

MediaWiki Use and Administration

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Some Terminology

- MediaWiki - wiki software
- Wikipedia - an online encyclopedia that uses MediaWiki software
- Wikimedia - a foundation which manages the Wikipedia and MediaWiki projects, among others

What's a Wiki?

- Web software for collaborative editing
- The first wiki site, WikiWikiWeb, established at c2.com in 1995
- “Wiki” means “quick” in Hawaiian
- Not a general-purpose CMS or blog
- Goals are:
 - Easy and quick to create/revise pages
 - Easily handle editing by multiple people
 - Low barrier to entry for participation

What is MediaWiki?

- Software created specifically for Wikipedia
- First stable release (1.1) in 2003
- Goals are:
 - Easy and quick to create/revise pages
 - Easily handle editing by multiple people
 - Low barrier to entry for participation
 - Scalability
 - Handling of multimedia
 - Facility for metadiscussion

Demo 1

- The basic unit of management is a page
- Show how to make an edit
- Show page history and diff

Why choose MediaWiki?

- Pros

- Very actively maintained
- Because of use in Wikipedia, more people are familiar with markup language
- Many extensions and skins available
- System requirements are easily met

- Cons

- More heavyweight than most other wikis
- Size and complexity create large attack surface (though security record is good)
- Optimized for Wikipedia use case

Demo 2

- Markup - special language, (mostly) not HTML
- Page sections, table of contents
 - == First-level heading ==
 - === Second-level heading ===
 - Editing individual sections
- Text appearance
 - ' ' *Italic* ' ' (these are two single quotes)
 - ' ' ' **Bold** ' ' ' (three single quotes)
 - Monospace: in a block, precede with a space;
inline, `<tt>monospace text</tt>`

Demo 2

- Bullet lists

- * Bullet point
- * Second bullet point
- ** Sub-point

- Numbered lists

- # Point 1
- # Point 2
- ## First sub-point under 2
- # Point 3

Demo 2

- Links

- `[[Page Name]]` - internal wiki link
- `[[Page Name | different link text]]`
- `[http://example.net/foo link text]` - external link
- Interwiki links
 - `[[wikipedia:Main Page | Wikipedia]]`
 - `[[rfc:5321 | Simple Mail Transfer Protocol]]`

Adding a Page

- Create an internal link to page first
- It will be shown in red to indicate no such page exists
- This is also a way to request a page you think someone else should create
- Following a red link will edit a new page

Edits

- Wikis are intended to be edited frequently
- Page history link on each page
- Recent changes page covers entire wiki
 - Atom feed allows easily monitoring changes
- Easy to revert changes or make further edits
- Changes while logged in are associated with your username; anonymous edits identified by IP address

Images/Files

- Upload Files link allows uploading (logged-in users only)
- Just like a wiki page, updates can be made and all versions are kept
- Size and/or file type restrictions may be in place
- Display (embed) an image on a page:
[[File:Foo.png]]
- Link to a file's page: [[:File:Foo.png]]
- Link to the file itself: [[Media:Foo.png]]

Categories

- Convenient way to group pages
- Adding `[[Category:Foo]]` anywhere in a page (though at the bottom is best) puts it in the Foo category
- A page can belong to any number of categories; these will be displayed in the footer
- Link to a category page using `[[:Category:Foo]]`

Protecting Pages

- In general, strong access controls are contrary to the wiki philosophy
- Reverting vandalism when it occurs is preferred
- However, individual pages can be protected so that only certain groups can edit them
- The ConfirmEdit extension can be used to force anonymous users to complete a CAPTCHA to make edits or create a new account

Talk Pages

- Used for discussion *about* the content of a page
- Heavily used in Wikipedia; in fact, discussion is required there if multiple people edit a page to say different things (“edit wars”)
- Less useful for wikis where editors know each other or communicate by other means

MediaWiki Administration

- Only users in the Sysop group can
 - Protect and unprotect pages
 - Delete and undelete pages
 - Block and unblock users/IP addresses

System Requirements

- Web server
 - Pretty much anything: Apache, Nginx, IIS, etc.
- PHP 5.3.3+
 - Required extensions: pcre, session, json, database interface (mysqli, pgsql, or sqlite3)
 - Optional extensions: intl, curl
- Database
 - MySQL 5.0.2+/MariaDB 5.1+ - best supported
 - PostgreSQL 9.0+ - supported since 2006
 - SQLite 3.6+ - supported since 2011, useful on shared web hosting w/o database server

System Requirements

- External programs (optional)
 - ImageMagick or GD to make image thumbnails
 - TeX to render mathematical formulas
 - Some way to send e-mail - can be a local mailserver, or a remote SMTP server
- Shell access to server is useful for running installation and maintenance scripts

Versions

- Long Term Support (LTS)
 - Each major release has a three-year lifetime
 - One-year overlap between releases
- Non-LTS
 - Each major release has a one-year lifetime
 - Six-month overlap between releases
- Database schema changes between major releases; upgrade script provided

Extensions

- Add new functionality
- Quality can be variable; some are officially maintained, others... not so much
- Switching to a new major MediaWiki version may break extensions that haven't been updated
- Skins (themes) are similar, though they change the wiki's appearance rather than its functionality

Anti-spam Measures

- Any unprotected wiki attracts spambots
 - Even though all external links have `rel=nofollow` by default
- The ConfirmEdit extension is included (but not enabled) in base install; allows requiring a CAPTCHA for certain actions
 - ReCAPTCHA supported, but effectiveness varies
 - Question and answer CAPTCHA works well for us

Installing

- Some distributions package, but are not necessarily up to date
- Download tarball from <https://releases.wikimedia.org/mediawiki/> and unpack
- Configure web server
- Visit <http://example.net/path/to/mediawiki/>
- Edit `LocalSettings.php`

Minor Updates

- Subscribe to announce mailing list
<https://lists.wikimedia.org/mailman/listinfo/mediawiki-announce>
- Option 1: Download patch file(s) & uncompress
 - `cd /path/to/mediawiki`
 - `patch -p1 --dry-run </path/to/patchfile.patch`
 - `patch -p1 </path/to/patchfile.patch`
- Option 2: Download full tarball
 - Unpack, copy over `LocalSettings.php`,
images, extensions, skins