Contents

1 Requirements
2 System installation
3 Configure Apache2 virtual host
4 Download resources
5 Extract resources
6 Define some random passwords temporarly
7 Install Html2PDF
8 Install OpenSearch
9 Optional: Secure system with iptables firewall
10 Installation of MediaWiki
11 Installation of BlueSpice

Requirements

This documentation is only based on a fresh minimal installation of Debian 13.

System installation

- Update the aptitude cache

```
apt update
```

- Install Apache2 and PHP

```
apt install -y apache2 libapache2-mod-php8.4 \
    php8.4-bz2 php8.4-curl php8.4-gd php8.4-intl php8.4-mbstring \
    php8.4-mysql php8.4-tidy php8.4-xml php8.4-zip
```

- Install MariaDB

```
apt install -y mariadb-server mariadb-client
```

- Install Java

```
apt install -y openjdk-21-jre-headless
```

- Install some needed other tools

```
apt install -y sudo python3 imagemagick ghostscript poppler-utils
```

Configure Apache2 virtual host

- Delete existing sample configuration

```
rm /etc/apache2/sites-enable/000-default.conf
```

- Create BlueSpice configuration

```
vi /etc/apache2/sites-available/bluespice.conf
```

- Copy and paste the configuration you can find on the related page (https://en.wiki4.bluespice.com/w/nsfr_img_auth.php/3004/b/bb/apache_vhost_bluespice_free.txt), configure related parts to match your system and save the file
- Enable the new vHost

```
a2ensite bluespice
```

- Enable the rewrite module

```
a2enmod rewrite
```

- Restart the apache2 webserver

```
systemctl restart apache2
```

Download resources

- Just download the sources from github

```
cd /root
git clone --branch=5.1.3 https://github.com/freesoft-official/bluespice-free.git
```

Extract resources

- Extract the downloaded sources

```
cd /root/bluespice-free
tar xzf bluespice-free-resources-<VERSION>.tar.gz
```

Define some random passwords temporarly

- For the installation process just create some randomly passwords and define it as environment variables
  These are example passwords! Please replace it by yourself!

```
export PWD_DB=DtSQHvxSXCwrmb7Yuh6hRyq2 # for the later needed BlueSpice database user
export PWD_OS=ktGN5LNLB47UZtYdyKxU5HbF # initial password for the OpenSearch installation
```

- Document your passwords for purposes if you need it later

Install Html2PDF

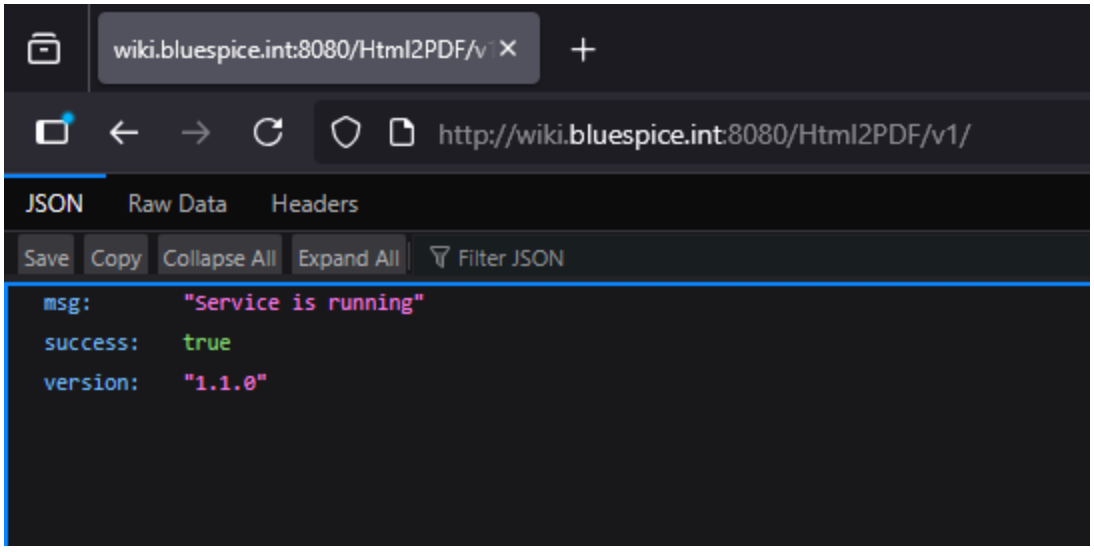
- Move Html2PDF app to /opt

```
mv /root/bluespice-free/bluespice-free-resources/html2pdf /opt
```

- Run the Html2PDF service

```
/usr/bin/java -jar /opt/html2pdf/html2pdf.jar
```

- Check at your browser if it works: http://<IP-or-hostname-of-your-server>:8080/Html2PDF/v1



- Interrupt the service at the console by pressing Ctrl+C
- Open a new text file to create a system service

```
vi /etc/systemd/system/html2pdf.service
```

Copy & paste the folling content into it

```
[Unit]
Description=Html2PDF for BlueSpice
After=network.target

[Service]
Type=simple
Restart=always
ExecStart=/usr/bin/java -jar /opt/html2pdf/html2pdf.jar

[Install]
WantedBy=multi-user.target
```

- Save and leave this file
- Reload daemon configuration

```
systemctl daemon-reload
```

- Start service

```
systemctl start html2pdf
```

- Check at your browser if it works: http://<IP-or-hostname-of-your-server>:8080/Html2PDF/v1
- Stop service

```
systemctl stop html2pdf
```

- Enable service

```
systemctl enable html2pdf
```

- Start service

```
systemctl start html2pdf
```

- Check at your browser if it works: http://<IP-or-hostname-of-your-server>:8080/Html2PDF/v1

Install OpenSearch

- Install needed tools

```
apt -y install lsb-release ca-certificates curl gnupg2
```

- Add OpenSearch public key to your keyring

```
curl -fsSL https://artifacts.opensearch.org/publickeys/opensearch-release.pgp | \
    gpg --dearmor -o /etc/apt/keyrings/opensearch.gpg
```

- Add OpenSearch sources to your aptitude repository

```
echo "deb [signed-by=/etc/apt/keyrings/opensearch.gpg] https://artifacts.opensearch.org/releases/bundle/
opensearch/3.x/apt stable main" | \
    tee /etc/apt/sources.list.d/opensearch-3.x.list
```

- Update the aptitude cache

```
apt update
```

- Install OpenSearch

```
env OPENSEARCH_INITIAL_ADMIN_PASSWORD=$PWD_OS apt install -y opensearch
```

- Remove the plugin opensearch-security

```
rm -rf /usr/share/opensearch/plugins/opensearch-security
```

- Comment or delete all *plugins.security.** entries at /etc/opensearch/opensearch.yml

```
######## Start OpenSearch Security Demo Configuration ########
# WARNING: revise all the lines below before you go into production
#plugins.security.ssl.transport.pemcert_filepath: esnode.pem
#plugins.security.ssl.transport.pemkey_filepath: esnode-key.pem
#plugins.security.ssl.transport.pemtrustedcas_filepath: root-ca.pem
#plugins.security.ssl.transport.enforce_hostname_verification: false
#plugins.security.ssl.http.enabled: true
#plugins.security.ssl.http.pemcert_filepath: esnode.pem
#plugins.security.ssl.http.pemkey_filepath: esnode-key.pem
#plugins.security.ssl.http.pemtrustedcas_filepath: root-ca.pem
#plugins.security.allow_unsafe_democertificates: true
#plugins.security.allow_default_init_securityindex: true
#plugins.security.authcz.admin_dn: ['CN=kirk,OU=client,O=client,L=test,C=de']
#plugins.security.audit.type: internal_opensearch
#plugins.security.enable_snapshot_restore_privilege: true
#plugins.security.check_snapshot_restore_write_privileges: true
#plugins.security.restapi.roles_enabled: [all_access, security_rest_api_access]
#plugins.security.system_indices.enabled: true
#plugins.security.system_indices.indices: [.plugins-ml-agent, .plugins-ml-config, .plugins-ml-connector,
#  .plugins-ml-controller, .plugins-ml-model-group, .plugins-ml-model, .plugins-ml-task,
#  .plugins-ml-conversation-meta, .plugins-ml-conversation-interactions, .plugins-ml-memory-meta,
#  .plugins-ml-memory-message, .plugins-ml-stop-words, .opendistro-alerting-config,
#  .opendistro-alerting-alert*, .opendistro-anomaly-results*, .opendistro-anomaly-detector*,
#  .opendistro-anomaly-checkpoints, .opendistro-anomaly-detection-state, .opendistro-reports-*,
#  .opensearch-notifications-*, .opensearch-notebooks, .opensearch-observability, .ql-datasources,
#  .opendistro-asynchronous-search-response*, .replication-metadata-store, .opensearch-knn-models,
#  .geospatial-ip2geo-data*, .plugins-flow-framework-config, .plugins-flow-framework-templates,
#  .plugins-flow-framework-state, .plugins-search-relevance-experiment, .plugins-search-relevance-judgment-cache]
node.max_local_storage_nodes: 3
######## End OpenSearch Security Demo Configuration ########
~
```

- Reload daemon configuration

```
systemctl daemon-reload
```

- Enable service

```
systemctl enable opensearch
```

- Start service

```
systemctl start opensearch
```

- Install plugin ingest-attachment

```
/usr/share/opensearch/bin/opensearch-plugin install -b ingest-attachment
```

- Restart service

```
systemctl restart opensearch
```

- Check the service

```
curl -X GET http://localhost:9200
```

Please note

If your OpenSearch installation will be updated to a newer version caused by a general system update or something else you have to check if the plugin opensearch-security has bin always kept deleted and commented at opensearch.yml and you have to reinstall ingest-attachment

```
/usr/share/opensearch/bin/opensearch-plugin remove ingest-attachment
/usr/share/opensearch/bin/opensearch-plugin install -b ingest-attachment
```

Optional: Secure system with iptables firewall

It is recommended to secure system services needed only by internal communication by closing their ports using iptables. Be careful at this point and do this steps only if you know what you are doing. The following steps are not commented at this documentation and maybe you have to change attributes regarding to your own system.

```
apt install -y iptables
```

```
iptables -i enp0s3 -A INPUT -p icmp -j ACCEPT \
iptables -i enp0s3 -A INPUT -p tcp --dport 22 -j ACCEPT \
iptables -i enp0s3 -A INPUT -p tcp --dport 80 -j ACCEPT \
iptables -i enp0s3 -A INPUT -p tcp --dport 443 -j ACCEPT \
iptables -i lo -A INPUT -j ACCEPT \
iptables -A OUTPUT -j ACCEPT \
iptables -A INPUT -j DROP
```

```
apt install -y iptables-persistent
```

Installation of MediaWiki

The first step will be the installation MediaWiki based on the first release version of the LTS version BlueSpice is based on. At the moment it is 1.43.0 which is also bundled at your bluespice-free-resources you already downloaded.

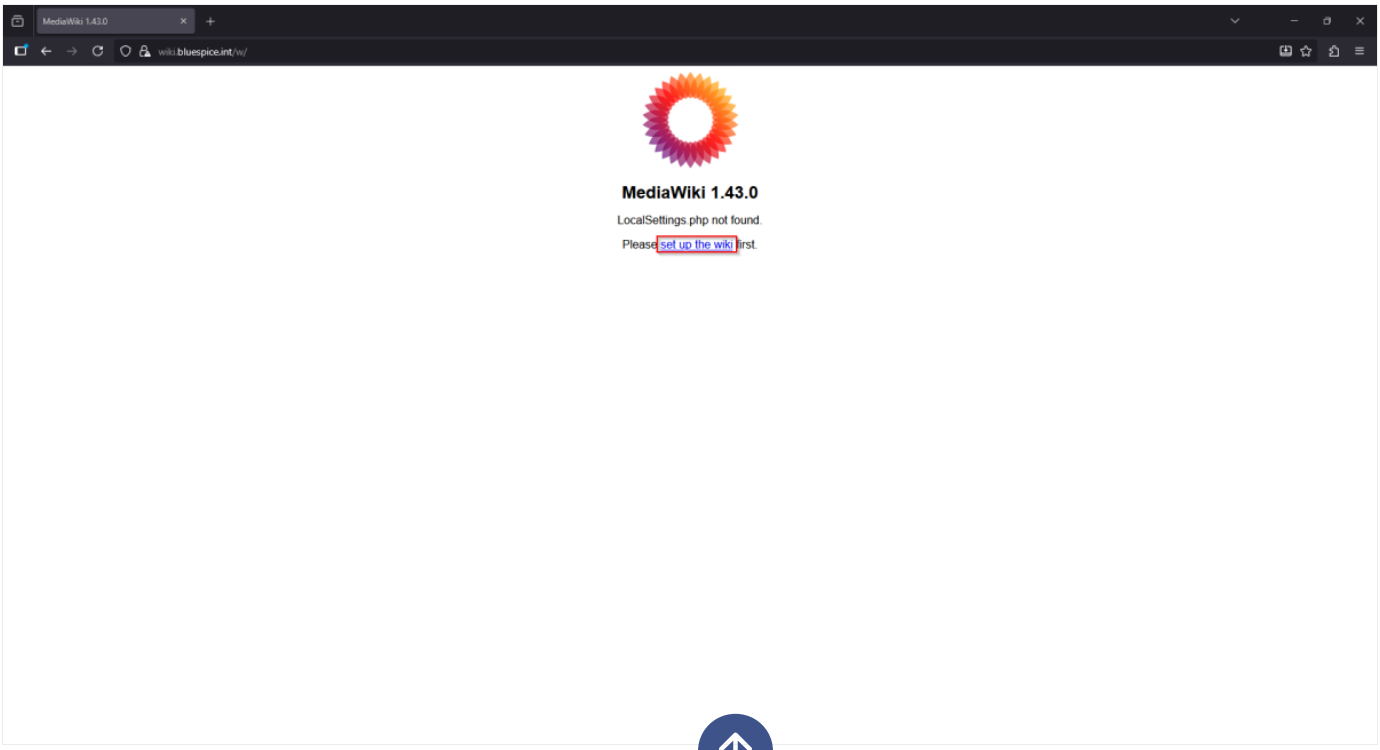
- The first step is to create a database user for the BlueSpice database. We will use the password $PWD_DB (see above).

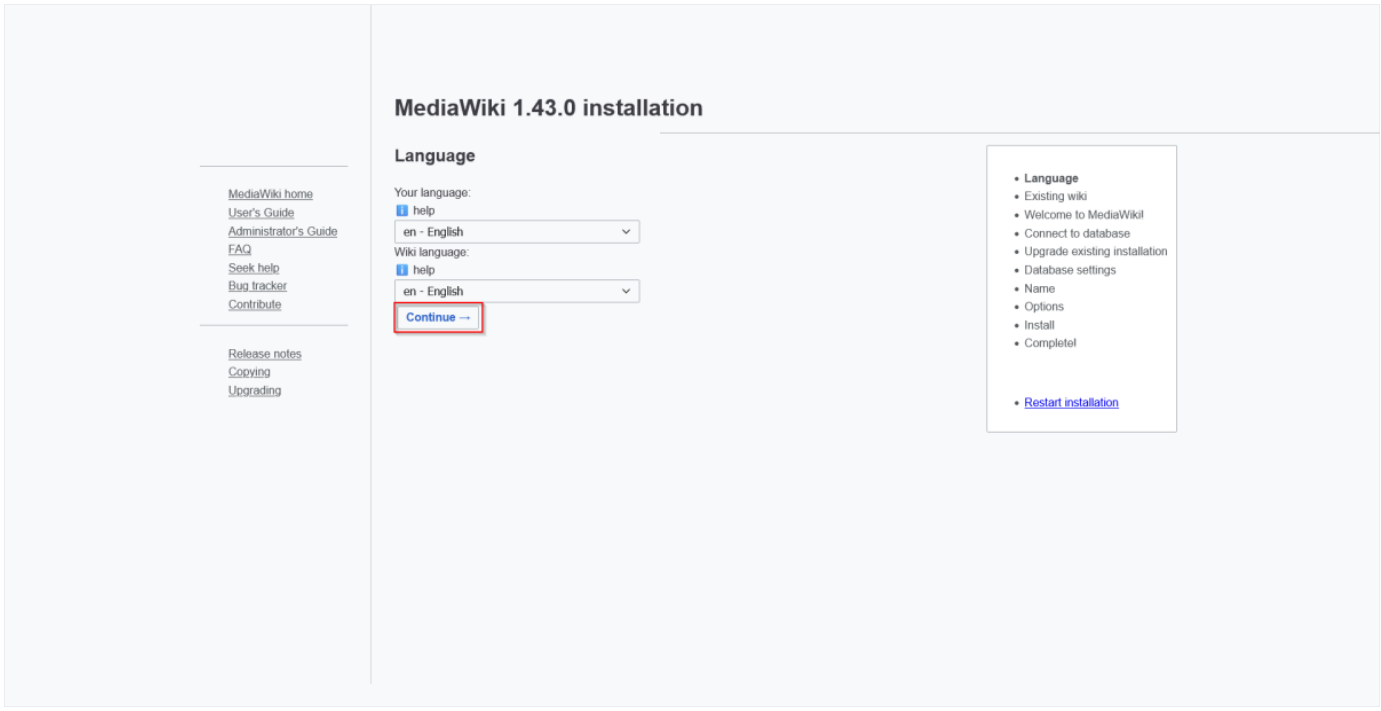
```
mysql -e "GRANT ALL ON bluespice.* TO 'bluespice'@'127.0.0.1' IDENTIFIED BY '$PWD_DB';"
```

- Create the BlueSpice WWW directory which was configured at apache2 (DocumentRoot) and copy the source of mediawiki into it

```
mkdir -p /var/www/bluespice \
cp -a /root/bluespice-free/bluespice-free-resources/mediawiki/ /var/www/bluespice/w
```

- Start the BlueSpice installation at your browser opening http://<IP-or-hostname-of-your-server>/w and follow all standard steps using default values. The configuration will be done later by the BlueSpice standards.
- Now the download of the file LocalSettings.php will start. Copy it to the server and place it into /var/www/bluespice/w.
- In your browser click on "enter your wiki"




MediaWiki 1.43.0 installation
Language
MediaWiki home
User's Guide
Administrator's Guide
FAQ
Seek help
Bug tracker
Contribute
Release notes
Copying
Upgrading
Your language:
help
en - English
Wiki language:
help
en - English
Continue →
Language
Existing wiki
Welcome to MediaWiki!
Connect to database
Upgrade existing installation
Database settings
Name
Options
Install
Complete!
Restart installation

MediaWiki 1.43.0 installation

MediaWiki home
User's Guide
Administrator's Guide
FAQ
Seek help
Bug tracker
Contribute

Release notes
Copying
Upgrading

Welcome to MediaWiki!

MediaWiki is a free and open-source wiki software package written in PHP. It serves as the platform for Wikipedia and the other Wikimedia projects, used by hundreds of millions of people each month. MediaWiki is localised in over 350 languages and its reliability and robust feature set have earned it a large and vibrant community of third-party users and developers.

- Language
- Existing wiki
- **Welcome to MediaWiki!**
- Connect to database
- Upgrade existing installation
- Database settings
- Name
- Options
- Install
- Complete!

- Restart installation

Environmental checks

Basic checks will now be performed to see if this environment is suitable for MediaWiki installation. Remember to include this information if you seek support on how to complete the installation.

PHP 8.4.11 is installed.

ICU 76.1 is installed (supports Unicode 16.0.0).

Warning: Could not find APCu.

Object caching is not enabled.

Found GD graphics library built-in.

Image thumbnailing will be enabled if you enable uploads.

Git version control software not found. You can ignore this for now. Note Special:Version will not display commit hashes.

Using server name "https://wiki.bluespice.int".

Using server URL "https://wiki.bluespice.int/w".

Warning: Because of a connection error, it was not possibly to verify that images in your uploads directory, respond with the HTTP header `x-Content-Type-Options: nosniff` to protect browsers from potentially unsafe files.

It is highly recommended to configure appropriate response headers on your webserver before enabling uploads.

The environment has been checked. You can install MediaWiki.

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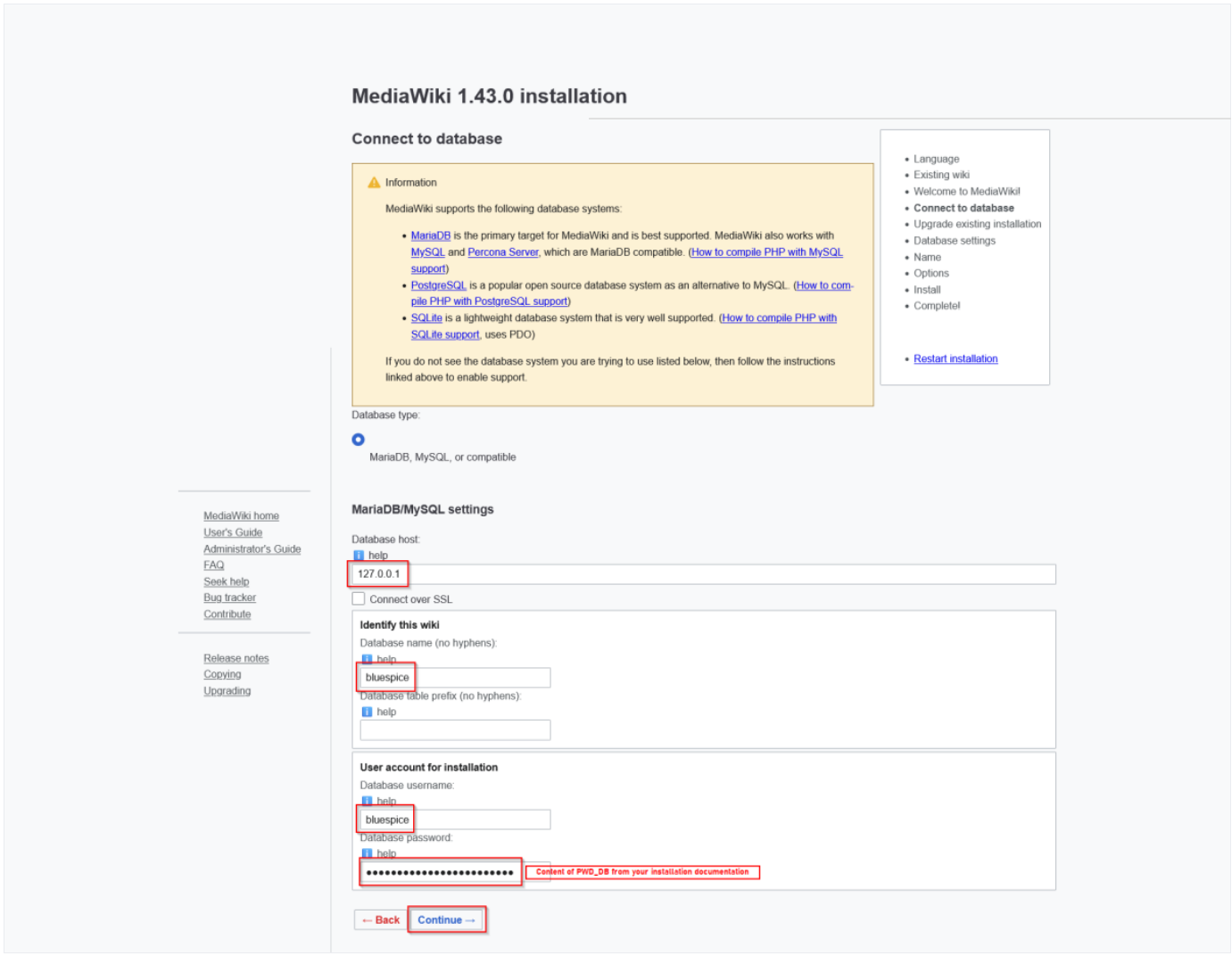
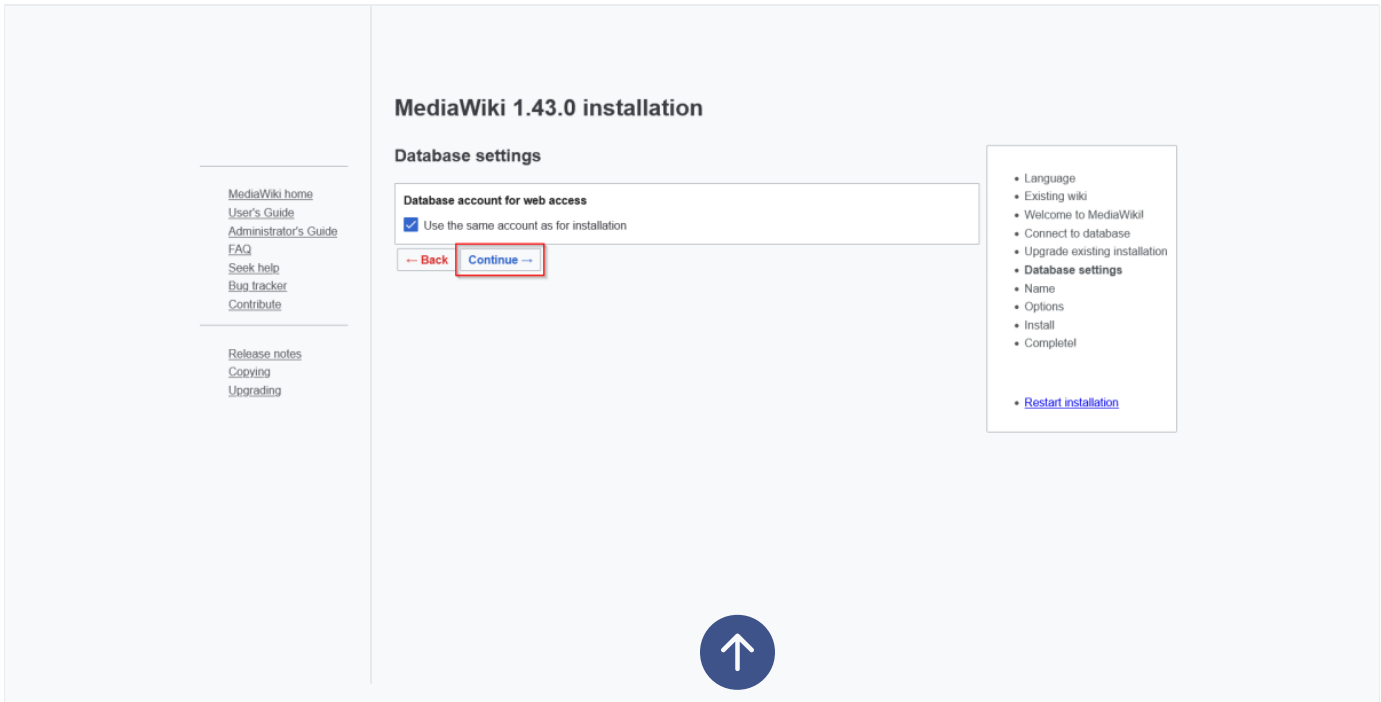
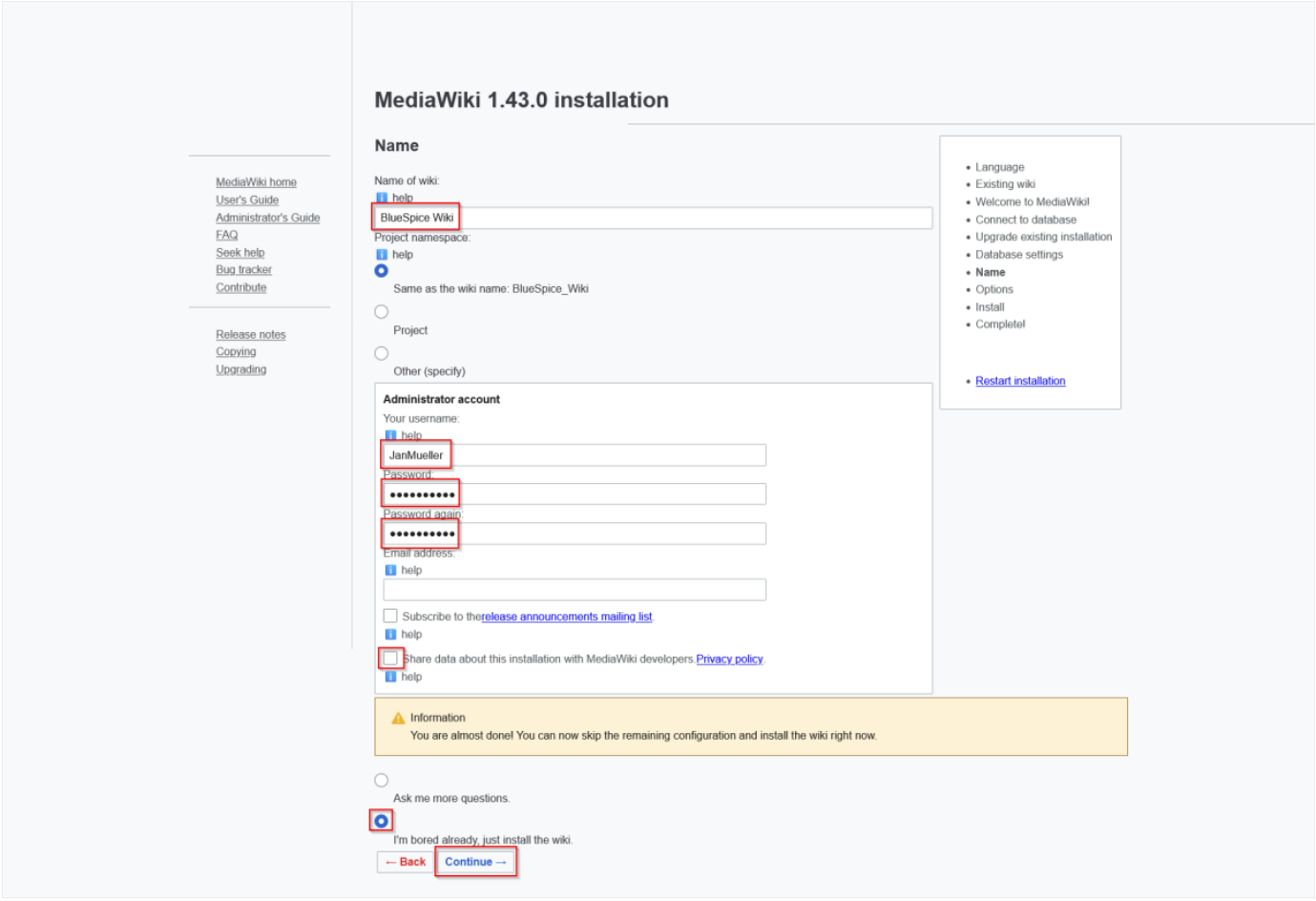
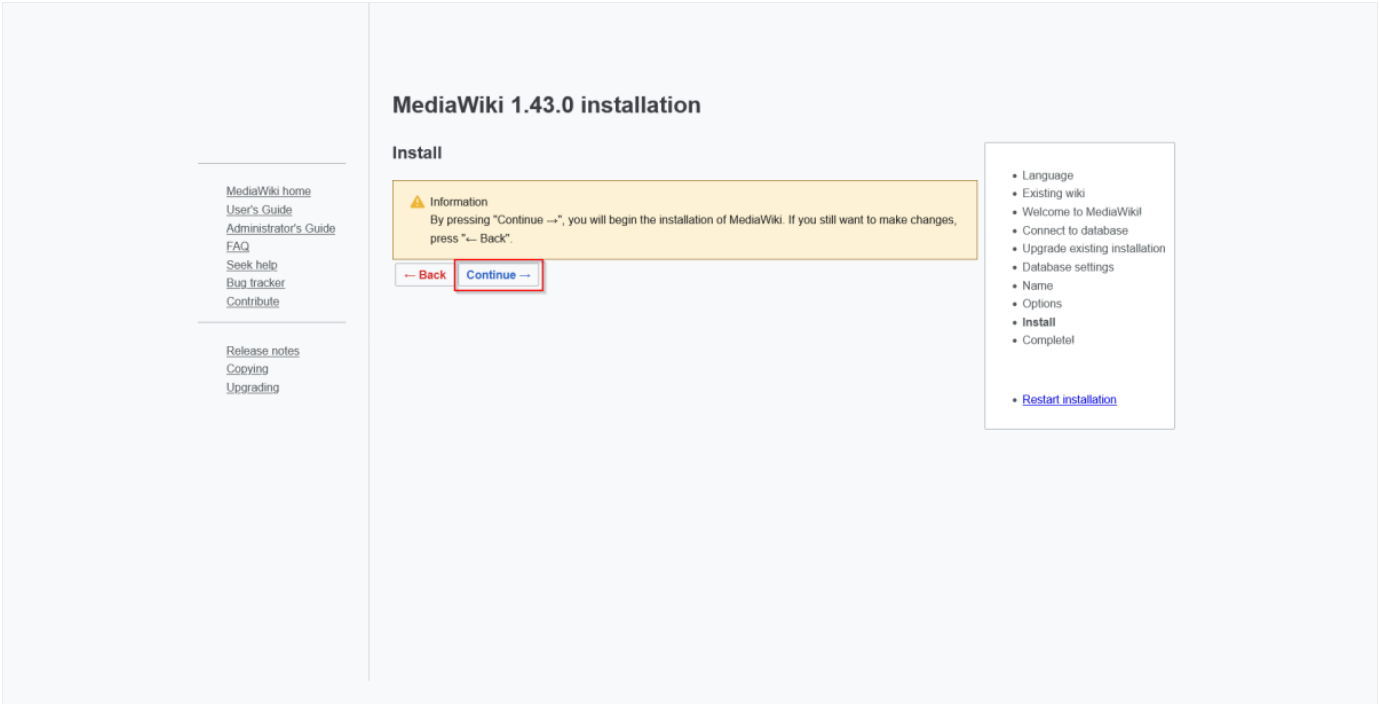
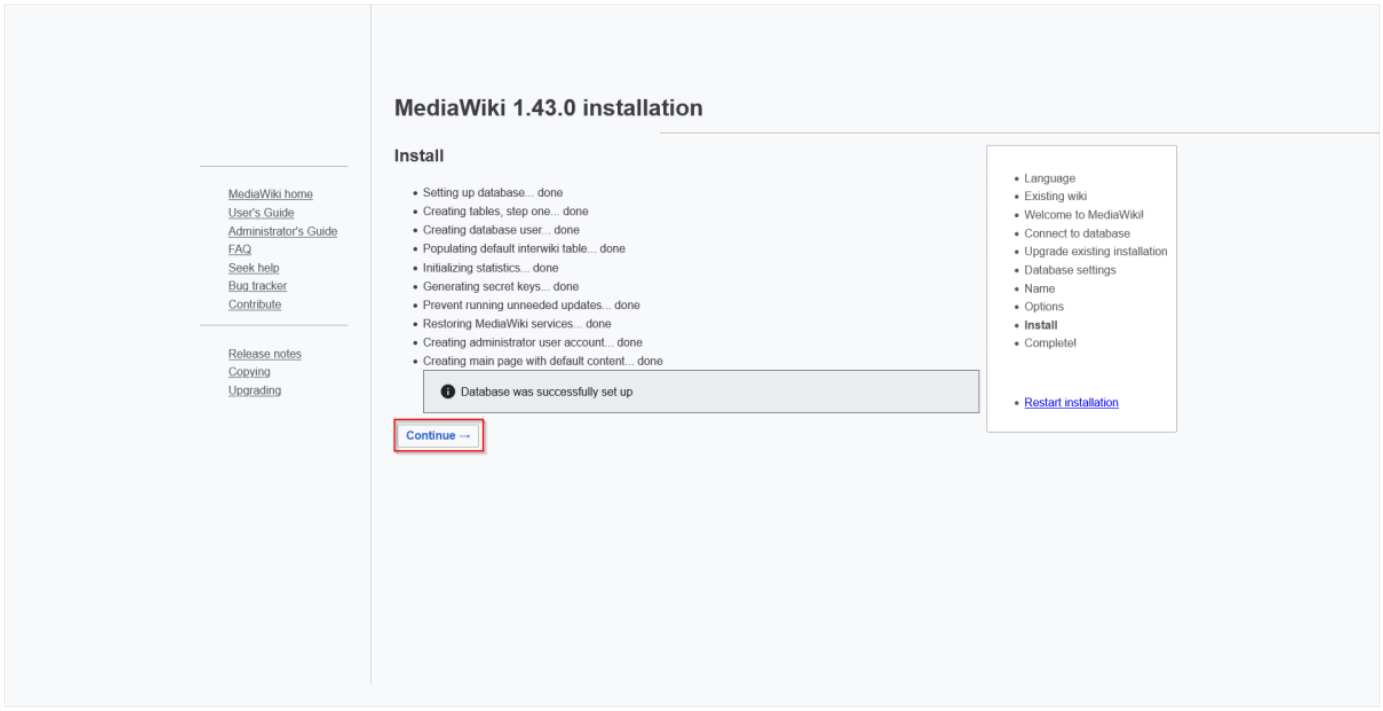
← Back | Continue →

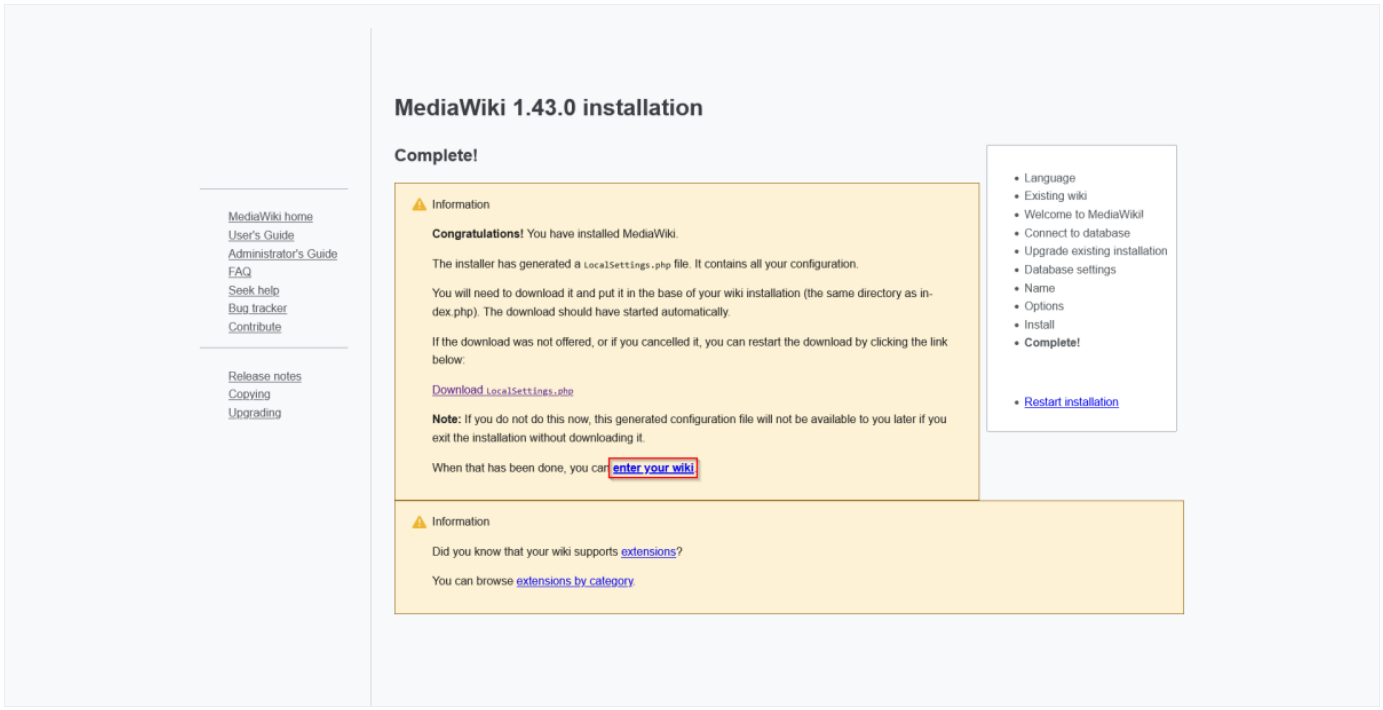

MediaWiki 1.43.0 installation
Connect to database
Information
MediaWiki supports the following database systems:
MariaDB is the primary target for MediaWiki and is best supported. MediaWiki also works with MySQL and Percona Server, which are MariaDB compatible. (How to compile PHP with MySQL support)
PostgreSQL is a popular open source database system as an alternative to MySQL. (How to compile PHP with PostgreSQL support)
SQLite is a lightweight database system that is very well supported. (How to compile PHP with SQLite support, uses PDO)
If you do not see the database system you are trying to use listed below, then follow the instructions linked above to enable support.
Language
Existing wiki
Welcome to MediaWiki!
Connect to database
Upgrade existing installation
Database settings
Name
Options
Install
Complete!
Restart installation
Database type:
MariaDB, MySQL, or compatible
MediaWiki home
User's Guide
Administrator's Guide
FAQ
Seek help
Bug tracker
Contribute
Release notes
Copying
Upgrading
MariaDB/MySQL settings
Database host:
help
127.0.0.1
Connect over SSL
Identify this wiki
Database name (no hyphens):
help
bluespice
Database table prefix (no hyphens):
help
User account for installation
Database username:
help
bluespice
Database password:
help
Content of PWD_DB from your installation documentation
← Back
Continue →


MediaWiki 1.43.0 installation
Database settings
Database account for web access
Use the same account as for installation
← Back
Continue →
Language
Existing wiki
Welcome to MediaWiki!
Connect to database
Upgrade existing installation
Database settings
Name
Options
Install
Complete!
Restart installation
MediaWiki home
User's Guide
Administrator's Guide
FAQ
Seek help
Bug tracker
Contribute
Release notes
Copying
Upgrading

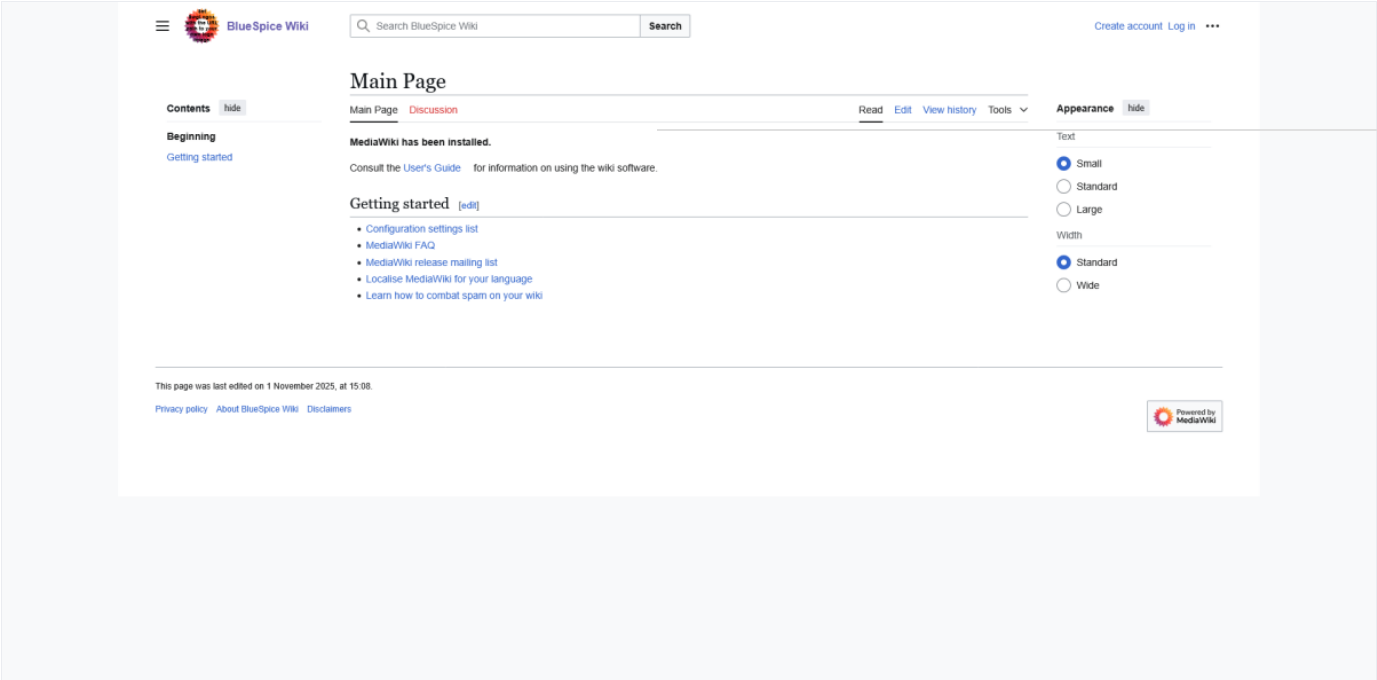

MediaWiki 1.43.0 installation
Name
MediaWiki home
User's Guide
Administrator's Guide
FAQ
Seek help
Bug tracker
Contribute
Release notes
Copying
Upgrading
Name of wiki:
help
BlueSpice Wiki
Project namespace:
help
Same as the wiki name: BlueSpice_Wiki
Project
Other (specify)
Administrator account
Your username:
help
JanMueller
Password:
Password again:
Email address:
help
Subscribe to therelease announcements mailing list.
help
Share data about this installation with MediaWiki developers.Privacy policy.
help
Information
You are almost done! You can now skip the remaining configuration and install the wiki right now.
Ask me more questions.
I'm bored already, just install the wiki.
← Back
Continue →
Language
Existing wiki
Welcome to MediaWiki!
Connect to database
Upgrade existing installation
Database settings
Name
Options
Install
Complete!
Restart installation


MediaWiki 1.43.0 installation
Install
MediaWiki home
User's Guide
Administrator's Guide
FAQ
Seek help
Bug tracker
Contribute
Release notes
Copying
Upgrading
Information
By pressing "Continue →", you will begin the installation of MediaWiki. If you still want to make changes, press "← Back".
← Back
Continue →
Language
Existing wiki
Welcome to MediaWiki!
Connect to database
Upgrade existing installation
Database settings
Name
Options
Install
Complete!
Restart installation





- Welcome to your MediaWiki base installation!



Installation of BlueSpice

- Replace the MediaWiki source with the BlueSpice source which contains the bundled version of MediaWiki and Bluespice. You already downloaded it.

```
cp -a /root/bluespice-free/bluespice-free-resources/bluespice/w/ /var/www/bluespice/
```

- Open the file LocalSettings.php for editing

```
vi /var/www/bluespice/w/LocalSettings.php
```

- Add BlueSpice at the end of the file

```
require_once "$IP/LocalSettings.Bluespice.php";
```

- Save and close the file
- Open a new file called LocalSettings.local.php for editing

```
vi /var/www/bluespice/w/LocalSettings.local.php
```

- Add the following content

```
<?php

$GLOBALS['wgArticlePath'] = "/wiki/$1";
$GLOBALS['wgUploadPath'] = $GLOBALS['wgScriptPath'] . "/img_auth.php";
$GLOBALS['bsgESBackendTransport'] = "http";
$GLOBALS['wgEnableUploads'] = true;
$GLOBALS['wgUseImageMagick'] = true;
```

```
$GLOBALS['wgImageMagickConvertCommand'] = "/usr/bin/convert";
```

- Save and close the file
- Change some file permissions

```
chown -R www-data:www-data /var/www/bluespice
find /var/www/bluespice -type d -exec chmod 0755 {} \;
find /var/www/bluespice -type f -exec chmod 0644 {} \;
find /var/www/bluespice/w/extensions -iname 'create_pygmentize_bundle' -type f -exec chmod +x {} \;
find /var/www/bluespice/w/extensions -iname 'pygmentize' -type f -exec chmod +x {} \;
find /var/www/bluespice/w/extensions -name 'lua' -type f -exec chmod +x {} \;
```

- Run the installation of the BlueSpice extensions

```
php /var/www/bluespice/w/maintenance/run.php /var/www/bluespice/w/maintenance/update.php --quick
```

- Initialize OpenSearch and build the index

```
php /var/www/bluespice/w/maintenance/run.php /var/www/bluespice/w/extensions/BlueSpiceExtendedSearch/maintenance/
initBackends.php --quick
php /var/www/bluespice/w/maintenance/run.php /var/www/bluespice/w/extensions/BlueSpiceExtendedSearch/maintenance/
rebuildIndex.php --quick
```

- Run the runJobs.php maintenance script to update the search engine

```
php /var/www/bluespice/w/maintenance/run.php /var/www/bluespice/w/maintenance/runJobs.php
```

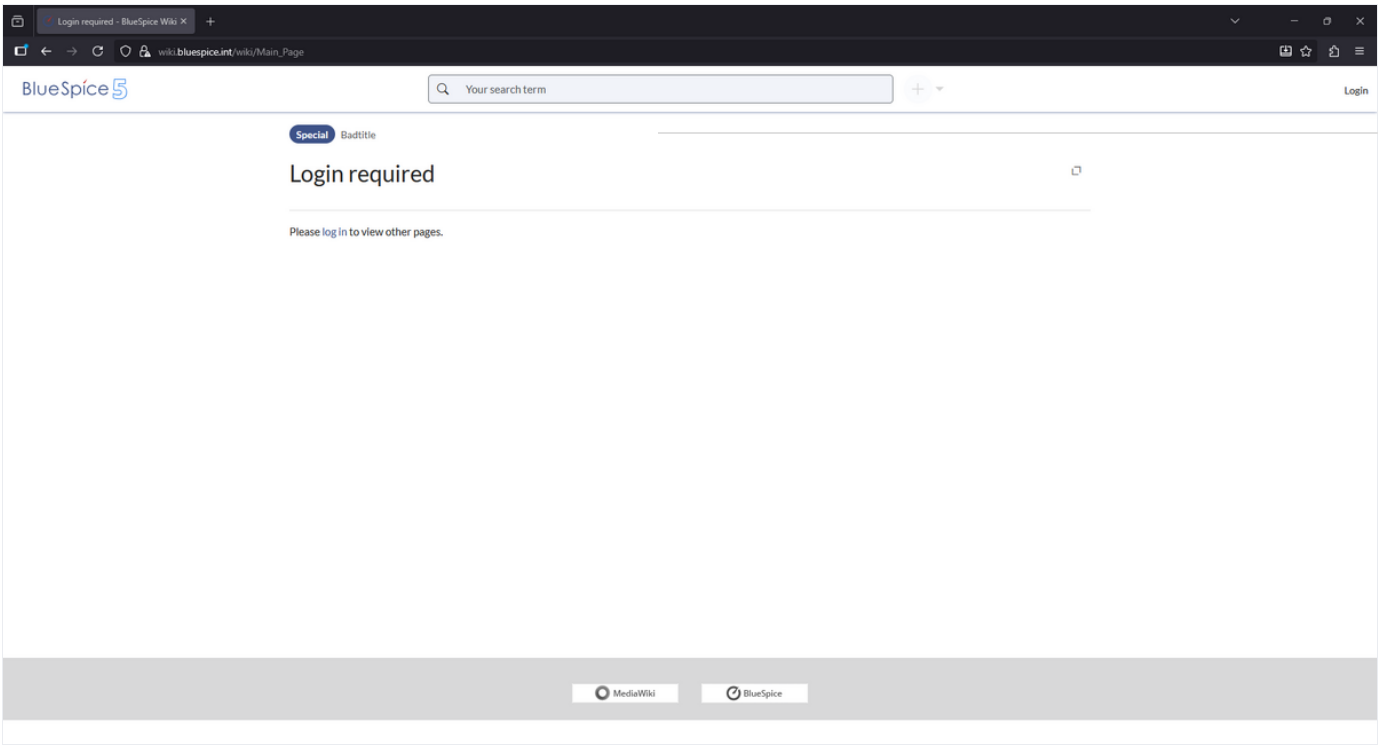
- Open your cronjob system configuration

```
crontab -e
```

- At the end add a line for the runJobs.php

```
*/10 * * * * sudo -u www-data -g www-data php /var/www/bluespice/w/maintenance/run.php /var/www/bluespice/w/
maintenance/runJobs.php
```

- Save and leave this file
- Open your browser and go to http://<IP-or-hostname-of-your-server>
- Welcome to your BlueSpice installation!


Login required - BlueSpice Wiki
wiki.bluespice.int/wiki/Main_Page
BlueSpice 5
Your search term
Login
Special
Badtitle
Login required
Please log in to view other pages.
MediaWiki
BlueSpice