# What is Ethereal Realms?

Ethereal Realms is a concept web-based chat system, originally based on two chat sites which are now both defunct. This system emulates what features and functionality those sites possessed while adding to the initial design and scope as time progressed.  Over time the code base has picked up message boards, internal messaging, image/prose galleries and a social network interface.

Released under the GNU General Public License[1] (GPL), this project also has the secondary aim of creating an advanced role-play and gallery environment that will can be shared and modified freely throughout the community.

Ethereal Realms has also moved well beyond the original mandate of offering chat capabilities. This includes the addition of threaded message boards, web polls, homepage management, collaborative galleries and social networking profiles with geographical searching. While these additions are not necessarily core to the role-play aspect of the site, they do compliment the existing feature set and provides communities a method of remaining self-sufficient.

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[1] See http://www.gnu.org/licenses/licenses.html#GPL for more details.

# Table of Contents

# File Overview

## ./ethereal

Ethereal Realms is designed to be a self-contained series of scripts. This path and all elements within demonstrate this concept as everything required to run the site is located within. This means the installation[2], execution[3], operation/maintenance[4], and run-time information[5] critical to the use of the site are all here.

This directory contains four sub-directories. The first of which is covered below:

## ./ethereal/conf/

This directory exists for the deployment and management of sites using Ethereal Realms code. New to version 4.0.0 of the code is the ability to hosts multiple sites[6] under one roof and is managed centrally through the script contained within.

## ./ethereal/conf/config.pl

This is the core script used in the deployment and management of sites. By default, this script cannot be executed directly as different locations in the interpreter would generate errors. In order to correct this issue this script has two requirements:

- The script requires the existence of the Config::IniFiles[7] module before it can be used; and
- The script must be called be the Perl interpreter directly. E.g. *perl –w config.pl*

Once this script is employed, you can add/remove, upgrade and manage new sites. The script will also confirm the existence of critical modules required for the use of the site and display the proper connection string to use with your scripts in order to effectively make use of the database.

Please note that this script is in fact a command-line script. You cannot make use of a web-browser to configure[8] the site.

## ./ethereal/conf/conf.ini

This file includes the basic configuration of the site itself. Information such as the database and http user names will be stored within this file. Please note that this file should not be made publicly available.

## ./ethereal/conf/lang.ini

This file contains all necessary messages and words used in the operation of the config.pl script. Due to the nature of the script it is necessary to not be dependant on a database which may not be operational at the moment.

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[2] This exists in the form of the config.pl script which manages most of the complexity involved in the installation of the scripts/database.

[3] In the form of end-user scripts located mainly under the ./main directory.

[4] Maintenance scripts for the most part exist under the ./mgmt directory.

[5] The ./db directory can contain local cache files to reduce database requests.

[6] Every site exists under its own schema in the database, while the core information relevant to all exists in public.

[7] Available through the CPAN network.

[8] This script was designed and tested to Unix-like operating systems only.

## ./ethereal/conf/ethereal_base.tmpl

Any file of the .tmpl extension exists to generate the base template of a sites configuration. With the addition of macros, these files contain all of the necessary database code[9] used in generation. During the process the macros are replaced with the proper information which will be appended to the site prior to use.

## ./ethereal/conf/ethereal_data.tmpl

See *./ethereal/conf/ethereal_base.tmpl* for more details.

## ./ethereal/conf/ethereal_functions.tmpl

See *./ethereal/conf/ethereal_base.tmpl* for more details.

## ./ethereal/conf/ethereal_schema.tmpl

See *./ethereal/conf/ethereal_base.tmpl* for more details.

## ./ethereal/conf/ethereal_views.tmpl

See *./ethereal/conf/ethereal_base.tmpl* for more details.

## ./ethereal/main

While the previous path dealt with the low level management of the site, this one exists to cater to the needs of the general users. Every script within are user scripts, designed to created user interfaces, pull information and share if it need be.

These scripts are designed to be used directly under mod_perl[10] a critical Apache[11] module used in accelerating Perl scripts at the expense of memory usage. These scripts are not true mod_perl modules however in order to maintain compatibility with sites that cannot run under this system.

## ./ethereal/main/bio.pl

This is a script designed to display biographical information, contact information or redirect to a puppets home page if the users have so decided to allow it. In realms, this functionality is enhanced as to allow for quick access to private messaging, ignoring and watching if currently in offline mode.

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[9] Really just straight out SQL statements and little else.
[10] See http://perl.apache.org/ for more details.
[11] See http://www.apache.org/ for more details.

## ./ethereal/main/board.pl  Aliases: board, sysboard.pl

Message board functionality for Ethereal Realms, using a simplified threaded model expanded for ease of use.   These are embedded within every public realm and can be accessed in various ways.    Additionally a special realm[12] can be established to hold the systems forums.

## ./ethereal/main/contrib.pl

A new portal designed exclusively for contributors which allow access to all contributor components[13] without using a unified native interface.   With the addition of this portal it became possible to make use of Ethereal Realms without the rest of the chat component in place.

## ./ethereal/main/gallery.pl Aliases: gallery

This script is the client side portion of galleries, currently featuring text and image works.   Script includes searching capabilities, with multiple views for quickly finding works or simply browsing through an individual's gallery.

For users currently authenticated to the system, one has the ability to rate and comment on works displayed.    This interface is also designed in such a matter to make it friendly to web spiders giving the works within the chance to be indexed in search engines.

## ./ethereal/main/gate.pl Aliases: go, portal.pl, ./ethereal/main/ssi/static.pl

The primary function of the portal is to authenticate users and direct them to a screen that will show them access to available features, functionality and allow them to access individual realms.   The realm resembles the interface provided with the .contrib.pl script except that it bridges to users to realms instead of works.

## ./ethereal/main/gummies.pl

A view-only script that is generally used in conjunction with the puppet configuration panel and allows users to see gummies allowed on the site.   This script can also be employed to view injected gummies, which behave very much like emoticons on instant messengers.

## ./ethereal/main/gwho.pl

The Global who script is a front-end allowing users to see realm activity globally.   There exists variants to this interface, one which will display information more pertinent to the administrators of a site and the other used to display initially at realm level.

## ./ethereal/main/mail.pl

Internal mail system for Ethereal Realms, that allows for users to send messages directly to another user without having to making their identities known.   This feature can also be used to capture messages normally send through Email[14], alleviating the load on mail systems if need be.

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[12] Normally this is a hybrid realm and the realm name must be specified under */Attributes/System*.
[13] Home pages and galleries are considered contributor components.
[14] This option can be changed through the User Details script.

## ./ethereal/main/offline.pl

Realms can be accessed in one of two modes, for users who wish to re-create a message-board style of role play they would normally enabled offline mode.   This script similar to the realm.pl handles all the necessary complexities.

## ./ethereal/main/poll.pl

This is a front-end interface for the polling system used by the site, which works by taking in votes and displaying the current results on request.

## ./ethereal/main/realm.pl Aliases: stream.pl

The Realm script handles the primary interaction between the users with their realms.   This script will also act as a portal for realm specific functionality such as private messaging, enhanced biographical information and forums.

## ./ethereal/main/registration.pl Aliases: confirmation.pl

Ethereal Realms requires that users are registered in order to recall settings, handles and customizations.   This script handles the tasks of collecting initial information and making sure that the details provided such as the Email address are valid through the confirmation aspect of the script.

## ./ethereal/main/reset.pl

If and when a user forgets their password, this script can come to their aid.   All they will require is their username and a new password[15] will be generated for them.   For users of elevated status such as an administrator[16] or supervisor[17] this script cannot be used.

## ./ethereal/main/social.pl Aliases: social

This is the social networking front-end for Ethereal Realms, which includes searches and the display of profile.  The site also incorporates Google Maps directly in order to visually show where people are aiding in the search of people nearby to oneself.

## ./ethereal/main/vanity.pl

This is an additional component to the social networking component.   This part deals specifically with the display of user pictures named Vanity Shots and allows for the voting and display of them in a mini-gallery like view.

## ./ethereal/main/weblog.pl Aliases: ./ethereal/main/ssi/quicklog.pl

Though the use of a weblog-style interface this script allows administrators to pass on information to the rest of the site. Extracts of the news headings can also be displayed within realms or through the use of SSI scripts.

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[15] Ethereal Realms does not keep the password in clear text, as a result it is impossible to recover a password without breaking the cipher.
[16] Managers of the system.
[17] Managers of realms.

## ./ethereal/main/webring.pl Aliases: ring.pl

A web ring system has been incorporated into Ethereal Realms in order to link all hosted realms together. This script acts as the intelligence required to link and lists all of the realms within the ring itself.

## ./ethereal/main/js

Scripts within this directory exist to export certain aspects of the site outside of Ethereal Realms itself. This allows hosts and users to display a realms current weather, list who is on and display banners currently being rotated out.

All of this can be done through the use of JavaScript. Also with the use of CSS[18] the user has the option of changing the look and feel of the displayed object to look exactly how they wish it too.

### ./ethereal/main/js/forecast.pl

This script displays the weather forecasts used in realms. Hosts can pass on the appropriate link as need be.

### ./ethereal/main/js/feed.pl

The use of RSS feeds on the site can be extended to display that information though JavaScript.

### ./ethereal/main/js/rotate.pl

This is the rotation script used specifically in rotating items outside of Ethereal Realms.

### ./ethereal/main/js/vote.pl

This is an additional script to the Polling system designed to collect and display polls. Uses JavaScript injection to make it dynamic and simplify output.

## ./ethereal/main/post

These scripts are used while interacting through a realm. As a result of this, the bulk of these scripts will have the same access control measures put into place as to prevent unauthorized access.

### ./ethereal/main/post/colours.pl

The colour guide displays every colour allowed within a realm allowing the user to make a better selection of fonts when playing within that setting.

### ./ethereal/main/post/dice.pl

An advanced die roller that while supporting a multitude of systems can use templates to support on system and catering to a realms specific role-play system. Rolls can be made in publicly or sent privately based on the user's preference.

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[18] See http://www.w3schools.com/css/css_intro.asp for more details.

### *./ethereal/main/post/private.pl*

This script is the primary private message sub-system that will allow sending messages in private to people of the same realm or public realms if configured to do as such. Administrators can also use this interface as to send messages globally to all realms at once.

### *./ethereal/main/post/who.pl*

Realm specific variant of the global who is on that will originally display everyone in a specific realm then move to all public realms if requested.

### *./ethereal/main/zoom.pl*

Allows for the expansion of posts into an external window in order to allow for easier modification and spell checking[19].

## ./ethereal/main/ssi

Ethereal Realms has created scripts that are made to function in conjunction with Server Side Includes (SSI). This allows dynamic content to be mixed in with seemingly static pages, without requiring people to use scripts directly.

The above directory does not contain any scripts; instead it acts as a container for allowed SSI scripts that can be made available publicly. To prevent a script from being used as a SSI element, simply have that link revoked.

## ./ethereal/mgmt

This directory acts as a separate container for scripts that sites may not to have loaded to be under mod_perl or equivalent web acceleration processes. This also allows one to selectively export directories within this tree granting a more granular control over the scripts themselves.

## ./ethereal/mgmt/admin

This contains all of the administrative scripts which require administrative level users to make changes to the system. These scripts allow changing anything from user's properties to the look and feel of the site.

*This path is normally exported for use by administrators. Without access to these scripts it becomes nearly impossible to make use of the site at all.*

### *./ethereal/mgmt/admin/swho.pl*

This script is similar in principle to global who is on, except that this script has the additional capabilities of seeing addition details. This includes the listing of all associated usernames, warning levels and any active realm currently active.

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[19] The spell checker requires the use of a daemon to function. Without this process checking spelling mistakes cannot be done.

### ./ethereal/mgmt/admin/system.pl

This administrative script creates a tabbed user interface that allows controlling all administrative aspects of the site. From realm creation to changes in the specific wording of a button, this script will allow such changes to be made. The administrator can also actions taken on the site, this audit entry viewer can become a very useful ally to determine where things have gone wrong.

# ./ethereal/mgmt/config

This directory contains these configuration scripts do not require administrative access in order to be used. However, their access levels vary from requiring supervisory/moderator access for their use to simply being available to all.

*This path is normally exported for use by users. Without access to these scripts it becomes nearly impossible to make use of the site at all.*

### ./ethereal/mgmt/config/home.pl

The homepage component of Ethereal Realms which allows contributors to access files and images stored on the local server. In addition to straight file access, the script allows for mass uploads, removals and image resizing.

### ./ethereal/mgmt/config/ignore.pl

This script allows the ignoring users on multiple levels, including simply replacing their title information.

### ./ethereal/mgmt/config/gallery.pl

Interface used to manage galleries, works and gallery news entries for any contributor of the site. This interface is collaborative in nature and can allow users who are not generally considered a contributor to access existing galleries in a limited fashion.

### ./ethereal/mgmt/config/puppet.pl

This is the puppet configuration script that handles the creation, cloning, modification and removal of puppets to be used throughout the site itself. Puppets are used as pen-names in galleries and employed when making comments to works or posting in a forum, these are essentially one of many user avatars.

### ./ethereal/mgmt/config/puppeteer.pl

Puppeteer configuration panel, also known as the user details page, allows a user to change user specific information from one interface. This includes password, Email address changes and contact information updates etc.

### ./ethereal/mgmt/config/realm.pl

This supervisory/moderator level script deals with realm specific management as required for public and/or hybrid realms. The management of every detail of the realm is done exclusively through this interface.

For administrators additional options may also appear, as certain features are considered to volatile for general experimentation and requires an administrator to undo.

## ./ethereal/mgmt/perl

A directory that contains very simple Perl modules which Ethereal Realms uses and does not require to be compiled to be run or included.   This process alone should cut down considerably on the list of required modules for installation, especially when some of these are less then common.

| Module | Version | Release Date | Author |
|---|---|---|---|
| **Config::IniFiles** | 2.38 | 13 May 2003 | Jeremy Wadsack |
| **Lingua::EN::NameCase** | 1.13 | 26 Apr 2002 | Mark Summerfield |
| **Lingua::EN:Tagger** | 0.13 | 29 Jun 2005 | Aaron Coburn |
| **Lingua::Stem** | 0.81 | 26 Jul 2004 | Benjamin Franz |
| **Number::Format** | 1.51 | 26 Apr 2006 | William R Ward |
| **Text::Wrap** | 2005.0824 | 24 Aug 2005 | David Muir Sharnoff |

## ./ethereal/mgmt/commandline

Scripts in this directory are to be used at the command line level only and do not carry with them the ability to interact as a CGI script and are used exclusively for maintenance/update tasks.   In certain cases the scripts heavily tailored to Ethereal Realms specifically and may require modification before use.

In certain cases these scripts are no longer being actively used and no longer work.  If this is the case and you are in dire need of employing them you may wish to contact the developer.

### ./ethereal/mgmt/commandline/convert.pl

This is a primitive tool that can be used in the migration of SQL dumps from MySQL databases to PostgreSQL.  It is used as a pipe from a process to generally a file.

### ./ethereal/mgmt/commandline/erealms.pl

Primary command-line utility used by Ethereal Realms for all of required maintenance.   This script can also be used to terminate streams, rotate banners in realms and synchronize Email addresses with mailing-lists.

### ./ethereal/mgmt/commandline/locate_tags.pl

This script is used in the location of stale and unused tags in the database.    When called it will display the proper SQL required to have these tags removed from the database.    This script is generally not required for sites outside of Ethereal Realms itself as the code is not generally actively being changed.

### ./ethereal/mgmt/commandline/publish.pl

Used on the site in order to publish all text works in galleries.   This also allows for a global update of all works to new matching templates saving time and resources.

### ./ethereal/mgmt/commandline/queue.pl

The queue is a simple script designed to serialize maintenance scripts[20].   Unfortunately this script does not always work as intended, however when it does the system can conduct complex maintenance without the worry of other administrative scripts interrupting its process or causing a fatal lock at database level.

### ./ethereal/mgmt/commandline/reverse.pl

Generates the necessary reverse indexes used in established galleries.   Most sites not already on 4.0.0 and already using galleries will either be required to use this script or have all users resubmit their works before the search engine can be used.

### ./ethereal/mgmt/commandline/spel.pl

This is a spell checking server-side daemon which will interact with *ispell* or the more modern *aspell* and allow the system to run spell-checking in scripts in an accelerated manner.

### ./ethereal/mgmt/commandline/thumb.pl

The thumbnail generator script is used to regenerate all thumbnails and supporting images based on new imposed rules.

### ./ethereal/mgmt/commandline/xfer.pl

Primitive script requiring a bit of retooling allowing users to be transferred wholesale from one version of Ethereal Realms to another.  In order to work, the old *Database.pm* settings from the original site have to copied into a new version of *Database.pm* on the new site and renamed to *Source.pm*.   With *Database.pm* (current settings) and *Source.pm* (old server settings) the site will transfer over elements piecemeal.

## ./ethereal/mgmt/ssi/

Additional Server Side Includes are added here.   These cannot normally be accessed from the outside world and have to be linked to the exported ./ssi directory located in the ./ethereal/main/ directory structure.

### ./ethereal/mgmt/ssi/faq.pl

Allows a user to display the FAQ and have it accessible to users.   This is the only interface available for the FAQ.

### ./ethereal/mgmt/ssi/rotate.pl

Similar to the JavaScript equivalent except there is no processing client side when the user makes use of the page.

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[20] This script is normally employed with cron.

## ./ethereal/mgmt/Ethereal

Modules on Ethereal Realms exist to perform certain tasks and cut down on code and complexity. The following modules come default with Ethereal Realms and are core to its use, however there are other modules required for operation which can be installed separately.

### ./ethereal/mgmt/Ethereal/Audit.pm

Auditing modules used to store records of administrative and supervisory tasks done within the system.

### ./ethereal/mgmt/Ethereal/Comm.pm

This module handles all the composition of posts and writing of that information to the database. Secondly it provides the interface with which people interact with at realm level.

### ./ethereal/mgmt/Ethereal/Database.pm

This module is designed primarily to hide most of the work used to access and work with the database and handle things from making a database handle to retrieving documents. With the introduction of Ethereal Realms 4.0.0 this module will also make use of BerkelyDB[21] databases in addition to PostgreSQL in order to create a faster cache for frequently accessed information.

### ./ethereal/mgmt/Ethereal/Geo.pm

A module that handles the localization of users through the use of their IP addresses. This is done using one of two databases[22] and while they require modules to use, administrators can select which is more appropriate for them.

This module is also employed in finding the Latitude and Longitude ranges for use in distance based queries. The math provided for this capability is used in aviation[23] and is more accurate then other modules available from CPAN since it accounts for the fact that the earth is not flat.

### ./ethereal/mgmt/Ethereal/Filter.pm

A safer, centralized method of filtering HTML based on a few factors. This includes a somewhat primitive version of HTML tag closing for those that tend to forget.

### ./ethereal/mgmt/Ethereal/Home.pm

Home page module, currently only used for the storage and removal of images and files on the system accessed through the Home Page or Gallery configuration panels.

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[21] See http://www.sleepycat.com/products/bdb.html for more details.
[22] See http://www.ip2location.com and http://www.maxmind.com for more details.
[23] See http://williams.best.vwh.net/avform.htm for more details.

### *./ethereal/mgmt/Ethereal/Image.pm*

This module is basically a wrapper Image::Magick[24] that simplifies common tasks such as thumbnail generation, resizing of images and determining key information.

### *./ethereal/mgmt/Ethereal/Leech.pm*

This module is new to Ethereal Realms 4.0.0 and allows galleries to retrieve massive amounts of images from web pages. This leeching module can be employed on any site without authentication and has a memory necessary in pulling several hundreds of images without a hitch.

### *./ethereal/mgmt/Ethereal/Login.pm*

This module exists as the central authentication method for the site.

### *./ethereal/mgmt/Ethereal/Mail.pm*

This is a mail handling module, allowing for the standardization and separation of the mailing process from the scripts. This module will make use of both SMTP and a Sendmail[25] wrapper in order to guarantee the transmission of Email.

### *./ethereal/mgmt/Ethereal/Menu.pm*

A straight forward module which will handle the rewrite necessary to change the title, identifier and provide a consistent menu structure for all headers with generated content.

### *./ethereal/mgmt/Ethereal/Option.pm*

This is the options handling module used in determining exactly what the user has selected and what it means for the database.

### *./ethereal/mgmt/Ethereal/Param.pm*

This module handles all aspects of the parameters sent back and forth between browser and server. Instance of the class also acts as an associative hash for easier retrieval of values.

### *./ethereal/mgmt/Ethereal/Post.pm*

Handles the display of posts to the various viewing method

### *./ethereal/mgmt/Ethereal/Pull.pm*

Module used to retrieve posts for users.

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[24] See http://www.imagemagick.org/ for more details.
[25] See http://www.sendmail.org for more details.

*./ethereal/mgmt/Ethereal/Rotate.pm*

This module deals with the rotation of ads and other material as dictated by administrators.

### ./ethereal/mgmt/Ethereal/Spel.pm

Spell checking module, which will work in conjunction with the spell checking daemon.    The typo in the name is done on purpose.

### ./ethereal/mgmt/Ethereal/Template.pm

This module makes use of templates to generate interfaces and widgets on the site, removing a great deal of repetition from the attribute code.

### ./ethereal/mgmt/Ethereal/Weather.pm

This module handles the parsing of the METAR[26] weather reports and will also retrieve them as needed for use in weather forecasts on the system and individual realms.

### ./ethereal/mgmt/Ethereal/Who.pm

Primary module used in all instances which list users actively in a realm.

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[26] See http://www.nws.noaa.gov/tg/siteloc.shtml for more details.

# ./ethereal/db

This directory will always be shipped empty.   When in use the database module will make use of it to place local caches of information specifically designed to speed things up client side and reduce database load.

In all cases the files within will contain the sites short name and then pertinent information.   This allows an administrator to quickly remove any stale files if and when a site is removed from the system.

## ./ethereal/db/auth

This directory would contain authentication and parameter information for every user currently on the site.   Maintenance scripts will remove stale entries as it also maintains the database.

## ./ethereal/db/geo

This directory is normally used to store the IP2Location and MaxMind databases.   Reference the *Ethereal::Geo* module for more information.

## ./ethereal/db/hash

This directory contains a cache of all hashes used in the display of information.   Files here are only generated when an administrator views the existing attributes and templates and their individual sites.

## ./ethereal/db/realms

Same as above, however this is related to realm specific settings.

# Caveats

## Version 4.0.0

Versions prior to the above version will encounter problems when attempting to upgrade to this latest version due to massive changes at the template and attributes level.   Names have been changed, moved around, re-organized and cleaned up in order to create a more streamlined release.

However, this had a side effect of causing conflicts between the old design and the new.  In addition, the move to Cascading Style Sheets has changed the way many of these designs can be changed.  As a result, it is highly recommend that people create an alternate site and upgrade the sites in parallel.

Galleries have also been changed heavily in order to support new features.    These require a significant amount of changes, which are not easy to achieve and may be easier to ask users to move their galleries over in time.

Due to the above reason IT IS NOT RECOMMENDED TO ATTEMPT A DIRECT UPGRADE FROM VERSIONS PRIOR.

## Version 4.1.0

This version is can be for the most part upgraded from versions prior without too much difficulty.  However it is to be noted that some handles may be lost for users because of the new 'Short Name' entry kept in the database.   This new short method of displaying names comes in handy when applied to the social networking component and reduces the chance of handles being too similar from one another.

This upgrade as a result will require a script to be run mid part in order to create these new entries.     Make use of the *./ethereal/mgmt/commandline/short.pl* script to complete the conversion.

**Note:**  Because of the requirement of the script, it will be necessary to run the upgrade script twice.   Else certain aspects of the site will not engage properly.

## Version 4.2.0

This release has a few minor database changes which may cause previous backups to fail in restore.    Before upgrading to this version, it is recommended that you backup before and after the upgrade script has kicked in.

## Version 4.3.0

This version is not recommended for a direct upgrade as several templates will require the addition of certain macros which will allow for the consistent menu structure and title names.    While it can be done, these changes missing from existing templates will yield trouble.

It is recommended as a result that one makes use of a parallel site and the ./mgmt/commandline/xfer.pl script in order to move users and their attributes over.

# Installation

There currently exist two separate methods for using Ethereal Realms. The first, which is the preferred method, is to host the scripts on a dedicated server with little or nothing else running on the server. The more access you have in this case the better.

The alternate method is to make use of a shared hosting site. This is not recommended under any circumstances as the sites performance will be horribly crippled and administration in general becomes more difficult. However it is possible and requires a different process in the configuration of the site.

## Before You Start

Make sure that you have the latest version of Ethereal Realms ready to be installed. This documentation will always reflect the most current release and may not be in synch with older methods of installing the scripts. The most versions of the script are always available through this link: http://www.ethereal-realms.org/download/pub/ethereal/ethereal-latest.tar.gz

Under no circumstance should you open the archived file on a Windows based operating system and transfer the contents to its new home. This will cause several needed symbolic links in being lost and may severely hinder your ability to use the site.

Make sure that you have command line access to the server which will be hosting Ethereal Realms. Command line access is required for installation, maintenance and management of all sites under the system. Without command line access the system will slowly begin to degrade in performance which could lead to crashes.

Ensure that you have Perl installed with the Config::IniFiles[27] module prior to beginning the installation. For those of you making of shared hosting arrangements you may need to request that the module be installed for you.

Lastly, you will require access to the PostgreSQL[28] database. Not all shared hosts offer this database engine so you may need to shop around for it.

HTMLDoc[29] is a program that is used to translate HTML files into Adobe Acrobat compatible PDF files. You may want to have this installed, especially if galleries are on your priority list for things to be operational. While there is a commercial version available, there are free versions with the absence of support, for the needs of Ethereal Realms you do not need a support license.

**Note:**      For most shared hosts you cannot create the required schemas for the database. This will have to be requested specifically. Fortunately the installer will not create things automatically, so simply record the name you chose and have that created when the time is right.

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[27] Newer version of Ethereal Realms will have this module included with the release.
[28] Visit http://www.postgresql.org for more details.
[29] Visit http://www.easysw.com/htmldoc/ for more details.

# Common Installation Process

Copy the latest archived version of Ethereal Realms your downloaded previously into a temporary directory. The files will be copied to their new location once the archive has been open.

Open the archive:
```
tar -zxvpf ethereal-X_X_X.tar.gz
```

Move into the newly created directory structure:
```
cd ./ethereal
```

Copy the included Javascript and Cascading Style Sheet documents to the directory which hosts your domains root:
```
cp -R ./webroot/css     /www/path/here
cp -R ./webroot/js      /www/path/here
```

Alternatively copy the images over as well:
```
cp -R ./webroot/img     /www/path/here
cp -R ./webroot/gummies /www/path/here
cp -R ./webroot/inject  /www/path/here
```

Move over the files used for the script to a location of your choice. The preference is somewhere that is not directly accessible by the webserver.
```
cp -R ./ethereal     /ethereal/base/path/here
```

**Note:** The above makes no real difference as the server will be told where these files are located. Optionally, if you feel comfortable with the installation process you can remove the archive and temporary location of the originals.

Move to the new location for the script files.
```
cd /ethereal/base/path/here
```

Move one step deeper into the ./conf path in order to begin installation:
```
cd ./conf
```

Run the configuration script:
```
perl -w config.pl
```

The following output will be displayed. Answer each section appropriately:
```
Initializing configuration:
  Admin:
    Database administrative login? [postgres]³⁰
    Database administrative password? [SOMEPASS]
  Database:
    Host address? [localhost]³¹
    Host port number? [5432]
    Host database? [ethereal]³²
  Script:
    Script database username? [ethereal]
    Script database password? [SOMEPASS]
    Scripts will belong to which user? [www]³³
    Scripts will belong to which group? [www]
    Script permissions? [0775]
    Root location of scripts? [/ethereal/base/path/here]
    Location of Ethereal Realms libraries? Should be list directory where ./Ethereal is located.
[/ethereal/base/path/here/mgmt/perl]³⁴
```

---

[30] This is generally the user under which the user has been created. In certain cases the administrative login and password will be the same as the script because of limited access to the system.

[31] Localhost will suffice in all cases where the PostgreSQL server is on the same machine as the web server.

[32] This is whatever you create it as, the example uses the assumed default.

[33] The web user and group and used to set permissions properly. If you are using a shared host use your username and group since most shared hosts require that permission set.

[34] This can be a trap for some users. You can't specify the full path as Perl will look for Ethereal prior to the name so simply specify the full path up to the ./Ethereal directory.

```

```
      Location of Perl interpreter? [/usr/bin/perl]
      Location of 'psql' utility? [/usr/local/bin/psql]
      Work directory for completed .sql files? [./work]
  Writing settings to file...  Done!

Do you wish to set the interpreter in the scripts? [no][35]
Do you wish to check for the existence of all necessary modules? [no][36]
    Testing for existence of modules
      Archive::Zip...Found!
      Calendar::Simple...Found!
      CGI...Found!
      CGI::Carp...Found!
      Cwd...Found!
      DBI...Found!
      DBD::Pg...Found!
      Digest::MD5...Found!
      LWP::Simple...Found!
      LWP::UserAgent...Found!
      IO::Socket...Found!
      Image::Magick...Found!
      IPC::Open2...Found!
      MIME::Entity...Found!
      Net::SMTP...Found!
      Number::Format...Found!
      POSIX...Found!
      Symbol...Found!
      Text::Wrap...Found!
      XML::RSS...Found!
      Math::Trig...Found!
      Lingua::Stem...Found!
      Lingua::EN::Tagger...Found!
      Time::HiRes...Found!
  Done!   [Enter]
```

Ethereal Realms will exist once the modules have been checked. Repeat the above minus setting configuration until you have all the modules properly installed. Once complete rerun the script:

```
  perl -w config.pl
  Checking configuration...  Done!
    Do you wish to reset file? [no]
  Do you wish to check for the existence of all necessary modules? [no]

DBI connect('dbname=ethereal;
                                host=localhost;
                                port=5432;
                                user=postgres;
                                password=SOMEPASS','',...) failed: could not translate host name
"localhost" to address: Name or service not known
 at config.pl line 1151
  Testing database connection...REMOTE FAILED...LOCAL SUCCESS...[37]

  -= Database Changes =-

   Based on your method of connection acheived, it will be necessary to
   modify the ./Ethereal/Database.pm file in order to connect without failure.
   Adapt line 122 of the file and replace it with the following:

   * For a REMOTE connection use the following lines:
     $database = DBI->connect("DBI:Pg:dbname=$dbname; host=$host; port=$port; user=$user;
password=$pass")
      or $self->ErrExit($cgi, "Database error \#$DBI::err :  $DBI::errstr");

   * For a LOCAL connection use the following:
     $database = DBI->connect("DBI:Pg:dbname=$dbname; user=$user; ")
      or $self->ErrExit($cgi, "Database error \#$DBI::err :  $DBI::errstr");
  Done!   [Enter]
```

---

[35] Saying yes here will rewrite all your scripts. This is highly recommended for the initial install.

[36] You want the script to check for the existence of all modules. If one module is missing the script will exit with a sample command line script on how to have it installed. For users of shared hosts, simply note the modules and have them do it.

[37] This is critical to pay attention to. Depending on which method failed or passed you will have to change your Database.pm file to use the appropriate format.
-= Action Menu =-   Select desired operation from the menu below.   For first time users   please note
that the only option allowed will be to create a new site   required to begin using Ethereal Realms.

  -=Sites=-
    [C]reate a new Site
    [D]elete a site38
    [M]odify existing attributes of a site

  -=Database=-
    [G]enerate a new release

  Action: [] C

-= Create a new site =-   Welcome to the Site Creation section.   In order to create a new site   simply
answer the questions prompted, which are needed for the creation   process.

    Full name [] Ethereal Realms
    Short name [] ethereal
    Domain Name [] ethereal-realms.org
    Root http:// directory [] /home/ethereal/www
    MD5 Password [ab8f9d279f3a8309a9f9ef50d9c330db]39
    Shared memory [ethe]40
    Site active for use [yes]
    Fallback default [no] yes

     * *

    Full name: Ethereal Realms
    Short name: ethereal
    Domain Name: ethereal-realms.org
    Root http:// directory: /home/ethereal/www
    MD5 Password: ab8f9d279f3a8309a9f9ef50d9c330db
    Shared memory: ethe
    Site active for use: yes
    Fallback default: yes

  Continue with operation? [yes]

> cat /somesite.sql | psql -h localhost -p 5432 -U postgres
```

The last line generated is exactly what will need to run in order to proceed with the installation.   If you do not have sufficient access to the system in order to complete this operation have an administrator proceed with this step.

**Note:**   This is where the difference between the admin user and database will become apparent.   While the SQL will be installed by the administrator the privileges will be changed to meet the needs of the script user and this is why that it is important to keep track of this.

---

[38] You cannot remove all your sites.  If only one is left the script will ignore your request.

[39] This is a legacy component which is no longer required.  Simply say yes on the matter and have it done with.

[40] This is a legacy component which is no longer required.  Simply say yes on the matter and have it done with.

Alternatively if you have more then one domain for the site you will need to make the scripts aware of this fact.    Follow the additional prompts below to correct the issue.

```
-= Action Menu =-   Select desired operation from the menu below.   For first time users   please note
that the only option allowed will be to create a new site   required to begin using Ethereal Realms.

  -=Sites=-
    [C]reate a new Site
    [D]elete a site
    [M]odify existing attributes of a site

  -=Database=-
    [G]enerate a new release

  Action: []M

-= Modify a Site =-   Simply follow the prompts to change information.

  [1] ethereal


  Change following site [0] 1

  -=Confirm=-
    Full name: Ethereal Realms
    Short name: ethereal
    Domain Name: ethereal-realms.org
    Root http:// directory: /tmp
    MD5 Password: e95740232612b126afff4b7343bc1d3b
    Shared memory: ethr
    Site active for use: yes
    Fallback default: yes


    Full name [Ethereal Realms]
    Domain Name [ethereal-realms.org]
    Root http:// directory [/tmp] /home/martin/www
    MD5 Password [e95740232612b126afff4b7343bc1d3b]
    Shared memory [ethr]
    Site active for use [yes]
    Fallback default [yes]


  -=Aliases=-
    Maintain alias ethereal-realms.org [yes]
    Create new alias (type 'done' to end) [done] erealms.org
    Create new alias (type 'done' to end) [done]

  Done!  [Enter]
```

This will complete the base install for Ethereal Realms and all that remains now to make the site aware of the script and begin using the site.

# Dedicated Hosting

Dedicated hosting sites are a bit simpler.    In order to proceed add in the following entries into the global section of the httpd.conf file located in the configuration directory for Apache:

```
#
# ETHEREAL REALMS
#

# Main folder
#
ScriptAlias /ethereal/[41] /ethereal/base/path/here/main/
ScriptAlias /erealms/  /ethereal/base/path/here/main/


<Directory /ethereal/base/path/here/main/>
  # Base settings
  AllowOverride None
  Options +ExecCGI FollowSymLinks

  # Apache Mod_Perl directives - Uncomment to use
  #SetHandler perl-script
  #Apache Registry
  #PerlHandler Apache::Registry
  #PerlSendHeader On

  # Permissions
  Order allow,deny
  Allow from all
</Directory>


# Administration scripts
#
ScriptAlias /ethereal/admin/ /ethereal/base/path/here/mgmt/admin/
ScriptAlias /erealms/admin/  /ethereal/base/path/here/mgmt/admin/

<Directory "/ethereal/base/path/here/mgmt/admin/">
  # Base settings
  AllowOverride None
  Options +ExecCGI FollowSymLinks

  # Permissions
  Order allow,deny
  Allow from all
</Directory>


# Configurations scripts
#
ScriptAlias /ethereal/config/ /ethereal/base/path/here/mgmt/config/
ScriptAlias /erealms/config/  /ethereal/base/path/here/mgmt/config/

<Directory "/home/oracles/ethereal/mgmt/config/">
  # Base settings
  AllowOverride None
  Options +ExecCGI FollowSymLinks

  # Permissions
  Order allow,deny
  Allow from all
</Directory>
```

Restart your Apache server to have these changes take effect:
```
  apachectl -restart
```

Lastly you can test the script by attempting to access it from your web browser at:
  http://www.somesite.org/ethereal/admin/system.pl

---

[41] Add in any additional names that may be requested as the ./ethereal and ./erealms exist for legacy reasons.

# Shared Hosting

Move to the directory structure where copied the Cascading Style Sheets. JavaScript and images:
```
cd /www/path/here
```

Create a new directory structure[42]:
```
mkdir ./ethereal    ./ethereal/admin ./ethereal/config \
      ./ethereal/js ./ethereal/post  ./ethereal/ssi
```

Create a symbolic link to match multiple conventions:
```
ln -s ./ethereal ./erealms
```

Create links[43] in all key folders:
```
ln /ethereal/base/path/here/main/*          ./ethereal/
ln /ethereal/base/path/here/main/js/*        ./ethereal/js/
ln /ethereal/base/path/here/main/post/*      ./ethereal/post/
ln /ethereal/base/path/here/mgmt/admin/*     ./ethereal/admin/
ln /ethereal/base/path/here/mgmt/config/*    ./ethereal/config/
```

Additionally, you can do the following for ssi if desired:
```
ln /ethereal/base/path/here/main/weblog.pl    ./ethereal/ssi/quicklog.pl
ln /ethereal/base/path/here/main/weblog.pl    ./ethereal/ssi/extlog.pl
ln /ethereal/base/path/here/main/gate.pl      ./ethereal/ssi/static.pl
ln /ethereal/base/path/here/mgmt/ssi/*        ./ethereal/ssi/
```

The following will handle more transparent names:
```
rm ./ethereal/board
ln ./ethereal/board.pl ./ethereal/board
rm ./ethereal/confirmation.pl
ln ./ethereal/registration.pl c./ethereal/onfirmation.pl
rm ./ethereal/donate.pl
ln ./ethereal/donations.pl ./ethereal/donate.pl
rm ./ethereal/gallery
ln ./ethereal/gallery.pl ./ethereal/gallery
rm ./ethereal/go
ln ./ethereal/gate.pl ./ethereal/go
rm ./ethereal/gummies
ln ./ethereal/gummies.pl ./ethereal/gummies
rm ./ethereal/journal
rm ./ethereal/portal.pl
ln ./ethereal/gate.pl ./ethereal/portal.pl
rm ./ethereal/ring
ln ./ethereal/webring.pl ./ethereal/ring
rm ./ethereal/stream.pl
ln ./ethereal/realm.pl ./ethereal/stream.pl
rm ./ethereal/vanity
ln ./ethereal/vanity.pl ./ethereal/vanity
rm ./ethereal/sysboard.pl
ln ./ethereal/board.pl ./ethereal/sysboard.pl
```

The next step is to create a new .htaccess[44] file in the ./ethereal directory with the following contents:
```
# Main options
Options +ExecCGI⁴⁵ +FollowSymlinks

# CGI Variant
SetHandler cgi-script⁴⁶
```

In some extreme cases you may need to add some translation since the server will refuse you the right to use +ExecCGI directive. Instead use this entry in your .htaccess with every single entry on one line:
```
 #
```

---

[42] This structure will only contain links to the actual files and prevent pervasive access to key files.

[43] Makes use of hard links which differ from symbolic links and bypass a lot of security on shared hosts.

[44] This files allows you to override certain directives from the Apache web server.

[45] Will tell the server that all files in here regardless of extension are executed.

[46] Informs the server that these files are to be treated as CGI scripts.

```
# Regular Expression matching redirects
RedirectMatch permanent /ethereal/board/(.*)   http://www/ethereal/board.pl/$
RedirectMatch permanent /ethereal/gallery/(.*) http://www/ethereal/gallery.pl/$
RedirectMatch permanent /ethereal/go/(.*)      http://www/ethereal/gate.pl/$
```

Lastly you can test the script by attempting to access it from your web browser at:
http://www.somesite.org/ethereal/admin/system.pl


# -- OR --


Alternatively, you can always make use of the *./ethereal/export* directory already available in the 4.0.1 release and above in order to speed up the process.   Simply copy this entire tree into */www/path/here* and call it the end of a day.  But first remember to have the files rewritten in order to make sure the paths are all sane.

# Frequently Asked Questions

This is an excerpt of the Frequently Asked Questions currently displayed on Ethereal Realms.   Of course these will be dated as of the date of release of this version of code, for an up-to-date please lookup the Ethereal Realms page directly.

## Additional maintenance scripts?

Additional scripts exist withing Ethereal Realms for administrators to use for various reasons. It is important to note that many of these scripts fall into disuse and are not necessarily maintained. So if a script fails to work we would love to hear about it!

**./mgmt/commandline/locate_tags.pl**
> This script can be useful to locate tags that are no longer being used within the code base. This is especially useful when you have upgraded from a previous version.

**./mgmt/commandline/publish.pl**
> This script is used to re-generate PDF's for every prose document on the site. This is especially useful in cases where the templates are changed and we want the documents to reflect said changes. Otherwise the PDF's will only be changed once the original documents are.

**./mgmt/commandline/reverse.pl**
> The ability for Ethereal Realms to search through works requires heavily on reverse look-ups. This script will generate them accordingly.

**./mgmt/commandline/thumb.pl**
> If you happen to change the formal, style, size of thumbnail generation, then administrators can use this script to re-generate all images and thumbnails as required.

## How do I change images in realm select?

If you wish to change the highlight images in the realm selection portion of the site, then change 'r_on' and 'r_off' variables in '/Template/WebDescription' to match the desired values.

The rest can be managed directly from '/Attribute/Portal/TmplRealmItem' or in rare cases from '/Template/WebPortal.'

## How do I change images in toolbars?

Toolbars are the Javascript enabled sections which allow a user to implement HTML formatting with little knowledge of the markup language.

While the initial images are changed directly using the appropriate macro such as '/Template/RealmZoom' and '/Attribute/Configuration/TmplFormat.' The additional changes are done through modification of the Javascript code itself.

Simply change the relevant links in the format.js file provided with the Ethereal Realms release and all image changes will be complete.

# How do I change news items displayed?

Behaviour of the news items displayed in realms can be dynamically changed. When the '/Attribute/SystemSetPortalNewsItem' is set to '0' the system will only display items which are recent. Otherwise, if a non-zero value is provided the system will show up to that amount of entries.

# How do I change the puppet list?

The '/Attribute/System/SetPortalPuppet' tag must be set to 1 in order to generate the condensed line. Reversion to 0 will cause the larger scrolling list to appear.

# How do I change the realm list?

The '/Attribute/System/SetPortalPuppet' tag must be set to 1 in order to generate the javascript functionality of the realms selection. Reversion to 0 will cause the larger scrolling list to appear.

# How do I disable components?

Versions of Ethereal Realms 4.2.x and above have the ability to disable Homepage, Gallery and Social Networking aspects of the site. These kill switches are implemented directly into the code as to prevent accidental changes.

To disable these features from their normally enabled state simply change the following attributes defined in Database.pm to 'false'.

- **COMP_HOME** - Homepage component
- **COMP_GALLERY** - Gallery component
- **COMP_VANITY** - Social Networking and Vanity Images

Once these changes are in place, the scripts that handle such features directly will be disabled from operation. The only exception is the User Details script which will simply not show the relevant material.

To reverse the operation reset the above to 'true' to enable their use. Scripts will then regain their normal operation.

**Note**: To remove certain components from the contributor panel, change the templates to remove the unneeded aspects.

# How do I fine tune gallery image settings?

There are six attributes which can be set at the system level in order to fine tune the look, size and format of thumbnails/images used on the site. Listed below:

- **SetImgBackground**: The background colour of the full demension thumbnails. **- Default** Transparent
- **SetImgQuality**: Compression level used - **Default** 30
- **SetImgType**: Format of image used - **Default** GIF
- **SetImgView**: Viewing images maximum size - **Default** 640
- **SetImgFull**: Maximum size of an image - **Default** 800
- **SetThumbnail**: Thumbnail size - **Current** 200

# How do I make use of cache?

Caching on Ethereal Realms is done through Berkeley DB and requires some minor changes to the Ethereal::Database module file. Before you proceed, realize that you will need to create/use a directory structure which will allow the web user name and group to access these files directly.

If you are attempting to implement caching under a multi-server system (more then one web server) you will need to make sure that the servers share the same cached information. This can be done through a network share or for those with money some sort of SAN.

To make use of this feature modify lines 68-70 in the Database.pm file. This file MUST be the same that is used by the scripts otherwise the changes will not take effect.

Change the lines to look like the ones below:

```
  DBAUTH => '/path/to/db/auth',          # Path for auth cache
  DBHASH => '/path/to/db/hash',          # Path for system tags
  DBROOM => '/path/to/db/room',          # Path for room tags
```

Alternatively, to disable you'd reset all of these to 'undef.' That will stop the cache files from being used even if they are present.

To create the hashes an administrator will need to access each series of attributes and the templates as to create the initial set. The files will update automatically as changes are made.

**Note**: It may also help if the maintenance script user has enough rights to remove stale files from time to time.

# How do I show/remove forum lists?

The '/Attribute/System/SetPortalForum' tag must be set to 1 in order for the appropriate macro to be generated.

# How do I show/remove news lists?

The '/Attribute/System/SetPortalNews' tag must be set to 1 in order for the appropriate macro to be generated.

**Note**: Setting the amount of items displayed is not done through the above attribute.

# How do I upgrade?

In most cases directions for specific releases are found under the 'Caveats' section of the installation documentation. Additional details can be found in the header section of files pertaining to the version your moving to under the ./upgrade directory of your Ethereal Realms release.

Along with these instructions, it becomes necessary to replace every script in your current release with the newer releases. Without this change the system will not be able to pull required information as it may not be there after the upgrade is complete.

Before you run the appropriate .sql file you must first run prior versions if you are not listed within that upgrade path. For example 'ethereal-upgrade_420_421.sql' is designed for users moving from 4.2.0 to 4.2.1 and no other.

Prior to running these .sql files against the database, replace PGSCHEMA. with the appropriate schema you wish to upgrade. One complete run this .sql file directly against the 'psql' command like you did for the initial install. Example:

```
> cat ethereal-upgrade_420_421.sql | psql -h localhost -p 5432 -U postgres ethereal
```

The reason for ther above is simple. Web-based and direct client methods will generally roll back all changes if an error is sounded. This will continue despite that attempt. which is required.

For the sake of a clean upgrade you should also consider running ./mgmt/commandline/locate_tags.pl to find and remove all unecessary tags. This script may lock up however, so you may want to run it by section to make it less likely to do so. For example:

```
> ./mgmt/commandline/locate_tags.pl admin
> ./mgmt/commandline/locate_tags.pl bio
> ./mgmt/commandline/locate_tags.pl board
> ./mgmt/commandline/locate_tags.pl configuration
> ./mgmt/commandline/locate_tags.pl contrib
> ./mgmt/commandline/locate_tags.pl faq
> ./mgmt/commandline/locate_tags.pl gallery
> ./mgmt/commandline/locate_tags.pl gummy
> ./mgmt/commandline/locate_tags.pl login
> ./mgmt/commandline/locate_tags.pl mail
> ./mgmt/commandline/locate_tags.pl poll
> ./mgmt/commandline/locate_tags.pl portal
> ./mgmt/commandline/locate_tags.pl realm
> ./mgmt/commandline/locate_tags.pl system
> ./mgmt/commandline/locate_tags.pl user
> ./mgmt/commandline/locate_tags.pl vanity
> ./mgmt/commandline/locate_tags.pl vcodes
```

As with the .sql files release ethereal. with the appropriate schema to which it applies to. Once that step is done, you should be at the latest version of Ethereal Realms.

**Note**: These instructions apply to Ethereal Realms 4.2.1 and above.

# I am missing files in my install?

Under no circumstance should you open the archived file on a Windows based operating system and transfer the contents to its new home. This will cause several needed symbolic links in being lost and may severely hinder your ability to use the site.

# I cannot change realms after install?

There is a known issue where escaped characters in database dumps may not remain as such. This causes issue in the JavaScript code found under /Templates/WebDescription and can be easily corrected by using the following lines:

```
var re = / (d+)$/;
var spc = /W+/g;
```

This will re-enable the regular expressions critical to the operation of the code itself.

# Just installed Ethereal Realms! Password?!?

The password for the user 'admin' is simple 'password' and as a general rule it is considered wise to change this as soon as humanly possible.

# Key error when using maps?

Google is pretty explicit in its errors and this is normally related to the fact that they key provided is not valid for the site attempting to use it, is not being used at all or the domains do not match.

If this is related to a site like Ethereal Realms itself which has many domain names then there is little you can do on the matter. Only request that your users be directed to the registered domain.

For those interested in their own key, please visit: http://www.google.com/apis/maps/signup.html

# Problems with Image::Magick, help?

Image::Magick is critical for the use of advanced features used in contributor scripts. Unfortunately, there is little one can do on this matter, Image::Magick is required for all image related actions including determining the size of images.

# Spell checker will not work?

The spell checker requires that a few things be in place prior to use. The first being that ispell/aspell must be installed with valid dictionaries. This will allow the daemon to actually confirm spelling.

Secondly you must configure all pertinent attributes at in Attributes/System to match your current setup and needs. This will ensure that there is proper communication between the scripts and the daemon itself.

Lastly you will need to have the daemon running by using the ./mgmt/commandline/spel.pl script This script will remain active in the background and allow the service to continue. Normally you want this script running at system start up, after the database itself has been initiated.

**Note**: This service is normally not available to users of shared hosting as you cannot normally keep the daemon running for extended periods of time.

# The ./conf/config.pl script does not work?

This script requires Config::IniFiles, DBI, Digest::MD5, File::Copy in order to work properly. If the first module especially is missing, the script will complain that it cannot find specific files in the search path.

# What is a macro and template?

Macro's are keywords the system will recognize and replace with appropriate material. These range from simple name fill-in to the more complex addition of user interface widgets.

A brief list is as follows:

- **M-SERIES**      - Dropping in words and phrases;
- **L-SERIES**      - Dropping in urls and links;
- **LST-SERIES**    - Drops in generated lists of elements such as the realms list on the portal; and
- **W-SERIES**      - Drops in a user widget such as a drop-down menu, text area and such.

**Note**: Some older templates do not make use of this precise naming scheme, however their function should become clear upon examination.

Templates are areas of text which contain macro and are expanded to form into a finished end product. There are two sets of templates.

Ones which reside in the 'Templates' section of the administrative section and are considered major templates independent of other attributes.

Lastly templates under 'Attributes' combined with others similar and will generally always begin with 'Tmpl.' These work the same however and are left together to make modifications easier.

**Note**: Some templates use other templates to generate their macros. The LSTREALMS macro in WebPortal for example uses another template within the Portal grouping to generate the listing.

# What is Berkeley DB?

Berkeley DB are single file databases which can carry information using various methods from hashing to binary search trees. These files have the additional capability of being implemented directly into Perl cutting out a lot of overhead when used.

Ethereal Realms uses this format of database in order to cache frequently accessed information cutting down on database load. For more information on this matter look up the 'How do I make use of cache' question in this FAQ.

# What is CROND?

The cron daemon schedules commands to be run at specified dates and times. Commands that are to be run periodically are specified within crontab(5) files.

Crontab entries are additionally critical for Ethereal Realms in running maintenance and generating reports without user interaction. While you can run any of the maintenance scripts manually from the command line, generally it becomes rather time involving especially if one opts to generate rotation scripts.

Crontab can be accessed from the crontab(5) command or for those using CPanel you can generally access it through one of the sections available on the main screen. In either case you probably want something that looks like the following:

```
*/15 * * * * /home/myspace/crond/quarter.shl > /home/myspace/crond/quarter.out
2    * * * * /home/myspace/crond/hour.shl > /home/myspace/crond/hour.out
5    3 * * * /home/myspace/crond/day.shl > /home/myspace/crond/day.out
10   4 * * 0 /home/myspace/crond/week.shl > /home/myspace/crond/week.out
20   5 1 * * /home/myspace/crond/month.shl > /home/myspace/crond/month.out
```

The scripts above listed as quarter.shl, hour.shl, day.shl, week.shl and month.shl are all available within the ./misc directory of Ethereal Realms 4.2.1 and above. Please note that the paths within all of these files would need to be adjusted to match your own environment, as would the cron entry above.

An additional script, ./mgmt/commandline/queue.pl is also capable of doing the abve task with additional safeguards it does necessarily work under all environments. As a result, if you are using a shared host, do not make use of it. Otherwise it may be worth a try with a crontab(5) entry looking a bit like:

```
*/15 * * * * ./mgmt/commandline/queue.pl quarter > /home/erealms/crond/quarter.out
2    * * * * ./mgmt/commandline/queue.pl hour > /home/myspace/crond/hour.out
5    3 * * * ./mgmt/commandline/queue.pl day > /home/myspace/crond/day.out
10   4 * * 0 ./mgmtl/commandline/queue.pl week > /home/myspace/crond/week.out
20   5 1 * * ./mgmt/commandline/queue.pl month > /home/myspace/crond/month.out
```

As with the .shl files you will also need to adjust queue.pl to have the correct path names.

# What is lock-down?

Lock-down mode is a simplification of Ethereal Realms to support sites which cannot or will not deal with a multi-handle environment. Sites such as Plenty of Fish and MySpace typically require the user to exist as one avatar due to the nature of the content they are peddling.

As a result of the recent code changes and future plans of on the code supporting social networks, it becomes critical to feature a locked-down experience for sites who choose to be more like a MySpace; in turn becoming a lot less like the traditional Ethereal Realms site is. The best aspect of lock-down however is that the changes are entirely at code level with no database changes that could potentially slow either mode of operation.

In order to enable lock-down the user simply needs to uncomment the definition of the $self->{'DEFAULT'} variable within the Database.pm module. This in turn will trigger all basic intelligence for the site to force the user to make use of their default handles wherever they go, all scripts that in turn require an avatar will simply force the default and continue.

Caveats to this method are that the macro's still exist as they did in the other mode. This is simply to allow the site owners to transition from one to the other with minor annoyance. For those administrators wishing to make it permanent, move the macros to an out of the way place and they will not bother you any longer (since it generates a hidden form attribute).

Also note that beyond simple template changes, the Puppet management page will also never allow a locked-down site to reach any other page other then the default handles properties. Sites who use lock-down would be best served removing the appropriate menu macros to avoid confusion.

# What is rotate?

Rotate is a subsystem provided by Ethereal Realms which will allow administrators to display various material in rotation. Filters can be applied that will additionally allow the display of Image and Prose based works.

When creating a new rotate template certain macros can appear if you use the appropriate filters:

**Image**

- **MNAME**        - Name of Work;
- **MPENN**        - Pen Name;
- **MRATE**        - Viewer Rating; and
- **LTHMB**        - Link to Thumbnail.

**Text**

- **MNAME**        - Name of Work;
- **MPENN**        - Pen Name;
- **MRATE**        - Viewer Rating; and
- **LTEXT**        - Short Experpt/Description.

**Static**. Nil.

Filters can be applied also to various sections of the site. Some of which make use of JavaScript injection, while others employ SSI or are part of the code itself. The possible zones of creation for rotation templates are as follows:

- Banner, as displayed in realms themselves;
- Gallery, using SSI to rotate on gallery themed pages;
- JavaScript, rotation using JavaScript injection;
- Portal, appearing when the user uses the Gateway/Portal; and
- SSI, themed to matched the main site using SSI to rotate.

**Note**: Banner templates also have a reset ability, this allows you to clear all timestamps on the last rotation to set a new order in the rotations shown.

# What Perl modules do I need installed?

These are the modules required for Ethereal Realms version 4.1.0 and above.

- **Standard Modules**
    - CGI
    - CGI::Carp
    - Cwd
    - File::Copy
    - IO::Socket
    - IPC::Open2
    - Math::Trig
    - POSIX
    - Symbol
- **Bundled Modules**
    - Config::IniFiles
    - Lingua::EN::NameCase
    - Lingua::EN::Tagger
    - Lingua::Stem
    - Number::Format
    - Text::Wrap
- **Non-Standard Modules**
    - Archive::Zip
    - DBI
    - DBD::Pg
    - Crypt::CBC
    - Crypt::Blowfish
    - Digest::MD5
    - Geo::IP
    - Geo::IP2Location
    - Image::ExifTool
    - Image::Magick
    - LWP::Simple
    - LWP::UserAgent
    - MIME::Entity
    - Time::HiRes
    - XML::RSS

**Note:** Standard modules are characterized by those which can be readily found on most modern Perl installations. While bundled modules are released with Ethereal Realms itself in order to reduce the need for installation.

# Why do users, realms and mail expire?

The system as a whole is required to expire certain information in order to keep the database from getting bloated. However, the lapse in time requires for the expiry of such features can be controlled individually.

Modifications to the '/Attribute/System/SetTimeout*' attributes will set the expiry time in days for each listed component.

**Note**: The use of the command line tools are required for any maintenance to be conducted. See 'What is CROND' for additional details.

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## Source Code[48]

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