

[PmWiki](#) includes a script called *upload.php* that allows users to [upload](#) files to the wiki server using a web browser. Uploaded files (also called *attachments*) can then be easily accessed using markup within wiki pages. This page describes how to install and configure the upload feature.

Some notes about [security](#)

PmWiki takes a somewhat, but justifiable, paranoid stance when it comes to the uploads feature. Thus, the default settings for uploads tend to try to restrict the feature as much as possible:

- The upload function is disabled by default
- Even if you enable it, the function is password locked by default
- Even if you remove the password, you're restricted to uploading files with certain names, extensions, and sizes
- The characters that may appear in upload filenames are (default) alphanumeric, hyphen, underscore, dot, and space ([see here](#)).
- The maximum upload size is small (50K by default)

This way the potential damage is limited until/unless the wiki administrator explicitly relaxes the restrictions.

Keep in mind that letting users (anonymously!) upload files to your web server does entail some amount of risk. The *upload.php* has been designed to reduce the hazards, but [wiki administrators](#) should be aware that the potential for vulnerabilities exist, and misconfiguration of the upload utility could lead to unwanted consequences.

By default, authorized users are able to overwrite files that have already been uploaded, without the possibility of restoring the previous version of the file. If you want to disallow users from being able to overwrite files that have already been uploaded, add following line to *config.php*:

```
$EnableUploadOverwrite = 0;
```

Alternatively, an administrator can [keep older versions](#) of uploads.

An administrator can also [configure](#) PmWiki so the password mechanism controls access to uploaded files.

Basic installation

The *upload.php* script is automatically included from *stdconfig.php* if the [\\$EnableUpload](#) variable is true in *config.php*. In addition, *config.php* can set the [\\$UploadDir](#) and [\\$UploadUrlFmt](#) variables to specify the local directory where uploaded files should be stored, and the URL that can be used to access that directory. By default, [\\$UploadDir](#) and [\\$UploadUrlFmt](#) assume that uploads will be stored in a directory called *uploads/* within the current directory (usually the one containing *pmwiki.php*). In addition, *config.php* should also set a default upload password (see [PasswordsAdmin](#)).

Thus, a basic *config.php* for uploads might look like:

```
<?php if (!defined('PmWiki')) exit();
## Enable uploads and set a site-wide default upload password.
$EnableUpload = 1;
$DefaultPasswords['upload'] = crypt('secret');
```

If you have edit passwords and wish to allow all users with edit rights to upload, instead of [\\$DefaultPasswords](#)['upload'], you can set [\\$HandleAuth](#)['upload'] = 'edit'; in *config.php*.

Important: do NOT create the uploads directory yet! See the next paragraph.

You may also need to explicitly set which filesystem directory will hold uploads and provide a URL that corresponds to that directory like:

```
$UploadDir = "/home/foobar/public_html/uploads";  
$UploadUrlFmt = "http://example.com/~foobar/uploads";
```

Upload directory configuration

Uploads can be configured *site-wide*, *by-group* (default), or *by-page* by changing [\\$UploadPrefixFmt](#) in `config.php`. This determines whether all uploads go in one directory for the site, an individual directory for each group, or an individual directory for each page. The default is to organize upload by group.

*It is recommended that the [\\$UploadPrefixFmt](#) variable defined in `config.php` is the same for all pages in the wiki, and not different in group or page local configuration files. Otherwise you **will** be unable to link to attachments in other wikigroups.*

Single upload directory

For site-wide uploads, use

```
$UploadPrefixFmt = '';
```

Per page upload directories

To organize uploads by page, use:

```
$UploadPrefixFmt = '/$Group/$Name';
```

You may prefer uploads attached per-page rather than per-group or per-site if you plan to have many files attached to individual pages. This setting simplifies the management of picture galleries for example. (In a page, you can always link to attachments to other pages.)

The upload directory

For the upload feature to work properly, the directory given by `$UploadDir` must be writable by the web server process, and it usually must be in a location that is accessible to the web somewhere (e.g., in a subdirectory of *public_html*). Executing PmWiki with uploads enabled will prompt you with the set of steps required to create the uploads directory on your server (it differs from one server to the next). *Note that you are likely to be required to explicitly create writable group- or page-specific subdirectories as well!*

Uploading a file

Once the upload feature is enabled, users can access the upload form by adding "`?action=upload`" to the end of a normal PmWiki URL. The user will be prompted for an upload password similar to the way other pages ask for passwords (see [Passwords](#) and [PasswordsAdmin](#) for information about setting passwords on pages, groups, and the entire site).

Another way to access the upload form is to insert the markup "`Attach:filename.ext`" into an existing page, where `filename.ext` is the name of a new file to be uploaded. When the page is displayed, a `'?-link'` will be added to the end

of the markup to take the author to the upload page. (See [Uploads](#) for syntax variations.)

By default, PmWiki will organize the uploaded files into separate subdirectories for each group. This can be changed by modifying the [\\$UploadPrefixFmt](#) variable. See [Cookbook:UploadGroups](#) for details.

Versioning Uploaded Files

PmWiki does not manage versioning of uploaded files by default. However, by setting [\\$EnableUploadVersions=1](#); an administrator can have older versions of uploads preserved in the uploads directory along with the most recent version.

Upload restrictions

Restricting uploaded files for groups and pages

Uploads can be enabled only for specific groups or pages by using a [group customization](#). Simply set [\\$EnableUpload=1](#); for those groups or pages where uploading is to be enabled; alternately, set [\\$EnableUpload=1](#); in the config.php file and then set [\\$EnableUpload=0](#); in the per-group or per-page customization files where uploads are to be disabled.

Restricting total upload size for a group or the whole wiki

Uploads can be restricted to an overall size limit for groups. In the group configuration file (i.e., local/Group.php), add the line

```
\$UploadPrefixQuota = 1000000; # limit group uploads to 1000KB (1MB)
```

This will limit the total size of uploads for that group to 1000KB --any upload that pushes the total over the limit will be rejected with an error message. This value defaults to zero (unlimited).

Uploads can also be restricted to an overall size limit for all uploads. Add the line

```
\$UploadDirQuota = 10000000; # limit total uploads to 10000KB (10MB)
```

This will limit the total size of uploads for the whole wiki to 10000KB --any upload that pushes the total over the limit will be rejected with an error message. This value defaults to zero (unlimited).

Restricting uploaded files type and size

The upload script performs a number of verifications on an uploaded file before storing it in the upload directory. The basic verifications are described below.

filenames

the name for the uploaded file can contain only letters, digits, underscores, hyphens, spaces, and periods, and the name must be a letter or digit and end with a letter or digit.

file extension

only files with approved extensions such as ".gif", ".jpeg", ".doc", etc. are allowed to be uploaded to the web server. This is important for server security, since the web server might attempt to execute or specially process files with extensions like ".php", ".cgi", etc.

file size

By default all uploads are limited to 50K bytes, as specified by the [\\$UploadMaxSize](#) variable. Thus, to limit all uploads to 100K, simply specify a new value for [\\$UploadMaxSize](#) in *config.php*:

```
$UploadMaxSize = 100000;
```

However, the default maximum file size can also be specified for each type of file uploaded. Thus, an administrator can restrict ".gif" and ".jpeg" files to 20K, ".doc" files to 200K, and all others to the size given by [\\$UploadMaxSize](#). The [\\$UploadExtSize](#) array is used to determine which file extensions are valid and the maximum upload size (in bytes) for each file type. For example:

```
$UploadExtSize['gif'] = 20000; # limit .gif files to 20KB
```

Setting an entry to zero disables file uploads of that type altogether:

```
$UploadExtSize['zip'] = 0; # disallow .zip files
$UploadExtSize[''] = 0; # disallow files with no extension
```

You can limit which types of files are uploadable by disabling all defaults and specifying only desired types. Setting the variable [\\$UploadMaxSize](#) to zero will disable all default file types. Individual file types may then be enabled by setting their maximum size with the variable [\\$UploadExtSize](#).

```
# turns off all upload extensions
$UploadMaxSize = 0;

# enable only these file types for uploading
$aSize=100000; // 100 KB file size limitation
$UploadExtSize['jpg' ] = $aSize;
$UploadExtSize['gif' ] = $aSize;
$UploadExtSize['png' ] = $aSize;
```

Adding new file types to permitted uploads

To add a new extension to the list of allowed upload types, add a line like the following to a [local customization](#) file:

```
$UploadExts['ext'] = 'content-type';
```

where *ext* is the extension to be added, and *content-type* is the "[MIME type](#)", or content-type (which you may find [here](#) or on the lower part of [this page](#)) to be used for files with that extension. For example, to add the 'dxf' extension with a Content-Type of 'image/x-dxf', place the line

```
$UploadExts['dxf'] = 'image/x-dxf';
```

Each entry in `$UploadExts` needs to be the extension and the mime-type associated with that extension, thus:

```
$UploadExts = array(
    'gif' => 'image/gif',
    'jpeg' => 'image/jpeg',
    'jpg' => 'image/jpeg',
    'png' => 'image/png',
    'xxx' => 'yyyy/zzz'
);
```

For the types that PmWiki already knows about it's not necessary to repeat them here (the *upload.php* script adds PmWiki's defaults to whatever the administrator supplies). See also [Cookbook:UploadTypes](#) for additional types.

Other file size limits

There are other factors involved that affect upload file sizes. In Apache 2.0, there is a `LimitRequestBody` directive that controls the maximum size of anything that is posted (including file uploads). Apache has this defaulted to unlimited size. However, some Linux distributions (e.g., Red Hat Linux) limit postings to 512K so this may need to be changed or increased. (Normally these settings are in an *httpd.conf* configuration file or in a file in */etc/httpd/conf.d*.)

Problem noted on Red Hat 8.0/9.0 with Apache 2.0.x, the error "Requested content-length of 670955 is larger than the configured limit of 524288" was occurring under Apache and a "Page not found" would appear in the browser. Trying the above settings made no change with PHP, but on Red Hat 8.0/9.0 there is an additional PHP config file, */etc/httpd/conf.d/php.conf*, and increasing the number on the line "LimitRequestBody 524288" solves the issue.

PHP itself has two limits on file uploads (usually located in */etc/php.ini*). The first is the `upload_max_filesize` parameter, which is set to 2MB by default. The second is `post_max_size`, which is set to 6MB by default.

With the variables in place--PmWiki's maximum file size, Apache's request-size limits, and the PHP file size parameters, the maximum uploaded file size will be the smallest of the three variables.

Password protecting uploaded files

Setting a read password for pages (and groups) will prevent an attached file from being seen or accessed through the page, but to prevent direct access to the file location (the *uploads/* directory) one can do the following:

- In *local/config.php* set `$EnableDirectDownload=0`;
- If you use per-group upload directories (PmWiki default, see [\\$UploadPrefixFmt](#)), add to *config.php* `$EnableUploadGroupAuth = 1`;
- Deny public access to the *uploads/* directory through moving it out of the *html/* or *public_html/* directory tree, or through a *.htaccess* file.

See [Cookbook:Secure attachments](#)

Other notes

- If uploads doesn't seem to work, make sure that your PHP installation allows uploads. The *php.ini* file (usually */etc/php.ini* or */usr/local/lib/php.ini*) should have

```
file_uploads = On
```

- Another source of error in the *php.ini* file is a not defined *upload_tmp_dir*. Just set this variable to your temp directory, e.g.

```
upload_tmp_dir = /tmp
```

Note that if you change this values, httpd must generally be restarted. Another way to check if uploads are allowed by the server is to set [\\$EnableDiag](#) to 1 in *config.php*, and set ?action=phpinfo on a URL. The "file_uploads" variable must have a value of 1 (if it says "no value", that means it's off).

How do I disable uploading of a certain type of file?

Here's an example of what to add to your *local/config.php* file to disable uploading of .zip files, or of files with no extension:

```
$UploadExtSize['zip'] = 0; # Disallow uploading .zip files
$UploadExtSize[''] = 0;   # Disallow files with no extension
```

How do I attach uploads to individual pages or the entire site, instead of organizing them by [wiki group](#)?

Use the [\\$UploadPrefixFmt](#) variable (see also the [Cookbook:UploadGroups](#) recipe).

```
$UploadPrefixFmt = '/$FullName'; # per-page
$UploadPrefixFmt = '';           # site-wide
```

For [\\$UploadDirQuota](#) - can you provide some units and numbers? Is the specification in bytes or bits? What is the number for 100K? 1 Meg? 1 Gig? 1 Terabyte?

Units are in bytes.

```
\$UploadDirQuota = 100*1024; # limit uploads to 100KiB \$UploadDirQuota = 1000*1024; #
limit uploads to 1000KiB \$UploadDirQuota = 1024*1024; # limit uploads to 1MiB
\$UploadDirQuota = 25*1024*1024; # limit uploads to 25MiB \$UploadDirQuota =
2*1024*1024*1024; # limit uploads to 2GiB
```

Is there a way to allow file names with Unicode or additiional characters?

Yes, see [\\$UploadNameChars](#)

Where is the list of attachments stored?

It is generated on the fly by the [\(:attachlist:\)](#) markup.

How can I find orphaned or missing attachments

For older versions of PmWiki, see [Cookbook:Attachlist enhanced](#) "",
for version 2.2 or higher see [Cookbook:Attachtable](#) ""

How can I prevent hotlinking of my uploaded images

See [Cookbook:Prevent Hotlinking](#)

I have limited the max upload size to 8 MB in config.php, however only files smaller than 2MB can be uploaded.

Check your php.ini for *upload_max_filesize*

```
upload_max_filesize = 8M
```

If you cannot access your php.ini directly try to soften server limits in the root .htaccess file:

```
php_value post_max_size 63M
php_value upload_max_filesize 62M
php_value memory_limit 64M
php_value max_execution_time 600
php_value default_socket_timeout 600
```


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