

TC KnowledgeBase

A self-hosted knowledge base for publishing help articles, downloads, and announcements — with multiple staff accounts, search, ratings, and moderated comments.

User Manual · Version 2.0 · Self-hosted PHP / MySQL on Apache

1. Introduction

TC KnowledgeBase is a self-hosted web application for building a searchable library of help articles, much like a commercial knowledge-base product — but running entirely on your own server, with no licence fees and no third-party services.

It is designed for teams that need to publish documentation, FAQs, how-to guides, and downloadable files for their customers or staff, while keeping full control of the data.

Who this manual is for

- **Administrators** — installing, configuring, and maintaining the system.
- **Editors & Writers** — creating and managing articles, news, and glossary terms.
- **Site visitors** — see Section 17 for how readers use the public site.



Conventions used in this manual. Menu paths are shown as **Admin** → **Articles**. Filenames and commands appear as `like this`. Keyboard keys appear as `Ctrl` + `K`.

2. Features

The system ships with a complete feature set out of the box.

Content

- **Articles** with a visual (WYSIWYG) editor, draft / published / archived workflow, and a "featured" flag.
- **Nested categories** of unlimited depth for organising content.
- **Tags** and automatic **related-article** suggestions.
- **File attachments** served as secure, tracked downloads.
- **Revision history** — a snapshot is saved on every article edit.
- **News & announcements** with a homepage strip.
- **Glossary** — an A–Z list of terms and definitions.

Reader interaction

- Full-text **search** across titles, summaries, and body content.
- Article **ratings** ("Was this helpful?" 👍 / 👎).
- **Moderated comments** with an anti-spam CAPTCHA.
- **Print / PDF** export of any article.
- Popular, latest, and featured article listings.

Administration

- **Multiple staff accounts** with three roles: Superadmin, Editor, Writer.
- **Statistics dashboard** — views, downloads, top searches, and "no-result" searches.
- **Multi-language** content with a visitor language switcher.
- **Email notifications** to admins on new comments.
- **SEO-friendly URLs**, configurable site settings, and a web-based installer.

💡 **No external dependencies.** The rich-text editor (Quill) is bundled and served from your own server. The application makes no outbound calls to third-party services.

3. System Requirements

COMPONENT	REQUIREMENT
Web server	Apache 2.4+ with <code>mod_rewrite</code> (for SEO-friendly URLs) and <code>AllowOverride All</code> so <code>.htaccess</code> files are honoured. Nginx works too — see the note below.
PHP	PHP 7.4 or newer, with the <code>pdo_mysql</code> extension. PHP 8.x is recommended.
Database	MySQL 5.7+ or MariaDB 10.2+ (InnoDB, <code>utf8mb4</code>).
Mail (optional)	A local MTA (e.g. Postfix or msmtplib) if you want email notifications.
Browser (admin)	Any current browser — Chrome, Edge, Firefox, or Safari.

i Using Nginx? The app ships `.htaccess` files that protect the `uploads/` and `includes/` folders and provide URL rewriting. On Nginx you must reproduce those rules in your server block (deny direct access to those folders; rewrite `/article/slug` to `/article.php?slug=slug` , etc.). See Appendix A.

4. Installation

Installation takes a few minutes using the built-in web wizard.

Step 1 — Copy the files to your web root

```
sudo cp -r knowledgebase /var/www/html/kb
sudo chown -R www-data:www-data /var/www/html/kb
sudo chmod -R 775 /var/www/html/kb/uploads /var/www/html/kb/includes
```

The `uploads/` and `includes/` folders must be writable by the web server — the installer writes `includes/config.php` , and attachments are stored under `uploads/` .

Step 2 — Create the database

```
CREATE DATABASE knowledgebase CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;
CREATE USER 'kb_user'@'localhost' IDENTIFIED BY 'a-strong-password';
GRANT ALL PRIVILEGES ON knowledgebase.* TO 'kb_user'@'localhost';
FLUSH PRIVILEGES;
```

Step 3 — Run the install wizard

- 1 Browse to `http://your-server/kb/install/` .
- 2 Confirm the pre-flight checks (PHP version, `pdo_mysql` , writable folders) are all green.
- 3 Enter the database host, name, user, and password from Step 2.
- 4 Set your **site name** and create the first **Superadmin** account (username, email, password — at least 8 characters).
- 5 Click **Install KnowledgeBase**. The wizard loads the schema, creates your account, and writes `includes/config.php` .

 **Delete the installer.** Immediately after installing, remove the install folder so it cannot be re-run:

```
sudo rm -rf /var/www/html/kb/install
```

Step 4 — Log in

Go to `http://your-server/kb/admin/login.php` and sign in with the Superadmin account you just created.

Installing in a sub-folder

If the app is *not* at the document root (for example it lives at `/kb`), open `includes/config.php` and set:

```
define('APP_BASE', '/kb');
```

If you enable SEO-friendly URLs (Section 15), also set `RewriteBase /kb/` in the root `.htaccess` .

 **Deploy everything together.** When uploading to your server, sync the *entire* folder in one operation so no file is missed (a partial upload can leave pages unstyled):

```
rsync -av --exclude 'includes/config.php' --exclude 'uploads/' ./ user@server:/var/www/ht
```



The excludes protect your live configuration and uploaded files.

5. Upgrading

If you installed an earlier version, apply the latest database changes from the admin panel.

- 1 Log in as a [Superadmin](#) .
- 2 Open **Admin** → **Upgrade**.
- 3 Click **Run Upgrade**.

The upgrade is **idempotent** — it is safe to run more than once. It creates any missing tables (glossary, news, search log, languages), adds new columns, and seeds new settings without touching your existing data.

 You can also apply the migration from the shell:

```
mysql -u kb_user -p knowledgebase < install/schema_phase2.sql
```

The web upgrader additionally adds the language columns; running both is harmless.

 **Back up first.** Always take a database backup before upgrading — see Section 19.

6. Dashboard & First Steps

After signing in you land on the **Dashboard**, which summarises the state of your knowledge base: total articles, published vs. drafts, categories, pending comments, and files, plus your most-viewed and recently updated articles.

The admin navigation

The left sidebar gives access to every area. What you see depends on your role:

MENU ITEM	PURPOSE	MINIMUM ROLE
 Dashboard	Overview & quick stats	Writer
 Articles	Create & manage articles	Writer
 Categories	Organise content	Editor
 News	Announcements	Editor
 Glossary	Terms & definitions	Editor
 Comments	Moderate reader comments	Editor
 Statistics	Usage analytics	Editor
 Users	Staff accounts	Superadmin
 Languages	Manage languages	Superadmin
 Settings	Site configuration	Superadmin
 Upgrade ·  Demo Content	Maintenance utilities	Superadmin

A suggested first-run checklist

1. Open **Settings** and set your site name, tagline, and email options.
2. Create a few **Categories**.
3. Add your team in **Users**.
4. Write your first **Article** and publish it.
5. Optionally load **Demo Content** to explore, then remove it.

7. Users & Roles

The system supports any number of staff accounts. Manage them under **Admin** → **Users** (Superadmin only).

The three roles

ROLE	CAN DO
Superadmin	Everything — including managing users, settings, languages, and running upgrades. The first account created during installation is a Superadmin.
Editor	Manage <i>all</i> articles (regardless of author), plus categories, news, glossary, comments, and statistics. Cannot manage users or settings.
Writer	Create and edit <i>their own</i> articles only. Cannot see or edit other authors' articles, and has no access to categories, users, or settings.

Adding or editing a user

- 1 Go to **Admin** → **Users**.
- 2 Fill in the **Add User** form on the right: username, full name, email, role, and a password (minimum 8 characters).
- 3 Leave **Active** ticked to allow sign-in.
- 4 Click **Create User**. To edit later, click **Edit** in the list; leave the password blank to keep the current one.

 For safety you cannot change your *own* role, deactivate yourself, or delete your own account — this prevents accidentally locking the last administrator out.

8. Categories

Categories organise your articles and form the browse structure on the public home page. Manage them under **Admin** → **Categories**.

Creating a category

- 1 Open **Admin** → **Categories**.
- 2 In the **Add Category** form, enter a **Name**.
- 3 Optionally choose a **Parent** to create a sub-category, add an emoji **Icon**, a short **Description**, and a **Sort order** number (lower numbers appear first).
- 4 Click **Create**.

A URL-friendly "slug" is generated automatically from the name.

 Deleting a category does **not** delete its articles — they simply become uncategorised, and any sub-categories move up to the top level.

9. Articles & the Editor

Articles are the heart of the knowledge base. Manage them under **Admin** → **Articles**, and create or edit one with the article editor.

Creating an article

- 1 Click + **New Article**.
- 2 Enter a **Title** and a short **Summary** (shown in listings and search results).
- 3 Write the body in the **visual editor**.
- 4 In the sidebar, choose a **Status**, a **Category**, optional **Tags** (comma-separated), and tick **Featured** if you want it highlighted on the home page.
- 5 Click **Save Article**.

The visual editor

The body editor (powered by the open-source Quill editor) provides headings, bold/italic/underline, ordered and bulleted lists, block quotes, code blocks, links, images, and text alignment. To insert an image, click the image button and paste an image **URL**.

 **Editing raw HTML.** Click `</> Edit HTML source` above the editor to switch to a plain-HTML view. This is useful for advanced markup such as **tables**, which the visual editor does not edit directly. Any article that already contains a table opens in HTML-source mode automatically so the table is never lost.

Publishing workflow

STATUS	MEANING
Draft	Work in progress; not visible on the public site.
Published	Live and visible to visitors. The publish date is set automatically the first time it is published.
Archived	Retired; hidden from the public site but retained.

Attachments & downloads

Once an article is saved, you can attach files from the editor sidebar. Attachments:

- are stored under `uploads/` with non-guessable names;
- are delivered through `download.php` , which checks that the parent article is published before serving the file to visitors;
- have their **download count** tracked (visible in Statistics).

The maximum upload size is set in `includes/config.php` (`MAX_UPLOAD_BYTES` , default 25 MB) and is also bounded by your PHP `upload_max_filesize` .

Revision history

Every time you save changes to an existing article, the system stores a snapshot of the *previous* title and content in the revision history, so prior versions are preserved.

10. News & Announcements

Use **Admin** → **News** to post announcements — service updates, new releases, maintenance windows, and so on. Published news appears on a dedicated **News** page and as a strip on the home page.

- 1 Click + **New Announcement**.
- 2 Enter a title and write the body in the visual editor.
- 3 Tick **Published** to make it live, then click **Create**.

11. Glossary

The glossary is an A–Z reference of terms and definitions, shown on the public **Glossary** page. Manage entries under **Admin** → **Glossary**.

- 1 In the **Add Term** form, enter the **Term** and its **Definition**.
- 2 Click **Add**. Terms are grouped and sorted alphabetically automatically.

12. Comments

Visitors can leave comments on articles. Moderate them under **Admin** → **Comments**.

Moderation

Comments are filtered by status: **Pending**, **Approved**, and **Spam**. For each comment you can **Approve** it (making it publicly visible), mark it as **Spam**, or **Delete** it.

 Whether comments require approval before appearing, and whether the anti-spam CAPTCHA is shown, are controlled in **Settings** (see Section 15). Admins can also be emailed when a new comment arrives.

13. Statistics

Admin → **Statistics** shows how your knowledge base is being used:

- Totals: views, published articles, downloads, comments, and searches.
- **Most-viewed articles** and **top downloads** (bar charts).
- **Top search terms** — what visitors look for most.
- **Searches with no results** — excellent candidates for new articles.
- **Highest-rated** articles by "helpful" score.

 The "no-result searches" panel is one of the most valuable reports — it tells you exactly what content your audience wants but cannot find.

14. Multi-language Content

The system can host content in multiple languages, each article/category/news/glossary entry belonging to one language, with a language switcher for visitors.

- 1 Run the **Upgrade** if you have not already (it creates the language tables).
- 2 In **Admin** → **Languages**, add the languages you need (code such as `es` , name such as `Español`) and choose a default.
- 3 In **Settings**, tick **Enable multi-language content**.
- 4 When creating articles, categories, news, or glossary terms, pick the **Language** from the new selector.

Visitors then see a language switcher in the site header, and content is filtered to the chosen language.

 Multi-language only activates when both the setting is on *and* the database has been upgraded, so turning the toggle on before upgrading cannot break the public site.

15. Settings

Admin → **Settings** (Superadmin) controls site-wide behaviour.

General

Site name, tagline, and the number of articles shown per page.

Interaction

- **Allow article ratings** — show the 👍 / 👎 helpful buttons.
- **Allow comments** — enable the comment form.
- **Hold comments for moderation** — new comments stay Pending until approved.
- **Anti-spam CAPTCHA** — show a simple maths question on the comment form.

Email notifications

- **Email the admin on new comment**, the recipient **admin email**, and the **From** address/name.

Delivery uses PHP's `mail()` function, so a working mail transfer agent (MTA) must be configured on the server.

URLs & Language

- **Use SEO-friendly URLs** — produces clean paths like `/article/getting-started` instead of `/article.php?slug=getting-started`. Requires the root `.htaccess` and Apache `mod_rewrite`.
- **Enable multi-language content** and the **default language**.

⚠ Only turn on **SEO-friendly URLs** after confirming `mod_rewrite` works on your server. If links return 404 after enabling, your rewrite engine or `AllowOverride` is not active — turn it back off and see [Troubleshooting](#).

16. Demo Content

Admin → **Demo Content** (Superadmin) inserts a realistic set of sample categories, articles, glossary terms, and news so you can explore the system. It is safe and reversible.

- Click **Create Demo Content** to add the samples.
- Click **Remove Demo Content** to delete *only* the demo rows — your own content is untouched.

💡 Load the demo content right after installing to see how a populated site looks, then remove it before going live.

17. The Public Site

This is what your visitors see. No account is required to read articles.

ACTION	HOW
Search	Type in the search bar at the top of any page. Results are ranked by relevance.
Browse	Pick a category from the home page or the navigation bar.
Rate an article	Use the 👍 / 👎 buttons under "Was this article helpful?".
Comment	Fill in the comment form at the bottom of an article (answer the anti-spam question if shown).
Download files	Click an attachment in the article's Attachments section.
Print / save as PDF	Click 🖨️ Print / PDF on an article; the browser's print dialog opens with a clean layout.
Switch language	Use the language links in the header (when multi-language is enabled).

18. Security

The application is built with sensible security defaults, but a few operational steps are your responsibility.

Built in

- Passwords are stored as salted **bcrypt** hashes — never in plain text.
- All admin forms are protected against **CSRF** with per-session tokens.
- Article HTML is **sanitised** to strip scripts and event handlers.
- Uploaded files are stored under opaque names and streamed through `download.php`; the `uploads/` and `includes/` folders are denied direct web access via `.htaccess`.
- Sessions use `HttpOnly` cookies and the session ID is regenerated on login.

Your responsibilities

- **Delete the `install/` folder** after installation.
- Serve the site over **HTTPS** (e.g. a free Let's Encrypt certificate).
- Use a **strong, unique password** for every staff account and the database user.
- Keep PHP, MySQL, and Apache **patched**.
- Set `APP_DEBUG` to `false` in `includes/config.php` on a live site.
- Take regular **backups** (next section).



Never leave the installer in place. If `install/` remains accessible, anyone could attempt to reconfigure the site. Remove it as soon as installation completes.

19. Maintenance & Backup

Backing up

A complete backup is two things: the **database** and the **uploads** folder.

```
# Database
mysqldump -u kb_user -p knowledgebase > kb-backup-$(date +%F).sql

# Uploaded files
tar czf kb-uploads-$(date +%F).tar.gz /var/www/html/kb/uploads
```

Keep `includes/config.php` too — it holds your configuration (but contains the database password, so store it securely).

Restoring

```
mysql -u kb_user -p knowledgebase < kb-backup-2026-06-18.sql
tar xzf kb-uploads-2026-06-18.tar.gz -C /
```

Updating the bundled editor

The Quill editor lives in `assets/vendor/quill/`. To update it, replace `quill.js` and `quill.snow.css` with the matching files from a newer Quill release (see the `README.txt` in that folder for the source URL).

20. Troubleshooting

The whole site looks unstyled / "broken"

Almost always a **partial upload** — the CSS or the `assets/vendor/quill/` files are missing on the server. Re-sync the entire folder (see the deployment tip in Section 4). Also check the browser's developer console for 404s on `style.css` or `quill.js`.

"Database connection failed"

Check the credentials in `includes/config.php` against the database you created, confirm MySQL is running, and that the user has privileges on the database. Temporarily set `APP_DEBUG` to `true` to see the exact error, then set it back to `false`.

Redirected to the installer every time

`includes/config.php` is missing or unreadable. Re-run the installer, or check file permissions/ownership (`www-data` must be able to read it).

Cannot log in

Username and passwords are case-sensitive. After several failed attempts, wait and retry. If you are truly locked out, you can reset a password directly in the database:

```
-- generate a hash in PHP: php -r "echo password_hash('NewPass123', PASSWORD_DEFAULT);"
UPDATE kb_users SET password_hash='<paste-hash>' WHERE username='admin';
```

SEO-friendly URLs return 404

`mod_rewrite` is not enabled, or `AllowOverride All` is not set for the directory. Enable them (`sudo a2enmod rewrite && sudo systemctl restart apache2`), or turn off **Use SEO-friendly URLs** in Settings. In a sub-folder, set `RewriteBase` in the root `.htaccess` .

File uploads fail or are rejected

Confirm `uploads/` is writable by `www-data` , and that the file is within both `MAX_UPLOAD_BYTES` (config) and PHP's `upload_max_filesize` / `post_max_size` (php.ini).

The editor shows a plain text box instead of formatting

The Quill files did not load. Verify `assets/vendor/quill/quill.js` and `quill.snow.css` exist on the server and are not blocked. The editor intentionally falls back to a plain HTML box if the script is unavailable, so your content is still editable.

Comment notification emails are not arriving

PHP `mail()` needs a working MTA. Confirm one is installed and configured (e.g. Postfix), check the **From** address is valid for your domain, and look in spam folders. Server mail logs (`/var/log/mail.log`) will show delivery attempts.

Search returns nothing for short words

Full-text search ignores very short terms; the system falls back to a simple match for queries under three characters. Try a longer or more specific term.

21. Frequently Asked Questions

Can I have more than one administrator?

Yes — create as many Superadmin, Editor, and Writer accounts as you need under **Users**.

Do visitors need an account to read articles?

No. The public site is open; accounts are only for staff who manage content.

Where are uploaded files stored?

In the `uploads/` folder, under randomised names, and served only through `download.php` .

Does the app rely on any external service or paid licence?

No. Everything — including the rich-text editor — runs from your own server. There are no licence fees and no third-party API keys.

Can I change the look of the site?

Yes. Edit `assets/css/style.css` (public theme) and `assets/css/admin.css` (admin theme). The colour scheme is defined by CSS variables at the top of each file.

How do I move the site to a new server?

Copy all files, restore the database backup, and update `includes/config.php` with the new database credentials (and `APP_BASE` if the path changed).

Appendix A — File & Folder Layout

knowledgebase/	
└─ index.php	Public home page
└─ category.php	Browse a category
└─ article.php	Read an article (rate / comment)
└─ news.php	News list & single announcement
└─ glossary.php	A-Z glossary
└─ search.php	Search results
└─ print.php	Print / PDF article view
└─ download.php	Secure attachment streaming
└─ admin/	Staff back-end (login, dashboard, all management)
└─ includes/	config, db, auth, functions, editor, mailer, templates
└─ config.php	Your configuration (created by the installer)
└─ install/	Web install wizard + SQL schema (delete after install)
└─ assets/	
└─ css/	Public & admin themes
└─ vendor/quill/	Self-hosted rich-text editor
└─ uploads/	Stored attachments (protected)
└─ docs/	This manual

Appendix B — Database Tables

All tables use the `kb_` prefix and the InnoDB engine with `utf8mb4` .

TABLE	HOLDS
kb_users	Staff accounts & roles
kb_categories	Category tree
kb_articles	Articles
kb_revisions	Article revision snapshots
kb_tags / kb_article_tags	Tags and their links to articles
kb_attachments	File attachments / downloads
kb_comments	Reader comments
kb_news	News / announcements
kb_glossary	Glossary terms
kb_languages	Configured languages
kb_search_log	Search terms (powers Statistics)
kb_settings	Site settings (key / value)

Appendix C — Settings Reference

Stored in `kb_settings` and edited via **Admin** → **Settings**.

KEY	MEANING	DEFAULT
site_name	Site title	TC KnowledgeBase
site_tagline	Tagline under the title	—
articles_per_page	Listing page size	10
allow_ratings	Show helpful 👍 / 💬	On
allow_comments	Enable comment form	On
moderate_comments	Hold comments for approval	On
captcha_comments	Anti-spam question on comments	On
notify_on_comment	Email admin on new comment	Off
admin_email	Notification recipient	—
mail_from / mail_from_name	Outgoing email identity	—
pretty_urls	SEO-friendly URLs	Off
enable_multilang	Multi-language content	Off
default_language	Default content language	en

Configuration constants (includes/config.php)

CONSTANT	PURPOSE
DB_HOST , DB_NAME , DB_USER , DB_PASS	Database connection
APP_BASE	URL path if installed in a sub-folder (e.g. /kb)
UPLOAD_DIR	Filesystem path for attachments
MAX_UPLOAD_BYTES	Maximum attachment size (default 25 MB)
APP_SECRET	Random secret for security tokens
APP_DEBUG	Show detailed errors — keep <code>false</code> in production

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