

glFusion - Technology Fused with Style

glFusion is value added distribution based on the Geeklog Open Source Content Management System (CMS). glFusion packages together the more common plugins to provide a one stop shop for CMS installation.

The main glFusion documentation is maintained online at the

[gl Labs Documentation Wiki](#)

glFusion is very well organized and provides an extremely powerful system that is very easy to use. glFusion powers all types of sites from personal blogs to high volume community discussion sites and almost everything in between. glFusion is well suited for both public and private sites. Using the flexible security model, it is possible to protect content from the general public and only allow specific users access to certain content or features. glFusion is an extremely extensible and flexible system.

glFusion is value added distribution based on the Geeklog Open Source Content Management System (CMS). glFusion packages together the more common plugins, with some code enhancements and other modifications, to provide a one-stop shop “total package” for CMS installation.

glFusion is a content publishing system. It has been called a blog, content management system, and even an application development framework. Regardless what you call it, glFusion provides all the tools necessary to quickly create and maintain a content driven web site. glFusion also provides a rich application development environment.

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A summary of glFusion’s features are:

Blog/CMS Features

- Create, Schedule, Post and Edit articles in multiple topics.
- Save story drafts until they are ready for publishing.
- Control over formatting used in articles (HTML white lists).
- Control over acceptable content (filtering of offensive language).
- Embed images or other content in articles.
- Multiple Authors can post.
- Submissions from users.
- Support for comments, trackbacks and pingbacks.
- Export and import in all common syndication formats (RSS/RDF/Atom etc).

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- Spam detection and rejection.
- Calendar functions with support for personalized calendars.
- Support for OpenID and other remote authentication methods.
- Extendible via numerous plugins.

Administration Features

- User accounts and access controls.
- Robust security model for all objects which can be extended for use in plugins.
- Access can be defined for each article, topic etc.
- All passwords are stored encrypted.
- All admin access is logged.
- All errors are logged.
- Complete error logging on all forms and SQL calls.

Developer Features

- Plugin support with Application Program Interfaces (API) for developers.
- A fully configurable block system, with php-in-block support.
- Well organized code base, use of PHP's Object-Oriented features.
- Thin database abstraction layer allowing glFusion to be ported to DBMS's other than the default (MySQL is the only database currently supported by glFusion).

License

Geeklog and glFusion are licensed under the terms of the GNU General Public License Version 2.

glFusion Team

The folks who added the new features or provided documentation for the glFusion release include:

- Marco Belmonte
- Mark R. Evans
- Mark Howard
- Joe Mucchiello
- Laugh (Tom)
- Eric Warren
- The gl Labs Community

What's New in glFusion v1.0.0

Since glFusion is built on the foundation of Geeklog v1.5.0, this section will highlight the major features enhancements available in Geeklog v1.5.0. Geeklog contains several bug fixes and a few major enhancements. Enhancements include:

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HTML Strict / XHTML v1.0 Compliance

Thanks to the Geeklog Japanese crew, Geeklog v1.5.0 has been enhanced to provide much cleaner, and valid, HTML output. For the first time, Geeklog can now support a true XHTML layout.

gl Labs will continue to release new themes which take advantage of the new XHTML capabilities.

Story Editor / Submission Updates

The internal code that handled story authoring has been completely rewritten and is now much cleaner and functional. Most notably is that what you type is actually what you'll get.

Automated Installation Process

No longer will you need to edit multiple files before installing Geeklog. The new installation routine will gather all the necessary information and write it to the proper configuration files. This new install routine greatly simplifies the glFusion installation process.

Online Configuration Editor

Almost all configuration options can now be changed via an online configuration editor. While the new configuration editor is still a bit rough around the edges, it is a great improvement from hand editing the config.php file.

Web Services API

The Web services API provides an interface for client software to talk directly to glFusion and perform certain operations. Typical usage would be to use a desktop client to publish and edit stories without having to visit the website.

Web Services requires PHP5. If you site runs under PHP4, web services will not be available.

User Story Submission now has both an Intro and Body Section

Added ability to have Body Text in user submitted stories. Previous versions of Geeklog only allowed user submitted stories a single entry field; the site administrator would have to break the stories into the Intro and Body parts.

Comments can now be closed

Existing comments will still be displayed but no new comment can be posted.

Caching Template Library

glFusion includes the new Caching Template Library. The benefits of the Caching Template Library are that it adds the following new features above the old template library. These features benefit both the site administrator and the plugin developer.

- Compiles templates to PHP code for enhanced page load speeds
- Adds logic processing to the templates
- Ability to specify multiple locations to search for templates

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Instance Caching

Instance caching refers to the ability to cache high load functions such as the What's New block. For example, each time the main glFusion index page is loaded, the What's New block is built, requiring several MySQL queries to determine what is new. Instance caching allows us to store a pre-built copy of the What's New block in HTML format. This means that you do not have to go to the database to ask for what is new each time the page is loaded.

This provides a significant speed increase for your site and a significant load decrease for your server.

Other changes

For a full list of changes, please see the history file in the distribution.

Other gl Labs Additions – What makes glFusion

gl Labs developed several enhancements to Geeklog and also integrated several plugins to the core Geeklog distribution.

gl Labs Added Plugins

- CAPTCHA – A Security / SPAM prevention tool
- Bad Behavior2 – A Security tool that helps block several automated bot attacks
- Forum – A collaboration plugin that allows for online communities
- FileMgmt – A file management plugin
- Media Gallery – A multi-media management system
- Site Tailor – A collection of tools to manage a site's look and feel, currently includes a menu editor, menu color configuration, and logo management.

General Enhancements

- Improved distribution organization
- Nouveau theme is the default theme
- Improved FCKeditor integration
- Enhanced HTML filtering – updated HTML filter sub-system to provide both safe HTML and XHTML compliant markup
- Forum and FileMgmt upgraded to be XHTML compliant
- Calendar and Links plugins integrated with CAPTCHA plugin
- Enhanced upgrade process that will read some of the core values from the existing config.php file
- Improved distribution method that does not include the configuration files as .php files, instead they are packaged as .dist files. This ensures your existing settings are preserved during a site upgrade.
- One primary goal of the glFusion project is to ensure 100% backward compatibility. If for any reason you wanted to return to using the core Geeklog distribution, you would be able to safely

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without any data loss. While the glFusion project may make core code change to Geeklog, it does not modify the database structures which allow full backward compatibility.

Template Compatibility

Geeklog v1.5.0 has made several internal changes that will break all existing themes designed for Geeklog v1.4.1 or earlier. glFusion adds some additional requirements as well, requiring a few new template files.

For more information on the template modifications, see the Template Changes in glFusion section.

Installation Requirements

To successfully install and use glFusion you must have a fully operational web server, a database, and the server side scripting language PHP. glFusion is developed and tested primarily on the Apache web server version 2.x, but it should run on any modern web server. glFusion has been successfully installed and is running on other web servers such as Zeus, Lighttpd, and Microsoft IIS.

glFusion still supports PHP v4.x, but the PHP Foundation has already announced the end of life of the v4.x branch. Using PHP v5.x series is a better long term choice. Currently, the Web Services feature of glFusion requires PHP 5. If you are running PHP v4.x, Web Services will be automatically disabled.

glFusion supports only MySQL, unlike Geeklog which supports both MySQL and Microsoft SQL Server database engines. glFusion does not officially support Microsoft SQL Server because several of the included plugins have not been certified to run with MS SQL.

Minimum Requirements

Software Requirement	Minimum Recommended	Web Site
PHP 4.3.10	4.4.8	http://www.php.net
MySQL 3.23.x	5.2.x	http://www.mysql.org
Apache 1.3.x	2.2 series	http://www.apache.org

Your server or hosting environment must have the following items available for you to install and run glFusion.

- Web Server (Apache, Zeus, lighttpd, Microsoft IIS, etc.)
- PHP v4.3.0 or higher
- MySQL v3.23

glFusion does not support Microsoft SQL Server. The core release does work with MS SQL server, but many of the bundled plugins do not, as a result, there is no official support for the MS SQL database engine.

Pre-Installation Notes

glFusion is designed where some of the files should reside outside of the web root, meaning they should not be directly accessible from the Internet. For most users this does not pose a problem, but some hosting services do not allow users to store files outside of the main web accessible directory. For these users, you can still install glFusion, but you will want to follow the directions in the installing glFusion in the web root section.

Make sure you know where your web root is on your server. This is different than your website's URL address. You may need to contact your hosting provider for assistance. It is important that you know this information prior to performing the installation.

If you are not sure how to determine your paths, contact your hosting provider's Technical Support Staff, they can generally help you out.

Pre Installation Tasks

Before we install glFusion, you will need to know a few key pieces of information. Write down the following information. If you are unsure what to put for each of the items below, please contact your system administrator or your hosting provider.

- Site URL:
- Database Server:
- Database Name:
- Database UserID:
- Database Password:
- Path to glFusion Private Files:
- (path/to/glfusion) these files should not be available via the Internet, so they go outside of your web root directory
- Path to glFusion Public HTML Files:
- (path/to/public_html)

Assumptions

These installation instructions assume that you will be running your glFusion site as the main site on your domain. If your installation will be a sub-domain or a set of sub-pages of an existing site, you will need to adjust some of the paths.

Create the glFusion Database

glFusion requires a MySQL database. Depending on your hosting solution, you may need to create a new database for glFusion and also a database user account. Some hosting providers setup a single database for your account that should be used. If you already have a database created that you wish to use, you can skip this section.

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Create the Database

Depending on your hosting solution, you may be able to create a new empty database using online tools provided by your hosting provider. You can also use a tool like phpMyAdmin to create the database.

Once you have created the database, record the name of the new database above in the Pre-Installation Tasks section.

Create the Database User

It is always a good security practice to create a unique user account for each database. Create a new database user and add the following permissions to the user for the database you created in the previous step:

- SELECT
- INSERT
- UPDATE
- DELETE
- INDEX
- CREATE TEMPORARY TABLES
- CREATE
- ALTER
- DROP
- LOCK TABLES
- REFERENCES
- CREATE ROUTINE

Record the new userid and password in the worksheet in the Pre-Installation Tasks section.

FTP Installation

If you do not have shell access to your server and can only use an FTP client to access your server, follow these instructions.

To install glFusion you will need to un-archive the distribution on your local computer. The glFusion distribution archive will automatically create all the proper directories when it is un-archived.

To un-archive a .gz file, you can use recent versions of WinRAR or 7-Zip. If you are running Mac OSX, please ensure you have the latest version of StuffIt installed as previous versions have had difficulty properly un-archiving .gz files. For Linux/Unix users, use the standard tar command to extract the distribution.

Create a temporary directory on your local hard drive to hold the glFusion distribution files. We will use C:\tmp for our example.

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Open the glfusion-1.0.0.tar.gz file with WinRAR (or you choice of archive program).

Select Extract All Files and point to the C:\tmp directory as the destination directory. You should now have a local copy of the glFusion distribution on your hard drive.

This will create the two main glFusion directories; private/ and public_html/

Open up your FTP client (our recommendation is to use FileZilla, it's available for multiple platforms, is easy to use, and best of all, it's free!)

Connect to your remote server using your FTP / Account login and password.

Highlight all the files and folders in the private/ directory. These are all the glFusion files that should reside outside your web root.

Drag the highlighted files over to your remote host site. You will want to place these files in an area that is not accessible via the web.

Highlight all of the glFusion distribution folder and files in the public_html directory. These files will reside in your web root and must be accessible via the web.

Drag the highlighted files over to your remote host site's web root that is accessible from the web.

glFusion has 3 configuration files that are needed. The distribution includes skeleton versions that will need to be renamed or copied to the correct filename. This prevents your existing configuration from being overwritten when you upgrade. Rename the following files:

db-config.php.dist to db-config.php

siteconfig.php.dist to siteconfig.php

lib-custom.php.dist to lib-custom.php (make sure to copy custom code into your new lib-custom.php!)

You are now ready to perform the Online Installation.

Shell Installation

Download the current version of glFusion from <http://www.gllabs.org>.

Unpack the downloaded distribution file by running:

```
tar -zxvf glfusion-1.0.0.tar.gz (for Unix systems)
```

Place the contents of glfusion/public_html/ into your web root directory on your web server. The web root directory is often named "public_html", "htdocs", or "www". Then, place the remaining contents of glfusion/ into either the parent directory of your root web directory (recommended) or any other non

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public folder and the installation wizard will attempt to locate them automatically. If it cannot you will be asked to specify their paths during installation. This is done as an additional security measure to prevent access to glFusion system files by Internet users.

glFusion has 3 configuration files that are needed. The distribution includes skeleton versions that will need to be renamed or copied to the correct filename. This prevents your existing configuration from being overwritten when you upgrade. Rename the following files:

db-config.php.dist to db-config.php

siteconfig.php.dist to siteconfig.php

lib-custom.php.dist to lib-custom.php

Webroot Installation

If your hosting provider does not allow you to place files outside of your root web directory, you should follow these additional steps to ensure a secure installation of glFusion.

Create an inconspicuous directory (i.e. don't name it "geeklog", "glfusion" or "private") in your root web directory.

Place these system files in that directory.

Password protect it using an .htaccess file or similar.

Fantastico Installation

Many hosting providers have a tool called Fantastico that will automatically install Geeklog. We do not recommend using this tool because it will create an unsecure installation of Geeklog. Instead, we recommend that you follow the installation procedures above and manually install Geeklog or glFusion. By following the manual installation procedures, you'll ensure that you have the latest version of Geeklog or glFusion and that your site is securely installed.

Directory Permissions

glFusion requires that your web server have the ability to write to certain files and directories. The following list is the directories that you need to ensure the permissions are properly set.

- path/to/glFusion/logs
- path/to/glFusion/data
- path/to/glFusion/data/layout_cache
- path/to/glFusion/backups
- path/to/glFusion/public_html/backend
- path/to/glFusion/public_html/images/topics

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- path/to/glFusion/public_html/images/articles
- path/to/glFusion/public_html/images/userphotos
- path/to/glFusion/public_html/images/library
- path/to/glFusion/public_html/images/library/File
- path/to/glFusion/public_html/images/library/Flash
- path/to/glFusion/public_html/images/library/Image
- path/to/glFusion/public_html/images/library/Media

Permissions are the top support issue. Always check your permissions first if you run into installation problems.

How to Set Permissions

Setting the permissions will vary from server to server, and depend on how you access your server. If you have shell access, changing permissions is as simple as running the following command from inside the path/to/glFusion directory:

```
chmod -R 777 logs
```

```
chmod -R 777 data
```

```
chmod -R 777 backups
```

... do this for all the directories listed above...If you use FTP to upload files to your server, you can use your FTP program to change the permissions. Below is an example of using FileZilla as the FTP program to set permissions:

With your mouse, highlight the directory you wish to change permissions

Right click and choose File Attributes

In the pop-up window, select the checkbox for Read / Write for owner, group and public permissions.

You will need to repeat these steps for all the directories listed above.

Assistance

If you need assistance getting the permission settings correct, check with your hosting provider's technical support or post a support message at the gl Labs website.

It is important that you validate the directory and file permissions before proceeding to the final installation step.

Performing the glFusion Installation Process

Now that you have all the files loaded onto your server, you are ready to begin the online installation. Let's review the steps you have already completed:

- Create Database Name
- Database User ID
- Database Password
- Path to glFusion
- Uploaded all the glFusion distribution files
- Proper directory permissions

Open your browser and navigate to the glFusion installation wizard at /admin/install/index.php. The path to this file will depend on where you chose to put the glFusion files on your web server. The default location is:

`http://Your_glFusion_Site/admin/install/index.php` The glFusion installation wizard was designed to automate the install process. Simply follow the installation steps.

You will be asked for the location of the db-config.php file. Type in the full path to this file and press Next. You will then need to enter your site specific information such as database server, database name, etc.

Once you have completed the installation be sure to delete the admin/install directory. Also, pay attention to the success message to learn how to log in as the administrator and change the default password.

Be sure and delete the public_html/admin/install/ directory when you have successfully installed glFusion.

You can log into glFusion using the default administrator's account.

Username: admin

Password: password

Make sure you change the default password IMMEDIATELY!

glFusion Upgrade Instructions

Before you begin the upgrade process, make a good backup of your source files and your database. The upgrade process is generally very safe, however, there is always the possibility that something could go wrong and part of any good upgrade plan is a good back out plan.

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If you have made any customizations to Geeklog's core files or the theme files, ensure you save a copy of your modifications.

glFusion brings some major architectural changes that break away from how upgrades were handled in previous versions of Geeklog. The main change is that the config.php file is no longer used by glFusion. Instead, most of the configuration options are now maintained with an online configuration editor and the configuration files are automatically updated during the upgrade process. There are a few configuration options that are still maintained in the db-config.php (database settings) and siteconfig.php (site specific options such as Character Set), but you should not have to edit these files directly. Also, you no longer need to edit lib-common.php to specify the path to config.php as you did with previous versions of Geeklog.

The upgrade process does not migrate your existing configuration options from the old config.php file. You will need to enter the Online Configuration section after the upgrade and set the options to meet your specific needs.

Be sure to check the Requirements list below to validate your site can be upgraded successfully.

Pre-Upgrade Checklist

To ensure a smooth upgrade process and to prevent any problems after the upgrade, you will need to validate the following items:

If you are using a theme other than Professional or Nouveau, make sure your theme has been updated to support glFusion. There are several theme changes that must be made to custom themes to allow glFusion to work properly. If your theme has not been updated for Geeklog v1.5.0 and you do not want to use one of the pre-installed themes (Professional or Nouveau), you will need to modify your custom theme with the required changes for Geeklog v1.5.0.

If you have made any customizations to the Geeklog core files, you will lose these customizations during the upgrade process.

Ensure that all the plugins installed on your site are compatible with Geeklog v1.5.0. You may want to check the support forums or with the author of the plugin to determine if it will function properly with glFusion.

glFusion has 3 configuration files that are needed. The distribution includes skeleton versions that will need to be renamed or copied to the correct filename. This prevents your existing configuration from being overwritten when you upgrade. Rename the following files:

- db-config.php.dist to db-config.php
- siteconfig.php.dist to siteconfig.php
- lib-custom.php.dist to lib-custom.php

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Backup, Backup, Backup

Take extreme care to back up any files from your current Geeklog installations that have any custom code in them, especially lib-custom.php (where all custom code should reside). Be sure to back up any modified themes and images from your current installation.

ALWAYS PERFORM A GOOD BACKUP BEFORE ATTEMPTING AN UPGRADE.

Uploading glFusion

Follow the instructions above in the installation section on how to upload the glFusion distribution.

Performing the Upgrade

Open your browser and navigate to the glFusion installation wizard. The path to this file will depend on where you chose to put the glFusion files on your web server. The default location is:

`http://[your_glfusion_site]/admin/install/index.php`

The installation wizard was designed to automate the upgrade process. Simply follow the installation steps. Please note that only 'basic' version numbers are listed, because, for example, Geeklog 1.4.1 and 1.4.1sr2 use the same database. So if you're upgrading from Geeklog 1.4.1sr2, just select '1.4.1'.

Once you have completed the upgrade be sure to delete the admin/install directory.

Congratulations! You now have glFusion successfully installed. Please take a moment to review the rest of this manual to better understand how to administer the features and functions of this software.

Post Upgrade Checks

Once you have successfully upgraded your site, there are a few things you will want to double check.

Go into the online configuration system and validate your configuration settings

If you had the Forum plugin installed, you will need to go into the Forum administration screens and select Resync for each of your forums. This will build the necessary last post information and correctly set the new counters in the database.

REMOVE THE INSTALLATION DIRECTORY

Pre-Installed Plugins

glFusion comes with the following plugins pre-installed,

- Bad Behavior2
- CAPTCHA
- FileMgmt
- Forum
- Media Gallery

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If any of these plugins were already installed on your site, they were automatically updated during the upgrade process.

If some of these plugins were not previously installed prior to the upgrade, they were not installed during the upgrade. The files are on your system and are ready to be installed, but you will need to go into the Plugin Editor to manually install them.

Security Overview

glFusion has a very flexible method of controlling access to content, plugins, and features. Almost every component of glFusion has the follow security attributes associated with it:

- Owner Permissions
- Group Permissions
- Logged In User Permissions
- Anonymous Permissions

Each permission can be set with the following attributes:

- Write
- Read
- None

There is an exception, the Owner permission is always Read and Write.

If you wanted to have a story that could only be viewed by paid subscribers to your site, you could do the following:

- Create a new group called 'paid_subscribers'
- Add site users to the group
- Set the group for the story to 'paid_subscribers'
- Set the permissions on the story to:
 - Owner – Read / Write
 - Group – Read
 - Logged-In Users – None
 - Anonymous – None

Now, only the owner (the author) and members of the 'paid_subscribers' group can see this specific story.

In some cases, glFusion's security permissions follow a hierarchy, for example; A story belongs to a Topic. Topics have their own security settings. Even if a story has permissions that would allow anyone to see it, it is possible that the Topic's security permissions would restrict access to the story. glFusion

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uses the least privilege model, which means when there are multiple levels of permissions, the least permissive setting wins.

glFusion has several pre-defined groups, these include:

Group	Description
All Users	you are a member whether you are logged in or not
Logged-In Users	you are a member only after logging in
Root	Full Administration Rights - member of all group
Story Admin	able to edit/delete stories and approve new story submissions
User Admin	able to add/edit/delete new users
Group Admin	able to create/edit group access

You can also create new groups to support your access requirements.

glFusion has an additional security feature called Rights. Rights are generally associated with an administrative function or a feature of the system. For example, there is a right called story.edit. If this right is assigned to a group, then members of that group could edit stories on your site.

An example of how Rights can be used is; If you have a site where you have delegated some responsibility for administration to some of your trusted users, you might create new groups to support the delegation of duties. For example, if you have 3 users who will moderate new story submissions (review and either approve or reject submissions), you could create a group called story_moderators and assign that group the right story.moderate. Any member of the story_moderators group can now moderate stories on your site.

There are several pre-defined rights:

Right	Description
block.delete	
block.edit	
calendar.edit	
calendar.moderate	
calendar.submit	
group.delete	
group.edit	
links.edit	
links.moderate	
links.submit	
plugin.edit	
polls.edit	
spamx.admin	
staticpages.delete	

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staticpages.edit
staticpages.PHP
story.edit
story.moderate
story.ping
story.submit
syndication.edit
topic.edit
user.delete
user.edit
user.mail

Block System

In glFusion, a block is a content item that resides on either the left or right of the main content of the site. Blocks can contain HTML, PHP functions, RSS Feeds from other sites, or almost anything you can think of.

Site Administrators define the location (right or left side), the order, and the permissions of each block. Important Users have the ability to turn off a block from displaying in their My Account settings. So there are no guarantees that a user may be viewing the information you place in your blocks.

Generally, most sites have both right and left blocks, where the right blocks only display when the user is at the main site index page. You can create a true 2 column layout by moving all your blocks to one side, if there are no blocks to display on the left side of the content, then the content will stretch into that position.

Blocks can also contain autotags. To enable autotags in a block, you must check the Enable Autotags box in the Block Editor.

Security Permissions

Each block contains the standard set of glFusion security permissions:

- Owner Permissions
- Group Permissions
- Logged in User Permissions
- Anonymous Permissions

This makes it possible to hide certain blocks from non-logged in users, or to display a block to a specific set of users.

Centerblocks

A feature that exists for plugins only is the ability to add a block to the center of the page. Typically this would be at the top of the main index page but can be optionally at the bottom or before or after a featured story.

An example would be the forum centerblock to show users a summary of the latest forum activity. Centerblocks are not controlled from within the BlockEditor but from within their respective plugins.

Block Types

There are four different block types that have completely independent functionalities:

Default Blocks

These blocks are built-in and cannot be deleted. They can be deactivated and usually their name, helpfile, position, and permissions can be changed. Default blocks are:

- What's New
- Who's Online
- Admins Only
- User Functions
- Topics
- Older Stories

PHP Block

This block calls a function that is provided by a plugin or PHP function added to lib-custom.php. The defined function usually returns content that will be displayed in the block. The block function can be anything from generating basic HTML content, displaying formatted data from a database, or remote site or an interactive form. There are really few limitations if any for a block as long as it fits within your layout.

The name of the PHP function is entered in the Block Function field. If you would like to have one of your blocks use PHP code, enter the name of the function above. Your function name must start with the prefix `phpblock_` (e.g. `phpblock_getweather`). If it does not have this prefix, your function will NOT be called. This is a security feature to ensure that arbitrary PHP code is not called by your site. Be sure not to put empty parenthesis `()` after your function name. Finally, it is recommended that you put all your PHP Block code in `/path/to/glfusion/system/lib-custom.php`. That will allow the code to stay with you even when you upgrade to a newer version of glFusion.

A PHP block will only be displayed if the function actually returned any content to be displayed in the block. This can be used to create blocks that only show up on certain conditions.

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Portal Block

The Portal Block is for displaying an RSS/RDF feed. The content can not be changed since it is completely determined by the content of the RSS/RDF file. For a new block, at least the complete URL of the RSS/RDF-file has to be given.

Normal Block

The Normal block is usually a simple HTML-text, which can contain announcements, links and even advertising. It can be used as a navigation-tool and link to static pages as well as external sites.

glFusion assumes that a normal block contains HTML formatted content when the very first character of the block content is a < character (for an opening tag). If it is any other character, glFusion assumes the content to be plain text and will translate line breaks to HTML
 tags.

For more information on the Block Editor Admin refer to: Block Administration

Language System

glFusion is internationalized. Instead of containing language specific text messages, it tracks text in a special way so that it can be extracted and translated into other languages. Users will see a version of the text that has been converted into their own language. This allows glFusion to be used in many countries and does not force English as the primary language.

glFusion is also aware of 'Right to Left' (RTL) languages too, so there are no restrictions on translating glFusion to any language.

The site administrator will select the default site language. Users can also select their preferred language under the 'My Account' options. There is a configuration option available that will disable a user's ability to change the language.

Keep in mind that user created content (such as stories) will only be available in the language they were originally written in.

glFusion does have minimal support for multilingual sites.

Translating glFusion

The language files are well commented and easy to customize the text displayed for any of the core glFusion screens. Plugins are also expected to use a language file for their user screens. A language subdirectory with the distributed plugin is where the different language files are located. The matching language file for the plugin will be selected if available.

To translate glFusion or any plugins to a new language, start with the english.php or english_utf-8.php file as the base.

Please submit any translations to <http://www.gllabs.org> so they can be included in future releases.

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Multilingual Sites

If you plan to run a site where the content will be in several languages, you should use languages that support UTF-8. UTF-8 is a universal method to display characters so you will be able to display German Umlaut next to Japanese Characters.

Search System

glFusion provides a complete search system that will work across all types of content. This includes stories, forum posts, files, photos, etc. Search results are organized by type (stories, forum posts, etc.). The search facility also honors glFusion's security system, so only items the user has the rights to view are returned in the results.

The main search mechanism is the Search Box located in the site header. Simply type what you are looking for and glFusion will scan through the content and return the exact matches.

There is also an Advanced Search feature where you can specify additional search criteria, refine the search, or limit the search to specific components.

Within the Advanced Search screen you can select the following:

Options	Description
Keyword Search	Determines if the search will look for an exact match, all of the keywords, or any of the keywords.
Date Range	You can specify a date range to use to refine the search. This allows you to return only recent items.
Topic	You can search just a specific Topic, which would limit the search to only stories in that topic.
Type	You can limit to search to a specific type, such as Story, Forum Post, Media Gallery, etc.
Author	You can also search for a specific author or owner of the content.

Finally, you can specify the number of search results you wish to see per page.

Submission / Moderation System

glFusion allows you to have certain items queued for review before they become live on your site. For example, if you allow users to post stories, you might want to review them first to ensure the content is appropriate. Once you review the submission, you can either approve or decline it.

The following items can be set for moderation:

- Stories
- Users

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- Links
- Calendar Events

Media Gallery and File Management also supports moderation, but they handle the moderation internally instead of leveraging glFusion's submission / moderation system.

User Moderation

You can enable the User Submission Queue in the online configuration screen. This would require all new users who have registered on your site be approved before their accounts become active.

The user will be notified that their account request is currently being reviewed by the site administrators. Once you have approved the submission, the user will be notified via email that they can complete the registration process.

If you decline the user submission, no notification is sent to the user.

Content Moderation

If you enable the Story, Links, or Event submission queue, each time a user submits new content, they will be informed that the content is queued for review. Once the submission is approved, the user will be notified via email.

If you decline the submission, no notification is sent to the user.

Comment System

glFusion supports a complete comment system that allows users to leave comments on almost every type of content on your site. Comment support can be enabled and disabled on a case by case basis. For example, each story has the ability to have comments enabled or disabled. In other areas, Media Gallery for example, comments can be enabled at the container level (albums in this case).

Comments provide an excellent method to solicit feedback from your users on your content. Comments are also an area that can be easily abused if not careful. Spammers will target comment entry fields as a method to promote their web sites or sell their wares. Fortunately, glFusion contains several SPAM fighting features that should prevent most abuse.

For stories, comments can also be closed after a period of time. This means that the existing comments are visible, but no new comments will be accepted.

Auto Tags & Auto links

Autolinks provide tags (called autotags) to link to objects under a plugin's control. For example,

[staticpage:svn Learn all about the glFusion SVN] will be displayed as this link: Learn all about the Geeklog SVN, and it will link to the Static Page with an ID of svn.

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Autolinks can be disabled globally, see Disable Autolinks in the Configuration section.

Auto Tags supported by a standard installation of glFusion are:

Auto Tag	Description
[story:]	Inserts a link to the story id, will use the story title as the link text if none is specified.
[staticpage:]	Inserts a link to a static page id, will use the static page title as the link text if none is specified
[staticpage_content:]	
[link:]	Inserts a link to the link id
[event:]	Inserts a link to the event id
[file:]	Inserts a link to a file controlled by filemgmt
[forum:]	
[album:]	Creates a thumbnail image using the album cover, various options.
[media:]	The general purpose media auto tag. Will display the assigned thumbnail for the chosen media item.
[img:]	Creates a raw tag a la html. Can only specify alignment and size.
[slideshow:]	
[fslideshow:]	
[video:]	Inserts a playable video in the page. Can be used to embed any video item from Media Gallery including remote video's e.g Youtube.
[audio:]	Places a small audio player in your page.
[download:]	Allows any item stored in an album to be downloaded by the user.
[image:]	Places a thumbnail image of the specified media item (using media id). This does not put a link, only the image.
[mlink:]	Places a text link to a media item - No thumbnail is used.
[playall:]	Inserts an MP3 jukebox into your story. It will contain a playlist of all the MP3 media in the album.

Many of the mediagallery autotags have options, see the relevant page

Theme and Layout Management

Themes allow for the customization of the sites look and feel for all visual aspects (including plugins). However, to ensure that themes are enabled and able to be changed, glFusion's configuration needs to be modified to ensure theme changing is enabled.

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You can set the site's default theme in the Theme configuration section. You can allow users to select other themes (or disable them selecting other themes), in the User and Submissions configuration section.

The base theme provided with the glFusion is the Nouveau theme. Nouveau is a pure CSS based layout that is Search Engine Optimized (SEO) and provides a modern look.

Within the /path/to/glfusion/public_html/layout directory, you will find the theme folders. The names on the folders themselves will be read and shown to users as selectable themes in the event the Allow User Themes option is set to 'true'. Likewise, the 'theme' configuration setting above needs to have the proper spelling of the theme's folder entered in order for the theme to be used as the default theme.

Configuring a Theme

A theme needs to contain each plugin's theme-able items within it as well as any of the core templates the framework requires.

A template file is denoted with a .html extension and is the core file type used by glFusion's template engine to fill in the user interface.

glFusion Theme Customization

glFusion allows you to customize the theme template files without actually modifying the original files. This allows you to make your customizations with confidence that they will not be overwritten during an upgrade.

To customize a template file, first create a custom/ directory under the directory that contains your template file. For example, the standard template directory structure is:

```
+-- theme root directory
|
+ admin\
|   + block\
|   + common\
|   ....
+ article\
|   |-- article.html
|   |-- printable.html
+ comment\
+ images\
+ js
  ...
+ traceback\
+ users\
|
|-- adminoption.html
|-- adminoption_off.html
...
```

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```
| - storybodytext.shtml
|
```

...If you wanted to customize the printable.shtml template, you would first make a custom/ directory under the article directory, then copy the printable.shtml template to the custom/ directory and make your edits.

If you wanted to customize the storybodytext.shtml template, you should first make a custom/ directory under the root theme directory, copy the storybodytext.shtml template to the custom/ directory and make your edits.

Your directory structure would look something like this if you made the above customizations:

```
+ - theme root directory
|
+ admin\
|   + block\
|   + common\
|   ....
+ article\
|   | - article.shtml
|   | - printable.shtml
|   + custom\
|       | - printable.shtml
+ comment\
+ custom\
|   | - storybodytext.shtml
+ images\
+ js
|   ...
+ traceback\
+ users\
|
| - adminoption.shtml
| - adminoption_off.shtml
|   ...
| - storybodytext.shtml
|
```

...The custom/ directories will never be overwritten during an upgrade.

Remote Authentication

With Remote Authentication enabled, users can login to your site via any authorized external service and act as a regular user.

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This allows you to disable anonymous comments and make it easier for people to comment (they don't have to sign up on yet another site (yours) they can use a pre-existing central account to make comments).

To enable Remote Authentication:

Install one or more Authentication classes in `/path/to/glfusion/system/classes/authentication` (glFusion ships with a class for LiveJournal.com and an LDAP class)

In glFusion 1.0.0 or later:

In the Configuration, go to “Users and Submissions” > “Users” and set “User Login Method[3rdparty]” to “True”

(optional) On the same Configuration panel under “User Submission”, set “User Submission Queue?” to “False”

With Remote Authentication enabled, the user is presented with a select box on the login screen to choose the login service. This will default to your site, but allow them to choose an external service. Users are authenticated via their remote username and password, and if they pass authentication a local account is created on your site that is slaved to that remote account. These local slave accounts can be banned, have special permissions etc just like any regular site user. The account creation process is the same as for local accounts, so all custom functions and plugin notifications are carried out as normal. In addition, the user is added to the group 'Remote Users' allowing you to automatically grant/deny specific permissions to all remote users.

Unique Usernames

When a new account is created, the local username for that account is set to the remote username. However, if there is already a user in the system with the same username a call is made to `CUSTOM_uniqueUsername` passing in their remote username. This allows the admin to supply a custom function to ensure unique usernames for all users.

It is not necessary to have unique usernames. This does not break the security of a local user or remote users login, as the full remote username and service are stored locally to avoid collision and internally users are identified by a unique number. However, if you want to ensure it is clear who has posted a comment or article by the name displayed, this function allows you to ensure uniqueness.

Disabling Services

To disable a specific service, simply remove the `(servicename).auth.class.php` file from `/path/to/glfusion/system/classes/authentication` and that remote service will no longer be available to your users.

Adding Services

Currently authentication modules are available for:

- LiveJournal
- LDAP

If you wish to add further services you will have to write custom modules to do so. This can be done by creating a PHP file named `ServiceName.auth.class.php` which declares a class called `ServiceName` with a method called `authenticate`. `Authenticate` takes username and password as arguments and should return a boolean. The class should expose an 'email' property and attempt to provide the users valid email address if this can be aquired from the remote server. If that information is available, the class can also provide the user's full name ('fullname' property) and homepage ('homepage' property).

Web Services

The Web Services API, which is a part of glFusion's Geeklog 1.5.0 core code, provides an interface for client software to talk directly to glFusion and manage content utilizing the Atom Publication Protocol. Typical usage would be to use a separate web-based or desktop client to publish and edit stories without having to visit the website. The Web Services in glFusion also syndicates content utilizing the Atom Syndication Format. Other protocols could be implemented and added to be used in parallel (see Geeklog's Webservices API for technical details).

Overview of Atom

The Web Services API implements the Atom Syndication Format (RFC4287) and Atom Publication Protocol (RFC5023).

The Atom Syndication Format is similar to RSS 2.0, except that it allows the payload type to be 'labeled', e.g. identified as to type or format. This allows you to syndicate all types of media, including audio, video, as well as escaped HTML/XHTML/XML, and even binary data.

The Atom Publishing Protocol essentially exposes an external interface to allow content to be managed remotely. It utilizes HTTP and XML as a methodology to access, edit and post content to the site.

Why Atom, you might ask? This blog post started the whole thing. General information about the Atom Syndication and Publication Protocols can be found here.

A lot of really specific and technical information can be found at atomenabled.org. Note that Geeklog's core implementation only works with PHP v5 or greater.

Configuring Web Services

When configuring a client that supports the Atom Publishing Protocol (aka Atompub), you will usually be asked for a service document or an introspection URL. Both terms refer to the same thing, so the following will work for both:

On a standard glFusion install at, say, www.example.com, the URL of the service document would be:

<http://www.example.com/webservices/atom/?introspection>If your web server is not set up to serve an `index.php` by default, you may have to use this URL instead:

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<http://www.example.com/webservices/atom/index.php?introspection>The service document provides all the information the Atompub client needs. You will only have to give your username and password as well (for your regular login to your glFusion site).

Using only one plugin

If you want to use Atompub for only one plugin (where “plugin” also refers to the stories here), you can point your client to one of the following URLs for the service document instead:

<http://www.example.com/webservices/atom/?introspection&plugin=story>

<http://www.example.com/webservices/atom/?introspection&plugin=staticpages>This way, the client will only see the service document for the given plugin.

Restricting access

The Web services can only be used by registered users. By default, any user with an active account can use the site's Web services. Since we're currently only supporting access to stories and static pages, this will only be of limited use to users without Admin access (Story Admin or Static Pages Admin), though. They will only have read-only access to the stories and static pages that they can see on the site.

Authentication Problems

If your web server is running PHP as a CGI, there may be a problem with the authentication not working. In this case, you will have to modify your .htaccess to forward the authentication headers.

Restrict Web Services Usage

To further restrict access to the Web services, such that only certain users can use it, you can enable the Restrict Webservices? option in the Configuration. From that point on, only users with the specific webservices.atompublish right can use the Web services. There is also a pre-defined Web services Users group that you can assign users to.

Clients

The list of Atompub clients is rather short at the moment since the protocol itself is still new (it was only approved in October 2007). However, many big names in the industry are already using Atompub for their services (e.g. Google for Blogger and the Google Calendar), so expect this list to grow soon.

Windows

- Windows Live Writer (Microsoft)
- Fude (Toru Marumoto)
- Zoundry Raven (Zoundry LLC)

Linux

- appfs (Peter Lacey) allows you to mount the contents of an Atompub-enabled site as a local file system.

Other

- Yulup is a Firefox extension.
- Atomic (Alex Milowski) is a Firefox extension.