the home page layout will look like. As content goes into the modules, things will change.

Hands-On Exercise: Draw Out Your Home Page

Take a few minutes to decide what you want on your home page. This isn't something you have to treat as a contract. It is to be done as an exercise in planning. If you want a Twitter feed on your home page, then make a box for it.

Sometimes it is easier to figure out what to display on the home page after the rest of the site is laid out and content exists. It becomes clearer as the site is built as to what has its proper place on the home page. If you want to wait to sketch out your home page layout, that is acceptable and perhaps even preferred.

1	Logo				RSS Module
2	Main Menu				
3			Gallery		
4					
5					
6	Call to action 1		Call to action 2		Call to action 3
7					
8					
9					
10					
11					
12	Featured Article			Newsletter	Module
13					
14					
15					
16					
17					
18					
19				Other module	Perhaps
20					Community
21					
22					
23					
24					
25					
26					
27	Social Media	Icons	Twitter Feed		Facebook Like
28					
29					
30					
31					
32					
33			Copyright Module		

Figure 2-6. Joomla Pet Center home page layout

Internal Page Layout

Using a similar approach as the home page layout, we have to figure out how our internal pages will be laid out. The difference between the home page and the internal pages is that typically, the home page gallery won't display on the internal pages. The three modules beneath the gallery also will not typically display on the internal pages. It could be that different modules will appear at the top of the internal pages depending on what page was being viewed.

Often there are different sidebar modules on internal pages than there are on the home page, which would highlight content or give additional calls to action depending on the content being displayed.

For example, on the Joomla Pet Center testimonial page, we may want to display a module in the sidebar giving people instructions on how to submit a testimonial. Joomla modules provide a lot of power to be able to display different content on different pages.

Planning the internal pages is again just a guide. We may or may not know what we want to display on the sidebars or on internal pages until the content is entered.



You may have several different internal page layouts. Extensions will often dictate the layout as well as specific modules to be published on those pages. The key is to plan things out so you have a basis from which to work.

For Joomla Pet Center, we assume that we will have a sidebar on each page to display complementary information or action items. This will be the right sidebar so that on a mobile device it will appear after the main content item. The left sidebar would appear first on a mobile device prior to the content item.



On a mobile device, sidebar modules generally display before or after the main content area. Each template works differently, so check the template demo from a mobile device to see how the module positions display.

Hands-On Exercise: Draw Out Your Internal Page Layout

Think about your internal pages. If you offer white papers on your products, you might want to have a different module on each product page that allows people to read that product's white paper. You may want to display your contact information in a module on every page.

You can draw on a piece of paper to lay out each page of your website or you can make a new slide for each page in presentation software. You can make a new tab of a spreadsheet. Plan out what modules you want to display on your internal pages, and whether they will be the same on all pages or if you want different modules on each page.

This exercise is to give you an opportunity to think about what modules you might want, if any, to accompany the content that displays on a page.

Now that we have spent some time planning the site, we can be more efficient and quickly get building. Let's take a short tour of how Joomla works on the backend before setting things up.

A Tour of the Administrator Panel

If you want to follow along in this chapter, you need to have Joomla installed. If you haven't yet downloaded and installed Joomla, see [Appendix A](#) for instructions. We'll be taking a brief tour of the Joomla Administrator Panel and jumping right into setting up the structure of the website.

In any good CMS, the administrator dashboard is where the magic happens. In Joomla, this is referred to as the Administrator Backend and allows site administrators to build and maintain robust websites. This chapter will cover the Control Panel, Menu, and Administrator Module regions of the backend. Other chapters in this book will discuss these items in more detail.

If you haven't installed Joomla yet, you can refer to [Figure 3-1](#) to see the different areas we'll cover.

If you have Joomla installed, you can log in and view your own administrator control panel at <http://www.YourSite.com/administrator> (remember to replace "YourSite" with your URL).

Control Panel

The *Control Panel* is more or less the administrator's home page. It's the launching point from which you will build and manage your website. The Control Panel dashboard is divided into two columns. The column on the left sidebar shows links to commonly used areas of the site. The right column shows the administrator modules. [Figure 3-1](#) shows the Control Panel columns you would see if you were logged in as a Super Administrator. Depending on whether you are logged in as a Manager, Administrator, or Super Administrator, there may be fewer quick links and administrator modules on your screen.

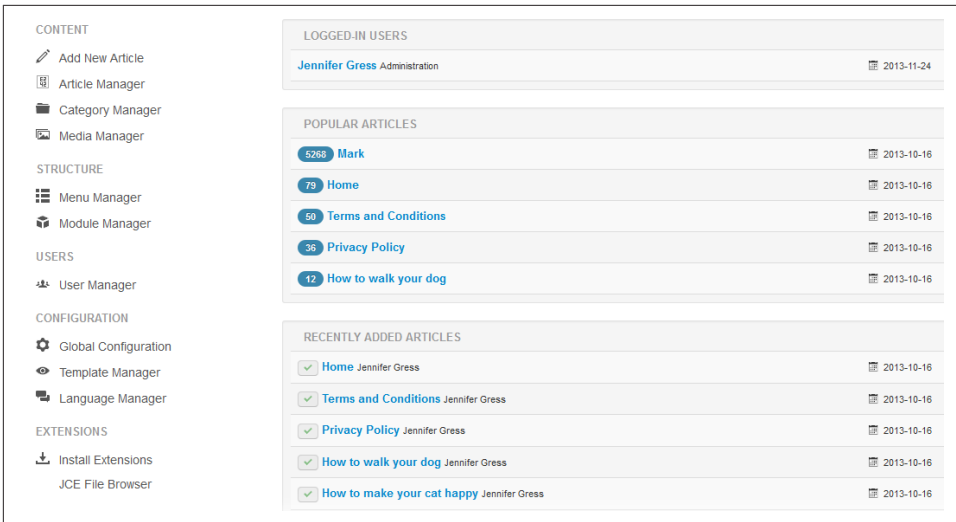


Figure 3-1. Joomla 3.x Administrator Backend

The links in the left column provide you with quick access to the following areas:

Add New Article

This link will take you to the new article page. This is the same as clicking Content→Article Manager and then New.

Article Manager

Displays a list of all of the articles that have been created in Joomla by you or any other user. You can also manage, add, edit, and delete articles from this screen.

Category Manager

Managing, adding, editing, and deleting categories takes place here. Categories are used to organize groups of articles.

Media Manager

Allows you to upload files into Joomla. Examples of file types are images, documents, videos, audio files, etc. Once uploaded, you can embed and link to them from various places within the CMS.

Menu Manager

This is mainly used for creating new menu items, but it can also be used to create new menus.

Module Manager

Used for creating, editing, or deleting modules published both on the frontend of the site and in the Administrator Backend.

User Manager

The *User Manager* allows you to manage user accounts, user groups, and access levels.

Global Configuration

A lot of high-level Joomla settings can be modified here.

Template Manager

Used for managing and configuring templates, template styles, and template files.

Language Manager

If English is not your first language or if you prefer a different language, you can use the *Language Manager* to change the default language for the frontend, the backend, or both. You can also allow each user to set their own language preferences and override language keys.



Additional languages are now available from the backend of Joomla. They can be installed from the *Extension Manager*. The Joomla Translation Working Group has translated Joomla's core language files into more than 100 world languages. Translations are available for download from [JoomlaCode](#).

Extension Manager

Used to install optional third-party extensions, update extensions, manage extensions, discover extensions, run a fix on the database, view warnings, and install additional language packs. Third-party extensions are packages that provide additional features or customize how Joomla works. See [Appendix C](#) for more on third-party extensions.

Administrator Menus

The menu at the top of the Administrator Control Panel serves as a launching point to virtually every area of Joomla's backend. A super administrator will have access to and see the menus that follow. If a user is in a different user group (administrator or manager), they will see some of these menus but not others. See [“User Groups” on page 243](#) for more information on user groups and the privileges granted to each group.

System

The System drop-down menu contains links to pages that facilitate the management of configuration settings, system information, cache, and checked-out items (see [Figure 3-2](#)).

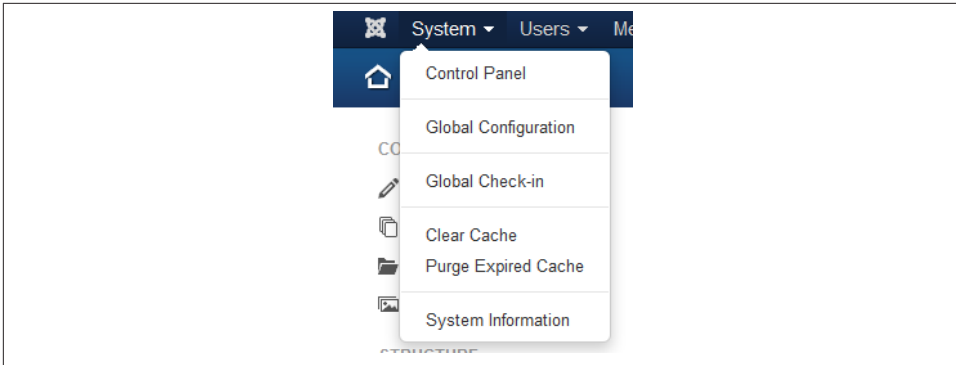


Figure 3-2. System menu drop-down

The following items are found in the System drop-down menu:

Control Panel

This links to the Administrator Control Panel.

Global Configuration

Many high-level Joomla settings can be modified here, such as system-wide editor and captcha, Search Engine Friendly (SEF) URLs, mail options, meta description and keywords, text filtering, access to global site, system, server, permissions, and text filter settings.

Global Check-in

This gives you the ability to check in articles, modules, menu items, and more in the database tables that may be locked/checked-out by another user who didn't check their item back in or may have been booted out of the system before exiting the article (or other item) properly.

Clear Cache

This does just what it says—it clears your site's cache.

Purge Expired Cache

Deletes any cache files that are no longer current.

System Information

Contains information about your server settings and key Joomla information. This is most helpful when troubleshooting an issue that may be caused by your server not being set up properly to run Joomla effectively.

Users

The Users drop-down menu contains links to manage and configure users, user groups, user access levels, user notes, and user note categories. Each menu item in the Users

menu drop-down has a submenu item that allows you to instantly “Add a new” of each menu item type for swift additions in the Users menu. Below are the items with descriptions of what you will find in the Users menu drop-down. For more information on using the items in the Users menu drop-down, see [Chapter 4](#).

User Manager

Allows you to manage user accounts.

Groups

Allows you to view default user groups or add new groups that can be configured with specific permissions that dictate what users can do on the site. (See “[User Groups](#)” on page 243 for more information.)

Access Levels

Allows you to view default access levels (or access control lists—ACLs) and create new access levels, to control which user groups can view what content on the sites, frontend or backend. See “[Access Control Lists \(ACLs\)](#)” on page 244 for more detail on ACLs.

User Notes

Create notes about specific users that will appear in the User Manager, with the ability to view or add a note on the fly about that user.

User Note Categories

Add *User Note Categories* to organize User Notes more effectively.

Mass Mail Users

Provides an easy way to send email to all your users or specific user groups.

Menus

The Menus drop-down menu allows you to access pages where you will have the ability to add, edit, and delete menus and menu items. [Figure 3-3](#) shows the Menus drop-down menu as it would look if sample data was not installed during Joomla installation. If you installed sample data during installation, you’ll see other menus below Main Menu.

As with the Users drop-down, the Menus drop-down has submenu items so that you can quickly add a new menu or a new menu item to an existing menu by utilizing the “Add a new” submenu item. For more information, see “[Creating Menu Items](#)” on page 47.

Menu Manager

Add, edit, and delete menus.

Main Menu

As the name suggests, Main Menu is the name of the main menu shown on the frontend. By clicking on Main Menu from the drop-down menu, you will be able

to add, edit, and delete menu items. If you have more than one menu, they will all be listed separately within the Menus drop-down.

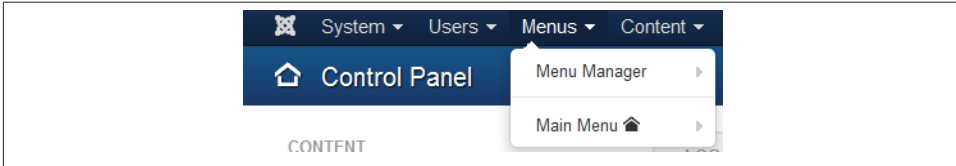


Figure 3-3. Menus drop-down menu

Content

Some would call content the heart of any CMS. The Content drop-down menu (shown in [Figure 3-4](#)) gives you access to fundamental parts of Joomla that facilitate managing your articles as well as your site’s hierarchical structure. Other content types such as events and contacts are managed using the Component drop-down menu (see the following section). For more information, see [Chapter 4](#) and [Chapter 5](#).

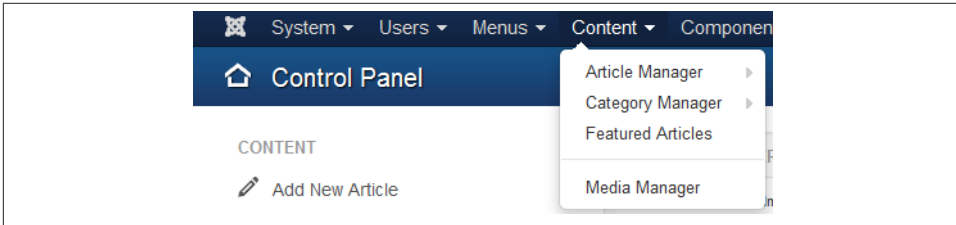


Figure 3-4. Content menu drop-down

Article Manager

Displays a list of all of the articles that have been created in Joomla. You can also manage, add, edit, and delete articles from this screen.

Category Manager

Add, edit, or delete categories.

Featured Articles

Shows the articles that have been designated to display as Featured. This is often content intended to show on the home page of your website, but it is not limited to this. Featured articles can be configured for any categories and then configured through the menu item to define how the content displays on the frontend of the site.

Media Manager

Allows you to upload files into Joomla. Examples of file types would be images, documents, videos, audio files, etc. Once uploaded, you can embed and link to them from various places within the CMS.

Components

The Components drop-down menu lists all the installed components. **Figure 3-5** shows the components that are available from Joomla. Any additional components you install will also show up in the Components drop-down.

Starting with version 3.4, components that are supported by Joomla will be available via the Joomla Extensions Directory or the Install from Web tab in the extension manager. These “core supported” extensions include Banners, Contacts, Finder, Messages, Newsfeeds, Redirect, Search, and Weblinks.

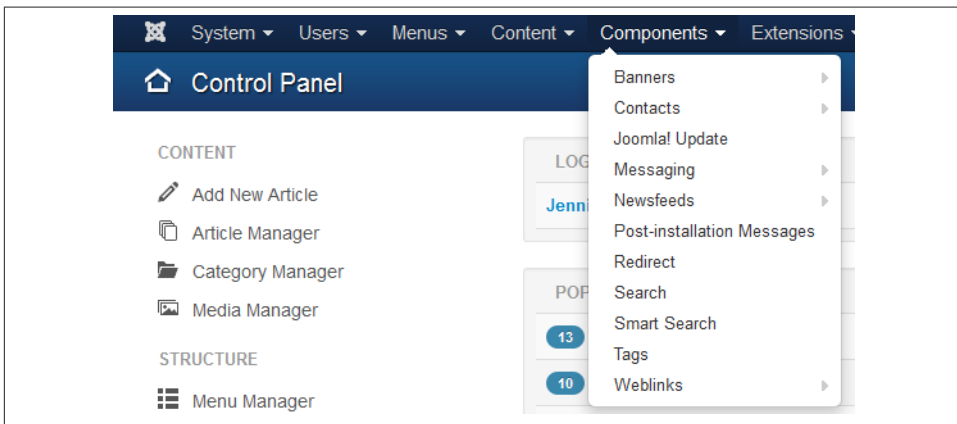


Figure 3-5. Components menu drop-down

Extensions

The *Extensions* drop-down menu shown in **Figure 3-6** shows links to install and manage your extensions, including modules, plug-ins, templates, and languages. Components are installed and managed from the *Extensions* drop-down menu as well.

Here are the descriptions of each of the *Extensions* drop-down menu items:

Extension Manager

Install and uninstall extensions, manage extensions, update extensions, discover extensions, fix the database, view warnings, and install additional language packs.

Module Manager

Add, edit, and delete instances of installed modules. You can also move and reorder them.

Plugin Manager

The Plugin Manager allows you to configure installed plugins. Options include enabling, disabling, order of execution, and access levels.

Template Manager

Here, you can change the look and feel of your website as a whole or just for specific pages. You can also modify the templates and template styles that have been previously installed. You may have multiple configurations of the same template on your Joomla site.

Language Manager

If you've installed any other languages, the *Language Manager* is where you can change the default language to the language of your choice. You can also create and manage language overrides here.

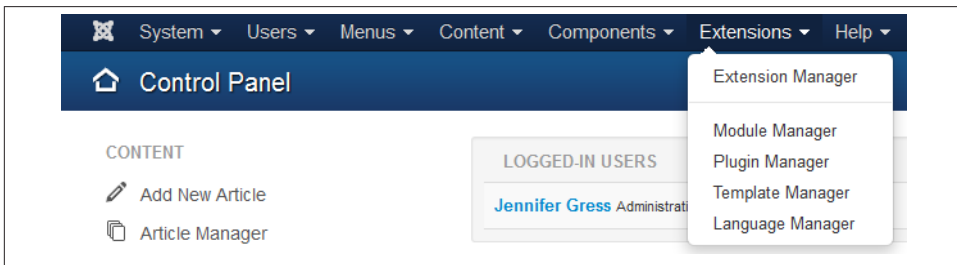


Figure 3-6. Extensions menu drop-down

Help

The *Help* drop-down menu (shown in [Figure 3-7](#)) provides access to help documents.

Joomla Help

This links to Joomla's internal help guide.

Official Support Forum

This links to Joomla's vast support forum. Be sure to read the forum rules and the [Absolute Beginner's Guide to Joomla](#) before posting. Utilize the [Forum Post Assistant](#) tool to help others help you.

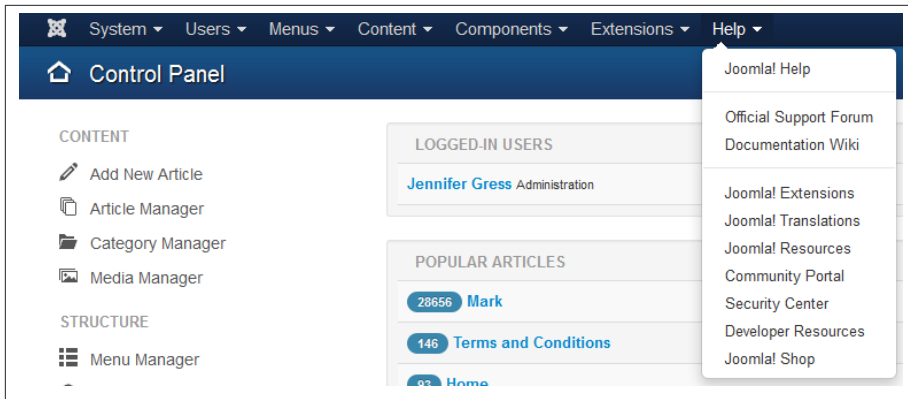


Figure 3-7. Help menu drop-down

Documentation Wiki

This links to the Joomla official documentation.

Joomla Extensions

This links to the famous Joomla extensions directory (JED). For more about third-party extensions, see [Appendix C](#).

Joomla Translations

This links to the Joomla Translations page, where language packs for all releases of Joomla can be found.

Joomla Resources

Find resources for education, extensions, templates, hosting, books, and more.

Community Portal

The latest blog posts and information from the Joomla Leadership Teams, as well as local Joomla User Groups (JUG), events, and the Joomla Community Magazine (JCM).

Security Center

This links to the Joomla Security Center, where you can sign up for the Security News Feed to receive notices about security releases for your Joomla site. Whenever these become available, you should upgrade them immediately (if not sooner!). For more on security, see [Chapter 14](#).

Developer Resources

Links to the Joomla Developer Network. There are many ways to help!

Joomla Shop

You know you want a t-shirt. This links to the Joomla Shop where you can fulfill that desire—and then some.

Personal Information Settings

The top righthand corner of the Control Panel shows a gear icon. This provides access to a drop-down menu that lets you quickly edit your account or log out (see [Figure 3-8](#)).

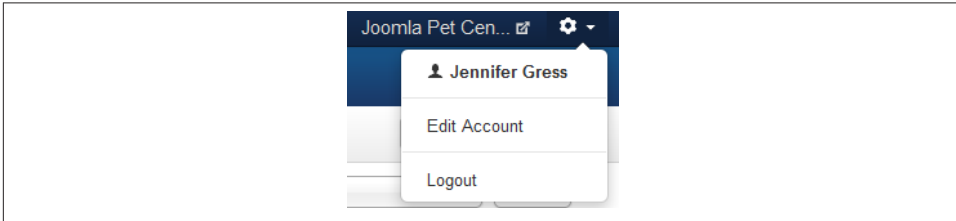


Figure 3-8. Personal Information drop-down menu

Edit Account

Here you can edit your account information.

Logout

Click logout to close the Backend Administrator Control Panel.

Administrator Modules

Administrator Modules are located in the main column of the Control Panel, as shown in [Figure 3-9](#). By default, Logged-in Users, Popular Articles, and Recently Added Articles are installed and enabled for all users who have access to the backend.

Logged-in Users

Shows you a list of all of the users who are currently logged in to your website. You can also see when they were last active or log them out. You cannot log out other Super Administrators.

Popular Articles

Lists the 10 most popular articles along with the number of hits they have received.

Recently Added Articles

The Recently Added Articles module lists the 10 most recently added articles, along with the date on which they were created and the name of the author.

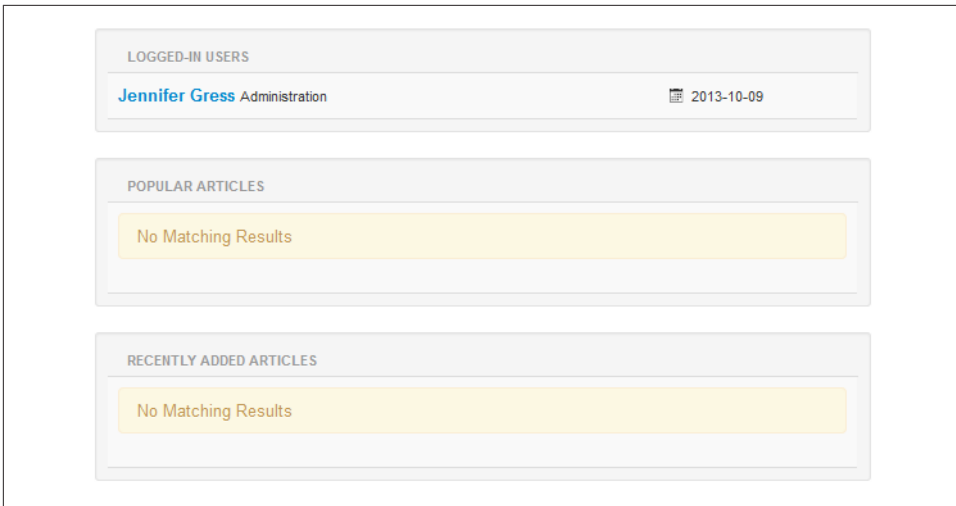


Figure 3-9. Administrator modules

Top Toolbar

In the top left area of the Article Manager, Menu Manager, and almost every Joomla extension, you will see the top toolbar. The top toolbar (Figure 3-10) contains buttons to Save, Edit, Trash, and perform a variety of other functions depending on which area of the backend you're working in. In some cases, you will see different buttons than are shown in Figure 3-10 until you select an item. After selecting a checkbox for an item, new buttons will appear that allow you to perform other functions. You will be using items in the top toolbar throughout this book and often on your Joomla journey so it's a good idea to get familiar with it.

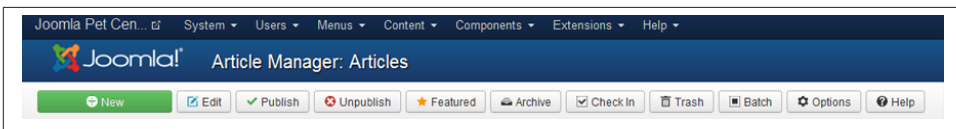


Figure 3-10. Article Manager toolbar

Filtering and Display

When you have a lot of articles, categories, menus, or modules, finding a specific one would be difficult without filters. Take a look at the Article Manager by clicking Content→Article Manager. By clicking the Search Tools button next to the search bar at the top of the manager, two rows of drop-down items will display to filter content (see Figure 3-11). You can filter articles one of two ways:

- Enter a word in the article title, alias, or the article ID in the Search box on the left and press Enter or click the magnifying glass icon.
- Select one or more items from the drop-down menus to filter articles by Status, Category, Max Levels, Access, Author, Language, or Tag.

Figure 3-11. Article Manager filters

Filters are also available in the Category Manager, Menu Item Manager, Module Manager, and Plugin Manager. Many components use filters to customize the display or locate specific items.

Footer Menu

The lower left corner of the Backend Administrator Control Panel shows you how many visitors and admins are logged into the site at any time. It also shows you if you have any mail and gives you the ability to log out (see Figure 3-12).

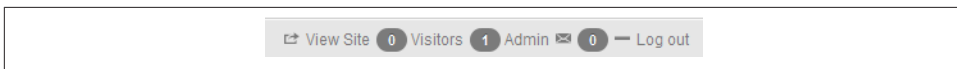


Figure 3-12. Footer menu

Here is a brief description of the items in the Footer menu:

View Site

Opens a new tab/window and shows you the frontend of your website.



Clicking the name of your website in the top right corner of the Control Panel has the same preview effect. Clicking the Joomla icon in the top left corner of the Control Panel will take you back to the backend Control Panel view.

Visitors

Shows you the number of visitors logged in to the frontend of your website.

Admins

Shows the number of administrators signed into the backend of your website.

Mail Envelope icon and number

Shows if you have any messages/mail.

Logout

Logs you out of the Backend Administrator Control Panel.

Now that you have a brief overview of the Joomla backend, get ready to start building the structure of your website.

Setting Up the Basics of Your Website

In this chapter, we're going to set up the basic structure that we planned in [Chapter 2](#). The very first step is to install Joomla. See [Appendix A](#) to accomplish this if you need to and then come back here to dive in.

For setting up Joomla Pet Center, we will start from a blank site with no sample content loaded. You may have chosen to install the sample content during the Joomla installation, and you can follow along using that (for information about sample data, see [Appendix A](#)). If you did not, then have your own planning sketches available so that you can set up your website structure while we do so for Joomla Pet Center.

The order of creating content for your website is as follows:

1. Create categories
2. Create articles
3. Create menu items

Content Categories

One of Joomla's strengths is its simplicity, and that's reflected in how it manages content, using categories and articles. It really is as simple as thinking of categories as being like buckets, and articles as like rocks. You can't have the same rock in multiple buckets, but you can have many rocks and buckets.

The Category Manager displays the categories of your site. These are the "buckets" for your articles. If your site is small, you may only need one or two categories. You'll organize your articles within them. But most sites will have a number of categories (e.g., About, Products, Services, Blog) to give more control and flexibility over how your

articles are displayed. The Category Manager enables you to copy, edit, create, and delete categories. Before you can create articles, you'll need to first create a category.

Creating Categories

You must create at least one category before you create any articles. For example, in Joomla Pet Center, we will be creating the categories we came up with in “[Planning Categories](#)” on page 14.

Joomla Pet Center Categories:

- Blog
- How to
- About
- Testimonials
- Legal

Blog and “How to” nested Categories:

- Dogs
- Cats
- Reptiles
- Birds

Hands-On Exercise: Create Your Categories

1. Log in to the backend of your website.
2. Click on Content and hover over Category Manager, then click on Add New Category. This opens the Category Manager: Add A New Articles Category ([Figure 4-1](#)) screen.
3. Enter a title for the category. We will start with the category Blog.
4. Leave the alias blank, and Joomla will fill it in for you.
5. Optionally, you may also enter a description of the category in the text box. This information will show up on category pages when the appropriate menu item parameter is enabled. See “[Category Blog Layout](#)” on page 51 further along in this chapter for more information about this parameter.
6. Another option is to associate an image that displays with the category. Simply click on the Images button at the bottom of the text editor to add an image to the category.

7. In the details panel on the right, select a parent category if the category you are creating is nested. In our case, it is not.
8. Leave the Tags field for now. We will be setting this up in [Chapter 8](#) when we set up our Blog.
9. Leave the Category as Published.
10. Choose an access level—either Guest, Public, Registered, Special, or a custom access level if you have created any. Most often this will be set to Public. If set to Registered, registered users or higher will have access. Special means only administrators will have access. Custom ACLs will have different access permissions. (See [“Access Control Lists \(ACLs\)”](#) on page 244.)
11. For other Publishing Options, Options, Metadata Options, and Category Permissions, click the tabs next to the Category Details tab and fill them in as desired.
12. Click Save & Close to return to the Category Manager or Save & New to create an additional category or nested category.

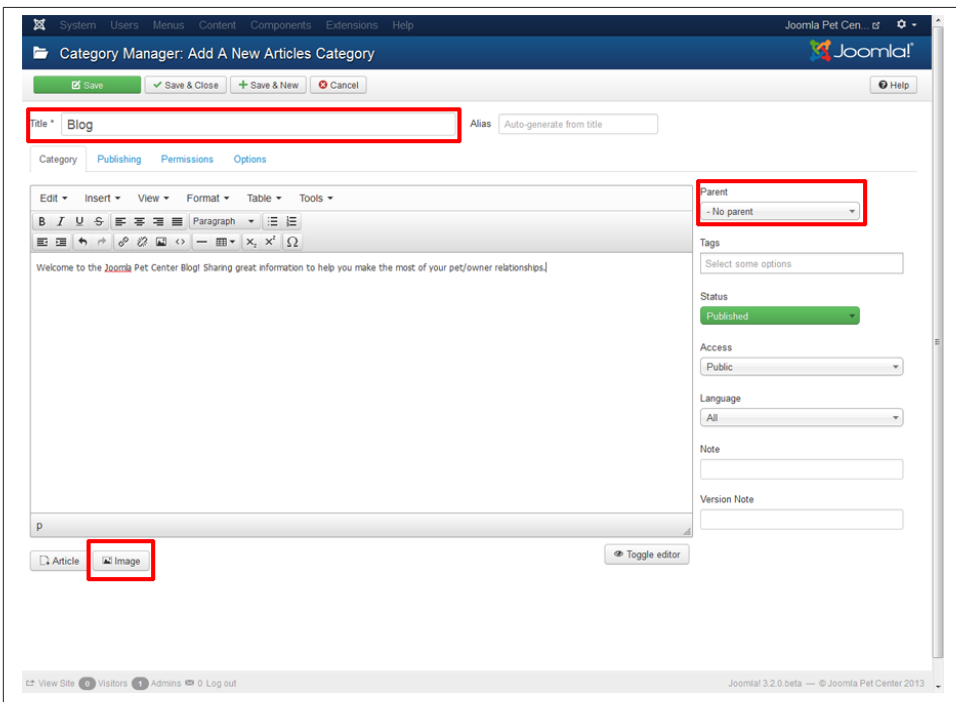


Figure 4-1. Create a new category

We have added all the categories and nested categories for Joomla Pet Center. When complete, our Category Manager will look like [Figure 4-2](#). Yours should look similar.

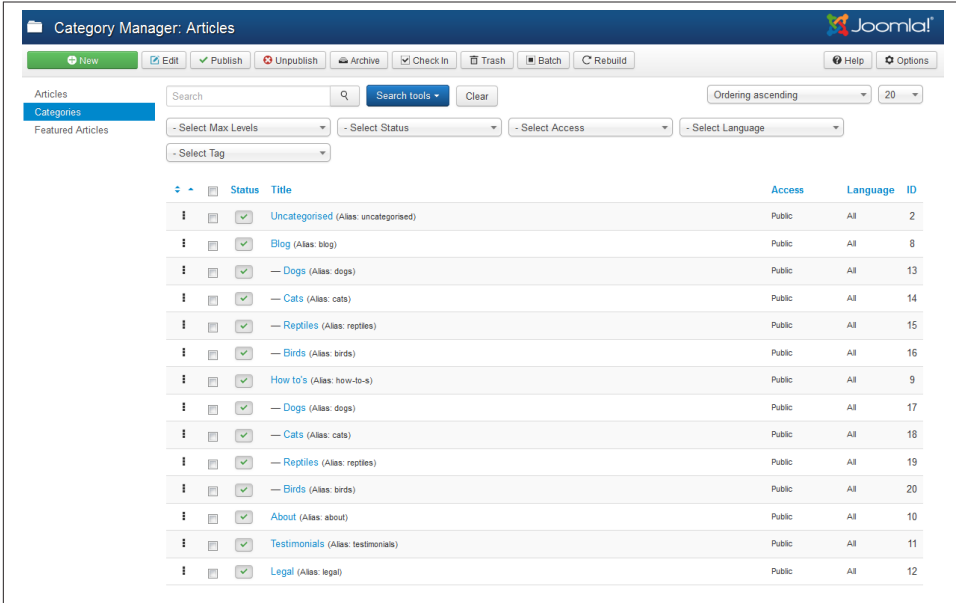


Figure 4-2. Joomla Pet Center categories in Category Manager view

If you installed Joomla with the sample data, you can use the existing categories and change the title, alias, and other settings to utilize what was installed with your site. Or you can follow the instructions above to create new categories and then unpublish or trash the sample data categories.



You will not be able to delete categories unless you first move or delete all articles within those categories. This includes archived articles and articles that are in the trash.

Publishing and Unpublishing Categories

In the Category Manager, you also have control over the published state of each category or nested category. To publish or unpublish a category, click the icon in the Status column, as shown in Figure 4-3. You can also unpublish a category in the Category Editor.

1. Go to the Category Manager and click the category name to open it in the Category Editor. You can also click the checkbox by the category name and select the Edit button in the toolbar.
2. On the Details panel on the right, click the drop-down menu for Status and set its status from Published to Unpublished, as shown in Figure 4-4.

3. Click Save & Close.

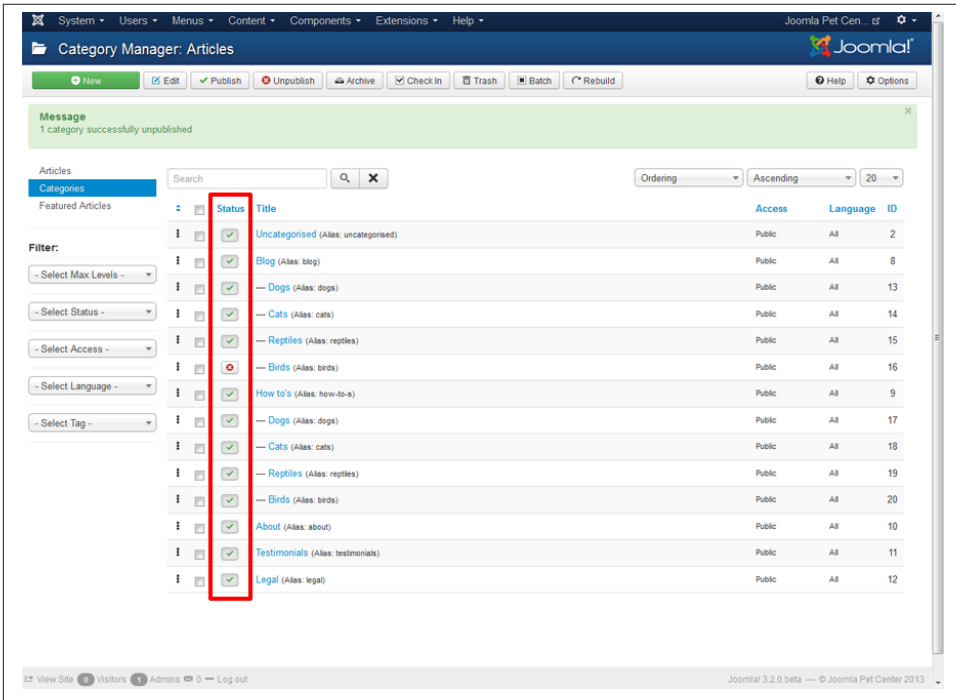


Figure 4-3. Publish or unpublish a category in the Category Manager

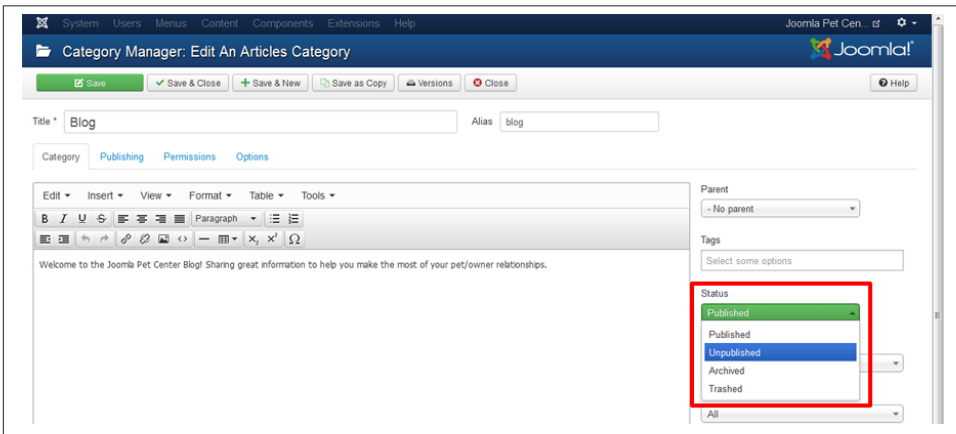


Figure 4-4. Publish or unpublish a category in the Category Editor

Copying Categories

There are times when you may want to duplicate a category. To copy a category:

1. Go to the Category Manager and open the category you want to duplicate.
2. Click the Save as Copy button in the toolbar.
3. This will open a copy of that category, which you can now give a new title and alias. You can simply erase what is in the alias field after copying and Joomla will assign a new alias upon saving the new category.



The Alias field is used to manage how a page's URL is constructed. Each category must have an original alias (each article and menu item must have original aliases as well). If in doubt, empty the alias field and Joomla will fill it in for you. For more on how to work with the alias field, see [“SEF URLs” on page 236](#).

4. Make any other changes to the items in the Details panel on the right or in the additional tab items next to Category Details as appropriate.
5. Click Save & Close.

You may copy multiple categories (or articles) at a time using the Batch function. Simply check the categories you want to copy (or move) and click the Batch button in the top toolbar. Select where you want to copy them to and make sure the Copy option is selected. Then click Process. Batch functionality is available in multiple instances of your Joomla website.

Uncategorized Category

You may have noticed the option of using the Uncategorized category when creating new articles. Uncategorized articles are limited in how they can be displayed on your website, so we don't recommend keeping finished articles in this category.

If you do use the Uncategorized category, it should be limited. The only articles that might be appropriate to have in the uncategorized category are:

- The home page
- Custom 404 page
- Thank you page for form submission
- Draft articles submitted by site authors

Aside from those, your articles should be placed into applicable categories you create. This reduces heartache down the road when you want content to display a certain way,

and the articles need to be moved into categories which then breaks links and is just a pain overall.

Now that our categories are all set up, we can create articles.

Creating Articles

You can create and manage articles in the Article Manager.

Creating a new article is as simple as clicking the Add New Article link on the left sidebar of the Control Panel. You can also create a new article by clicking on Content, hovering over Article Manager, and clicking Add New Article. If you are already in the Article Manager, simply click the New button in the toolbar. All of these methods open up the Article Editor screen (Figure 4-5) where you can add text, images, and other content. When you click Save, your article is saved and kept open for editing. If you are done editing, click Save & Close, and you'll be taken back to the Article Manager. Clicking Save & New saves the article you are working on and opens a new article to be added to the system.

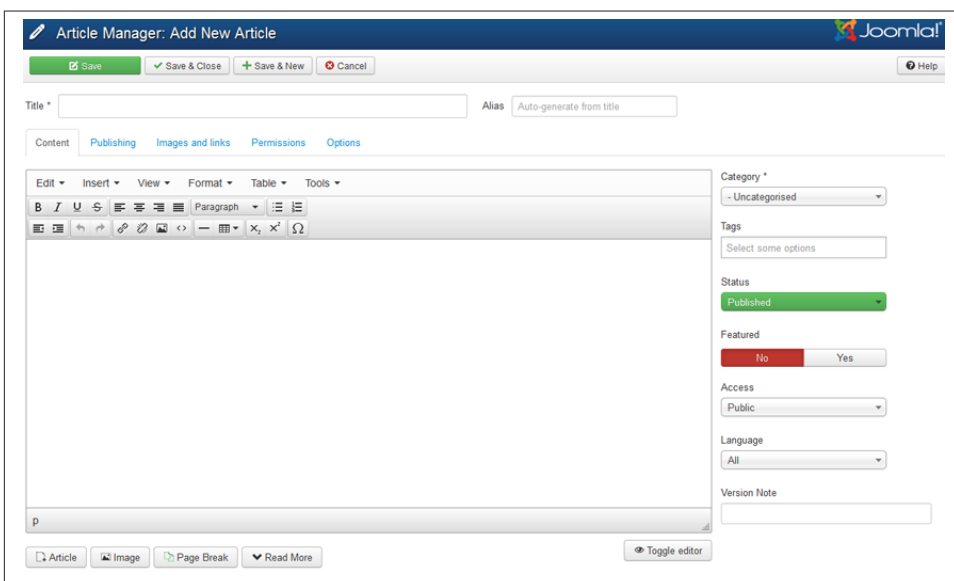


Figure 4-5. The Article Editor

In setting up the basics of our website, we will first create all of our articles at once without adding content to them. We will add content in Chapter 5.

Hands-On Exercise: Create Your Articles

We will use the spreadsheet we created when planning our website to create our articles. You will use the planning sketch of your website and create yours.

Joomla Pet Center will have the following articles, which we decided in “[Planning Articles](#)” on page 15:

- Helen
- Diana
- Mark
- Testimonial 1
- Testimonial 2
- Testimonial 3
- Blog 1
- Blog 2
- Blog 3
- How to 1
- How to 2
- How to 3
- Privacy Policy
- Terms & Conditions
- Home

Follow these steps:

1. Click on Add New Article in the Control Panel.
2. Enter an article title in the Title field. We’ll start with Helen.
3. Leave the Alias field blank and Joomla will fill it in for you.
4. Select Category from the drop-down menu. In our case, the category is About.
5. For the time being, we are going to leave everything else as is and click Save & New to create the rest of our articles.

The Featured button is what tells Joomla to display any Featured articles on a page that is set up to be a Featured Article menu item type; this is most typically the home page. Even though “home” is the most popular use of Featured articles, it is not the only way they can be used. Featured articles are associated with the Featured menu item type, which is installed by default by Joomla as the Home menu item in the Main Menu.

None of our articles will be Featured articles except our home page, which we will mark as Featured and leave in the Uncategorized category. This will be denoted by a yellow star in the Status column of the Article Manager.

When we are done adding articles for Joomla Pet Center, the Article Manager will look like [Figure 4-6](#).

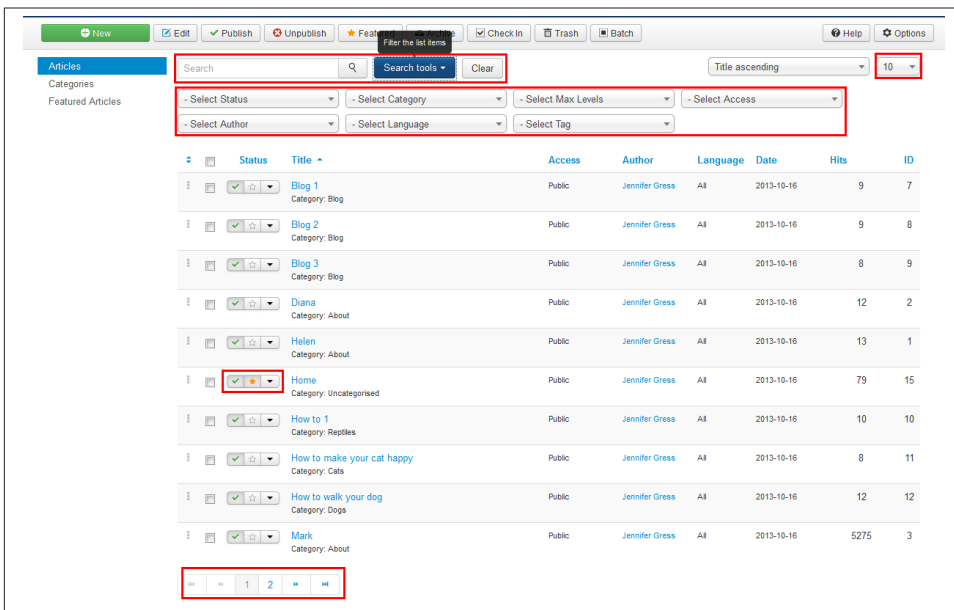


Figure 4-6. Joomla Pet Center articles

You can see in the Article Manager that we have a list of articles. At the bottom of the list, you can navigate to a second page of articles. You can select the number of articles to show in the list in the top right corner. There is a red box around it.

There are a number of tools, including filters, that can save you time when looking for your articles to edit them in the future. You can type a portion of the title into the search box at the top of the Article Manager. You can select Search Options at the top of the Article Manager, which will toggle the display of several filters that you can set when looking for articles in a certain Category, Status, Access Level, and more. You can also click on a column heading to sort by a heading. Clicking twice will reverse the results. For example, clicking on the Title column heading once will sort alphabetically with the letter A first. Clicking the Title heading again will sort reverse-alphabetically with the letter Z first.



Once you set your filters, the system remembers that they are set, visits other pages, and returns. In order to display your entire list of articles again (unfiltered), you need to clear the filters by choosing Select from the drop-down menu.

Article Publishing and Unpublishing

New articles are set to Published by default—meaning they are visible to your site users. Unpublishing an article removes it from view. Publishing and unpublishing articles is straightforward, but there are a number of ways to do it and customize the process. The first (and most common) way is by clicking the publish/unpublish icon in the Article Manager.

Find the icon in the Status column. A green checkmark means the article is already published on your site. A red circle with a white x in the center means the article is unpublished and not viewable on your website. The star icon denotes that the article is both published and Featured.

The second way to toggle the published state is in the Article Editor where you edit the article. Go to the Article Manager and click the name of the article you want to edit. Find the Status drop-down under the Details column at the far right of the screen. Select either Published, Unpublished, Archived, or Trashed from the drop-down menu, as seen in [Figure 4-7](#).

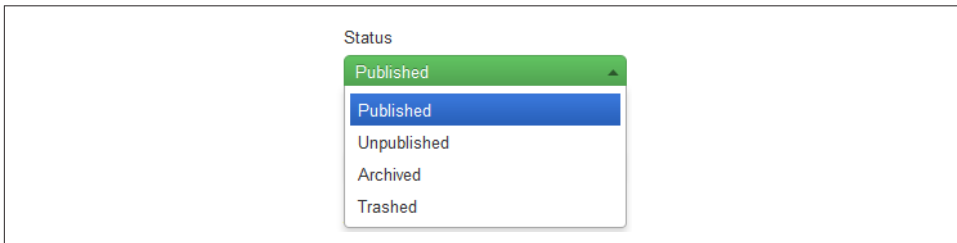


Figure 4-7. Change the status of an article

Click the Save button or Save & Close button to save your changes.

Now that we have added our categories and articles, if you were to check the frontend of our website, you would see that there is no difference in how the site looks. Now that we have our categories and articles created, we get to move to the fun part of having them display on the frontend of the website by creating menu items.

Creating Menu Items

Menu items are the primary tools for navigating to and controlling the display of content in Joomla. Joomla Pet Center has a lot of menu items that will depend on an extension to display content stored in the extension itself. Since we are only setting up the basics of our site structure right now, we will create placeholders for menu items that will utilize extensions.

We will focus on the most popular menu item types for Joomla Pet Center: the Category Blog, Single Article, and our placeholders that utilize the Text Separator menu item type.

For now, we are working with the Main Menu, which was installed with Joomla.

Let's start by taking yet another look at our sketch, spreadsheet, or file of the menu that we created in [Chapter 2](#) so we can create our menu items.

Text Separator Menu Item type

Aside from Home, our first five menu items are extensions. Because we haven't yet installed and configured these extensions, we will create placeholders for them using what's known as the *Text Separator* menu item type.

The Text Separator menu item type is also often used as a main tab, or Parent menu item with submenu or child-menu items. This forces a visitor to choose from the drop-down because the Text Separator isn't clickable.

Hands-On Exercise: Create Text Separator Menu Items

1. Click on Menus from the backend Control Panel, hover over Main Menu, and click on Add New Menu Item, as seen in [Figure 4-8](#).

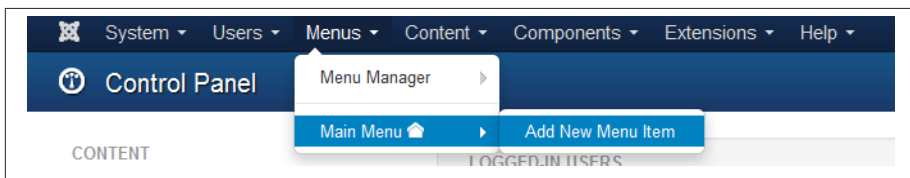


Figure 4-8. Add a new menu item to the main menu

2. In the Menu Manager: New Menu Item screen, enter the menu title.
3. The alias will autogenerate when you save the menu item. See more about using an alias in [“SEF URL Settings and SEO Basics”](#) on page 236.
4. Click the blue Select button to the right of the Menu Item Type field to select the type of menu item, as seen in [Figure 4-9](#).

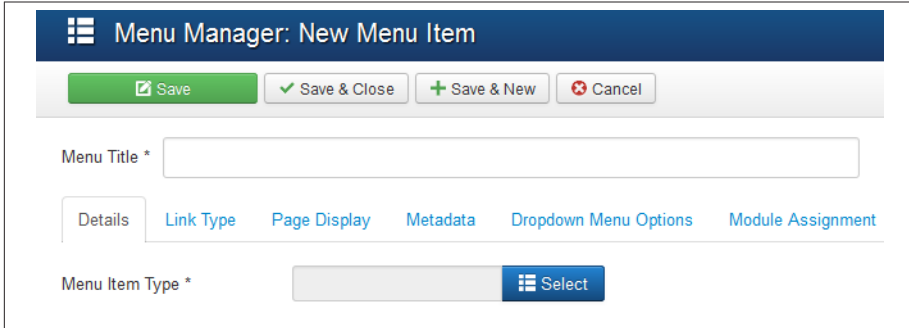


Figure 4-9. Enter the title and click Select to choose the menu item type

5. Click on System Links and then on the Text Separator menu item type, as seen in Figure 4-10.

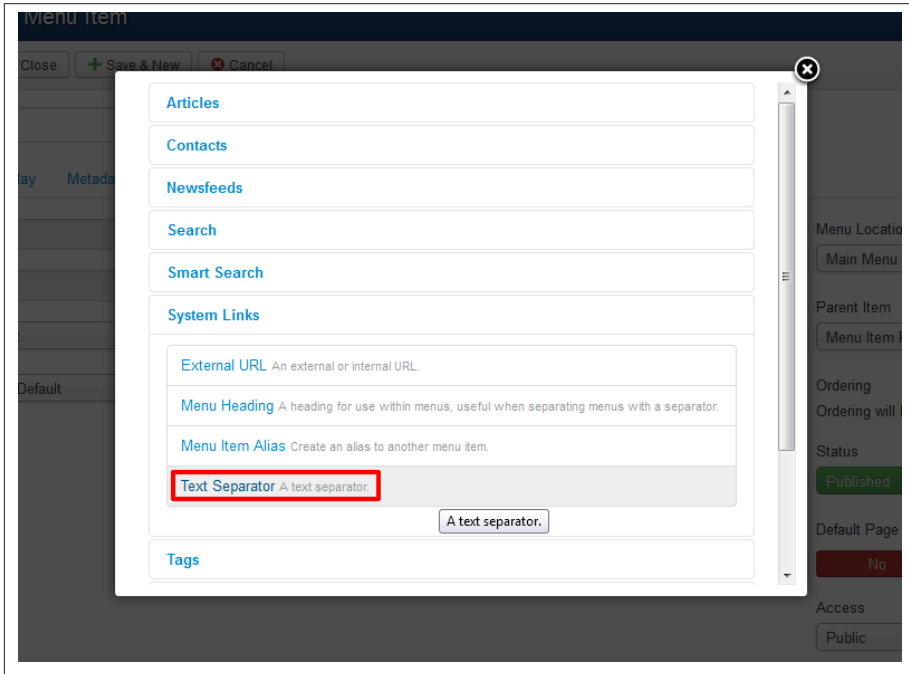


Figure 4-10. Select Text Separator from the System Links menu item types

6. Click Save & New from the top toolbar and repeat for the next menu items that have the Text Separator menu item type. When you get to the last one, click Save & Close.

You may not have the same menu items next to each other as we do. Feel free to create your menu items in the order your menu calls for and with whatever types are required. Items can be ordered after they are entered.

We are going to continue and add our Text Separator menu item types for events, gallery, community, and forum. Forms and Contact will also be extensions, so we will create Text Separator menu items for those when we get to the About portion of the menu items.

Creating Single Article Menu Item Types

The Privacy Policy and Terms & Conditions for Joomla Pet Center are both simple Single Article menu item types. Single Article menu item types are by far the most commonly used menu item type. We just happen to be using a lot of extensions and Category Blog layouts (which you'll see in the following hands-on exercise) in Joomla Pet Center. Chances are good that you will have more Single Article menu item types than we do.

Let us create a couple of Single Article menu items.

Hands-On Exercise: Single Article Menu Item Types

Open a new Menu Manager: New Menu Item. Then just follow along.

1. Enter the title of your menu item. Ours will be Privacy Policy.
2. Leave the Alias field blank, as Joomla will fill it in for you.
3. Click the Select button for the Menu Item Type.
4. Click Articles and then click the Single Article menu item type. (Figure 4-11.)
5. Click the Select button next to the Select Article field.
6. A list of articles will appear in a pop-up window. You can filter by Access, Status, Category, or Language. You may also type a portion of the title of the article into the *Filter* field at the top and press Enter. Articles matching your search will appear in the box. Click on the desired article. See Figure 4-12 to see articles in the Legal category.
7. Leave the Link field alone unless you really know what you are doing. It will be automatically populated for most menu item types.
8. Leave the Target Window as Parent.
9. Leave the Template Style as Use Default unless you are using a different template for specific pages.

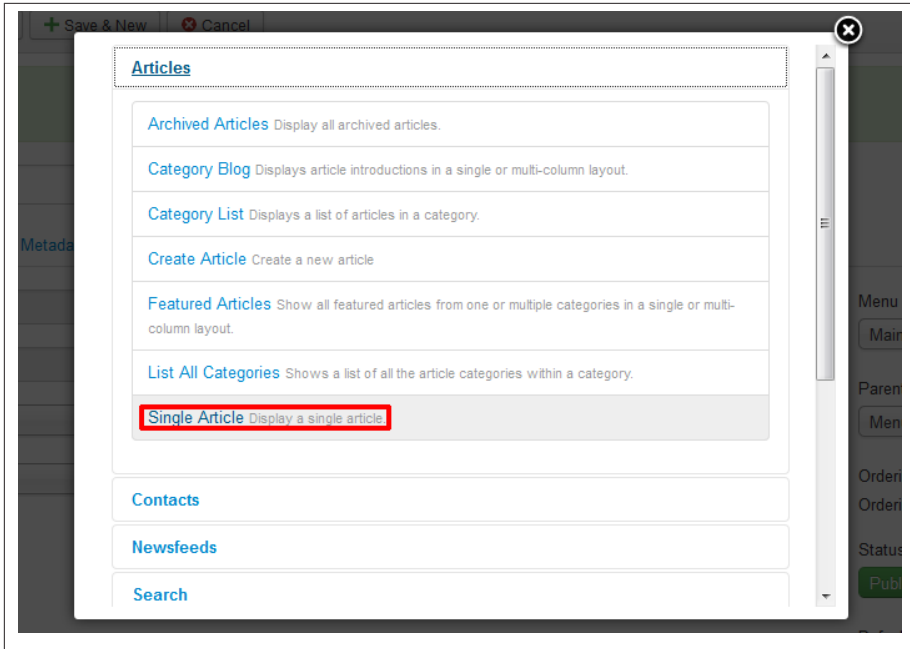


Figure 4-11. Click Article, then Single Article to choose the menu item type

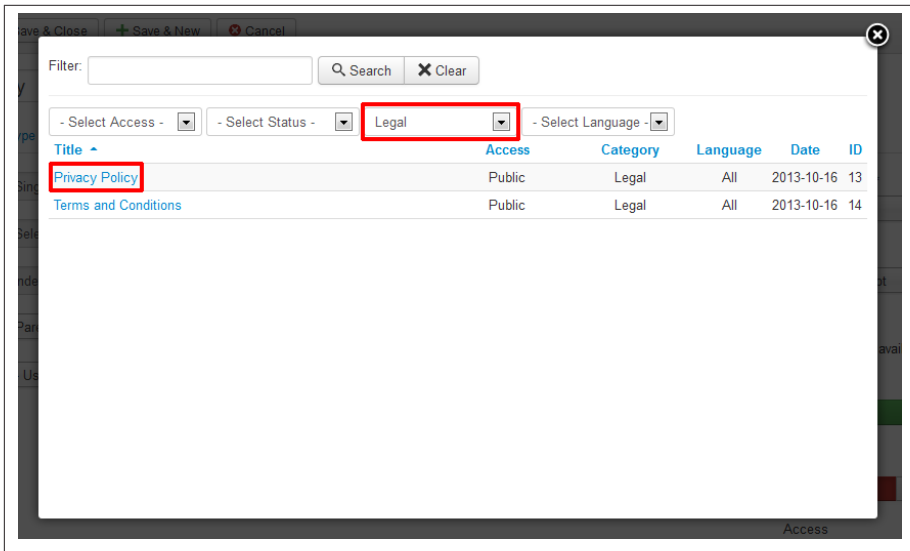


Figure 4-12. List of articles using the category filter for Single Article menu item type

10. Leave the Menu Location as Main Menu.
11. Click the Parent Item drop-down menu and select About as the Parent Item. This means that the Privacy Policy menu item will be a drop-down menu item under the About tab in the main menu.
12. Leave the Status as published.
13. Leave the Default Page set to No. Only one menu item will be Yes on your website. That menu item will be the main page that your domain directs to. Typically, this is the home page.
14. Leave the Access set to Public unless it is intended for registered users or content to display to a specific access level.
15. Click Save & New to save and move on to creating a new menu item or Save & Close if complete.

It is possible to change menu item types. If you create a Single Article menu item type and then decide you want to make it Category Blog, you may do so simply by clicking the Select button next to Menu Item Type and selecting a new menu item type. Keep in mind that the system will then erase the settings you had created for the original menu item type. So if you decide to go back to Single Article, you will have to input your original settings again. You may want to take a screen capture of your original settings so they are easy to access in case you want to revert back.

You may want to use the Save as Copy button to test a new menu item type before changing menu item types. Just remember that whichever you choose, you may need to change the alias and title so that the original title and alias are properly reflected in the new menu item type that may be a copy.

We left most of the settings alone while creating the basic structure of this site. The reason for this is because when we add our chosen template, the look and feel will change. After we install and configure the template we are going to use, we will be better able to decide how we want things to display. Adding content to the articles may also change what we want to display and how. Just getting the basics in place helps us. Then we will go back and fine-tune.

Category Blog Layout

Blog, About, and Testimonials are our next menu item types and they are all going to be Category Blog menu item types. We will configure each one differently so that you can see the flexibility of this type.

We are going to skip some aspects of the menu item settings. We could write an entire book just on menu items if we were to go through every field. Hovering over any field will provide you with a tooltip describing what that field does.



Global settings for some parameters of the Category Blog layout can be found in the Global Article Options, which we cover in “[Joomla Pet Center Article Options Hierarchy](#)” on page 85.

Hands-On Exercise: Category Blog

We’ll start with our Category Blog menu item for our Blog. Start by having a Menu Manager: New Menu Item up on your screen.

1. Enter the title; in our case, the title is Blog.
2. Leave the Alias field blank. For more information on how to work with the alias field, see “[SEF URLs](#)” on page 236.
3. Click the Select button for the Menu Item Type.
4. Click Articles and then click the Category Blog menu item type. ([Figure 4-13.](#))

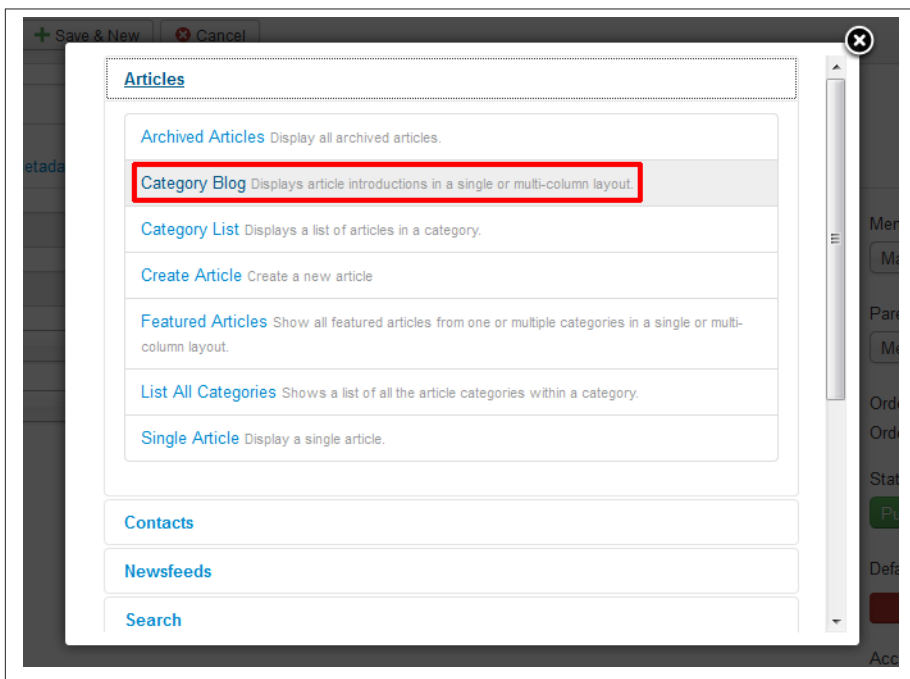


Figure 4-13. Select Article, then Category Blog to choose the menu item type

5. Choose the appropriate category from the “Choose a category” field. We will choose Blog, which will include all our nested categories within the Blog category.

6. Leave the Link field alone unless you really know what you are doing. It will be automatically populated for you for most menu item types. It just states what the internal link will be to that menu item minus the `Itemid` parameter.



Changing the default value can break links and lead to unexpected results if you're not sure how `Itemid` parameters work.

7. Leave the Target Window as Parent for most cases.



As a guideline, if you are linking to a page on the same website, you should open it in the *Parent* window (which refers to the browser window or tab you are currently viewing). If you are linking to a different website, you should almost always open that page in a new window so you don't take the user away from your website.

8. Leave the Template Style as Use Default unless you are using a different template for specific pages.
9. Leave the Menu Location as Main Menu.
10. Leave the Parent Item as Menu Item Root. This means that it will be a parent menu item having a main “tab” or “button” in the main menu. If it were a drop-down item (a child item), then clicking the drop-down of the Parent Item would give you the opportunity to select which parent item to have the new item drop down under.
11. Leave the Status as Published.
12. Leave the Default Page set to No. Only one menu will have a Default Page state of Yes on your website. That menu item will be the main page that your domain directs to. Typically, this is the home page.
13. Leave the Access as Public unless it is intended for registered users or is meant to be displayed to a specific access level. [Figure 4-14](#) shows the Details tab.
14. Click on the Blog Layout tab.
15. Enter the following and see [Figure 4-15](#) to see the Blog Layout fields of this tab.
 - **1** in the # Leading Articles field
 - **4** in the # Intro Articles field
 - **2** in the # Columns field
 - **10** in the # Links field

16. For now, leave the rest of the fields set to Use Global. We will go over what this means in [Chapter 5](#).
17. Click Save & New to create another menu item or Save & Close if you are done creating menu items.

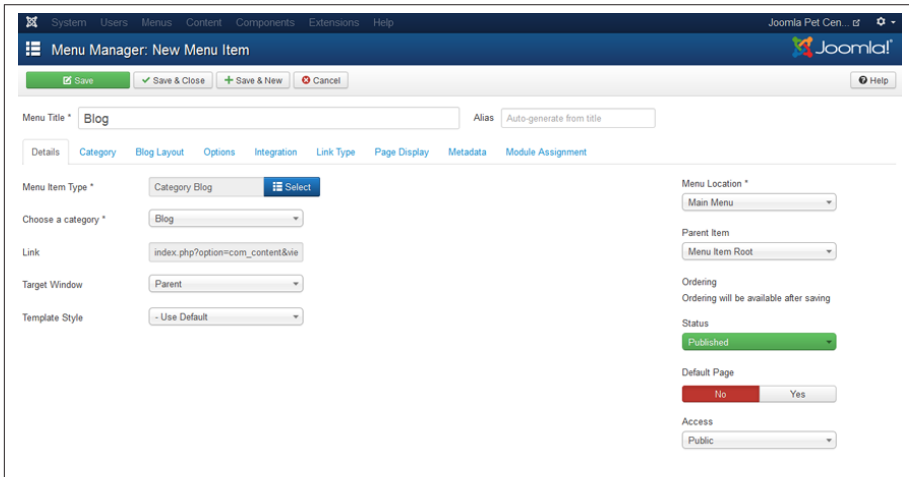


Figure 4-14. Category Blog Details tab for Joomla Pet Center blog

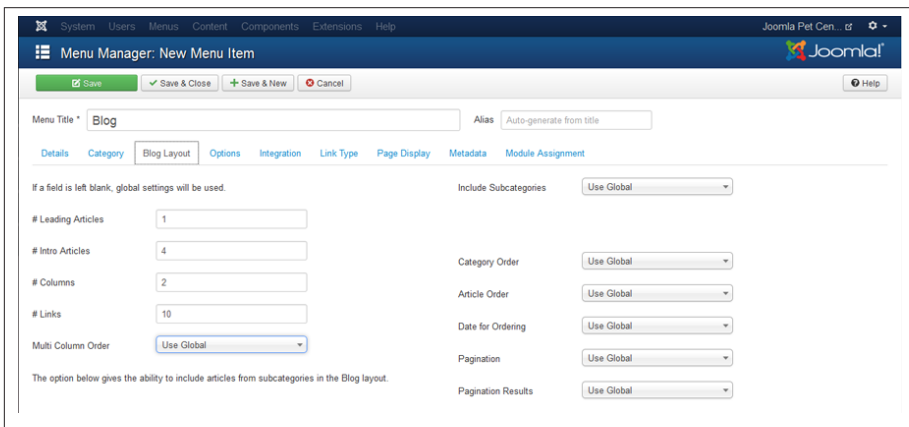


Figure 4-15. Category Blog Layout tab for Joomla Pet Center blog

What we have done in this menu item is tell the Blog menu item to show one Leading Article in its entirety. We want four articles to show only their intros, and then folks can pursue the ones they're interested in by clicking on the title or the "Read more" button.

At the bottom of the main Blog page, there will be a list of up to 10 links to additional articles in the Blog category or any of its nested categories.

The About Category Blog menu item will be created the same way as the Blog menu item, except we'll choose About as the category and in the Blog Layout tab we will select the following:

- # Leading Articles = **3**
- # Intro Articles = **0**
- # Columns = **1**
- # Links = **0**

This will cause the articles for Helen, Diana, and Mark to appear one after another in their entirety on the About page of the website.

We'll do it again with the Testimonials Category Blog menu item by choosing the Testimonials category and clicking the Parent Item drop-down and selecting the About category. In the fields on the Blog Layout tab, we will choose the following:

- # Leading Articles = **0**
- # Intro Articles = **100**
- # Columns = **3**
- # Links = **0**

This will create a display that appears to be three columns of testimonials. We want them all to show, so we set the number of Intro Articles relatively high and display zero links.

Category List Menu Item Type

We will set up the “How to” menu item differently, as “cat people” typically do not want to see “How to” articles about dogs. This is a change from the original spreadsheet we created. A *Category List* menu item type will be ideal for this area of the site so that people can easily find the “How to” article that means the most to them.

We've created the menu item similarly to the Category Blog, except that we selected Category List from Articles for the menu item type.

We left it entirely default for now. Once the template is installed, we will be able to fine-tune it and get it looking the way we want it to look, displaying the correct information.

Mastering Backups

We have added a lot of information to our site now. Before we install our template, we want to make a backup of our website and the database.



It is highly recommended that you run a backup of your site before you install or uninstall any extension, do an update, or after you do any work on your site. Otherwise, if an unlikely problem were to occur, you would need to either start over or restore an earlier backup and have to do your work over again. Back up!

The easiest way to run a backup of your site and database is with a brilliant extension called Akeeba Backup. Jenn (and thousands of others) are extremely impressed with the developer of Akeeba Backup as a result of his witty sense of humor, excellent documentation, stellar products, and brilliant mind.

Thanks to the new Install from Web feature in Joomla 3.x, we can install Akeeba Backup from the Extension Manager.

1. Click on Extensions in the top menu and then on Extension Manager.
2. You will see a blue bar across the top of the screen with a button directing you to add the install from Web tab.
3. Click that button and wait while the system installs the appropriate plugin to add the Install from Web tab. You will now see a list of categories and a number of pretty, colorful icons for different popular extensions from the Joomla Extensions Directory (JED). Since Akeeba Backup is one of the most popular Joomla extensions available, it will be listed in one of these boxes. Scroll down until you find it.
4. Click on the Akeeba Backup Core box. Core implies that it is the noncommercial (free) version of Akeeba Backup.
5. You will now see the rating, software version, the type of extension (component, module, plugin) and buttons for download, directory listing, and developer website.
6. Click the Download button and you will be taken to the appropriate page of the Akeeba Backup website to download the Akeeba Backup package.



Just because you see an extension in the Install from Web tab, don't feel complacent about its safety. You still need to do research on extensions and only install those you need on your website. If you install an extension you do not need, uninstall it immediately (after taking a backup). Extensions need to be maintained and updated; scripts not being updated are one of the top reasons that sites get hacked. See [Chapter 14](#) and [Appendix C](#) for more information on extensions.

7. Once you download the latest stable version of Akeeba Backup and save it to your computer, go back to your Extension Manager.
8. Click on the Upload Package File tab.
9. Click the Browse button and navigate to where you saved the Akeeba Backup package and double-click on it.
10. Click the Upload & Install button.
11. When complete, you will see the “Installing component was successful” message. See **Figure 4-16**. It is highly recommended that you spend some time watching videos and reading the documentation for Akeeba Backup, and learning how to restore backups. The documentation is so thorough that it isn’t necessary to cover it here. The author/developer has done better than we ever could.

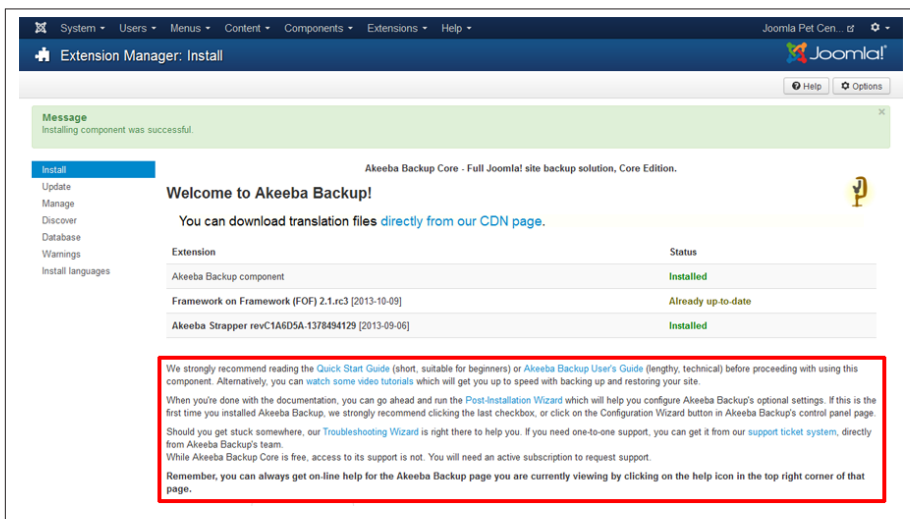


Figure 4-16. Akeeba Backup “installing component was a success” screen

12. Click on Components and then on Akeeba Backup.
13. Because this is our first time accessing Akeeba Backup, it wants to run us through the configuration wizard and make sure we know a few important things. Leave the two boxes checked to run the configuration wizard and update all profiles to AN-GIE. Then, read all three boxes under Mandatory Information and be sure you understand them. This is very important!
14. When complete, click “Apply these preferences.”
15. Akeeba Backup will perform a bunch of scans and do its magic to configure itself on your server. Do not browse away from the page while it’s processing.

16. You will see a Finished message, and from here you can click the Backup Now button. On this screen, you can simply click the Backup Now button, or you can enter a note in the Backup comment field. In our case we will type `before template install`. This comment appears in the Manage Backups tab of the extension and can be helpful.
17. Click Backup Now and the site will back up. Do not navigate away from this page until it is complete.
18. When complete, use an FTP client such as FileZilla and copy the backup file off the server and onto your local device, an external drive, or DVD. The default location of the backup file is `public_html(httpdocs)/administrator/components/com_akeeba/backup`. Your default backup location may (and should) be elsewhere, yet that is the default location.
19. After you have downloaded your backup file, make sure you delete it from your server. If someone gets their hands on your backup, they can find ways to hack your site. Don't keep backups on your server!

A backup is useless unless you test that it restores. Thus, it is recommended to create a subdomain or subdirectory on your server and test restoration of your backup. Full documentation can be found at [Akeeba Backup](#).



The Pro version of Akeeba Backup provides many more features, including automated backup and storage in an external location like Amazon S3. This is highly recommended. As humans, we have great intentions of keeping our site regularly backed, up and then guess what? It doesn't happen. The Pro version is worth every penny.

Now that you have your backup, you can safely install the template.

Template Parameters

We've decided on the Afterburner2 template by RocketTheme. The first step is to download the package from [RocketTheme's website](#). We are downloading the Afterburner2 Template bundled with Gantry. You may be using a different template company or a custom template. Once you have the package (typically a `.zip` file), follow these steps to install your template:

1. Log in to your Backend Administrator Control Panel.
2. Click on Extensions and then on Extension Manager.
3. Click the Browse button, navigate to where you saved the template installation package, and select it. This will fill in the filename to replace the "No file selected" text.

4. Click the Upload & Install button (Figure 4-17) and wait for the success (or failure) message (Figure 4-18).

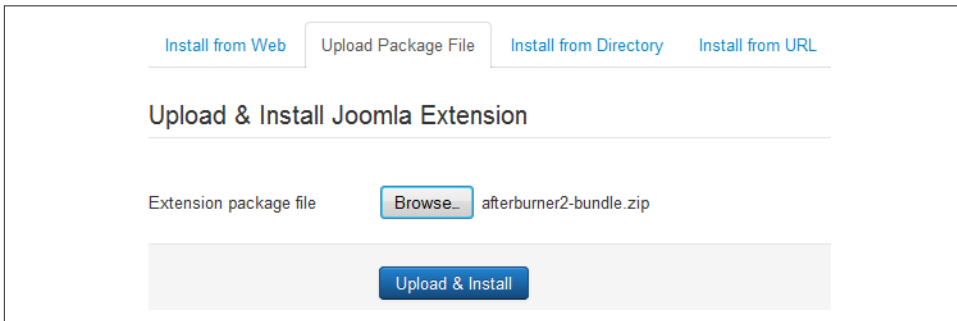


Figure 4-17. After selecting the file package, click the Upload & Install button

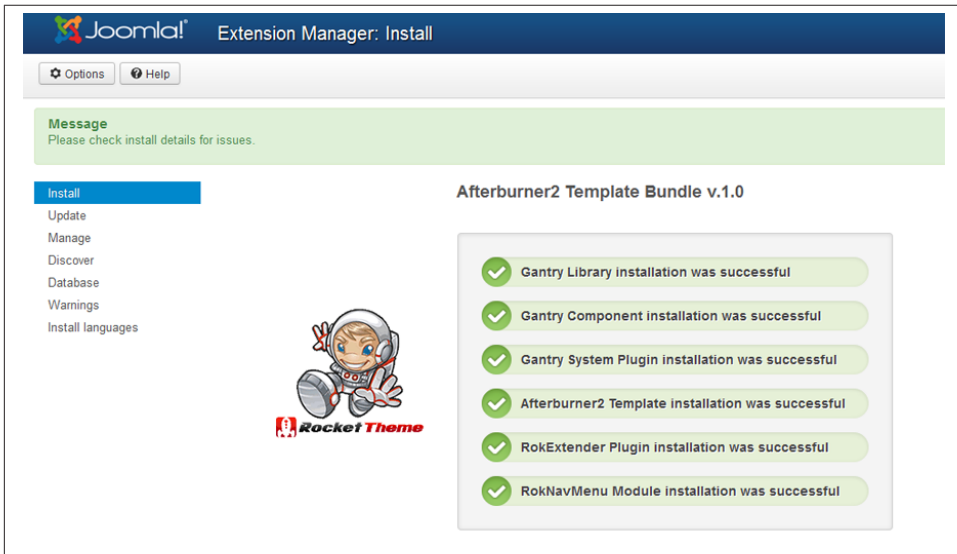


Figure 4-18. Success message after installing the template package

With our template installed, we will now set it to be the default template and set up the parameters for it.

1. Click on Extensions and then click on Template Manager.

2. Click the button with the star to the right of the Style called Afterburner2 - Default. This action makes the Afterburner2 template the default template for our website (See [Figure 4-19](#)).

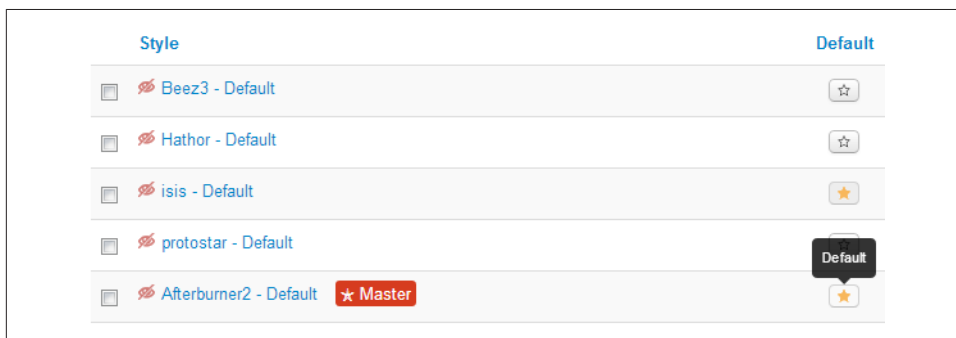


Figure 4-19. Set Afterburner2 as the default template

At this point, we can go to the frontend of our website and see the structure we have planned and built thus far. See [Figure 4-20](#).

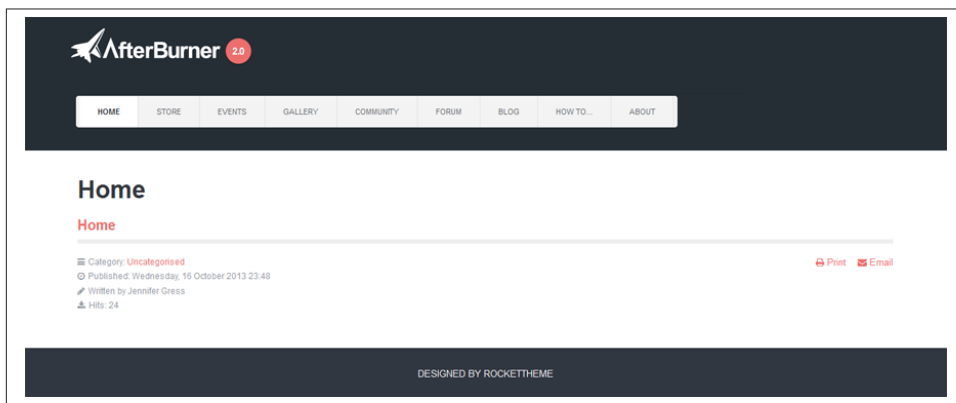


Figure 4-20. Frontend of Joomla Pet Center after installing template and setting it to default

There are several things we want to change and customize in the template for Joomla Pet Center. We want to change the logo, the “Designed by RocketTheme” in the footer, and the color from the pink accent color to a lovely green.

We make these changes in the parameters of the template. From the Template Manager, click on the Style Afterburner2 - Default to access the configuration of the template. The Overview tab appears. See [Figure 4-21](#).

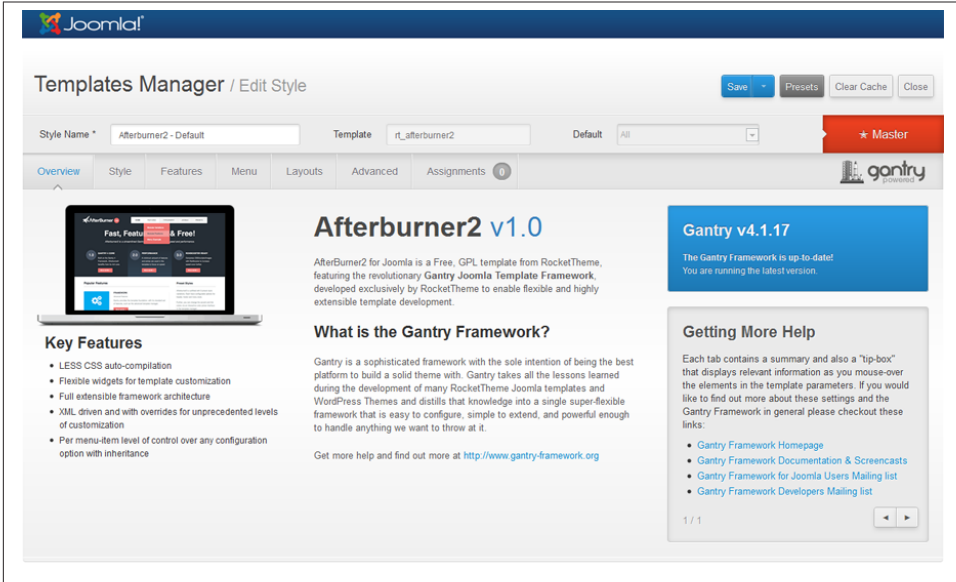


Figure 4-21. Overview tab of the Afterburner2 template configuration

The overview tab gives you just that: an overview of the template and the Gantry Framework that the template runs on top of. There are links to get more help and a notification as to whether the installed version of Gantry needs to be updated or if it is up-to-date. For more on third-party extension updates, see “[Updating Third-Party Extensions](#)” on page 289.

There are other tabs for the Afterburner2 configuration. They are:

- Style
- Features
- Menu
- Layouts
- Advanced
- Assignments

Each template company has a different way of making changes to template parameters. We will be going through each of our tabs and making changes that give us the look and configuration we are looking for on Joomla Pet Center. You will want to do the same thing with your template. The template company should have documentation and tutorials to assist you in making the template “your own.”

The Style Tab

The Style tab starts with the ever-important logo. Currently, the template is pulling the Afterburner2 logo, and we want it to pull our logo instead. To do this, we need to upload our logo image to the site in the Media Manager. We will be covering media in detail in “Media Manager” on page 127, but for now, we want to see our logo on the site.

1. Click Close in the Template Manager/Edit Style screen (unless you have made changes, in which case click Save & Close).
2. Click on Content and then on Media Manager. By default, you will see a screen like Figure 4-22.

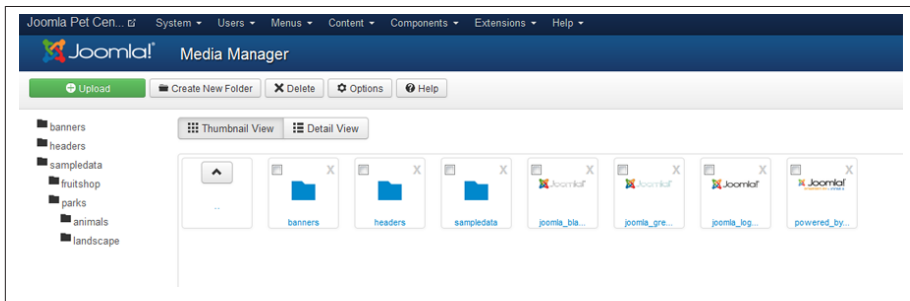


Figure 4-22. Media Manager screen in thumbnail view

3. Create a new folder by clicking the Create New Folder button in the top toolbar as seen in Figure 4-23. Name it *logos*.

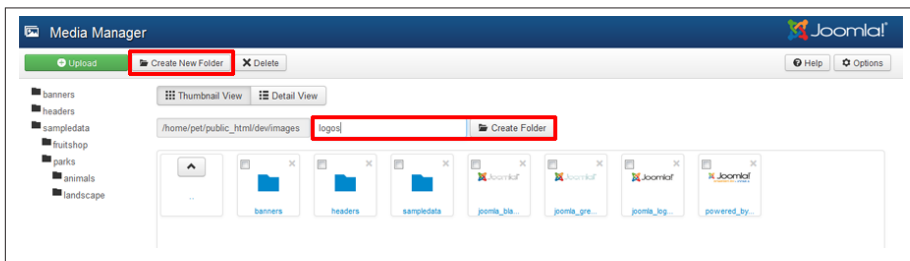


Figure 4-23. Add a folder for logos in the Media Manager

4. Click on the new logos folder you just created.
5. Click the green Upload button in the top toolbar.
6. Navigate to where your logo file is located and select it.
7. Click the Start Upload button.

Now we'll go back to our template parameters by clicking Extensions and again on Template Manager. Select the Afterburner2 template and then click the Style tab.

We will be making a number of changes to this tab to address the logo and the accent color.

To change out the logo:

1. Leave the Show setting as On.
2. Leave the Position at top-a.
3. Click the Type drop-down and select Custom. This creates a new line where you can select your logo that was just uploaded to the Media Manager.
4. Click the Select button, which opens a new window in a popup box with the folders and files in your Media Manager.
5. Scroll down to your folder called *logos* and click on it.
6. Click on the logo file you just uploaded which will force the Image URL to appear below in the Image URL field.
7. Click the blue Insert button. See [Figure 4-24](#).

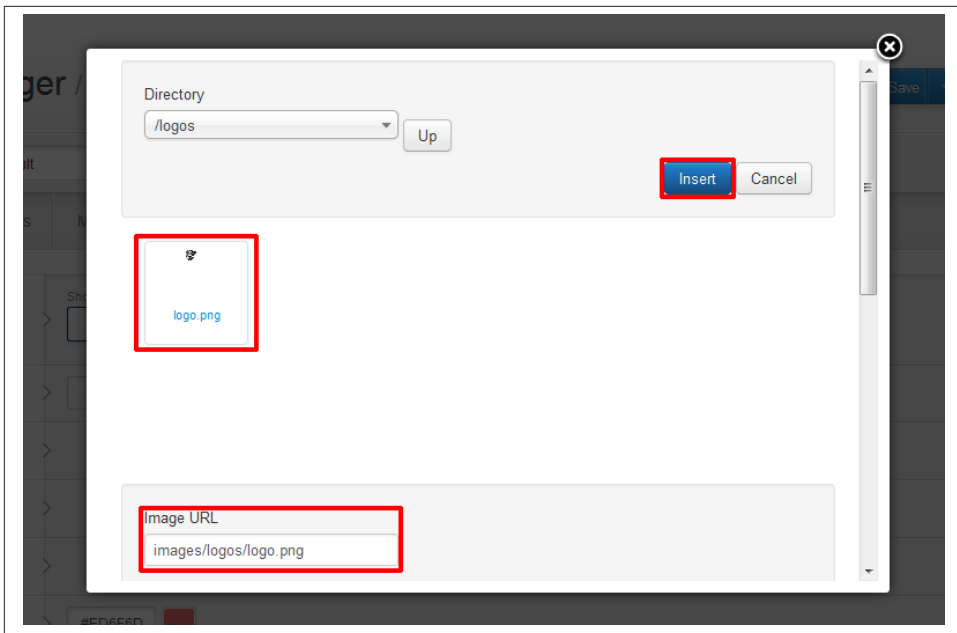


Figure 4-24. Insert your own logo into the template



Some templates will require you to create a Custom HTML module to display your logo. If this is the case, simply create a new Custom HTML module as described in “[Hands-On Exercise: Create Custom HTML Placeholder Modules](#)” on page 74 and insert an image as described in “[Hands-On Exercise: Adding Folders and Uploading Images from the Editor](#)” on page 132. To hyperlink the image of your logo, follow the directions in “[Hands-On Exercise: Hyperlinking an Image](#)” on page 136.

Now we’ll address the rest of the parameters on the *Style* tab:

Header Style

Leave as Dark. You may want to change it to light if your logo has dark text that wouldn’t otherwise show up on a dark background. The light header style will create a different look that you might prefer.

Menu Style

Leave as Light. You may want to change it to dark or grey. This is all a matter of preference.

Footer Style

Leave as Dark. Same as above on personal preference. Image background colors may dictate how you want this to appear.

Link & Accent Color

Click the color swatch to the right of the hexadecimal code field to use the color picker provided. You can also directly enter a hex code into the field. See [Figure 4-25](#) as an example.

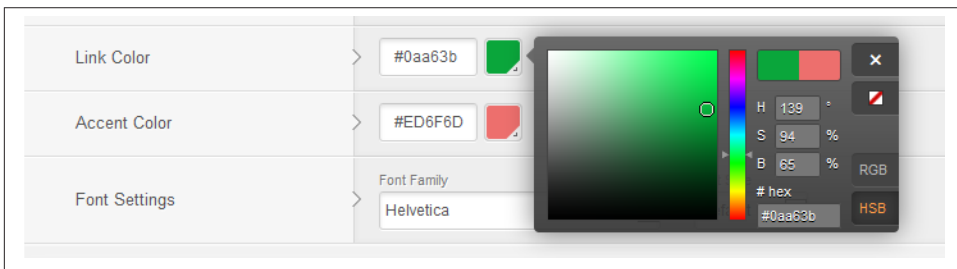


Figure 4-25. Using the color picker to change the accent and link color in the template



Most browsers have add-on tools that give you the ability to grab hex codes from web-based sites or images. These can be great tools to find the exact color of a hue in your logo or other resource. ColorZilla is an example of one of these tools for Firefox.

Font

Here you can choose from the drop-down many of the standard fonts and a plethora of Google Fonts.

Figure 4-26 shows how the Style tab looks after our changes.

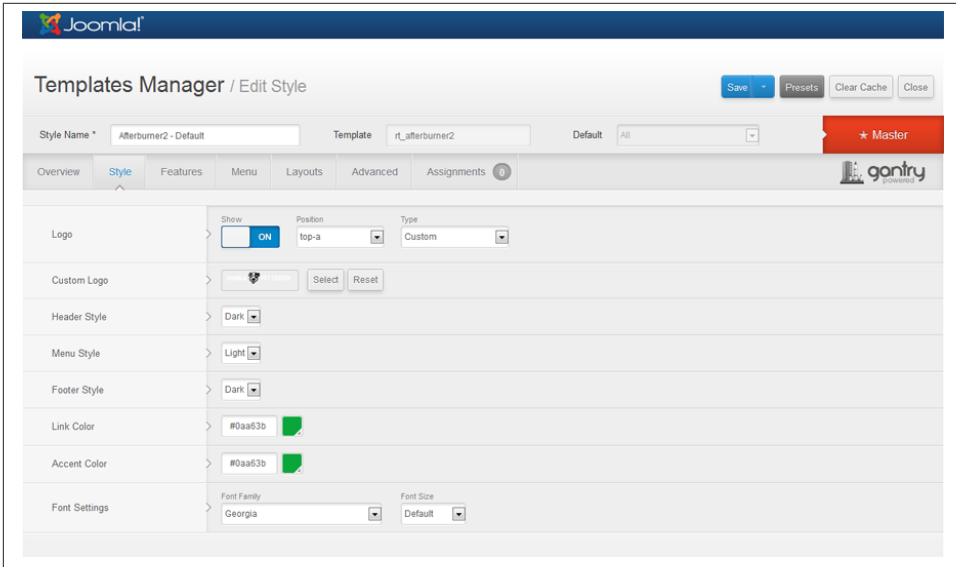


Figure 4-26. Style tab with completed parameters

Now let us take a look at the frontend with our new settings in Figure 4-27.

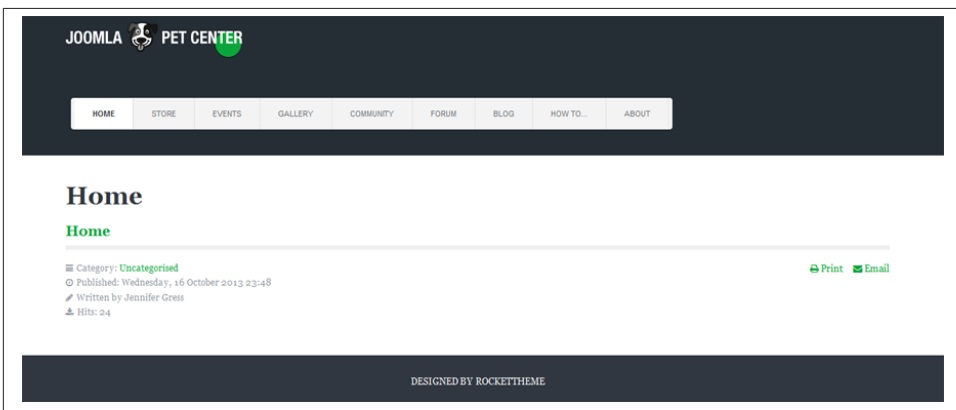


Figure 4-27. Frontend of Joomla Pet Center with logo changes

The logo looks good, but as you can see, there's a dot under it; the CSS in the template is creating this. We don't want that there, so we'll need to find the CSS code that makes it appear and alter it.

Using a Firefox add-on tool called Firebug, we'll inspect the element to find the applicable code. Chrome has a similar Inspect Element function that you can access by right-clicking on a browser window and choosing Inspect Element.

Firebug creates a panel under the website that shows the code and CSS of the website. When we inspect the element over the logo area, we can see the code that creates the style of the logo—including that circle, which is called `` in [Figure 4-28](#). That is what we need to see, so we'll click on that span line.

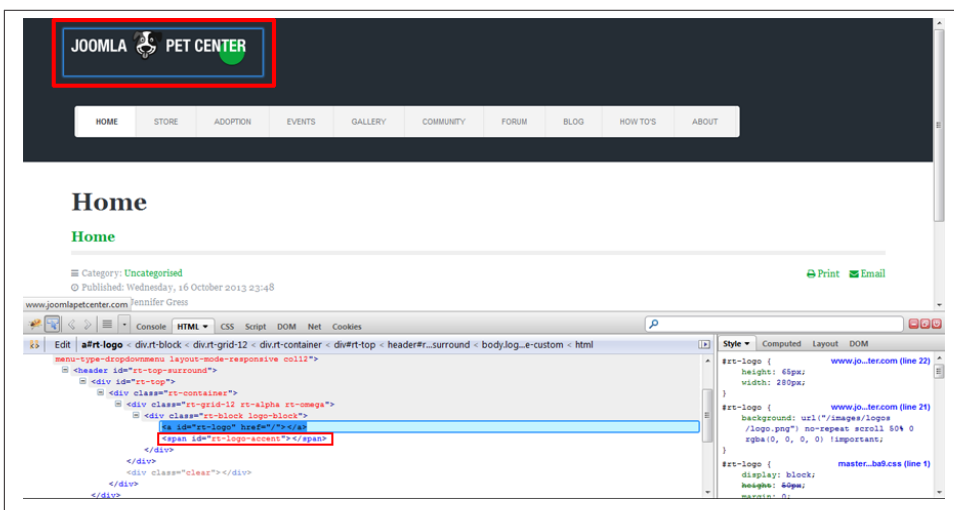


Figure 4-28. Firebug inspecting the logo area to find proper CSS code to change

In [Figure 4-29](#), we can see the CSS code on the right. If we change the height to 0, the dot disappears, and that's what we want. Another way to state this is `display: none;`. We will copy the code from Firebug and create a template override file to make this change permanent.



Changes made in Firebug or in Chrome's Inspect Element function are not permanent. They show you what your changes would look like before committing them. If you refresh, your changes will disappear.

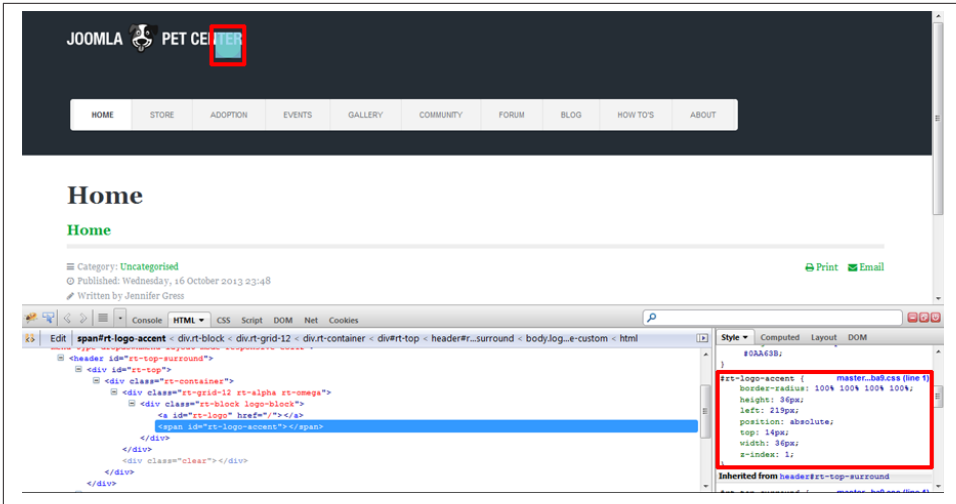


Figure 4-29. CSS code for the dot that we do not want

Template CSS Overrides

Many template companies have specific files that changes to the template CSS can be placed into. The benefits to this are many:

- One place to make changes
- Won't be affected by template updates
- Often, CSS changes desired for other extensions can be added to the template overrides which then wouldn't be affected by extension updates
- We won't forget that we changed the individual files—because we didn't

To create an override file for RocketTheme templates, we will follow these steps:

1. Click on Extensions and then on Template Manager.
2. Click on Templates in the left sidebar.
3. Scroll down and select the Afterburner2 Details and Files.
4. Create a new .css file by clicking New File from the top toolbar.
5. Select the `css` folder.
6. Select the File Type `css` from the drop-down.
7. Name the file `rt_afterburner2-custom.css`.
8. Click the blue Create button. See [Figure 4-30](#).

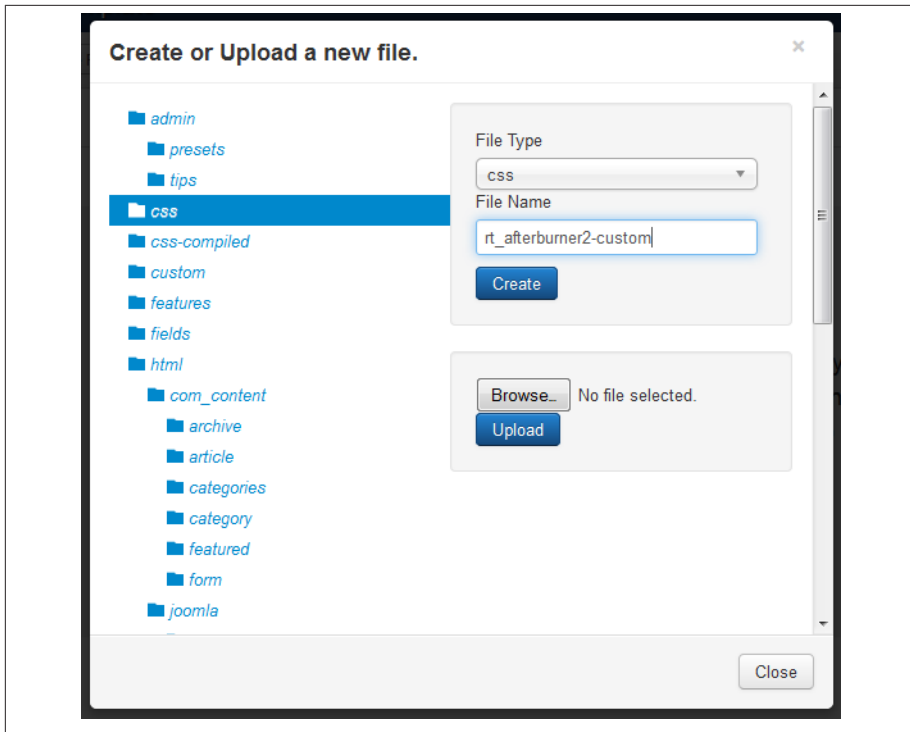


Figure 4-30. Create a new CSS file

9. Navigate to the file on the right sidebar and place the following code into the file.

```
#rt-logo-accent {
    display:none;
}
```

10. Click Save & Close and refresh the frontend.

11. Using FTP, copy this new file onto your local device so you have it as a backup in case it is needed in the future.

With the code in our overrides file in place, the green dot is gone.

We could have gone into the *logo.php* file and erased the line for `rt-logo-accent` except that, in that case, any template update would put the green dot back. Using the CSS override file, we avoid future problems.

Templates that operate on top of a framework will almost always have some kind of override file system. Look for documentation from your template company or search in their forums.

Remember that if you want to change something in your template, chances are good that someone else has wanted to as well. Search for what you want to do and you will likely find the answer.

Features Tab

The Features tab is where we can change the copyright, change the module position, turn off the System Messages, and add our Google Analytics tracking code.

We are going to leave everything as default on the Features tab except Designed by RocketTheme, which we will change to “© 2014 Joomla Pet Center. All rights reserved.” This field takes HTML, so if we wanted a blank line under the copyright, we could add it with a break. Perhaps something like:

```
© 2014 Joomla Pet Center. All rights reserved.<br />Built by Jenn & Ron
```

This would appear as:

© 2014 Joomla Pet Center

Built by Jenn & Ron

When we save the new settings, the completed *Features* tab looks like [Figure 4-31](#).

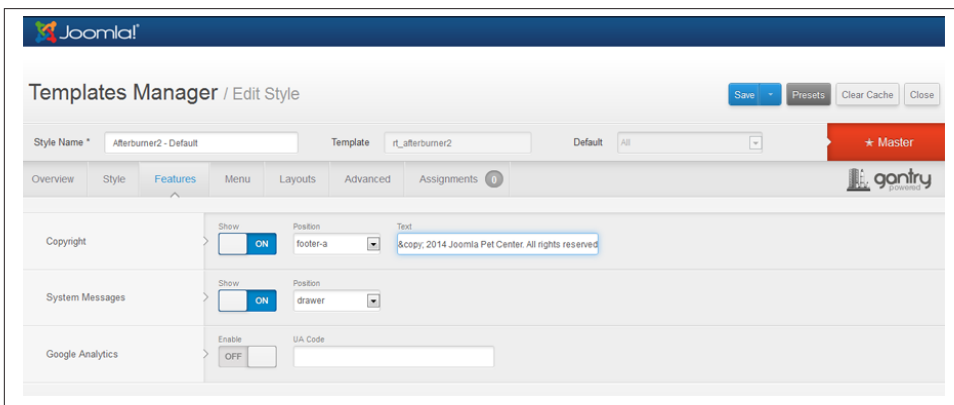


Figure 4-31. Features tab of template for Joomla Pet Center

The frontend of the site reflects our new copyright in [Figure 4-32](#).

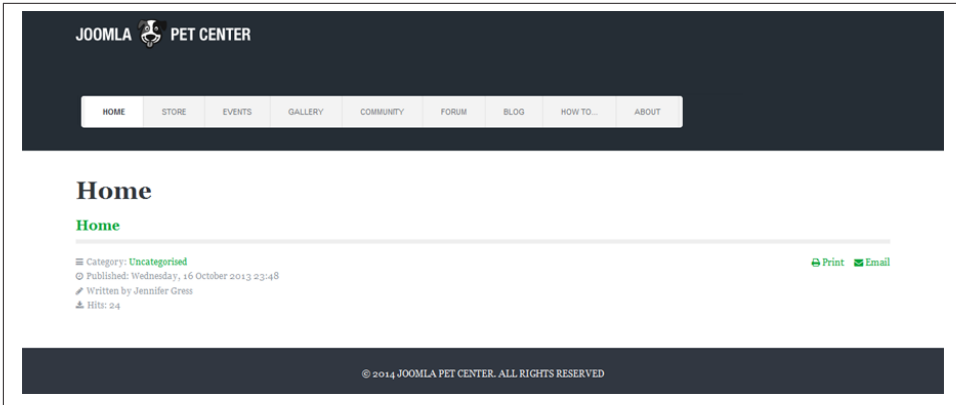


Figure 4-32. Page with Joomla Pet Center copyright in place

Menu Tab

In the *Menu* tab, you can control the menu type and what menu is being used. We are leaving them all as default, as seen in Figure 4-33.

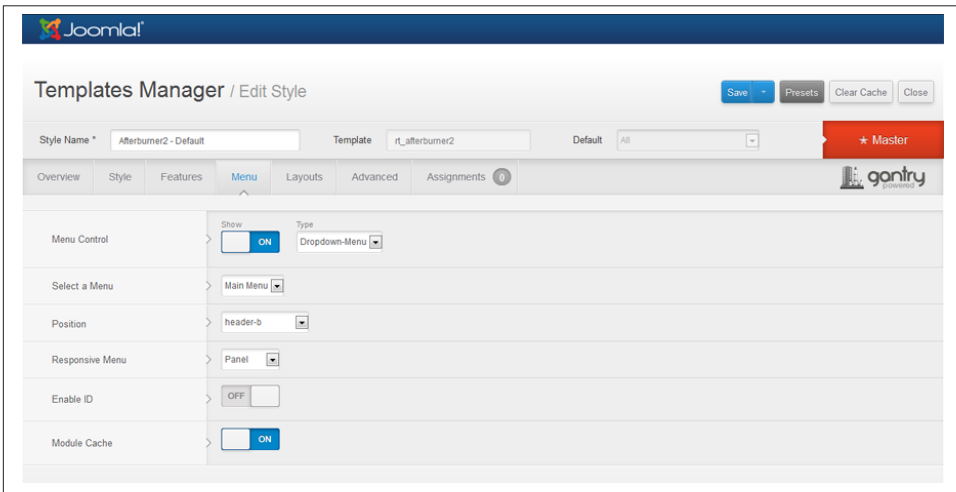


Figure 4-33. Menu tab of the template configuration for Joomla Pet Center

You can select Split Menus in the Menu tab by choosing it from the drop-down. A *split menu* eliminates the drop-down for child menu items (submenu items) and instead only shows the parent menu item in the main menu bar. When the parent menu item is clicked, a secondary menu appears in the module position chosen in the Menu tab of the Afterburner2 template parameters.

Layouts Tab

There is extraordinary flexibility with the Gantry Framework, which quickly becomes apparent in the Layouts tab. See [Figure 4-34](#).

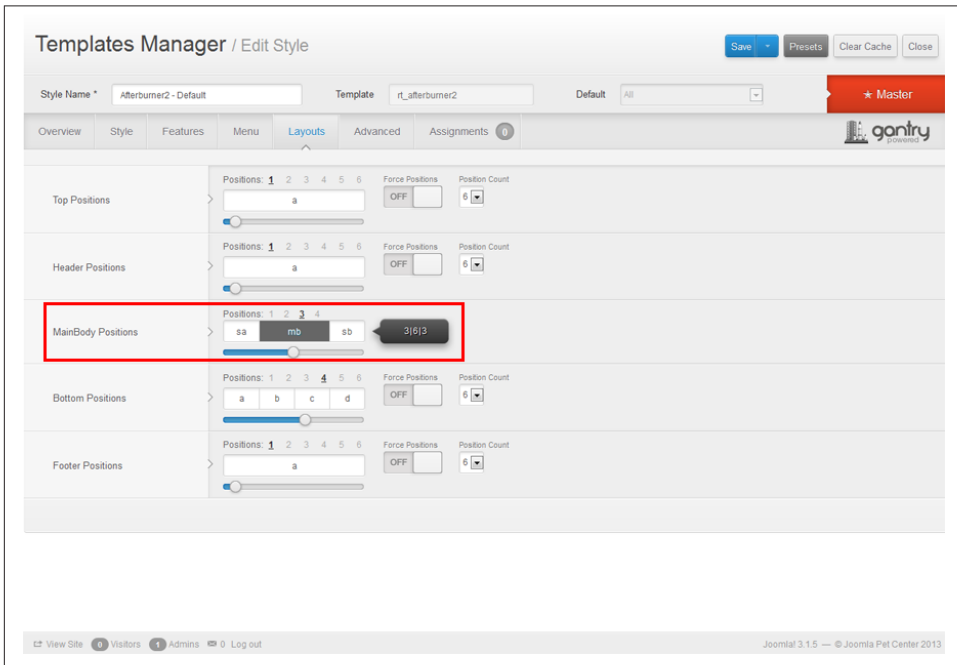


Figure 4-34. Layouts tab in Afterburner2 template configuration

Most templates for Joomla operate with a 12-grid system. Modules and the main content area can be set to span a specific number of columns of the 12 available grids. This creates a lot of flexibility in your layout display.

We've left everything at the default values except the MainBody Positions. We know that we are going to have sidebars. In order to accommodate this, we needed to change the configuration.

1. Click the number of Positions. We selected 3 so that we could have a sidebar a (sa), a mainbody section (mb), and a sidebar b (sb). If a sidebar is not in use, it will collapse. This gives us a lot of flexibility.
2. Click, hold, and slide the slider below the positions to determine the ratio of space for each position. This can be changed as the design takes shape.
3. Click Save.

Advanced and Assignments Tabs

We are going to leave both the Advanced and Assignments tabs at their default settings. You are welcome to change them. Feel free to read more of the [RocketTheme documentation](#).

Assignments come into play if you want a different look and feel to appear on different pages. This is a powerful feature that is beyond the scope of this book, yet very cool. You can create different variations of this template and have them appear on different menu items by using Assignments.

At this point, the basics of your template are configured and your site should look pretty good. We will get to further customizing of content in [Chapter 5](#).

Creating Modules

Modules provide a sort of window into your content by displaying it in small, customizable blocks or boxes. Modules are usually positioned in the left and right columns of a web page, but they can be just about anywhere you want. Joomla comes with a number of default module types that show you the most recent news items, a login form, breadcrumbs, or an advertising banner. Third-party extensions provide options do a whole lot more.

At this point, you should have a few menu items created (see [“Creating Menu Items” on page 47](#) if you jumped ahead) as a prerequisite for getting your modules to appear.

Module names and their positions are determined by their location in your template. If you’re using the default Protostar template and you installed the sample data, you already have a few modules in various positions set up on the frontend of your website.

The Module Manager provides an overview of your modules, their positions in your template, type of module, and status (see [Figure 4-35](#)).

In the Module Manager, you can reorder modules when you have more than one module in the same position by dragging and dropping into the desired order. See [“Ordering Modules” on page 79](#) for more detail.

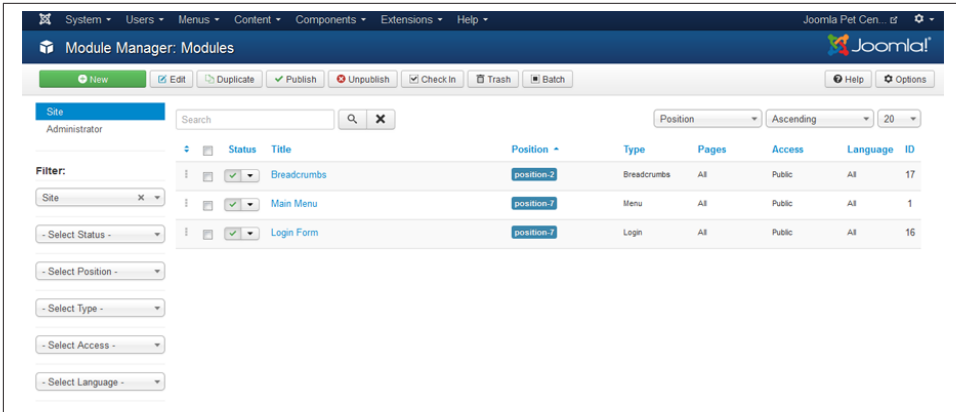


Figure 4-35. The Module Manager

As your site grows, you'll end up with a lot of module positions, and finding them can be tough. Have you ever looked at a module and wondered which position it was in? Here's how to find out.

To enable the preview of module positions (which is disabled by default):

1. From the backend, click on Extensions and then on Template Manager.
2. Click on the Options button at the top of the screen.
3. Click Enabled for Preview Module Positions.
4. Click Save & Close.
5. Click the eyeball icon at the left of the template title to view the preview of the module positions available for that template.

On the frontend, add the `tp` parameter with a value of 1 on the end of the website URL. An example of that would be: `http://www.<yourwebsite>.com/index.php?tp=1`

That's it. Now you can see the module types and positions from the frontend of your site.

Placeholder Custom HTML Module

We know that we will have modules on our site based on our layout, which we saw in [Figure 2-6](#). Because we don't have our extensions installed yet and we haven't yet learned how to create content and manage images (this will be discussed in [Chapter 5](#)), we are going to create a few placeholder modules so that the layout of Joomla Pet Center can take shape.

The module positions for the Afterburner2 template can be found on [RocketTheme's demo website](#). Once we select the Afterburner2 template, we can navigate to the module positions page of the demo to see which are built into the template for us. In our case, these module positions are available on the [RocketTheme demo website](#) under the “Features” tab.

Afterburner2 is a free template. Free templates often have less functionality than paid ones, which is the case with Afterburner2. Afterburner2 doesn't have as many module positions as RocketTheme's Club templates. We are going to make it work, as there are still many module positions to choose from.

The Top module positions are going to be utilized by our logo and our RSS module. The menu bar occupies the Header positions so we are unable to use it for additional modules.



More than one module can be used in the same module position, as they can stack or be side-by-side. We are not choosing to do so because of aesthetics. You will need to try different positions in order to achieve the layout you want.

Our gallery will occupy the Breadcrumbs module position. This is not normally a position we would use for a gallery, but since we are low on positions, and breadcrumbs are not necessary on the home page, we will use it. See [“Adding an Image Gallery” on page 140](#) for instructions on how to create a gallery.

We will place our three calls to action in the module positions Content Top and use content-top-a, content-top-b, and content-top-c.

We will use the Sidebar position sidebar-b for our newsletter (see [“Getting the Word Out with a Newsletter” on page 229](#)) and other modules.

The Bottom positions will house our social media modules. See [Chapter 12](#).

We will create placeholders for each of these modules.

Hands-On Exercise: Create Custom HTML Placeholder Modules

Creating placeholder modules is generally the same process no matter the type or position. Because we only need to place a little text in a module as a placeholder, a Custom HTML module is the perfect type of module for this purpose. A Custom HTML module is also good for pasting a bit of HTML code on your site outside of the main content area. This module allows you to paste any text, image, or HTML you want and have it show up in a module position. To create a Custom HTML module:

1. Click on Extensions and then on Module Manager.

2. Click the New button in the top toolbar.
3. Choose the type of module you want to create; in our case, we will choose Custom HTML (see [Figure 4-36](#)).

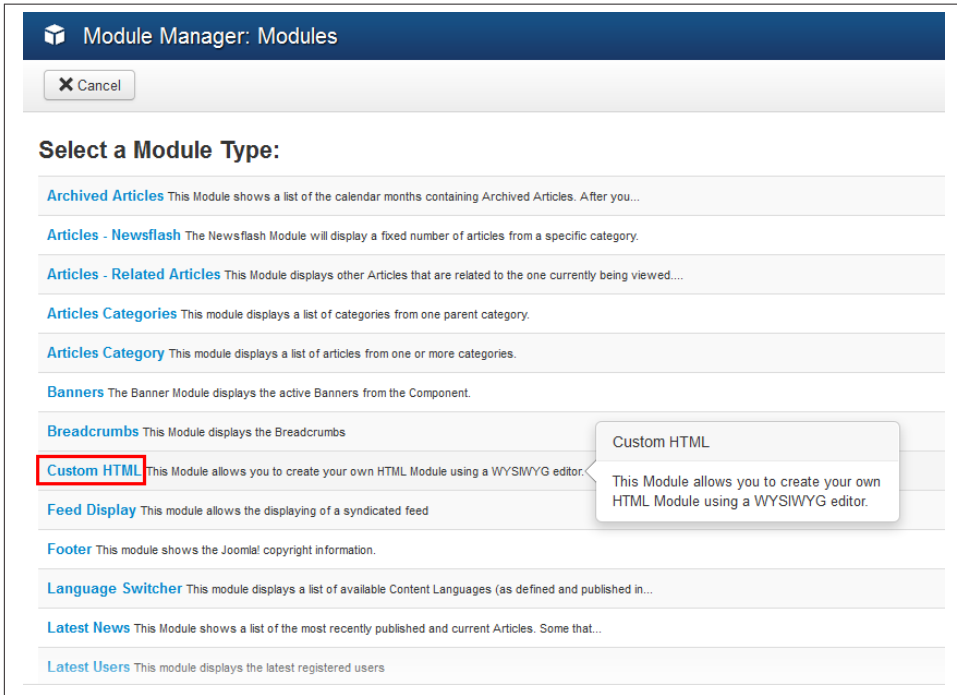


Figure 4-36. Selecting the Custom HTML module type

In the Module tab:

1. Enter **Gallery** as the module title (show or hide the title on the right sidebar) and choose a position from the drop-down. We will create a placeholder for the gallery in the Breadcrumbs position.
2. Change Status to **Unpublished** if you don't want it to appear at this time. (You can also trash the module with the Status drop-down).
3. If you want your module to turn on or off automatically, set the Start Publishing and Finish Publishing date and time.
4. Choose the Access level if different from public.
5. Select your Language if different languages are being utilized on the site.
6. Add a Note, which will appear in the Module Manager list if desired.

See [Figure 4-37](#) for how our placeholder looks with the Module tab filled out.

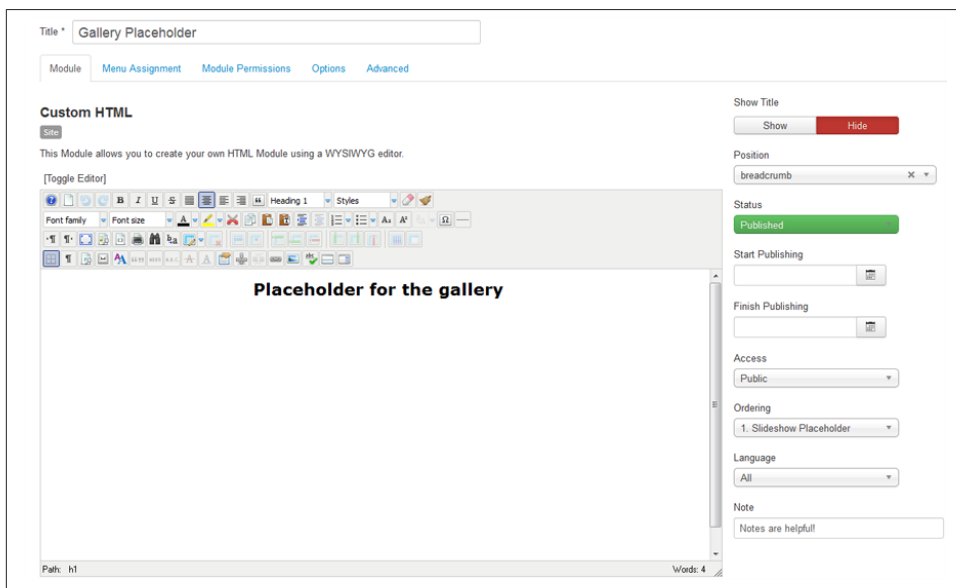


Figure 4-37. Custom HTML module tab



If your desired module position isn't in the position drop-down, you can create one on the fly by typing the name.

You can also type the name of a module position to save time scrolling through the drop-down, as it shows the positions for all loaded templates in the Template Manager. You may also want to uninstall unused templates from the Template Manager so that module positions are faster to select from the list.

Adding a note in the Notes field for a module will help clarify what a module is if the title is obscure. Notes are a great way to make your life easier in the future. You could add a note like “home page advertisement” or “contact page sidebar.” Use whatever makes it easier to find the module, because the titles don't always make sense when editing or aren't shown on the frontend.

In the Menu Assignment tab:

In order for your modules to appear on your website, they must be associated with one or more menu items. Since menu items essentially point to pages on your site, you're deciding which modules will show up on which pages. To assign a module:

1. In the Menu Assignment tab (Figure 4-38), leave the Module Assignment set to “On all pages” to have the module show up on all pages. Select “No pages” to have the module be hidden. Choose “Only on the pages selected” to choose specific pages for the module to appear on. Or choose “On all pages except those selected” to have the module publish on all pages except the ones checked.
2. We will only be showing the slideshow on the home page. We will select the option “Only on the pages selected,” which brings up a list of all menu items on the site.
3. Uncheck all boxes except the Home menu item by deselecting all other menu items or clicking the link None at the top and then only ticking the Home box. Check out Figure 4-39 for how this looks.
4. Click Save to save the module and stay on the screen. Click Save & Close to save and go back to the Module Manager list.

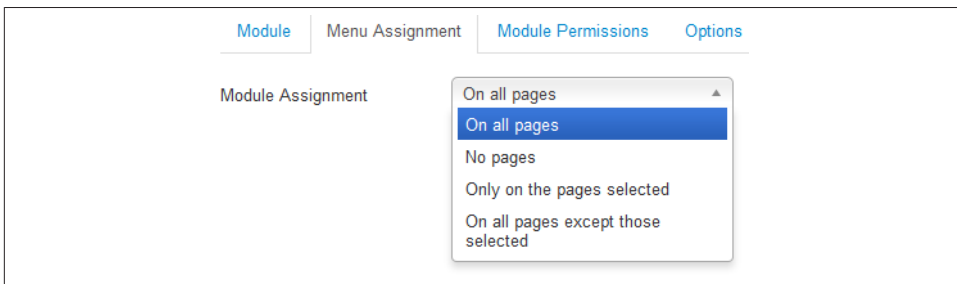


Figure 4-38. Menu Assignment options for modules

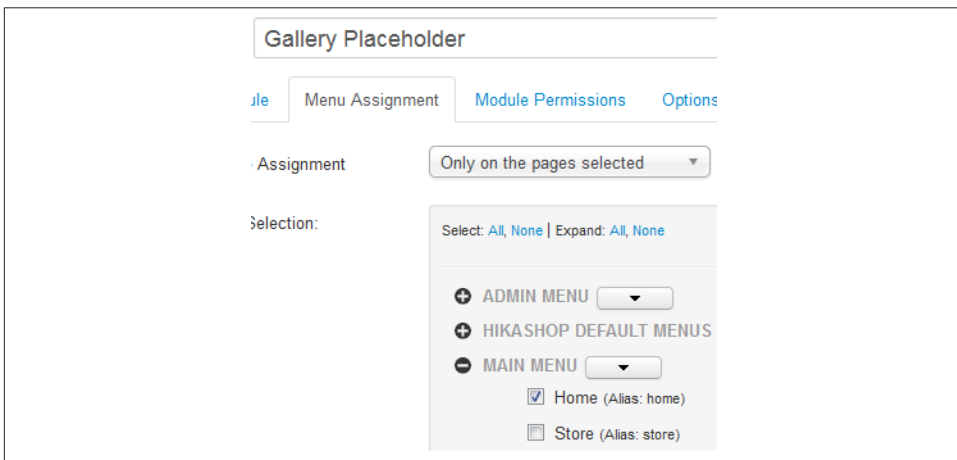


Figure 4-39. Module published only to the home page



If you were to use the “Only on the pages selected” Module Menu Assignment, then as you add articles to the menu, you would also have to go into each module and select the menu item in the Module Menu Assignment for each module you want to appear on your new page. It’s a real time saver and a real confusion saver if someone other than you is adding pages but doesn’t have the permissions to edit modules.

The great thing about “On all pages except those selected” is that as you add pages to your menu, modules will automatically publish on them with this option selected, except on the pages that are checked.

Within the Menu Assignment tab, you can save time by using the Select: All, Select: None, Expand: All, Expand: None either at the top of the Menu Selection or the drop-down arrow button next to the menu name and checking the Select or Deselect checkboxes to check or clear all menu items in that menu with a click.

In the Advanced tab:

1. Enter a Module Class Suffix in the Advanced Options tab if you want to apply specific CSS styles to this module. Module Class Suffixes are appended to the normal module CSS class. If you have an off-the-shelf template like we do, the template designer may have included alternative color schemes, borders, and styling for modules that are activated by adding one of the available Module Class Suffixes in the template demo. If you are using a custom template, to check with your template designer about the suffixes available to you.



It is important to note that a leading space before a suffix leaves the preprogrammed CSS class intact and adds an additional class, so that two sets of CSS rules apply. A suffix without a leading space causes the existing class to be renamed so that a different set of rules apply.

2. Afterburner2 has a number of module suffixes with the main style suffix as box1. For the purpose of the slideshow placeholder, we will not use a suffix.
3. Click Save to save the module and stay on the Edit Module screen. Click Save & Close to save and go back to the Module Manager list.

Hovering over any of the titles in the Advanced tab will tell you what each field is for. Module Class Suffix is the most frequently used field in the Advanced tab.

See [Figure 4-40](#) as an example.

Module	Menu Assignment	Module Permissions	Options	Advanced
Alternative Layout			Default	
Module Class Suffix				
Caching			Use Global	
Cache Time			900	
Module Tag			div	
Bootstrap Size			0	
Header Tag			h3	
Header Class				
Module Style			Inherited	

Figure 4-40. The advanced tab of a Custom HTML module

Depending on which type of module you created, you'll have a few module-specific options available. Go ahead and play around with the options, choosing the ones that best fit your needs, and see how they affect the frontend of your site.

Ordering Modules

Ordering modules in the same module position is a breeze in Joomla 3. From the Module Manager, use the position filter to display the position you want to order. Click the up/down arrows at the top of the first column on the left to activate the ordering function. Then simply drag and drop the modules in the order desired.

Duplicating Modules

Since we are creating a number of placeholder modules, we are going to simply duplicate our modules and change the following items on each so that they appear on our frontend.

- Title
- Module Position
- Show Title

- Text in the description
- Notes field
- Menu Assignment
- Add a Module Class Suffix if applicable

Duplicating modules is also very helpful if you have modules with a lot of customizations and you need more than one of these modules. You can save a lot of time by duplicating it rather than starting from scratch. To copy a module:

1. From the Module Manager, click the checkbox next to the module name you want to duplicate.
2. Choose Duplicate from the top toolbar. See [Figure 4-41](#).

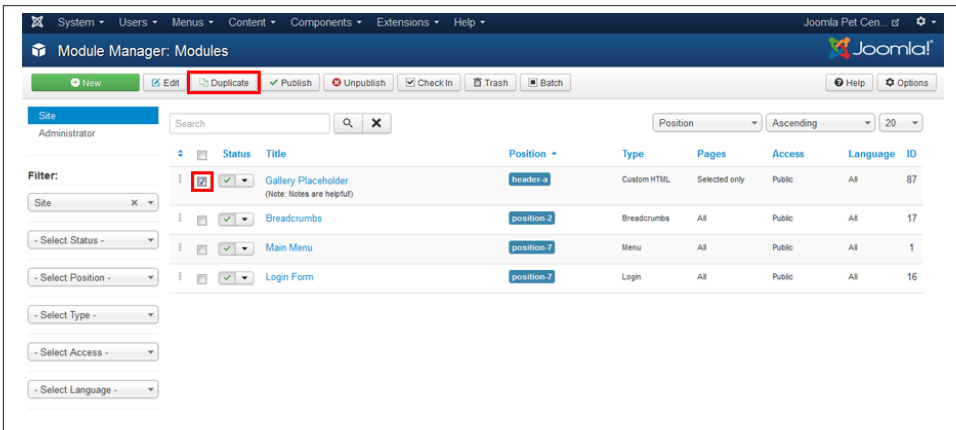


Figure 4-41. Duplicate a module

Your new copy will be saved with the same title and “(2)” added (e.g., a new copy of Gallery Placeholder will be named Gallery Placeholder (2)). Your new module will be unpublished by default.

You can then go into the module and change the title and other specifics to make it appear on the proper pages and publish it to the frontend according to our list as previously stated in this section.

We have created the rest of our placeholder modules (See [Figure 4-42](#)). One of the top reasons to create placeholders is so that as we create content, we have a proper idea of layout in the design. If you think you might have a sidebar, adding a placeholder for it is a wise move. It may determine the optimum or maximum width for images that you place in articles.

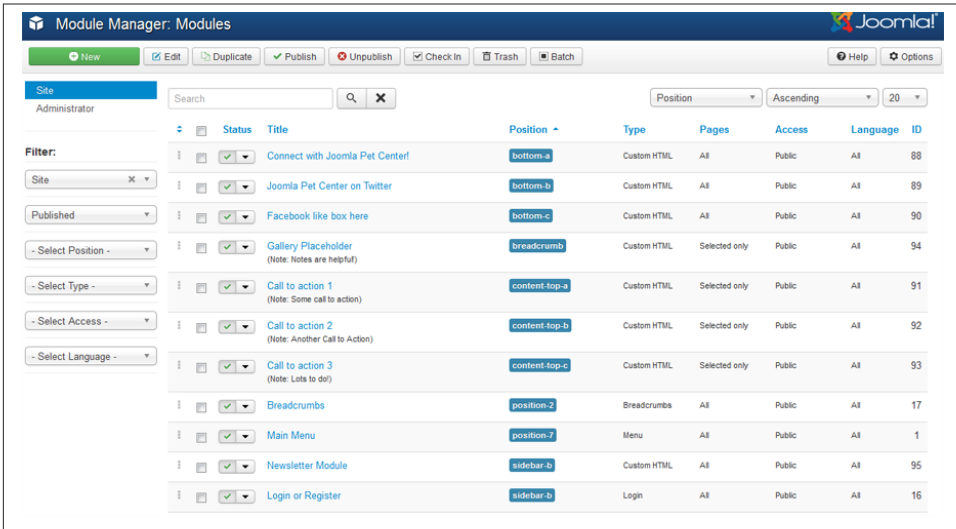


Figure 4-42. Placeholder modules in the Module Manager

Deleting Modules

Ultimately, we will be deleting some of our placeholder modules. Here are the step-by-step instructions on how to delete modules.

If you make a mistake or create a module you no longer need, you can simply delete it. To delete a module:

1. Click on Extensions and then on Module Manager and click the checkbox next to the module name you want to delete.
2. Choose Trash from the top toolbar.



You can still access trashed modules by choosing Trashed in the Status filter drop-down. You can restore or permanently delete modules from the Trashed module list.

Frontend Layout After Building the Structure

See Figures 4-43 and 4-44 for how our site looks after the work we did in this chapter.

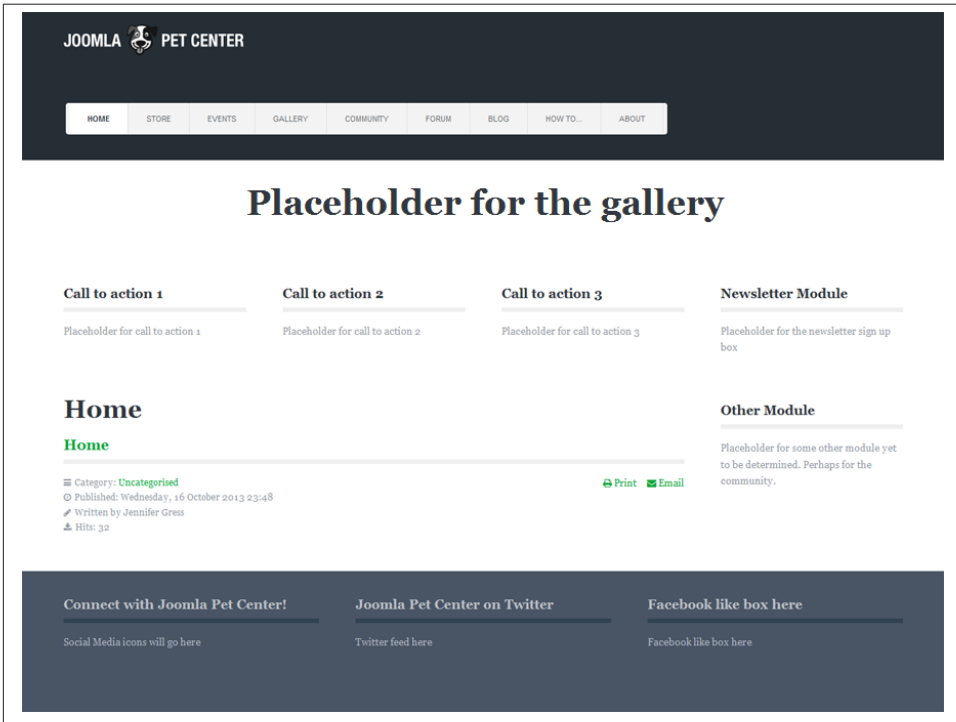


Figure 4-43. Home page layout with articles, menu items, and modules

Now that you have gotten this far, it is time to run a backup. See “[Mastering Backups](#)” on page 56 and remember to do backups regularly, not to keep backups on your server, and that a backup is only good if you are sure it can be restored.

Next we will rock on and work with the content and fine-tune the site further.

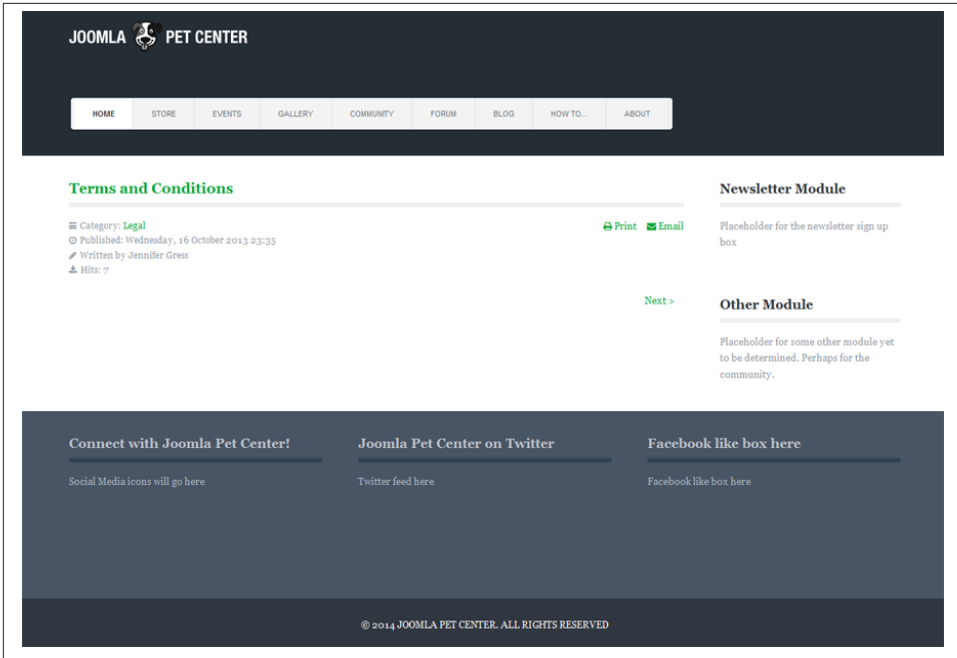


Figure 4-44. Interior page layout with sidebar modules

Because Joomla is a CMS, it goes without saying that content is at the heart of everything it does. Whoever said “Content is king” was very right. Attracting site visitors requires compelling content that is regularly updated.

The basic content type in Joomla is the article. In this chapter, we’re going to explore article content in depth as the basis for understanding how Joomla organizes content as a whole.

Joomla Pet Center Article Options Hierarchy

When we look at the frontend of Joomla Pet Center, we can see that each article has some data being displayed by the system. See [Figure 5-1](#).

This information and the display of an article on your Joomla website is controlled by three sets of parameters: Global Article Options, Menu Item Article Options (see “[Creating Menu Items](#)” on page 47), and Article Options. In many cases, the same parameter can be specified for all three. A specific cascading hierarchy is used to determine which parameters are actually used when an article is displayed.

Global Article Options

The Global Article Options are accessible in the Article Manager. In the top toolbar, click the Options button. These parameters should be set to whatever you desire for the majority of your articles. Wherever you see Use Global within Article Options, Category Options, Menu Item Options, and even Permissions, it is pulling from the parameters that are set in the Global Article Options—thus the term Use Global in the drop-downs. You can override what is set in the Global Article Options via the Menu Item Article Options.

Menu Item Article Options

These options override the Global Parameters and they're located in the Advanced Options tab of the Single Article menu items (pointing to individual articles). They can be adjusted by going to Menus in the top menu and choosing the menu that contains the menu item you want to edit. Then click the name of the menu item in the Menu Item Manager to open it for editing. Make your changes in the Options tab.

Article Options

These parameters will not display on your site unless the menu item type is Category Blog or Featured Articles, and Use Article Settings is selected. If this is the case, then the article options settings will take effect. To do this, go to the Article Manager and click the article title to open the article for editing. Click the tab Options, and change the desired fields. In the menu item associated with your category of articles, click the Options tab and change desired settings to Use Article Settings.

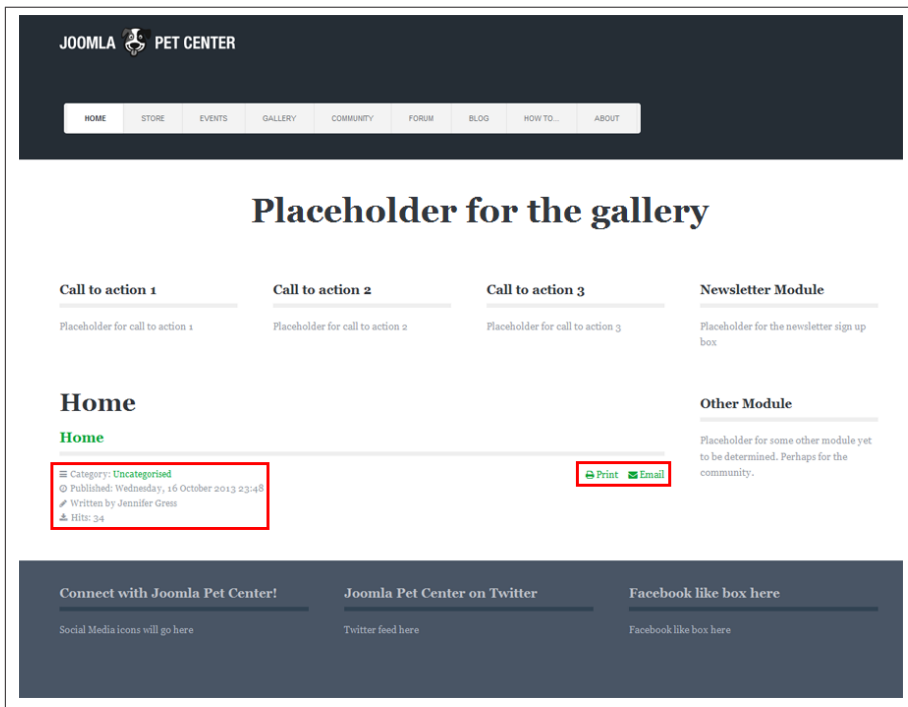


Figure 5-1. Article display showing category, date, author, hits, and icons

For our articles, we do not want the category, date published, author, or hits to show up except in the Blog and the “How to” articles. This means that for the majority of our articles, we want those turned off. We will leave the Print and Email icons published.

Hands-On: Setting the Global Article Options

Joomla comes out of the box with the Author, Created Date, Category, Hits, and the Print and Email icons set to show on all articles. So unless you desire that, you have to venture into the Global Article Options and change them in the Articles tab. You might not need to change anything else in the Global Article Options.

1. Click on Content and then on Article Manager.
2. Click on the Options button in the top toolbar on the right (Options are also accessible through the Category Manager and Featured Article Manager).
3. Change the Show Category and Link Category to Hide and No (Figure 5-2).

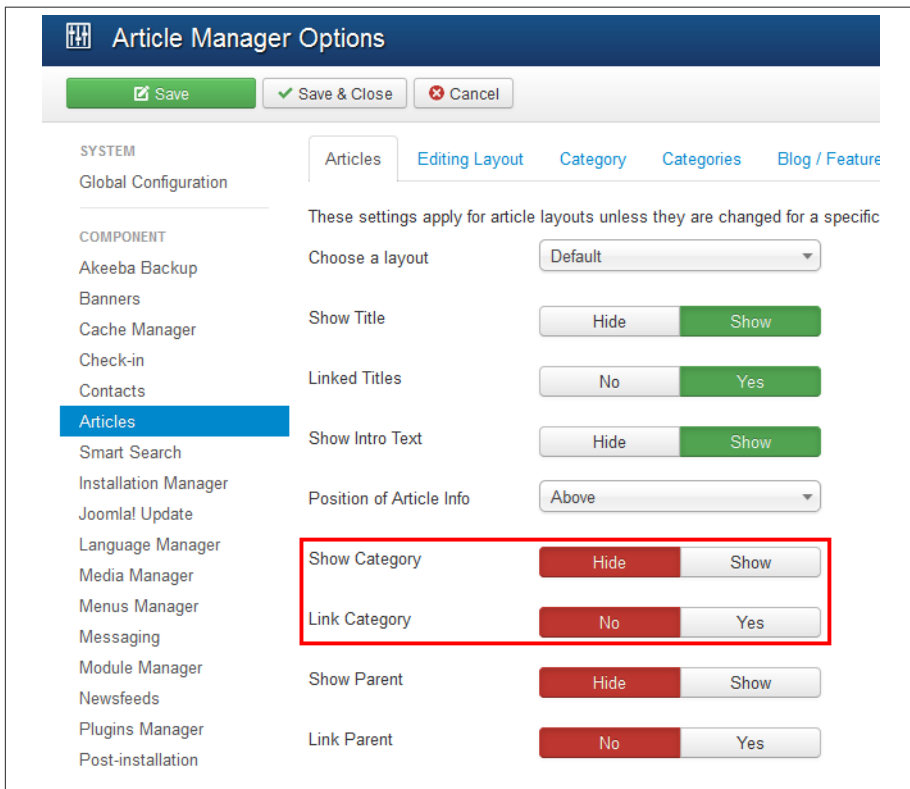


Figure 5-2. Changing the show category and link category to not display in the Global Article Manager Options

4. Scroll down and change the Show Author, Show Publish Date, and Show Navigation to Hide (Figure 5-3).

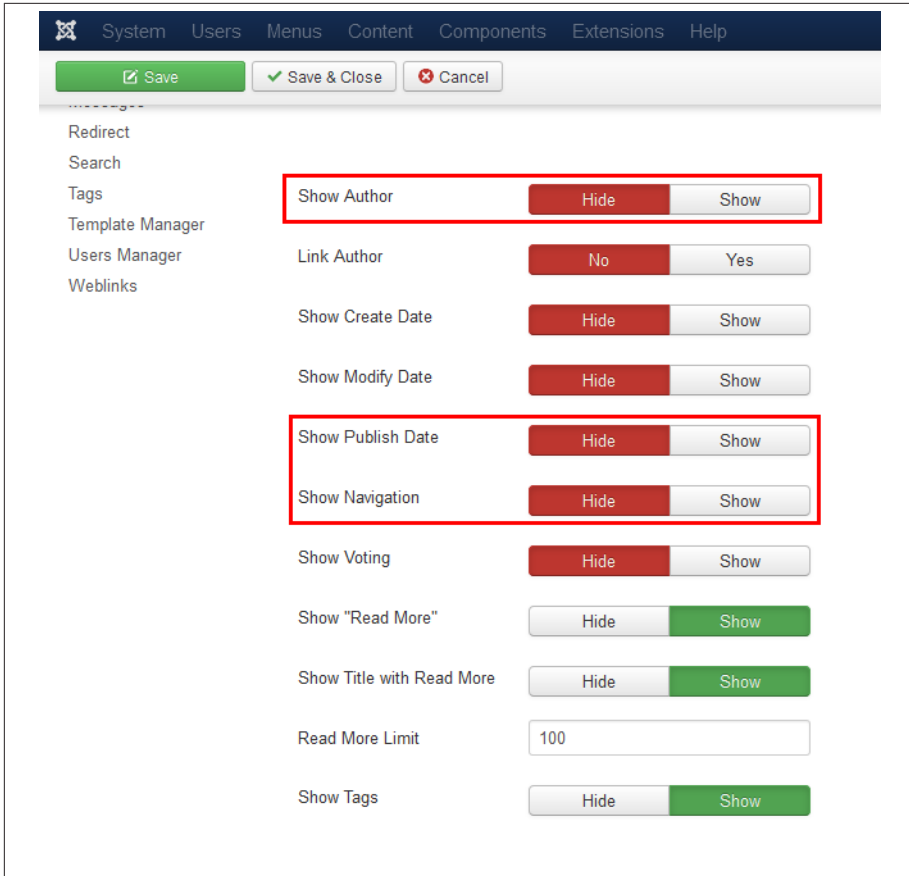


Figure 5-3. Changing the Show Author, Show Publish Date, and Show Navigation to not display in Global Article Manager Options

5. Scroll down more (this is a long page) and change Show Hits to Hide (Figure 5-4). If you want to not show the icons or words for print and email, they can be changed to Hide in this screen.
6. Click Save or Save & Close.
7. Refresh the frontend of your site and you should see your changes take effect.

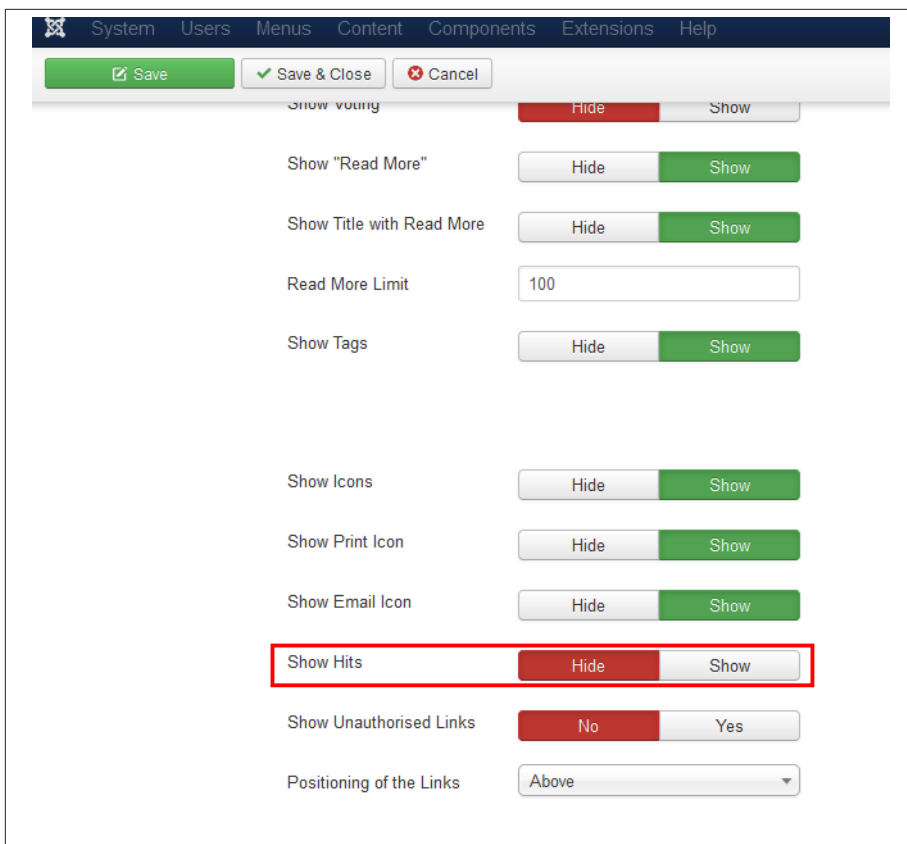


Figure 5-4. Changing the Show Hits to not display in Global Article Manager options

The Global Article Options are a very powerful way to accomplish other settings on a site-wide level. If you are using the same Category Blog display settings on multiple menu items, it would be brilliant to set the parameters here before setting up your menu items. By doing so, the site will pull what is in the Global Article Options, saving you time.

Note all the various tabs in the Global Article Options (Figure 5-5). Here's a brief description of each of the tabs and what they do. If you hover over each setting within each tab, a tooltip will describe what the setting is for. .

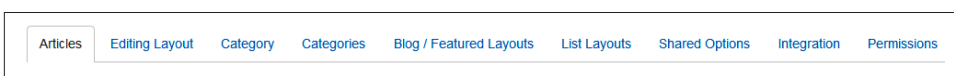


Figure 5-5. Global Article Options

Global Article Manager Options are divided into the following tabs:

Articles

The settings selected here apply to all article layouts.

Editing Layout

These settings control some options so that users editing articles may or may not be able to alter Publishing Options, Article Options, Frontend Images and Links, Administrator Images and Links, and URL Target Windows. They also dictate how Intro and Full Text Images float—giving articles a consistent look and feel despite who is editing them.

Category

These settings globally decide various options based on categories. You can choose a default layout, and show or hide Category Titles, descriptions, images, etc. These apply unless they are changed in the individual categories or in the menu item settings.

Categories

Settings apply for Categories when they are displayed as one or more subcategories within a parent category unless altered in the individual category or menu setting.

Blog/Featured Layouts

Here you can set a global setting for all blog or featured menu item layouts. This is helpful if you have a number of Category Blog or Featured Article menu items and you want to keep the look consistent site-wide and make setting up of those menu items faster.

List Layouts

A number of different menu items create lists of categories and/or articles within a category, contacts, and more. This tab allows you to globally set whether you want certain common list attributes to show or not.

Shared Options

These settings are for shared options in the list, blog, and featured menu item types so that if you always want to follow one consistent method, you can do so with ease instead of having to change it in all menu items associated with list, blog, or featured menu items.

Integration

This tab is mainly regarding the Feed component built in to Joomla's core.

Permissions

Review the notes at the bottom of the permissions tab and “[Users, User Groups, Access Control Lists \(ACLs\), and Frontend Editing](#)” on page 242 for additional information about using permissions.

Next we need to change the menu items for the Blog and “How to” articles so that the author and published date appear. While we are at it, we will remove one of the instances of “Home” from the home page. That can drive you nuts!

Changing Menu Item Options

We want the author and published date to appear in the Blog and “How to” articles, so let’s make that happen:

1. Click on Menus and then on Main Menu.
2. Click on the title of the Blog Menu Item.
3. Click on the Options tab.
4. Change Show Author to Show.
5. Change Show Publish Date to Show (see [Figure 5-6](#)).
6. Click Save or Save & Close.

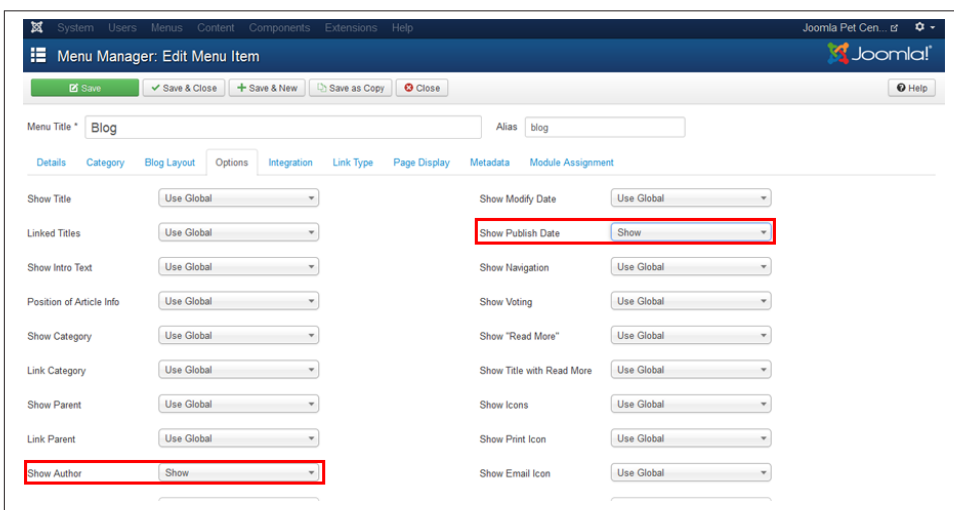


Figure 5-6. Set the author and publish date to show in the menu item options

Do the same thing with the “How to” articles.

See Figures 5-7 and 5-8 for how these articles now display. The “How to” articles show the author and date when they are clicked from the category list view.

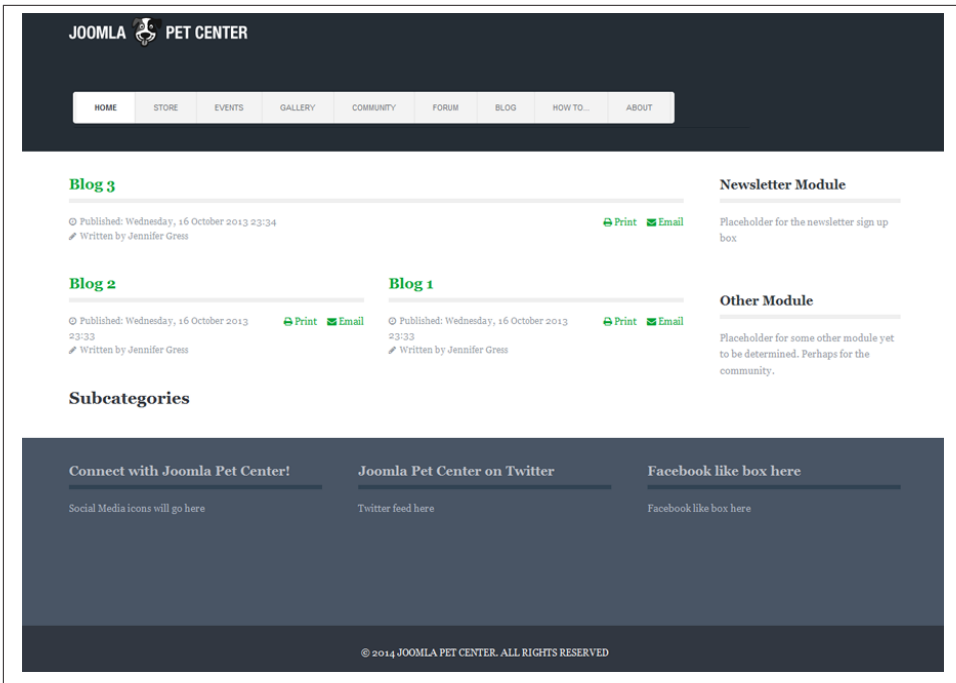


Figure 5-7. Blog articles with author and date displayed

The screenshot shows a Joomla! table with the following data:

Title	Author	Hits
How to 3	Written by Jennifer Gress	Hits: 5
How to 2	Written by Jennifer Gress	Hits: 5
How to 1	Written by Jennifer Gress	Hits: 6

In the top right corner of the table area, there is a dropdown menu showing the number 10.

Figure 5-8. “How to” articles with author and date displayed

To get that second “Home” title out of the home page, follow these instructions:

1. From the Main Menu Manager, click on the Home title.
2. Click on the Page Display tab.
3. Change Show Page Heading from Yes to No.
4. Click Save & Close.
5. Check to see how it looks on the frontend.

If you don't want to show the title at all on the home page, simply change the Show Title field to Hide in the menu item Options tab. It is pulling the article title. If you want to change the title of the article, do so in the Article Manager.

You will probably be visiting your menu items on more than one occasion to fine-tune how your article displays. This is normal. Just remember that if you are experimenting with how displays look, only change one setting at a time. Save that one change and check it from the frontend. If it doesn't do what you want it to do, change that one setting back and then change another one. It can be easy to get confused and wish you could start over. "One change at a time" is a good motto while you are learning to use Joomla.

The WYSIWYG Editor

WYSIWYG (What You See Is What You Get) editors make it really easy to create and format your site content. If you're familiar with most word processing programs, you're already familiar with how the "B" button makes text bold and how to make text bigger or smaller. The editor included with the basic installation of Joomla is **TinyMCE**. It's a lightweight and powerful WYSIWYG editor that not only allows you to write and format your text, but supports image management, Flash/media embedding, and tables.

You can change the editor in the Global Configuration to either set your choice of editor on a site-wide basis or in a user's profile to set on an individual basis. To change the WYSIWYG editor for all users, visit Global Configuration and select the Site tab in the secondary toolbar (if it isn't already selected). Under Site Settings, you should see a drop-down menu to select an editor to use globally. Select No Editor if you want to turn the editor off completely.

There is a new editor in Joomla 2.5 and 3.x called **CodeMirror**. This gives coders an easy way to enter their HTML and have it color-coded to assist in finding errors.



You can install other third-party WYSIWYG editor extensions and they will appear in this same drop-down menu. You'll find a few editor options in **Appendix C**.

We will be installing a third-party editor called the **Joomla Content Editor (JCE)**. It is the simplest editor for beginners to use, and its noncommercial (free) edition has a ton of functionality. JCE has additional plugins with more features, which can be purchased via a subscription.

Installing JCE

In much the same way that we installed Akeeba Backup (“Mastering Backups” on page 56), we will install JCE. Back up your site before performing the installation.

1. Click on Extensions and then on Extension Manager.
2. Click the Install from Web tab.
3. JCE will be on the list (Figure 5-9). Click on it.
4. Click Install. See Figure 5-10.
5. Click Install again to confirm the installation.

Now we will assign JCE as the global editor.

1. Click on System and then on Global Configuration.
2. On the Site tab, select Editor - JCE from the drop-down (Figure 5-11).
3. Click Save & Close.

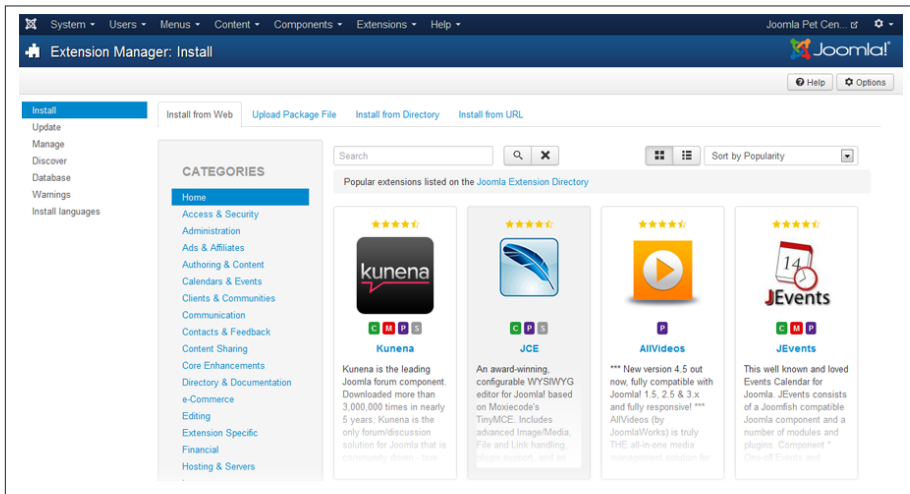


Figure 5-9. Install JCE from the backend of Joomla

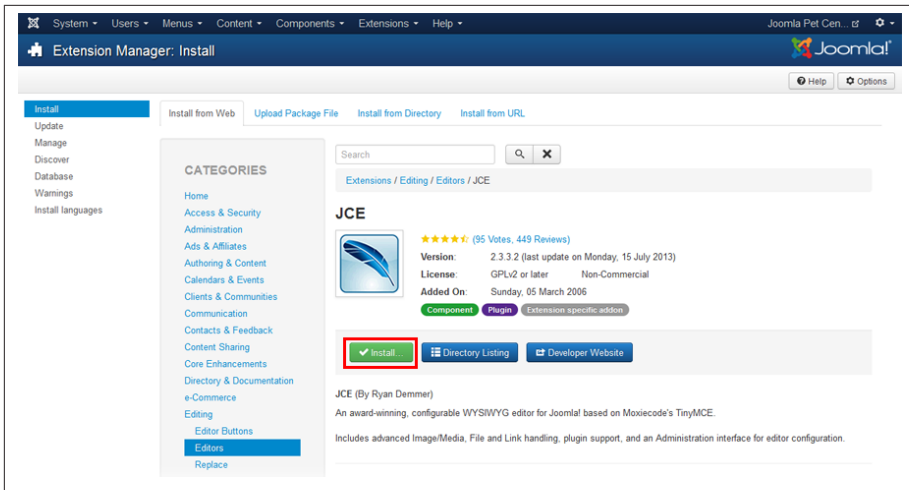


Figure 5-10. Step 1 of installing JCE.

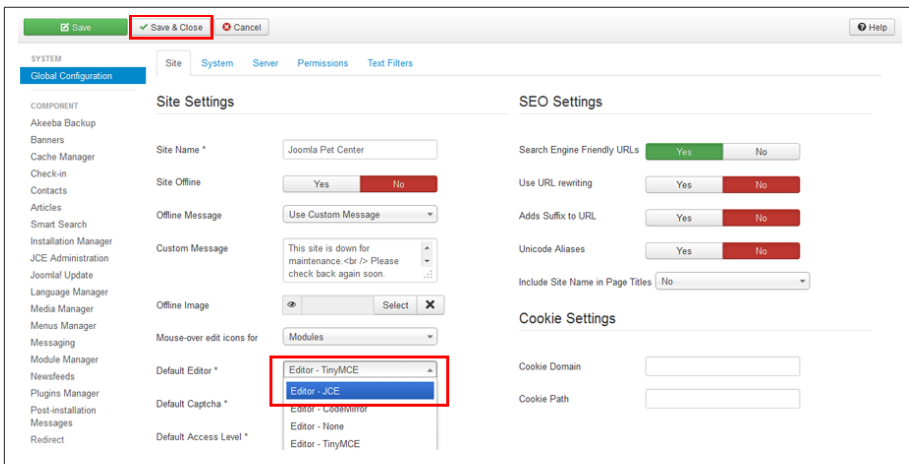


Figure 5-11. Site Settings in Global Configuration showing WYSIWYG editor options selecting JCE

When you click on the Extensions menu, you will see that JCE Editor appears in the drop-down. JCE is extraordinarily flexible. We are going to leave all the default settings as they are at this time.



JCE allows you to create various profiles for different users or user groups that determine which buttons appear in the editor for them. This is a powerful feature if you want some users to not have certain abilities and others to have them.

JCE allows you to add styles and classes to the editor, which adds incredible functionality.

Our editor in articles now looks like [Figure 5-12](#). You will see that there is more functionality there than you will likely use.

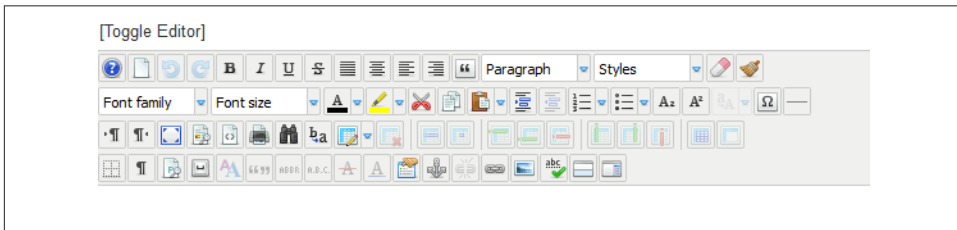


Figure 5-12. The JCE editor toolbar

Ron prefers TinyMCE to JCE. Joomla can handle this beautifully by assigning a different WYSIWYG editor for just one user.

1. Click on Users and then on User Manager. See [“Hands-On Exercise: Creating Users” on page 242](#) for directions on creating users.
2. Find a user that is at least Author-level or higher (the minimum required to author content) and click their username to edit their user profile. In our case, we will click on Ron’s user account.
3. In the Basic Settings tab, change the setting for Editor from Use Default to Editor - TinyMCE. See [Figure 5-13](#).
4. Click Save & Close when you’re done.

Now Ron can use TinyMCE and the rest of the users can use JCE.

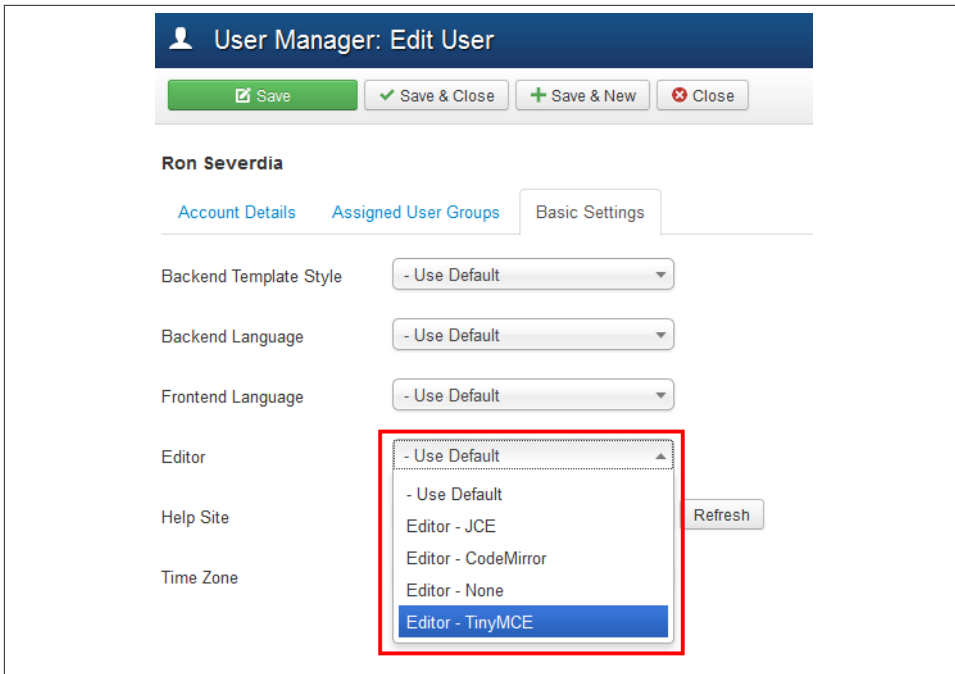


Figure 5-13. Editing a user to assign a WYSIWYG editor

Customizing Articles: Recommended Guidelines

The best way to enter your text into an article is to type it directly into the Content tab. Allow your sentences to wrap naturally and press Enter for a new paragraph.

Out of the box, the text you type into the Content tab will not look exactly as it will on the frontend of your website. “What You See” is not always “What You Get,” despite the Content tab being called a WYSIWYG editor. It’s close, though. The template CSS dictates the color and size of your text on the frontend as well as some additional styling, which will differ from template to template. You can use documentation from JCE to make the CSS of your template available through the editor by utilizing *an editor.css file* so that “What You See” more closely matches the final result for the currently active template. Here are some suggestions:

- Type text first with no formatting
- Format text
- Add hyperlinks
- Add images

Copying and Pasting

Many people like to work on their website content in a word processing program and then paste it into an article. This creates inconsistencies in the site, because when you copy and paste from another application like a word processing program, it will bring in the formatting from that program and try to render it with HTML (and usually add a lot of “junk” code behind the scenes, which makes things difficult to fix without coding knowledge). What then happens on the frontend of your website is that you will have a page that looks one way, another page that looks different, and perhaps some pages with multiple font types, font sizes, and font colors—resulting in an inconsistent design or layout. If you paste from a word processing program and then try to add content to your article, you may end up with spacing issues and wonder why that has happened—and how on earth do you fix it?

Here is how to avoid some of these problems if you want to work on your content in a word processing program and then paste it into your website articles.

First off, do not format your writing in your offline program. Just type the text. Do the formatting part in the article with the editor. You will save yourself frustration. Promise! You will find it helpful to know some keyboard shortcuts working with editors. Here are the most commonly used keyboard shortcuts:

- Copy = Ctrl+C on a PC or Cmd+C on a Macintosh
- Cut = Ctrl+X on a PC or Cmd+X on a Macintosh
- Paste = Ctrl+V on a PC or Cmd+V on a Macintosh
- Undo = Ctrl+Z on a PC or Cmd+Z on a Macintosh

We have copied a small amount of text from a Word document by pressing Ctrl+C on a PC or Cmd+C on a Macintosh. This is not a complex article, and it will go on the home page of Joomla Pet Center. We will go step-by-step to show you how to properly paste this into our article:

1. Copy desired text.
2. Open desired article in Joomla.
3. Click the “Paste as plain text” icon in the editor (see [Figure 5-14](#)).



Figure 5-14. Paste as plain text selection in the JCE editor

4. In the new window that has opened, use the “Paste” keyboard shortcut and paste your content into the window. See [Figure 5-15](#).



You can work with your text from inside this window. If you indented in your word processing document, you can remove those in this window. We don't indent paragraphs on the Web. If you have breaks instead of paragraph tags, they can be fixed in this window.

5. Click Insert.

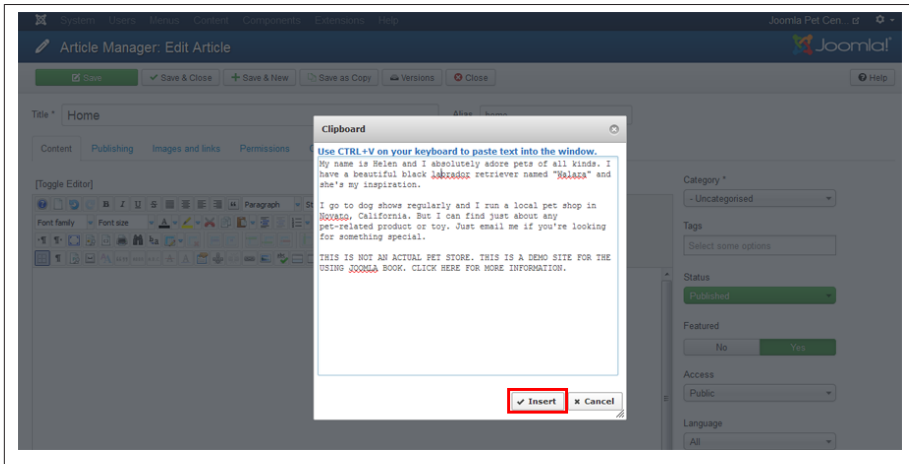


Figure 5-15. Paste as plain text into the window and insert

Your text will now appear in the main content area as seen in [Figure 5-16](#).

Save what you have, and the rest of the chapter will help you make your content take shape and look more attractive.



You can make the content area of the editor larger by dragging the lower righthand corner down and to the right.

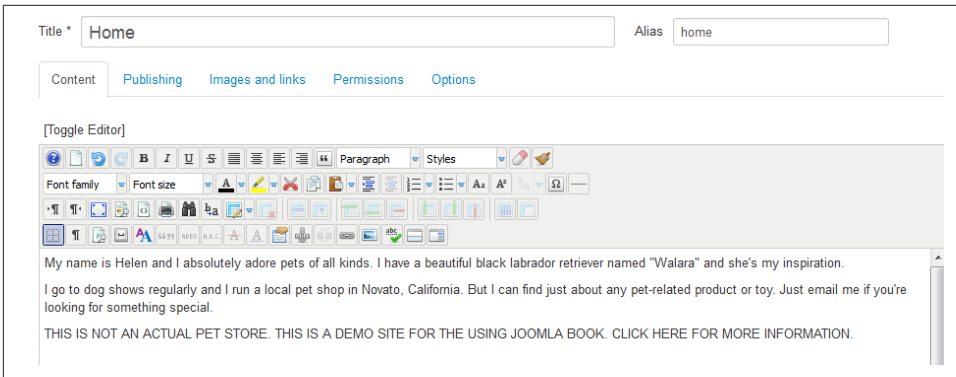


Figure 5-16. Text after pasting as plain text

Pasting Lists

The most common types of lists are an unordered list (bullets) and ordered lists (numbers). You can create lists using the JCE Editor with ease by using the icons showing an unordered list or an ordered list.

We are specifically bringing them up because when you paste from a word processing program and you have lists formatted, they may appear fine. Yet, if you try to add a line or remove a line it can get messy quickly.

Here's how to best handle it:

1. Don't format your list in a word processing program in the first place.
2. Leave each line of your list as a plain old line of text.
3. After you paste as plain text into the article, highlight the lines you desire to be in a list and click the appropriate list icon in the editor.

Here's how a list can look before you format it (Figure 5-17):

This will give you nice clean code (even though you can't see it) that will allow you to change your list items with greater ease.

If things are so screwed up that it is frustrating you massively, then highlight all of the text and click the Remove Formatting button, then retry the Unordered List button. If that still doesn't work, then retype those items one at a time pressing Enter between each one. Then follow the three steps listed previously. If the formatting persists at being a pain, you are going to need a clean line of code, because every time you press Enter, it is taking code with it to the next line and that is messing up your list.

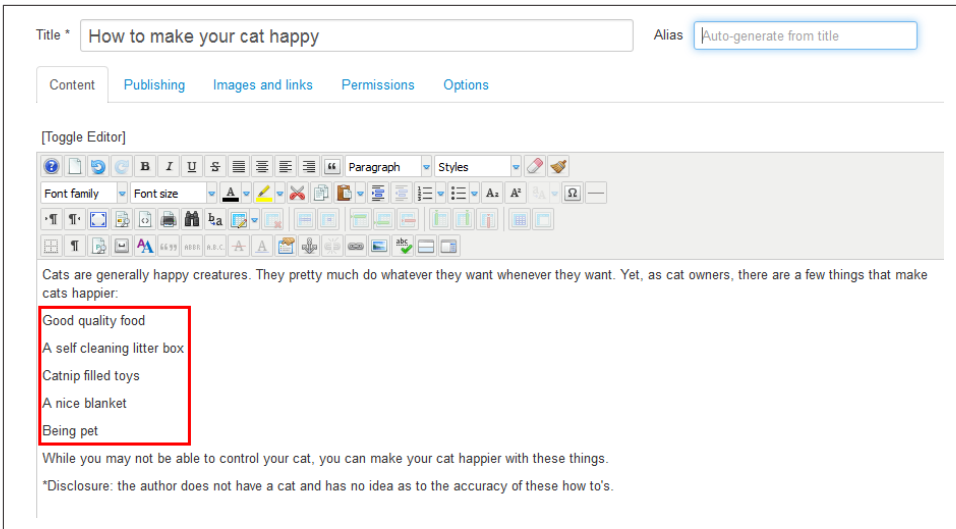


Figure 5-17. List items before formatting into an ordered or unordered list

To do this, click Toggle Editor at the top left of the editor icons. This shows you the HTML for your article. Scroll down until you get to the part of the content that is giving you trouble. When you get there, put your cursor at the beginning of the line and press Enter. Arrow up to your clean row and type `<p></p>`. See Figure 5-18 for how this looks. Click Toggle Editor again and scroll down to where you just put your clean line. Put your cursor there and type it again as instructed previously.

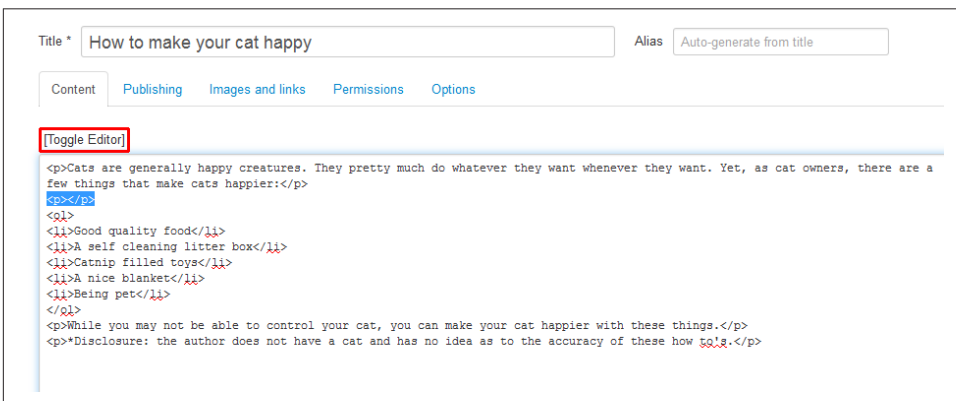


Figure 5-18. How to add a clean line to your content

Learning some basic HTML code will help you in the long run. Visit [w3schools](http://w3schools.com) for free learning resources.

Heading Tags

Using headings (also called heading tags or h tags) is a great way to make specific bits of content stand out and have a consistent look and feel site-wide. Typically, headings are used when there is a fair amount of content in an article and headings divide it up and make the text easier to scan and read.

Another benefit to using headings is that search engines do look at them when they scan the site.

Do not use Heading 1 in your content, as it is dedicated for your titles. Do use Heading 2 through Heading 6 liberally. You may use the same heading consistently throughout the article or graduate down in size (Heading 1 is the largest heading and Heading 6 the smallest) as you move through depth levels in your content.

In our next example, we take one of our “How to” articles and change the title from How to 3 to How to walk your dog. We cleared the alias field so that it would autogenerate using our new title.

See [Figure 5-19](#) for the text for this article.

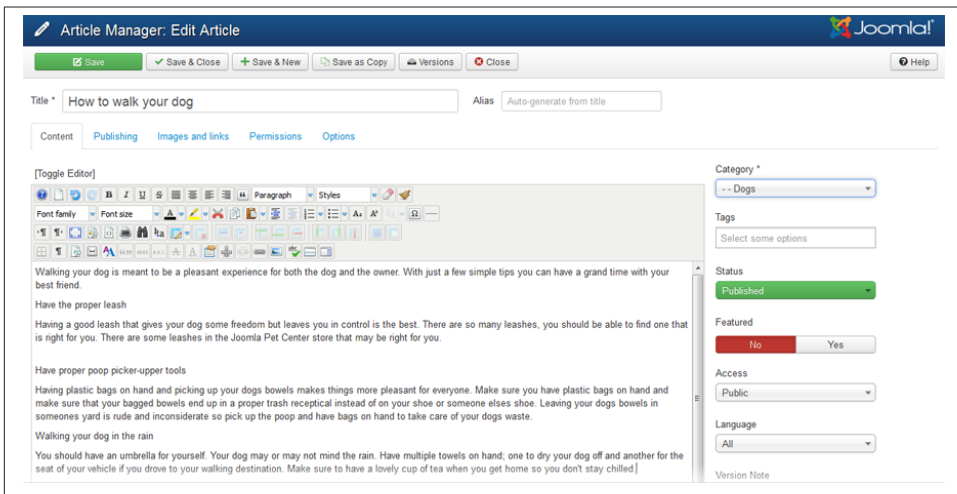


Figure 5-19. “How to walk your dog” text

Likely you can see by looking at the text that we have three phrases that would benefit the reader/visitor by having a larger size and weight of font. A heading tag does exactly this. We will change the three phrases “Have the proper leash,” “Have the proper poop picker-upper tools,” and “Walking your dog in the rain” to Heading 2, Heading 3, and Heading 4 so that we can see how each one looks and choose one for our article.

How to add a heading tag:

1. Highlight the text you want to be a heading.
2. Click the Paragraph drop-down in the top row of the editor.
3. Scroll down and select Heading 2 (see [Figure 5-20](#)).

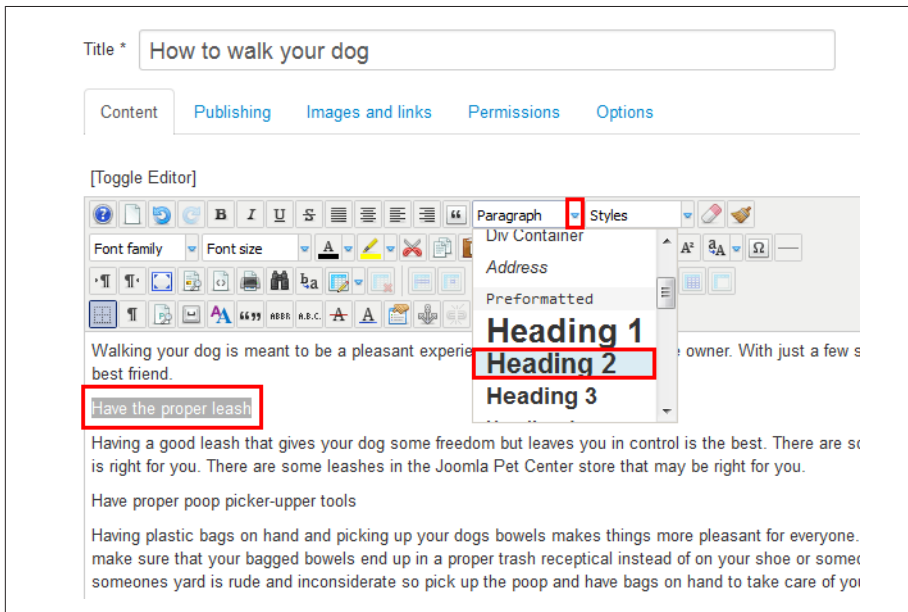


Figure 5-20. Creating text with a heading tag

4. Repeat and substitute Heading 3 and Heading 4 for the other two phrases.
5. Save the article.
6. Go to the frontend of your website and navigate to the article being edited.
7. Check out how the article looks (see [Figure 5-21](#)).

In the Afterburner2 template, the heading tags look like [Figure 5-21](#). Heading 2 has that nice line underneath it. Heading 3 has a larger font than Heading 2 and doesn't have a nice line. Heading 4 is a slightly smaller font than Heading 3 and does not have the nice line either.

Based on how these styles look, we are going to stick with Heading 4 for this article and most of our articles in the site. You will have to decide for yourself what Headings you use and for what purposes. We will use the other Heading tags, just less often and with specific purpose.

How to walk your dog

© Published: Wednesday, 16 October 2013 23:34 Print Email
 ✍ Written by Jennifer Gress

Walking your dog is meant to be a pleasant experience for both the dog and the owner. With just a few simple tips you can have a grand time with your best friend.

Have the proper leash

Having a good leash that gives your dog some freedom but leaves you in control is the best. There are so many leashes, you should be able to find one that is right for you. There are some leashes in the Joomla Pet Center store that may be right for you.

Have proper poop picker-upper tools

Having plastic bags on hand and picking up your dogs bowels makes things more pleasant for everyone. Make sure you have plastic bags on hand and make sure that your bagged bowels end up in a proper trash receptical instead of on your shoe or someone elses shoe. Leaving your dogs bowels in someones yard is rude and inconsiderate so pick up the poop and have bags on hand to take care of your dogs waste.

Walking your dog in the rain

You should have an umbrella for yourself. Your dog may or may not mind the rain. Have multiple towels on hand; one to dry your dog off and another for the seat of your vehicle if you drove to your walking destination. Make sure to have a lovely cup of tea when you get home so you don't stay chilled.

Figure 5-21. Different looks of headings 2 through 4

We will highlight the text we formatted as Heading 2 and Heading 3 and change them to Heading 4, and Save & Close our article.



If you would like to change how your Heading tags look, you may. It will require a modification of your template and knowledge of Cascading Style Sheets (CSS).

Text Color and Underline

While the editor has the ability to create text of any color, it is not recommended that you use this function. If you do use it, use it minimally and with very specific purpose.

Your template has specific CSS styles that dictate the font and hyperlink color for your website. When you manually change the color of text in your article, your website visitors assume it is a link. If the visitor has to wonder if something is a link or not, you risk them leaving your site. On a mobile device, they may think that the colored text is a link that is broken, making them think you don't care about your site and wonder why they should stay, browse, shop, or do whatever you want them to do.



Do not change the color of text just because you can! Let your template do its job and take care of the coloring of text for your site.

The same concept goes for using the underline function of the editor. When text is underlined, it will confuse a visitor as to whether the text is a link or a broken link, and this will just frustrate them.



If you would like your main body font to be a different color site-wide, you may. It will require a modification of your template and knowledge of CSS.

Tables

Tables do not work very well on mobile devices. One of two things will happen:

1. The visitor will have to scroll back and forth on their phone/tablet to see the data.
2. The table will not allow someone to scroll back and forth on their phone/tablet to see the data.

Different size tables without a set width might work well. Do not have a fixed-width table if you want to have any hope of it working on a mobile device. Try it with limited text and without spending much time, and test it from a mobile device to see if it works. If not, try something else, like:

- Create an image of the information
- Find a different way to display the information
- If you are very savvy with HTML and CSS, find articles online about making tables responsive

Hyperlinking

Hyperlinking in a website is as normal as breathing is for a human body. Having internal links from one page of your content to another guides your visitors to the information they want and to what you want them to see to accomplish your business and website goals. Having external links to other websites can navigate the visitor to even more resources than your website provides. Having email links can help visitors contact you

or other people with ease—and often if you can get visitors to contact you, it is a step in the right direction to meet your goals.

Internal Links to Content Items

Hyperlinking to other pages on a website like an article or menu item (e.g., contact page or store) is common practice with content. As an example, we will use an article for Helen in the About category.

Read through the text for the Helen article. We have made **bold** the words that are opportunities for hyperlinking to internal pages.

“Helen loves dogs—all dogs. Her love of dogs is what has spurred this website into existence, to bring other pet owners together and provide resources to others who share her passion. By partnering with **Diana** and **Mark**, the website also provides valuable information about **cats** and **reptiles**. Helen has been the proud recipient of the **Doggy Society’s Doggy Lover Award** every year since its inception in 1912. Helen’s joy is sharing. Helen is an active member of the Joomla Pet Center **forum** and **blog**. Feel free to send Helen a message via the **contact** page or by sending her an **email**.”

Hands-On Exercise: Hyperlinking to Internal Content

“Diana” is the text we will link first. “Diana” is a single article. Follow along as we link the word “Diana” to the article associated with her.

1. Type your text into the article if not typed already.
2. Highlight the text you want hyperlinked.



For better search engine indexing of your content, hyperlink the words that most exactly match the content item or article you are linking to. For example, if you are linking to the contact page which has the title “Contact,” your text in the article may say, “Contact us for more information.” Highlight only the word “Contact” and hyperlink only that one word.

3. Click the Insert/edit link button in the editor with the chain link icon (see [Figure 5-22](#)), which will open a pop-up window.
4. In the pop-up window, click the word Content in the Links section. You will see the different categories of your website. Clicking on a category will then open up the articles within that category.
5. Click the category that the article you want to link to is in. For example, we are linking to “Diana,” which is an article in the About category.

6. Click the Diana article from the list under the About category. You will see that the URL at the top of the window has filled in with the relative URL of the article. See [Figure 5-23](#).

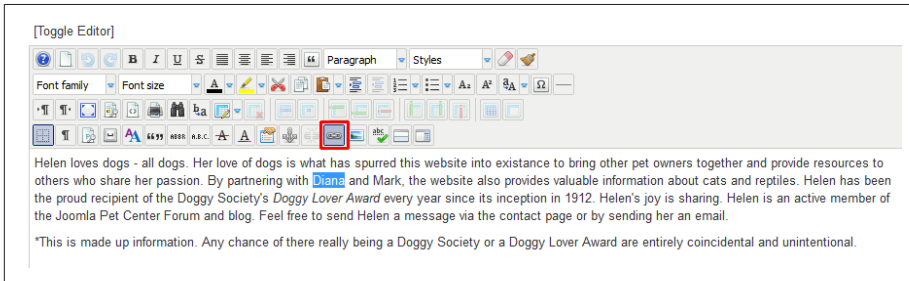


Figure 5-22. Highlighted text and the insert/edit link icon

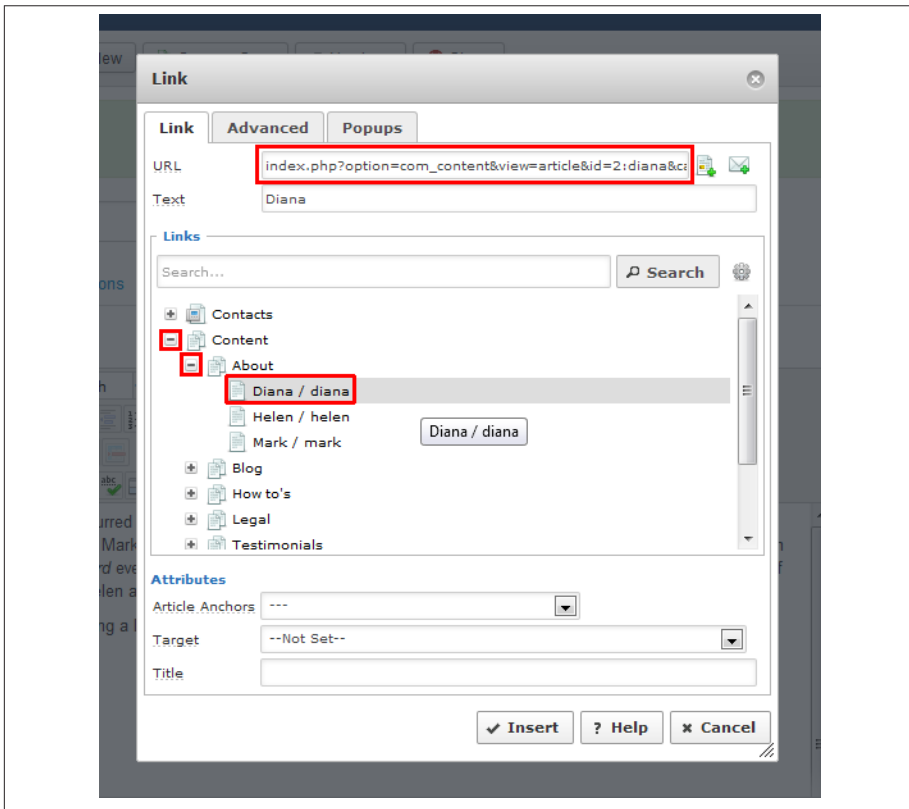


Figure 5-23. Linking to an article

7. Leave all other settings as they are.
8. Click Insert at the bottom of the window.
9. Click Save in the top toolbar.
10. Go to the frontend of the website and test the link. See [Figure 5-24](#) for our text and the word “Diana” linked to her article. The link indeed works, though there is no content present for Diana’s About page yet.

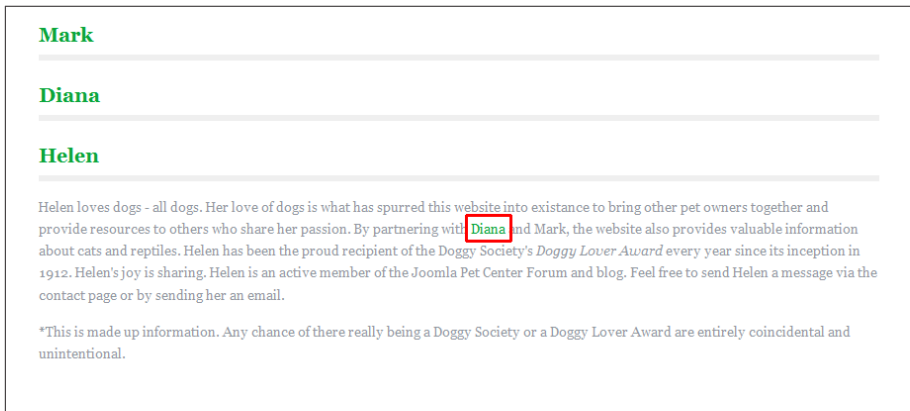


Figure 5-24. Article with hyperlink to another article within the site

11. Repeat with any other hyperlinks in the article, then click Save & Close.

Hyperlinking to the blog or an extension like the forum or the store have similar yet slightly different steps. Follow along while we link the word “blog” in Helen’s article to the blog. The same steps would apply to linking the forum, store, or other component.

Extensions and menu items for extensions need to be created before you can link to them. Because our store and forum extensions are not yet installed, we cannot link to them at this time. Once the extensions are installed and the proper menu item types are created, they can be linked by following these same steps.

1. Follow steps 1–3 in the preceding list.
2. Click on Menu in the Links section of the pop-up window. Each of the menus of your website will appear.
3. Click on Main Menu, which will then display a list of all your menu items.
4. Click on the Blog menu item, which will automatically fill in the relative URL in the URL field at the top of the pop-up window.
5. Leave all other fields as they are.
6. Click Insert at the bottom of the window.

7. Save the article and test your link from the frontend. See [Figure 5-25](#).



Figure 5-25. Hyperlink to a blog-style menu item within the site

8. Click Save & Close when complete.

Hands-On Exercises: External Hyperlinks

External links take visitors away from your website to a different website. The steps are very similar to linking to internal content with a few minor adjustments.

1. Follow items 1–3 on “[Hands-On Exercise: Hyperlinking to Internal Content](#)” on [page 106](#).
2. Copy the URL of the website page you desire to link to.
3. Paste the URL into the URL field of the link pop-up window. Make sure the URL is complete and begins with either `http://` or `https://` to signal that the link is a connection to an external website.
4. Set the Target to “Open in new window” from the drop-down. See [Figure 5-26](#).
5. Click Insert.
6. Click Save from the top toolbar.
7. Test your link from the frontend and verify it opens in a new tab or window (depending on browser configuration).

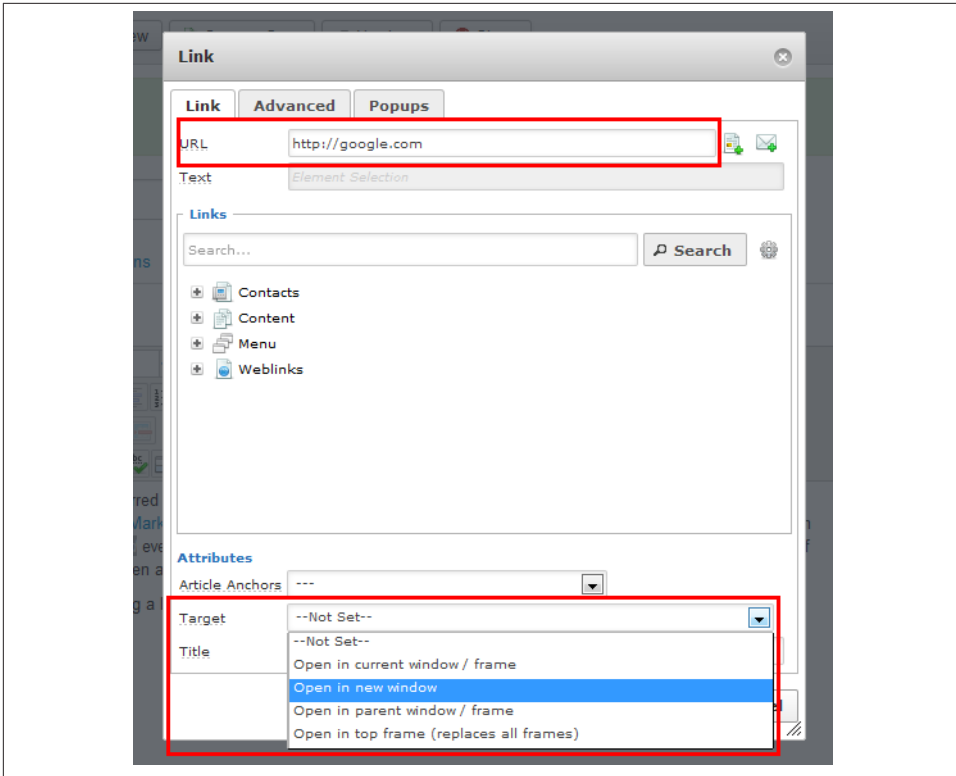


Figure 5-26. Hyperlinking to an external website address

The reason we set the target to open in a new window is the hope that by opening the external website in a different tab, the visitor may come back to our website and do what we want them to instead of leave forever and never come back. Distracted browsing and Internet addiction is very common.

Hands-On Exercise: Email Address Hyperlinks

If you would like to hyperlink the word “email” with an actual email address or *address@yoursite.com* to an email address, it is a simple process.

1. Again, follow steps 1–3 in “Hands-On Exercise: Hyperlinking to Internal Content” on page 106.
2. Click the envelope with the little green plus sign to the right of the URL field (Figure 5-27).

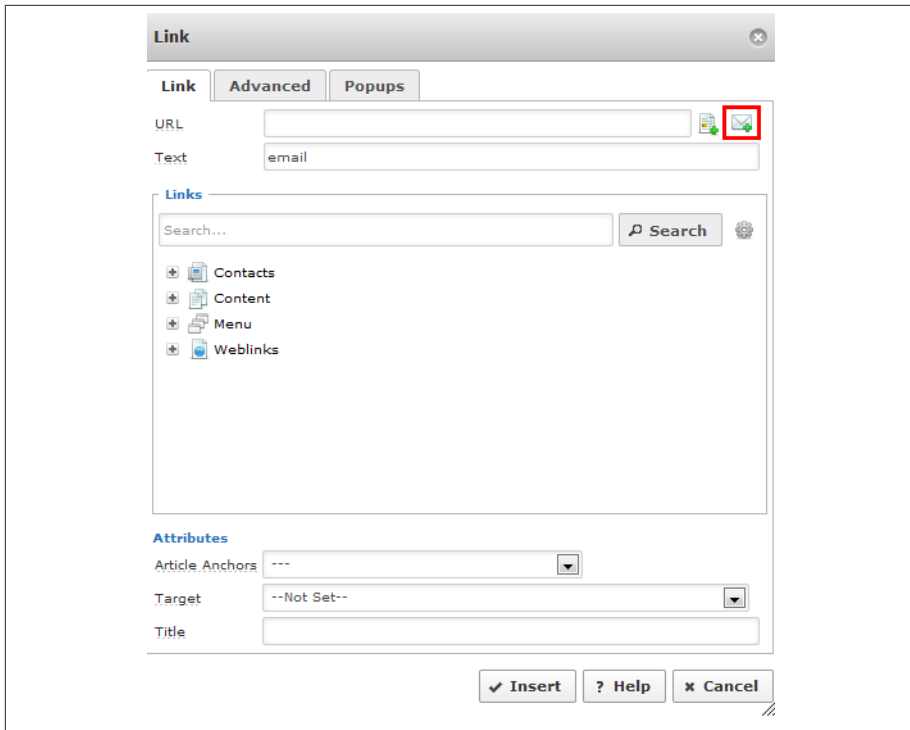


Figure 5-27. Hyperlink to an email address icon

3. In the pop-up box that appears, enter the email address (and any cc or bcc addresses) and the desired subject line (Figure 5-28).

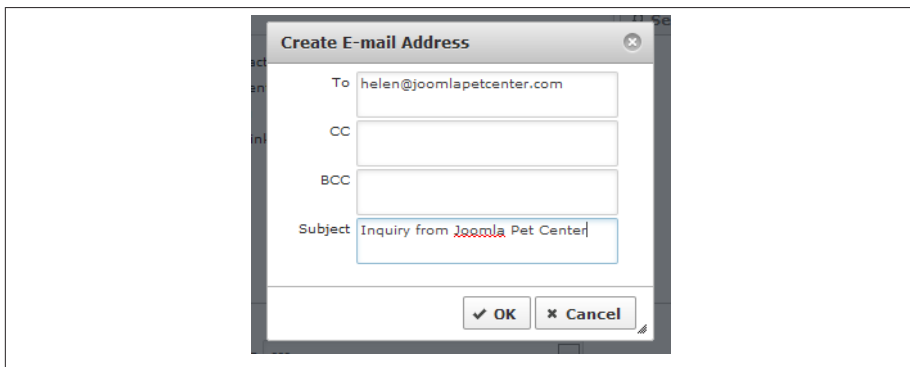


Figure 5-28. Entering email addresses and subject line for email hyperlink

4. Click OK.

5. Set the Target to “Open in new window.”
6. Click Insert at the bottom of the link pop-up window.
7. Click Save from the top toolbar.
8. Test from the frontend. See [Figure 5-29](#).

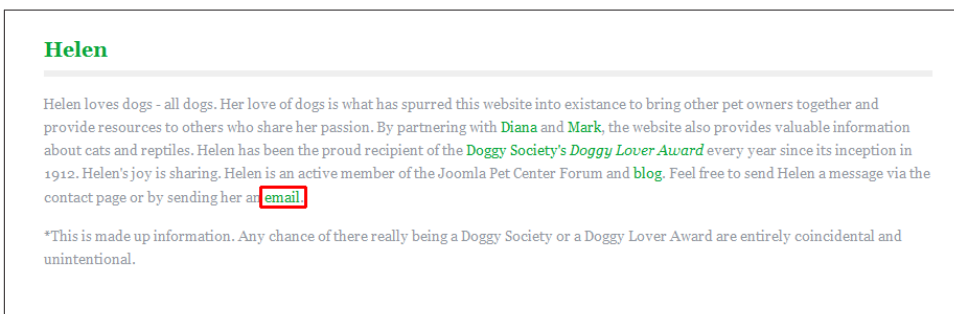


Figure 5-29. Email hyperlink in an article



If you do not have an email client configured to automatically open and compose an email, this link will not work for you. It will work for people who do. Those that don't use such email clients can simply copy the address into their browser-based email client.

Adding Embedded HTML Code and Text Filtering

There are times that you may want to embed HTML code into an article (or module). Common uses of adding HTML code to an article are to embed a YouTube video, a PayPal button, or an affiliate code onto your site.

Because code can sometimes include malicious additions that you do not want on your site (for example, an `<iframe>` can sometimes be used to attempt site hacking), Joomla applies specific text-filtering profiles based on the user group a user is in. This is to protect your site. Super Administrators and Administrators have no filtering and can safely embed code into articles without any code stripping. Other user groups may have filtering set differently. As a result, before you embed code in an article or instruct other users in user groups with lesser permissions to embed code in articles, you will want to make sure that they have the ability to add code without it being removed upon saving the article.



If a user without permissions to embed code into an article does indeed embed code, the code will be stripped out of the article upon saving.

If a user without proper filtering permissions accesses an article with embedded code already in place and makes an edit anywhere in the article, the code that was in place will be stripped out when they save.

Text-filtering settings are found in Global Configuration. Click on the Text Filters tab. Reading the description of what is in the default blacklist at the bottom of the page will help you to know what is allowed and disallowed for various user groups.

We want the Editor user group to be able to embed videos from YouTube. Embed code from YouTube is an `iframe`. Thus, we will change the editor user group filter type to White List and type `iframe` into the Filter Tags field. Then click Save & Close. See [Figure 5-30](#).

Filter Groups	Filter Type ¹	Filter Tags ²	Filter Attributes ³
Public	No HTML		
—Guest	Default Black List		
—Manager	Default Black List		
—Administrator	No Filtering		
—Registered	No HTML		
—Author	Default Black List		
—Editor	White List	iframe	
—Publisher	Default Black List		
—Super Users	No Filtering		

1. Black List allows all tags and attributes except for those in the black list.
-- Tags for the Default Black List include: 'applet', 'body', 'bgsound', 'base', 'basefont', 'embed', 'frame', 'frameset', 'head', 'html', 'id', 'iframe', 'layer', 'layer', 'link', 'meta', 'name', 'object', 'script', 'style', 'title', 'xml'
-- Attributes for the Default Black List include: 'action', 'background', 'codebase', 'dynsrc', 'lowsrc'
-- You can black list additional tags and attributes by adding to the Filter Tags and Filter Attributes fields, separating each tag or attribute name with a comma.
-- Custom Black List allows you to override the Default Black List. Add the tags and attributes to be black listed in the Filter Tags and Filter Attributes fields.

White List allows only the tags listed in the Filter Tags and Filter Attributes fields.

No HTML removes all HTML tags from the content when it is saved.

Please note that these settings work regardless of the editor that you are using.
Even if you are using a WYSIWYG editor, the filtering settings may strip additional tags and attributes prior to saving information in the database.

2. List additional tags, separating each tag name with a space or comma. For example: `p,div,span`

3. List additional attributes, separating each attribute name with a space or comma. For example: `class,title,id`

Figure 5-30. Customize how code is filtered by user group in Global Configuration

This ought to do it. Yet, there is still a chance that upon saving, the code could be stripped. If this occurs, there is a setting in the WYSIWYG editor for JCE that may need to be changed.

1. Click on Extensions and again on JCE Editor.
2. Click on Editor Profiles and then on the Default link to access the default profile.
3. Click on the Plugin Parameters tab.
4. Scroll down just a bit and click on the tab on the left that says Media Support.
5. The second item on the list says Allow IFrames and is by default set to No. Change this to Yes. See [Figure 5-31](#).

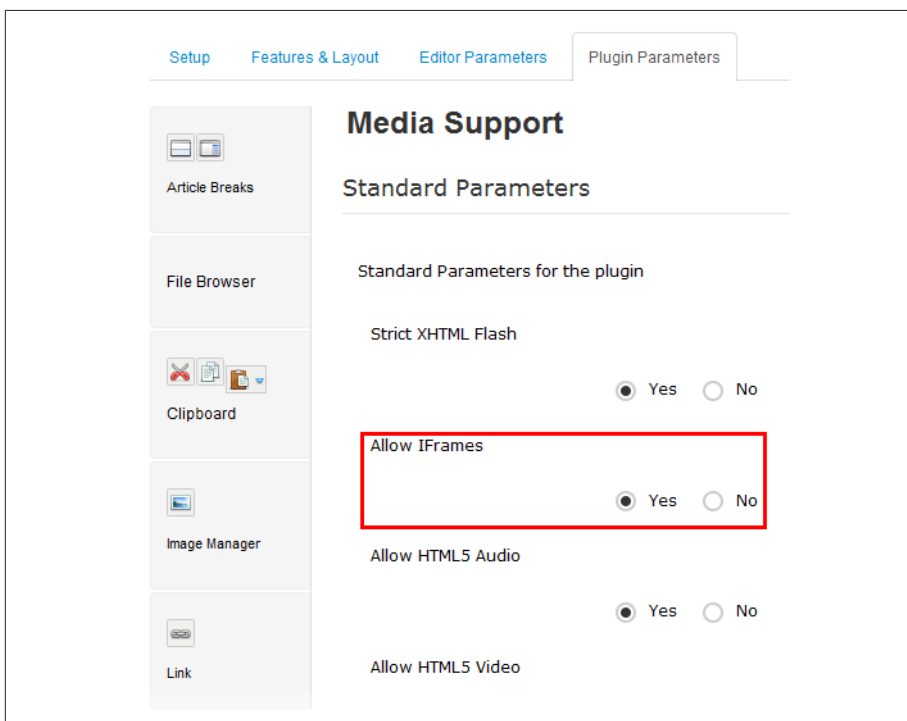


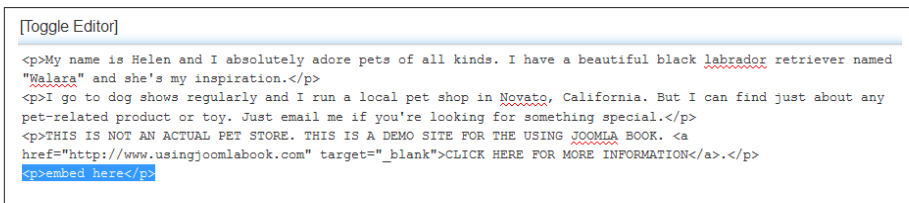
Figure 5-31. Setting JCE editor to allow iframes

6. Click Save & Close from the top toolbar.

Now that we don't run the risk of stripping out our YouTube code, we will add a video to the home page of Joomla Pet Center as an example.

Hands-On Exercise: Add a YouTube Video

1. Go to YouTube and navigate to the desired video.
2. Beneath the video will be a link that says Share and then another link that says Embed. Click the Embed tab.
3. Choose the size of the player you desire from the options listed, and then copy the embed code provided in the box.
4. In the backend of your website, click on Content and then on Article Manager.
5. Click on the article you desire to insert the video. In our case, the article is called Home.
6. In the main text area for the article, put your cursor where you want the video to be and type the words **embed here**—this makes it easier for the next step. If you want the video to be centered, then center that text with the editor.
7. Click the Toggle Editor text at the top left of the editor above the icons. You will now see all the HTML code from the page in the text area of the article including the text **embed here** that you just typed.
8. Highlight the line of code, `<p>embed here</p>`. See [Figure 5-32](#)



```
[Toggle Editor]
<p>My name is Helen and I absolutely adore pets of all kinds. I have a beautiful black labrador retriever named "Walara" and she's my inspiration.</p>
<p>I go to dog shows regularly and I run a local pet shop in Novato, California. But I can find just about any pet-related product or toy. Just email me if you're looking for something special.</p>
<p>THIS IS NOT AN ACTUAL PET STORE. THIS IS A DEMO SITE FOR THE USING JOOMLA BOOK. <a href="http://www.usingjoomlabook.com" target="_blank">CLICK HERE FOR MORE INFORMATION</a>.</p>
<p>embed here</p>
```

Figure 5-32. Use the Toggle Editor to see where you will paste the embed code

9. Paste your embed code from YouTube over the line you highlighted in the previous step.
10. Click Toggle Editor again and you should see a beige box, which is your video as seen in [Figure 5-33](#).
11. Click Save in the top toolbar.
12. Go to the frontend and refresh, or navigate to the page you just embedded the video and test it.
13. As long the video works as expected, go to the backend and click Save & Close.

Our video on the frontend looks like what is seen in [Figure 5-34](#).

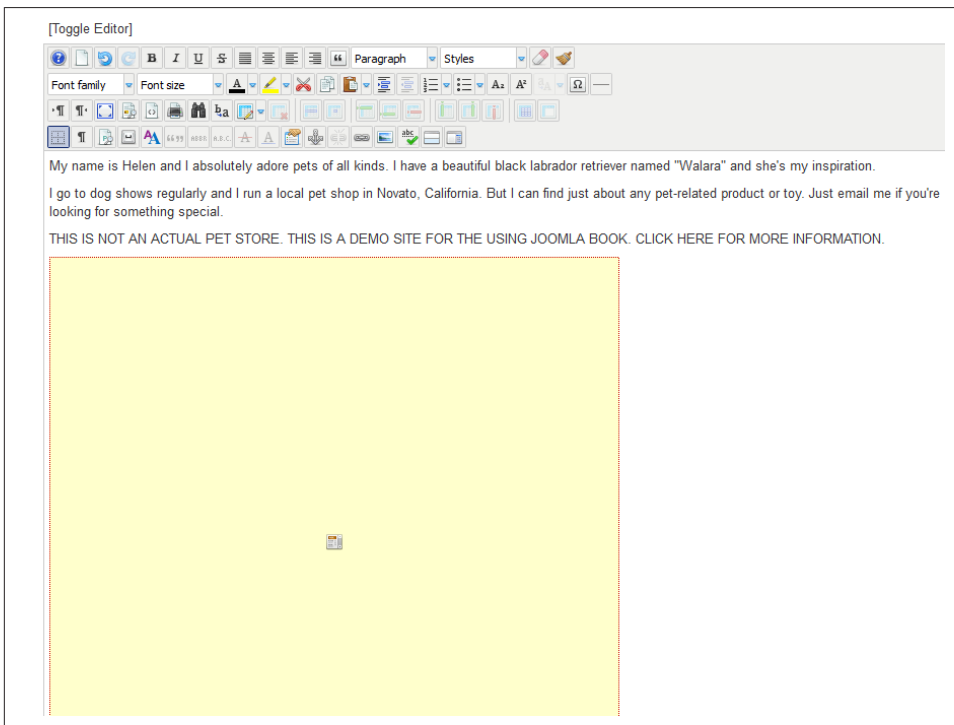


Figure 5-33. How videos look in the Edit Article screen after inserting an embed code

We embedded a playlist. Within YouTube, you can specify whether to embed an entire playlist or an individual video. You may want to create your own playlist to embed, so that you have more control of what is displayed when the video ends.

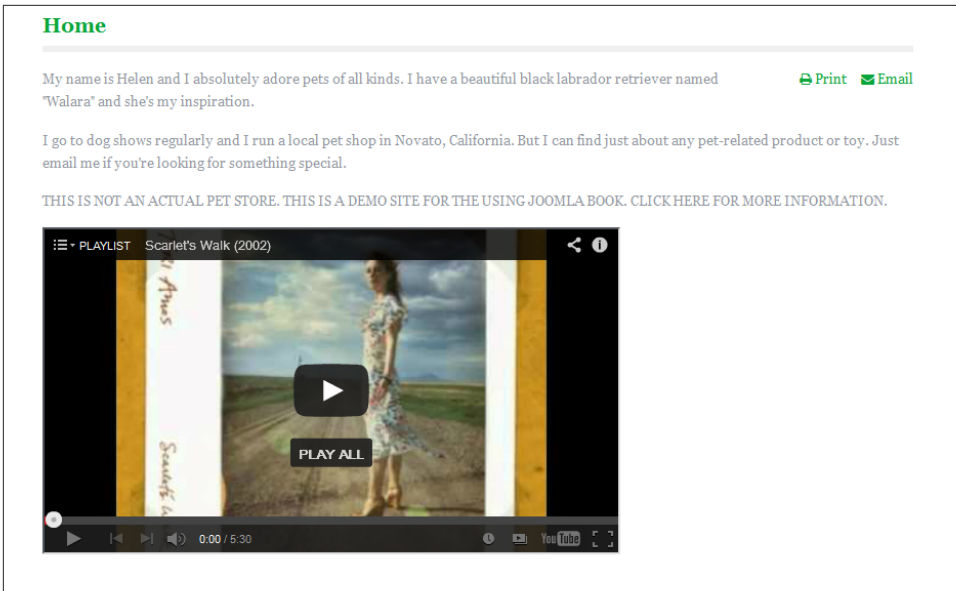


Figure 5-34. Video displayed on the home page

Read More and Pagebreak

Under the text editor area in the Article Editor, you've probably already noticed four article-related buttons (Figure 5-35). These buttons are inserted by Joomla and appear regardless of which editor you have selected, so they may be redundant. If your selected editor provides a more feature-rich version of a button at the top of the editing window, that's the one to use. Because JCE Editor increases functionality beyond that of these buttons, we will only be looking at Read More and Page Break. Let's take a closer look at both:

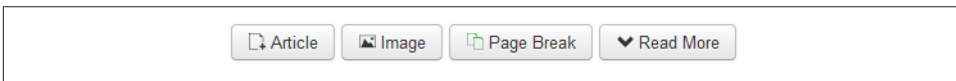


Figure 5-35. The default editor extended toolbar

Read More

When you have a few articles displayed on a single page, a common practice is to display just a teaser of each article. When a user finds an article of interest, they can click a Read More link to see the full article.

To add a "Read more" link to the article, place your cursor where you want to "break" your article (usually after the first sentence or paragraph) and click the Read More button. The following HTML will be automatically inserted into your article.

```
<hr id="system-readmore" />
```

There will now be a horizontal rule with a break, as shown in **Figure 5-36**. When this article is loaded on the frontend of your site, Joomla will add a “Read more” link at that point.

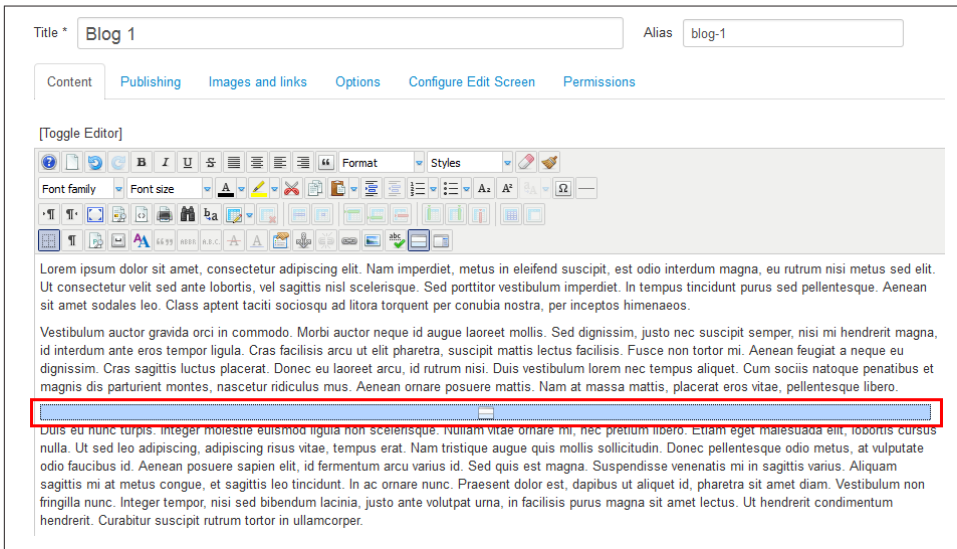


Figure 5-36. “Read more” line in an article

Page Break

Page breaks are often added to reduce scrolling when reading long articles. You can add a page break to your articles where your cursor is placed. Clicking the Page Break button gives you the option to add a Page Title and Table of Contents Alias.

The following HTML code will be automatically inserted into your article: `<hr title="My Page Title" alt="MY TOC Alias" class="system-pagebreak" />`

When this article is loaded on the frontend of your website, Joomla will automatically generate a table of contents in your article with links to any other page breaks you’ve added. By accessing the Content - Pagebreak plugin via the Plugin Manager, you can select page breaks to display either plain, or as tabs or sliders with the Presentation Style setting.

Meta Description and Keywords

Each article, category, and menu item have fields for entering a Meta Description and Meta Keywords. Meta Description is a summary sentence that outputs in the HTML

and is sometimes rendered in search engine results. Meta Keywords output in the HTML of each article.

The Meta Description is more important than the keywords because of how search engines scan the text in the article these days.

You will want to enter a Meta Description for each of your articles.

1. In the desired article, click on the Publishing tab.
2. Enter a value for the Meta Description in the field.
3. Click Save & Close.

When adding meta keywords to your site, they can be all lower-case and separated by commas. Keywords need to be directly related to the content of the article.

Article Management

The following pointers will help you manage articles on an ongoing basis.

Versioning/Revisions and Editing Articles

Joomla 3.x has the ability to save revisions of your articles when you edit them. To use this functionality, you must first enable it in the Global Article Options ([Figure 5-37](#)).

1. Click on Content and then on Article Manager.
2. Click on the Options button on the top toolbar.
3. Click on the Editing Layout tab.
4. Change the Save History button to Yes.
5. Change the Maximum Versions number to the number of versions you would like to keep. The default is 10.
6. Click Save & Close.

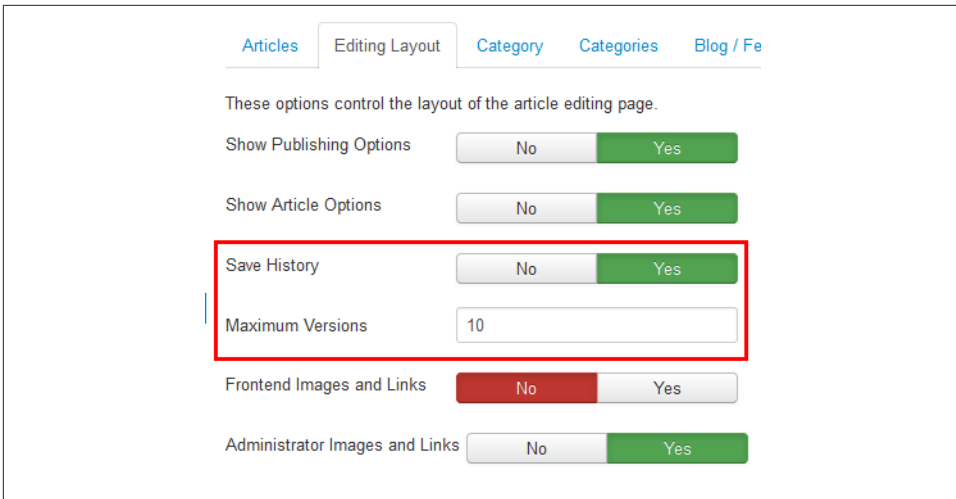


Figure 5-37. Enable versioning in Global Article Options

When you edit an article, you will see that there is a new field on the right sidebar under the Language drop-down called Version Note, as seen in Figure 5-38.

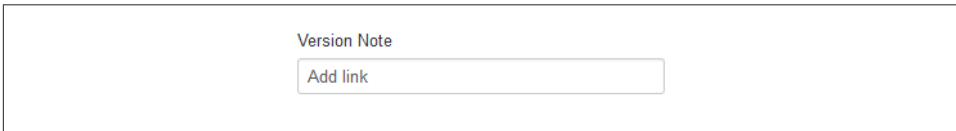


Figure 5-38. Add a version note to save a revision of your article

We added a link to the article and added “Add link” as the version note. After saving the article, when we click on the Version button in the top toolbar, we can see our new version saved, as in Figure 5-39.

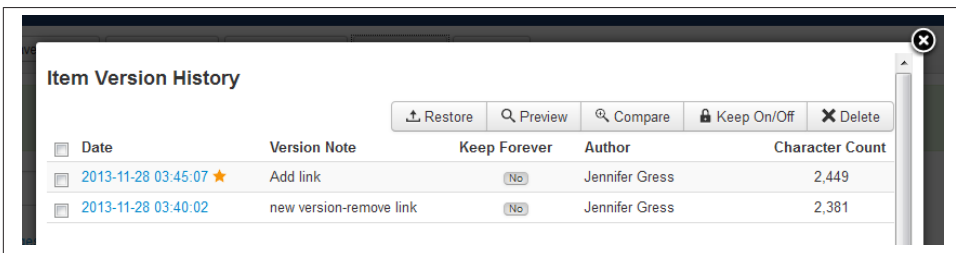


Figure 5-39. Item version history of article

From here, we can mark a revision to keep forever, restore a revision, delete revisions, and compare revisions. If you do not enter a version note, the system will still keep a revision for you. It won't have a note, however. The star shows which version of the article is live.

This is a handy feature that will enable you to revert to an earlier version (for example, if you mess up—and we've all messed up—or if the code gets stripped out). We set our maximum number of versions to keep at 10, but you will have to decide what works for your site. It is possible that keeping a large number of revisions could perhaps get a little out of hand.

Check In

When you edit an article, Joomla “checks out” the article from the database so multiple users don't try to edit the same article at the same time. When you're done editing an article, it must be “checked in.” If this doesn't happen for some reason (for example, closing your browser window without saving your work, trying to save changes after your login session has expired, or using your browser Back button), Joomla will assume that the article is still checked out and will prevent anyone from editing it. If you discover that an article remains inappropriately checked out, you can check it back in by clicking on the checkbox to the left of the status column in the Article Manager and then clicking the Check In button in the toolbar.

If you find that multiple items are checked out, you can check in multiple articles at one time by clicking on System and again on Global Check-in. Using this tool will check in all of your articles and any other items that are checked out.



If you use this tool to check articles back in, make sure none of your users have open articles, or else their work will be lost.

For more detail on checking in items, see [“Global Check-in” on page 282](#).

Ordering Articles

You can display articles in the order in which they appear in the Article Manager. You only need to set your article order here if you're going to use this order to display your articles on your website. This is applicable for Category Blog, Category List, and Featured Menu Item types, which give you the option to “Use Article Manager Order.” You can also set the parameters to display your articles in a specific order (e.g., by date or title).

If you're not there already, click on Content and again on Article Manager to view your articles. Article ordering is handled on a category level, and you can see the article's position within that category by selecting the category from the category filter and looking at the Order column, which has two up/down arrows in the heading and three dots prior to the checkbox for each article title.

To make ordering easier to see, let's use the filters to view a specific category. Choose a category from the article filter drop-down menu. We will use the category Blog for our example. Once you've selected a category, you should see only the articles in that specific category—something like [Figure 5-40](#).

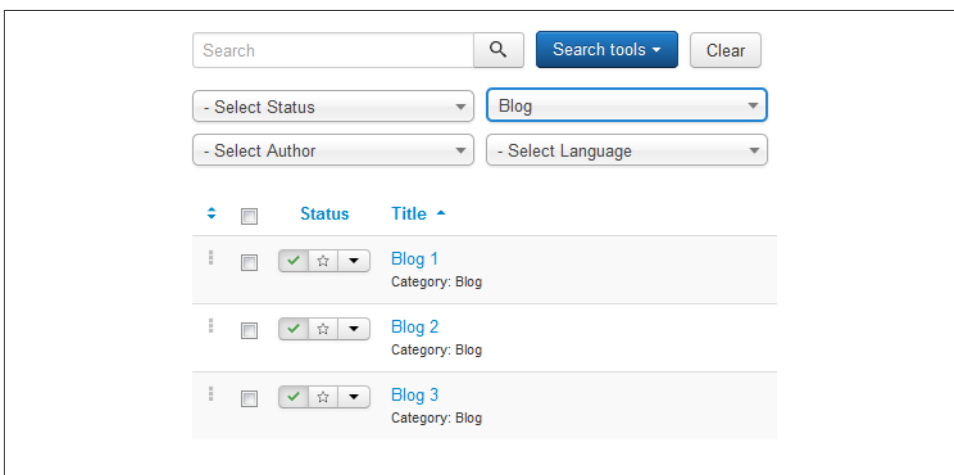


Figure 5-40. Ordering a category of articles in the Article Manager

You can reorder the articles by first clicking the up/down arrows at the top of the column and then simply clicking the three dots at the left of the checkbox and dragging the articles into the desired order. Ordering menu items, modules, and categories are done this same way site-wide.

Permissions

Permissions are determined by one of three default Access Levels: Public, Registered, and Special. You may have more custom Access Levels. We will be looking only at the three default Access Levels. The default Access Levels correspond to the following user groups and determine their access:

Public

This level applies to general users and site visitors who don't have an account. It could also be defined as guest users.

Registered

This level applies to all users that have logged in. These users are associated with user groups that are Registered or higher. This includes Authors, Editors, Publishers, Managers, Administrators, and Super Administrators.

Special

This level applies to users that are any level above Registered, including Authors, Managers, and higher.

Category Permissions

To set permissions for an entire category, go to the Category Manager and choose the category you want to edit. Choose an Access Level in the field on the right and click Save & Close.

Article Permissions

To set permissions for a single article, go to the Article Manager and choose the article you want to edit. Choose an Access Level from the drop-down menu in the righthand column under Details and click Save & Close.

For detailed information on permissions, Access Levels, and user groups, see [“Users, User Groups, Access Control Lists \(ACLs\), and Frontend Editing”](#) on page 242.

Archiving Articles

Archiving articles is the best way to remove your articles from view, but still keep them. *Archived* articles aren't deleted, but they aren't visible on the frontend unless you create direct links to them or create an Archived Article List menu item. Archived articles are not visible in the backend Article Manager unless you set the Status filter to specifically show Archived Articles.

Trashing Articles

When you no longer need an article, you can remove it from the Article Manager by moving it to the trash. The *Article Trash* behaves like the recycle bin or trash can on your desktop computer. Once you trash an article, you can still recover it until you empty the trash. Trashed articles are not visible in the backend Article Manager unless you set the Status filter to specifically show Trashed articles. From there, you can set an article's status back to Published or permanently remove trashed articles from your site.

To permanently delete articles, go to the Article Manager, filter the status by Trashed, click the checkboxes next to the articles you want to delete, and then click the Empty Trash button in the toolbar.



Joomla does not ask you to confirm emptying the trash a second time. Deleting articles from the Article Trash actually deletes the information from the database. As a result, if you accidentally delete an article from the Article Trash, it is gone forever.

Adding Content to Modules

Adding content to Custom HTML modules is exactly like adding content to articles or category descriptions. You can apply all the principles in this chapter and in “[Media Manager](#)” on [page 127](#) to make your Custom HTML modules look great.

Hands-On Exercise: Showing Modules Inside an Article

Modules are usually associated with menu items, but sometimes you’ll want to associate a module within a specific article. Modules are commonly assigned to module positions, and these positions appear on the web page as defined in your template. But sometimes it’s useful to have a module actually “embedded” in the article itself, which gives you a great deal of flexibility over where you display your modules. To do so, follow these steps:

1. Go to Extensions and then Module Manager, and create a new module or open an existing module.
2. Add the desired content.
3. Make sure the module is Published.
4. Instead of choosing a module position that is defined in your template, create a new one just for use inside an article. Let’s say `inarticle` is the name of the new module position we’ll use. It doesn’t exist yet so it will not be selectable in the drop-down, so just type in the new position name.
5. In the Menu Assignment tab, make sure the module is set to display on all pages.
6. Click Save & Close.
7. In the Article Manager, locate the article you want the module to appear in.
8. Click the article name to open it for editing. Find the place where you want the module to be.
9. Enter `{loadposition myposition}` where you’ll replace *myposition* with the name of the module position you used in step 4 ([Figure 5-41](#)). Using the name `inarticle`, the text you enter into the article would be `{loadposition inarticle}`.

Any module assigned to the `inarticle` position will now load in that article. Check your results by viewing the article on the frontend. Your module should now load di-

rectly into the body of the article. If it doesn't, check the settings of the module to verify that it is Published and that the Menu Assignment tab shows All pages.

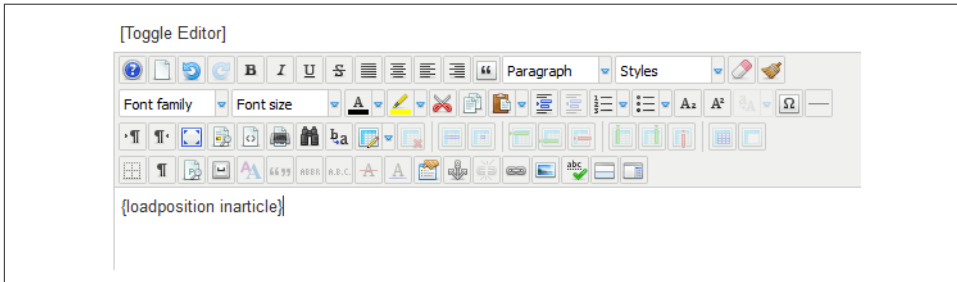


Figure 5-41. The loadposition module tag inserted into an article

Managing Media and Creating Galleries

Media Manager

Using media on your site makes it much more engaging than just plain text. With Joomla, you can add images, audio, video, or even Adobe Flash to your web pages with just a few clicks. In this section, we'll cover how to upload media, add it to your articles, and delete media.

The *Media Manager* (Figure 6-1) is a simple tool for not only managing your media files, but also incorporating them into the pages of your website. To open the Media Manager, click on Content and then on Media Manager to open up the default Thumbnail View.

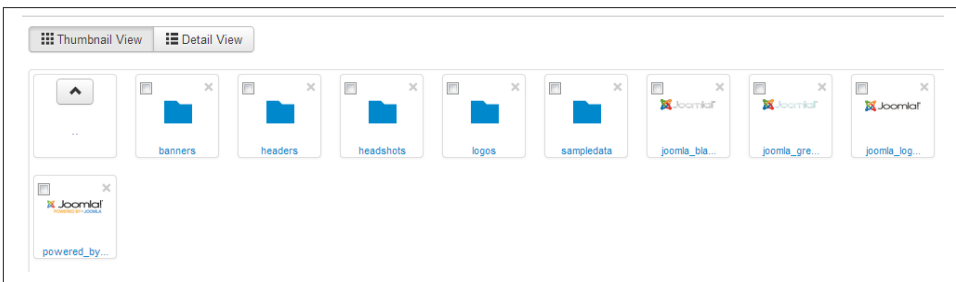


Figure 6-1. The Media Manager default Thumbnail View

The Media Manager displays images, folders, and other files inside the `/images` directory. The folders on the left sidebar are all subfolders within that directory. The little folder symbol next to each expands and collapses each folder of the tree. Clicking on each of these folders displays their contents.



The Media Manager doesn't manage images or other files that are used in your template. Those should be stored in the template folder.

Navigating Views and Managing Media

The Thumbnail View (Figure 6-1) might not show the information you want to know about each file. The Detail View (Figure 6-2) in the Media Manager shows a little more detail about each file, including the file size and pixel dimensions.

Preview	Image Name	Dimensions (px)	File size	Delete
▲	..			
▲	banners			✕ <input type="checkbox"/>
▲	headers			✕ <input type="checkbox"/>
▲	headshots			✕ <input type="checkbox"/>
▲	logos			✕ <input type="checkbox"/>
▲	sampledata			✕ <input type="checkbox"/>
▶	joomla_black.gif	225 x 50	3.66 kb	✕ <input type="checkbox"/>
▶	joomla_green.gif	225 x 50	3.07 kb	✕ <input type="checkbox"/>
▶	joomla_logo_black.jpg	350 x 71	8.3 kb	✕ <input type="checkbox"/>
▶	powered_by.png	150 x 35	2.25 kb	✕ <input type="checkbox"/>

Figure 6-2. The Media Manager Detail View

In both views, only a small thumbnail of each image is shown. If you want to see the full-size image, click the image thumbnail, the icon, or the filename to open the image in a larger view.

Uploading and Deleting Media

In this section, we will go over how to upload media and how to delete it. Storing unnecessary media files on your website takes extra storage and creates confusion, so we will cover the best ways to go about it.

Hands-On Exercise: Uploading Media

We're now going to walk through the basic steps of uploading an image. To upload an image using the default form uploader:

1. Click on Content and then on Media Manager.
2. Select the folder on the left where you want to upload the image. If you need to create a new folder, you can do so by using the Create Folder button in the top

toolbar. Then click that new folder and be sure you have it accessed before proceeding.

3. Click the Upload button in the top toolbar. This will create a field and buttons just above the thumbnails or details (depending on which view you are in).
4. Click the Browse button and select the file on your computer. You can select more than one image if they are in the same folder or section of your computer (Figure 6-3)
5. Click the Start Upload button.

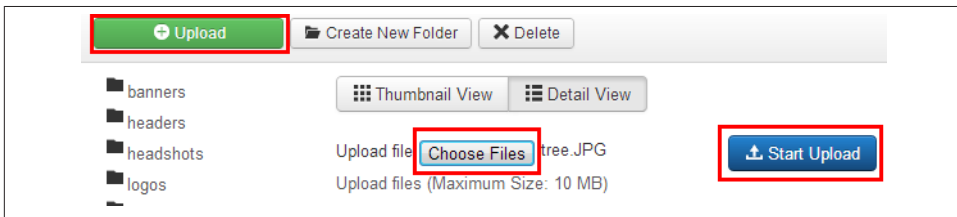


Figure 6-3. Uploading in the Media Manager

These same steps apply to uploading documents like PDFs or other file types to the Media Manager. You may need to use an FTP client to upload very large files to your image folder.



The upload functionality is limited by the POST limit set by your hosting provider. To check your limit, go to System→System Information→PHP Information and look for the `upload_max_filesize_` (individual files) and `post_max_size` variable (total files) to see the maximum upload size in megabytes.

The time it takes to upload a file will depend on the speed of your connection, the speed of your web server, and a number of other factors.

Hands-On Exercise: Deleting Media

To delete a single media item in the Media Manager:

1. Click on Content and then Media Manager.
2. Select the folder on the left to locate the item you want to delete.
3. Click the X icon next to that item (Figure 6-4).



Figure 6-4. Deleting a single item in the Media Manager

To delete multiple media items at once from a single folder:

1. Click on Content and then Media Manager.
2. Select the folder on the left to locate the items you want to delete.
3. Click the checkboxes next to each item (Figure 6-5).
4. Click Delete in the top toolbar.

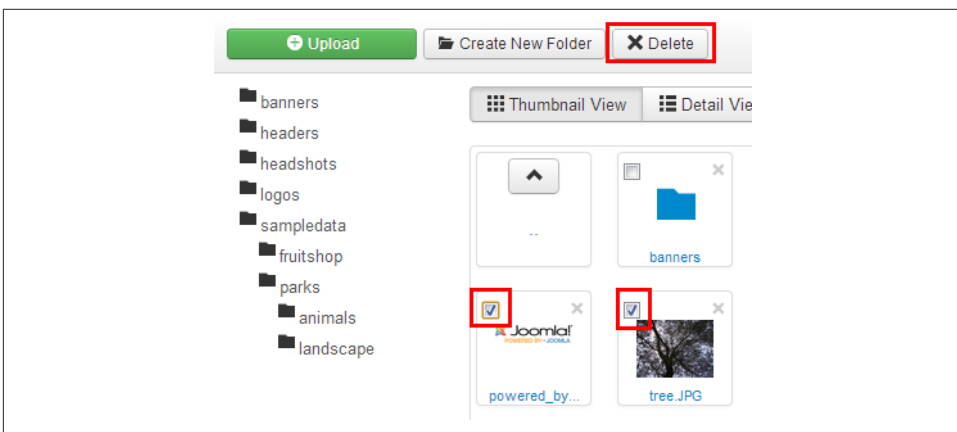


Figure 6-5. Deleting multiple items in the Media Manager



You cannot move media around in the Media Manager. If you need to move an item to another folder, you will need to delete that item and upload it to the proper folder using the previous steps. You might be able to move media from your hosting dashboard file manager. Just remember that when you move an image, any link to the image in your website will break until the URL is changed to reflect the new location.

Using Media in Your Articles

Adding media to your articles is a good way to spruce up the look of your website.

Hands-On Exercise: Adding an Image to an Article

We're now going to add an image to Helen's article. To insert previously uploaded images and other types of media to your articles:

1. Click on Content and then on Article Manager.
2. Click the name of the article to which you want to add an image.
3. Insert your cursor in the article body where you want the image to be placed.
4. Click the "Insert/Edit image" button in the JCE Editor's toolbar. It looks like a small photo of a tree. This will open the Image Manager in a pop-up window.
5. The bottom half of the image manager is called *File Browser*. This shows everything in your root image folder. Navigate to where you uploaded your image in the Media Manager on the left side of the window called *Folders*. When you select your image, the *Details* will appear on the right. This will fill in the *URL* in the top field of the Image Manager. See an example in [Figure 6-6](#). A preview of your image should appear at the top right of the window in the *Preview* area.
6. Replace the Alternate Text with something familiar for people to read. This assists those with disabilities viewing the site. It also improves search engine optimization (SEO).
7. Click Insert. (For more on aligning images or wrapping text, see steps 14 and 15 in "[Hands-On Exercise: Adding Folders and Uploading Images from the Editor](#)" on [page 132](#)).
8. Click the Save button to save the article or Save & Close to save the article and proceed to the Article Manager List.

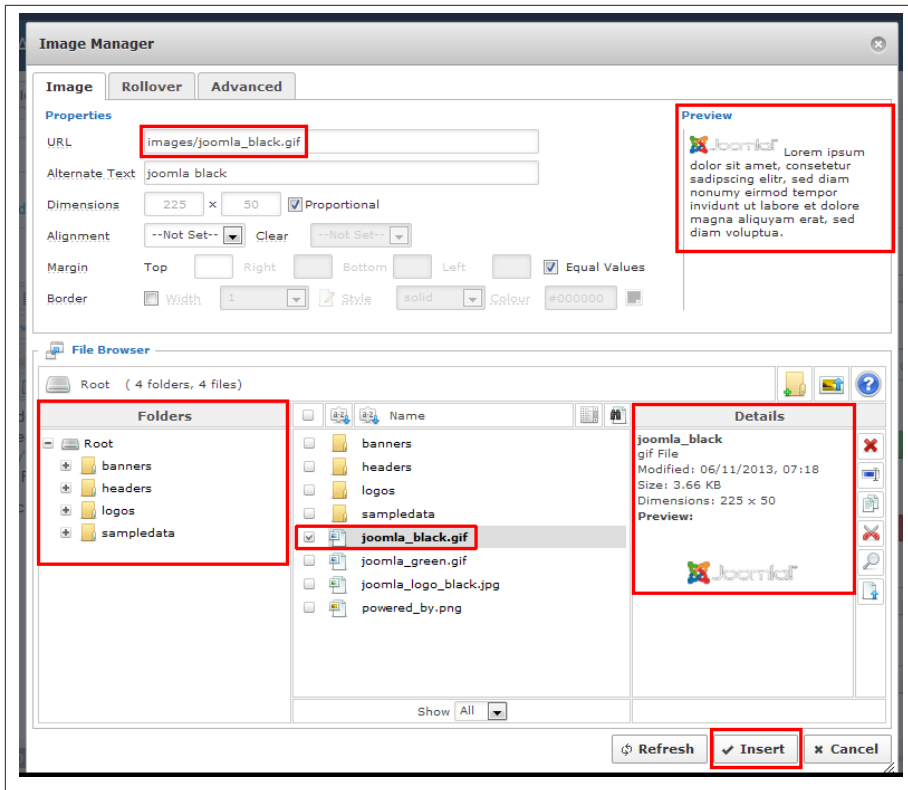


Figure 6-6. Insert an image with the JCE Image Manager

Hands-On Exercise: Adding Folders and Uploading Images from the Editor

You can add folders and multiple images at a time from the Image Manager with the JCE Editor. It is a similar process to working with the Media Manager and adding an image in the previous section.

1. Click on Content and then on Article Manager.
2. Click the name of the article where you want to add an image.
3. Insert your cursor in the article body where you want the image to be placed.
4. Click the Insert/Edit image button in the JCE Editor toolbar. It looks like a small photo of a tree. This will open the Image Manager in a pop-up window.
5. To add a folder, navigate to the folder that will contain the new folder and then click the button above the details with the folder icon and a green plus sign.

6. Type the name of the folder (all lowercase with no space). We will add a folder for headshots. See [Figure 6-7](#).

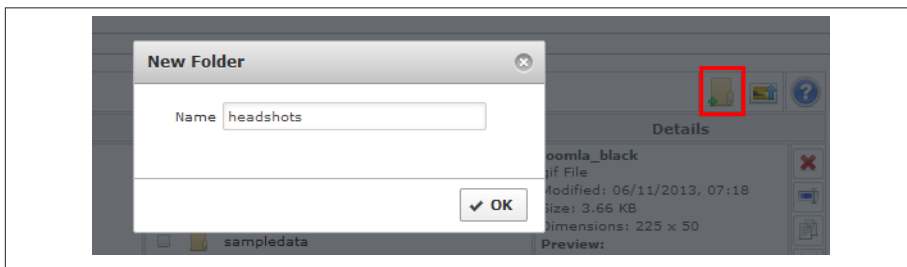


Figure 6-7. Adding a folder to the image directory using JCE from within an article

7. Click OK.
8. In the middle section, navigate to your new folder. Make sure you are in the correct folder before uploading your image(s).
9. Click the *Upload* icon above the Details panel. This will open a pop-up window for you to drag and drop image files or browse to select images. You can upload multiple images at a time as long as they don't hit the size limit. See [Figure 6-8](#).
10. Click Upload, and the X in the upload screen will turn to a checkmark as each file upload completes, and then the window will close.
11. Back at the Image Manager, select the file you just uploaded or one you wish to insert into the article. This will automatically fill in the URL, Alternate Text, and Dimensions.
12. Replace the Alternate Text with something normal for people to read. This assists those with disabilities viewing the site, plus it improves SEO.
13. Do not resize images in the browser using the Dimensions field, even though you can. Resize and optimize your images with a photo editing application prior to uploading to your site. See [“Resizing, Optimizing, and Naming Image Files” on page 139](#).
14. If you would like your text on the page to wrap around the image, click the drop-down next to the word Alignment and choose to the right or left. You will be able to see an example of this in the Preview pane.
15. If you need to stop the text from butting right up against the image, add some margin to the right or left (depending on which direction the image is aligned). We want to align our image to the left, so we will add 10 pixels of margin to the right side of the image. See [Figure 6-9](#).

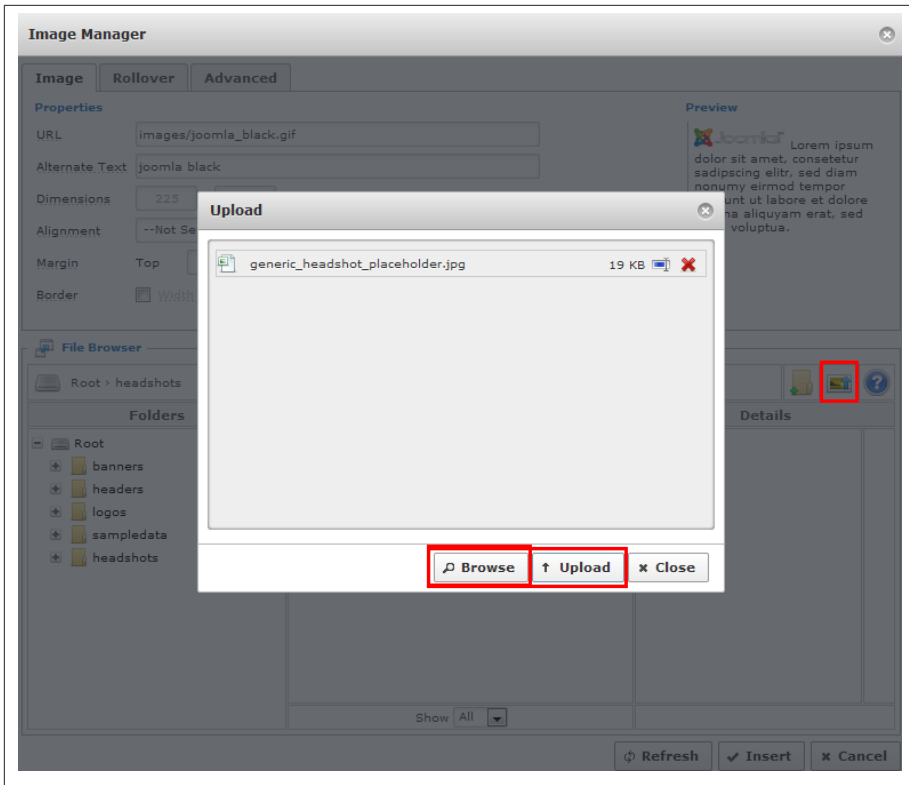


Figure 6-8. Upload images via JCE Image Manager

16. Click Insert.
17. You will now see your image inserted into the article editor. Click Save from the top toolbar and check your article from the frontend of your website (Figure 6-10).

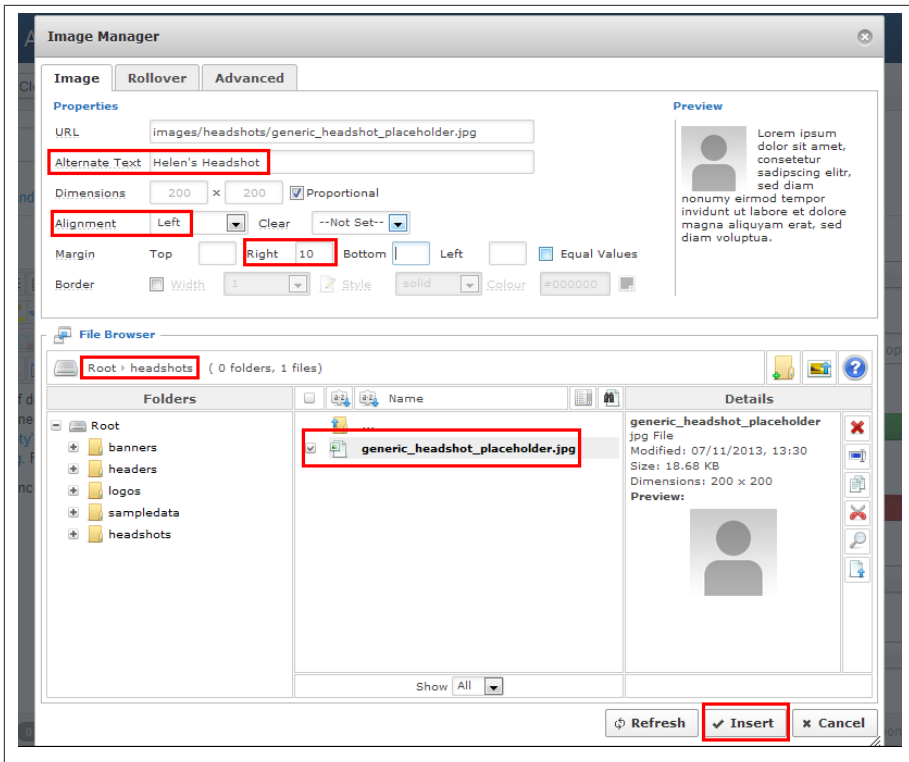


Figure 6-9. Inserting an image with left alignment and right margin

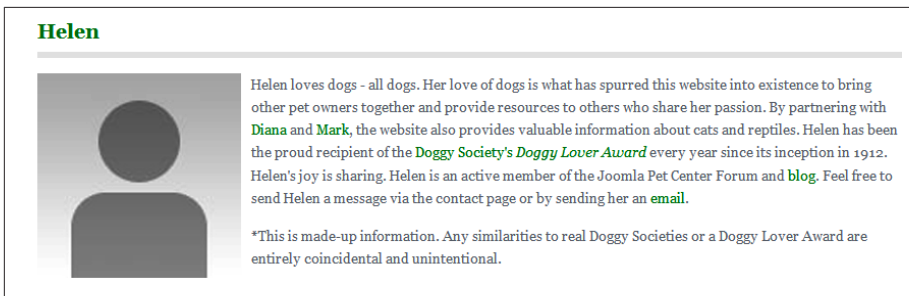


Figure 6-10. Image added to article as viewed from the frontend

Hands-On Exercise: Changing an Image

Make a mistake or want to update an image? To change an existing image:

1. Go to the Article Manager and click the name of the article that contains the image you want to change.
2. Select the image you want to replace by clicking on the image.
3. Click the “Insert/Edit image” button in the JCE Editor toolbar. It looks like a small photo of a tree.
4. Select or upload the image you desire. A preview of your image should appear after you select the desired image.
5. Click Insert.
6. Click the Save button to save the article or Save & Close to save the article and proceed to the Article Manager List.
7. Refresh and check your change from the frontend.

Hands-On Exercise: Removing an Image

Deleting the image is like deleting text. Follow these steps:

1. Go to the Article Manager and click the name of the article where you want to remove an image.
2. Select the image you want to delete by clicking on it.
3. Press Delete on your keyboard.



When you delete an image from an article, it does not delete it from the Media Manager. If you know that you will never use that image on your site again, it is best to also remove it from the Media Manager. You may also delete an image from the JCE Image Manager by selecting it and clicking the Delete icon to the right of the Details pane.

Hands-On Exercise: Hyperlinking an Image

1. Insert your image by following the instructions in [“Hands-On Exercise: Adding an Image to an Article”](#) on page 131.
2. Click the image in your content text so it is outlined.
3. Click on the “Insert/Edit link” button in the editor toolbar.

4. Follow the instructions for “[Hands-On Exercise: Hyperlinking to Internal Content](#)” on page 106.

Hands-On Exercise: Linking Documents

Linking to downloadable files, PDFs, and documents is very similar to inserting images in an article.

1. Create a new folder (see “[Organizing Media](#)” on page 137) named *documents* in Media Manager. Folders and filenames should have no spaces and be all lowercase.
2. Upload documents to the applicable folder via FTP, Media Manager, or even JCE unless the file is too large.
3. Go to the Article Manager and click on the article in which you want the document linked.
4. Type the display text for your link (caps and spaces are fine here).
5. Highlight the text and click on the “Insert/Edit link” button; it is the same button with the chain link icon used to add a hyperlink.
6. Click on the button with the paper document icon to the far right of the URL bar that says Browse when hovered over.
7. A pop-up window will open with the root folder displayed.
8. Click on the applicable folder and navigate to the file you want to link to.
9. Click Insert, which will close this pop-up window.
10. Set the Target to open in a new window from the drop-down in the Link pop-up.
11. Click Insert at the bottom of the pop-up window.
12. Click Save in the article.
13. Refresh and test from the frontend.
14. Go back to the backend administration and click Save & Close.

Organizing Media

Taking some time to think through your media before haphazardly uploading is wise. Even in a small site, media can quickly become a mess, making it difficult to find images when you are working in an article.

Here are some tips to help you:

1. Do not upload large quantities of images into the root of the */images* directory (where you land when you go to Media Manager).

2. Create folders often.
3. Create a folder specifically for logically categorized images.
4. Examples of folder names could be:
 - *logos*
 - *social-icons*
 - *affiliation-logos*
 - *documents*
 - *videos*
 - *news*

You can create subfolders within these folders. For example, inside of the documents folder could be folders for:

- *past_newsletters*
- *press_releases*
- *data_sheets*

Within the news folder could be:

- *2014*
- *2013*
- *2012*
- *2011*

You may need to break it down further or in different ways. Make it logical for the people working with your site. There are few things more frustrating than looking for an image in the root of the Media Manager with 900 images in it. Trust me, after 45 minutes looking for one image, you'll wish you had made folders. So make folders.



When naming files and folders, use only lowercase letters and no spaces.

Resizing, Optimizing, and Naming Image Files

In “Hands-On Exercise: Adding Folders and Uploading Images from the Editor” on page 132, we recommended that you resize images before uploading them to your website. This is important because:

Page speed

It takes browsers longer to load the page and render an image that has an original size of 1000 pixels by 1000 pixels compared to 200×200.

File size

An image that is 1000×1000 will be much larger than a 200×200 image. This occupies unnecessary space on your server.

They look better

When images are resized in the browser, they often look grainy and pixelated. When the image is properly resized, it makes a beautiful difference in how the image looks on your page.

An additional guideline for images on websites is to optimize them for the Web. The reasons are the same as for resizing images. The idea behind this is that an image on a website does not need to be the same quality as one you would take to a photo processing store and have blown up into an 8×10 image.

Photoshop makes it easy to crop, resize, and optimize images. Yet not all people have the luxury of Photoshop. A cheaper alternative is Photoshop Elements, which is a stripped down version of Photoshop that still does cropping, resizing, and optimizing images beautifully. Your computer may have a basic image editing program like Paint that can resize but not optimize images, but other, better options exist.

Here are some web-based services to help you resize and optimize your images:

- **Webresizer**: resizes and optimizes images.
- **Imageoptimizer**: only optimizes images and does not resize them.
- **Gimp**: Gimp is an open source alternative to Photoshop. It is a big program and will have a learning curve, but it is worth it.

These are other resources as well. Doing a Google search for “resize and optimize images” will turn up an onslaught of options.

Learning to work with images is important. Take the time to master it, as it will make your website load faster and be more attractive.

While you are at it, practice naming your images and document files in a way that search engines like. Search engine crawlers do not see the colors on your site, nor do they see the images on your site. Search engine crawlers see text and code. When it comes to

image and document filenames, the search engines only see the filename and the alternative text (which we showed you how to change when adding an image in “[Hands-On Exercise: Adding an Image to an Article](#)” on page 131).

The image filename *IMG1234.jpg* is ineffective. If instead you renamed the file to *cute-black-labrador-swimming.jpg*, you will get better results from people searching for this type of image. You really don't know how people will find your site. This does take more time and effort. Yet it is important and since you are committed to your website, you will do the best you can, right?

Just remember, filenames have no spaces and are all lowercase.

Global Media Manager Options

There are several global settings for the Media Manager that can be accessed and set by clicking on Content→Media Manager, and then clicking the Options button in the top toolbar.

The most commonly used are:

Legal Extensions (File Types)

When uploading files with the Media Manager, this field tells Joomla what extensions to allow. You can add new extensions as needed, but be sure to add both the lowercase and uppercase version of the extension separated by commas, and avoid spaces. Generally, you wouldn't allow users to upload scripts that might be accessed by a third party to execute code on your server (e.g., any executable files like *.php*, *.rb*, or *.asp*).

Maximum Size (in bytes)

This is the largest file size users with upload permissions can upload. If you run into an issue where you can't upload a file smaller than the Maximum Size, look at the System Info under the System menu. It's possible that the `upload_max_file_size` in PHP is set to a smaller number. To fix this, either edit PHP's *php.ini* file or contact your host.

Adding an Image Gallery

Images and how they are presented make a big difference in the look of a site. Images create an inviting environment and create personal connections with visitors. A picture is worth a thousand words, isn't it?

We will add two types of image galleries to Joomla Pet Center. One will be in a module position on the home page. The second will be embedded into an article.

To do this, we will use a third-party extension called **sigplus**. Sigplus has both a module and plugin available, and we will use both. Sigplus is a free download. You will need to

pay to get developer support. If you like sigplus, a donation to the developer would be a good way to help ensure the possibility of future development.

The following is not a substitute for reading the [developer's documentation](#). Always read documentation.

Hands-On Exercise: Installing sigplus

Installing sigplus is a breeze with the Install From Web feature of the Extension Manager.

1. Click on Extensions and then on Extension Manager.
2. Type **sigplus** into the filter and press Enter, or click the magnifying glass button.
3. Click the sigplus entry and then the green Purchase & Download button.
4. This will take you to JoomlaCode, where you can download the package for Joomla25+.
5. Back up your site.
6. Go back to the Extension Manager and click the Upload Package File tab.
7. Browse to find your download of sigplus and click the Upload & Install button.

This installs the module and plugin to the site. Now let's get some image galleries added to Joomla Pet Center.

Hands-On Exercise: Creating a Gallery in a Module

We are going to add an image gallery to the Joomla Pet Center home page in the drawer module position, as we planned in [Chapter 2](#).

First we need to get our images ready as explained in [“Resizing, Optimizing, and Naming Image Files” on page 139](#). Because they have been taken with a nice camera, the images are over 4,000 pixels wide and almost 4 MB in size. We do not need any image that huge on the website. All it will do is bog everything down. Prepare all images to be no more than 1,000 pixels wide and optimize to no more than 100 KB. For most images, anything larger is overkill.

With your images resized and optimized, let's get our home page gallery up.

1. Click on Content and then on Media Manager.
2. Add a new folder for your gallery images. We'll call ours *home-gallery*.
3. Upload your images to the new folder as described in [“Hands-On Exercise: Uploading Media” on page 128](#).

Now that the images have been uploaded, we'll configure the module to display them.

1. Click on Extensions and again on Module Manager.
2. Click on the module Title that says “sigplus.”
3. Change the Title to Dog Gallery or choose Hide the Title if desired.
4. Select the Drawer Module Position.
5. Set the Status to Published.
6. On the lefthand side, change the */images* path to the folder you just created for your gallery, *images/home-gallery*.
7. Change the number of Columns to the number of images you want set in the row. We have four images, so change the Columns to **4**.
8. Click on the Menu Assignment tab and set the Module Assignment to show only on the home page.
9. Click Save and then see how it looks from the frontend of your website.

If you like the gallery, click Save & Close. If you want to make more changes, make changes one at a time and save after each of them. This is a very flexible module. Have some fun with it. Our home page gallery looks like **Figure 6-11**.

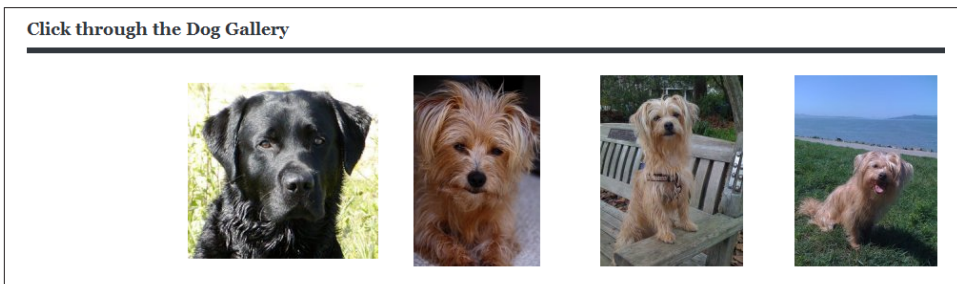


Figure 6-11. Home page gallery with sigplus gallery module

Hands-On Exercise: Embedding a Gallery in an Article

You can easily add galleries to an article using the sigplus image gallery plugin. Adding an image gallery to an article is a great way to add some flavor and variety to a lot of text without taking up a lot of space.

1. Click on Extensions and then on Plugin Manager.
2. Locate the “Content - Image gallery - sigplus” plugin.
3. Enable it by clicking the red X.
4. Create a new article or open an article in which you wish to embed a gallery.

5. In the location in the article where you would like your gallery to appear, type `{gallery}home-gallery{/gallery}`. (Remember to change home-gallery to the name of your folder.)
6. Save your article and check it from the frontend.

The tag `{gallery}folder{/gallery}` defaults to looking for subfolders of `/images`. If you want to pull images from a folder that is further down the tree, perhaps in a folder inside a folder, you would add that to the tag. For example, if you wanted to pull the images in the `/images/sampledata/parks` folder, you would have a tag that looks like `{gallery}sampledata/parks{/gallery}`. See [Figure 6-12](#) for how this looks in our article and [Figure 6-13](#) for the frontend view of the article.

```
Adding an image gallery to an article is easy! Here's one and it only took a minute!!  
{gallery}home-gallery{/gallery}  
A gallery in a folder inside a subfolder.  
{gallery}sampledata/parks{/gallery}
```

Figure 6-12. Use the sigplus gallery to embed a gallery into an article

To change the parameters of how the galleries look, go back to the Plugin Manager and click on “Content - Image gallery - sigplus” and make changes similar to the parameters that are in the module.

The order of the images is determined by the filename. If you want to order them, name your images with perhaps a number in front to denote the order in which they will appear. Using a leading zero (01, 02, ... 12, 13) will sort alphabetically, as will using 10010, 10020, 10030, giving you plenty of room to add pictures between each other if the need arises.

You can add captions to your gallery images as well. See the [developer's documentation](#) for instructions.

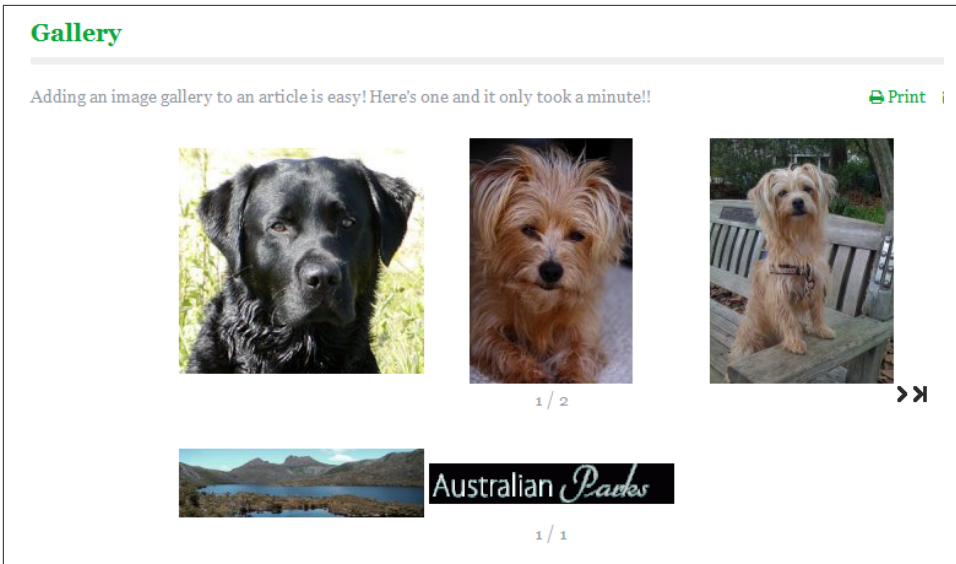


Figure 6-13. How galleries in an article appear from the frontend

Other Gallery Resources

A favorite extension of Jenn's is [JFBAlbum](#). JFBAlbum pulls albums from Facebook in a beautiful gallery type of display. The extension is 20 bucks. The beauty of this extension is that Facebook houses your huge 4,000-pixel images and resizes them for you. The parameters of the extension display them on your Joomla site perfectly.

Another popular gallery is [IgniteGallery](#). This is a big component that is great for managing massive galleries. For many people, though, it is more than they need. Yet it's worth a mention if you need a lot of controls for multiple galleries.

If you want a slideshow, you may want to try YooTheme's [Widgetkit](#) or [Slideshow CK](#).

Making Your Website Speak Multiple Languages

The Internet is a global platform, and users will likely visit your website from places that you've never heard of before. Joomla has made it very easy to provide your site information to visitors in their own language.

We've set up our pet store, and while looking at our site analytics, we discovered that many people from the Czech Republic visit. To make our site friendlier to those users, we will translate the site content into Czech. Since Czech users are increasing and one person in particular, Karel, has been very helpful in providing suggestions, we have decided to ask him to help out in the site administration. He prefers Joomla to be in Czech instead of English, so we will customize the Joomla interface to support multiple languages.

Offering Your Site Content in Multiple Languages

Older versions of Joomla required a third-party extension to support sites with multiple languages (both frontend and backend). That's no longer necessary, because Joomla 3.x was built from the start with multilingual support in mind. Let's set up a few languages to see how it works.

Hands-On Exercise: Installing Multiple Languages When Joomla is Initially Installed

If, when installing Joomla 3.x and setting up a new website, you know you want to make your site available in multiple languages, you can choose to install additional languages and activate the required plugins during installation. (If your site is already live, jump to [“Hands-On Exercise: Installing Additional Site Languages After Joomla is Installed”](#) on page 147 for the usual process of setting up additional languages.)

Upon successful installation, you will see the option to install additional languages (Figure 7-1).

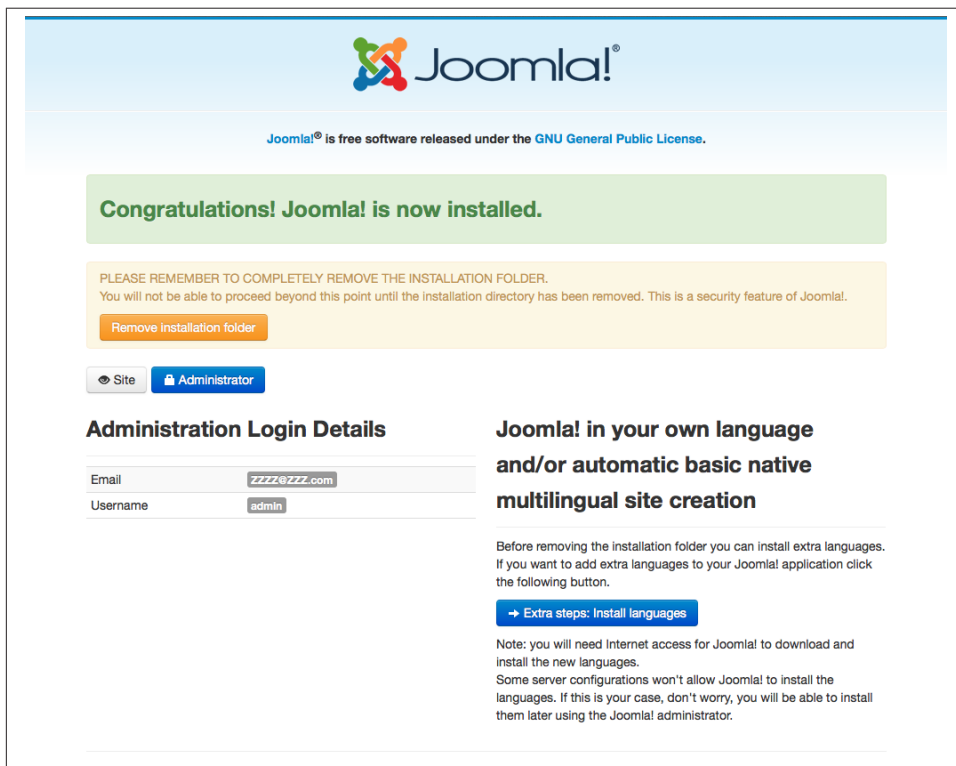


Figure 7-1. Joomla successfully installed

Click the “Extra steps: Install languages” button to start the process.

1. Choose the language packs you want to use and they will automatically be downloaded and installed. Click Next.
2. Click Yes to activate the multilingual feature. Then click Yes for Install Localized Content, which will automatically create a category for each language. This is a good way to keep your content organized by language in Joomla.
3. Click Yes to Enable the Language Code Plugin. This will give you unique URLs using a language code (en-GB) to improve your site’s SEO.
4. Choose both a default language for the administrator backend and the site frontend or leave them as the default. Click Next. See Figure 7-2.

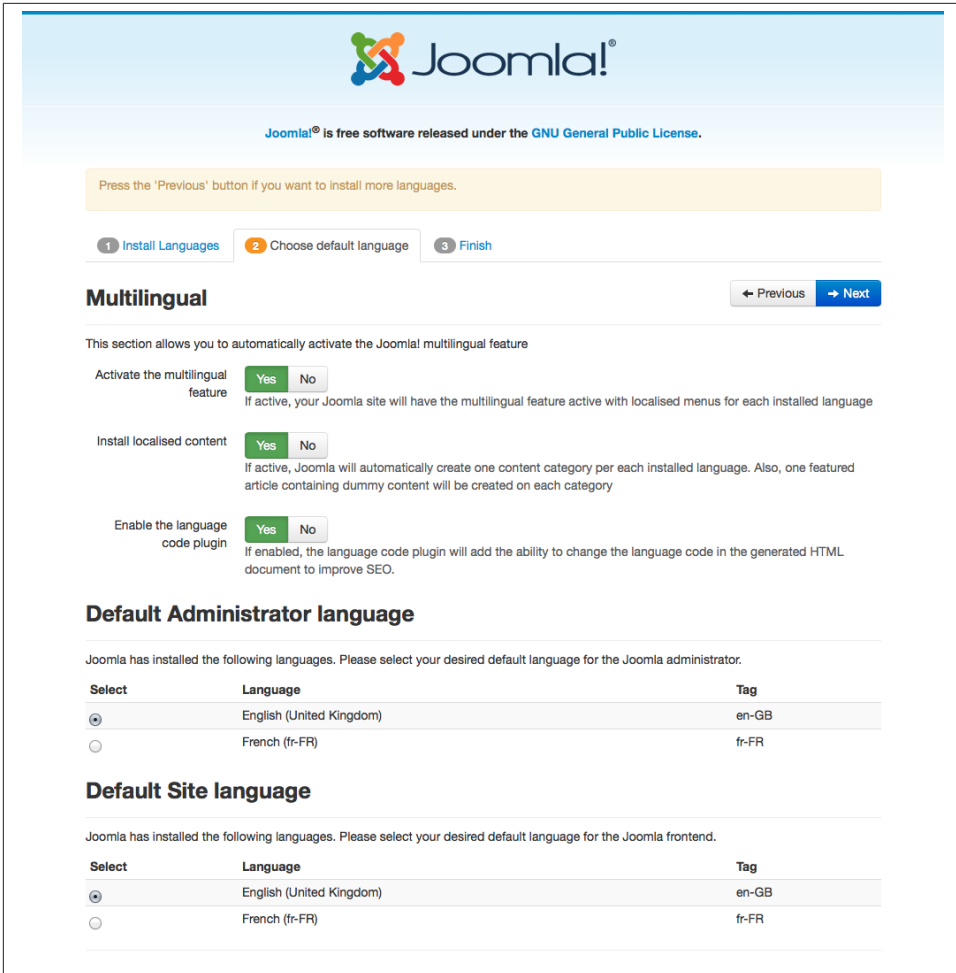


Figure 7-2. Activate all the options and set the preferred primary language

Your site is now set up to use multiple languages. See [“Translating Your Content” on page 149](#) for an overview on how to best create and structure your content.

Hands-On Exercise: Installing Additional Site Languages After Joomla is Installed

If Joomla has already been installed and you want to add another language, the Joomla Extension Manager can autoinstall many accredited language translation packs.

1. Click the Install Languages submenu item to load the available language options. Be careful not to install a language that hasn't been fully updated. A short notice under each language will let you know:

Language pack does not match this Joomla! version. Some strings may be missing.

Usually, the version number of the pack will match the Joomla version number, but not always, so it isn't a reliable indicator. If you don't see the language you want, click the Find Languages button to refresh the list (see [Figure 7-3](#)). It might already be installed or it might not be available. Check the [language site](#) for additional details on whether it's available (or if it isn't available, feel free to volunteer to contribute a translation). At this time, there are translations in almost 50 languages.

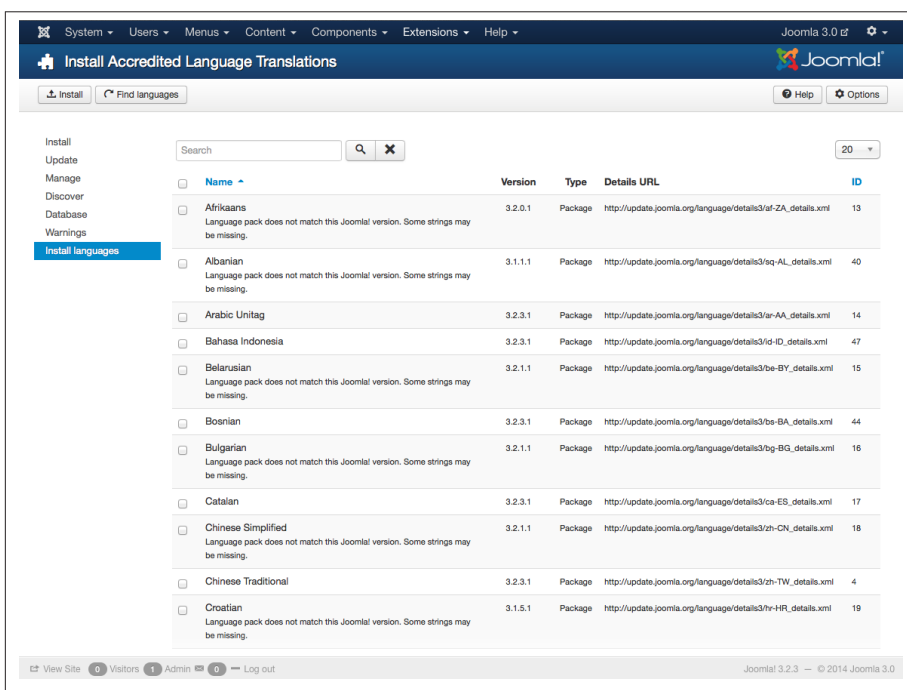


Figure 7-3. Choose the language(s) to install

2. Check the language(s) you want to install and click the Install button, as seen in [Figure 7-4](#). This will install the language for both the site and administrator.

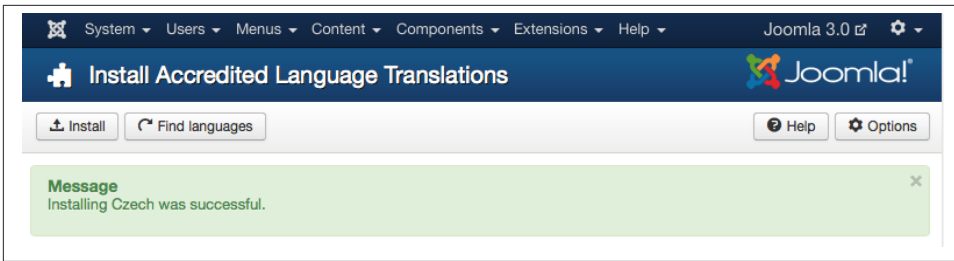


Figure 7-4. Successful installation of the Czech language pack

Uninstall a Language

To uninstall a language, go to the Extension Manager. Choose Manage from the left submenu and then choose Package from the Type drop-down menu (not Language) to locate the language pack to uninstall (see Figure 7-5). You can't uninstall the languages themselves; this can only be done by uninstalling the package.

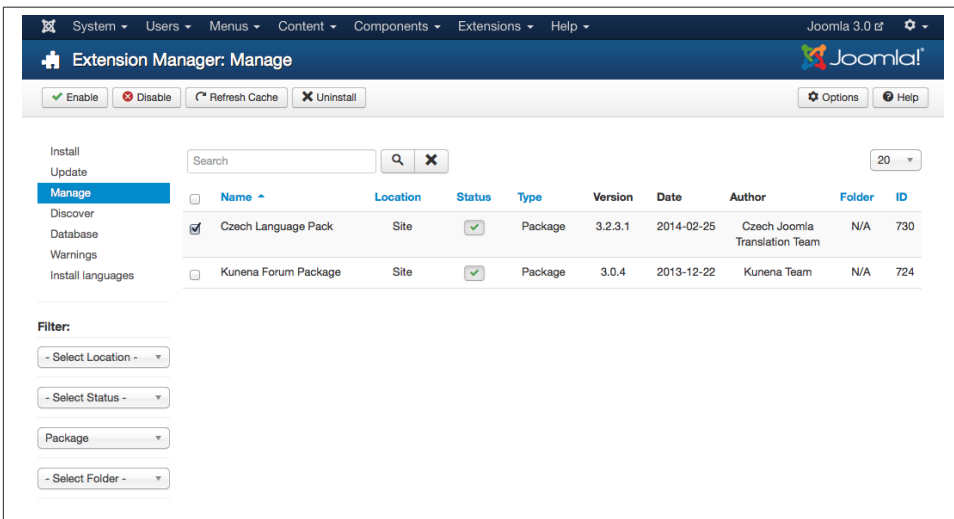


Figure 7-5. Choose Package from the filter drop-down to see language packages

Translating Your Content

If you'd like to offer your site content to users in other languages, we recommend it be translated by someone who is a native speaker of that language, because good translation is really an art. Each translation requires a separate article, so if we are translating our entire website in English to Czech, we will need a Czech article for every corresponding English article.

Since menu items handle URL routing in Joomla, we will need to create additional menu items that point to the translated articles. To keep track of our languages, we will organize and group them into separate menus as seen in [Figure 7-6](#). In the Menu Manager, create the following menus:

Main Menu

This exists by default in Joomla and your site menu items belong in here. The Language setting for all menu items here should be set to All and the Default Page option set to Yes.

Main Menu (English)

If your website is in English, this may be a duplicate of the items in the Main Menu. The Language setting for all menu items here should be set to English (which can be changed all at once if you copy the menu items using the Batch option).

Main Menu (Czech)

If all the content of your website has been translated into Czech, this may be a duplicate of the items in the Main Menu. The Language setting for all menu items here should be set to Czech (which can be changed all at once if you copy the menu items using the Batch option).

See [“Copying Categories” on page 42](#) for how to use the Batch option.

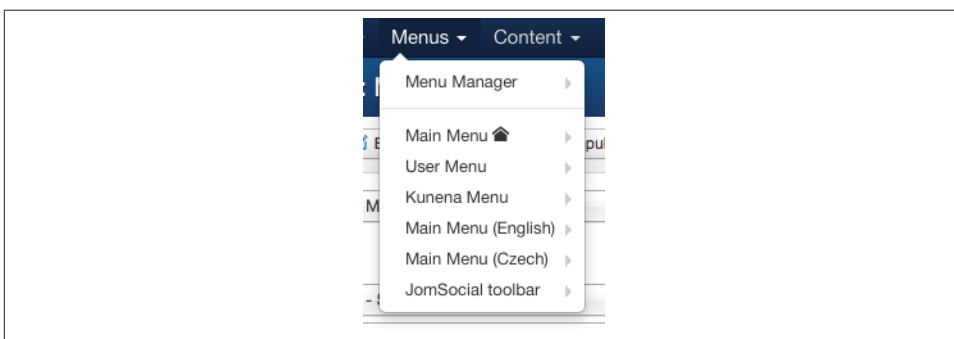


Figure 7-6. Create two new menus, one for each language supported

Depending on the size of your site and how much you want to customize your SEF URLs (see “[SEF URL Settings and SEO Basics](#)” on page 236), you might want to separate your articles into language categories as well. To do this, create your categories in the Category Manager as you normally would (see “[Creating Categories](#)” on page 38), create an extra category called English, and put all your content categories nested inside the English category. Do the same for the other languages, so all your top-level categories are language names and site content is structured underneath each. This can also help prevent URL conflicts. See [Figure 7-7](#).



Figure 7-7. Create a default category and a separate one for each additional language

Users can switch between languages using the Language Switcher module that comes with Joomla. Enable this module in the Module Manager and make sure the language setting is set to All.

Activating the Language Filter system plugin enables automatic content switching. We could set the same language for all users, but we will let the plugin automatically set the language based on the user’s browser settings as shown in [Figure 7-8](#). In order to do this, Joomla needs to know the connection between the English and Czech menu items. In the Menu Item Options, go to the Associations tab and select the corresponding menu item. If you select it in one, it will automatically be set in the other. Improve your SEO by activating the Language Code plugin (don’t forget to add the custom language codes in the settings).

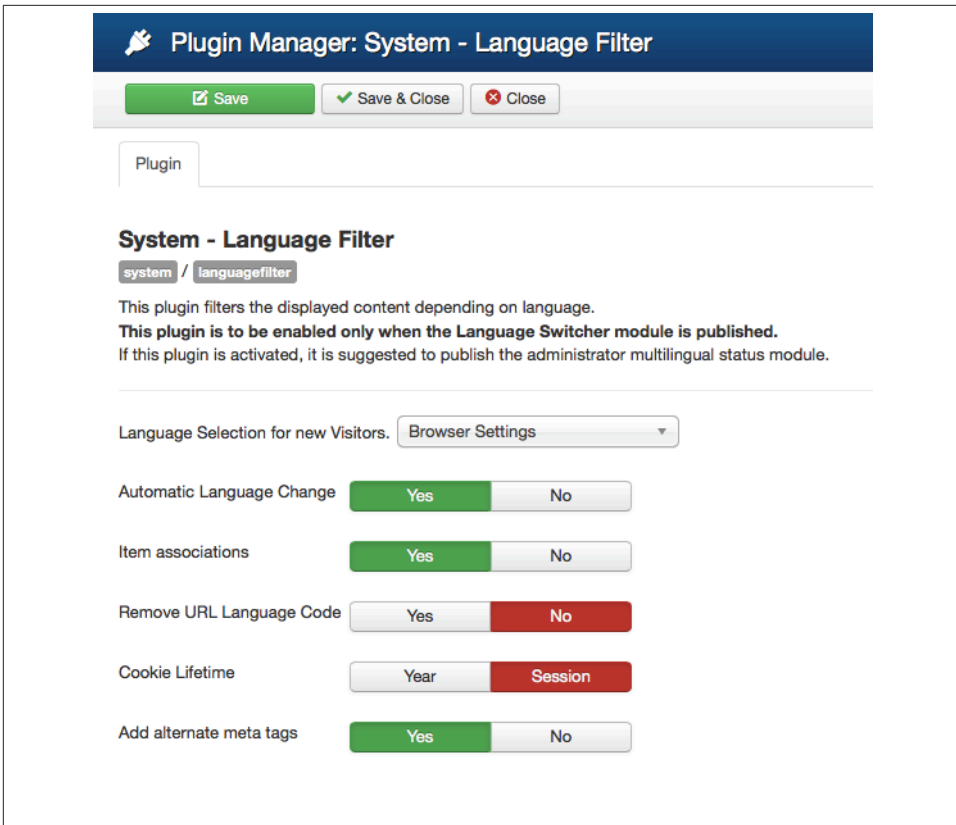


Figure 7-8. Configure the Language Filter plugin settings

Using the Joomla Administrator Interface in Another Language

Our Czech users are increasing, and one person in particular has been very helpful in providing suggestions. We have decided to ask Karel to help out in the site administration, and he prefers Joomla in Czech instead of English. If we have already installed the Czech language pack, there's no need to install anything else. See [Figure 7-9](#).



Figure 7-9. We already installed the Czech language pack so we're ready to go

Hands-On Exercise: Setting the Language Options for Site Administrators

From the administrator backend, we will go to the User Manager under the User menu, and find the user for whom we want to change language settings. Click the user's name to open their settings and switch to the Basic Settings tab as shown in [Figure 7-10](#).

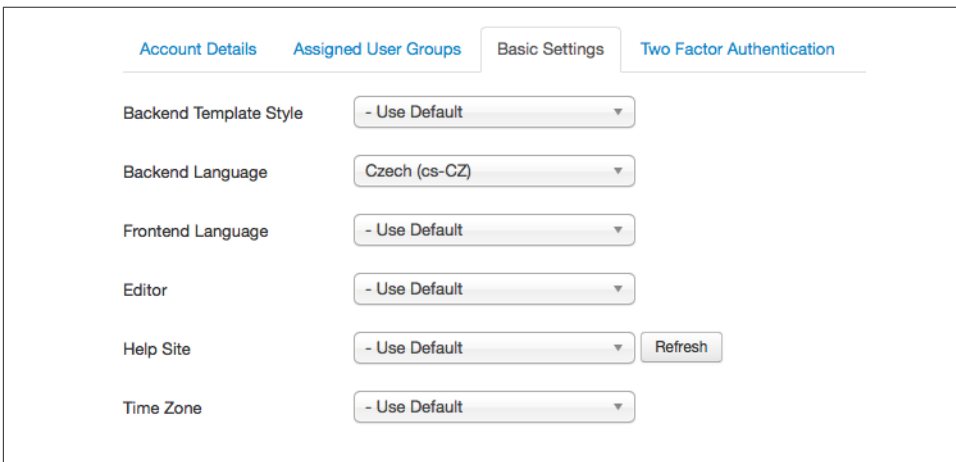


Figure 7-10. Change the user's language setting in their profile

Change the Backend Language to the preferred language. Karel speaks Czech. If the language doesn't appear here, it may not be installed, so verify that it's present in the Language Manager, and follow the steps in [“Hands-On Exercise: Installing Additional Site Languages After Joomla is Installed”](#) on page 147 if you need to install a new language. You can also change the Frontend Language for this user in these settings if your content is translated into those other language(s). Click Save & Close when you're done.

Karel should now see the administrator interface in Czech, while the default administrator will see it in the default language.

In the next chapter, we'll start creating our blog in English (which Karel writes in Czech).

Starting a Blog

Blogs nowadays are used for much more than personal diaries. They're a way to communicate ideas, business news, and even critical information to the world. They are your own “personal newspaper” or corporate newsletter that dynamically updates and allows for a two-way conversation with your audience.

At its inception, Joomla didn't have many blog features—and is still missing quite a few—but it can be used effectively as a blog with a few customizations. In this chapter, we'll walk through how to use Joomla as a blog, as well as explore a few other installable blogging options.

Joomla Articles as a Blog

A blog is essentially a collection of articles displayed with the most recent article first. Because Joomla uses articles to organize content, this is easy to set up. In fact, you've probably done the steps already.

1. Create a category for your blog articles by going to Content→Category Manager and clicking the New button. We'll call ours Blog.
2. Add a description if you'd like to display a text introduction at the top of your blog. Otherwise, leave it blank. Leave the other settings at their defaults and click Save & Close.

All that's left to do is to create a new menu item pointing to the blog as described in “[Category Blog Layout](#)” on page 51 in [Chapter 4](#). Make sure you edit the menu item and update the Article Order setting in the Blog Layout tab to Most Recent First, so your latest blog post will always be at the top of the page.



If your blog is in a different language than your site or it's in multiple languages, see “[Translating Your Content](#)” on page 149 for information on creating multiple categories for multilingual content.

Hands-On Exercise: Creating a New Blog Post

Now you're ready to create your first blog post. Create a new Joomla article in the Article Manager (see “[Creating Articles](#)” on page 43 for a review on creating articles) and select your Blog category.

To submit blog articles from the frontend of your site, you'll need to create a new menu item (called Submit an Article) and add it to a module visible on your website. Set the permissions of that menu item so only users who will be blogging will be able to see it (usually this goes in the User Menu, which is displayed in a Menu Module). Then all the user has to do is log in to the frontend and submit an article.



Using this setup with the default Joomla categories, you could have multiple users sharing the same blog or set up separate Joomla categories for individual users to have their own blog.

Hands-On Exercise: Scheduling an Article to Publish and Unpublish

A handy way to publish or unpublish an article is to auto-publish on a specific date and time. There are many situations where this could be useful (maybe you're going on vacation and you want an article to auto-publish while you're away). Alternately, you might want an article to expire on a certain date and *unpublish* automatically.

Start by going to the Article Manager and clicking the name of the article to edit it. In the second tab, Publishing, you'll see the options for the article (see [Figure 8-1](#)).

Adjust the following parameters to automate publishing:

Start Publishing

This is the date and time the article will be automatically published. Clicking the calendar icon will display a calendar date picker, as shown in [Figure 8-1](#). The default value for this field is the Created Date.

Finish Publishing

This is the date and time the article will be automatically unpublished. Clicking the calendar icon will display a calendar date picker, as shown in [Figure 8-1](#).

The screenshot shows the Joomla! Article Manager interface for adding a new article. The 'Publishing' tab is selected, displaying various scheduling and metadata fields. The 'Start Publishing' and 'Finish Publishing' fields include calendar icons. The 'Created by' field has a user selection icon. The 'Robots' field is a dropdown menu currently set to 'Use Global'. The 'ID' field is pre-filled with '0'.

Figure 8-1. Schedule publishing and unpublishing in the Article Manager



Remember, these parameters are based on your web server’s internal clock. Check with your web hosting provider to see if there’s a time zone difference you need to account for when scheduling.

Also note that the time is in 24-hour format—HH:MM:SS.

The Finish Publishing parameter also recognizes the term Never for items with no end date. The default value for this field is Never, or 0000-00-00 00:00:00.

Click Save or Save & Close to save your changes.

Adding Comments, Tags, and Modules to Your Blog

By default, Joomla doesn’t come with commenting capabilities, so we’ll have to use a third-party solution. Fortunately, there are several very good options for comments.

Hands-On Exercise: Adding Comments Using Komento

Komento is a free extension that adds commenting functionality to any article on your site. While the paid pro version offers a few themes and a number of other features, you might not need those to add simple comments. To use Komento, follow these steps:

1. Download and install the Komento extension in the Extension Manager. Open Komento under Components.
2. By default, Komento enables comments on all Joomla articles, but we only want comments on our blog posts. So open the Integrations section and click the Joomla Article button to adjust the settings.
3. In the Workflow section, change the Komento assignment to “On selected categories” and choose the Blog category we created (see [Figure 8-2](#)).

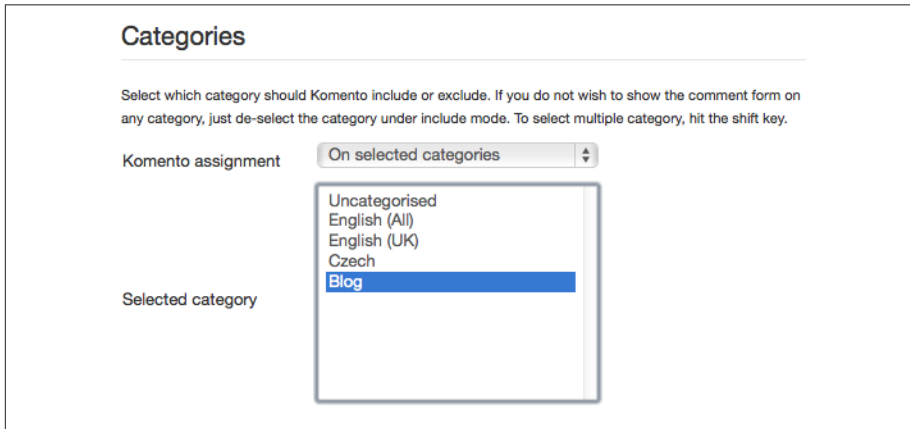


Figure 8-2. Select Komento categories

4. You can change layout options in the Layout section, but this is not required. However, you should set up the antispam options that are supported. Flood control, Akismet, and reCaptcha are all very helpful at preventing spam comments.
5. Click Save & Close when you are done.

Now switch to the articles on the frontend of your site to see the comment fields. Any new posts will also be visible under the new comment section.



Make sure to enable Clear Captcha on page load in the Komento configuration settings. That will delete old captcha files on a regular basis.

Hands-On Exercise: Adding Comments Using the Kunena Forum

Yes, it might sound odd at first, but if you think about it, a discussion forum is really just a series of comments organized into categories and threads. And the **Kunena** forum component has a special plugin that adds a comments feature to your blog posts and centralizes all that discussion on your forum. You don't need to actually use the forum if you don't want to (you can hide it from your site visitors), but adding a forum might be a great way to facilitate even more user interaction on your website (see “[Creating a Discussion Forum with Kunena](#)” on page 222 in [Chapter 12](#) for details on how to set up and manage the Kunena forum).

1. After installing Kunena, **download** and install the Kunena Discuss plugin.
2. Comments on articles are “mapped” to specific forum categories. We have a blog category called Dogs, and we also have a forum category with the same name. So we'll go to the Category Manager and note the category IDs in both Joomla and Kunena.



Note that you have to use an ID of a Kunena category, not a section. So if it says Section next to the ID in the Kunena Category Manager, it won't work.

3. Go to the Plugin Manager and open the Content - Kunena Discuss plugin ([Figure 8-3](#)).

Topic Owner	<input type="text"/>
Category Mapping	<input type="text" value="5,7;2,3"/>
Default Forum Category	<input type="text" value="1"/>

Figure 8-3. Add the category mapping to the plugin settings

4. Enter the pairs of IDs (Joomla Category ID first, Kunena Category ID second) separated by a comma (e.g., **13, 1**). If you want to map multiple categories, separate the pairs with a semicolon (e.g., **13, 1; 15, 6; 18, 2**). See [Figure 8-4](#).

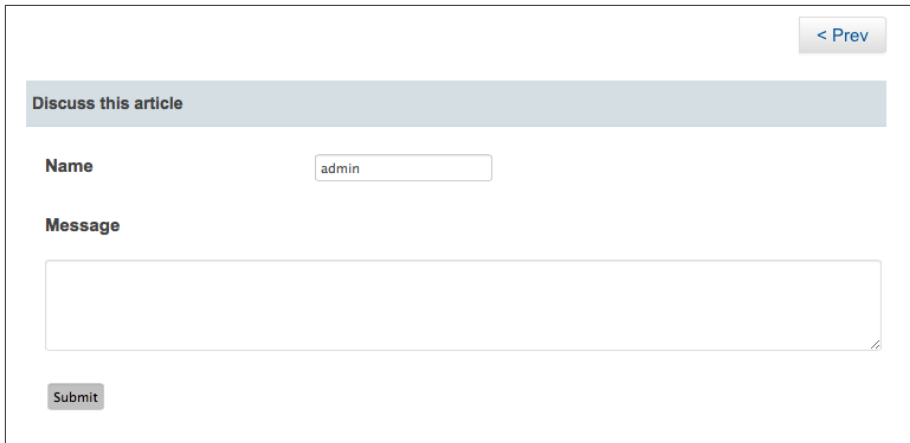


Figure 8-4. Define default category for comments

5. If you don't have a forum category that corresponds to the content category in Joomla, you can create a general "catch-all" default forum category for all other comments. Enter the category ID from Kunena under Default Forum Category.
6. Enable the plugin and click Save & Close.

Now, site visitors will see a comment field at the bottom of each article in the Dogs category. When comments are added to articles in that category, a new topic will be created in the corresponding forum category. So users will see the same comment in both places, though it actually only exists in the forum.

Hands-On Exercise: Adding Joomla Tags to Your Blog

Tags are a great way to display related content on your website. In Joomla 3.1, content tags were introduced and they can be used to tag any content, contacts and any other core Joomla extension. Tags are quite robust, and they are almost Joomla articles themselves, supporting descriptions, images, and more. For our purposes, we will just use the basic tagging feature. So let's quickly create a few new tags:

1. Go to Components→Tags and click the New button.
2. Add a Title (e.g., **Dogs**) and click the Save & New button. Repeat this to create a few tags.
3. Click Save & Close when you've created your last tag.

Tags can also be created on the fly when creating a new article, so you don't have to create all of them now. Just type a new tag name into the Tags field and click Save & Close.

Now when you create new articles, you'll see the option to add tags. Click the box to see a drop-down menu or start typing in it to see tag matches. When users click on these tags, they will see all the articles related to the tag.

Tor Tags will auto-add tags to your content and includes a tag cloud module. It is also compatible with a number of other Joomla components, like JEvents and K2, if you want to use tags with those extensions. There are paid upgrade options for more features, and Joomla 3.x compatibility.

Hands-On Exercise: Adding a Popular Tags Module

Since we're tagging our blog articles with keywords, let's give users a way to search for all the articles with a specific tag. So let's create a tags module in the Module Manager:

1. Go to Extensions→Module Manager and click the New button.
2. Choose the Popular Tags module by clicking on it.
3. Add a title for the module (Popular tags) and adjust the "Maximum tags" value to show the number of tags you want. You may want to change a few other things like "Display number of items" to Yes.
4. In the Cloud Layout tab, you can change the minimum and maximum font size, but we'll leave them at the default.
5. In the Position drop-down, choose the template position where the module should appear. The module will appear on all pages by default, but if you only want the module to appear on specific pages, switch to the Menu Assignment tab and choose the specific pages in the Module Assignment options.
6. Click Save & Close. Switch to the frontend of your site to see the module ([Figure 8-5](#)).

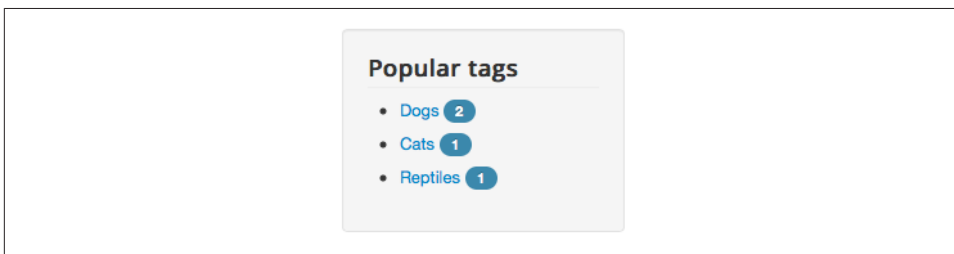


Figure 8-5. The Popular Tags module showing the most popular tags

This now displays a list of tags in order of popularity (the most items tagged with this keyword). Also, the Similar Tags module will display a list of articles with the same tag as the article currently viewed.

Hands-On Exercise: Adding a Latest Posts Module

Say we want to add a “latest news” module to the side column of our website. Joomla has made this easy with the Latest News module. To create the module:

1. Go to Extensions→Module Manager and click the New button (make sure the Site option is selected in the left column; otherwise, you’ll be creating an Administrator module).
2. Select the Latest News module type from the list of available modules.
3. As shown in **Figure 8-6**, add a title for the module (“Latest Blog Posts”), select the blog category, and enter the number of posts to show in the module. We’ll use five.

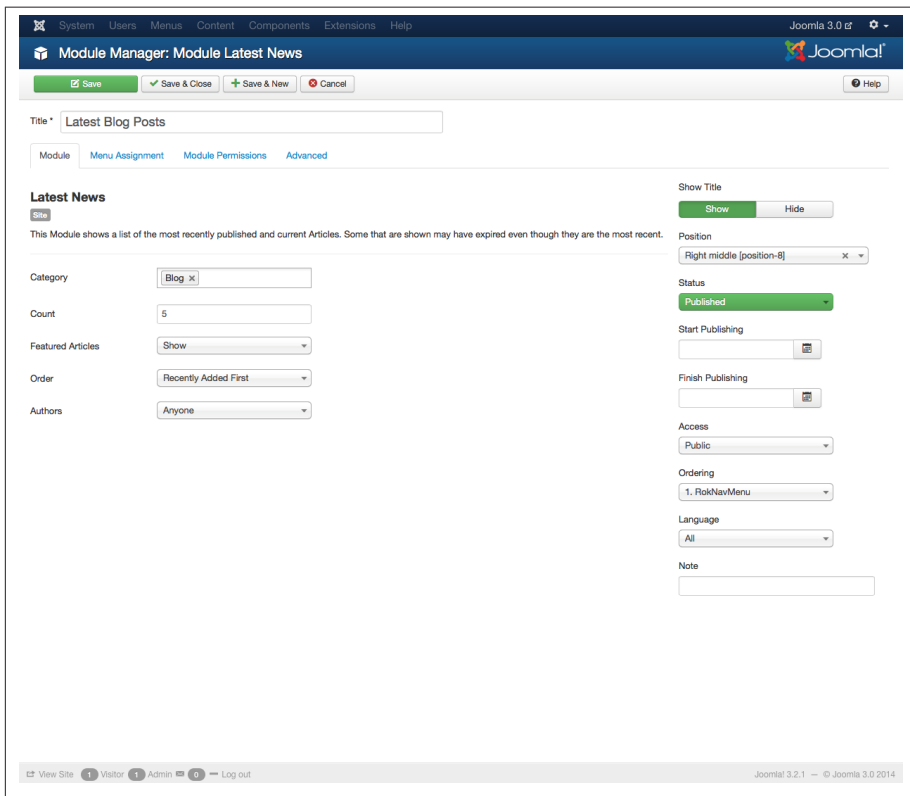


Figure 8-6. Creating a new Latest News Module

4. In the Position drop-down, choose the template position where the module should appear. The module will appear on all pages by default, but if you only want the module to appear on specific pages, switch to the Menu Assignment tab and choose the specific pages in the Module Assignment options.

5. Click Save & Close.
6. Switch to the frontend of your website to see the new module showing the latest posts, as seen in **Figure 8-7**.



Figure 8-7. See the latest articles in a module

Create and Share an Event Calendar

Helen travels to dog shows and other pet events year round. She needs a way to keep track of those events and let her site visitors know about them. The best way to do this is to add an events calendar to the site. We will use a third-party extension called JEvents for this purpose.

JEvents is a free extension. The documentation and support are a bit lacking unless you purchase a membership. That being said, JEvents is straightforward to install and to use for simple implementations of an events calendar.

Hands-On Exercise: Installing and Configuring JEvents

1. Back up your site.
2. You can install JEvents through the Install from Web tab in the Extension Manager just as you did with Akeeba Backup (see “**Mastering Backups**” on page 56).
3. After installation is complete, navigate to Components and then JEvents.
4. Click on Configuration.
5. You will see three buttons for “Config options to show.” Click on the Advanced button.
6. The left sidebar shows the different sections to be configured in JEvents. In the Component section, leave every entry at the default except for the following:
 - Change Show Headline to Menu entry
 - Change Show Copyright Footer to No
 - Change JEvents Project News to No
 - Change “Timezone for site” to our time zone

7. Click Save and then click on Permissions in the left sidebar.
8. Chose the groups and what they are allowed to do. For Joomla Pet Center, the default permissions are fine as is.
9. Click on Event Editing from the left sidebar. Read this section thoroughly and make whatever changes you'd like. We are leaving all at the defaults except for the following:
 - Change “Required fields” to include Description and Location
 - Change “Show time details before description?” to Yes
10. Click Save when complete, and then click on Event Detail View from the left sidebar. Again, here is what we are changing:
 - Change Display Creators to Name
11. Click Save and then click on Main Monthly Calendar.



Some complain that their event titles get cut off in calendar view. This is the section of the configuration that you can change by increasing the “Title length” and Max Events. As the tooltip says, changing these numbers to be very high could destroy the layout of your calendar. Just keep it in mind so it can be altered if need be.

12. We are going to leave everything at the defaults in Year/Category View and iCal Import/Export.
13. In the RSS section, we will brand it for Joomla Pet Center instead of JEvents for the RSS Title and RSS Description.
14. We are going to leave the SEF/Performance Options at their default settings.
15. Both Calendar and Latest Events are specifically geared toward modules for JEvents. We will leave both as is at this time.
16. Click Save & Close to return to the JEvents Control Panel.

Hands-On Exercise: Creating a Calendar

In JEvents, you can have a virtually unlimited number of calendars. We’re going to create a single calendar for the entire site, but each user could have their own private calendar. To create a new calendar:

1. From the JEvents Control Panel, click Manage Calendars.

2. We are going to use the default calendar. To create an additional calendar, click New and enter the new calendar information.
3. Change Unique Identifier to a different name if you wish.
4. Change any of the other settings you want. We're leaving it all at the defaults.
5. Click Save & Close.

That's it! Now let's add some categories.

Hands-On Exercise: Creating Event Categories

Separating events into categories makes it easier for visitors to sort through events they want to see. Since this calendar is mainly for Helen's dog shows, we want a category for Dog Shows. We will add additional categories for Cat Shows and Bird Shows.

1. From the JEvents dashboard, click Manage Categories.
2. We will first use the Default category and change it to Dog Shows.
3. Change the name of the category.
4. Enter a description of the category if desired.
5. Click on the Options tab and select a color for the category and add an image if desired.
6. Select a user that administers the category if desired.
7. Click Save & Close or Save & New to create another category.
8. Choose a different color for each category so it is easier for visitors to distinguish between the categories.

Hands-On Exercise: Adding JEvents to the Menu

At this point, you may want to see what your configuration and categories for your first calendar looks like. To do this, you need to add it to a menu to be able to access it.

1. Click on Menus and then on Main Menu.
2. You already have a placeholder menu item for events, so you should click on that and change the menu item type. If you do not have a placeholder set, you will click New and continue with the instructions.
3. When you click the Select button to choose a menu item type, you will see an accordion item with the label `jevents`. Click on it to see the options for displaying your events via a menu item (Figure 9-1).

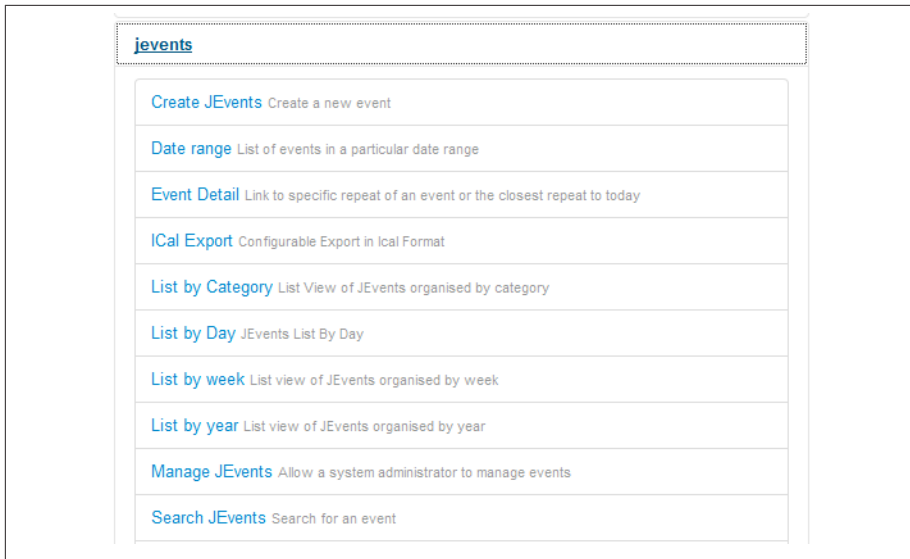


Figure 9-1. Options for JEvents menu item types

4. Choose a menu item type by clicking on it. We chose View by Month, which gives a month calendar view as seen in **Figure 9-2**.
5. You have many options for displaying your calendar. Try different types by selecting them and then clicking Save from the top toolbar.
6. Refresh from the frontend to see how it will look.
7. Repeat until you have a display style you are happy with, and then click Save & Close.

It may help to have some events in your calendar as you try out the various options.

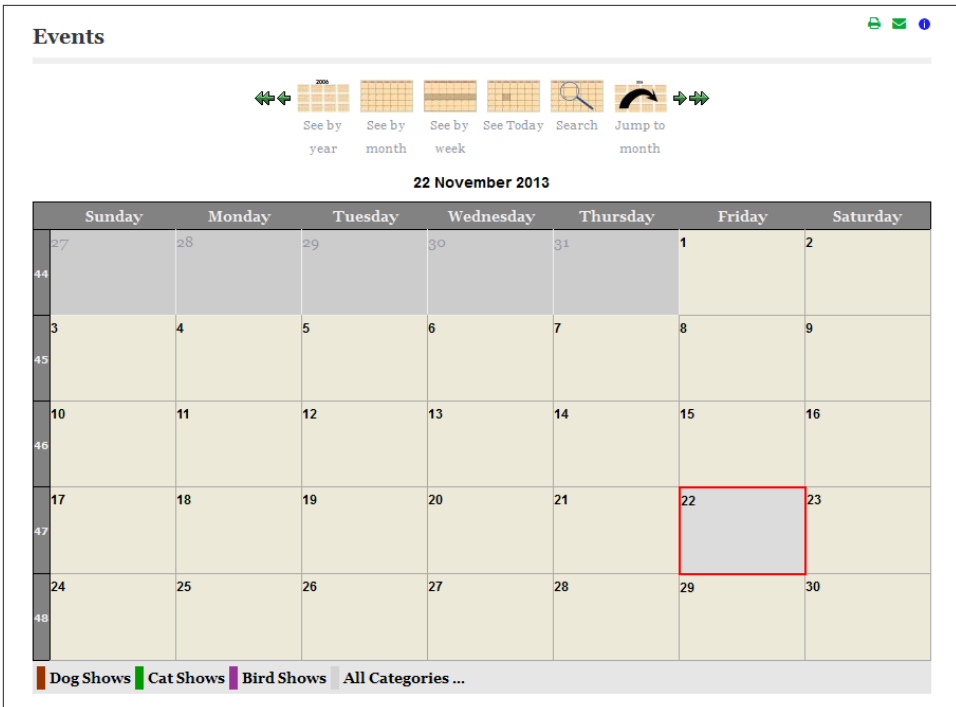


Figure 9-2. JEvents view in a month calendar

Hands-On Exercise: Adding Events to JEvents

New events can be created in a snap in a variety of ways. The two types of events are either one-time events or recurring events. We'll step through both types of event creation.

Create One-Time Events

1. From the JEvents dashboard, click Manage Events.
2. Click New from the top toolbar.
3. In the Subject field, enter the title of the event.
4. Change Event Creator to a different user if desired.
5. Select the category for the event from the Category drop-down.
6. Leave access level set to Public. For more information about access levels, see [“Access Control Lists \(ACLs\)” on page 244](#).
7. Leave State set as Published.

8. Click the calendar icon to select the start date for your event. Then enter the time the event starts. Select the button to denote a.m. or p.m.
9. The end date should automatically set itself to the same as the start date, though you will want to confirm this and change it if necessary. Click the Calendar icon and select the end date. Enter the end time and select the button to denote a.m. and p.m.
10. Leave Repeat Type as no repeat.
11. In the Activity field, enter the description in this main area with the editor. This would be all the pertinent information about the event, such as who is speaking, what information will be delivered, contact information, how to register, how to pay, and details on payment. (JEvents does not take payments. For this you'll need another third-party extension like **JTicketing**, or else you should link to a service like PayPal or Eventbrite to take payments.)
12. In the description, use heading 2, 3, or 4 from the Paragraph drop-down as well as some bold to make it look nice.
13. If you need to add an image or a PDF, you may want to create a new folder in the Media Manager so that it is easier to purge them when they are no longer required.
14. Enter the location of the event and the address.
15. Enter the contact information for the event.
16. Any extra information can be entered here, such as a price if applicable (though I would also put it in the description).
17. Click Save (it might say Apply) at the top and check out how your event looks on the frontend.
18. Make any changes you want to after you check it out from the frontend.
19. If you're happy with it, then click Save & Close.

Our one-time event can be seen in **Figure 9-3**. We used heading 2 and heading 3 for the first four lines. We made the size of the text in the fifth line 12 points. We used some built-in typography found in the Afterburner2 template for the buttons.

The screenshot shows a JEvents event page for 'Spring Dog Show'. At the top, the event title is displayed in bold. Below it, the date and time 'Wednesday 30 April 2014, 01:00pm - 05:00pm' are shown on the left, and 'by Jennifer Gress' and 'Hits : 3' are on the right. The event title 'Spring Dog Show' is repeated in a larger font. Below that, the date 'Wednesday, April 30, 2014' is centered. The time '1pm to 5pm' and location 'At the Beach!' are also centered. A descriptive paragraph follows: 'Bring your pooch and pooper scooper and join us. The biggest TV stars in the world will be judges.' Three action buttons are centered: 'Register your dog' (blue), 'Buy a ticket' (orange), and 'Sponsor the event' (green). A disclaimer at the bottom reads: 'This is not a real event. It is for demo purposes only.' In the bottom left corner, the location 'Platform Beach' and contact 'Helen' are listed.

Figure 9-3. One-time event using JEvents

Create Recurring Events

Organizations often have recurring events that happen, for example, on the second Tuesday of the month. JEvents makes it very simple to add recurring events. Here's how to do it:

1. Enter the event exactly as if it is a one-time event except change “Repeat type” to the event’s frequency (daily, weekly, monthly, or yearly).
2. JEvents will present additional options that only apply to recurring events. Adjust these options as you wish.

Here are some examples of common recurring events and how to create them:

Weekly recurring event on Saturdays from 10 a.m. to 2 p.m. (see [Figure 9-4](#)):

1. In the “Repeat type” field, select the Weekly radio button.
2. Leave Repeat Interval field set at 1 weeks.
3. Enter the number of repeat counts (how many times the event will recur) you would like to have. If it is unlimited, then leave it blank and the field will set itself to 999 when you save (or you can just type in 999 into the field yourself).

4. Click the Repeat Until radio button and click the arrow in the calendar next to the year until you find your chosen date.
5. In the By Day field, ensure that the correct day of the week is selected. For example, if your event is on Saturdays, make sure Saturday is what is selected in the By Day field.
6. Click Save & Close and check your results from the frontend.

The screenshot shows a form titled "Start, End, Duration" with the following settings:

- All day Event or Unspecified time:** (unchecked), **12 Hour:** (checked)
- Start date:** 11/30/2013 (with a calendar icon)
- Start Time:** 10:00, **am** (selected), **pm** (unselected)
- End date:** 11/30/2013 (with a calendar icon)
- End Time:** 12:00, **am** (selected), **pm** (unselected)
- No specific end time:** (unchecked)

Repeat type: No Repeat, Daily, **Weekly** (selected), Monthly, Yearly

Repeat Interval: 1 weeks

Repeat Count: 999 repeats

Repeat Until: 12/26/2020 (with a calendar icon)

By Day: (selected), with a row of buttons for days of the week: S, M, T, W, T, F, **S** (Saturday selected)

Figure 9-4. Configuration settings for a recurring event on Saturdays from 10 a.m. to 2 p.m.

You can see in the calendar view that we have our one-time event and four recurring events for April of 2014 in [Figure 9-5](#). When you click on one of the recurring bird cage sale events, you can see the event detail view in [Figure 9-6](#).

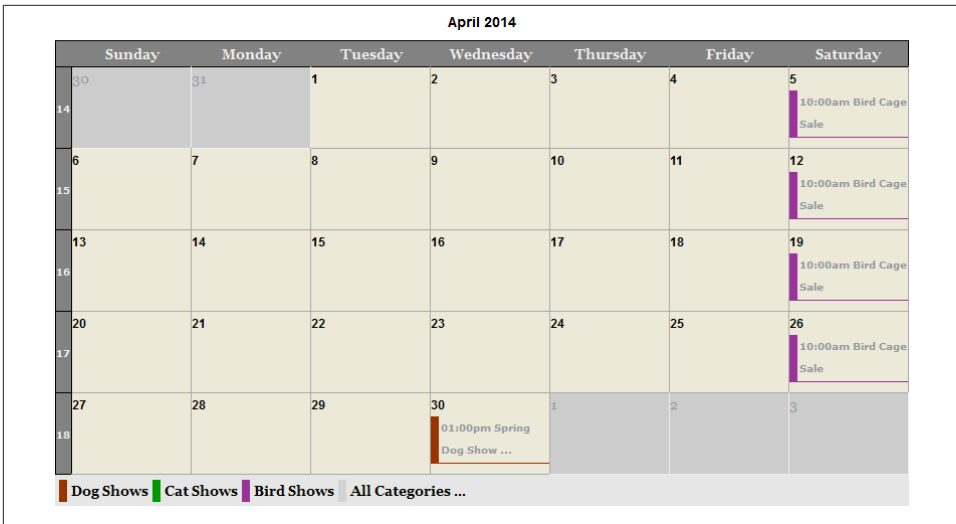


Figure 9-5. Calendar view of a one-time event and a recurring event

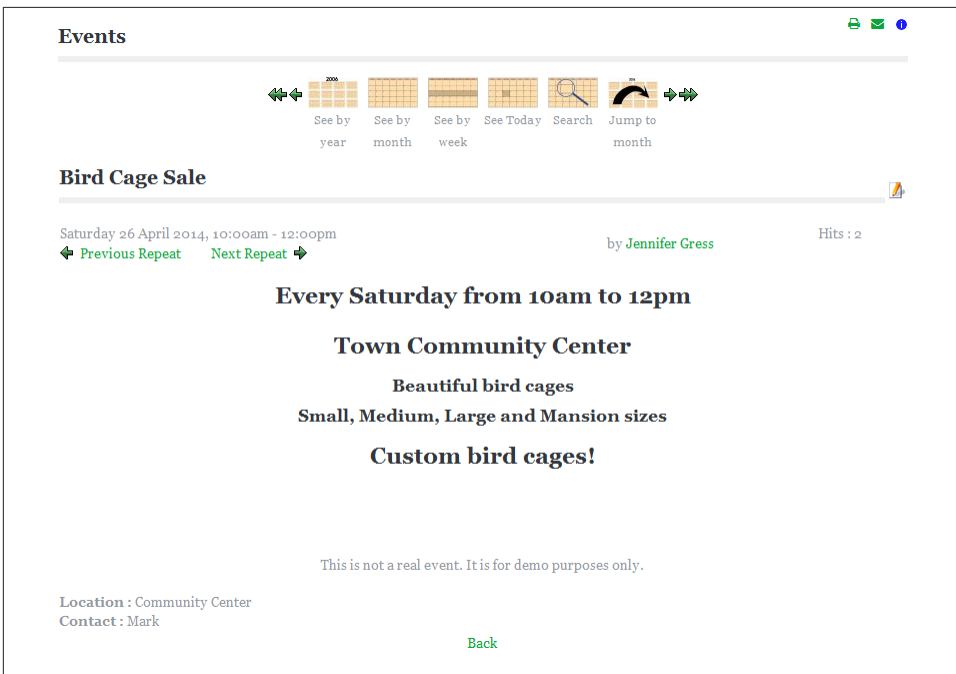


Figure 9-6. A recurring event in JEvents

Follow these steps to set up an event happening on the third Thursday of each month from 6 p.m. to 8 p.m. (see [Figure 9-7](#)):

1. In the “Repeat type” field, select the Monthly radio button.
2. Leave the Repeat Interval set at 1 months.
3. The Repeat Count field will set itself to 999 when you save, or you can just type it in.
4. Click the Repeat Until radio button and click the arrow in the calendar next to the year until it gets to 2020, or whenever you want the repeat to end. Then click the third Thursday of the month there.
5. Ignore By Month Day in this example.
6. Click the By Day radio button and make sure that the Thursday button is selected.
7. In the Which Week(s) field, uncheck the week 1, week 2, week 4, and week 5 buttons leaving ONLY week 3 checked.
8. You should not need to use the “Count back from month end” checkbox.
9. Click Save & Close and check your results from the frontend.

The screenshot shows the configuration settings for a recurring event. The "Start, End, Duration" section includes options for "All day Event or Unspecified time" (unchecked) and "12 Hour" (checked). The "Start date" is 11/21/2013 and the "Start Time" is 06:00 pm. The "End date" is 11/21/2013 and the "End Time" is 08:00 pm. The "Repeat type" is set to "Monthly". The "Repeat Interval" is 1 months, the "Repeat Count" is 999, and the "Repeat Until" date is 11/19/2020. The "By Day" section is selected, with the "T" (Thursday) button highlighted. The "Which Week(s)?" section shows "week 3" selected. The "By Month Day" section is unselected, and the "Count back from month end" checkbox is unchecked.

Figure 9-7. Configuration settings for recurring events every third Thursday of the month

Follow these steps to set up an event happening on the 17th of each month from 1 p.m. to 3 p.m. (see [Figure 9-8](#)):

1. Set “Repeat type” to Monthly.
2. Leave Repeat Interval at 1 months.
3. Repeat Count will set itself to 999 when you save, or you can just type it in.
4. Click the Repeat Until radio button and click the arrow in the calendar next to the year until it gets to 2020, or whenever you want the repeat to end. Then click the 17th of the month there.
5. In the By Month Day field, the date (number of the day) of the event should be listed in the field “Comma separated list.” That is perfect. Just confirm that the number in the field is the date on which you want the recurring event to happen each month.
6. You should not need to use the “Count back from month end” checkbox.
7. Save and check your results from the frontend.

Start, End, Duration

All day Event or Unspecified time 12 Hour

Start date: 11/17/2013 Start Time: 01:00 am pm

End date: 11/17/2013 End Time: 03:00 am pm No specific end time

Repeat type

No Repeat Daily Weekly **Monthly** Yearly

Repeat type

Repeat Interval: 1 months Repeat Count: 1 repeats Repeat Until: 12/17/2020

By Month Day

Comma separated list: 17

Count back from month end

By Day

S M T W T F S

Which Week(s)?

week 1 week 2 week 3 week 4 week 5

Count back from month end

Figure 9-8. Configuration settings for recurring events on the 17th of each month

Adding Events from the Frontend by Visitors/Registered Users

Would you like your visitors or registered users to be able to add events from the frontend of your website? If so, JEvents makes this easy to do.

To add events from the frontend:

1. Log in to the site on the frontend.
2. Navigate to the event calendar.
3. At the bottom of the calendar, you will see a link called “Add an event.” Click on it.
4. Create your event. Examples can be found in the previous three sections of this chapter.
5. If you need to edit an event, click on the orange pencil icon at the top of the right side and edit the event.



You cannot edit the time and date for recurring events from the frontend. If you make a mistake and cannot resolve it from the edit screen, you will have to log in to the backend to resolve it. If you do not have access to the backend, you will need to contact whoever does to assist you.

Add a Module Showing Latest Events on Other Pages of the Site

We want to have a module that lists the latest events, so that people can easily see at a glance what is coming up.

The JEvents package includes such a module, called JEvents Latest Events. We will publish this module in the sidebar-a position, where we currently have a placeholder titled Other Module.

1. Click on Extensions and again on Module Manager.
2. You will see an unpublished module called JEvents Latest Events. Click on the title so you can edit it.
3. Change the Title to Upcoming Events.
4. Select whether you want the title to show or be hidden. We chose Show.
5. Select sidebar-a as the Module Position.
6. Change the Status to published.

7. In the Menu Assignment tab, select the pages you want the module to appear on.

There are a number of options for this module. We recommend you save it without changing any of the other settings. Then take a look at it and decide what you want to change. Only change one setting at a time, and then click Save to view your changes. This way you will know exactly how each setting affects the frontend. Click Save & Close when you are happy with your module. The module on Joomla Pet Center can be seen in [Figure 9-9](#).



Figure 9-9. Latest events module

Having an attractive and effective events calendar can be a great addition to your site. As you can see, it's very simple to add events that your visitors can appreciate and participate in. Next, we'll create a contact form.

Forms are very common on websites. Contact forms are the most popular. Often there is a need for highly customized forms in order to get the information you need from visitors.

In this chapter, we will add a contact form and a donation form with fields to accept payments via PayPal. This will give you a brief idea of what is possible for your website.

Contact Form with Contact Enhanced

Contacts and contact forms are included with Joomla when it installs. The contact form isn't particularly flexible and doesn't always look very pretty. Thus, we are going to use a third-party extension for the Joomla Pet Center contact page/form.

Contact Enhanced is one of many extensions available from Ideal Extensions. Contact Enhanced is a commercial extension and worth every penny for the increased flexibility and ability to customize your contact page by adding extra contact detail fields—and to customize your contact form by adding form fields. With Contact Enhanced, you can put a contact form into a module position, which is helpful on many sites where you may not want the form to take an entire page. The support for Contact Enhanced is fantastic.



The following exercises are not a substitute for the **developer's documentation**. It is recommended that you read the developer's documentation as well.

For Joomla Pet Center, we are going to keep the contact form pretty basic. We will add a field in the form to collect the specific topic that the visitor is contacting us about.

Hands-On Exercise: Installing Contact Enhanced

After purchasing and downloading Contact Enhanced, you will need to unzip the package and extract it so that you can access the installation package required for Joomla 3. Typically this is done by double-clicking on the zipped file and choosing Extract. Save the extracted folder. Inside will be packages for multiple versions of Joomla and a captcha plugin created by Ideal Extensions, called SecurImage.

1. Log in to the backend of Joomla.
2. Back up your site.
3. Click on Extensions and then on Extension Manager.
4. Click the Upload Package File tab.
5. Browse to the folder where your Contact Enhanced packages are located and select the desired zipped package for Joomla 3.x. It will look similar but not identical to `pkg_contactenhanced_3.x_regular_package.zip`.
6. Click the Upload & Install button.

That's it. Now Contact Enhanced is installed. In general, when working with third-party extensions we would configure the extension next. With Contact Enhanced, we find it easier to get the contact created first, see it, and then alter the configuration as needed.

Hands-On Exercise: Creating Beautiful Contact Pages with Forms

The first step in creating a contact page is to create a category for your contact. Any and all contacts must be in a category.

Creating Contact Categories

1. Click on Components and then on Contact Enhanced, and you will reach a very empty dashboard.
2. Note the menu on the left sidebar and the Options button at the right side of the top toolbar, as seen in [Figure 10-1](#).

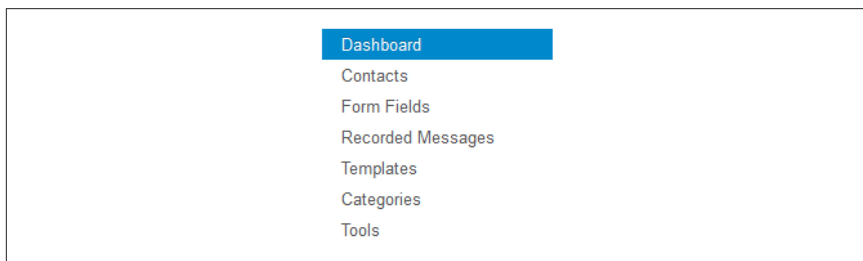


Figure 10-1. Contact Enhanced sidebar menu

3. Click on Categories on the left sidebar menu, as we need to create a category before we can create a contact.
4. Click the New button from the top toolbar.
5. Enter the title of your contact category. You are going to create a category called Contacts.



If you have multiple contacts or types of contacts, you may want to create multiple categories. For example, perhaps you want to create a Board of Directors and an Associates category. If you have multiple locations represented on your site, perhaps you want to add a category for each location.

6. Enter a Description for your category if you wish.
7. Click Save & Close.

Create a Contact

When you click on the Contacts menu item on the left sidebar, there are two choices when creating a new contact:

1. Create a contact.
2. Import Contacts & Categories from Joomla Core Contacts.

The second option is handy if you have tried to get the Joomla Core Contacts to work and found you just needed more functionality than it could provide. All your work and settings will import right into Contact Enhanced. Simply click the link if you would like to import from Joomla Core Contacts.

Create a New Contact

1. Click “Create a contact.”
2. Enter the name of the contact.
3. Leave the Alias field blank, as Joomla will fill it in for you.

New Contact Tab

1. Enter information on the New Contact tab as needed and see how it looks for you. We like to have a lot of flexibility over display and like to use the Extra Contact Detail Fields for all our display information.
2. You must enter an email address in the Email field in order for the contact to save.
3. Verify that the correct category is selected from the drop-down.

Maps Tab

1. If you have entered an address in the New Contact tab, click the “Locate in map” button and it will automatically put your location in the Google map.
2. Enter the Latitude and Longitude if they are different from the address field.
3. You can drag and drop the marker to get the exact location and choose the zoom level.

Miscellaneous Info Tab

The Miscellaneous Info field can be utilized for any purpose. It does require a Language Override to override the title of the field. See “[Language Overrides](#)” on page 239 for how to add a Language Override to your site.

Sidebar Tab

Contact Enhanced gives you the ability to have a sidebar on your contact form without having to create an additional sidebar module position in your template. This is nice if you would like a column-like look on your contact page. The width and position of the sidebar can be set in the Contact Form tab. Enter the information you would like in your sidebar just as you would any article. The sidebar displays next to the form.

Extra Contact Detail Fields Tab

Extra Contact Detail Fields are very handy for adding information that doesn't fit into the default fields. These can be for anything. The labels can be changed via the Language Manager Overrides (see “[Language Overrides](#)” on page 239). Using an Extra Contact Detail Field for everything on your contact page above the form is a simple way to get things to display exactly how you want them to.

Display, Contact Form, and Template Tabs

All of these settings pull from the Options button, which we haven't addressed yet. If you have multiple forms, you will want to manage the settings accessed via the Options button before controlling the display for Contact Forms from their tabs. See “[Hands-On Exercise: Configuring Contact Enhanced](#)” on page 185 or refer to the developer's documentation.

Integrations Tab

Contact Enhanced offers integrations with other software. We will not be addressing this tab. However, it would be good for you to take a look, so that as your business grows, you know how you can further take advantage of your existing technology.

In **Figure 10-2** we use the fields in the Edit Contact tab, including the Image field with a koala bear. We change the Setting field on the Icons tab in the Global Options to Text for this view. There is no extra field in use.

Contact Joomla Pet Center

These are fields below displaying from the Edit Contact Fields

Address:
123 Main Street
San Francisco
CA


Email: helen@joomlapetcenter.com

Phone: 555-1212


Fields marked with * are required

Name *

Email *



This is a sidebar! Anything can go in a sidebar just like any other article.



Right sidebar at 40% - maybe. ;)

This is about:

- Social Network
- Adoption
- Events
- Specific Dog Question
- Specific Cat Question

Figure 10-2. Display of contact form when using fields for the contact

In **Figure 10-3**, we add all the contact data to one Extra Contact Detail Field. Everything above the form is in one Extra Contact Detail Field. We have not shown the email address required in the Edit Contact tab.

Contact Joomla Pet Center

Using an extra field, we can customize every bit of our contact page. Everything in bold and the image are done in one Extra Field.

Phone: 555-1212

Email: helen@joomlapetcenter.com

Address:

123 Main Street
San Francisco, CA

Facebook link

We look forward to speaking with you. Use the information above or the form located below to reach us! Thanks!

Fields marked with * are required

Name *


Email *

This is about:


Social Network

Adoption

Events



This is a sidebar! Anything can go in a sidebar just like any other article.



Right sidebar at 40% - maybe. ;)

Figure 10-3. Display of contact form when using one Extra Contact Detail Field

Hands-On Exercise: Adding a Contact Form to the Menu

We need to add the contact form to the menu so we can see what we want to change.

1. Click on Menus and then on Main Menu.
2. Click the Contact menu item that was created as a Text Separator menu item type.
3. Click the Menu Item Type Select button.
4. Click the Contact Enhanced accordion heading and select the Single Contact Form menu item type.
5. Click the Select button next to the new Select Contact field and select the contact you wish to display.
6. Click Save & Close.
7. Review your Contact from the frontend.

How does yours look? What about ours? Not bad, but not super. Let's get it fixed up by addressing the configuration.

Hands-On Exercise: Configuring Contact Enhanced

Click on Components and then on Contact Enhanced. Click the Options button on the right side of the top toolbar. Here you see a ton of options for many parameters to display your forms. Here's what we will change from the defaults:

Single Contact Tab

1. Change Email to "Show email as a mailto link."
2. Set Country to Hide.
3. Set Extra Contact Detail Field 1 to "Show, but hide label."

Icons Tab

- Change the Settings to None. You can load custom icons to show instead of the default icons that load with Joomla.

List Tab

- Set the Extra Contact Detail Field 1 to Show.

Contact Form Tab

1. Set the Email Sender to Contact. This will enable you to reply directly to the visitor who submitted the form by clicking Reply in your email account.
2. The Redirect field allows you to add a page to which to redirect the visitor after submitting the form. Only use this field if the value will be the same for each of your contacts/forms. If you intend to have a different redirect page for each contact/form, then use the Redirect field within each of the individual contact's parameters.

Maps Tab

- Set Show Map to "After the form." You may want to put the map in the sidebar.

Now our form looks pretty good. We want to do a few more things, though.

Hands-On Exercise: Adding a Contact Form to an Article

If you would like to add the form to an article, you can do that using the plugin Content - Contact Enhanced Form. To make it even easier, do this:

1. Click on Extensions and then on Plugin Manager.
2. Look for the plugin Button - Contact Enhanced Form and make sure it is enabled.
3. Go to the article into which you want to add the form.

4. Put your cursor where you want to insert the form.
5. Click the button “Add CE form” below the description area.
6. Select the contact you desire, and it will insert the form into the article.

You can get very specific with this syntax on what you want to appear in the article using the tag. Check out the Content - Contact Enhanced Form plugin and click on the Description tab for all the details and options that are available in an article.

Hands-On Exercise: Add a Form Field to the Contact Form

We want to get more specifics from our visitors when they submit a contact form. In addition to the standard fields, we will add a field titled “This is about” and give them a series of checkboxes to select. We are choosing checkboxes instead of a drop-down because it’s a little easier for visitors browsing from a mobile device to navigate.

1. From the Contact Enhanced dashboard, click on Form Fields from the left sidebar menu.
2. Click New.
3. Enter the name of the field.
4. Select the field type. We will select Checkbox.
5. Click the Save button from the top toolbar.
6. In the Value field, we will add the options we want people to be able to check. Ours will look like Social Network|Events|Specific Dog Question|Specific Cat Question|Specific Reptile Question|Other.
7. Add a Tooltip in the Tooltip tab.
8. Add any Attributes into the Attribute tab.



Attributes can be any HTML attribute. For example, if you want to make the fields wider, you can add `style="width:90%"`. We have done this with the Names Form Field as an example on the Joomla Pet Center Contact form.

9. We’ll set the General and Checkbox parameter tabs to how we want them to display. You can select the number of columns and the custom field’s container width in these tabs.
10. Save the Form Field and view the form from the frontend.

We want this form field to appear before our subject line, so we'll go back to the Form Fields manager and drag the "This is about" field to above the subject field. The custom fields reorder exactly the same way we order articles, categories, and modules.

Depending on the template you are using, you may need to change the Width type in both the General Parameters tab and the Checkbox Parameters tab (or whatever type of custom field you are adding) from Bootstrap to Percentage.

In our case, because our template is blocking some bootstrap files, we also need to add some custom CSS to the custom fields so that our sidebar appears, as our template was blocking it. We did this using the following steps:

1. Add a new form field with the type CSS Code.
2. Save the form field.
3. Add this custom code:

```
.row-fluid{width:100%;zoom:1}
.row-fluid:before,.row-fluid:after{display:table;line-height:0;content:""}
.row-fluid:after{clear:both}
.row-fluid [class*=span]{display:block;float:left;width:100%;
min-height:30px;
margin-left:2.07446808511%;-webkit-box-sizing:border-box;
-moz-box-sizing:
border-box;box-sizing:border-box}
.row-fluid [class*=span]:first-child{margin-left:0}
.row-fluid .controls-row [class*=span] + [class*=span]
{margin-left:2.12765957447%}
.row-fluid .span12{width:99.9468085106%}
.row-fluid .span11{width:91.4361702128%}
.row-fluid .span10{width:82.9255319149%}
.row-fluid .span9{width:74.414893617%}
.row-fluid .span8{width:65.9042553191%}
.row-fluid .span7{width:57.3936170213%}
.row-fluid .span6{width:48.8829787234%}
.row-fluid .span5{width:40.3723404255%}
.row-fluid .span4{width:31.8617021277%}
.row-fluid .span3{width:23.3510638298%}
.row-fluid .span2{width:14.8404255319%}
.row-fluid .span1{width:6.32978723404%}
```

4. Leave the rest of the parameters at the defaults and click Save & Close.
5. Refresh and test it from the frontend.

You may add fields for very useful items like dates, free-text boxes, custom PHP and CSS, and integration with Constant Contact, MailChimp, and AcyMailing. Contact Enhanced also integrates with Salesforce. See all custom field options and their descriptions on the [Ideal Extensions website](#). This makes Contact Enhanced very flexible to use.

Hands-On Exercise: Adding Captcha to the Form

Joomla comes with Google's ReCaptcha integrated. Sadly, this doesn't always keep spammers out and can often be difficult for visitors to read.

The Contact Enhanced component comes with a different captcha plugin called SecurImage. It's in the same package as Contact Enhanced, and we'll install it the same way through the Extension Manager.

Here are the steps:

1. Install SecurImage captcha through the Extension Manager.
2. Click on Components and again on Contact Enhanced.
3. Click on the Options button.
4. Click the Contact Form tab.
5. Change the Captcha Plugin to Captcha-SecurImage.
6. Click Save & Close.
7. Check it from the frontend of your form.

This is a highly configurable captcha plugin. To change its appearance, go to the Plugin Manager and click on Captcha - SecurImage. Here you can alter color, how many lines appear, if you want it to display a math problem, etc. Remember, change one thing at a time and check each change from the frontend. Because Joomla Pet Center gets a lot of traffic and we really don't want anyone emailing through our forms, we are going to make it very difficult to get through the captcha.

You can use SecurImage in other forms or other third-party extensions on your site by setting the captcha default in Global Configuration.

Testing Your Contact Form

Next, make sure you test your form by filling it in and submitting it. The submitter will receive a copy of the email if they select the box. The email address assigned in the contact will receive the form. You may add email addresses to receive the form results in the Contact Form tab. The email received looks like [Figure 10-4](#), which is the Plain Text email. You can also configure Contact Enhanced to send HTML emails. On your email, the email address and IP address will appear. They have been removed from this screen capture.

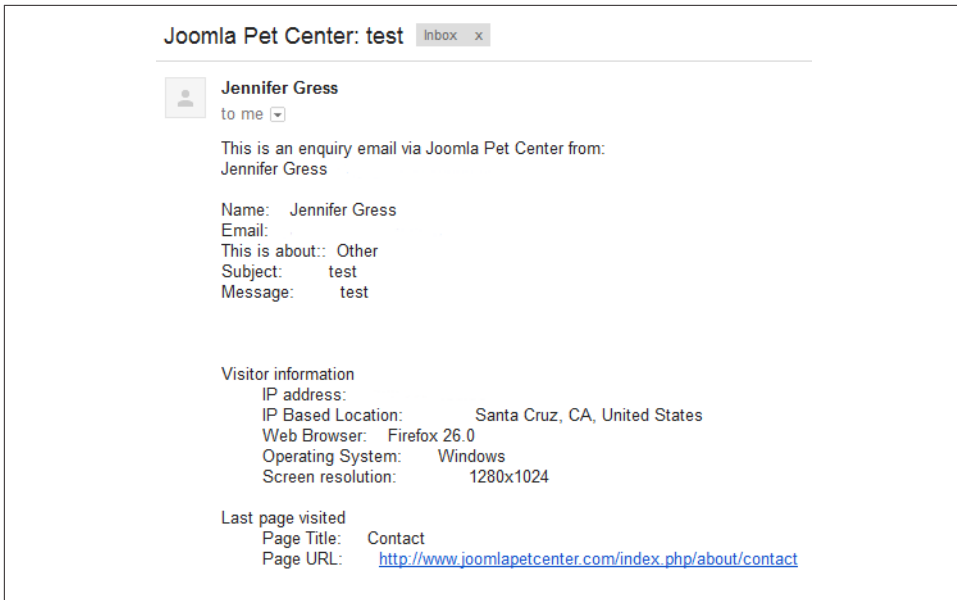


Figure 10-4. Email received when a visitor submits a form

You may view recorded messages in the backend of Joomla in the Contact Enhanced dashboard and reply to them from there if desired.

It is easy to make very customized contact forms using Contact Enhanced. Jenn often uses them as regular forms. There are a few things that would require a different forms extension, so we'll go forward and investigate.

There is even more you can do with Contact Enhanced, including:

- Google Spreadsheet integration
- QR code integration
- Salesforce integration
- Send a copy of an email to a specific user group
- Display menu items in many styles
- Frontend editing of contact information forms
- Use with Joomla's multilingual features

Donation Form with RSForm Pro

There are times that you may need to use a third-party extension for other types of forms. Thus, we are briefly going to share **RSFormPro** by RSJoomla. RSForm Pro is also a paid extension that costs about the same as Contact Enhanced. There are some “free” form extensions out there, but many of them require the presence of “link-backs” to the developer site, and Jenn just doesn’t like that.

There are many aspects to RSForm Pro, as it is highly customizable. In this chapter, we will tell you what aspects of the configuration you should address. We will not give you step-by-step instructions for each aspect. RSForm Pro has very good **documentation** and support. Read the documentation.

RSForm Pro has an incredible features list, including PHP manipulation, accepting PayPal payments, SalesForce integration, vTiger integration, and much more. Check out **RSForm Pro Features and Benefits** to see more that can be done with RSForm Pro.

Joomla Pet Center doesn’t really need another form, so we’re going to do a very short form with a PayPal button, since that is a common need for sites. We will pretend that Joomla Pet Center accepts donations and create a form for that. We’ll get right into it.

Installing RSForm

Before purchasing RSForm, you will want to download and install the RSTester to make sure that your server is compatible with its extensions. If it all checks out fine, purchase the extension. After purchasing RSForm Pro, download the proper version and install it via the Extension Manager after making a backup.

Configuring RSForm

1. Click on Extensions and then on RSForm Pro to get to the dashboard.
2. Click on Configuration on the left sidebar menu.
3. Click on the Update tab and enter your license code in the field, so you can get extension updates.
4. Click Save & Close.

Installing Plugins and Modules for RSForm Pro

Unlike Contact Enhanced, each plugin for RSForm needs to be individually installed.

1. Right-click on Plugins from the RSForm dashboard and choose “Open in a new tab”—or it will take over your backend and take you to the RSJoomla website.
2. Download any of the modules and plugins you will require.

3. Install applicable modules and plugins via the Extension Manager just like you did with the extension.
4. Go to RSForm Configuration and click on the PayPal tab.
5. Fill in the PayPal tab with the appropriate information. Ours looks like [Figure 10-5](#). Leave the Tax Type field blank for no tax.
6. Click Save & Close.

The screenshot displays the PayPal configuration settings for RSForm Pro. At the top, there is a navigation bar with tabs for 'Settings', 'Update', 'Calculations', 'Payment', and 'PayPal'. The 'PayPal' tab is currently selected. Below the navigation bar, the configuration fields are as follows:

- PayPal E-mail Account:** helen@joomlapetcenter.com
- Return URL:** http://www.joomlapetcenter.com
- Cancel URL:** http://www.joomlapetcenter.com
- Live Mode:** Radio buttons for 'No' (selected) and 'Yes'.
- Tax Type:** Radio buttons for 'Percent (%)' and 'Fixed Rate' (selected).
- Tax Value:** An empty input field.
- Language code:** US

Figure 10-5. PayPal configuration for RSForm Pro

Creating a Donation Form with PayPal Payment Integration

There are two example forms that install with RSForm Pro. Definitely check them out, as each field can be copied to another form. We suggest you keep these two example forms as they are for reference—just unpublish them so that they aren't accessible from the frontend.

Now we'll create the form with a PayPal payment field. The basic steps are:

1. Make sure you read the [documentation for the PayPal plugin](#).
2. Make sure you have downloaded and installed the PayPal plugin from RSJoomla.
3. Make sure the plugins are enabled in the Plugin Manager.
4. Create a new form from Manage Forms and use the wizard to set up your new form.

We chose the simple contact form during our wizard. Now we will fine-tune it.

We want to keep the Name, Email, and Send fields. We will delete the Subject and Message fields by clicking the red Delete icon next to each of those fields. We will add fields for Header, Address, Phone, Captcha, and PayPal, which is a series of fields. See [Figure 10-6](#) to view the fields added from the backend. See RSForm Pro documentation on [setting up the PayPal fields](#).

Name	Caption	Preview	Edit	Delete	Ordering	Published	Required	Validation Rule
Header		Simply submit the form below to donate to Joomla Pet Center. (Please don't - this is only a demo.)			1	<input checked="" type="checkbox"/>	-	-
Name	Your Name	<input type="text"/>			2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
Email	Your Email	<input type="text"/>			3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	email
Address	Please enter your street address, city, state and zip code	<input type="text"/>			4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
Phone Number	Phone Number	<input type="text"/>			5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	phonenummer
Donate	Amount of Donation	<input type="text"/>			6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
Payment type	Select Payment Method	PayPal Payment			7	<input checked="" type="checkbox"/>	-	-
PayPal	PayPal Payment	<input type="text"/>			8	<input checked="" type="checkbox"/>	-	-
Total	Total	0.00 USD			9	<input checked="" type="checkbox"/>	-	-
Captcha	Enter the code to show you're human	<input type="text"/>			10	<input checked="" type="checkbox"/>	-	-
Submit Donation	<input type="button" value="Submit Donation"/>				11	<input checked="" type="checkbox"/>	-	-

Figure 10-6. RSForm fields for the donation form

Next you will need to address the properties of the form so that the emails that go to the visitor and the administrator of the form give the desired information.

1. From the form edit mode, click the Properties tab.
2. Click the User Emails menu item on the left sidebar to edit the email sent to the visitor/user.
3. Click the button Toggle Quick Add on the top right.
4. Click Edit the Email Text, which will open the email text in a new window.
5. Copy the desired caption and value tags from the Quick Add options on the right and paste them into your Email Text window.
6. Format them how you want them to look. Make sure you test the form and make sure it isn't too small and is legible. On the backend, ours looks like [Figure 10-7](#).

```
Thank you for your donation. We appreciate your contribution!  
{Name:caption}: {Name:value}  
{Email:caption}: {Email:value}  
{Address:caption}: {Address:value}  
{Phone Number:caption}: {Phone Number:value}  
{Donate:caption}: {Donate:value}  
{Payment type:caption}: {Payment type:value}  
{Total:caption}: {Total:value}
```

Figure 10-7. Values to be included in emails sent to the visitor and the admin

7. Copy the email text and paste it into the Admin Emails email text. Add or remove text and fields as desired. This way you don't have to format both of them which can be time-consuming.
8. Save both of these emails.
9. Save & Close the form itself.

A glance in the Properties tab shows that there are obviously many, many things you can do with these forms. Right now, we want to see our form and test it. We'll move on and add it to a menu item so we can check it out.

Adding a Form to the Menu

1. Click on Menus and then on Main Menu.
2. Click on the Forms menu item and click the Select button for Menu Item Type.
3. Click on RSForm Pro.
4. Change the menu item type to Form.
5. You will see a new field labeled Form appear under Menu Item Type.
6. Select your form from the drop-down.
7. Click Save.
8. Check the form from the frontend.
9. Test the form with your own email address and make sure the emails you altered look how you want them to.

Our form looks fine (Figure 10-8). It might be nice to add a PayPal icon to the form, which can be accomplished by adding an image field. We grabbed PayPal's source code from its [approved logo page](#) and entered the HTML in a free-text form field in RSForm Pro.

Donate to Joomla Pet Center

Simply submit the form below to donate to Joomla Pet Ce

Your Name (*)

Your Email (*)

Please enter your street address, city, state and zip code (*)

Phone Number (*)

Amount of Donation (*)

Select Payment Method

Total 0.00 USD

Enter the code to show you're human (*)

SECURE PAYMENTS BY **PayPal**[™]




Figure 10-8. Donation form from the frontend

We'll leave it up to you to investigate the properties, fields, and other functionality of RSForm Pro beyond this brief example. RSForm Pro makes so much possible using forms on your Joomla website.

Building an Online Store

An online store using Joomla is a great way to get your products out into the world and make money. Stores can offer physical products or virtual products available for download only. Payments can be taken via credit card with a payment gateway, or hosted solutions like PayPal or Google Checkout can be used. Benefits to using PayPal or Google Checkout are that you don't have to be concerned with store security, as you'll see later on in this chapter.

Stores are almost always more complex to configure than you realize going into it. While YouTube may have a video showing you how to set up a store in a few hours, it rarely is as simple as that. Planning is required to set up your store. Thinking ahead is also required. We do not yet know what will be necessary when going from Joomla 3 to Joomla 4. We might need to migrate third-party extensions. If you know you don't want to take on migrating your store in the future, you may want to think about utilizing a hosted shopping cart like Shopify, AmeriCommerce, or MagentoGo. When you choose a hosted solution, typically security issues such as those discussed in [“Notes About Security, SSL, and PCI Compliance” on page 206](#) are taken care of for you.

If your website is selling products (or subscriptions), you will need to budget for expenses. Online stores like Amazon or eBay have IT staff/programmers employed to run, manage, and administer their online stores. Even “simple” products can require the ongoing expense of working with trusted programmers. If you decide to hire a freelancer or contract help, they may or may not follow the best practices or rules in the process of your online store project. This could create pain down the road around upgrades and/or security.

That being said, Joomla makes it much easier to build online stores at a lower cost by using existing third-party extensions that accomplish much that is necessary for the online store owner. Even if a third-party extension doesn't do exactly what you want out of the box, you can often find a reputable Joomla integrator to extend those third-party extensions. Yes, it may cost you, yet it is less than it would be to start from scratch.

We are going to show you the basics of setting up an online store for Joomla Pet Center using the third-party extension **HikaShop**. HikaShop has a free version called HikaShop Starter and two “paid” versions: Essential and Business. You can compare versions on the HikaShop website. The starter version of HikaShop requires that visitors register as users on the Joomla site in order to check out. If you don’t want people to register in order to check out, you will want to go for one of the paid versions.

There are good reasons for using a paid version of a shopping cart for your store:

- Features
- Support
- Updates

In planning, you will need to consider several things for your online store. Here are some questions to ask yourself:

1. Will you offer physical products that need to be shipped?
2. How will shipping work? Cost? Flat fee? Based on weight? Are there complex shipping configurations?
3. How will tax work? Every country is different in how it handles taxes. You will need to check with your accountant or local government to determine how your tax configuration will need to be set up.
4. Will you offer virtual products?
5. How will you control the delivery of that virtual product to your customer?
6. Will you require visitors to register and log in to the system in order to make a purchase?
7. What types of payment options will you offer?
8. If you will accept credit cards without the aid of a service like PayPal, do you have a merchant account set up at your bank? Do you have a payment gateway like Authorize.net?
9. If you will accept PayPal or Google Checkout or something more common in your region, do you have that account set up properly?
10. Will you have images for your products?
11. What attributes will those products have (size, color, etc.)?
12. Are there custom options that you offer that might affect the flow or the extension you use?

The Joomla Pet Center store will be using the “free” starter version of HikaShop. We don’t want people to buy any products. Nor do we want anyone to register or check out.

As a result, if you were to take a look at Joomla Pet Center and attempt to check out, you won't be able to. This is on purpose. Joomla Pet Center will simply use PayPal as a payment option.



The following hands-on exercises are not a substitute for thoroughly reading the **developer's documentation**, which is very good.

Hands-On Exercise: Installing HikaShop

With our planning done, we are now ready to install HikaShop on our Joomla website.

1. Download the applicable package for HikaShop from the website.
2. Back up your site.
3. Install the extension via Upload Package File in the Extension Manager.
4. You will automatically be taken to the HikaShop Installation Assistant, a delightful walkthrough of some of the main configuration options of HikaShop.
5. Shop Access determines how the frontend of HikaShop looks on your website. We are choosing the menu item for products.
6. For Products Layout, choose whether you want your products to display in a grid, list, or table. We are choosing a grid.
7. In the Location field, enter your country, state, and address.
8. For the Main Parameters, enter your main currency, tax name, and rate. We are choosing USD \$ for the currency, Tax for the tax name (make it something that describes the tax so you know what it is), and 8.75 for the rate. We may need to change these later in System→Taxes→Manage Rates button. There you would create a new rate, unpublish the old rate, and edit your tax rule to choose the new rate.
9. Enter your PayPal email address in the “PayPal configuration” field.
10. Select the “Product type” you will be selling on your site. The options are “Virtual goods,” “Shippable goods,” or Both.
11. Click the “Save & go create your first product!” button.

This takes you to a new product screen. Close out of it. We aren't quite ready to add a product.

Hands-On Exercise: Configuring HikaShop

We need to make a few refinements to our configuration after the walkthrough we just completed.

1. Click on the HikaShop menus System and again on Configuration.
2. You'll want to confirm each of these settings with the [configuration documentation from HikaShop](#) and change whatever needs to be changed. We changed the Tax section by changing our "Main tax zone" to the United States of America, and the "Show taxed prices" to "Display both" and to "Apply discounts" before taxes.
3. Note that there are tabs across the top as seen in [Figure 11-1](#). Check them all.
4. Click Save & Close when complete. It's good to know where these settings are, as you will probably need to revisit them as you set up your store.

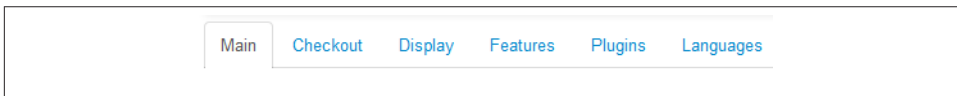


Figure 11-1. Tabs of the HikaShop configuration

Hands-On Exercise: Setting Up Payments, Shipping, and Taxes

While many people want to jump right into creating their products, there are three very important aspects of your store: payments, shipping, and taxes. All three must be in place in order for your store to function and sell products. Let's start with Payments.

Payments

We are only going to use PayPal so our configuration is simple. Using PayPal Pro will keep the transaction on your site rather than taking visitors off to PayPal to complete their transaction. PayPal Pro needs to be a Business-type account from PayPal.

If you want to use more than one payment method, go for it. Many people offer an option of either using a credit card on the site or going off to PayPal. This may or may not increase your sales. Both PayPal and taking credit cards have fees associated with them through either PayPal, the bank, and/or the gateway. Know that a portion of your sales will go toward these services.

1. Click HikaShop's System and again on "Payment methods."
2. PayPal is already entered because we set it up in the walkthrough. Clicking on the title will allow you to set up even more configuration options for this payment type. Definitely do this, as you will want to verify your currency type at the very least. Again, checking the [HikaShop Documentation for PayPal](#) is key to your success.



From any screen in the HikaShop extension, you can click the Help button and your help will show up in a handy split screen, making it simple to read and make changes at the same time.

3. Click Save & Close when complete.

To add a new payment option:

1. Create a new payment option by clicking the New button.
2. Select one of the plugin options and enter all your applicable data. Use the documentation from HikaShop by clicking the Help button from any screen.
3. Click Save & Close when complete.

Zones

Zones are utilized for both shipping and tax configuration. By clicking on System and then on Zones, you will see a huge list of zones. Within each country zone are subzones with their states. From the main Zones screen, you can get documentation by clicking the Help button.

If you want a zone with all of Europe, you can use a default zone called Europe, which already has all the European countries added to it.

You could do the same if you have the same shipping or tax rule for the Americas. Create a new zone called Americas and then add each of the countries to it.

Shipping

You will want to think about your shipping fees. For some, a flat fee based on the shipping or billing address may be fine. Others with awkward or complex shipping parameters will need to do more preparation and configuring. HikaShop has a number of plugins for shipping, which can be found through its documentation.

Joomla Pet Center will have two shipping options:

1. National \$5.00
2. International \$15.00

To get started, simply:

1. Click on System and again on “Shipping methods.”
2. Click the New button.
3. Select the plugin you would like to use for your shipping method. We are choosing the Manual Shipping Plugin.
4. Make it Published.
5. Name it. We are naming ours National Shipping and International Shipping.
6. Enter the amount of the shipping in the Price field and select \$ USD from the drop-down.
7. Edit other fields as desired.
8. Click the box next to Restrictions, which will open an additional set of fields for you to enter your rules.
9. Assign a Zone by clicking the Edit icon and selecting the appropriate zone, as shown in [Figure 11-2](#).



Figure 11-2. Add a zone to a shipping method

10. Fill in any of the other fields you desire.
11. Click Save & Close.
12. Repeat for another shipping method.

If you are using the USPS, UPS, or FedEx shipping plugins, you must enter your account information so that HikaShop can pull the shipping calculations from those sources. You must also specify the weight and dimensions, so that the shipping entities can calculate the rates for the products.

HikaShop has pretty flexible shipping parameters. See what the owner/lead developer has to say:

If you want different shipping prices based on the location of the user, you can create several instances of the plugin with different “zone” restrictions and different prices. If you want different prices based on both the location and the weight of the products, you can create one instance of the plugin per combination of zone and weight range with the corresponding price in each. The system will then filter out the shipping methods that don’t match on the checkout and only display the relevant(s) one(s).

Alternatively, you can also create one manual shipping method with the “shipping price per product” option turned on. Then, in each product, you’ll be able to set the shipping price for the product and the system will sum the shipping prices of all the products in the cart for the shipping method.

On top of that, you can have combinations of all of these shipping method settings (some shop owners do have complex requirements) to be able to have almost any kind of shipping method selection on the checkout. I’m not even talking about HikaMarket Multi-vendor, which allows you to have different shipping methods for different vendors *and* have different shipping method selections for different vendors on the checkout (that’s something that few multivendor systems allow for).

— Nicolas Claverie
HikaShop owner/lead developer

Tax

We need to charge sales tax in the state of California only. To set this up, we will:

1. Click on System and again on Taxes.
2. Click on the “Manage tax categories” button.
3. Click on New and add a new category. We will name ours California Sales Tax.
4. Click on System and again on Taxes.
5. Click on New and create a new tax rule.
6. Select your new product tax category from the drop-down.
7. Make sure your rate is selected.
8. Select “Cumulative tax” and the post code if required.
9. Click the edit icon to add the zone of California by filtering by state and entering California into the filter.
10. Click OK.
11. Select the customer type if desired.
12. Change Published to Yes.

Hands-On Exercise: Adding Categories, Products, and Attributes

We need to have categories for the products to go into. We're going to have just a few categories for Joomla Pet Center for dog, cat, and reptile accessories.

To add a new category, from the HikaShop dashboard/menu:

1. Click Products and then Categories.
2. Click the New button.
3. Enter the name of the category.
4. Click Save & New.
5. Repeat until you have added all your categories.
6. Click Save & Close.

To add a new product, from the HikaShop dashboard/menu:

1. Click Products and then Add a Product.
2. Enter the name of your product.
3. Add a product category by clicking the Add button in the Categories box.
4. Enter the product description in the field below the editor.
5. If you have related products, they can be added in the "Related products" box.
6. We will address Characteristics in the next section.
7. Enter the price in the Prices box and any minimum quantity you may want to add.
8. Add your images into the Images box.
9. Add files to the Files box if you have downloadable files as part of the product.
10. To the left of the Files box, select your Product tax category from the drop-down. For us, we select California Sales Tax.
11. Look at each of the additional fields and alter what is required.
12. Click Save & Close.

To add characteristics (also known as attributes or variants) to a product:

1. Click on Products and then on Characteristics.
2. Click the New button.
3. Enter the Name of the Characteristic, such as **Size**.
4. On the right in the Values box, click the Add button.

5. Enter the size itself, such as **Small**.
6. Click OK.
7. Repeat until you have added all the variants of your characteristic.
8. Order the characteristics how you want them to appear on your product page.
9. Click Save & Close or Save & New to create a new characteristic.

To add the characteristic to a product:

1. From inside the product, scroll down to the Characteristics box.
2. Click the Add button.
3. Select the characteristic you want associated with this product.
4. Click OK.
5. Repeat for as many characteristics that you want to add.
6. Click Save & Close.

If you would like to manage the variants of a characteristic by product, use the Manage Variants button to override the main product information for each variant (for example, having a different price per variant).

Process orders from the Orders drop-down and create discount codes from the Discounts drop-down. Don't forget about the Help button on every screen and visit HikaShop's site for more documentation and a support forum.



If you would like to do A/B testing to see if one product image performs better than another, there is a great extension that can help you. **Google Website Optimizer** helps you put together A/B tests with Google to determine what gets your store the most sales.

Adding the Shop to the Menu

If you didn't get a menu item created during the initial walkthrough, simply go to your main menu and add one. Select from the options and check them all out.

When we installed HikaShop, an additional menu was created called "HikaShop default menus." If you would like that menu to appear, you'll need to create a module for it.

1. Click on Extensions and then on Module Manager.
2. Click on New.
3. Select Menu from the module types.
4. Enter a title and whether you want it to show or not.

5. Select a module position.
6. Choose Menu Assignment and select the option to only show on the Store menu item.

Now that we can see our store, we need to test all functions. We've added a product to our cart after selecting our characteristics. Enter a billing address. Make sure that based on that billing address (or shipping address if that is how your cart calculates shipping and tax), the correct shipping and tax appear. You can set up multiple billing and shipping addresses by clicking the New button from the checkout screen.

Indeed, when an Australia address is entered, the shipping method for International Shipping appears, as seen in [Figure 11-3](#). No sales tax is added to the order, as shown in [Figure 11-4](#). When a California address is entered, then the National Shipping option appears, as seen in [Figure 11-5](#). Sales tax is added to the order, as seen in [Figure 11-6](#).

The screenshot shows a checkout form with the following elements:

- Billing address** section with two radio button options:
 - Ms Jennifer Gress
who cares
4067 brisbane Queensland
Australia
Telephone: 831-227-3522
 - Ms Jennifer Gress
123 Main Street
95060 Santa Cruz California
United States of America
Telephone: 831-227-3522
- A green **NEW** button.
- Shipping method** section with one radio button option:
 - International Shipping \$15.00**

Figure 11-3. Australian address charges the international shipping rate

	Total	\$10.00
	Shipping	\$15.00
	Final total	\$25.00

You chose the shipping method: **International Shipping**

You chose the payment method: **PayPal**

FINISH

Figure 11-4. No sales tax charged to addresses outside of California

Billing address

- Ms Jennifer Gress
 who cares
 4067 brisbane Queensland
 Australia
 Telephone: 831-227-3522
- Ms Jennifer Gress
 123 Main Street
 95060 Santa Cruz California
 United States of America
 Telephone: 831-227-3522

NEW

Shipping method

- National Shipping** \$5.00

Figure 11-5. California address charges the national shipping rate

Total	\$10.00
Shipping	\$5.00
Taxes	\$0.88
Final total	\$15.88

You chose the shipping method: **National Shipping**

You chose the payment method: **PayPal**

FINISH

Figure 11-6. Sales tax is charged to California addresses

Adding HikaShop-Specific Modules

HikaShop installed with several modules. They are listed in the Module Manager and are unpublished.

We are going to publish a couple. We're going to publish the HikaShop Cart Module and the HikaShop Random Products modules to our sidebar.

Just go in and edit the settings and publish.

Notes About Security, SSL, and PCI Compliance

Keeping your online store and your customer's sensitive data safe is of utmost importance. It needs to be the first and most constant thing on your mind. Many thanks to Matt Simonsen (one of our technical reviewers; read about him in [“About the Technical Reviewers” on page xix](#)) for his assistance and expertise on this topic.

Make these tasks a priority in your security routine:

- Keep all scripts patched and up to date. That means Joomla and all third-party extensions.
- Use trusted third-party extensions. Tips on choosing third-party extensions are found in [Appendix C](#).
- Use strong passwords and change, regularly. We know it's a pain, but it increases good security.
- Choose a reputable host with secure and encrypted protocols. This means using SSH or SFTP and not regular FTP.
- Use a third party to regularly scan and audit your site.
- Use security-based extensions like those discussed in [Chapter 14](#).

- Consider adding `mod_security` (discussed in this chapter), or a cloud security solution like **CloudFlare** in front of your hosting company.
- Keep minimal services exposed by firewalling all nonpublic services (talk to your host about this).
- Regularly review server logs.
- Larger companies have maximum security because of multiple networks with dedicated database server(s) and firewalls as well as separate applications on HTTP servers.

Below are several security terms, definitions, and tips for your online store and server environment:

SSL (Secure Sockets Layer)

SSL is a protocol for encrypting information over the Internet. The visible manifestation of this is the addition of the letter *S* in the URL of at least the checkout process pages of your website. You will see `https://www.yourdomain.com` instead of plain `http://`. This encrypts the data submitted by your visitor/shopper.

If you take credit cards on your site or are utilizing PayPal Pro, which keeps visitors on your site throughout the transaction process, you need to have an SSL certificate. You can get SSL certificates from your host or a third party.



Unless you're also using encrypted protocols, using SSL can give you a false sense of security. Still, you need it in combination with other security measures.

ModSecurity

ModSecurity (`mod_security`) is an Apache module that helps keep your server secure. It is not typically something installed by the average user. Rather, it is utilized and managed by your host to help protect your server (and thus your site) from intrusions and vulnerabilities. You will want to contact your host and make sure they have the ability to use ModSecurity to help keep your customers, information private. Many hosts have the ability to use ModSecurity as well as other server-hardening techniques to help keep stores and their visitors secure. Ask about it.



`mod_security` can break many applications and/or may require carefully tuned rulesets to be effective. If you use `mod_security` and have trouble with extensions, disable it before discussing with vendor support for the affected third-party extension, as `mod_security` could be the cause of your issues.

PCI Compliance

Payment Card Industry Data Security Standard (PCI DSS) is mostly used in the US and is gaining momentum worldwide. PCI Compliance is a set of requirements that are designed to ensure that all companies that process, store, or transmit credit card information maintain a secure environment. There are various merchant levels which each have unique requirements to satisfy PCI Compliance. Being that this is a gigantic subject, we encourage you to research and then make sure you are compliant and ready for self-assessment or PCI Scans. Both are set up through your merchant account. See [PCI Compliance FAQs](#) and its accompanying page [PCI Myths](#) (under the PCI 101 tab) for more information.

Very few shared hosting companies are PCI Compliant, and very few virtual private servers are PCI Compliant. It doesn't mean you won't pass a scan. It's just that normally, it's not the server that will be PCI Compliant.



Never keep credit card numbers. Make sure your online store doesn't either. Protect your visitor. Be paranoid about this. It is a healthy paranoia if you are accepting credit cards through your online store.

So that we don't end on a total downer note, many people create very successful online stores using Joomla and third-party extensions like HikaShop. Take your time, do the research, plan well, and you can have a great online store selling physical or virtual products to the world.

Engaging and Keeping in Touch with Your Users

Everywhere you go on the Internet, you see ways to connect to social networks like Facebook, Twitter, Pinterest, and many others. These networks give users a common home to connect and share their ideas, photos, videos, and more. If your website is also a place where users with a shared interest come together to interact, you'll want to add some of these social sharing features. This makes your site more engaging and improves the “stickiness” factor—reasons for your users to keep coming back.

Getting Social with JomSocial

There are a few nice social extensions available for Joomla, but **JomSocial** has done it better than the others. Originally developed by Azrul, it's now run by the folks at iJoomla.

Hands-On Exercise: Installing and Configuring JomSocial

Let's set up a social website for pet owners by first installing JomSocial. Go to Extension Manager→Install and choose the installation package. After JomSocial is installed, go to Components→JomSocial and click on Configuration to see the subsections as seen in **Figure 12-1**.

Adjust anything you think you might need, but here are a few things we'll customize for our site. First, we'll set up user profiles and custom profile fields, and configure a few basic settings.

1. Under Site, we will enable the ability to use multiple profiles, so we can have Dog Lovers, Cat Lovers, and Reptile Lovers. We will configure the specific options for each in a moment under the settings for Profile.

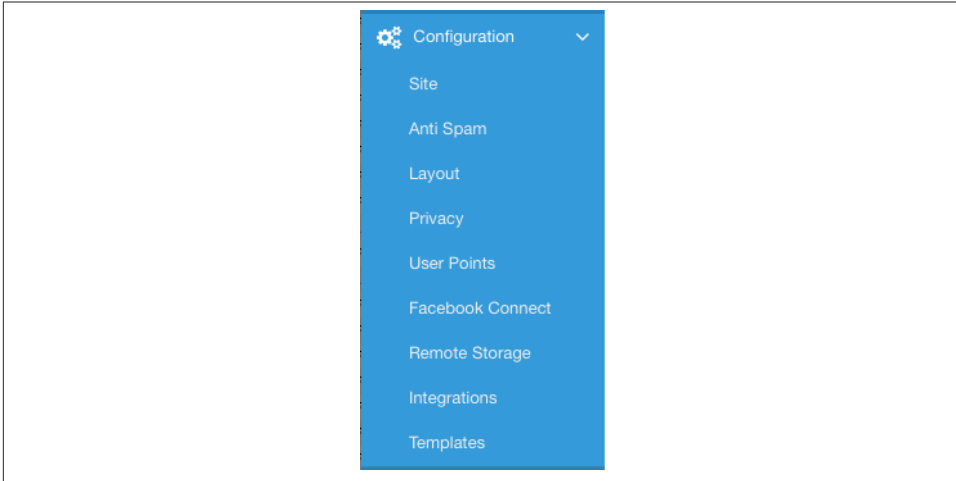


Figure 12-1. First adjust the JomSocial configuration

2. If you're not planning on using a separate ReCaptcha extension, you will want to enable the one here. Go to [Google ReCaptcha](#) and register to get your public and private keys to add to the configuration.
3. To help prevent spam, we are going to sign up for [Akismet](#) and enter the key provided in the Anti Spam section of the Configuration.
4. We like the default template, but the blueface template better suits our website, so we'll change that in the Templates section of the Configuration. Click on the name to adjust any specific parameters, like hiding Who's Online (see [Figure 12-2](#)).

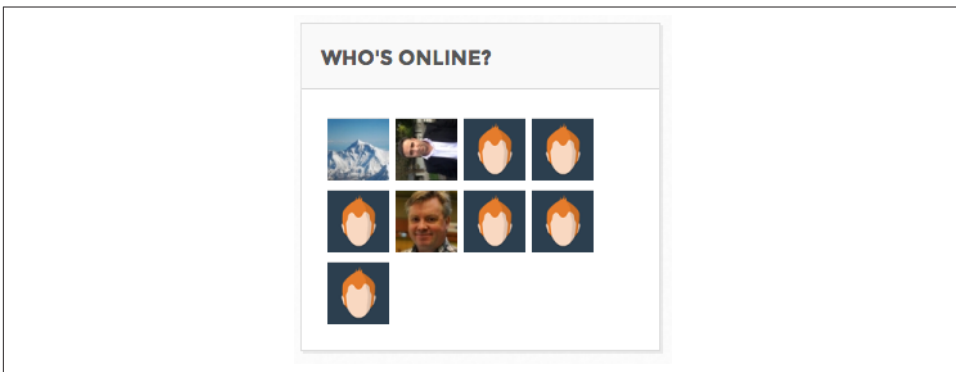
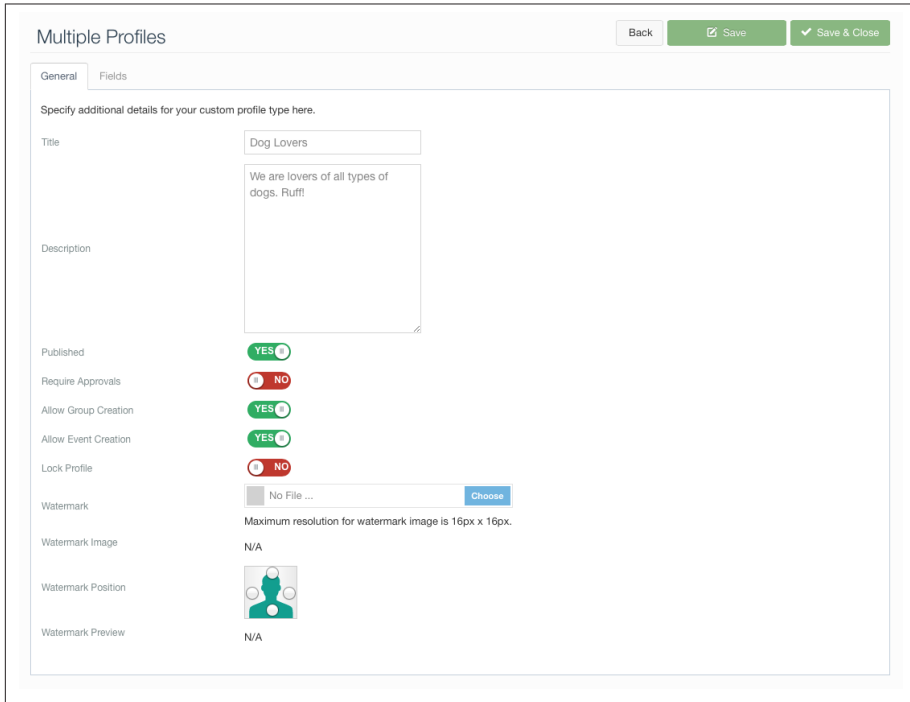


Figure 12-2. See which users are online

Hands-On Exercise: Setting Up a Custom User Profile

Now that JomSocial is configured the way we want, we'll move on to setting up custom user profiles in the Profiles section:

1. Go to Multiple Profiles and click the New button.
2. Add **Dog Lovers** to the title field and the short description, **We are lovers of all types of dogs. Ruff!** (see [Figure 12-3](#)).



The screenshot shows the 'Multiple Profiles' configuration interface. At the top right, there are buttons for 'Back', 'Save', and 'Save & Close'. The main content area is divided into two tabs: 'General' (selected) and 'Fields'. Below the tabs, a message reads: 'Specify additional details for your custom profile type here.' The 'General' tab contains the following settings:

- Title:** Dog Lovers
- Description:** We are lovers of all types of dogs. Ruff!
- Published:** YES (radio button selected)
- Require Approvals:** NO (radio button selected)
- Allow Group Creation:** YES (radio button selected)
- Allow Event Creation:** YES (radio button selected)
- Lock Profile:** NO (radio button selected)
- Watermark:** No File ... (with a 'Choose' button)
- Watermark Image:** N/A
- Watermark Position:** (with a preview icon of a person's head)
- Watermark Preview:** N/A

Figure 12-3. Adding multiple profiles in JomSocial

3. Don't forget to publish the profile, and we'd like to allow users with this profile to create events and groups, so we'll enable those before saving.

Now we want users to share more details about their dogs, so we give them the ability to add dog breeds and names to their profiles. Go to the Customize Profile section.

1. We want to create a new field group called My Dog by clicking the New Group button and leaving the default settings as is.
2. Next, create a new field for the dog breed by clicking the New Field button.

3. Enter **Breed** for the Name, and for the Field Code enter **FIELD_DOGBREED** (this could be anything, but it's best to be consistent with the naming scheme used by default; see [Figure 12-4](#)).

New Field ✕

Create new custom profile for your site.

Name *

Type

Groups

Field Code *

Registration No Yes

Visible Personal All Admin only

Published No Yes

Required No Yes

Tooltip

Option

Separate each options with a new line

Multiple No Yes

Size

Style Attribute

Figure 12-4. Add a new profile field for dog breed

4. For Type, we want to only provide a few specific breeds to pick from, so choose **Select - List** and enter three items in the **Option** box: **Yorkie**, **Boxer**, and **German Shepherd**. When a user registers or edits his profile, he will see a drop-down with these options in them. For **Groups**, choose the new **My Dog** field group we created in step one.

- Click Save when done (see [Figure 12-5](#)).

	Groups	Field Code	Type	Registration	Visible	Published	Required	Tooltip
	<input type="checkbox"/> My Dog			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
1	<input type="checkbox"/> Breed	FIELD_DOGBREED	Select - List	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Figure 12-5. Now you have a new field group and a custom field

- Let's create one more custom field to enter the dog's name. This time we will choose Textbox as the type, so a user can enter in her preferred name without any constraints. Type **Dog's Name** for the Name field and **FIELD_DOGNAME** in the Field Code (see [Figure 12-6](#)). Click Save when done.

New Field

Create new custom profile for your site.

Name *

Type

Groups

Field Code *

Registration No Yes

Visible Personal All Admin only

Published No Yes

Required No Yes

Tooltip

Figure 12-6. Create a custom field to enter a dog's name

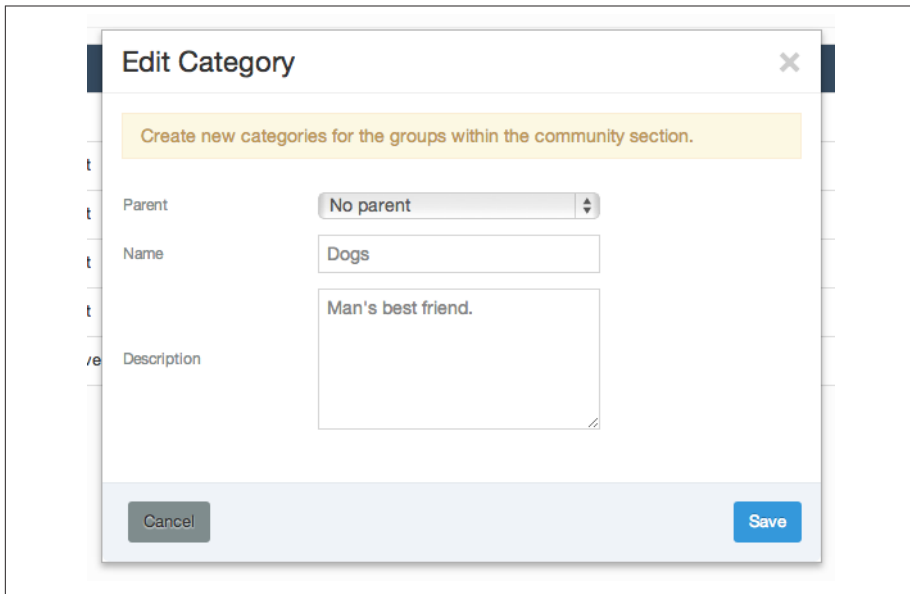
- You need to do one final step to make these custom fields available to users. Return to the Multiple Profiles sections and open the Dog Lovers' profile you created earlier. Open the Fields tab and activate the two new custom fields you created (Breed and Dog's Name).

Now we'll set up a few groups for our members to join.

Hands-On Exercise: Setting Up Groups in JomSocial

Groups enable people with common interests to share and discuss. We are going to set up a few groups, but first we need to set up our group categories, so you'll have to give some thought to how to structure the groups on your site. If you don't have enough interest groups to justify using categories, you can have just one category for all your groups. To set up group categories:

1. Go to Components→JomSocial and choose Group Categories from the left sub-menu.
2. Click the New button and enter a name and a description, as seen in [Figure 12-7](#).



The screenshot shows a modal dialog titled "Edit Category" with a close button (X) in the top right corner. Below the title bar is a yellow instruction box that reads "Create new categories for the groups within the community section." The form contains three fields: "Parent" with a dropdown menu set to "No parent", "Name" with a text input containing "Dogs", and "Description" with a text area containing "Man's best friend.". At the bottom are "Cancel" and "Save" buttons.


Figure 12-7. Creating a new group category in JomSocial

3. Click Save when you're done.

Repeat these steps for any other group categories. We'll create two, named Dogs and Cats. Then we'll create our individual groups for animal breeds (see [Figure 12-8](#)).

Groups




Group Name

Thumbnail Avatar 

Publish YES NO

Administrator

Description

B i U |  |  | 

[Source](#)

The Yorkshire Terrier is a small dog breed of terrier type, developed in the 19th century in the county of Yorkshire, England, to catch rats in clothing mills, also used for rat-baiting. The defining features of the breed are its maximum size of 7 pounds (3.2 kg) and its gray, black, and tan coat. The breed is nicknamed Yorkie and is placed in the Toy Terrier section of the Terrier Group by the Fédération Cynologique Internationale and in the Toy Group or Companion Group by other kennel clubs, although all agree that the breed is a terrier. A popular companion dog, the Yorkshire Terrier has also been part of the development of other breeds, such as the Australian Silky Terrier.

Category

Group Type

Discussion Ordering

Photos

Albums

Videos

Videos

Events

Events

Enable New Member Notification

Enable Join Request Notification

Enable Wall Post Notification

Figure 12-8. Create a new group in JomSocial

1. Click View Groups from the left submenu and click the New button.

2. Add a name and description for your group. We'll add Yorkshire Terriers and upload a cute avatar.
3. Select the group category we created earlier.
4. Make sure you publish the group.
5. Click Save & Close when you're done.

We recommend you enable photos, video, and events, so group members will be excited about returning to your site to share them.

You can also create groups from the site frontend (see [Figure 12-9](#)). Navigate to JomSocial, click Groups in the menu, and then click the Create link on the right side of the submenu and follow the same steps as you did to create a group on the backend.

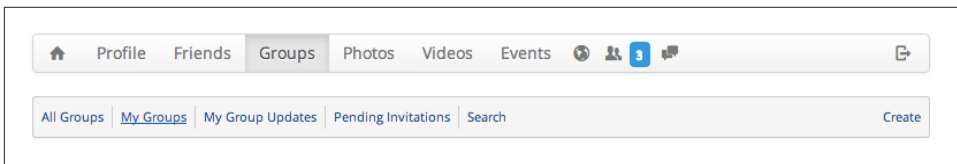


Figure 12-9. Create a JomSocial group on the site frontend

We'll now create groups for other dog (Bulldog, Dalmatian, Labrador Retriever, Poodle) and cat (Persian, Burmilla, Siamese, and Manx) breeds. We recommend you add some seed content (like photos and videos) to get the group started, so it doesn't look empty. You may want to do this on a regular basis for groups that are just getting started, so your users can see the full features and benefits of joining and sharing. Users can now join your groups when visiting the Groups section of JomSocial on your website.

Hands-On Exercise: Creating Events in JomSocial

Events in JomSocial are organized into categories in the same way groups are, so we'll create two Event Categories: one for dog shows and one for cat shows.

1. Go to Components→JomSocial and choose Event Categories from the left submenu, as seen in [Figure 12-10](#).
2. Click the New button and enter a name and a description. Our description is Dog Shows.

Figure 12-10. Create a new event category in JomSocial

3. Click Save when you're done.

Let's create an event for the annual Westminster Dog Show. Events in the latest version of JomSocial can only be created on the frontend of your site, though you can manage existing events from the backend. To create an event, navigate to the JomSocial section of your website and do the following:

1. Click the Events menu and then click the small Create Event link underneath it, as seen in [Figure 12-11](#).

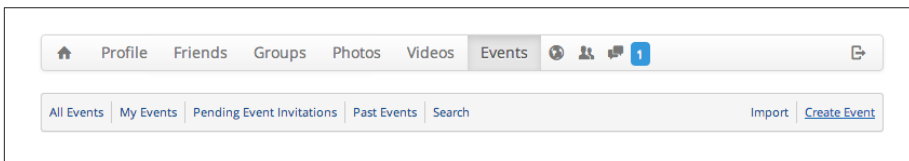


Figure 12-11. Create events in JomSocial on the site frontend

2. Add a title and brief summary for the event. See [Figure 12-12](#).

The screenshot shows the 'Create Event' form in JomSocial. At the top, there is a navigation bar with 'Events' selected. Below it, there are tabs for 'All Events', 'My Events', 'Pending Event Invitations', 'Past Events', and 'Search'. The form fields are as follows:

- Title ***: Annual Westminster Dog Show
- Set Event as Private
- Summary**: The greatest dog show on earth!
- Description**: The Westminster Kennel Club Dog Show is a two-day, all-breed benched conformation show that takes place at Madison Square Garden in New York City every year. The first Westminster show was held in 1877.
- Category ***: Dog Shows
- Location ***: Madison Square Garden, NY
e.g. San Jose, California
- Start Time ***: 2014-02-10 9:00 am
- End Time ***: 2014-02-11 12:00 am
- All Day
- No. of Seats ***: 100
- Allow guest to invite.

At the bottom, there is a note: 'Fields marked with an asterisk (*) are required.' and two buttons: 'Cancel' and 'Create Event'. The footer says 'Powered by JomSocial'.

Figure 12-12. Create a new event in JomSocial

3. Select the Event Category “Dog Shows” that we created earlier.
4. Enter the event location. Make sure this is correct, because it will be linked to a Google Map on the event page once it goes live.

5. Enter the start and end time and date. Select the All Day option if there are no specific times.
6. For Number of Seats, enter the number of people that can sign up for the event. This will help limit attendance if the venue has a certain capacity.
7. Click Create Event when you're done. That's it.

After you save the event, you can customize the appearance of the event page by uploading a header/cover image.

Now, we'll create events for our other favorite dog shows, the Golden Gate Kennel Club and Cape Cod Kennel Club. You can save a little time in creating events if you already have them in your calendar and can export them as ICS files. A few calendar applications support this format—Apple iCal/Calendar, Google Calendar, Mozilla Thunderbird, and some versions of Microsoft Outlook. The Import button is right next to the Create Event button.

To keep in touch with everyone who has confirmed attendance, remind them the event is coming up, or ask them to RSVP, click the Options link on the event page to send out an email reminder to all participants (see [Figure 12-13](#)).

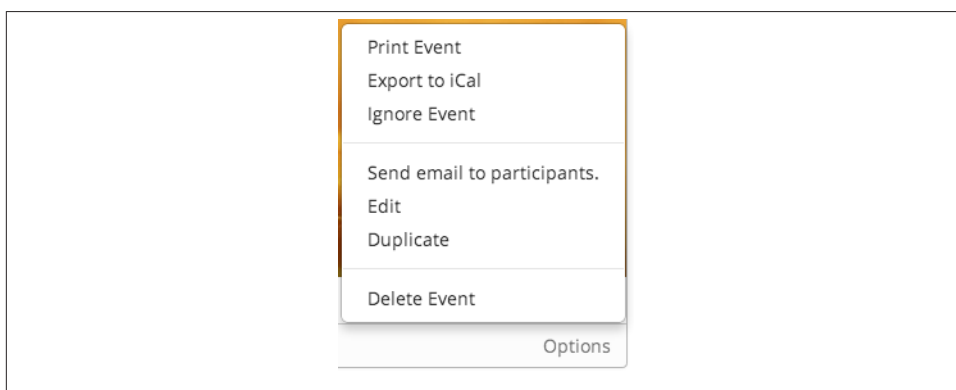


Figure 12-13. Configure event options in JomSocial



Many extensions like JomSocial and Kunena have built integrations with each other. To take full advantage of those integrations, go to the extension settings and turn on integration. For Kunena, activate the Kunena - JomSocial Integration plugin in the Plugin Manager.

Here are some additional social feature options:

- [Community Builder](#)
- [Easy Social](#)

Social Media Sharing

Promoting your site through social networks is a standard practice these days. This involves making your content as easy as possible for users to share. You could create a Joomla module from scratch to accomplish this, but the free service AddThis makes this really easy.

Hands-On Exercise: Adding an AddThis Module

AddThis is a free service that adds sharing buttons to your website so users can share your content on sites such as Facebook and Twitter. You have three main options, and each has premade Joomla extensions that you can quickly install:

Smart Layers

Sharing buttons “float” in a layer above your content in the margins. On the Get the Code page under Options, choose Joomla as the platform to download the module. Install this module in Joomla as you would any other, configure its options (adding your Facebook profile and other user profiles), and make sure to enable it once installed. See [Figure 12-14](#).

Share Buttons

Sharing buttons are located in a group, which can be customized and placed anywhere on your site. On the Share Buttons page under Options, choose Joomla as the platform to download the plugin and module. Install them in Joomla as you would any other module, making sure you enable them. See [Figure 12-15](#).

Follow Buttons

Follow buttons are directly linked to your social networking accounts, so users can follow you with a single click. On the Follow Buttons page under Options, choose Joomla as the platform to download the module and plugin, making sure to enable both once installed.

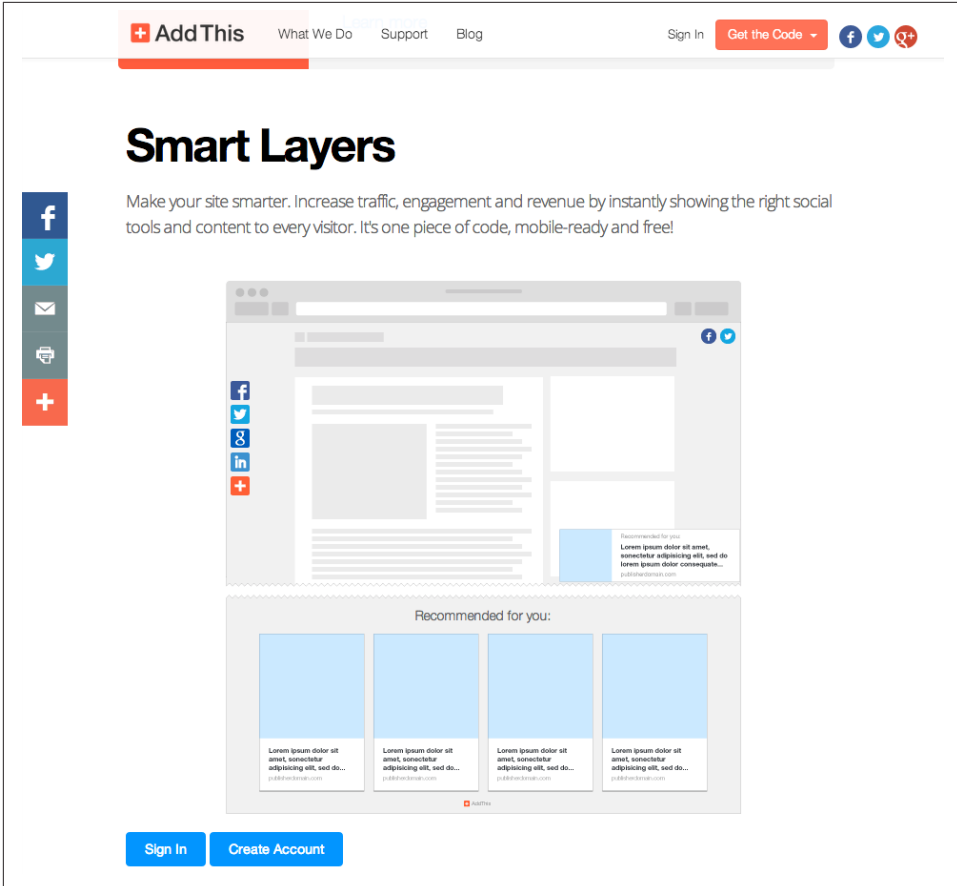


Figure 12-14. Download the Smart Layers module for Joomla

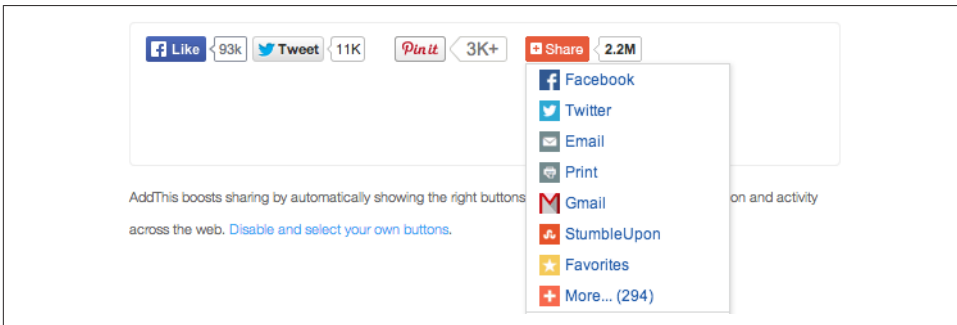


Figure 12-15. Easily add sharing buttons to your website

Creating a Discussion Forum with Kunena

Kunena is much more than a discussion forum. It's a communication platform. The name comes from the Swahili word "to speak" (like "Joomla" comes from a Swahili and means "all together as one") and originally was a fork from another forum that fizzled out years ago. The Kunena team has done an amazing job of making the free forum extension a fast, robust, and highly integrated solution. Kunena supports multiple languages, and there are quite a few Kunena-specific extensions available from developers who wanted to extend the features in new ways. See [Figure 12-16](#).

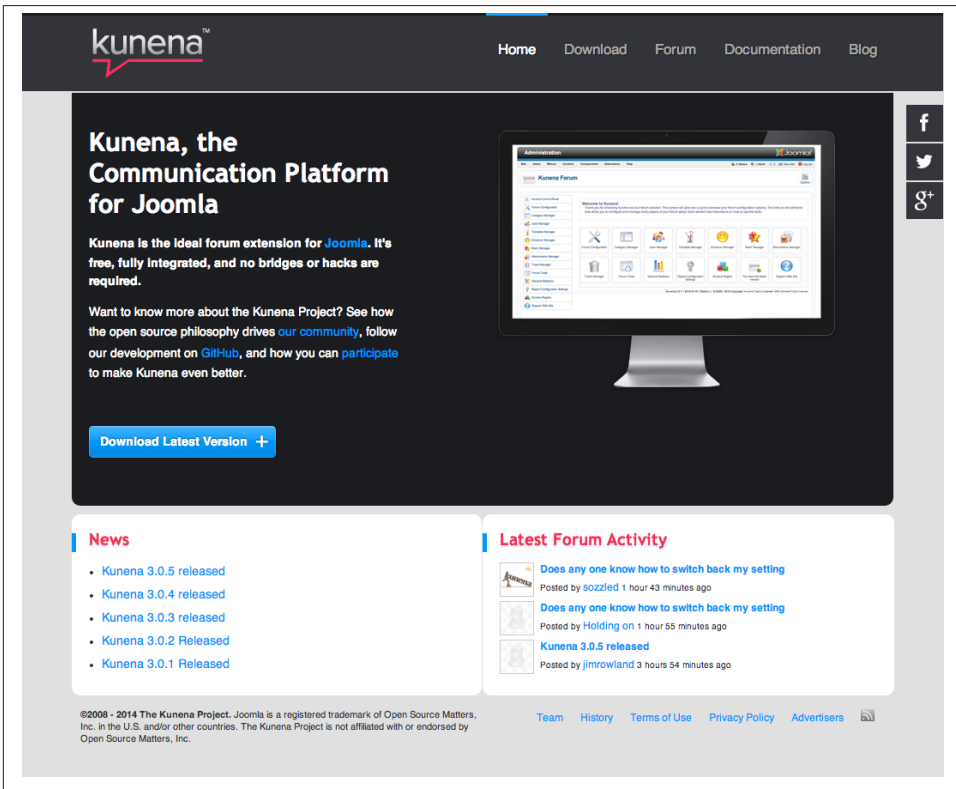


Figure 12-16. The Kunena main page

Let's create a simple forum for visitors of Joomla Pet Center to share their pet experiences.

Hands-On Exercise: Creating Forum Categories

Just like Joomla, Kunena uses categories to create a forum. We'll create three new forum categories for a few different types of pets—Dogs, Cats, and Reptiles.

1. Go to the Components Menu and choose Kunena Forum to go to the dashboard.
2. Go to the Category Manager, which is shown in [Figure 12-17](#). You'll see three items (one section and two categories) there already. These are installed by default, and you can delete them later. You might want to keep them and just disable them, so you can use them as an example if you get stuck and your forum isn't working as expected.

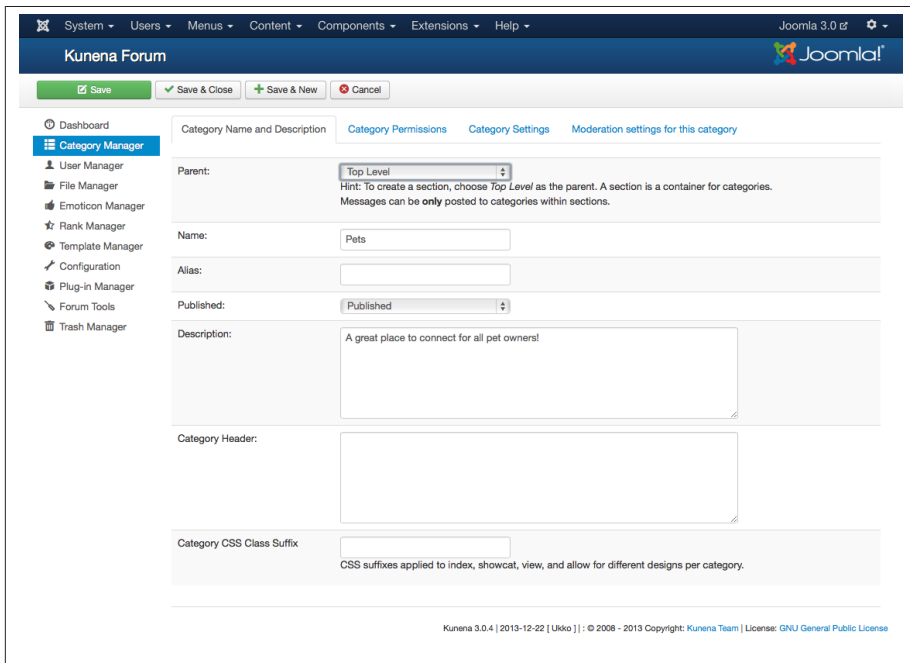


Figure 12-17. Create a new forum category in Kunena

3. Click the New Category button to create a section. Yes, this is a little confusing, but we need a section to “contain” the categories we’ll create in a minute. We’ll name this Pets and add a short description. Leave the alias blank (it will be auto-created on Save).
4. We will leave the options in the other tabs (Permissions, Settings, and Moderation) as the default. That means this section will be accessible by the general public, but only registered users will be able to post messages. Polls are disabled by default.

5. Don't forget to change the Published option to Published and click Save & Close when you're done.

Now we'll create the categories where users will post messages:

1. Click the New Category button to create a Dogs category and add a short description.
2. Select the parent section called Pets that we just created and select Published.
3. Leave the other options at the defaults, and click Save & Close when you're done.

We'll create two more for Cats and Reptiles. When you switch to the frontend of your site, it should look like **Figure 12-18**.

The screenshot displays the Joomla! Kunena Forum interface. At the top, there are navigation tabs for 'Index', 'Recent Topics', and 'Search'. Below this is a login section with fields for 'Username' and 'Password', a 'Remember me' checkbox, and a 'Login' button. There are also links for 'Forgot your password?' and 'Forgot your username? Create an account'. The main content area is divided into several sections:

- Main Forum:** A blue header section with a description: 'This is the main forum section. It serves as a container for categories for your topics.' It contains three items:

	Welcome Mat We encourage new members to introduce themselves here. Get to know one another and share your interests.	1 Topics	1 Replies	Last Post: Welcome to Kunenal by admin 1 year 1 month ago
	Suggestion Box Have some feedback and input to share? Don't be shy and drop us a note. We want to hear from you and strive to make our site better and more user friendly for our guests and members a like.	0 Topics	0 Replies	No Posts
- Pets:** A blue header section with a description: 'A great place to connect for all pet owners!'. It contains three sub-categories:

	Dogs Meet other lovers of man's best friend.	0 Topics	0 Replies	No Posts
	Cats Fans of felines meet here.	0 Topics	0 Replies	No Posts
	Reptiles Creepy crawly critters are here.	0 Topics	0 Replies	No Posts
- Who Is Online:** A section showing 'Total users online: 0 Members and 1 Guest Online' and a legend for user roles: Site Administrator, Global Moderator, Moderator, Banned, User, Guest.
- Kunena Forum Statistics:** A section showing various statistics: Total Messages: 2, Total Subjects: 1, Total Sections: 2, Total Categories: 5, Today Open: 0, Yesterday Open: 0, Today Total Answer: 0, Yesterday Total Answer: 0. It also shows 'Total Users: 2' and 'Latest Member: test'.

At the bottom of the page, there is a footer with 'Time to create page: 0.175 seconds', 'Powered by Kunena Forum', and a breadcrumb trail: 'Home > Forum > Index'.

Figure 12-18. New forum categories for our Joomla Pet Center

Oops. We just discovered that reptile pet owners hate being lumped in together. Apparently, there's a rivalry between snake owners and turtle owners, so we'll create separate subcategories for them. Follow the same steps as above, except call one Snakes and another Turtles. Choose the Reptiles category as the parent for each, select Published, and click Save & Close when done. It will look like [Figure 12-19](#).

Pets A great place to connect for all pet owners!				
	Dogs Meet other lovers of man's best friend.	0 Topics	0 Replies	No Posts
	Cats Fans of felines meet here.	0 Topics	0 Replies	No Posts
	Reptiles Creepy crawly critters are here.	0 Topics	0 Replies	No Posts
	Snakes (0/0) Turtles (0/0)			

Figure 12-19. New forum subcategories for our Joomla Pet Center

You'll now have two new subcategories under the Reptiles category. If you want to prevent users from posting in the general Reptiles category now, you can lock it in the Kunena Category Manager. Click the icon in the Locked column next to Reptiles.

Now let's disable the default categories created when Kunena was installed. In the Kunena Category Manager, click the little green checkmarks to the left of each category name to disable them, as seen in [Figure 12-20](#).

	Status	Title
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Main Forum (Alias: main-forum)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	— Welcome Mat (Alias: welcome-mat)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	— Suggestion Box (Alias: suggestion-box)

Figure 12-20. Disable a forum category

The disabled forum categories should now look like [Figure 12-21](#).

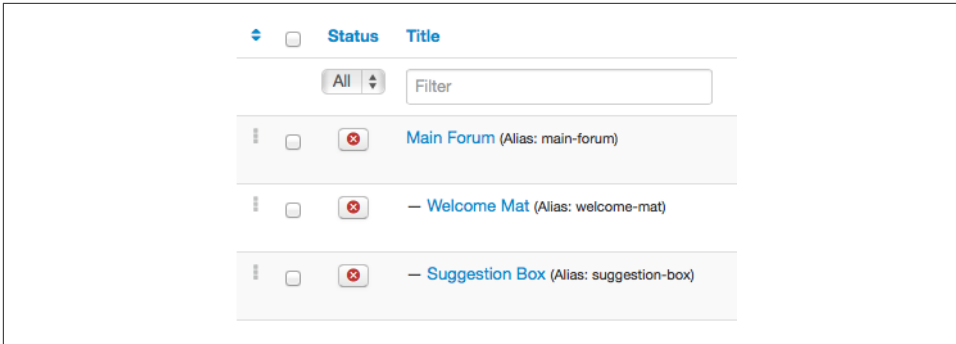


Figure 12-21. Forum sections and categories are now disabled

If you switch to the frontend of your website, you'll see that the default categories are no longer visible. If you want special forum categories that are not visible in the main forum, but want to give users a special URL to see them, you can disable only the parent section and leave the categories under it published.



Disabling the parent section is not a substitute for having a secure forum category and should only be used if there is not a security risk with the information being posted there. See the next section for how to set up permissions if you want to customize how users access your forum.

Hands-On Exercise: Creating Category Permissions and Moderating Users

Sometimes you need a private forum for team discussion. Helen has decided that she and her forum moderators need their own section, to discuss problem users and debate plans for the future of the forum. She has already created a new category under Pets called Pet Center Team Discussion, but she needs to make it private.

1. Go to Users→Groups→Add New Group to create a new group for the forum moderators.
2. We'll name this group Forum Team Members and make the group parent Registered. This essentially means users in this group will inherit the basic access rights of all users in the Registered group.
3. Click Save & Close.
4. In the Kunena Category Manager, click the Pet Center Team Discussion category name to edit it.
5. Switch to the Category Permissions tab to see the permissions options. The Access Control Types are which system Kunena uses to control access. The default option

is Access Level, and that uses the basic groups/levels Joomla has predefined. We want custom options, so we'll choose User Groups as the type.



If you have JomSocial, Community Builder/GroupJive, or another supported third-party system installed, you will see it here as an option. Other extensions may have their own groups, and you can use the permissions built into them to manage what users can and can't see.

6. A few new selection boxes will appear, and you should see the Forum Team Members group in each of these boxes. Select the group in the boxes for Primary User Group, User Groups Allowed To Post, and User Groups Allowed To Reply (see [Figure 12-22](#)).
7. You can control access to child groups here, but we are only setting up our category and don't need to adjust anything. Click Save & Close when done.

Now any user in the Forum Team Members group will see this forum category. To add a user to this group, go to the User Manager to edit their profile and assign them to this group. We'll do this for each member of our team.

Preventing Spam in Your Forum

Unfortunately, forums are prime territory for spam, and even though no spam prevention tools are 100% effective, Kunena has a few good options in the configuration to help prevent it.

Go to the Security tab of the configuration and make the following changes:

Flood Protection

This helps block spambots that actually get into your forum and prevents them from posting many times quickly. Setting this at 120 means the user has to wait 2 minutes between posts. If that doesn't seem right for your forum, make an estimate based on how quickly you think your average user will be posting on the forum and set this value just under that limit.

Captcha Configuration

If you're not planning on using a separate ReCaptcha extension, you will want to enable the one here. Go to [Google ReCaptcha](#) and register to get your public and private keys to add to the configuration. Set the Challenge option to Yes, and you might want to change the "User posts" setting from 0 to 2 so users with fewer than 2 posts will have to enter the captcha until they are trusted.

Category Name and Description	Category Permissic
<p>Access Control Type:</p>	<p>Access Level</p> <p>JomSocial</p> <p>User Groups</p>
<p>Primary User Group:</p>	<p>Public</p> <p>- Guest</p> <p>- Manager</p> <p>-- Administrator</p> <p>- Registered</p> <p>-- Author</p> <p>--- Editor</p> <p>--- - Publisher</p> <p>-- Forum Team Members</p> <p>- Super Users</p>
<p>Primary Includes Child Groups:</p>	<p>Yes</p>
<p>Secondary User Group:</p>	<p>Public</p> <p>- Guest</p> <p>- Manager</p> <p>-- Administrator</p> <p>- Registered</p> <p>-- Author</p> <p>--- Editor</p> <p>--- - Publisher</p> <p>-- Forum Team Members</p> <p>- Super Users</p>
<p>Secondary Includes Child Groups:</p>	<p>Yes</p>
<p>User Groups Allowed To Post</p>	<p>Public</p> <p>- Guest</p> <p>- Manager</p> <p>-- Administrator</p> <p>- Registered</p> <p>-- Author</p> <p>--- Editor</p> <p>--- - Publisher</p> <p>-- Forum Team Members</p> <p>- Super Users</p>
<p>User Groups Allowed To Reply</p>	<p>Public</p> <p>- Guest</p> <p>- Manager</p> <p>-- Administrator</p> <p>- Registered</p> <p>-- Author</p> <p>--- Editor</p> <p>--- - Publisher</p> <p>-- Forum Team Members</p> <p>- Super Users</p>

Figure 12-22. Change the forum category permissions

Stop Forum Spam Configuration

Stop Forum Spam is a great service dedicated to, well, stopping forum spam. Once you register, you can retrieve an API key from their website to add to the configuration.

If you do these few steps, you will eliminate most or all of the forum spam on your website.



By default, you should never make posting to your forum a public option. Registration helps filter out unwanted spammers.

Customizing the Look of Kunena

Kunena has two basic templates: Blue Eagle and Bootlicker. You can see them in the Kunena Template Manager. Clicking on each will display the color customization options, but the easiest way to get Kunena looking more like the rest of your site is to enable the Blend with Joomla Template option at the bottom. Do that first, and then customize the other colors (not the other way around). You might not need to change anything at all.

By default Kunena is the forum title, and it's displayed in a few places on our forum. To customize that for Joomla Pet Center, go to the configuration section of Kunena and select the General tab to enter your preferred name. This affects page titles, the statistics box header, notification sender name, and a few other places.



You can use the Kunena Discuss plugin as a commenting extension on your Joomla articles. See [“Hands-On Exercise: Adding Comments Using the Kunena Forum” on page 159](#) for details on how to set up comments.

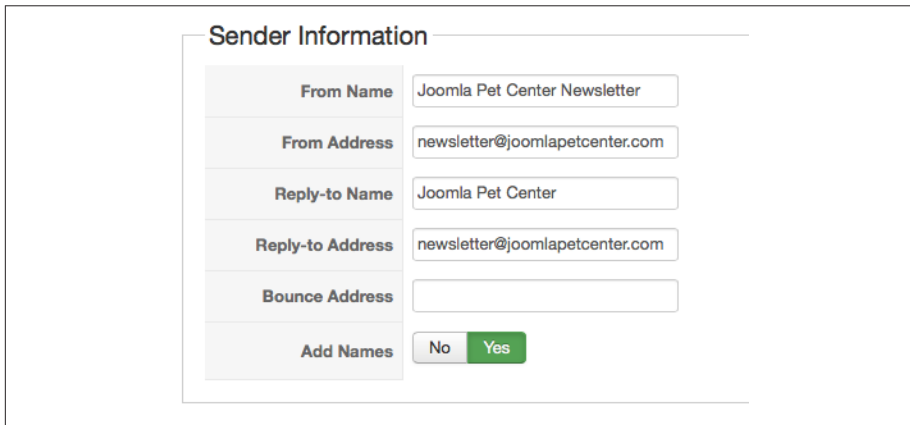
Getting the Word Out with a Newsletter

An email newsletter is a great way to reach out to users who may not have visited your site in a while. It's also a great way to alert your users to new site features, deliver news targeted to specific user interests, and see what kinds of topics visitors respond to. [Acyba AcyMailing](#) is a powerful newsletter component, and the basic version is free.

Hands-On Exercise: Setting Up and Creating a Mailing List

The first thing we have to do is configure a few options, so AcyMailing can send emails and set up a mailing list for users to subscribe to when they register.

1. In the Extension Manager, install the AcyMailing Starter extension.
2. Go to Components→AcyMailing to open the AcyMailing configuration. We will adjust the Sender Information to match our site settings, as seen in [Figure 12-23](#).



The screenshot shows the 'Sender Information' configuration window. It contains the following fields and options:

From Name	Joomla Pet Center Newsletter
From Address	newsletter@joomlapetcenter.com
Reply-to Name	Joomla Pet Center
Reply-to Address	newsletter@joomlapetcenter.com
Bounce Address	
Add Names	<input type="radio"/> No <input checked="" type="radio"/> Yes

Figure 12-23. Configure the reply address in AcyMailing

3. Switch to the Queue Process tab. You can leave the defaults here as is, but you should check with your web hosting provider to see what their email send limit is. Nearly all hosting providers have a limit on the number of emails you can send per hour. They may be able to increase that limit if you ask them.
4. Click Save & Close when you're done.

By default, AcyMailing has a mailing list called Newsletters set up and ready to use, but you can have multiple lists for multiple topics. We will create lists for Dog, Cat, and Fish topics:

1. Go to AcyMailing→Lists and click New.
2. Enter a List Name and Description as seen in [Figure 12-24](#). Users will see these on your website and decide which newsletters(s) to sign up for, so make them sound interesting. Click Save & Close when you're done.

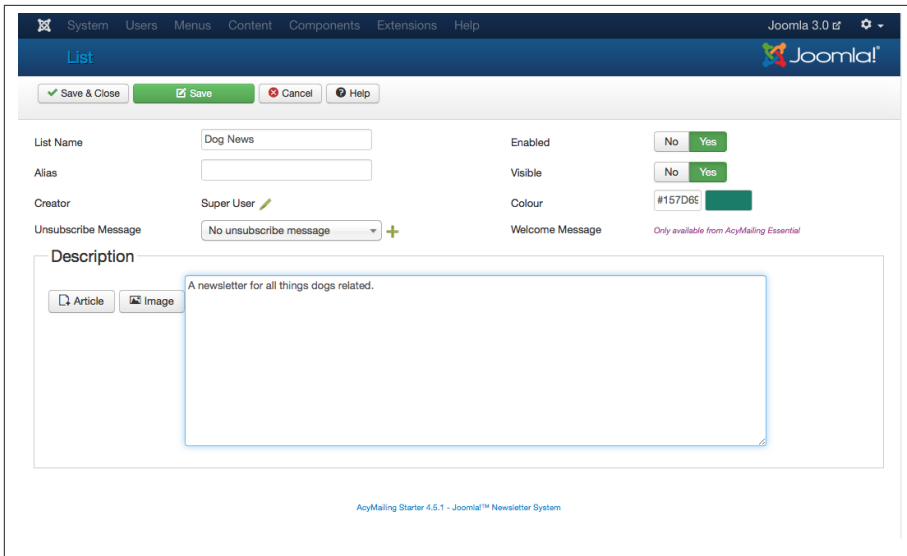


Figure 12-24. Create a new email list in AcyMailing

- Repeat steps 1 and 2 for each new newsletter list. (See the result in Figure 12-25.)

#	List Name	Subscribers	Unsubscribers	Creator	Ordering	Visible	Enabled	ID
1	Fish News	0	0	Super User	1	✓	✓	4
2	Cat News	0	0	Super User	2	✓	✓	3
3	Dog News	0	0	Super User	3	✓	✓	2
4	Newsletters	1	0	Super User	4	✓	✓	1

Search... [Search] [Close] All Creators [Dropdown]
Results 1 - 4 of 4
20 [Dropdown]

Figure 12-25. Our lists are now set up in AcyMailing

Now we're ready to send our first newsletter to people who have subscribed to the Dog News list.

Hands-On Exercise: Send Your First Newsletter

There are four templates included in the basic version of AcyMailing, and you can create your own by copying the code from one of those into a new template. For our purposes, we will use the existing Newspaper template to send out our first email to all the users currently subscribed to the Dog News list.

1. Go to Components→AcyMailing→Newsletters and click New (Figure 12-26).

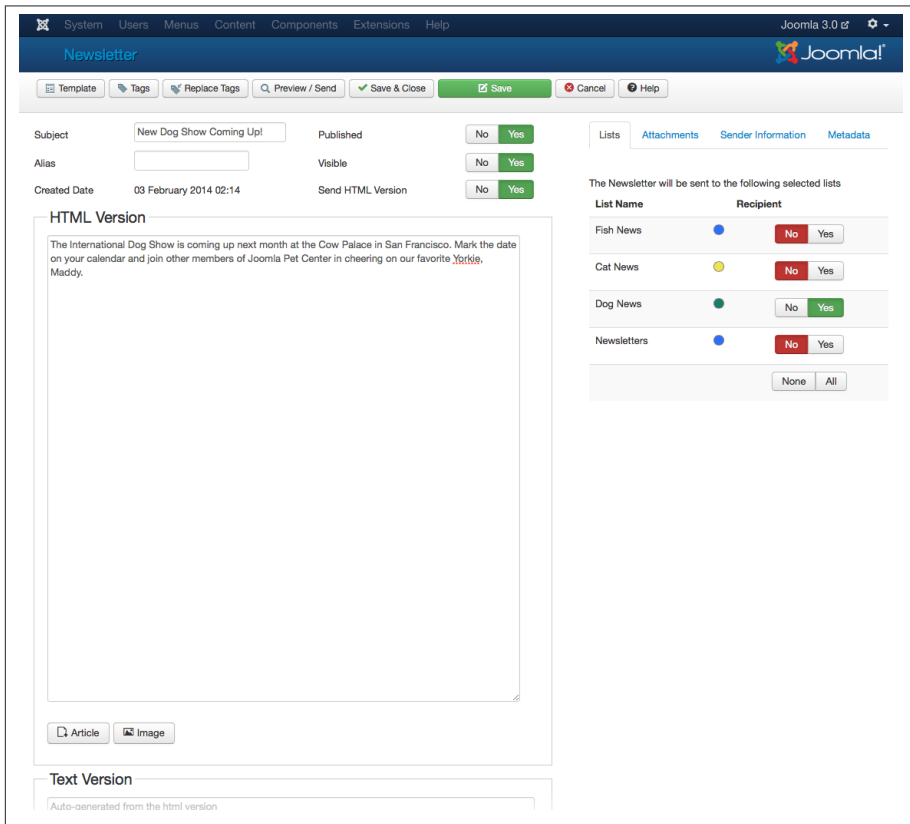
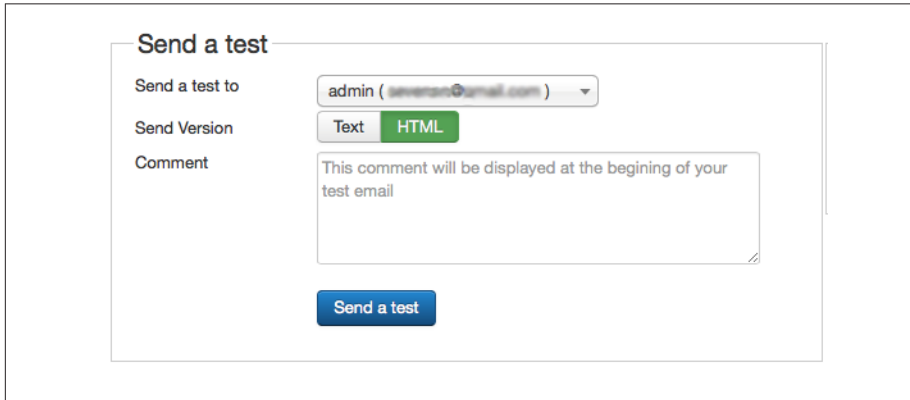


Figure 12-26. Create a new newsletter in AcyMailing

2. Create your newsletter in the HTML Version field. This should be something newsworthy for your users. We'll let them know about an upcoming dog show by adding text and images.
3. Leave the Text Version field blank. It will be automatically generated from the HTML Version.
4. Select the list this newsletter will be sent to.
5. Changing the Published setting to Yes will make the newsletter available on your website. Click Preview/Send when you're ready to send or Save & Close if you want to come back to it later.
6. Preview your newsletter to make sure everything looks good. If not, click the Edit button to make any changes and return back to the preview by clicking Preview/

Send. If you're ready to send, you should send a test to yourself first (see [Figure 12-27](#)).



The screenshot shows a web interface for sending a test email. It is titled "Send a test". There are three main sections: "Send a test to" with a dropdown menu showing "admin (admin@small.com)", "Send Version" with two radio buttons, "Text" and "HTML" (the "HTML" button is highlighted in green), and "Comment" with a text area containing the text "This comment will be displayed at the beginning of your test email". At the bottom of the form is a blue button labeled "Send a test".

Figure 12-27. Send an email test in AcyMailing

7. Once you've confirmed that the email looks good, click the Send button. You will see a status modal with a confirmation of each recipient on the list.

Congratulations! You just sent your first email blast. Check the statistics in the Statistics section of the extension to see how your newsletters are performing based on number of views and clicks.



AcyMailing uses a queue system to send out email newsletters in batches, in order to not go over your hosting provider's limit. You can adjust the batch sizes in the Queue Process tab of the configuration. Also, your hosting provider may prefer that you use a different sending protocol (e.g., SendMail instead of PHP Mail). Consult the support documentation for your host to make sure you're using the right configuration.

Hands-On Exercise: Letting Users Manage Their Subscriptions with the AcyMailing Module

The AcyMailing module was installed (but unpublished) when you installed AcyMailing. All you have to do is configure and activate it to give users the ability to manage their own subscriptions.

1. Rename the module title to **My Newsletter Subscriptions** or something users will easily understand.

2. For the Display the Lists option, select all or some of the lists you want to show. Make sure you unselect the options for “Automatically subscribe to” or your users won’t be able to select specific lists on the frontend.
3. Adjust any other settings and click Save & Close when done.

Now switch to the frontend of your site to see the module ([Figure 12-28](#)).

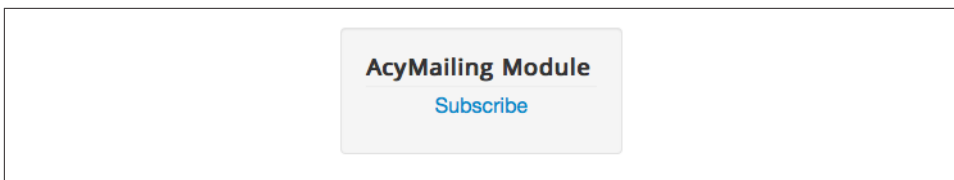


Figure 12-28. The module style may be different depending on your template

Troubleshooting AcyMailing

The developers of AcyMailing have created a [fantastic tool to test your newsletters](#) to see if you’ve been put on any blacklists, or if improvements can be made to your setup. Whether you use AcyMailing or an entirely different newsletter system, it’s very helpful.

Additional Newsletter Options

- [ccNewsletter](#)
- [jNews](#)
- Use [MailChimp](#) or [Constant Contact](#) and embed signup forms on your site.

Solutions to Common Problems

We've compiled a collection of problems users commonly run into and some good solutions for each.

Database Fix Tool

The Database Fix tool checks that your database table structure is up to date with your Joomla website, and lets you attempt to fix any problems that are found. It is great to check this and run the fix after updating Joomla or third-party extensions.

Here's how to run it:

1. Click on Extensions and again on Extension Manager.
2. Click Database on the left sidebar.
3. You will see a screen similar to [Figure 13-1](#) or one saying that things aren't OK.
4. Click the Fix button in the top toolbar.

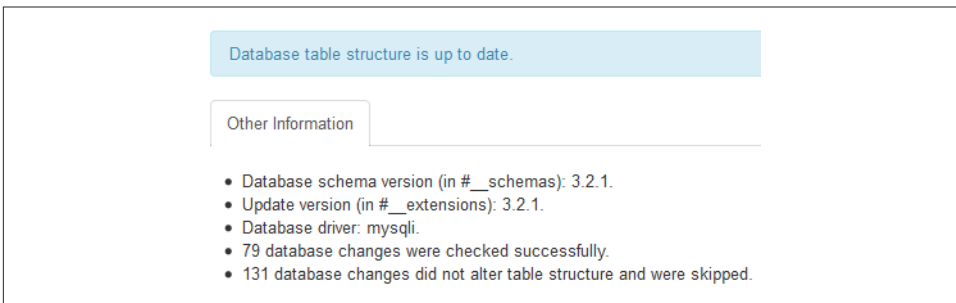


Figure 13-1. Database fix tool

That's it. Simple and very useful.

SEF URL Settings and SEO Basics

Both Search Engine Friendly (SEF) URLs and Search Engine Optimization (SEO) are key to identifying and classifying your content. Here are a few key points.

SEF URLs

SEF URLs are also known as “human-friendly” URLs, which means site visitors can read them and they make sense. When you first install Joomla, your URLs will look something like this: `http://www.joomlapetcenter.com/index.php?option=com_content&task=view&view=article&id=11`. What a mess! There's no way you'd know what information is on that page. But when you activate SEF URLs, the same URL would look like this: `http://www.joomlapetcenter.com/dogs/collies`.

That makes much more sense. Users will have a very good idea of what to expect when they see that URL—and search engines use these URLs to help rank your content. The URLs are determined by the alias that is used in the menu item and/or the category and article.

The options for SEF URLs in Joomla are:

Search Engine Friendly URLs

Friendly URLs are human-readable and are better for search engine ranking. This setting turns them on and off.

Use Apache mod_rewrite

This indicates whether you want to use Apache's Rewrite module, an extension for Apache that rewrites URLs. This requires the use of the included `.htaccess` file. This is the only way to remove `index.php` from URLs.

Add Suffix to URLs

When turned on, the file suffix `.html` will be added to the end of all friendly URLs.

Unicode Aliases

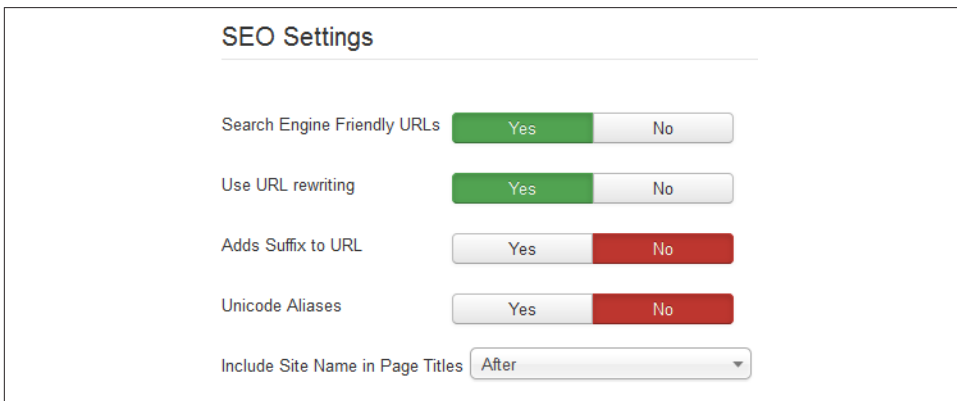
If set to Yes, then non-Latin characters are allowed in the alias and URL. If no, then a title that includes non-Latin characters will produce the default alias of the current date and time. The default setting is No.

Include Site Name in Page Titles

This will include the site name in the page titles. For example, if set to Before, the browser tab would read My Website Name - Menu Title. You can select the site name to display either After, Before, or No.

To activate SEF URLs in Joomla:

1. Go to System→Global Configuration.
2. Under SEO Settings (Figure 13-2), click the button on the right to enable Search Engine Friendly URLs. This will append your menu item alias to the end of the URL and make it readable. For more information on setting up menu items, see “Creating Menu Items” on page 47.
3. If your web server is running Apache, change “Use URL rewriting” to Yes to use Apache `mod_rewrite` to enable Apache’s URL rewriting functionality. This will give you hierarchical URLs. This also requires you to rename the `htaccess.txt` file included in the home directory of Joomla to `.htaccess` (notice the period in front of `htaccess` in the filename). See more in the Joomla docs on [Enabling Search Engine Friendly URLs on Apache](#).
4. If you want your URLs to have an `.html` suffix appended on to each, click the button next to Add Suffix to URLs to enable it.
5. Click Save & Close to save your changes.



The screenshot shows the Joomla! SEO Settings interface. It features five settings:

- Search Engine Friendly URLs:** Set to "Yes" (green button).
- Use URL rewriting:** Set to "Yes" (green button).
- Adds Suffix to URL:** Set to "No" (red button).
- Unicode Aliases:** Set to "No" (red button).
- Include Site Name in Page Titles:** Set to "After" (dropdown menu).

Figure 13-2. Enabling Search Engine Friendly URLs in Joomla

You should now test your website to make sure the URLs are working properly.

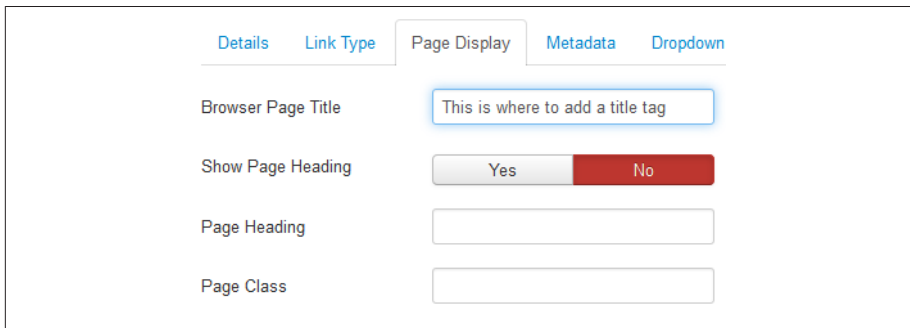


If SEO or SEF settings are not working correctly, you might need to check with your hosting provider to see whether or not their server meets the basic requirements to run Joomla.

Search Engine Optimization (SEO) Basics

Entire books exist about SEO. What's even lovelier is that the rules change frequently. It's a moving target. Yet there are certain guidelines that hold true no matter how algorithms change.

1. Create good, quality content that has value to the visitor. This is *always* number one!
2. Page structure matters. There should only be one h1 tag and the other h tags should accurately represent how your content is presented. More on heading tags can be found in [“Heading Tags” on page 102](#).
3. Good metadata is important, especially the Meta Description found in every article, category, menu item, and many extension fields.
4. Descriptive page titles matter. The `<title></title>` tags are added by menu item in the Browser Page Title field, as seen in [Figure 13-3](#).



Details	Link Type	Page Display	Metadata	Dropdown
Browser Page Title		<input type="text" value="This is where to add a title tag"/>		
Show Page Heading		<input type="radio"/> Yes <input checked="" type="radio"/> No		
Page Heading		<input type="text"/>		
Page Class		<input type="text"/>		

Figure 13-3. Add the title tag into each menu item

5. Search Engine Friendly URLs (see [“SEF URLs” on page 236](#)).
6. Image filenames should be considered (see [“Resizing, Optimizing, and Naming Image Files” on page 139](#)). Alternate text tags for images as described in [“Hands-On Exercise: Adding an Image to an Article” on page 131](#).
7. Include a site map.
8. Submit site map to search engines.

Certainly you can research and learn more, and test various SEO practices. It is a huge and ever-changing world. You might want to leave all this up to a specialized Joomla extension, like [iSEO from iJoomla](#), which guides you through the setup process to generate metatags, optimize your content, and even automatically link keywords in your content. This can save you a lot of manual work (even more so if you have a lot of third-

party components installed). iSEO also comes with an online course, plus a few other guides to get you up to snuff on SEO best practices for any website.



Use caution around email or phone scams that claim that they can get you ranked number one on Google. You should do your best to steer clear of these types of claims. Google has even issued a **warning on their blog**:

“Google never guarantees top placement in search results or AdWords—beware of companies that claim to guarantee rankings, allege a special relationship with Google, or advertise a *priority submit* to Google. There is no priority submit for Google.”

Favicon

What is a favicon you ask? It’s that little icon in the browser tab, as shown in **Figure 13-4**.

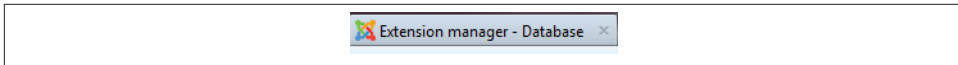


Figure 13-4. Favicons are small icons that appear in the browser tab

Typically you can create a favicon from a portion of your logo or some kind of branding for your site. Look at other websites for examples. Once you know what you will use, follow these steps:

1. Crop the portion of your logo you will use.
2. Go to a favicon generation website like **Favicon**.
3. Upload your image and create the favicon.
4. Download the *favicon.ico* file.
5. Upload the *favicon.ico* file to the root of your *public_html* directory or to the template root. You can view the existing favicons in your site by going to your file manager in your hosting provider’s control panel (commonly called the *cPanel*).

When you upload the new *favicon.ico* file, it won’t appear immediately in the browser that you normally use. If you use a different browser or clear your browser cache/history, you will be able to see your new favicon. People who have never visited your site will see your new favicon immediately.

Language Overrides

There are times that you might like to override a Joomla or third-party extension language file. An example of this might be the message seen when a contact form is

submitted. The message that Joomla gives by default is Thank you for your email. If instead you wanted to say Thank you for your message, you would do so with a *Language Override*.

To do a Language Override:

1. Click on Extensions and again on Language Manager.
2. Click on Overrides in the left sidebar.
3. Click the New button.
4. On the righthand side of the screen, enter the text you want to change. In our example, it is Thank you for your email, which is the Value.
5. Leave the “Search for” drop-down set at Value.
6. Press Enter or click the Search button.
7. You will see a list of language Constants (see [Figure 13-5](#)). Select the one you want to change.

Search text you want to change

A language string is composed of two parts: a specific language constant and its value. For example, in the string:
COM_CONTENT_READ_MORE="Read more: "
'COM_CONTENT_READ_MORE' is the constant and 'Read more:' is the value. You have to use the specific language constant in order to create an override of the value. Therefore, you can search for the constant or the value you want to change with the search field below. By clicking on the desired result the correct constant will automatically be inserted into the form.

thank you for your email

Search for

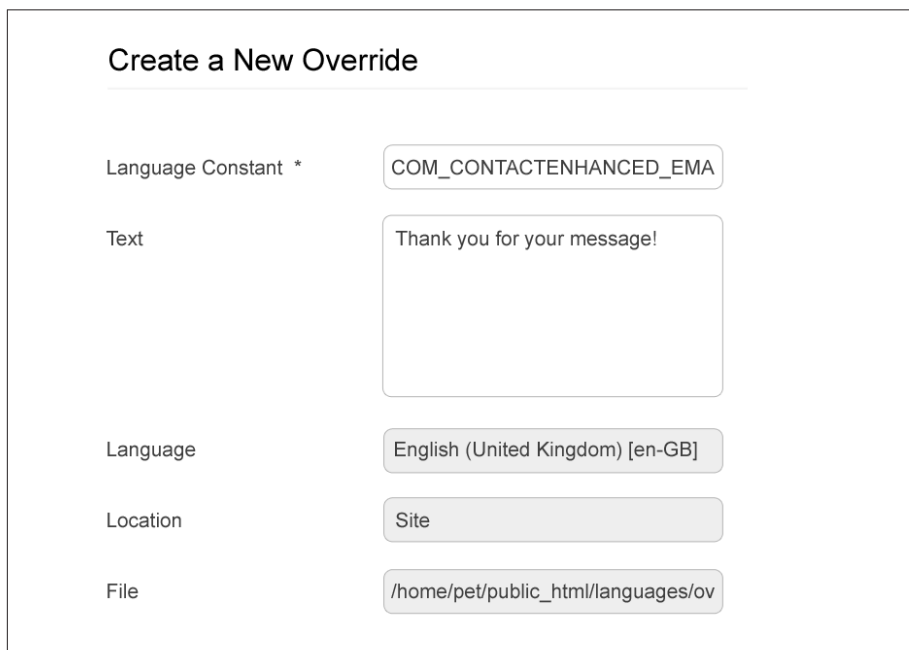
Search Results

COM_CONTACT_EMAIL_THANKS	Thank you for your email.
COM_CONTACTENHANCED_EMAIL_THANKS	Thank you for your email.

Figure 13-5. List of language constants for our value

8. When you select the one you desire, it will automatically fill in the left side of the screen with the necessary data.

- In the Text field, change the text associated with the constant, as shown in [Figure 13-6](#).



The screenshot shows a form titled "Create a New Override" with the following fields:

Language Constant *	COM_CONTACTENHANCED_EMA
Text	Thank you for your message!
Language	English (United Kingdom) [en-GB]
Location	Site
File	/home/pet/public_html/languages/ov

Figure 13-6. Changing the text of a language constant

- Click Save & Close.
- Test from the frontend.

Sometimes it's difficult to know which language constant is the right one. This is especially the case when attempting to override the language constant for a Search module. In those cases, instead of erasing the text that appears for the constant, add something to it to make sure it's the correct language constant. Jenn often adds a question mark to the Text field as a test. Then she saves the override, and refreshes from the frontend to verify the correct language constant has been selected to change.

Language Overrides are a powerful way to make changes to the language files without having those changes be overridden during an update. Happy overriding!

Users, User Groups, Access Control Lists (ACLs), and Frontend Editing

Even the simplest websites involve some aspect of users, user groups, and ACLs. In this section, we are going to briefly cover creating users, user groups, and ACLs and how they can be used. This can be a complex topic used for a plethora of applications. Know that you can go deeper than what we cover here.

Hands-On Exercise: Creating Users

Many times, users need to register themselves on the frontend, but sometimes you may want to add them yourself from the backend. To add users:

1. Click on Users and then on User Manager.
2. Click the New button on the top toolbar.
3. Fill out their relevant details in the Account Details tab.



Login Name and Password cannot have spaces.

4. Click the Assigned User Groups tab and select a user group for your user. By setting the group, you are defining what the user can and can't do in Joomla. The different permissions and group types are detailed in [“User Groups” on page 243](#).
5. Click the Basic Settings tab.
6. Change any of these settings if applicable. Backend Language & Frontend Language allows you to set a language preference when navigating the backend and frontend of your website. Leaving this as Select Language will keep it as the default language, which is set in the Language Manager. The User Editor can be assigned by user, as we did in [Chapter 5](#). Leaving this as Select Editor will keep it as the default editor set in Global Configuration. The Time Zone can be set by user as well. Because servers are set up all over the world, time zone shifts need to be accounted for. The standard is to set servers to Greenwich Mean Time (GMT) or UTC+0, but not all servers adhere to that standard. Greenwich Mean Time is based on the current time in Greenwich, Greater London, England.
7. Click Save & Close. Once you click Save, an email will be sent to the email address of the new user with their account details.

User Groups

Each group is designed to control what your users can do. The predefined groups are Super Administrator, Administrator, Manager, Publisher, Editor, Author, Registered, and Guest. **Table 13-1** outlines the permissions each group has by default. Each group inherits the permissions from all groups below it. As an example, Registered users can not only view content in the Registered ACL, but they can also perform basic browsing, as can the Guest group.

Table 13-1. User groups and their permissions

Group	Backend Permissions	Frontend Permissions
Super Administrator	Global Configuration	All below
	Template Manager	
	Language Manager	
	Mass Mail	
Administrator	User Manager	All below
	Trash Manager	
	Extension Manager	
	Module Manager	
	Plugin Manager	
	Global Check-in	
	Clean/Purge Cache	
Manager	Article Manager	All below
	Featured Articles	
	Category Manager	
	Media Manager	
	Menu Manager	
	Components	
	Private Messaging	
	Help	
	System Info	
Publisher	No access to backend	Can publish articles
Editor	No access to backend	Can edit all articles
Author	No access to backend	Can create articles
		Can edit own articles
Registered	No access to backend	Can view registered content
Guest	No access to backend	Basic browsing

These user groups are not fixed in Joomla. They are the user groups that install with Joomla. You can add user groups for specific tasks if desired (see “[User Groups](#)” on page 243). Make sure you only add a user group if you must. User groups (and ACLs) can get confusing quickly. Only add user groups if what installs with Joomla doesn’t fit your site’s needs. An alternative is editing an existing user group so that it is allowed or not allowed to do what you want to limit permissions to that user group.

Access Control Lists (ACLs)

Let’s get clear first.

ACL stands for Access Control List. In the Joomla backend, in the Users drop-down, they’re called Access Levels. Go figure that one out. Regardless, ACLs control what a user can see; that is, what they can view on the frontend of your website. ACLs work in conjunction with user groups. They require each other.

The default ACLs installed with Joomla are:

Guest

Anyone who visits the frontend of the site. This is a child of the Public ACL.

Public

Anyone who visits the frontend of the site.

Registered

Only users who are logged in to the frontend of the site.

Special

Manager, Administrator, and Super Administrator can view content on the frontend or backend of the site.

You can keep the default ACLs and use them just as they are. Or you can customize them to suit your needs (see “[Hands-On Exercise: Control What the User Sees with ACLs](#)” on page 246). The ability is there to show content to the users you desire.

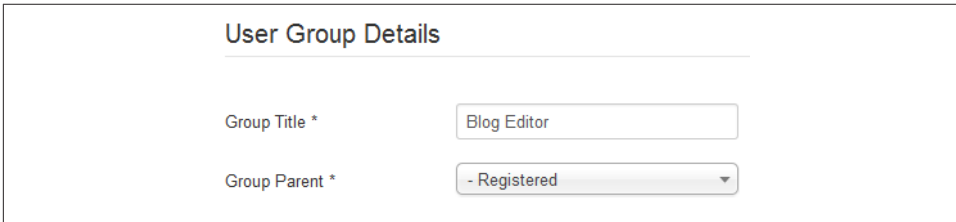
Hands-On Exercise: Allowing a User Group to Edit Specific Content

Let’s say that you have someone helping you add content to your site. You want them to be able to add and edit a specific category but not other categories. You can do that.

Because this is something that a user will do, we will need to add a user group for the user or users that have permission to add and/or edit that category.

1. Click on Users→Groups→Add New Group.
2. Enter a name in the Group Title field.
3. Select Registered for Group Parent. See [Figure 13-7](#).

4. Click Save & Close.



User Group Details

Group Title *

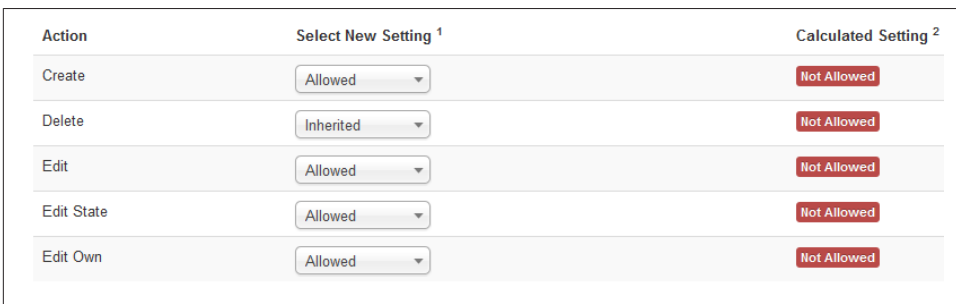
Group Parent *

Figure 13-7. Add a new user group

Next, create a new user as described in “[Hands-On Exercise: Creating Users](#)” on page 242 and select the user group as the new group you just created.

To give permission to your new user to perform tasks in the category desired:

1. Click on Content→Category Manager.
2. Click on the category you want the user(s) to be able to add or edit.
3. Click on the Permissions tab.
4. On the left sidebar with tabs, select the user group you just created to give permissions to.
5. Read the notes at the bottom of the page.
6. The main section of the page gives three columns for Action, Select New Setting, and Calculated Setting. Change the Select New Setting drop-down for each of the actions you want to change (see [Figure 13-8](#) for the settings to allow the user group to Create, Edit, Edit State, and Edit Own. They are not allowed to Delete).
7. Click Save & Close.



Action	Select New Setting ¹	Calculated Setting ²
Create	Allowed	Not Allowed
Delete	Inherited	Not Allowed
Edit	Allowed	Not Allowed
Edit State	Allowed	Not Allowed
Edit Own	Allowed	Not Allowed

Figure 13-8. Giving a user group permission to create and edit articles in a specific category

When the user logs in through a login module (see “[Hands-On Exercise: Login Module](#)” on page 247) on the frontend of the website, they will only be able to edit the category they have permission to edit or add to. The articles in that category will have an Edit icon that allows the user to edit the content or change the state (published, unpublished, archived).

In order for that user group to add an article, you will need to create a new menu (in either the Registered or Special access level) with a menu item that gives them the ability to create a new article. You can set the default category to only the category they have permission to create for.

A single user may be in multiple groups, which will allow them to add or edit content in multiple categories. If that’s the case, when they use the menu item to create a new article, they will have any category they have permission to add to available to select from the category drop-down.

If you want a certain user group to have permission to edit a module, they can do so from the frontend after logging in (see “[Hands-On Exercise: Login Module](#)” on page 247 for directions on creating a Login module for your site). However, they must have backend permissions as well. This means their user group must be a child group of one of the user groups that have backend access, as seen in [Table 13-1](#).

Hands-On Exercise: Control What the User Sees with ACLs

ACLs work with user groups. We’ll explain with a scenario of a school. For this school website, we want to have a section of the website to be accessible to only students, another area for only parents, and a third area that only teachers can access.

Before we can create access levels for our students, parents, and teachers, we need to create new user groups for each using the instructions in “[User Groups](#)” on page 243.

Once we’ve added our user groups, we can add new access levels for each. To create a new access level:

1. Click on Users→Access Levels→Add New Access Level.
2. Enter the Level Title of **Students**.
3. Check the box for the User Groups Having Viewing Access of Students.
4. Click Save & New to add access levels for Parents and Teachers.
5. Click Save & Close.

Next we need to set certain content to only be viewed by the appropriate access level. Most every component has the ability to set the access level.

Set the Access Level of Your Content

If you want to set a specific category to a certain access level, open the category from the Category Manager and select the Access to Students from the drop-down (Figure 13-9).

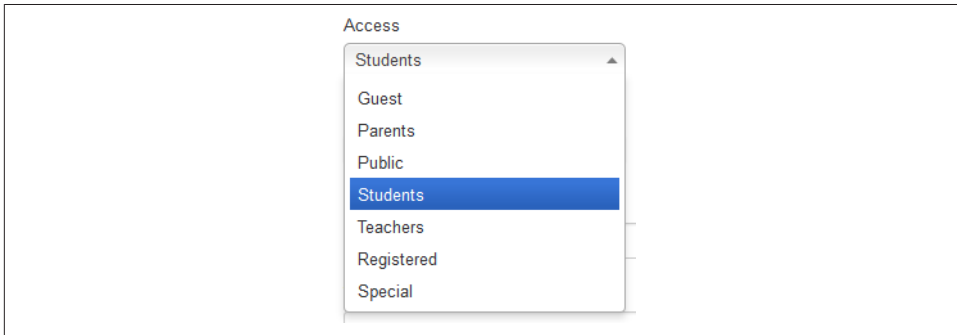


Figure 13-9. Access drop-down with Students selected

You will also set access levels for articles from the Access drop-down. The menu items have the same parameters. Set them for the access level desired.

Next, the user itself needs to be placed into the user group(s) associated with the ACL it needs to view. So, if you have a student who creates an account as Registered on the frontend, in order for that user to see the Student content, you will need to add them to the Student user group in the User Manager before they will be able to view the Student content. The same is true for the Parents and Teachers user groups and ACLs. The group that the user is in will tell the ACL what to show to them.

We always recommend using the functionality built into Joomla before using a third-party extension. However, user groups and ACLs can get complicated quickly. If you find yourself getting confused, we recommend using [ACL Manager](#) to help you set up your user groups and ACLs. You can uninstall the extension when you are done creating your user groups and ACLs, and all that you created will remain in Joomla core without the third-party extension. Such a great extension!

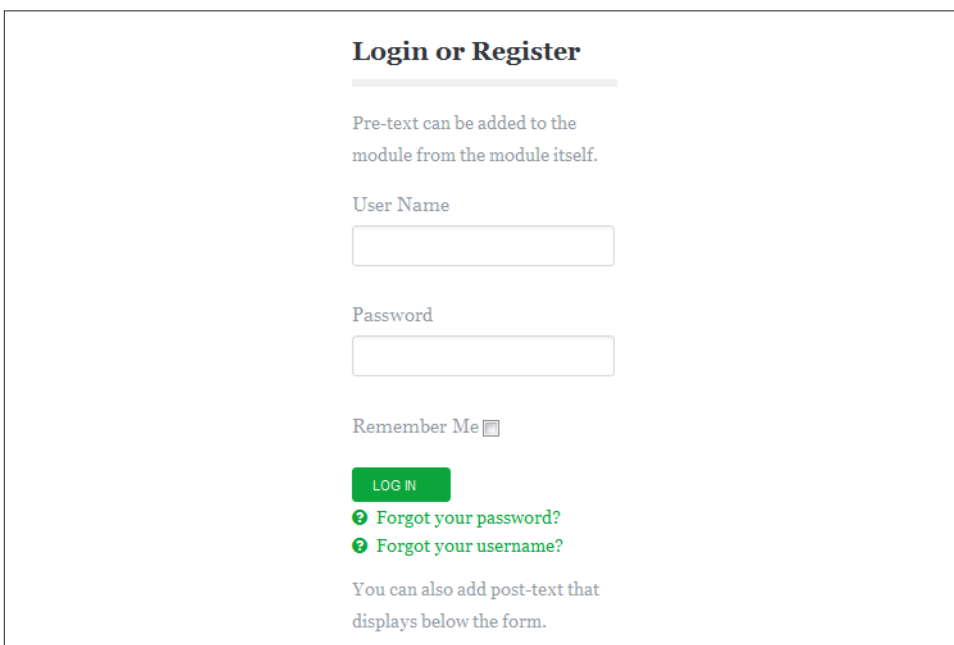
Joomla's user group and ACL structure makes for a highly customizable experience for your site's users and visitors. Use it if you need it. Do not use it if you don't need it.

Hands-On Exercise: Login Module

Joomla Pet Center is going to require a way for visitors and frontend editors to log in to the site. Joomla installs with a login module already created in the Module Manager. We simply need to set it up to display in our template by assigning it to a module position.

We also want to change a few of the user settings to prevent unwanted people from registering on our site.

1. From the Module Manager, find the module with the title Login Form and click on it to open the module.
2. Change the title of the module if you want to display a title. We will change our title to Login or Register.
3. Add any inviting words you want to appear on the form in the Pre-text or Post-text fields.
4. Change any of the other settings you desire.
5. Select a position for the login module to appear. We will select module position sidebar-b.
6. Click Save and test from the frontend. See [Figure 13-10](#) for how our module looks.



The screenshot shows a Joomla! frontend login module titled "Login or Register". The module has a pre-text area that says "Pre-text can be added to the module from the module itself." Below this is a form with two input fields: "User Name" and "Password". There is a "Remember Me" checkbox below the password field. A green "LOG IN" button is positioned below the form. Below the button are two links: "Forgot your password?" and "Forgot your username?". At the bottom of the form, there is a post-text area that says "You can also add post-text that displays below the form."

Figure 13-10. Login module from the frontend of Joomla Pet Center

Setting User Options

Now for an adjustment. Because Joomla Pet Center is an example website created for this book, it is particularly vulnerable to attack. Thus, we are going to eliminate the ability for people or automated bots to create an account via the login module.

We do this by changing a setting in the User Manager Options:

1. Click on Users and then on User Manager.
2. Click on the Options button on the top toolbar.
3. The first option on the Component tab is Allow User Registration. Change from Yes to No.
4. Click Save & Close, and the link “Create an account” in the login module on the frontend of the site will no longer appear.

Other notes regarding login from the options in the Users menu:

- You can set the default user group into which new accounts should be placed.
- You can choose whether the system sends the user an email containing their newly created account’s password. For security purposes, you may want to switch the Send Password field to No.
- You can choose whether a new user does not need to activate the account, whether the system sends them a link they must click on to activate, or whether an administrator needs to approve their new user account. You would then want to have the system send a notification message to administrators.
- Joomla 3.x comes with captcha integration through ReCaptcha. This needs to be initially set up by going to Extensions and then Plugin Manager. Search for captcha in the filter field, and follow the directions in the plugin to set up captcha. Then go to Global Configuration and set the Default Captcha to Captcha - ReCaptcha. Click Save & Close.
- Set the number of times a user can reset their password and in what amount of time.
- Set the required length of the password along with the requirement for integers, symbols, and uppercase letters. This can do much to increase security on your site. We recommend a password length of eight digits or more.

Making Your Website Secure and Optimized

Security is something that should be taken very seriously. Joomla! itself provides regular updates, and one easy thing you can do is always make sure you are using the latest versions of Joomla! and that any extensions you use are updated. The **Joomla Security Center** provides updates on any vulnerabilities discovered in Joomla!, and we recommend that you **sign up for the mailing list** to receive notifications when a security update is released. See **Figure 14-1**.

The screenshot shows the Joomla! Developer Network website. The main navigation bar includes links for Home, News, Development Status, CMS, Framework, Tracker, About, and Joomla! Google Summer of Code 2013. The page title is "Joomla! Developer Network".

The main content area is titled "Security Center" and contains the following information:

- Report a security issue in the Joomla! CMS or Framework.
- Report a security issue in a Joomla! extension
- Get help for 2.5 sites that have been attacked
- Get help for 3.x sites that have been attacked

The featured security advisory is titled "[20140301] - Core - SQL Injection". The details are as follows:

- Project: Joomla!
- SubProject: CMS
- Severity: **High**
- Versions: 3.1.0 through 3.2.2
- Exploit type: SQL Injection
- Reported Date: 2014-February-06
- Fixed Date: 2014-March-06
- CVE Number: Pending

Description
Inadequate escaping leads to SQL injection vulnerability.

Affected Installs
Joomla! CMS versions 3.1.0 through 3.2.2

Solution
Upgrade to version 3.2.3

Contact
The JSST at the Joomla! Security Center.

On the right side of the page, there are sections for "Joomla! CMS Status" (showing LTS and STS releases), "Joomla! Framework Status", "Resources" (including API, Coding Standards Manual, CMS Code Coverage, Framework Code Coverage, PLT Nomination Form, Google Summer of Code 2013, Security Center, and Report Security Issues), and "Mailing Lists" (with a link for General Extension Mailing).

Figure 14-1. The Joomla! Security Center

Tips and Best Practices

There are so many great Joomla extensions and it's tempting to try them all, but you should do your homework first. If you find an extension you want to use, check to see if it has any known vulnerabilities on the [Joomla Vulnerable Extensions List](#). Also, browse around the help section of the developer's site and see if users have reported issues. Is the developer responsive to support questions? Has the developer made regular, timely updates to fix and improve the extension? What kind of support can you expect? Is there a paid support option? These are important questions you need to consider before choosing an extension. Doing some research and searches on Google will help you form a picture of the safety and security of that extension.

You also need to do similar research on your web hosting company. Is it responsive to server issues? How quickly? What is its uptime guarantee? Does it use antivirus software? Does it have a policy for Joomla upgrades that requires you to upgrade regularly? Some hosting providers force you to update your Joomla installation on their schedule, and you should be prepared for that.

Using Security Tools and Performing Health Checks

Joomla development and testing is community-driven and is only secure as the community makes it. If you want to be more proactive, which we recommend you do, here are a few handy tools to help protect your site.

JAMSS is a simple tool that regularly checks your Joomla installation for malicious PHP code ([Figure 14-2](#)). It's a PHP script that you upload to your website via FTP and run in a browser. It's been known to give a few false positives, but it should provide some protection.

The **Brute Force Stop** plugin is a sentry-like tool that checks for incorrect login attempts, records the attempts, and can block the IP of the user (temporarily or permanently). It can also send out an email to notify you that this has happened. See [Figure 14-3](#).

```
Joomla! version: 3.2.3 Stable JAMSS - Anti-Malware Scan Script for Joomla! - v.1.0.4
Welcome to JAMSS, the Anti Malware Scan Script Joomla!

Here are the suspicious parts of code found in this scan process :



---


In file ./plugins/system/gantry/overrides/3.2/2.5/mod_wrapper/default.php-> we found 1 occurrence(s) of Pattern #18 - IFRAME element
--> Details: "Found IFRAME element in code, please check if it's a valid code."

Line #: 28:
... <iframe <?php echo $load; ?>
    id="blockrandom"
    name="<?php echo $target; ?>"
    src="<?php echo $url; ?>"
    width="<?php echo $width; ?>"
    height="<?php echo $height; ?>"
    scrolling="<?php echo $scroll; ...

--> ./plugins/system/gantry/overrides/3.2/2.5/mod_wrapper/default.php is a file. It was last accessed: 2014-03-27T11:53:36-05:00, last changed: 2014-03-27T11:53:36-05:00, last modified: 2014-03-27T11:53:36-05:00.
File permissions:0644



---


In file ./plugins/system/gantry/overrides/3.2/2.5/com_wrapper/wrapper/default.php-> we found 1 occurrence(s) of Pattern #18 - IFRAME element
--> Details: "Found IFRAME element in code, please check if it's a valid code."

Line #: 37:
... <iframe <?php echo $this->wrapper->load; ?>
    id="blockrandom"
    name="iframe"
    src="<?php echo $this->escape($this->wrapper->url); ?>"
    width="<?php echo $this->escape($this->params->get('width')); ?>" ...

--> ./plugins/system/gantry/overrides/3.2/2.5/com_wrapper/wrapper/default.php is a file. It was last accessed: 2014-03-27T11:53:36-05:00, last changed: 2014-03-27T11:53:36-05:00, last modified: 2014-03-27T11:53:36-05:00.
File permissions:0644
```

Figure 14-2. JAMSS in action



Figure 14-3. Don't forget to enable the plugin

The **Joo ReCaptcha** plugin helps prevent the most common way spammers attack your site—creating dummy accounts so they can post spam in your comments, forums, and anywhere else they can. ReCaptcha is a great service that helps prevent malicious spambots by forcing them to enter a series of letters shown in an image. At the same time, the user is entering letters from a poorly scanned document; and they are helping to perform Optical Character Recognition (OCR) on that document to digitize it. So you're keeping spambots out and doing good by preserving books at the same time! Register for **ReCaptcha** private and public keys to add this plugin (illustrated in [Figure 14-4](#)).

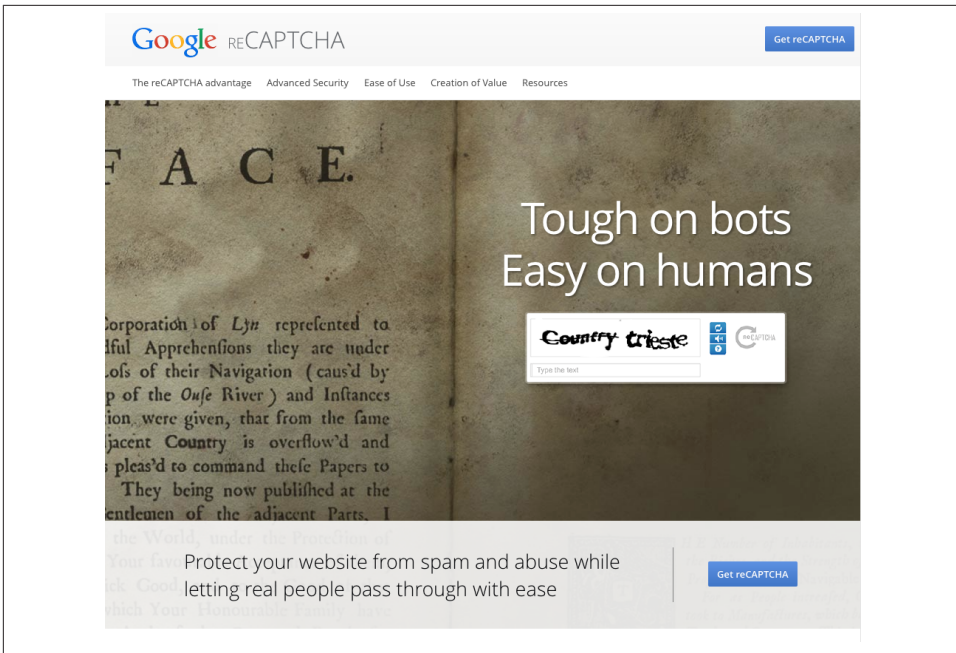


Figure 14-4. Use Google ReCaptcha to protect your site

Akeeba Admin Tools is described as the “Swiss Army knife for your site” because it does many things to make your job as a site administrator much easier. Want to know when an update for Joomla is available? Admin Tools will send you an email. Want to easily create complex *.htaccess* rules? Do it in an easy user interface. Admin Tools will also optimize your database tables and even create custom URL redirects. **Figure 14-5** shows the display page for the plugin.

Additional Resources

Here are a few key online resources for helping to secure your Joomla website:

- [Joomla Security Checklist](#)
- [Joomla Security and Performance FAQs](#)
- [Joomla Security Checklist - Getting Started](#)
- [Joomla Security News Feed](#)
- [Joomla Vulnerable Extensions Feed](#)

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Maintain
Optimise your database tables. Clean your temporary directory. Or perform any of the countless other daily maintenance tasks with a single click each.

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When a Joomla! update is available, Admin Tools will email you. Better yet? Click on the link of the email and the update happens. No need to even log in to your site. A life-simplifying feature brought to you by the same people who wrote Joomla! Update itself.

Secure it
Randomise your Super Administrator ID. Change your database table prefix. Fine-tune your file permissions. All of them are just a button push away.

Protect your site
Our Web Application Firewall protects your site against the vast majority of common attacks. You won't find any security tool more feature-complete than this.

.htaccess Maker
Give your site the best overall protection. Create a sophisticated, secure .htaccess with an easy GUI. You don't have to be an expert. Or even know what a .htaccess file is.

Redirect easily
Do you find the Redirect component hard to use? Are you puzzled by its inability to redirect URLs with parameters? No problem! Admin Tools' URL Redirect can do that. And much more.

Watch. Sniff. Catch.
Admin Tools' PHP File Change Scanner will monitor your site's PHP files for changes. If something is amiss, it will let you know. It will even tell you which files might have been hacked.

Automate it
Let the most useful maintenance operations run automatically. Use a CRON to keep the file change scanner ticking while you're fast asleep. Simply and efficiently.

Figure 14-5. AdminTools can help you in a pinch

Enable Two-Factor Authentication

Joomla 3.2.x introduced two-factor authentication to further boost security. This requires the user to verify their identity in two stages before gaining access to a Joomla site. Facebook also uses this to verify you based on your IP as well as your username/ password. It can be a minor annoyance for users, but it makes a big difference.

There are two options for authentication, and they are both Joomla plugins installed by default. You only need to activate the one you intend to use. We prefer the Google Authentication option, but here's how to set up both:

To use **Google Authenticator**, you need to get a free app from Google for Android, iOS, or BlackBerry (see **Figure 14-6**). Search the app store for your device and download/ install the Google Authenticator app. Now we'll set up authentication in Joomla.

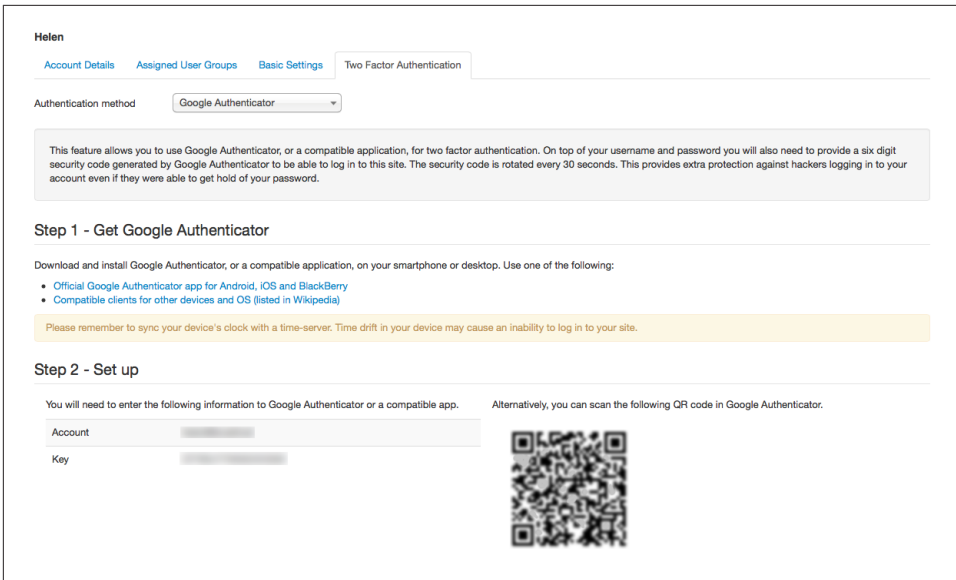


Figure 14-6. Set up Google Authentication

1. Go to Extensions→Plugin Manager and enable the Two Factor Authentication - Google Authenticator plugin by clicking the Status button. By default, it's for both the site frontend and backend, but you can configure this in the plugin settings.
2. Go to Users→User Manager and click a username to edit its profile. This user will be required to use two-factor authentication after this is set up.
3. The Two Factor Authentication tab should now be visible (enable the plugin in step 1 if isn't). Change the Authentication method to Google Authenticator.
4. Follow the instructions for setting up Authenticator. Either scan the QR code or enter the information manually. Enter the security code provided. You will also see a set of emergency passwords. It's very important that you keep these in a safe place in case you lose your password or need them.
5. Click Save & Close when you're done.

To use **YubiKey authentication**, you need to purchase a USB hardware token from Yubico and set it up on your computer in order to link your Joomla account:

1. Go to Extensions→Plugin Manager and enable the Two Factor Authentication - YubiKey plugin by clicking the Status button. By default, it's for both the site frontend and backend, but you can configure this in the plugin settings.
2. Go to Users→User Manager and click a username to edit its profile. This user will be required to use two-factor authentication after this is set up.

3. The Two Factor Authentication tab should now be visible (enable the plugin in step 1 if it isn't). Change the Authentication method to YubiKey.
4. Insert your YubiKey into a USB port and follow the instructions. When the process is complete, you should see a confirmation that your key is linked to your account. You will also see a set of emergency passwords. It's very important that you keep these in a safe place in case you lose your password or need them.
5. Click Save & Close when you're done.

Users can also edit their profile on the Joomla frontend to enable Google Authenticator or YubiKey authentication. Once you've confirmed you have everything set up and working for either Google Authenticator or YubiKey, go to the Plugin Manager and disable the Authentication - Joomla plugin to prevent users from bypassing the authentication. Users will now see a third option called Secret Key under User Name and Password when logging in. Users will have to enter a secret key sent to them at the time of logging in to verify themselves, as shown in [Figure 14-7](#).

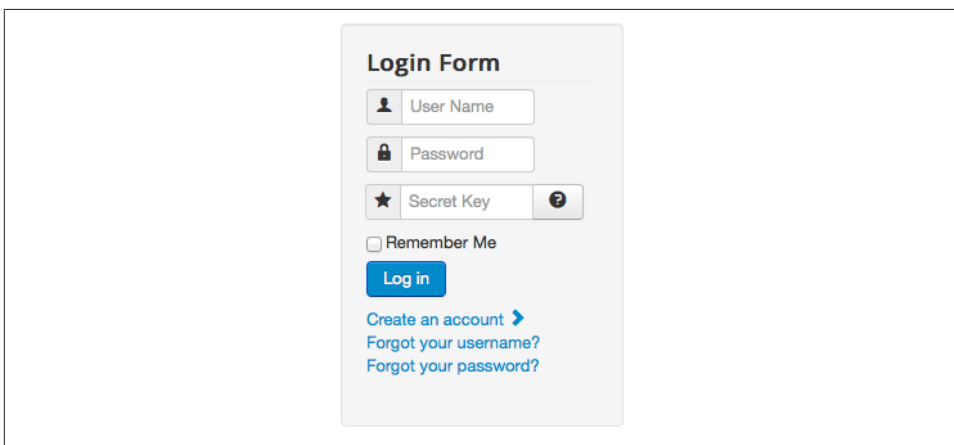


Figure 14-7. The Secret Key field, used to increase security

I Was Hacked!

Sometimes a hacker can get in through no fault of your own and deface your website. A popular extension you have installed may have a vulnerability, and before you can update it, a “script kiddie” gets in. Don't panic, because you have regular backups to roll back to, right? No? Well, then let me remind you of the importance of regular backups. They're not just a good idea in the case of a break-in, they're a great idea in case anything else happens. Call it an insurance policy or general peace of mind in case that rainy day ever comes.

If you have backups, you can start to roll each one back to figure out when the hack occurred. First, log in to the site using FTP and see where the hacked files are. Roll back the previous backup and see if the files are still there. If they aren't, you're probably OK with that version of the site (hopefully you caught it quickly). But now you have to do some detective work to see *how* they got in. The most common way of hacking a website is via an outdated Joomla extension, so check all your nonstandard extensions against the Vulnerable Extension List to see if any are listed. Update those immediately. Also, make sure you're using the latest version of Joomla in the series (1.5.x, 2.x, 3.x) to ensure you have the latest security fixes.

Check your *.htaccess* to make sure it doesn't contain anything extra in it. Some hackers won't change a thing on your site except this file, only making you think they've changed your files, and instead they're really redirecting your site users to their URL. When in doubt, download a fresh copy of Joomla and upload a fresh copy of this file to your website. You can also use the PHP File Change Scanner in Akeeba Admin Tools (mentioned earlier in this chapter) to see if any of your files have been altered. When in doubt, upload a fresh copy of those.

If you just can't find the security hole, you can also try Phil Taylor's tool [MyJoomla](#) to audit your site and secure it.

Once you've cleaned up the mess and updated and verified your files, change all your passwords. Change the password for MySQL (which is stored in the *configuration.php* file), FTP, and anything else important. Use secure passwords at all times. There are many great tools out there, like [Strong Password Generator](#) or [Password Bird](#), that can generate secure passwords for you.

For the future, it's best to be as proactive as possible. Do a regular check every once in a while on the extensions you're using, and make sure Joomla is up to date. You can also pay services like [watchful.li](#) to monitor all your sites via one unified dashboard. Sometimes it takes getting hacked as a wake-up call before a person gets serious about security. Don't let that be you.

APPENDIX A

How to Install Joomla

This appendix will provide everything you need to know about installing and upgrading Joomla.

We understand readers come from various backgrounds and may or may not have expertise in dealing with server environments. Some parts may get a little technical, but we'll try to put away the super-technical lingo and explain the process in simple terms everyone can understand.

Requirements

Even though Joomla may work on servers that do not meet the minimum specifications outlined in [Table A-1](#), it is not advisable to run your site on a noncompliant server. In fact, you should strive to have your server support the recommended requirements.

Table A-1. Requirements for Joomla 3.3+

Software	Recommended	Minimum	Software website
PHP (Magic Quotes GPC off)	5.3.10+	5.3.10+	www.php.net
Supported databases:			
MySQL (InnoDB support required)	5.1+	5.1+	www.mysql.com
MSSQL	10.50.1600.1+	10.50.1600.1+	www.microsoft.com/sql
PostgreSQL	8.3.18+	8.3.18+	www.postgresql.org
Support web servers:			
Apache (with mod_mysql, mod_xml, and mod_zlib)	2.x+	2.x+	www.apache.org
Nginx	1.1	1.0	www.wiki.nginx.org
Microsoft IIS	7	7	www.iis.net

For up-to-date requirements information, visit the official [Joomla Technical Requirements](#) page.



Do not install an older version of Joomla to get around the PHP 5.3.10 requirement. You will end up with a site you cannot maintain. Instead, find a new host.

Choosing a Host

Choosing a good host is of utmost importance. There are many, many types of servers and services that you will need to select based on your site's needs. You may need a dedicated server, a virtual private server (VPS), or cloud hosting. Perhaps shared hosting is all your site needs.

Most sites running Joomla are using shared hosting. Shared hosting is the most inexpensive type of hosting available. Inexpensive is relative, however. Choosing hosting because it is “cheapest” will probably cost you more in the long run when server configurations don't meet Joomla's requirements or you wind up with performance issues.

One of the top questions we (as Joomla consultants) are asked is “What host should I use?”

Focusing on shared hosts, here are a few hosts that are Joomla-friendly. They are not the “cheapest,” nor should they be! They are running your website. Any of the following work very nicely with Joomla.

- [Rochen](#)
- [Khoza Technology, Inc.](#)
- [Inmotion Hosting](#)
- [Siteground](#)
- [cloudaccess.net](#)

(Jenn receives affiliate compensation from some of these links.)

Local Web Servers

Some people prefer to develop their website locally on their computer, and then migrate it to their web host when complete. This can be much faster than developing on a remote server, since you do not have to rely on the speed of your Internet connection when interacting with the website. Whether you are on a Windows machine or a Macintosh, there is a solution for you.

For Windows, use [XAMPP](#).

For Mac, use [MAMP](#).

After either solution is installed, you will find that you have an Apache/MySQL/PHP web server on your computer ready for you to start building your Joomla website. After the website is developed, you can easily move it from your local web server to your web host. To move your website from one server to another, use Akeeba Backup and Akeeba Kickstart.

One-Click Installers

Many shared hosting providers offer a control panel of some kind with a quick install option, referred to as a *one-click installer*. These one-click installers get your Joomla installation accomplished very quickly, without going through the steps in the following section of this appendix. If your host does not have a one-click installer, you will need to refer to the previous section to install Joomla (which is also very simple, so no fretting).



We prefer using FTP to upload, install, or update Joomla, since hosting providers don't always have the latest versions of Joomla in their one-click installers and can, at times, create more problems than they are worth.

Database Setup

The database is where all of the information for your website is stored. In this chapter, we're going to create a database and database user, and then give that database user privileges to interact with the database.

Since cPanel is the most popular hosting control panel, we will use it in our examples. If your hosting company is not using cPanel, these instructions should loosely correspond to the process in your host's control panel. You may need to consult your hosting provider for specific information.

Let's get started by logging in.

1. Navigate to: `http://www.<yourdomain>.com/cpanel` or follow your host's instructions for setting up nameservers so that your domain points to your hosting company's servers, so that you can reach your cPanel URL.
2. When prompted, enter your login credentials. If you don't know them, refer to any documentation that you may have received from your host when you signed up.
3. Find and click the icon titled MySQL Databases. The icon looks like **Figure A-1**. Depending on your version of cPanel, it may look different.



Figure A-1. cPanel icon for MySQL Databases

4. In the New Database: field, enter **joomla** or whatever you would like for a database name, as seen in **Figure A-2**.

Create New Database

New Database: pet_j32013 ✓

Create Database

Figure A-2. New database

5. Click Create Database.
6. On the success screen, click Go Back to return to the MySQL Databases screen.



Make a note of the actual database name (an Excel spreadsheet or *.txt* file are good ways to track these). Typically, cPanel will prefix the database name with the account username. In our example, it created a database name of: *pet_j32013*.

7. In the Username field, enter **joomla** or whatever you would like for a database username, as seen in **Figure A-3**.

MySQL Users

Add New User

Username: pet_j3u13 ✓

Password: ●●●●●●●● ✓

Password (Again): ●●●●●●●● ✓

Strength (why?): **Very Strong (100/100)** Password Generator

Create User

Figure A-3. New database user

8. Enter a secure password. Make a note of the database password along with your database username, as you will need them to install Joomla.



Use the cPanel Password Generator to generate strong passwords. Alternatively, if you are not using cPanel, you can generate strong random passwords by using [Bytes Interactive](#) or [Strong Password Generator](#). These give you lots of options for password length, character types, and even the option to exclude characters that can be confused with other characters.

9. Click Create User.
10. On the success screen, click Go Back to return to the MySQL Databases screen.



Make a note of the actual database username in that same spreadsheet or *.txt* file. Typically, cPanel will prefix the database username with the account username. In our example, it created a database username of: *pet_j3u13*.

11. In the Add Users To Your Databases section, ensure that the correct values are selected for the User and Database fields.
12. Click Add User to Database.
13. Assign All Privileges to the user, as seen in [Figure A-4](#).

Manage User Privileges
User: **pet_j3u13**
Database: **pet_j32013**

<input checked="" type="checkbox"/> ALL PRIVILEGES	
<input checked="" type="checkbox"/> ALTER	<input checked="" type="checkbox"/> CREATE
<input checked="" type="checkbox"/> CREATE ROUTINE	<input checked="" type="checkbox"/> CREATE TEMPORARY TABLES
<input checked="" type="checkbox"/> CREATE VIEW	<input checked="" type="checkbox"/> DELETE
<input checked="" type="checkbox"/> DROP	<input checked="" type="checkbox"/> EXECUTE
<input checked="" type="checkbox"/> INDEX	<input checked="" type="checkbox"/> INSERT
<input checked="" type="checkbox"/> LOCK TABLES	<input checked="" type="checkbox"/> REFERENCES
<input checked="" type="checkbox"/> SELECT	<input checked="" type="checkbox"/> SHOW VIEW
<input checked="" type="checkbox"/> UPDATE	

Figure A-4. Add users to your databases

14. Click the *Make Changes* button.
15. On the success screen, click Go Back to return to the MySQL Databases screen.

That's it for the database setup. Now we're ready to begin uploading files.



Write down the details you just created. You'll need the username, password, and database name during the Joomla installation process.

File Transfer Protocol (FTP)

File Transfer Protocol, often referred to as FTP, is a protocol used for transferring files across the Internet. You are already familiar with another protocol called Hypertext Transfer Protocol, or HTTP.

If you don't already have an FTP client, we recommend using **FileZilla**. It is free and works on Windows, Mac OS X, and Linux.

When you open up your FTP client, you will need to enter three pieces of information.

Host/Site

This tells your FTP client where to find your server. Typically this is your domain name without the *http://www*. An example might be *<yourdomain>.com* or *ftp.<yourdomain>.com*. It may also be an IP address.

Username

This tells your FTP client what login to use when connecting to your server. This is typically the same as your cPanel login.

Password

This tells your FTP client what password to use when connecting to your server. This is typically the same as your cPanel password.

Once logged in, you should see something that looks similar to **Figure A-5**. There are a good number of files and folders. We are only going to concern ourselves with one of them. The *public_html* folder is where all of your website files will go. When you go to a website, it looks for files in that folder to load. On some servers, this folder may not exist. If it does not exist on your server, then look for *www*, *httpdocs*, or *htdocs*. If none of those folders exist, contact your host to find out which folder you should put your website files in.



You may have noticed in [Figure A-5](#) that it has a *public_html* and a *www* folder. Both of these are on our list. How would you have known which one to choose? The *www* folder is not really a folder. Actually it is a symbolic link that points to *public_html*, meaning they are the same folder with two names. Using either would be fine.

Filename	Filesize	Filetype
..		
.cpanel		File folder
.htpasswd		File folder
.mozilla		File folder
.trash		File folder
access-logs		File folder
Backup		File folder
cpmove.psqli		File folder
cpmove.psqli.1299074234		File folder
etc		File folder
logs		File folder
mail		File folder
public_ftp		File folder
public_html		File folder
tmp		File folder
www		File folder
.bash_logout	33	BASH_LOG...
.bash_profile	176	BASH_PRO...
.bashrc	124	BASHRC File
.contactemail	17	CONTACT...
.cpanel-logs	15	CPANEL-L...
.emacs	515	EMACS File
.gemrc	145	GEMRC File
.lastlogin	14	LASTLOGI...

Figure A-5. Remote files in an FTP client

Now we are ready to get some Joomla files.

Download the latest version of Joomla to your desktop and unzip it.

Upload the contents of the Joomla ZIP archive to the *public_html* directory shown in [Figure A-5](#). This may take a while depending on your upload speed. Once everything is uploaded, you're ready to begin the installation steps.

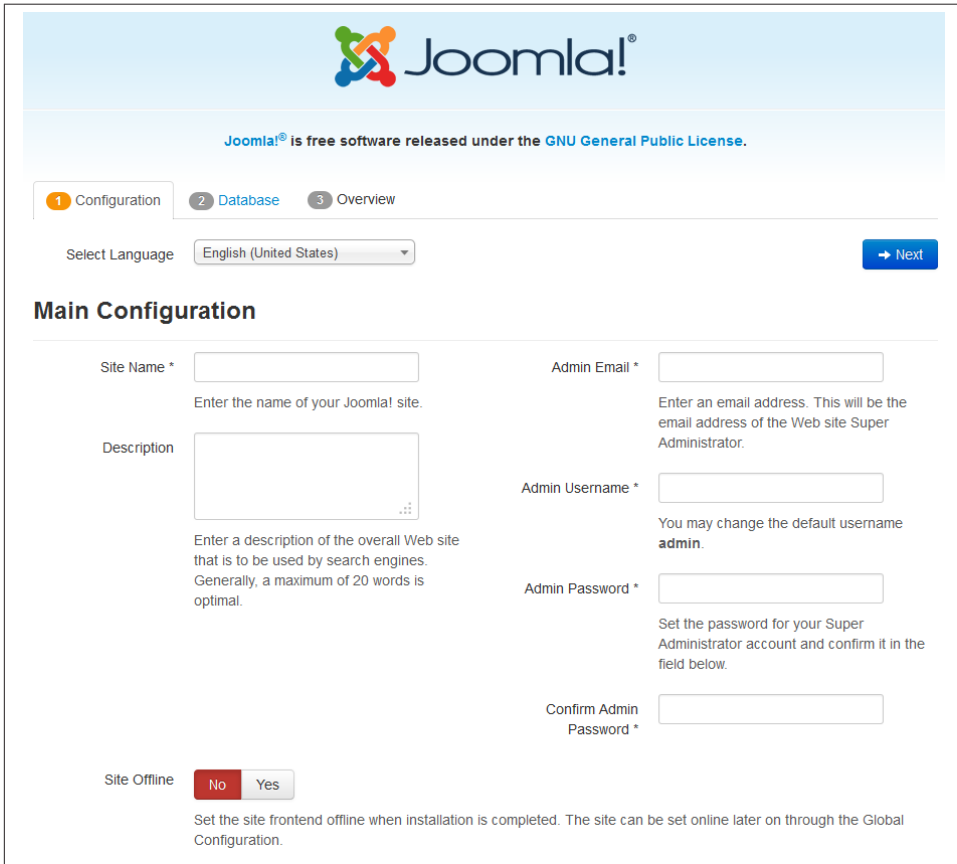


Another way to get the Joomla source files uploaded to your server is to either FTP the zipped package from Joomla or use File Manager upload within cPanel. cPanel allows you to extract the archive with one click. If you are familiar with this method, it is faster.

Don't close your FTP program just yet—there will be one final step at the end where you'll need it.

Web Installer

You're in the final steps of the process, and minutes away from having your very own Joomla website. In your browser, navigate to your website's URL: *http://www.<yourdomain>.com/installation*. You should be greeted with the Joomla Web Installer screen, as shown in [Figure A-6](#).



The screenshot shows the Joomla! Web Installer Configuration screen. At the top, the Joomla! logo is displayed. Below it, a message states: "Joomla! is free software released under the GNU General Public License." The interface includes a progress bar with three steps: 1 Configuration (active), 2 Database, and 3 Overview. A "Select Language" dropdown menu is set to "English (United States)", and a "Next" button is visible. The "Main Configuration" section contains several form fields: "Site Name *" (text input), "Admin Email *" (text input), "Description" (text area), "Admin Username *" (text input), "Admin Password *" (text input), and "Confirm Admin Password *" (text input). Each field has a descriptive instruction. At the bottom, there is a "Site Offline" section with "No" and "Yes" radio buttons and a descriptive note.

Figure A-6. Joomla Web Installer – Configuration

1. The first step is to select your language from the drop-down.



If you intend to install multiple languages, it is preferable to do so now. See [“Hands-On Exercise: Installing Multiple Languages When Joomla is Initially Installed”](#) on page 145.

2. Enter your site’s name.
3. Enter a description of your site. This can be done later if you don’t want to think about it right now. It can be found in the Global Configuration.
4. Select if you want your site frontend offline by leaving Site Offline set to No or changing it to Yes.
5. Enter an admin email address.
6. Choose an admin username.



It is recommended for increased security to not leave the username as the default username `admin`. Change it to something else. By leaving it `admin`, you’re giving half of your login information away. Don’t give it away! Change it!

7. Make up an admin password, enter it in the Admin Password field, and confirm it in the field below. Your password should be secure and include uppercase letters, lowercase letters, numbers, and symbols. It should be a minimum of 8 characters, but 15 is better. The longer the better. This is your website; you want to protect it the best you can. Strong passwords help.
8. Click Next at the top right.

In the Database Configuration tab ([Figure A-7](#)), you will be entering the details of the database you created in a previous step.

Database Type

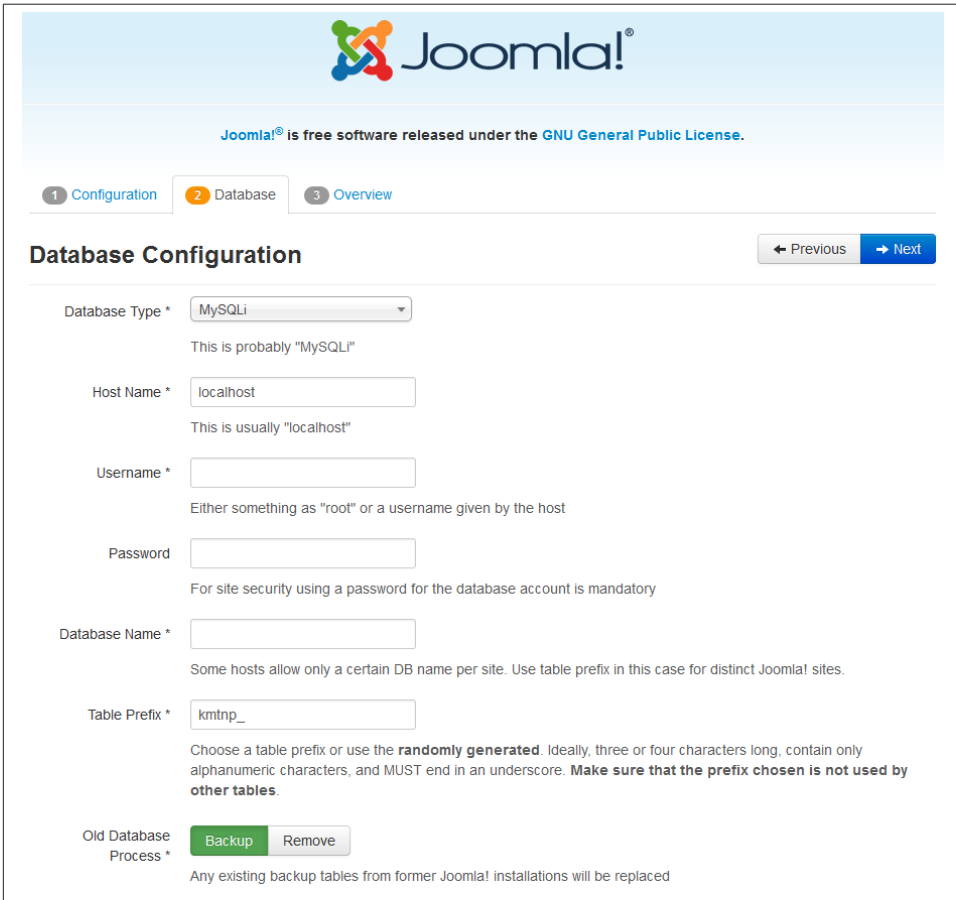
This is almost always MySQLi. If this is not available, then use MySQL. If MSSQL or PostgreSQL are available, they will be listed in the drop-down as well.

Host Name

This tells Joomla where the database is located. This is almost always `localhost`, because MySQL typically runs on the same server as your website. If `localhost` does not work, contact your host to obtain the hostname for your database.

Username

This is the username we created in step 7 of “Database Setup” on page 261.



The screenshot shows the Joomla! Database Configuration screen. At the top, the Joomla! logo is displayed, followed by the text "Joomla!® is free software released under the GNU General Public License." Below this, there are three tabs: "1 Configuration", "2 Database" (which is active), and "3 Overview". The main heading is "Database Configuration". On the right side, there are two buttons: "← Previous" and "→ Next". The form contains several fields and options:

- Database Type ***: A dropdown menu set to "MySQLi". Below it, the text says "This is probably 'MySQLi'".
- Host Name ***: A text input field containing "localhost". Below it, the text says "This is usually 'localhost'".
- Username ***: An empty text input field. Below it, the text says "Either something as 'root' or a username given by the host".
- Password**: An empty text input field. Below it, the text says "For site security using a password for the database account is mandatory".
- Database Name ***: An empty text input field. Below it, the text says "Some hosts allow only a certain DB name per site. Use table prefix in this case for distinct Joomla! sites."
- Table Prefix ***: A text input field containing "kmlnp_". Below it, the text says "Choose a table prefix or use the **randomly generated**. Ideally, three or four characters long, contain only alphanumeric characters, and **MUST** end in an underscore. **Make sure that the prefix chosen is not used by other tables.**"
- Old Database Process ***: Two buttons, "Backup" and "Remove". Below them, the text says "Any existing backup tables from former Joomla! installations will be replaced".

Figure A-7. Joomla Web Installer – Database Configuration

Password

This is the password to the username we created in step 8 of “Database Setup” on page 261.

Database Name

This is the name of the database we created in step 4 of “Database Setup” on page 261.

The Table Prefix is randomized so that virtually all Joomla installations will have a different Table Prefix. This is to prevent certain types of SQL injection hacks from

working successfully. If you want to choose your own, just pick three or four random letters followed by an underscore. Do not use bak_ as it is reserved for backup tables.

Once everything is entered, click Next. If you receive an error, click Previous and double-check your information.

The next page, seen in **Figure A-8**, finalizes the installation and gives some options for you to select. Let's go through them.

Joomla!
Joomla!® is free software released under the GNU General Public License.

1 Configuration 2 Database 3 Overview

Finalisation

← Previous → Install

Install Sample Data

- None
- Blog English (GB) Sample Data
- Brochure English (GB) Sample Data
- Default English (GB) Sample Data
- Learn Joomla English (GB) Sample Data
- Test English (GB) Sample Data

Installing sample data is strongly recommended for beginners.
This will install sample content that is included in the Joomla! installation package.

Overview

Email Configuration

Send configuration settings to `jengress@gmail.com` by email after installation.

Main Configuration	
Site Name	Joomla Pet Center
Description	Pet Supplies, Pet Adoption and Pet Forums for Dogs, Cats, Hampsters
Site Offline	<input type="button" value="No"/>
Admin Email	<code>jengress@gmail.com</code>
Admin Username	<code>jgress2jpc</code>
Admin Password	***

Database Configuration	
Database Type	mysql
Host Name	localhost
Username	pet_j3u13
Password	***
Database Name	pet_j32013
Table Prefix	kmtnp_
Old Database Process	<input type="button" value="Backup"/>

Figure A-8. Joomla Web Installer – Overview/Finalization

Install Sample Data

If you are new to Joomla, you may want to install the sample data by clicking the Install Sample Data button. The sample data contains articles, menu items, and other forms of content that will display on your site. If you're already comfortable with Joomla, you can choose to skip the sample content. But if you're new to Joomla, you may want to install the sample data to get an idea of how things can be set up.

You can select different types of sample data: Blog, Brochure, Default, Learn Joomla, and Test English (the Test English sample data set is used by community members to help test the software). Pick one and enjoy.



Once your site has taken shape, you will want to go through and clean up (trash and empty trash) any sample data that you did not use, so it doesn't confuse you or other users on the site. Also, even though pages aren't showing on the frontend of your site, that doesn't mean those pages won't be indexed. Cleanup is helpful in avoiding unwanted content from being indexed and creating confusing other administrators.

Using an extension like [OS Content](#) can aid in removing sample data quickly.

Email Configuration

Select whether you would like the configuration settings emailed to the admin email that you set up two screens previously. This emails the admin username and password as well as the database credentials to the email address specified.

Main Configuration

This shows what you entered for the Configuration installation page. You can use the Previous button at the top right to go back to the screen and make changes to it.

Database Configuration

This displays what was entered in the Database installation page. This works the same way as Main Configuration: you may use the Previous button at the top right to go back to the Database screen and make changes to it (though you wouldn't have made it to this screen unless it was correct).

Recommended Settings

As stated, these settings are recommended for compatibility with Joomla, though for the most part, Joomla will often still function if they don't quite match. It would be wise to make a note as to what didn't match, so that if something doesn't work, you have some notes to talk to your host about. For example, "If Magic Quotes are on, Joomla 3.x will not work."

1. Click Install at the top right. We're at the finish line—or rather the Finish page. See [Figure A-9](#).
2. If you would like to install additional languages, you may do so by clicking the “Extra steps: Install languages” button. You would do this before removing the installation folder. This step will install various multilanguage setups for you automatically. If you plan to have multiple languages on your site, this step will save you a lot of time.
3. Remove the installation folder by clicking the orange button that says “Remove installation folder.” Alternatively, you may remove the installation folder via FTP or cPanel.



Figure A-9. Joomla Web Installer – Finish

That's it. You now have Joomla installed. The frontend of your website will look similar to [Figure A-10](#).

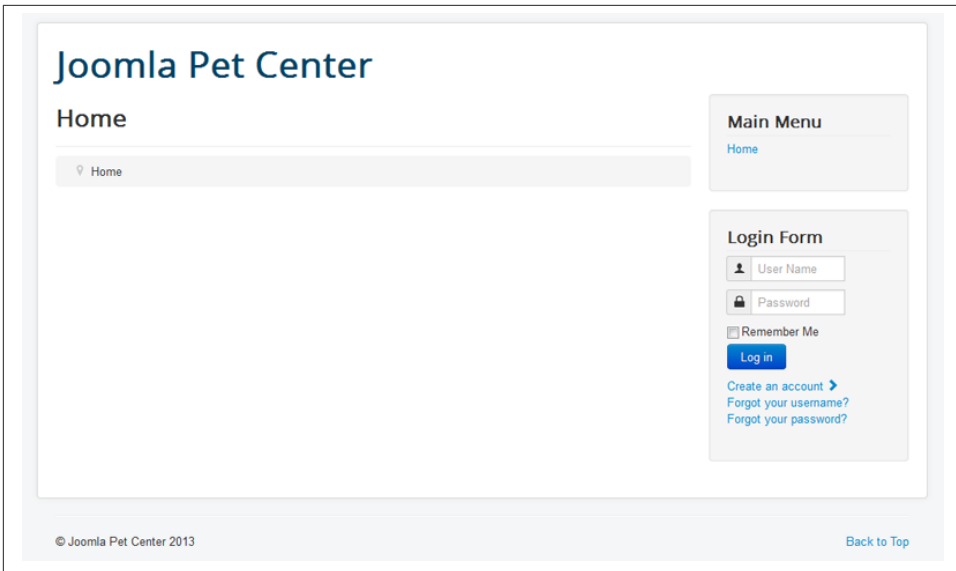


Figure A-10. Frontend of newly installed Joomla website

Access your site and administrator panel by utilizing your URLs:

- You should be able to access the frontend of your site by going to *http://www.<your-domain>.com*.
- To access the administrator panel, go to *http://www.<yourdomain>.com/administrator* and enter your newly created username and password.



If you uploaded the Joomla installation package via FTP or cPanel and then extracted the files via the File Manager, you will notice that the zipped package is still located in the root of your site files. It is safe to delete this file. You do not need it. It just takes up space and is no longer necessary in that format.

When you log in to the backend administrator panel, you will find that you have some System Messages. One of them is about Two Factor Authentication. We recommend that you not enable this functionality until you read and understand what this feature does. See more about Two Factor Authentication and Yubikey in [Chapter 14](#).

Global Configuration

Now that you've installed Joomla, you are going to want to make at least a few setting changes in the Global Configuration. Here are the main settings to address after you install Joomla and are logged into the administrator panel:

1. Click on System and then on Global Configuration.
2. In the Site tab, make sure your site name is entered.
3. Scroll down and enter information into the Site Meta Description and Site Meta Keywords fields.
4. Set Robots to “No index, no follow” until you are ready to go live.
5. Change the Show Joomla Version setting from Yes to No.
6. If you are building on a temporary URL that looks like */121.121.12.12~username/*, do not worry about your SEO settings at this time. If you are building on your domain where the site is going to reside, then you can change the SEO settings by following the instructions in [“SEF URL Settings and SEO Basics” on page 236](#) about Search Engine Friendly (SEF) URLs. If in doubt, don't change them right now.
7. In the System tab, scroll down and change your Session Lifetime to 60 (do not set this number too high, as it is dangerous to do so).
8. In the Server tab, verify that the Mail Settings fields for “From email” and From Name are how you would want them to appear when emails are sent from the system, so as to not create confusion for the recipient.
9. Do not touch Permissions or Text Filters for now.

That is all. You can now move on to more exciting aspects of building your website with Joomla.

Global Configuration Expanded

The System menu has settings and tools that affect your website from a global perspective. This includes Global Configuration, Mail Settings, Time Zone, FTP Layer, and more.

The first item in the System drop-down is Control Panel. Clicking this link will get you back to the Control Panel or Administrator Dashboard regardless of where you have been working in the Joomla CMS.

The Global Configuration page contains settings that affect your website from a global perspective.

You must be logged in to the backend as a Super Administrator in order to access the Global Configuration page. It is best to limit the number of people who have access to

Super Administrator accounts. The main difference between Administrator and Super Administrator is that Super Administrators have the ability to break the site more easily. They have the ability to accidentally uninstall needed extensions, and the Global Configuration page is where Super Administrators have the potential to cause the most problems to the site if they don't know what they're doing.

There are two ways to access the Global Configuration screen:

- Click the Global Configuration icon in the Control Panel
- From the top menu, select System and then Global Configuration

It's safe to click around and play with most of the options; however, there are some options that, if changed, would cause your website to cease functioning.

The Global Configuration page is broken down into five main tabs, and those tabs are outlined in the following sections.

Site

The Site tab contains options that affect how the site functions from a usability standpoint.

Site settings

Site Name

Site Name is the name of your website, commonly displayed in the title bar of your browser.

Site Offline

Setting this to Yes will cause the frontend of your website to display an offline message instead of any site pages, based on the selection in the Offline Message field you see below it. If Custom Message is selected from the drop-down, the text in the Custom Message editable box will appear instead of loading your site. A login screen will also appear to allow authorized people to view the site while offline.

Offline Message

You can select whether to display a custom message, the Site Language Default Message, or hide any offline message. This is the message displayed when the website is offline.

Custom Message

This editable box is where you can enter the text you want to display when the site is in offline mode. This box accepts HTML.



If you don't know HTML and want to style your message to look different than just plain text, you can design a custom message using an article with an editor. Toggle the source view and copy the HTML from the article, and paste it into the Custom Message field.

Default Editor

When creating articles, Joomla provides a rich WYSIWYG content editor allowing you to quickly format your content as you would in a word processing program. You can specify the default editor for all users.

Default Captcha

Joomla comes with a delightful ReCaptcha Plugin that can be enabled to provide captcha on forms, to prevent spam and bots from attempting to inject negative items into your site. See [Chapter 10](#) for how to set up ReCaptcha for your site. There are other captcha extensions available. If installed, they will appear in the drop-down here and can be selected as the Default Captcha.

Default Access Level

Select the default access level for content and menu items: this can be Public, Registered, Special, or a custom access level you create.

Default List Limit

When listing content in the Joomla backend, this parameter is the number of items to display per page. This is only the default value, and users have the ability to adjust this when viewing the list.

Default Feed Limit

When syndicating articles or other items using the RSS features of Joomla, this field represents the maximum number of items that will be displayed.

Feed Email

When the feed is generated, the author is shown for each item. This setting allows you to dictate whether you want the feed to show the author's email, the site's email, or no email.

Metadata settings

Site Meta Description

This contains the description metadata. This helps search engines know what your site is about. Some search engines display your meta description under the link to your site within their search results; therefore, it is important not to leave this as the default Joomla description.

Site Meta Keywords

This contains the keyword metadata. Although search engines don't rely on this as much today as they once did, it tells them what keywords you want associated with your site.

Robots

There are four options for directing search engine crawlers on how to handle your content. This information is stored in a file called *robots.txt*. The four options are:

- Index, Follow
- No index, Follow
- Index, No follow
- No index, No follow

Index means that you are telling search engines to index the page. *No index* means that you are telling search engines not to index the page. *Follow* means that you're telling search engines to crawl the links on your page. *No follow* means that you are telling search engines not to crawl the links on your page.

In general, if your site is live and you want people to get to your site, set this option to Index, Follow. If you are in development, then perhaps you want to set this to “No index, No follow” until you are ready to go live.

Show Author Meta Tag

If set to Yes, the author of the article you are viewing will show in the metadata.

Show Joomla Version

If set to No, the version (e.g., 3.x or 2.5) of Joomla will not show in the meta generator. The name Joomla will still appear in the generator.

SEO settings

Search Engine Friendly URLs

Friendly URLs are human-readable and are better for search engine ranking. This setting turns them on and off. “[SEF URL Settings and SEO Basics](#)” on page 236 goes into much more detail on the subject of Search Engine Optimization and Search Engine Friendly URLs.

Use Apache mod_rewrite

This indicates whether you want to use Apache's Rewrite module, an extension for Apache that rewrites URLs. This requires the use of the included *.htaccess* file.

Add suffix to URLs

When turned on, the file suffix *.html* will be added to the end of all friendly URLs.

Unicode Aliases

If set to Yes, then non-Latin characters are allowed in the alias and URL. If no, then a title that includes non-Latin characters will produce the default alias of the current date and time. The default setting is No.

Include Site Name in Page Titles

This will include the site name in the page titles. For example, if set to Before, the browser tab will read My Website Name - Article Title. The options for this feature are After, Before, or No. We recommend using After or No.

Cookie settings

Cookies are used to track sessions and are necessary for some operations within Joomla. The settings below are used to further fine-tune cookies set by Joomla. In general, the defaults (leaving the fields blank) will work for most users.

Cookie Domain

This is for telling the system the domain to use when setting session cookies. Precede with a dot (.) to make valid for all subdomains. Example: *.TheDomain.com*.

Cookie Path

Enter the path for which the cookie is valid.

System

The System tab contains options that relate to sessions, debugging, and cache handling.

System settings

Path to Log Folder

This is the path to the Joomla log file where errors are recorded. This path is set by the installer to the */logs* directory.

Help Server

When you choose the server to pull help files from, you are also setting which language to use for help.

Debug settings

Debug System

When debugging is turned on, information to help you troubleshoot a variety of issues is displayed at the bottom of each page.

Debug Language

Similar to Debug System, except that this only displays language information for the Joomla language files. This is useful when writing your own extensions.

Cache settings

Cache

Turning on the cache can help speed up sites with lots of traffic by reducing the number of MySQL queries and the amount of processing power needed to render and return pages. If enabled, however, changes to your site will not appear until the Cache Time (see below) has expired. This setting should not be used in the process of developing a site when many changes are being made and testing is being done.



Always test cache performance. The cache setting sometimes has unpredictable results depending on the server. Some extensions may break while using cache. Always test and use with care.

Cache Handler

The Cache Handler setting tells Joomla where to store the cache.

Cache Time

This tells Joomla how long to cache a file. After it expires, a new cache file will be created.

Session settings

Session Lifetime

After you have been idle for the given amount of time, the system will automatically log you out. Although it is tempting to make this a really large number so that you never have to worry about being kicked out in the middle of writing a long article, it truly is a security risk. This is especially true if you will be accessing your site from public computers.

Session Handler

The Session Handler setting tells Joomla where to store user session information. Using Memcache is not recommended at this time.

Server

The Server tab contains server-specific options like locale, FTP, database, and mail settings.

Server settings

Path to Temp Folder

This is the folder Joomla uses when storing temporary files. For example, when you install an extension from an archived file, this is the folder where files are extracted before they are actually installed. The default directory is */tmp*. It will appear in this field with your specific server path, with */tmp* as the last part of the path.

GZIP Page Compression

When set to Yes, HTML and other code is compressed before it is sent from the server to a site visitor. For large sites, this setting may improve page loading times.

Error Reporting

Error Reporting sets the level of reporting PHP errors.

Force SSL

This forces your site to run under Secure Sockets Layer (SSL). You can choose Entire Site (frontend and backend) or Administrator Only. Using SSL means that all traffic to and from your site will be encrypted and not readable by hackers using packet-sniffing software. You will need to make sure that you have a valid certificate installed, or end users will receive a warning from their web browser when visiting your site. By default, this is set to None.

Location settings

Server Time Zone

Select your time zone from the drop-down box.

FTP settings

Enable FTP

Most people installing Joomla will not need to enable the FTP layer within Joomla. If you are having permissions issues, then contact your host and have them install the patch suPHP or FastCGI to your server if possible. If they won't do this, then switch hosts.

FTP Host

This is the name of the host for your FTP server. Typically, 127.0.0.1 works.

FTP Port

The default port for FTP is port 21. However, some hosts change this for security reasons, so check with your hosting provider if it doesn't work.

FTP Username

This is the username for the FTP account.

FTP Password

This is the password for the FTP account.

FTP Root

Typically, when you log in to your hosting account via FTP, you won't end up in Joomla's root directory by default. The FTP Root is nothing more than the path from FTP's root directory to Joomla's directory.

Database settings

Database Type

The database type is almost always MySQLi. Changing this field could cause your site to stop working, so it shouldn't be changed unless you know exactly what you're doing and know the type of database created and working for your site. A reason you may want to change it is if you switch hosts to one with a different type of compatible database or change the type of database on your current server.

Host

The hostname is where Joomla can find your database. Most often this is local host, but if your database is on a different server (GoDaddy uses a different server), you'll want to enter it here.

Database Username

This is the username for the MySQLi account that has access and write privileges to your database.

Database Name

This is the name of the database where your Joomla tables are.

Database Tables Prefix

All of the Joomla tables for this installation begin with a database prefix. This is randomly generated by Joomla upon installation for security purposes. See [Chapter 14](#) for more on security. If you wanted to add a second installation to Joomla and not create a new database, you could just give it a different prefix. Prefixes can be lowercase letters, numbers, and underscores. Once this is set, you will probably never change it.

You may have noticed that Password is not an option within the Database Settings. If you want to change the MySQLi password, you'll need to manually change the \$password variable in the *configuration.php* file located in Joomla's root directory.

Mail settings

Mailer

When Joomla sends out an email, this determines what method to use.

From email

When an email is sent out, this is the return email address.

From Name

When an email is sent out, this name is shown as the sender.

Sendmail Path

If you set Mailer to be Sendmail, this is the path to the Sendmail script on your server.

SMTP Authentication

If you set Mailer to be SMTP Server, this tells Joomla if the SMTP server requires authentication.

SMTP Security

You simply select the security model that your SMTP server uses; either SSL or Transport Security Layer (TLS).

SMTP Port

This is where you enter the port number of your SMTP server. Generally it is 25 for unsecured servers and 465 for secured servers.

SMTP Username

When authentication is required, you must supply a username for the SMTP server.

SMTP Password

When authentication is required, you must supply a password for the SMTP server.

SMTP Host

This tells Joomla where the SMTP server is located. If it is located on your server, you could leave this value as localhost.

Permissions

In the permissions tab you set the permissions settings for the user groups listed there. You would do well to thoroughly review “[Users, User Groups, Access Control Lists \(ACLs\), and Frontend Editing](#)” on page 242 before changing any of these settings. Permissions for user groups get confusing quickly, so read first, read again, and then make changes.

The screen works in the permissions tab like this: you click on one group at a time on the left starting with Public and ending with Super User, and it opens a screen to the right where you can change the permissions for various actions for that user group. You can then change the permissions for those actions in the Select New Setting column.

Check out “[Users, User Groups, Access Control Lists \(ACLs\), and Frontend Editing](#)” on page 242 for detailed information on the wonderful world of permissions.

Text filters

The following Filtering Options are used to control filtering on article submissions. These are essentially security precautions to keep malicious code from being added to your website, but they can also filter unwanted code in articles when an article is submitted or edited:

Filter Groups

Select the user group(s) to which you want the filters applied.

Filter Type

Select the type of filter you want to apply:

- **Default Blacklist:** When selected, this will filter out the following blacklisted tags by default: `applet`, `body`, `bgsound`, `base`, `basefont`, `embed`, `frame`, `frame set`, `head`, `html`, `id`, `iframe`, `ilayer`, `layer`, `link`, `meta`, `name`, `object`, `script`, `style`, `title`, and `xml`. It will also filter out the following blacklisted attributes by default: `action`, `background`, `codebase`, `dynsrc`, and `lowsrc`.
- **Whitelist:** This allows only the tags specified in the Filter Tags or Filter Attributes fields.
- **No HTML:** This removes all HTML from the article when submitted.

Filter Tags

List additional HTML tags to filter, separating each with a comma or space. These tags will be either blacklisted or whitelisted, depending on your Filter Type setting.

Filter Attributes

List additional attributes to filter, separating each with a comma or space. These attributes will be either blacklisted or whitelisted, depending on your Filter Type setting.

These Filtering Options are applied regardless of which WYSIWYG editor is used.

For more explanation on Text Filtering, see [“Adding Embedded HTML Code and Text Filtering” on page 112.](#)



Some third-party editors have their own filter configuration options. See the documentation for your particular editor for more information.

Global Check-in

When an article is edited, Joomla will lock it so that multiple users can't edit it at the same time and accidentally overwrite or delete each other's changes. The article (this also applies to components, categories, modules, and menu items) is unlocked when you click the Save or Close buttons in the toolbar when editing the article. When you close the browser without clicking Save or Close, your session expires, you use the Back button, or you just navigate away from an open article, you never unlock it. When this happens, no one else can edit it. This is actually a great feature and prevents website administrators from having to manage “content conflict.” However, we're all human and sometimes we forget to close an article properly.

When items are being edited, a small padlock icon like the one shown in [Figure A-11](#) will appear next to the title.

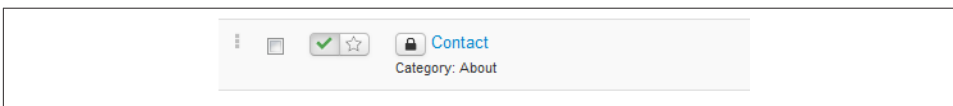


Figure A-11. Checked-out article in Article Manager

There are three ways to unlock a locked item.

1. Have the person who has it locked finish editing the item and click Save & Close.
2. Use Global Check-in.



To use the Global Check-in feature, click System and then Global Check-in. Looking at [Figure A-12](#), you'll see that Global Check-in not only checks in articles, but many other types of items as well.

3. If you have the authorized permissions, you can check in the item in the Article Manager, Menu Manager, or Module Manager by clicking on the lock icon or selecting the checkbox in front of the item(s) and clicking the Check In button in the toolbar.

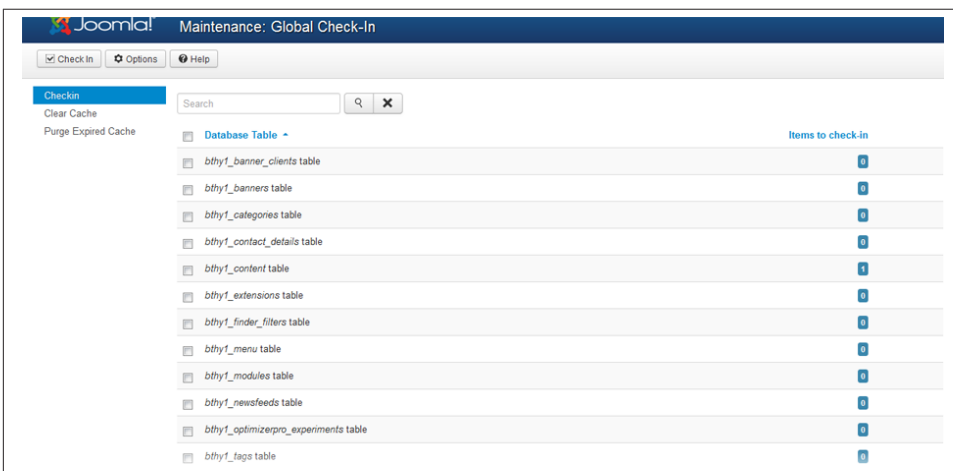


Figure A-12. Global Check-in

If you want to edit an item that is locked and checked out, pay special attention to the time. If you see that it was checked out recently, it is a good idea to check with the person who checked it out to make sure they're not still editing it. If you use Global Check-in and then edit an item while someone else is also editing it, the second person to save the item will overwrite the first person's edits.

Clear Cache

The term *cache* (pronounced like the word “cash”) might be a fairly common word, but not everyone knows exactly what it is. Essentially, it's a space where items can be quickly stored and reused in order to save resources and time.

Each time you view a page on your website, Joomla does a lot of work to build each piece of the page, and then puts them together like pieces of a jigsaw puzzle. When the page is complete, the web server sends the rendered code back to your browser, where you actually view the page. When caching is turned on, the individual puzzle pieces are saved to files after they are built. The next time someone needs that puzzle piece, Joomla will get it from the file instead of working to build it again. After a set period of time, that puzzle piece will expire and Joomla will build a new puzzle piece and place it into cache. Typically, cache refresh happens every 15 minutes. Cache settings in Global Configuration can be used to specify the amount of time to cache these puzzle pieces.

On sites with few visitors, caching serves little purpose. On high-traffic sites, caching is vital to minimize server load time, which in turn greatly improves site performance.

To access the Cache settings, click System and then click Clear Cache. [Figure A-13](#) shows the Maintenance: Clear Cache screen with a few cached items. To clear them, check the ones you want to delete and then click Delete in the toolbar.

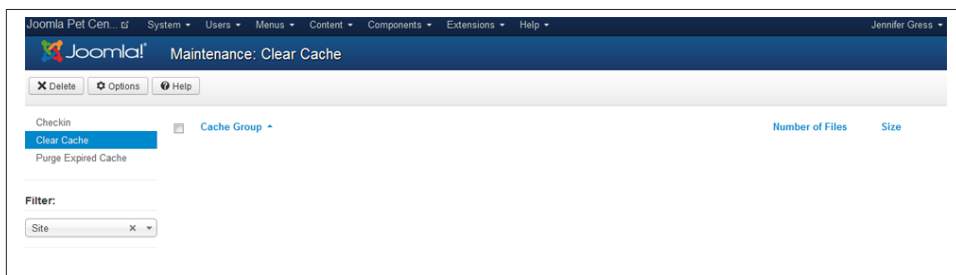


Figure A-13. Maintenance: Clear Cache - Clear Cache Admin

Clearing the site's cache may need to be done if you have made substantial changes to your website and they aren't appearing on the frontend.

Purge Expired Cache

When the cache refreshes, the old cache files are not removed. To purge expired cache, click System and then Purge Expired Cache. You should see a screen like [Figure A-14](#).

Pay close attention to the warning listed in [Figure A-14](#). If you have a large number of expired cache items, consider performing this action during a time of day with lower traffic.

Once you have read the warning message and are ready to proceed, click the “Purge expired” button in the top toolbar.

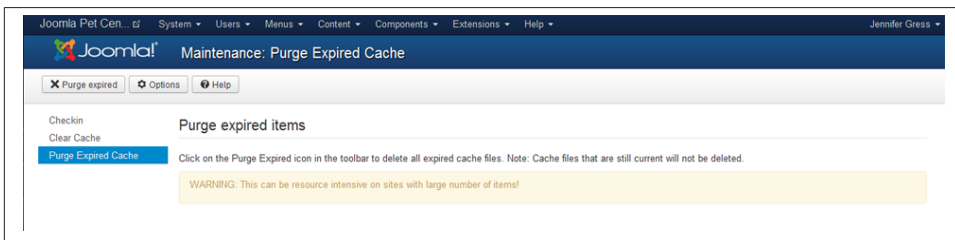


Figure A-14. Purge Expired Cache

Depending on site traffic, you should notice that most or all the cache files are now purged.

System Information

System Information provides an overview of certain Joomla and server settings. The tabs in System Information are especially important when troubleshooting problems with your Joomla site.

System Information

This tab contains basic information about your server and the installed applications needed to run with Joomla.

PHP Settings

This tab contains PHP settings set by your server administrator that can affect the performance of your website.

Configuration File

This tab contains the contents of your website’s *configuration.php* file. Most of these settings can be changed from within Global Configuration.

Directory Permissions

This tab contains directory permission information vital for proper operation of your website. Every row in the status column should say Writable in green letters. If a directory is not writable, you will see Unwritable in red letters. To correct this, you'll need to change the permissions on those folders, and probably contact your hosting provider for assistance.

PHP Information

This tab gives you an overview of your server's PHP settings.

Updating and Migrating Joomla

Joomla Updates

Things change. This truth is perhaps the only thing that doesn't change. This includes website software like Joomla.

Sometimes you will hear your host tell you that you have outdated scripts or you need to keep your scripts updated. "What is a script? I'm running scripts?" you may ask yourself. And yes, you are. The language Joomla's code is written in is PHP, which is technically a scripting language. A script is a list of commands that are executed by a scripting engine. Joomla itself is a script. Your template is a script. Any third-party extensions are scripts.

The importance of keeping your scripts updated is paramount to the continued health and safety of your website. Outdated scripts can potentially make your site more vulnerable to attack. In fact, the top two reasons sites are hacked are:

1. An improperly configured or vulnerable hosting environment
2. Outdated scripts

We will walk through various means of updating your Joomla site and third-party extensions in this appendix. We will also cover migration from one version of Joomla to another, which is a necessity in order to operate your website with the most recent version of Joomla (a script).

Updating Joomla Within a Release Cycle

Periodically, Joomla will release security and/or feature updates when necessary. It is important to do these promptly. Upgrading Joomla has never been particularly difficult. Since Joomla 2.5, it is even easier for anyone to update Joomla to the latest release.

There are two ways to find out about security updates:

1. Subscribe to receive Joomla Announcements and **Security Updates**. You'll receive notification when an update is available.
2. A large pink banner appears across the top of the Control Panel, as in **Figure B-1**.
3. On the left sidebar of the Control Panel under the heading Maintenance, there is a Quick Link that will state "Joomla 3.2.1 is available: Update now," as can be seen in **Figure B-2**.

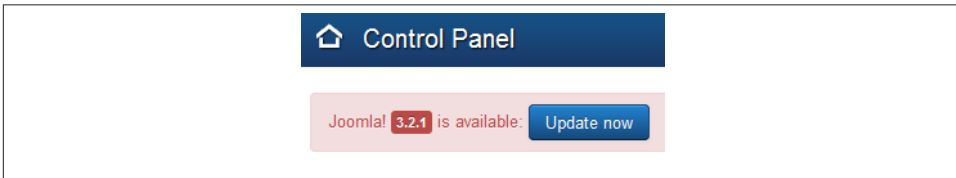


Figure B-1. Update alert banner at top of Control Panel

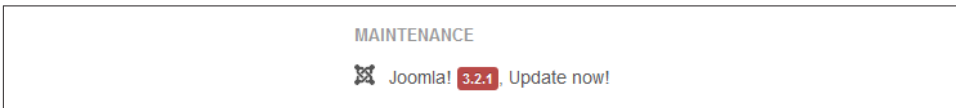


Figure B-2. Control Panel icon showing a Joomla Update is available

Follow these steps to upgrade your website:

1. The first step when an upgrade to your site is available is to do plenty of due diligence. Read as much as you can about the update by going to Joomla's website and look at the known issues. Click the FAQs for the release link and read what is there. Go to the **Joomla Forums** and see if others are having problems with the update.
2. Back up your website. See "**Mastering Backups**" on page 56 for instructions on how to use Akeeba Backup in order to create a backup of your site.
3. The pattern of excellence is to restore this backup into a new subdomain or subdirectory as a test site. Visit **Akeeba Backup** for documentation on using **Akeeba Kickstart** to restore your backups.
4. Click Components and click on Joomla Update.
5. You will see the version of Joomla you are running and the version available (**Figure B-3**).

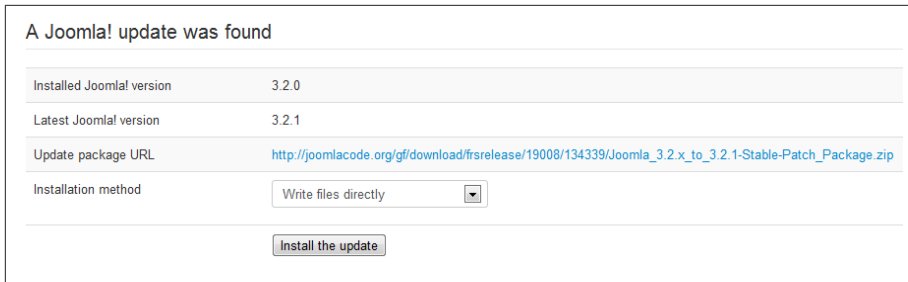


Figure B-3. Joomla Update screen

6. Click the “Install the update” button.

You will see the progress of the update and get a notice when it’s complete.

Now, test the site. Add an article and add some content to the article with various formatting. Insert some images and do some linking. Add a menu item. Test whatever people do on your site both from a visitor perspective and an admin perspective. If something goes wrong, use a search engine or visit the Joomla Forums to find others who may have gotten the same error you did, or are experiencing the same problem and learn how it was resolved. In fact, it’s a pretty good idea to do a search for any update problems before doing the update. Even if you do have problems with the update, you can relax knowing that you are on a test site and not on a production site.

Once you determine that the update has been installed correctly and your components are working properly, back up your live site again and execute the update on your live site. This is also a good time to go through your other extensions and update them if there are updates that have been provided by the developer(s). Maintaining your scripts/ extensions is very important. See the next section for more on updating third-party extensions.

We like to run a backup again after the update. Akeeba Backup allows you to associate a note with the backup. You can type **After 3.x.x update** so that you know which backup it is, in case you need to restore it in the future. These notes can be found by hovering over the *i* icon from the Manage Backups tab of Akeeba Backup.

Updating Third-Party Extensions

There are two types of third-party extensions:

1. Those that notify you through the backend of Joomla and can be updated through the one-click update function.
2. Those that do not notify you through the backend of Joomla and/or must be manually updated via the Extension Manager.

On the Control Panel in the left sidebar under the heading Maintenance, there is notification that Joomla is up to date (see [Figure B-4](#)) and another that will say either “All extensions are to up to date” or “Updates are available!” If an extension that can be updated through Joomla has an update available, it will appear here. Clicking on the link will take you to the same place as clicking on Extensions and again on Extension Manager.



Even if the Maintenance heading states that all extensions are up to date, you still need to check other extensions that do not notify you via the backend of Joomla. Those extensions need to be updated manually.

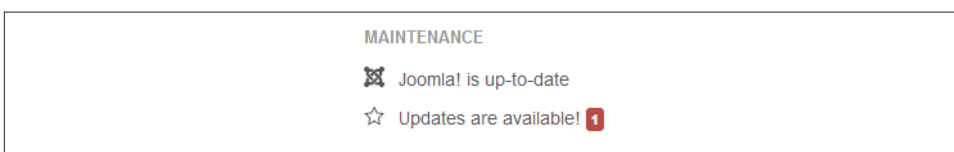


Figure B-4. The Maintenance section of the left sidebar shows available updates

Click on the left sidebar option Update. Here you will see a list of extensions that need updating, as in [Figure B-5](#). Follow the same routine you would for any update:

1. Read.
2. Back up.
3. Update a test site.
4. Test.
5. Update the live site (button in top toolbar).
6. Test.
7. Back up again.
8. Repeat if necessary.

<input type="checkbox"/>	Name ^	Install Type	Type	Version	Folder	Client	URL Details
<input type="checkbox"/>	Gantry	Update	Library	4.1.19	N/A	Site	http://www.gantry-framework.org/updates/joomla16/gantry.xml http://www.gantry-framework.org

Figure B-5. A third-party extension update available in the Extension Manager

Some third-party extensions want you to update by installing the new extension package (typically in a *.zip* or *tar.gz* file format) over what you already have. This is done via the Extension Manager on the Upload Package File tab, as we did when installing Akeeba Backup (see “Mastering Backups” on page 56).

In some rare cases, third-party extensions will direct you to uninstall the extension through the Manage section of the Extension Manager and then reinstall the new version of the extension. Never uninstall an extension in an effort to update unless specifically directed by the developer. Uninstalling extensions will mean the loss of your configuration settings in most cases. Use caution and always do a backup first.

You can check with the extension developer’s website or the JED to see if newer versions of the extension are available. Check the developer’s instructions on updates concerning their extensions, as one approach does not fit all.

Joomla Migrations

Between major releases of Joomla, significant changes take place that sometimes require a restructuring and associated migration of data as opposed to an update. Technology changes not just from the Joomla side but also with the versions of PHP and MySQL that force CMS technology to change with it.

Migrations from one life cycle of Joomla to another give everyone many opportunities to:

- Assess site goals and determine if they are being achieved
- Clean up “great ideas” that didn’t turn out so well
- Remove extensions that were installed and not used
- Simplify
- Develop new areas of the site
- Change design and/or flow
- Increase usability
- Increase accessibility to disabled folks
- Increase functionality for visitors on multiple screen resolutions
- Improve SEO
- Take advantage of new features

One of the members of the Joomla User Group (JUG) that Jenn co-organizes used a good illustration that she has altered slightly to more easily describe the process of migration from one major release of Joomla to another.

Imagine in your mind's eye that you have decided to move to a new home. It doesn't matter if this is a new larger home or if you are downsizing to a smaller home. The concept is the same.

In your current home, you have furnishings in each room. Perhaps you have a couch and some coffee tables in the living room. Perhaps you have a table and chairs in the dining room with a big hutch. Let's just say you have a bedroom and an office, each with some furniture in it.

You have found a new home to move into. It's great! Yet, some of the furniture that is working fine in your current home isn't fitting perfectly into the new home. The new home doesn't have a dining room. What are you going to do with that dining room set? The hutch is going to have to be sold.

The living room in your new home is huge! The couch and furniture you have in your current home are going to look like doll furniture. Thankfully, your new home has two bedrooms, and your bedroom and office furniture will fit just fine.

So it is with migration in Joomla. It is moving your data and extensions from one home to another. Perhaps literally if you choose to change hosts at the same time. The articles, categories, menus, and modules are pretty simple to move. The data in extensions perhaps easy and perhaps not so easy. It could be that an extension you have been using hasn't been updated for the new version of Joomla—it will be like that hutch in the dining room. It will have to go. Some other extension or solution will have to be found in order to fulfill the functionality that extension served—if it's still required.

Isn't that a great illustration?

Planning for Migration

The first step in any migration process, whether big or small, is planning. Plan, plan, plan. There is no substitute for planning. If planning takes a week or six weeks, so be it. Planning makes the entire process easier.

The following are considerations for performing a major migration. A major migration would be moving from Joomla 1.0 or 1.5 to Joomla 3.x. A mini-migration, such as Joomla 2.5 to Joomla 3.x, means that Joomla core content is a one-click update, and third-party extensions need to migrate. The amount of work is determined mainly by the third-party extensions in use. Each of the following considerations should be thought about when planning a major or minor migration.

1. Revisit your goals. This is an opportunity to get back on track or change track.
2. Take a look at your existing site from the backend.

3. Make a list of all extensions in use; both the components that install with Joomla and third-party extensions. This includes components, modules, plugins, languages, and templates.
4. Make note if those extensions are used heavily, moderately, hardly ever, or never.
5. Research whether the extensions you rely on are ready for the version of Joomla you are migrating to.
6. Determine if you really need all the extensions you are using. Is it possible that the newer version of Joomla has features that replace an extension you were using?
7. Does the developer of extensions you must keep have a migration path for you to follow from one version of the extension/Joomla to another?
8. Take a look at your sections (if Joomla 1.5) and categories. Sections no longer exist from Joomla 2.5 on. Perhaps there is cleanup that needs to be done so you don't migrate unnecessary sections and categories.
9. Are the categories you have still applicable? Make a list of categories you may want in your "new" site.
10. Take a look at your articles. Is there cleanup that needs to be done? Are there articles in the trash? Best not to move those over. Note or make a list of articles you want to move over.
11. Are you using Joomla Contacts, Web Links, or Newsfeeds? Make note of those, as they will need to move over.
12. Are you going to move over users? If you are using a third-party extension to gather additional data on users, is that going to move over?
13. Take a look at your Media Manager and determine if you need to or want to move it all over. If your Media Manager has become a nightmare, you may want to move your images over manually via FTP or cPanel instead of migrating the entire directory. For more on Media Manager organization, see ["Organizing Media" on page 137](#).
14. Check out your modules. Are there any special modules from third-party developers? You will need to find out whether they are ready for the version of Joomla you are moving to.
15. Look at your template. Has the developer updated it for the version of Joomla you are migrating to? Was it heavily customized? If so, those changes will all have to happen again. Are you using a custom template? It will have to be converted and changed to work with the new version of Joomla. Do you have any desire to have a responsive template? If so, now is the time to decide.
16. Find a template that is compatible with the version of Joomla you are migrating to, or hire someone to migrate your template to work with the version of Joomla you are migrating to.

17. Will your new template have different module positions than your old/existing one? If so, just know to allocate time to change the positions of all of your modules to the new position names.
18. Will your new template require different images? For example, if the header on your existing template is white and the background of your logo is white, and you choose to move to a new template where the header is black, you may need have some image work done so that your images look good. Images with a white background do not look fantastic against black or even off-white, as in a main content area. Keep these things in mind when looking at templates or modifying the template CSS.
19. Check your menus and determine if you will be bringing them all over. Check the trash and ditch any that are there.
20. Are there features of the new version of Joomla that you wish to utilize, like Access Control Levels (ACLs)? If so, now is the time to begin planning for it. Planning ACL structures is a careful and thorough business. Do not rush.
21. Is your existing site using functionality that “hacked the core”? Those changes won’t be migrated. This is a good time to clean up “core hacks” by using template CSS overrides or other override techniques.
22. Are the internal links in your content hyperlinked with relative URLs? If not, while in migration mode those links may not work, or they will need to be fixed.
23. Will you have obsolete pages requiring redirects so as to not lose your SEO standing?

The bottom line is that you are determining what stays, what goes, and what changes in every aspect of migrating your existing site to your new site.

Essentially, a migration is a new website—it’s just that you already have data. The data will be migrated/moved with minimal effort for the most part. Still, you’re building a new website in a new version of Joomla. It will all have to be cleaned up. Migration entails a lot of cleanup. Joomla core data is the simple part of a migration. The more challenging aspects involve the third-party extensions, especially components with data that needs to migrate. Templates are always an important aspect of this.

Each third-party extension developer will have different means of migrating data from one version of Joomla to another. It is up to you to seek this information out and determine the migration path for the individual extension. It will generally fall into one of a few processes:

1. The third-party developer has a documented process to move the data which is fairly simple to follow.
2. The third-party extension is no longer developed for the newer version of Joomla and you must choose a new one.

3. Start from scratch or move (copy and paste) data manually (by hand) with an updated version of the extension in the new version of Joomla.

It is outside the scope of this book to describe the thousands of possible migration paths of third-party extensions. There are many articles to assist you on the Internet, and we encourage you to research and read prior to migrating third-party extensions.

Steps for Mini-Migration: Joomla 2.5 to 3.x

The process for Joomla 2.5 sites to go to 3.x is considered a mini-migration. That means that Joomla core extensions (categories, articles, modules, menus, core settings, and plugins) can be updated from 2.5 to 3.x with a one-click update. Third-party extensions may or may not need to be migrated or may only need to be updated.

If the third-party extension includes versions for 2.5 and 3.x in the same *.zip* or *tar.gz* file, it won't require migration and can be updated via the one-click updater.

If the third-party extension has a separate file for a 2.5 installation and a 3.x installation, then you will need to migrate the data according to the developer's documentation.

As of May 2014, the exact verbiage for selections has not been decided by the Joomla Production Leadership Team (PLT). In general the steps below reflect how to perform a mini-migration. They may change slightly. Definitely check documentation provided by Joomla when updating/migrating from Joomla 2.5 to 3.x if anything you see on your screen is different from the list of instructions that follow.

1. Read.
2. Back up.
3. Restore on test environment, subdomain, or subdirectory.
4. Update Joomla to the latest release in the cycle.



Step 4 must be done in order for the update that will get you to 3.x to appear in your 2.5 site. Failure to update to the latest 2.5.x version could create unknown and perhaps terrible results. Have a backup and be on a test environment to mitigate ill results.

5. Uninstall all extensions (modules, plugins, extensions, templates, packages) that are not ready for Joomla 3.x or do not have a 3.x-ready version inside the same *.zip* or *tar.gz* file. (Any extensions that aren't ready that you do not uninstall will result in displaying an error and the white screen of death for your update.) If you need to uninstall your template, select a default template like Beez in the Template Manager prior to uninstalling your template.

6. Update all extensions that do have a 3.x version inside the same .zip or tar.gz file to their latest release.
7. Back up your site again.
8. Disable the Remember Me plugin via the Plugin Manager.



Failure to disable the Remember Me plugin may throw an error on your update with the infamous white screen of death. Fixing it is a pain, and it's faster to just restore a backup and start over. If you do want to fix it, visit the [Joomla Community Form](#) and search for "disable *remember.php*" and give it a go.

9. Click on Components and again on Joomla Update.
10. Click on Options.
11. From the drop-down, select the update server option that will get you to 3.x.



The name of the Update server option has not yet been established as of May 2014. Use caution, as there will be as many as three simultaneously maintained release cycles at this time. You want the one that gets you to the 3.x series. As of May 2014, this is labeled Short Term Support.

12. Click Save & Close.
13. Once your available update appears on the Control Panel or in the Joomla Update component, run the update.
14. Click on Extensions and then on Extension Manager.
15. Click on Database on the left sidebar and then click the Fix button.
16. Get ACL Manager and repair your missing assets, orphaned assets, and asset issues. Follow the instructions in steps 23–30 of "[Hands-On Exercise: Migrating from Joomla 1.5 to 3.x](#)" on page 299.
17. Check the frontend of your site to make sure you have no white screens of death. If you have a white screen of death, it means that there was an extension still installed that isn't compatible with Joomla 3.
18. Reinstall any necessary third-party extensions, including your template, one at a time.
19. Test everything.
20. Back up your 3.x test site.
21. Move or restore your 2.5 site to a new directory from the root of your hosting for safekeeping until you are sure you no longer need it for anything.

22. Move or restore your 3.x test site to the root of your hosting to make the new 3.5 site your live site.
23. Remove the 2.5 site as soon as possible so you do not have a security vulnerability on your server.
24. Remove the test site in a subdomain if applicable.
25. Remove any unnecessary and unused MySQL databases for the test site or 2.5 site as well.

Steps for a Full Migration from Joomla 1.5 to 3.x

Joomla 1.5 was built with a completely different structure than 2.5 or 3.x. Thus, it is a major migration process to go from 1.5 to 3.x. Thankfully, tools exist to assist us in migrating the areas of the site that install with Joomla, including articles, modules, contacts, etc.

Third-party extensions need to be handled individually, as described earlier.

Migration Tools

The most popular tools to assist with migration are:

SPUpgrade

We will use SPUpgrade, as it is quick, simple, popular, and an accurate method for migrating Joomla core content and some third-party extensions. SP Upgrade does cost a small amount and it is worth every penny. Check out [SP Upgrade on the JED](#).

JUpgrade

Many have had good success with this noncommercial (free) extension to migrate between major Joomla releases. Many have not. Its purpose is to move Joomla content, not third-party extensions. Check out [JUpgrade on the JED](#).

redMIGRATOR

redMIGRATOR is a fork of JUpgrade by redCOMPONENT. Check out [redMIGRATOR on the JED](#).

J2XML and J2XML Importer

During migration, some decide to rebuild sites entirely from scratch. This is fine if it is a small site; it can be quite time-consuming with a large site. Enter J2XML. J2XML migrates Web Links, sections, categories, and articles. It also migrates users and images associated with the articles while keeping the article IDs, which is important to most from an SEO perspective. It starts from a clean install of the new version of Joomla from scratch and an empty database, and inserts articles as if they had been hand-entered, which makes for a cleaner move of the data, yet leaves you

to create your menus and modules all over again. This is clean and more time-consuming. Check out [J2XML](#) and [J2XML Importer](#) on the JED.

Migrate Me

New to the migration scene is Migrate Me. While we haven't tested this method, we hear there is good success with it and have had success with other extensions by this developer. Check out [Migrate Me on the JED](#).

Case Study: Migrating [www.usingjoomlabook.com](#) from Joomla 1.5 to 3.x

As a supplement to *Using Joomla* First Edition (O'Reilly), [www.usingjoomlabook.com](#) was created in Joomla 1.5. Now that we have a Second Edition of *Using Joomla*, the content and the Joomla version need to be updated without removing the information from the First Edition.

The case study for this section will be to migrate [www.usingjoomlabook.com](#) from Joomla 1.5 to Joomla 3.x. We followed the planning guidelines seen in [“Planning for Migration” on page 292](#) and have determined the following:

- System Info shows us that the technical specifications for Joomla 3.x are met on this server. We can proceed.
- There is only one third-party extension installed that is not in use. We will not migrate it.
- There is an additional language pack installed but no content for it. We will not migrate it.
- We will need a new template. We will choose one that is responsive.
- There are a few Web Links in one category. We will bring those over. There are many Web Link categories that do not have any Web Links in them. We will not migrate those empty categories.
- There is one content section with five categories. There are just a handful of articles. We will migrate the section, categories, and articles.
- A handful of Joomla core modules are in use. We will migrate the modules.
- Two menus exist; the Main Menu and a Hidden Menu Links menu. We will bring the menu items from both menus to the 3.x site. It is common to see a menu called Hidden or something to that effect. Often a menu item is created in a hidden menu to create and control URLs for articles that are not displayed to visitors, or to manage which modules display with those articles. While it may appear that the menu isn't in use, and one might be tempted not to bring over the menu items, it could be important to do so—or certain links within content articles, links published on other websites, or those published in the first edition of the book may not work properly or would require a 301 redirect.

- This is a simple site with only a few images, which are all found in the root of the */stories* directory. */stories* is the default image directory in Joomla 1.5. Changing the image locations will break image links and require reinserting the image with the proper link if you want them to appear. With a lot of images, you will want to keep images in the directories they currently exist in. We will bring over all the images in the */stories* directory along with the directory itself.
- Google Analytics is coded into the template directly. We will need to make sure we add Google Analytics to the new template after the new migrated site goes live.
- We will be changing the menu structure of the migrated site so that the information from the first edition stays intact, with the same URLs, and also includes new pages for the second edition.

The *www.usingjoomlabook.com* site is very simple (see [Figure B-6](#)). Yours may be more complex, and it cannot be stressed enough that you should plan accordingly. You must think about everything. Even when you think you've prepared enough, it still could be that something unexpected arises. This is normal, and it is important to not get down on yourself or give up. Ask for help on the Joomla forums if you need to.

Hands-On Exercise: Migrating from Joomla 1.5 to 3.x

1. Create a subdomain, subdirectory, or an environment on your local device where you will install a fresh installation of Joomla 3.x.
2. Install Joomla 3.x using the directions in [Appendix A](#). Do *not* install sample data!
3. Install Akeeba Backup using the directions in “[Mastering Backups](#)” on page 56.
4. Take a backup of your clean 3.x site.
5. Take a backup of your 1.5 site and test that it restores properly. Update your 1.5 site to the last release of Joomla 1.5, which is 1.5.26.



If your 1.5 site does not have Akeeba Backup installed already, you will want to install it to take your backup. See [Akeeba Backup's version compatibility](#) page to determine the version of Akeeba Backup to use. Installing the current version of Akeeba Backup on a 1.5 site will *not* work.


6. Purchase and download the [SP Upgrade](#) extension. Unzip and extract the files on your local device.
7. Install the applicable SP Upgrade package into your 3.x website (the file package that begins with 3.x.x).
8. Click on Extensions and again on SP Upgrade. You will be greeted by an error and a warning. It's OK—just keep following the directions.

Using Joomla

O'REILLY®

Main Menu

- o Home
- o Table of Contents
- o O'Reilly Forums
- o Joomla Pet Center
- o Google Preview
- o Errata



"This is simply the best Joomla book out there. It's clear and well written, packed with examples and resources for any level of Joomla user."

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"Brilliant! Severdia and Crowder have put together a solid reference. If you only buy one book on a subject or want the best one covering a topic, this is the Joomla book for you."

—Andrew Eddie, Joomla Project Cofounder and Developer, The Art of Joomla


Why use Joomla? Because with Joomla you don't need to have any technical expertise or web design experience to create effective websites and web apps. Whether you're creating your first website or building a multifunction site for a client, this book provides straightforward hands-on instruction that makes it easy to learn this open source web content management system.

Written by members of the Joomla Leadership Team, *Using Joomla* helps newcomers quickly learn the basics, while developers with Joomla experience will pick up best practices for building more sophisticated websites. You'll also find more than a dozen ways to extend the functionality of existing Joomla-built websites. Start building with Joomla in minutes!

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Figure B-6. Frontend of Joomla 1.5 version of www.usingjoomlabook.com

9. Click the Options button.
10. In the Configuration tab (Figure B-7), leaving the Same IDs Handling and the Duplicate Alias fields at their default settings will likely be appropriate for you. By leaving the Same IDs Handling as “Replace existing items” we keep the IDs from the 1.5 site, which is important from an SEO perspective. We have zero existing items, so there is nothing to overwrite. Leaving the Duplicate Alias set to Yes will add letters and numbers to any duplicate aliases that may exist. In 1.5, duplicate aliases were allowed. From 2.5 on, they are not. The rest will be addressed in future steps.

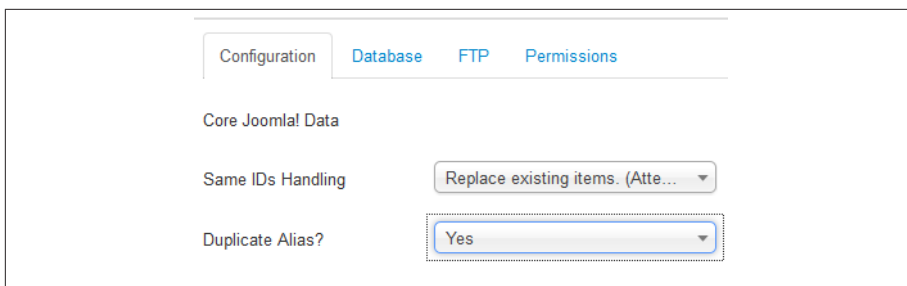


Figure B-7. SP Upgrade Configuration tab

11. Click the Database tab and enter the 1.5 database credentials. You can find the database credentials in the *configuration.php* file in the root of your Joomla 1.5 site. SP Upgrade automatically fills in the Database Tables Prefix field in with `jos`. That is the default prefix in 1.5. You may have a different prefix.
12. Enter the FTP credentials into the FTP tab. The correct path to the root needs to be in the FTP Root field. This might be *public_html*, *htdocs*, or might even be *public_html/directory*.
13. Leave the Permissions tab alone.
14. Click Save & Close.
15. If the banner in the dashboard turns green (see Figure B-8), you're good to go. If it is still red, then something is wrong in your database credentials or FTP login/path. SP Upgrade documentation is quite good. You must be logged in to Cyend's website to access the documentation.

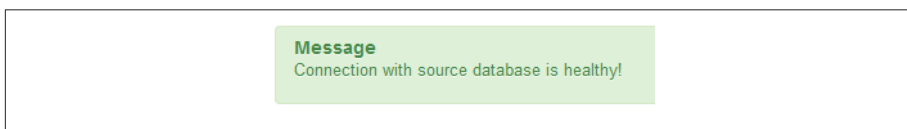


Figure B-8. SP Upgrade healthy connection message

16. The left sidebar of SP Upgrade show the sections of the extension. In the Core Transfer section, select the core components you would like to migrate. Checking the box and leaving the "ID's to transfer" field blank will move all items in that core component. For example, checking the Web Links Category box will bring all Web Links categories. We only want to bring one category, so we will enter the category ID in the field. The ID can be found in the manager for any component. We only want to move the category ID 35 for Web Links. We will enter that in the field.



Make sure you bring over sections and categories. If you use the logic that we don't use sections anymore and only bring over your categories, many things will be broken and you will have to start over. Bring sections and categories over and clean them up later.

- We are bringing over the following: Users (all), Sections (all), Categories (all), Articles (all—see [Figure B-9](#)), Web Links Category (35), Web Links (all—see [Figure B-10](#)), Menu Types and Items (all), Modules (1,40,42,45,46,47—no spaces between the commas), Images (all—FTP is required to bring over images, see [Figure B-11](#)).

ID	<input type="checkbox"/>	Extension	Description	ID's to transfer example: 1,9,12,20,45,53 or leave empty for all	
0	<input checked="" type="checkbox"/>	Users -> Users	The registered users.	<input type="text"/>	<input type="button" value="Choose"/> <input type="button" value="Clear"/>
1	<input checked="" type="checkbox"/>	Content -> Sections	Sections of the Content component.	<input type="text"/>	<input type="button" value="Choose"/> <input type="button" value="Clear"/>
2	<input checked="" type="checkbox"/>	Content -> Categories	Categories of the Content component.	<input type="text"/>	<input type="button" value="Choose"/> <input type="button" value="Clear"/>
3	<input checked="" type="checkbox"/>	Content -> Articles	Articles of the Content component.	<input type="text"/>	<input type="button" value="Choose"/> <input type="button" value="Clear"/>

Figure B-9. Migrate all users, sections, categories, and articles with SP Upgrade

6	<input checked="" type="checkbox"/>	Web Links -> Categories	Categories of the Weblinks component.	<input type="text" value="35"/>	<input type="button" value="Choose"/> <input type="button" value="Clear"/>
7	<input checked="" type="checkbox"/>	Web Links -> Web Links	Links of the Weblinks component.	<input type="text"/>	<input type="button" value="Choose"/> <input type="button" value="Clear"/>

Figure B-10. Migrate select categories and all Web Links with SP Upgrade

13	<input checked="" type="checkbox"/>	Menu -> Types	The menu types.	<input type="text"/>	<input type="button" value="Choose"/> <input type="button" value="Clear"/>
14	<input checked="" type="checkbox"/>	Menu -> Items	The menu items.	<input type="text"/>	Yes <input type="button" value="Choose"/> <input type="button" value="Clear"/>
15	<input checked="" type="checkbox"/>	Modules -> Modules	The Modules.	<input type="text" value="1,40,42,45,46,47"/>	Yes <input type="button" value="Choose"/> <input type="button" value="Clear"/>
16	<input checked="" type="checkbox"/>	Media -> Images	The images folder.		

Figure B-11. Migrate all menus, select modules, and all media with SP Upgrade



We do not recommend attempting to bring your 1.5 template to 3.x. It's not pretty. You can try to bring over your 1.5 template and see how it does migrating it to 3.x. If you do, bring your content first and then make a backup. Bring your template last, so that if it is nothing but a disaster, you can restore the backup and swap out your template to take advantage of newer technology and keep more of your hair.

18. Click the Transfer button and click Yes to proceed. A pop-up window will appear and refresh every 15 seconds. If you have a large amount of data to move, it can take some time. Let it do its thing. It will show Process Completed when complete.
19. Copy this data to a *.txt* file. Some errors show up here, and you will want to go back and resolve them. You can also access this information via the Monitoring Log on the left sidebar.
20. Click on Extensions and then on Extension Manager.
21. Click Database on the left sidebar and run the Fix.
22. Back up your site.
23. Purchase and download **ACL Manager**. What? When migrating data, some of the assets in the tables get scrambled causing problems down the road. While fixing the asset tables is possible manually via phpMyAdmin, ACL Manager includes a feature for fixing them *so* easily that we recommend using it unless you have experience with databases. See **ACL Manager on the JED**.



ACL Manager is a top-rated extension, and while we are using it here to assist with migration cleanup, it does far more. If you have complex Access Control Levels (ACLs) and user group set up on your site, we cannot recommend ACL Manager more. ACLs can get complicated fast. ACL Manager helps you manage them.

24. Install ACL Manager.
25. Click on Components and again on ACL Manager.
26. The ACL Manager dashboard has a box titled Diagnostic Checks. You will see right here if you have asset issues, as we do in **Figure B-12**.

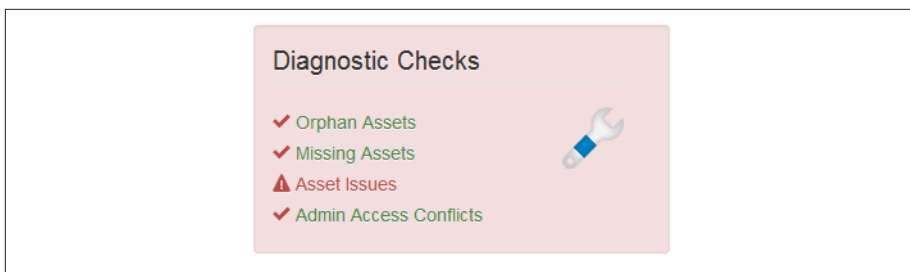


Figure B-12. Asset issues shown easily for us with ACL Manager

27. Click on the Asset Issues link in the Diagnostic Checks box, and it will take you to the Diagnostic page and show you all your problems. This happens in migration. It's OK.
28. Click the Fix Asset Issues button at the bottom of the page to fix them all. This will take a few seconds, and then you will understand why we recommended this extension and the few dollars it costs. It just saved you oodles of time.
29. Back up your site again. Yes, again. If in doubt, back up.
30. Uninstall ACL Manager (unless you have more data to move and will need to fix more asset issues or you intend to use it for ACL management long-term on your site) by going to Extensions and then Extension Manager. Click Manage on the left sidebar. Type **ACL** into the filter. Check the box for ACL Manager and then click the Uninstall button in the top toolbar.
31. Install your new template and customize as desired.
32. Change the positions of your modules if applicable, so they appear where you want them to in your new template.
33. Check the *.txt* file you created with the details from your data transfer. If there are any items that added sp-23908439847 or something to that effect, they need to be addressed as you go through.
34. Make sure all your users are assigned to a group. If they aren't, add them to the applicable group. Do not leave any user groups empty; this could trigger a mail error and send mail to people that you don't intend.
35. Make sure the users' email addresses don't have a 15 appended to them and fix them if they do, so those people will still be able to recover their passwords and receive system mail.
36. Clean up your categories. We are going to change the name of the General category to First Edition and leave the nested categories as is. We also added a category for Second Edition that all our new articles will go into.

37. Clean up your articles. If any of your articles came over with an alias including sp-123235342525, you will want to address it. First, go to your article trash and empty it. Second, check your Archived Articles and see if there are duplicate aliases that would have caused this alias addition to have occurred.
38. Make sure all articles are in a category. If they have an empty category, or a category that says ROOT, that means it was in the uncategorized category and needs to be placed in a new category or nested category.
39. Some article content that looked fine in your 1.5 template may not look fine in an updated template with newer technology. You may need to remove extra spaces and address some messy HTML code. Some tips on this are found in [Chapter 5](#).
40. Look at the frontend of your site and check that your menu items are working properly.
41. Check the frontend of your site and make sure your hyperlinks are working properly. If they are not, you will need to either link them again or verify that they will work again once the site is live. For example, if you linked directly to *http://www.yourdomain.com/contact* instead of a relative URL, the page will work again when you go live with the proper domain. You just won't be able to use that link to view it until then.



Broken links after a migration is a lousy problem to find you have. Improper creation of links in your original articles can create hours of work in a migration. If you have the budget to do so, hire someone to check links and update the broken ones. If you don't have the budget or don't trust other people to do it for you, the following items can make it easier for you:

- Have blocks of an hour or two to work at a time
 - Have a nice glass of water or iced tea at your desk
 - Up-tempo music—play music that can help keep you going
 - Make sure you blink your eyes often
 - Stand up, stretch, and walk around every hour for 10–15 minutes
 - Take it one page or category at a time, and don't think about the others
 - Know that you are not alone—lots of link fixing happens at migration
42. Check the frontend to ensure that your images have come through properly and are displaying. If they are not, check them and relink them if necessary.

43. Back up often.
44. If you have third-party extensions, address each one. Back up before you install new extensions. Back up after you are done configuring new extensions. Uninstall extensions you have installed and decided not to use. Uninstall SP Upgrade when you are done migrating data.
45. Make sure your Global Configuration is as it should be and that your Global Metadata is moved over from your 1.5 site.
46. Check the current 1.5 site and make sure that any new content that has been added since the migration started gets moved over to the Joomla 3 site.
47. When you are totally happy with your 3.x site, take a final backup of it.
48. Make a spreadsheet or list of any 1.5 URLs that have changed between your 1.5 site and 3.x site.
49. Move your 1.5 site out of the root to another subdomain or subdirectory, or simply delete it.
50. Use Akeeba Kickstart to restore your 3.x site to the host root.
51. Take another backup.

Then do other little things like:

1. Enable *.htaccess* and SEF URLs.
2. Add Google Analytics tracking code to the new template.
3. Submit any new site map to Webmaster Tools.
4. Create any 301 redirects for new URLs that are different from the 1.5 URLs.
5. Make any other changes that needed to wait until the 3.x site was live.

Before doing any redesign for the second edition of *Using Joomla*, our migrated site's frontend looks like **Figure B-13**. If you go to <http://www.usingjoomlabook.com> now, you will see the finished product.

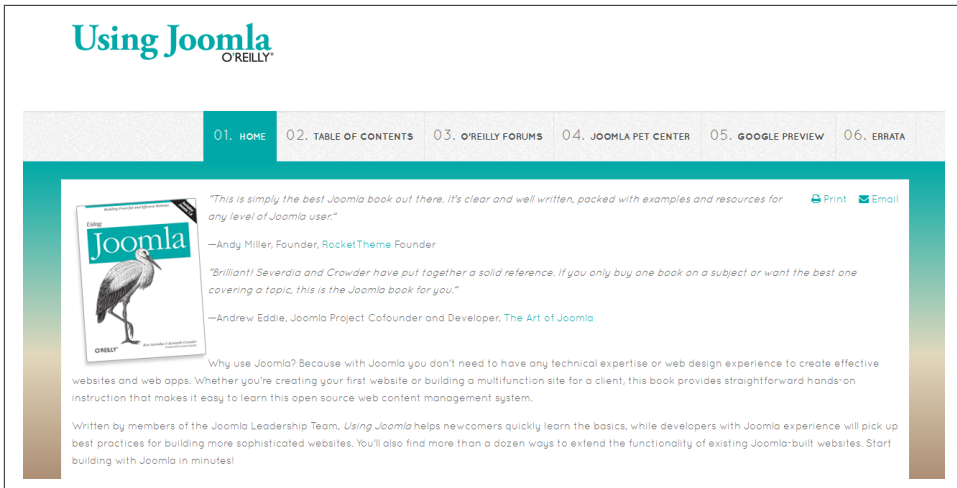


Figure B-13. Newly migrated site for <http://www.usingjoomlabook.com> from 1.5 to 3.x

Migrate to a New Host While Migrating to 3.x

If you decide that it is also time to move to a new host at the same time as you migrate your site, there are a few slightly different setup options that will make your life easier in the long run.

1. Install your fresh build of Joomla 3.x on a temporary domain in the root of your new hosting account.
2. Restore a copy of your 1.5 site in a subdirectory of the root at the new host.
3. Exclude the 1.5 subdirectory from your backup in Akeeba Backup in your Joomla 3 site.
4. Migrate your data from the 1.5 site in the subdirectory to the new 3.x site in the root.
5. When you're ready to go live, change the nameservers for your domain from your old host nameservers to the new host nameservers.
6. Kill the 1.5 site.

Choosing the Right Extensions

It has been said that cooks are only as good as the ingredients that they use. We're not so bold to say that your website is only as good as the extensions you use, but if you use the wrong extensions, you may set yourself up for heartache later.

Which Extension Is Right for Me?

When choosing extensions, there are many questions to ask yourself. This chapter will go through some of those questions.

What Do I Want the Extension to Do?

There are thousands of extensions for Joomla. Chances are that an extension already exists to do what you are looking for. Getting a clear idea of what you want the extension to do will make your search a whole lot easier.

You should first look at the [Joomla Extensions Directory \(JED\)](#). Categories are broken out logically. Most categories have subcategories that focus on specific needs.

New in Joomla 3.x, you can access and install some extensions from the backend of Joomla. This does not replace the need to take the steps in the rest of this chapter before installing an extension. Any extension installed needs to be maintained. Only use extensions that you need. Uninstall extensions not in use.

If your requirements for an extension are very specific and there is nothing already developed that meets your needs, you may need to hire a programmer to write the extension for you. This may be from scratch or using another extension as a starting point.

What Do Others Say About the Extension?

One of the great features of the JED is that you have the ability to read user reviews of extensions. This is your best source to find out both positive and negative aspects about the extensions. We don't recommend that you rely solely on testimonials the developer posts on its own website.

Am I Willing to Pay for the Extension?

Some people new to Joomla are put off when they find they have to pay for some extensions. Some people think that since Joomla is free, why shouldn't the extensions also be free?

The truth is that it takes time to develop extensions. The developers that write these extensions often devote huge amounts of time in order to provide a product for the world to use. Some developers write and support extensions as their full-time job. So it only makes sense that they are compensated for their time.

Most of the extensions that require payment have very reasonable prices. You may think that \$50 seems like a lot of money, but when you compare it to the hourly rate of hiring your own developer to build an equal product, you'll quickly discover that \$50 is a bargain.

We're not advocating that you should pay for all of your extensions, or even that extensions you pay for are better than extensions that you do not pay for. We're saying that if you find that a specific extension that costs money and does what you need better than a free one, go with the one that costs a little money. In the long run, we think you'll be glad that you did because of the support you'll receive.

We all know that software piracy is wrong, yet so many people do it. If you download a pirated version of an extension, there's no way to really know what you are actually downloading. The person that pirated the software could have added their code to do something malicious. Let's explore some of the consequences that might convince you not to pirate extensions. A pirated copy of the extension could potentially do one of the following:

- Email each of the users signed up on your website letting them know that the owner of the site likes to steal software
- Blindly create a Super Administrator user for the hacker to log into your website
- Upload a file that could be used to completely delete your website
- Give the hacker the ability to send spam from your server

It is common for the original developer of the real extension not to provide support on pirated versions of their extension.

You may want to consider giving a donation to developers for their non-commercial extension for the same reason that some developers charge—to compensate them for their time and to show some gratitude. Additionally, donating to an extension developer gives them incentive to continue development of the extension in the future. Good reviews on the JED show the developer that there is public appreciation of their extension, which provides further incentive.

Can I Get Support on the Extension If I Need It?

Some extensions provide excellent support. Some extensions provide no support. The ability to obtain support, whether free or paid, is important if you ever have a problem.

Checking the developer's website to see how they handle support is an important point in deciding on which extension to use. Do they have a ticketing system? Do they have a public or private forum?

If the developer's website looks like it has not been updated or the forum is full of unanswered questions, you can pretty much expect that you won't get any help from the developer if you have issues. Also be on the lookout for developers who consistently ask for backend access to your site to resolve some issue and never report back to the forum to explain the fix. Without knowing what was changed on your site to fix a problem, you do not know if an update will override the fix.

If you can see that the support forum offers prompt answers to questions, that is a good sign.

Check the documentation on the developer's website. Good documentation is priceless. If you have permission to access it, read it to help you make a decision. Some developers do not allow you to read the documentation until you purchase the extension, while some others have you pay for a membership to access the documentation.

Changelogs

Investigate the extension version changelogs to get a feel for how often the developer updates the extension. Check the amount of time that passes in conjunction with major Joomla releases. It is important to see the response time to bug fixes and how the developer responds to Joomla releases, which may force the extension code to change.

License

Almost all software made today is released with some license attached to it. The license states what you can and cannot do with the software. Some licenses are very restricting while others are very free.

Joomla is released under the GNU General Public License Version 2 (GNU GPL). The GNU GPL license gives you a lot of freedom when it comes to what you can do with

the software. All extensions listed on the Joomla Extensions Directory are licensed under GNU GPL.

Not all extensions for Joomla are released under the GNU GPL license. We are not going to open a GNU GPL debate in this chapter—we will only state that it's the Joomla Project's stance that extensions are derivative works and therefore should also be licensed under the GNU GPL. As a Joomla user, you have to decide whether you want to use extensions that adhere to Joomla's principles or if you're willing to veer away from the GNU GPL license when choosing extensions. We're not going to make that decision for you, but we recommend you get as informed as possible and come to your own conclusion.



To learn more about the GNU GPL, refer to the license information that is included in the root directory of every Joomla web site. Specific filenames are:

- *LICENSE.php* for Joomla 1.5
- *LICENSE.txt* for Joomla 2.5 and 3.x

Even if you only read the Preamble, it is worth it. You will get a good basic understanding of the freedoms that are given to you.

Is It Secure?

Extensions listed on the JED are not audited for security issues in advance of being listed. The JED relies on users to report back their experiences and help with crowd-sourced reviews. While it would be ideal to be able to audit every extension in advance of being listed on the JED, the truth is that it would take a lot of manpower to do a security audit on every extension. Here are some quick things that you can do to check for some basic security issues:

At the top of the extension's PHP files, there should be a check to see if `_JEXEC` is defined. This is to make sure that you cannot call the file directly, since we want all files to be called through Joomla's main *index.php* file.

Example: `defined('_JEXEC') or die('Restricted access');`

Occasionally, there's a good reason why a file would need to be called directly. If you do not see the `defined()` command from above in one or two files, you may want to check with the developer to make sure that it was done intentionally.

`JRequest` should be used to request all variables. If you see `$_REQUEST =` anywhere in your extension, you should be very cautious. You may be vulnerable to SQL injections.

Did you download the extension from a trusted source?

Visit and get the latest list from the [Joomla Vulnerable Extensions \(VEL\)](#) team. Report issues to the developer and possible security issues to the VEL team if you find them.

Is the Extension Encrypted?

In the software industry, many companies encrypt their software so that the code is not visible. Typically, this is done in order to preserve intellectual property. In the open source world, people prefer their source code to be open without encryption. If there's a problem with a component, we want to be able to fix it ourselves if we need to. If there is something we wish worked a little differently, we want to be able to change it.

For the most part, all extensions are open source. There are some extensions that resort to encrypting a single file that performs checks to see if you legally purchased a license to use. Depending on the type of encryption, you may have to have special software installed on your server to interpret it.

Where Can I Find an Extension Used in This Book?

All of the extensions that we spotlight in this book have a link to the website where they can be downloaded. The following is a chapter-by-chapter list:

Chapter 3

- [Afterburner2](#) template by RocketTheme
- [Akeeba Backup](#)
- [Akeeba Kickstart](#)

Other popular template companies:

- [Joostrap](#)
- [Joomlashack](#)
- [YooTheme](#)
- [Joomla Bamboo](#)

Chapter 4

- [JCE Editor](#)
- [CK Editor](#)

Chapter 6

- [sigplus Gallery](#)

Chapter 8

- [Kunena](#)
- [Komento](#)

Chapter 9

- [JEvents](#)

Chapter 10

- [Contact Enhanced](#)
- [SecurImage Captcha](#)
- [RSForm Pro](#)

Chapter 11

- [HikaShop](#)

Chapter 12

- [JomSocial](#)
- [Community Builder](#)
- [Easy Social](#)
- [AddThis](#)
- [Kunena](#)
- [Acyba AcyMailing](#)

Chapter 13

- [iSEO from iJoomla](#)
- [ACL Manager](#)

Chapter 14

- [JAMSS](#)
- [Brute Force Stop](#)
- [Joo ReCaptcha](#)
- [Akeeba Admin Tools](#)
- [watchful.li](#)

Appendix A

- [OS Content](#)

Appendix B

- [SP Upgrade](#)
- [ACL Manager](#)

Other popular migration components:

- [J2XML](#)
- [Migrate Me](#)
- [jUpgradePro](#)

As time goes by, we expect that some of those links will change or even disappear. If a link from the book changes or no longer works, we will update it on the website that accompanies this book to point to its new location.

Ways Extensions Are Packaged

There are thousands of extensions available for installation with Joomla. They tend to come packaged in four different ways:

Universal Installer

A single ZIP file with everything required to install in any version of Joomla. Simply upload the ZIP file in the Extension Manager and click the Install button.

Version-Specific Installer

You are offered a file for Joomla 2.5 and another file for Joomla 3.x. Upload the appropriate file for your version of Joomla in the Extension Manager and click the Install button.

Separate Extension Installers for each feature

Instead of a single package file, there may be separate ZIP files to download and install for each component, module, and plugin. Just make sure the files you download are for the Joomla 3.x version. These files can be uploaded and installed via the Extension Manager in any order.

A ZIP file that contains a bundle of ZIP files

These are the only downloads that cannot be uploaded and installed directly. The hint is that the filename will include words like “UNZIPFIRST” in it. If you attempt to install this ZIP file, no harm will come to your Joomla installation. You will get an error saying “No manifest file could be found.” Simply unzip the file locally and inside you will find more ZIP files, one of which will be for Joomla 3. Upload and install the file to the Extension Manager.

Disable Install from Web Feature

With the new Install from Web feature in Joomla 3.x, it is easier than ever to install extensions. With this ease comes responsibility. While the feature is fantastic, you don't want others with access to the backend to be able to install extensions haphazardly. You will want to disable it when not in use. Here's how to do it:

1. From the administrator Control Panel, click on Extensions and then on Plugin Manager.
2. Type **web** into the filter/search bar.
3. For the Plugin Name Installer - Install from Web, click the green checkmark button in the Status column so that it is disabled.
4. Go to Extensions and then Extension Manager and click the X to close the Install from Web message at the top of the Extension Manager.

5. This takes you to a page named “Installer configuration.” Click the “Hide message” button for Joomla Extensions Directory.

To enable the Install from Web feature again, simply enable the plugin.

Developing for Joomla

Joomla development is driven by contributors of both the Joomla CMS and Joomla Framework. The Joomla Extension Directory (JED) is full of hundreds of developers who have extended Joomla in many ways and made it even more powerful. If you want to contribute to make Joomla better or develop your own extensions, here are a few resources and bits of information.

Joomla Framework and API

The **Joomla Framework** is the underlying scaffolding the Joomla CMS is built upon (and replaces the Joomla Platform). They are really separate pieces, but together they make up what is installed with Joomla. This lightweight framework enables developers who are interesting in building their own application via an **API** to leverage the power and benefits of Joomla, even if they don't want to use the CMS. It also enables Joomla Framework developers to implement and take advantage of the most modern trends in web application development. The framework is developed independently from the CMS, so the version numbers are different. When the CMS team is planning their next release, they decide which version of the framework is appropriate for their needs, and that's what is incorporated.

It is licensed under the LGPL (the CMS is still licensed under the GPL), which allows for more flexibility in how it can be used and integrated with other applications. This should greatly help increase enterprise adoption.

If you're interested in contributing to the Joomla Framework API, visit these sites:

- [Contributing to the Joomla Framework on Github](#)
- [Joomla Framework on the JDN](#)

Developer Resources

As a developer, you have a great opportunity to contribute new features to Joomla and help fix bugs. The Project can always use more code contributions, especially from highly skilled PHP developers.

Before you get started developing on Joomla core code, you need to sign the [Joomla Contributor Agreement](#). It takes only a few minutes online and basically says you agree to distribute your contribution under the same license used by Joomla. Once you do that, you're ready to go, but there are a few basic requirements:

1. All code has to meet the [Joomla Coding Standards](#).
2. It has to include automated tests (unit and/or system) and pass those tests.
3. Any new functionality needs at least some basic documentation.

We also recommend you get some background on development before you dive right in. Some developers just start writing what they think is cool before finding out if it's really something that can be used in the Joomla codebase. It's a good idea to visit the [Developer Network](#), understand the [Joomla Development Strategy](#), and view the latest updates to the [roadmap](#) before you spend time on something you think fits with the team's strategy. Talk to team members and see what they think about your ideas.

If you're interested in developing your own extensions for Joomla, the documentation wiki has a few tutorials on how to create a basic component, module, and plugin. Templates are also considered extensions (though they aren't allowed in the Joomla Extensions Directory) and are easy to create once you know the basics.

All Joomla code is managed on [GitHub](#), so if you're not familiar with distributed revision control, you should read up on how it works (it's a very unique, but far superior, approach to source code management). If you prefer a free SVN-based code repo for your project, you can use [JoomlaCode](#) for code management—it includes a robust tracker, download manager, and a few other handy features.

How to Get Involved and Give Back to the Community

There are a lot of things you can do to give back to the Joomla Project, no matter how limited or deep your technical knowledge is. Here are a few ways:

Answer Questions on the Joomla Discussion Forum

Participating on the [Joomla forums](#) is probably the easiest way to get involved in Joomla and where most people get their start. There's no time commitment beyond what you dedicate, and it's a good way to make a name for yourself.

Join the Joomla Bug Squad (JBS)

The **JBS** is the heart of software development, and it's responsible for testing, reporting, and fixing bugs in Joomla. You can help verify bugs, browse the forums and report bugs in the tracker, and more.

Report Bugs and Test Fixes

All software has bugs. You can help find them and add them to the **bug tracker**. Make sure you provide as much information as possible about the bug, and also be sure to search the tracker before you post to see if your bug has already been found or fixed.

Join a Joomla Mailing List

Mailing lists are used for communication in many areas of the Joomla Project. Join one (or all!) to see the latest developments in the framework, CMS, Leadership Team, and more.

Share Your Ideas for Improving Joomla

Do you have great ideas for how to make Joomla even better? You can add your ideas to the **idea portal**.

Translate Joomla

Joomla might not be in your language, and if you speak multiple languages, the Project could use your help—you can join or create a **Translation Team**.

Organize a Joomla Event

JoomlaDays and other events are a great way to meet other Joomla fans from all over the world. See current events and find out how you can host your own on the **Joomla Community Portal**.

Sponsor Development

If you are a business, you can help by sponsoring new features for upcoming releases. Get in touch with David Hurley, Community Development Manager, at david.hurley@joomla.org or **Open Source Matters** for details on how to get started.

Having used Joomla since its inception, we've collected a variety of helpful tips along the way. Here are a few we think are pretty important to have in our tool bag.

How to Recover Your Admin Password

Yes, it happens to all of us at some point or another. We get locked out of our own home and need to find a way back in. The procedure for Joomla 2.x and 3.x is a little different than it was in Joomla 1.5. There are two ways to do it, and we'll start with the easier of the two. You'll need FTP access to get to the *configuration.php* file.

1. Use an FTP application to connect to your site and go to the root folder. You should see all your Joomla files there, including the *configuration.php* file.
2. Download this file and open it up in a text editor (e.g., Notepad++, TextWrangler, or Sublime Text). Make sure this is a plain text editor that doesn't convert the file to RTF or some other text format (don't use something like Microsoft Word for this).
3. Add the following line to the end:

```
public $root_user='myname';
```



Replace *myname* with a username for which you know the password and save the file.

4. Delete the *configuration.php* file on the server and upload this new file. You will now be a Super Administrator and can log in to make any necessary changes, including resetting the Super Administrator password.

5. Once you've completed your changes and gained access, try the automatic removal of the line you added to the *configuration.php* file. This has mixed reliability, so it's probably best to edit the file, remove the line, and reupload the original file.



Be careful about setting your file permissions, and make doubly sure they are set to 444 on the *configuration.php* file. This file has important access information for your site and database, so protect it with the correct file permissions!

If changing your *configuration.php* was unsuccessful, you'll have to edit the database directly using a tool such as phpMyAdmin. If you don't have access to it (it's usually available in most hosting packages and setups), ask your hosting provider to set it up or help you accomplish the following steps:

1. Go to phpMyAdmin and open the database for your site. You will see a list of tables in the left column.
2. Find the “_users” table and click on it to view the users. The actual name of this table will depend on the prefix defined during the Joomla installation.
3. Find the user you want to give access to in the list and click the Edit link in the left column to edit that record. Enter the following sequence into the password field:

\$P\$D3Y0MClapAvHiMedwAq8KHQ7/byH6F0

password	varchar(100)	<input type="text"/>	\$P\$D3Y0MClapAvHiMedwAq8KHQ7/byH6F0
----------	--------------	----------------------	--------------------------------------

4. Click the Go button at the bottom to save the record.

You can now log in with that user account and use **help** as the password.

If neither of these methods work, you will need a SQL statement to insert a new record, which requires more advanced skills. Consult the [Joomla Help documentation](#) for instructions on how to do this. You will need to scroll a good way down the page to locate the instructions for Joomla 3.x.

How to Tell If a Website Is Running Joomla

With Joomla 1.5 it was easier to tell if a website was running Joomla, but that's changed with Joomla 2.x and 3.x. Here are a few ways you can tell:

1. Look at the source code for the page to see if you can find the meta tag within the <head>:

```
<meta name="generator" content="Joomla - Open Source Content Management" />
```

2. Check the source code and see if known Joomla template names (e.g., *beez_20*, *protostar*) are in use within the <head> to call CSS and JavaScript files.
3. Add **/administrator** to the end of the top-level URL to see if the Joomla administrator login page comes up.

4. Look for common file paths to libraries Joomla needs to work:

```
/media/system/js/mootools-core.js  
/media/system/js/core.js  
/media/system/css/system.css
```

5. Use the Chrome Sniffer plugin in Chrome.

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We'd like to hear your suggestions for improving our indexes. Send email to index@oreilly.com.

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About the Authors

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Colophon

The animal on the cover of *Using Joomla* is a white stork (*Ciconia ciconia*). According to legends that originated in northern Germany, white storks are a symbol of fertility and prosperity. Found throughout Europe, the Middle East, and west-central Asia, white storks are long-necked wading birds whose bodies are mostly white except for their black flight feathers. Their bills and legs are red. Nothing but size (males are slightly larger than females) distinguishes the sexes from each other.

Monogamous during the breeding season, couples build their nests together, although finding materials is primarily the male's responsibility. The nests are large and usually made up of twigs, grass, sod, and paper. Pairs will often reuse their nests year after year, adding new material each breeding season. To signify the completion of the next, they will often plant a leafy branch on one side.

Since the Middle Ages, white storks have built their nests on man-made structures like rooftops, chimneys, and telephone poles. Nests can also be found in trees and sometimes even on the ground. Females usually lay between three and five eggs. Both parents are responsible for feeding their young until the babies reach eight or nine weeks of age and leave the nest, after which time the young are known to return to their parents on occasion to beg for food.

The white stork's diet is quite varied and includes frogs, fish, snakes, lizards, earthworms, crustaceans, and even sometimes the eggs and chicks of small ground-nesting birds. Storks are visual hunters, so when foraging, they walk with their eyes and bill pointed toward the ground. Once they spot their prey, they cock their necks back and then jab their bills back and forth until they catch their victim.

Over the last 50 years, the white stork population has seen a steady decline, particularly in Western Europe. In 1910, there were 500 breeding pairs in the Netherlands, but in 1985 there were only 5. This extreme change is mostly due to habitat destruction, but pesticide use and wetland drainage have limited the availability of food as well.

The cover image is from Cassell's *Natural History*. The cover fonts are URW Typewriter and Guardian Sans. The text font is Adobe Minion Pro; the heading font is Adobe Myriad Condensed; and the code font is Dalton Maag's Ubuntu Mono.