1KA
INSTALLATION

Installing the 1KA application

1KA version 26.09.01 · October 2026

This guide covers a new installation of 1KA on your own server, updating an existing installation, and the most common problems.

The installation package contains:

- `1ka/` : the application, which goes into the web root of your server
- `Installation_instructions.pdf` and `Navodila_za_namestitev.pdf` : these instructions

1. Requirements

Server

- A **Linux** server (Debian or Ubuntu recommended)
- A domain or subdomain (for example `surveys.example.com`). 1KA can be installed in the web root or in a subfolder (for example `https://example.com/1ka/`).
- **Apache 2.4** with the `mod_rewrite` module, and `.htaccess` files enabled (`AllowOverride All`)
- **PHP 8.1, 8.2 or 8.3**
- **MariaDB** (10.3 or newer, recommended) or **MySQL**, with *strict mode* turned off
- **cron**, for scheduled tasks
- HTTPS (for example a free Let's Encrypt certificate) is strongly recommended.

PHP extensions

`mysqli` , `mbstring` , `openssl` , `gd` (with FreeType and JPEG support), `bcmath` , `zip` , `curl` , `xml` (dom, simplexml, xmlreader, xmlwriter), `fileinfo` , `iconv` , `zlib` , `json`

On Debian/Ubuntu:

```
apt install apache2 libapache2-mod-php php php-mysql php-mbstring php-gd php-bcmath php-zip
php-curl php-xml
```

PHP settings (php.ini)

The installer checks these values:

Setting	Value
`short_open_tag`	`On`
`memory_limit`	at least `512M`
`upload_max_filesize`	at least `500M`
`post_max_size`	at least `500M`
`max_execution_time`	at least `120`
`max_input_time`	at least `120`
`max_input_vars`	at least `8000`

Additional programs

Program	Used for	Debian/Ubuntu package
`sed`, `awk`	Preparing collected data (results, exports)	usually already installed
XeLaTeX with all LaTeX packages, fonts and languages	PDF exports (questionnaire, answers, analyses)	`texlive-full`
latex2rtf	RTF exports	`latex2rtf`
ImageMagick and Ghostscript	Charts in PDF exports	`imagemagick ghostscript`
R (optional)	Advanced analyses (crosstabs, t-test, break), SPSS (.sav) export, speeder index, some modules	`r-base`

XeLaTeX must be available at `/usr/bin/xelatex`. Install the whole `texlive-full`. PDF exports use several fonts and the language packs for all survey languages (including Chinese, Japanese and Korean), so smaller TeX Live packages aren't enough.

ImageMagick must be allowed to work with PDF files. In `/etc/ImageMagick-6/policy.xml`, change `rights="none"` to `rights="read|write"` on the line with `pattern="PDF"`:

```
sed -i 's/rights="none" pattern="PDF"/rights="read|write" pattern="PDF"/' /etc/ImageMagick-6/policy.xml
```

For R, also install these R packages:

```
Rscript -e 'install.packages(c("haven", "foreign", "data.table", "dplyr", "reshape2", "scales"), repos="https://cloud.r-project.org")'
```

2. Installation

2.1 Copy the files

Copy the contents of the `1ka/` folder from the package to the server, for example to `/var/www/1ka/`, either as the web root of your (sub)domain or as a subfolder of an existing site.

Example Apache configuration (virtual host):

```
<VirtualHost *:80>
    ServerName surveys.example.com
    DocumentRoot /var/www/1ka

    <Directory /var/www/1ka>
        AllowOverride All
        Require all granted
    </Directory>
</VirtualHost>
```

Enable `mod_rewrite` and restart Apache:

```
a2enmod rewrite
systemctl restart apache2
```

2.2 Create the database

Create an empty database and a user with a password for it, for example in the MariaDB/MySQL console:

```
CREATE DATABASE 1ka CHARACTER SET utf8 COLLATE utf8_general_ci;
CREATE USER '1ka'@'localhost' IDENTIFIED BY 'STRONG_PASSWORD';
GRANT ALL PRIVILEGES ON 1ka.* TO '1ka'@'localhost';
FLUSH PRIVILEGES;
```

Turn off *strict mode* permanently in the database server configuration (for example in `/etc/mysql/mariadb.conf.d/50-server.cnf`, under `[mysqld]`), then restart the database server:

```
[mysqld]
sql_mode = "NO_ENGINE_SUBSTITUTION"
```

2.3 settings.php

Rename `settings.php.example` to `settings.php` and fill in:

Setting	Description	Example
`$site_domain`	Domain	`surveys.example.com`
`$site_url`	Full address (including the subfolder, if any), ending with `/`	`https://surveys.example.com/`
`$site_path`	Path to the folder on the server, ending with `/`	`/var/www/1ka/`
`$site_frontend`	Leave it as `simple`	`simple`
`$cookie_domain`	Domain for cookies	`surveys.example.com`
`$pass_salt`	Long random string (see below)	
`$mysql_server`, `$mysql_username`, `$mysql_password`, `$mysql_database_name`	Database connection details from step 2.2	`localhost`, `1ka`, …

Generate the `$pass_salt` value with this command and paste it between single quotes:

```
php -r 'echo bin2hex(random_bytes(32)), PHP_EOL;'
```

> **Important:** Passwords are stored using `$pass_salt`. Don't change it after installation, or users won't be able to log in.

2.4 .htaccess

Rename (or copy) `.htaccess.example` to `.htaccess`. It contains the rules for survey links, the API and loading of the user interface. Without it, the application doesn't work.

2.5 Folder permissions

The web server user (on Debian/Ubuntu `www-data`) must be able to write to the `.htaccess` file (1KA adds short survey links to it) and to these folders, including all their subfolders:

- `admin/survey/AnalysisArchive`, `admin/survey/SurveyBackup`, `admin/survey/SurveyData`, `admin/survey/tmp`
- `admin/survey/export/temp`, `admin/survey/export/latexclasses/textemp`
- `admin/survey/minify/cache`
- `admin/survey/pChart/Cache`, `admin/survey/pChart/tmp`
- `admin/survey/R/TempData`
- `admin/survey/classes/phpqrcode/imgs`
- the `temp`, `results` and `db` folders of the modules in `admin/survey/modules/`

- `main/survey/uploads`
- `uploadi`
- `public/img/logo/custom_logo`
- `logs`, `utils/cache`

The simplest way is to give the web server user ownership of the whole application:

```
chown -R www-data:www-data /var/www/1ka
```

2.6 Installation wizard

Open the address of your installation in a browser (for example `https://surveys.example.com/`). While the database is empty, 1KA automatically opens the installation wizard:

1. **Welcome**
2. **System check**: checks Apache, PHP, the database and additional programs. Items in red must be fixed before you continue; items in orange are recommendations.
3. **Database**: imports the empty 1KA database and applies all updates. This can take a few minutes.
4. **Finish**: go back to the front page with the button.

2.7 First login

Log in with the username **`admin`** and an **empty password**.

> **Important:** Set a new password for the `admin` user immediately after the first login (click your name in the top right corner → *My profile*).

2.8 System settings

As `admin`, open the system settings at `https://surveys.example.com/admin/survey/index.php?a=nastavitve&m=system`. Set at least:

- the application name and the administrator's email address
- email sending (SMTP server), which invitations, registrations and notifications need
- optionally: Google reCAPTCHA keys (registration form protection), Google login, and so on.

3. Scheduled tasks (cron)

1KA needs two cron entries. Without them, these features don't work:

- **Scheduler, every 5 minutes:** scheduled survey activation and deactivation, delayed sending of invitations
- **Nightly job, once a day:** final deletion of deleted surveys and responses, GDPR deletions, deactivation of expired surveys, cleanup of temporary files

Add both entries for the web server user (`crontab -u www-data -e`):

```
*/5 * * * * php /var/www/1ka/utils/1kaScheduler/scheduler_cli.php >> /var/www/1ka/logs/sched
uler.log 2>&1
0 2 * * * cd /var/www/1ka/utils/1kaScheduler/scheduled_jobs && php scheduled_jobs_night.php
>> /var/www/1ka/logs/scheduler.log 2>&1
```

Use the same PHP version as the web server (for example `/usr/bin/php8.3` instead of `php` , if several versions are installed).

4. Updating an existing installation

1. Back up the database and the whole application folder:

```
mysqldump -u root -p 1ka > 1ka_backup.sql
tar czf 1ka_files_backup.tar.gz /var/www/1ka
```

2. Install the new version into a new folder (for example `/var/www/1ka_new`). Installing over the old folder is not recommended, because files that are no longer part of 1KA would stay on the server.

3. Copy your settings and data from the old installation into the new folder:

- `settings.php`
- `.htaccess` : copy the old file, because it contains your short survey links (below the line `## LEPI URL-JI ZA POSAMEZNE ANKETE`). Compare it with the new `.htaccess.example` and add any new rules above that line.
- `uploadi/`
- `main/survey/uploads/`
- `public/img/logo/custom_logo/`
- `admin/survey/AnalysisArchive/` , `admin/survey/SurveyBackup/` , `admin/survey/SurveyData/`
- `admin/survey/modules/mod_geoIP/db/` (if you use GeoIP)

4. Set the folder permissions again (step 2.5), then point Apache's `DocumentRoot` to the new folder (or rename the folders) and restart Apache.

5. Update the database: log in as `admin` and open `https://surveys.example.com/sql/import_db.php` . The page shows the current version and the changes that will be applied. Click **Posodobi** (Update).

6. Check that the cron entries point to the right folder (section 3).

5. Quick test with Docker

For local testing, the package contains a Docker setup in `utils/Docker/Latest` (Apache, PHP 8.3, LaTeX, MariaDB and phpMyAdmin). Use it for testing only, because it has a default database password.

1. In `settings.php`, set: `$site_url = 'http://localhost/';`, `$site_path = '/var/www/html/';`, `$mysql_server = 'mysql';`, `$mysql_username = 'root';`, `$mysql_password = '1234';`, `$mysql_database_name = '1ka';`.
2. Copy `.htaccess.example` to `.htaccess`.
3. Start it in the `utils/Docker/Latest` folder:

```
docker compose up -d --build
```

4. Open `http://localhost/` (phpMyAdmin is at `http://localhost:8080/`).

6. Troubleshooting

The page looks broken (no styles or scripts)

The admin user interface loads JavaScript and CSS through *minify*. Check that:

- `.htaccess` exists (step 2.4)
- `mod_rewrite` is enabled and `AllowOverride All` is set for the folder (step 2.1)
- `admin/survey/minify/cache` is writable
- `short_open_tag = On` is set in php.ini

No data is shown after a survey is completed

The `admin/survey/SurveyData` folder must be writable, and the `sed` and `awk` programs must be installed on the server.

"Napaka pri ustvarjanju ankete!" (Error creating survey) when creating a survey

The database has *strict mode* turned on. Turn it off in the database server configuration (step 2.2) and restart the database server.

Error "FUNCTION 1ka.MAX_RECNUM does not exist" when completing a survey

The database user didn't have permission to create functions during the database import (this usually happens when the database server has binary logging enabled). Run the code below in the SQL console as the database administrator:

```
DELIMITER $$
CREATE FUNCTION MAX_RECNUM (aid INT(11))
RETURNS INT(11)
DETERMINISTIC
BEGIN
DECLARE max INT(11);
SELECT MAX(recnum) INTO max FROM srv_user WHERE ank_id = aid AND preview='0';
IF max IS NULL THEN SET max = '0' ;
END IF;
RETURN max+1;
END$$
DELIMITER ;
```

PDF export doesn't work or the PDF is empty

- XeLaTeX must be installed at `/usr/bin/xelatex`, together with the whole `texlive-full` (section 1).
- The `admin/survey/export/latexclasses/textemp` and `admin/survey/export/temp` folders must be writable.
- If charts are missing from the PDF, check ImageMagick, Ghostscript and the PDF permission in `policy.xml` (section 1).

RTF export doesn't work

The `latex2rtf` program must be installed.

Crosstabs, t-test or break don't work in analyses

Install R and the R packages from section 1. The `Rscript` command must be available to the web server user.

Charts are not shown in analyses

The `admin/survey/pChart/Cache` folder must be writable, and PHP must have the `gd` extension.

No reCAPTCHA in the registration form

Register your domain at Google reCAPTCHA and enter the keys in the system settings (step 2.8).

Saving the email server settings doesn't work

PHP must have the `openssl` extension.

Some settings are not saved

The PHP sessions folder (on Debian/Ubuntu usually `/var/lib/php/sessions`) must be writable for the web server user.

Uploading images in the editor doesn't work

The `uploadi` folder and all its subfolders must be writable.

Scheduled survey activation/deactivation or delayed invitations don't work

Check that both cron entries exist (section 3), and check the log in `logs/scheduler.log`.