



BlueSpice  
MediaWiki

## BlueSpice 2.27.3 - Installation without installer



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# 1. Installation MediaWiki

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This document describes the steps of the MediaWiki Installation, which is essential for the installation of BlueSpice.

## Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C: \inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).
- The placeholder `<bluespice-url>` stands for the URL to your future BlueSpice installation, e.g. <http://localhost/bluespice>.

## Requiriements

### Webservice

A webservice (IIS / Apache), which is configured to be accessable for `<bluespice-url>` , must already be running on the system.

### PHP

PHP needs to be integrated in the webservice. Make sure that the following moduls are activated:

- php-curl
- php-gd

- php-tidy

## MySQL

---

A database server (MariaDB oder MySQL) must be set up completely and needs to be available. You need administrative access (root).

## Download MediaWiki

---

Download the MediaWiki version compatible with BlueSpice [www.mediawiki.org](http://www.mediawiki.org). BlueSpice is always compatible with the current LTS version of MediaWiki. You can see the correct version of MediaWiki at the version number of BlueSpice - for example:

BlueSpice version 2.27.x corresponds to MediaWiki version 1.27.x.

## Unzip and Copy MediaWiki

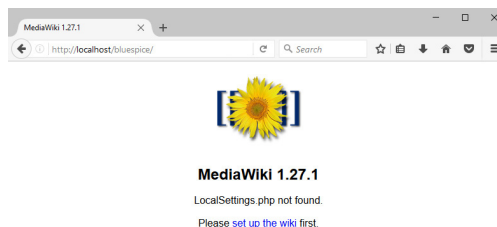
---

Unpack the downloaded archive from MediaWiki. Note that the relevant content is located in a subfolder (for example, mediawiki-1.27.4). Move the contents of this subfolder to `<installpath-bluespice>`.

## Starting the Installation

---

Call up `<bluespice-url>` in your browser. The start page of the installation should be displayed:

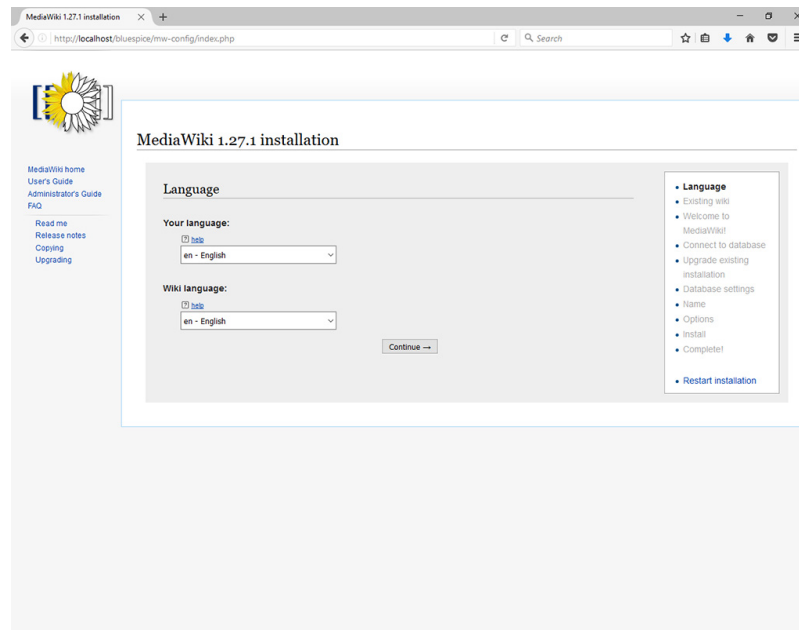


Continue by clicking "set up the wiki".

## Language Selection

---

You will now be asked for the language during the installation process and the language of your later installation:



Select the required language and click on "Next".

## Checking the Installation Environment

---

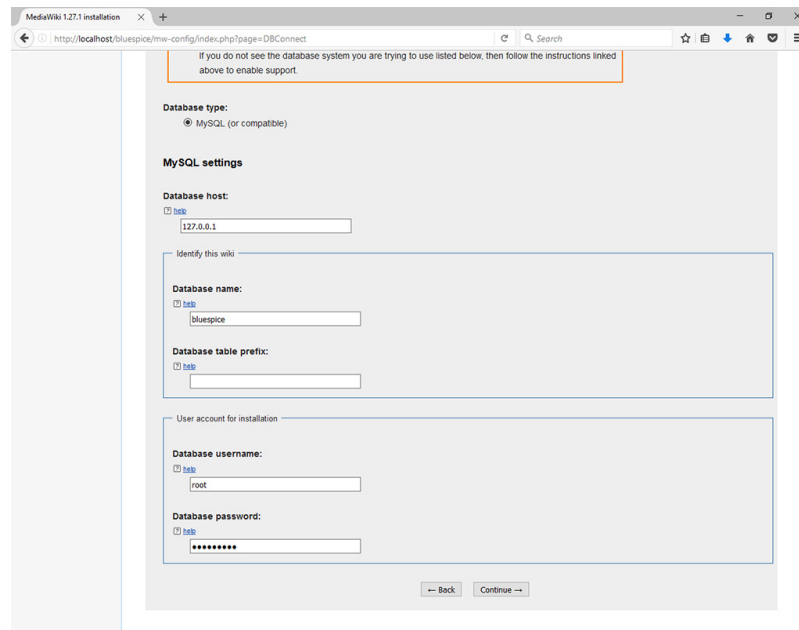
The following page should allow you to skip with "Next" in most cases. If errors (red font) are displayed, there is a need for action at your server environment. Please do the necessary corrections.

## Database Settings

---

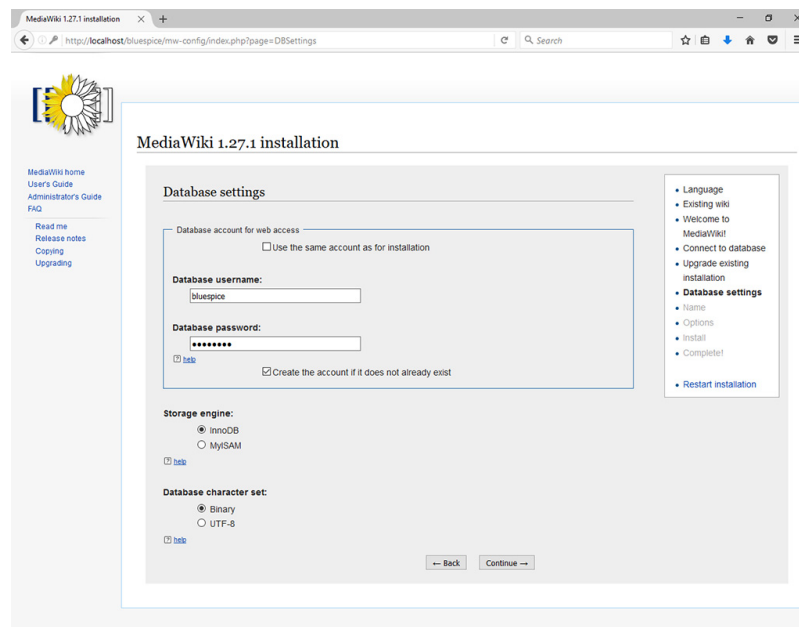
On the following page, you will be prompted to enter your database settings.

- If the database server is on the same PC as the MediaWiki installation, please do not use "localhost" but "127.0.0.1".
- The database itself is created in the further process if it does not already exist. You do not have to create the database in advance.
- The database table prefix does not have to be specified. This only makes sense if you need the database for other database tables than for your MediaWiki installation.
- Please enter the user name and password of the administrative database user (usually root).



Click "Next".

On the second page about the database it is recommended to create your own database user for your installation. Deactivate the checkbox "Use the same database account as during the installation process" and enter a username and password of your choice. Activate the checkbox "If not already existing, you have to create the account now".



Then click "Next".

## Wiki Settings

Now enter a name of your choice for your wiki.

You can also define an administrative user and his password here. You can change the email address of this user at any time in the user settings.

Leave all the other settings as they are and click "Next".

The screenshot shows the 'Name' configuration page of the MediaWiki 1.27.1 installation. The page is titled 'Name' and contains several sections: 'Name of wiki:' with a text input field containing 'My wiki'; 'Project namespace:' with radio buttons for 'Same as the wiki name: My\_wiki' (selected), 'Project', and 'Other (specify)'; 'Administrator account' section containing 'Your username:' (input: 'WikiSysop'), 'Password:' (masked with dots), 'Password again:' (masked with dots), and 'Email address:' (input field). A yellow box highlights a message: 'You are almost done! You can now skip the remaining configuration and install the wiki right now.' At the bottom, there are radio buttons for 'Ask me more questions.' (selected) and 'I'm bored already, just install the wiki.' and 'Back'/'Continue' buttons.

## Extended Settings

The settings on the now displayed page should be set as shown in the following screenshot. Please adjust the email address according to your needs, the paths in the section "Uploading Images and Files" are automatically filled and should be left as they are.



**At this point, no MediaWiki standard extensions will be chosen. The necessary extensions for BlueSpice will be integrated during the BlueSpice setup.**



MediaWiki home  
User's Guide  
Administrator's Guide  
FAQ  
Read me  
Release notes  
Copying  
Upgrading

## MediaWiki 1.27.1 installation

### Options

#### User rights profile:

- Open wiki
- Account creation required
- Authorized editors only
- Private wiki

Wikis work best when you let as many people edit them as possible. In MediaWiki, it is easy to review the recent changes, and to revert any damage that is done by naive or malicious users.

However, many have found MediaWiki to be useful in a wide variety of roles, and sometimes it is not easy to convince everyone of the benefits of the wiki way. So you have the choice.

The **Open wiki** model allows anyone to edit, without even logging in. A wiki with **Account creation required** provides extra accountability, but may deter casual contributors.

The **Authorized editors only** scenario allows approved users to edit, but the public can view the pages, including history. A **Private wiki** only allows approved users to view pages, with the same group allowed to edit.

More complex user rights configurations are available after installation, see the [relevant manual entry](#).

#### Copyright and license:

- Creative Commons Attribution
- Creative Commons Attribution-ShareAlike
- Creative Commons Attribution-NonCommercial-ShareAlike
- Creative Commons Zero (Public Domain)
- Public Domain
- GNU Free Documentation License 1.3 or later
- No license footer
- Select a custom Creative Commons license

[help](#)

#### Email settings

Enable outbound email

[help](#)

#### Return email address:

[help](#)

Enable user-to-user email

[help](#)

Enable user talk page notification

[help](#)

Enable watchlist notification

[help](#)

Enable email authentication

[help](#)

#### Skins

CologneBlue

Modern

MonoBook

Vector

Use this skin as default

Use this skin as default

Use this skin as default

Use this skin as default

[help](#)

#### Extensions

Cite

CiteThisPage

ConfirmEdit

Gadgets

ImageMap

InputBox

Interwiki

LocalisationUpdate

Nuke

ParserFunctions

PdfHandler

Poem

Renameuser

SpamBlacklist

Syntaxhighlight\_GeSHi

TitleBlacklist

WikiEditor

[help](#)

#### Images and file uploads

[help](#)

Enable file uploads

[help](#)

#### Directory for deleted files:

[help](#)

#### Logo URL:

[help](#)

Enable Instant Commons

#### Advanced configuration

##### Settings for object caching:

No caching (no functionality is removed, but speed may be impacted on larger wiki sites)

Use Memcached (requires additional setup and configuration)

[help](#)

[Back](#)

[Continue](#)

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

Then click on "Next". Also confirm the following pages with "Next".

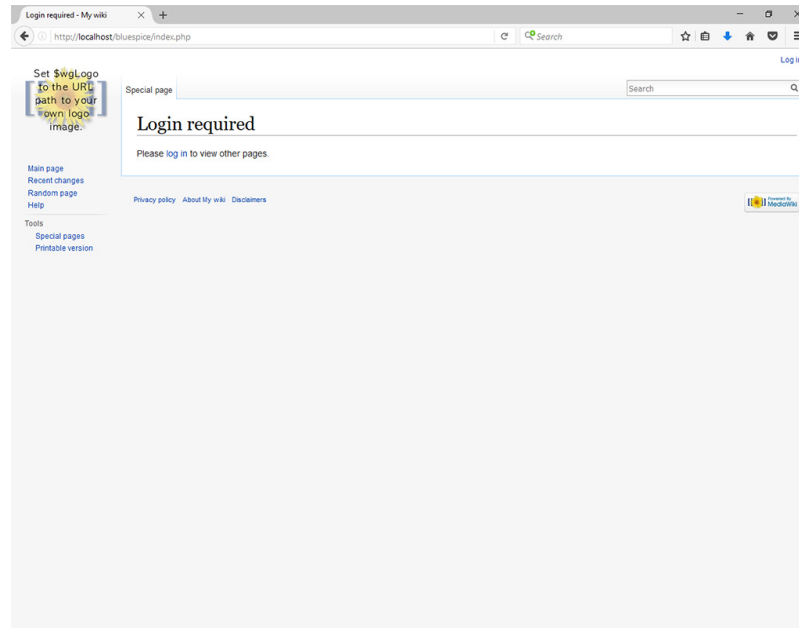
All necessary settings are made now. Please confirm with "Next" again.



## Deposit LocalSettings.php ablegen

Finally, the "LocalSettings.php" will be provided for downloading it. Please do this and move the file to `<installpath-bluespice>`.

Then call `<bluespice-url>` and you should see a complete installation of MediaWiki, where you can log on with the previously defined username / password.



## 2. Update MediaWiki

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This document describes the update of MediaWiki from version 1.23.x to 1.27.x as a basis for the installation of BlueSpice 2.27.x

### Notes

- Please read this manual completely and follow the installation steps in the given order.
- For editing the configuration files in a text editor, it is necessary to save the files in UTF-8 code without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` is representative for the path to your BlueSpice installation, e.g. `C:\inetpub\wwwroot\bluespice` (Windows) oder `/var/www/bluespice` (Linux).
- The placeholder `<bluespice-url>` is representative for the URL of your BlueSpice installation, e.g. <http://localhost/bluespice>.

### Requirements

The requirements for the MediaWiki version 1.27.x can be found in the corresponding [installation manual](#).

### Backup

It is absolutely necessary to create a backup copy of your current installation before updating the wiki.

#### Backup Database

To back up your database, use the on-board "mysqldump" program from MySQL / MariaDB: To do this, please open a console, change the directory `<installpath-bluespice>` and save the database using the following command:

```
mysqldump -u <username> -p --lock-tables <database> > database.sql
```

For <username> please use your administrative database user (usually "root"). For <database> use the database name of your MediaWiki/BlueSpice installation.



**Under Windows, please make sure that the [environment variables](#) are set correctly to access the `mysqldump` command.**

## Backup File System

Save the complete directory <installpath-bluespice>, which now contains the database image, to a different location on your server.

**For security reasons, immediately delete the file <installpath-bluespice>/database.sql.**

## Download MediaWiki

Please download MediaWiki 1.27.x under [www.mediawiki.org](http://www.mediawiki.org).

## Unzip and copy MediaWiki

Unzip the downloaded MediaWiki archive. Please make sure that all relevant content is placed in **one** subfolder (e.g. mediawiki-1.27.1). Move the content of this subfolder to <installpath-bluespice> and overwrite the existing files.

## Setup LocalSettings.php

Open the file <installpath-bluespice>/LocalSettings.php. Look for the following lines:

```
# End of automatically generated settings.  
# Add more configuration options below.
```

Insert the following lines right before the code above:

```
wfLoadSkin( 'CologneBlue' );  
wfLoadSkin( 'Modern' );  
wfLoadSkin( 'MonoBook' );  
wfLoadSkin( 'Vector' );
```

Also add the following line at the end of the code:

```
return;
```

Also search **before** the above mentioned lines after lines that contain `require_once`. Please delete these lines.

## Update database schema

Open your command line or terminal in <installpath-bluespice> and run the following command there:

```
php maintenance/update.php (Linux)
php maintenance\update.php (Windows)
```



**Under Windows, make sure that the [environment variables](#) are set correctly to access the php command.**



**Under Linux, please note that you have to adjust the [file system permissions](#) after running the update.php.**

When the script is finished with the "Done" message, proceed to the next step.

```
...event_agent field does not exist in echo_event table, skipping modify field patch.
Modifying event_variant field of table echo_event ...done.
Modifying event_extra field of table echo_event ...done.
Modifying event_agent_ip field of table echo_event ...done.
...have etp_id field in echo_target_page table.
...have notification_bundle_base field in echo_notification table.
...echo_event table does not contain event_timestamp field.
...have eeb_event_hash field in echo_email_batch table.
...have event_page_id field in echo_event table.
...index echo_event_type already set on echo_event table.
...index echo_user_timestamp already set on echo_notification table.
Creating titlekey table...ok.
Rebuilding titlekey table...
... 1 ok.
...hitcounter table does not exist, skipping modify field patch.
Creating hit_counter_extension table ...done.
Creating hit_counter table ...done.
...page table does not contain page_counter field.
Creating bs_editnotifyconnector table ...done.
Creating bs_namespacemanager_backup_page table ...done.
Creating bs_namespacemanager_backup_revision table ...done.
Creating bs_namespacemanager_backup_text table ...done.
Adding page_content_model field to table bs_namespacemanager_backup_page ...done.
Adding rev_shal field to table bs_namespacemanager_backup_revision ...done.
Adding rev_content_model field to table bs_namespacemanager_backup_revision ...done.
Creating bs_permission_templates table ...done.
Creating bs_dashboards_configs table ...done.
Creating bs_usagetracker table ...done.
Creating bs_pagetemplate table ...done.
Creating bs_pageassignments table ...done.
...se text field does not exist in bs_saferedit table, skipping modify field patch.
Creating bs_readers table ...done.
...have readers_ts field in bs_readers table.
...site_stats is populated...done.
Checking existence of old default messages...done.
Populating rev_len column
...doing rev_id from 1 to 200
Populating ar_len column
...archive table seems to be empty.
rev_len and ar_len population complete [0 revision rows, 0 archive rows].
Populating rev_shal column
...doing rev_id from 1 to 200
Populating ar_shal column
...archive table seems to be empty.
Populating ar_shal column legacy rows
rev_shal and ar_shal population complete [0 revision rows, 0 archive rows].
Populating img_shal field

Done 0 files in 0.0 seconds
Fixing protocol-relative entries in the externallinks table...
Done, 0 rows updated.
Populating fa_shal field from fa_storage_key

Done 0 files in 0.0 seconds
Updating *_from_namespace fields in links tables.
...doing page_id from 1 to 200
Purging caches...done.

Done in 1.6 s.
root@bluespice:/var/www/bluespice#
```

## Check installation

---

Open <bluespice-url> in your browser. You should now have an updated MediaWiki standard installation with your current content.

## Next Steps

---

In the next step, you can now [update to the current version of BlueSpice](#).

## 3. Installation BlueSpice

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This document describes the steps for the installation of BlueSpice version 2.27.3 without the installer.

### Tip for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C: \inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).
- The placeholder `<bluespice-url>` stands for the URL to your future BlueSpice installation, e.g. <http://localhost/bluespice>.

### Requirements

For the installation of BlueSpice, a completely installed and configured MediaWiki version 1.27.x is required. This must be accessible with a browser under `<bluespice-url>`. For further information, please take a look at the [installation manual for MediaWiki](#).

### Download BlueSpice

Download the current version of BlueSpice directly at [Sourceforge](#). The package is named **BlueSpice-free-2.27.3.zip**.

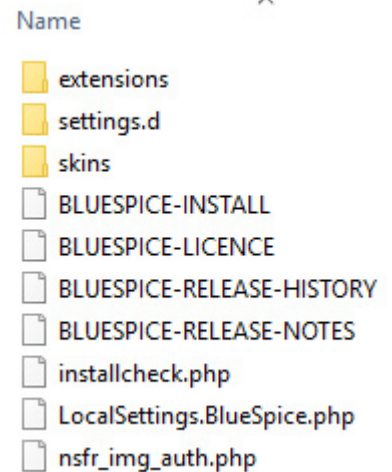


**If you purchased BlueSpice pro, this step is not necessary. The appropriate package has been provided by the distributor.**

## Unzip and Copy BlueSpice

Unpack the downloaded archive with BlueSpice. Note that the relevant content is located in a subfolder (bspw. bluespice-free). Those contains the following files and directories:

- extensions
- settings.d
- skins
- BLUESPICE-INSTALL
- BLUESPICE-LICENSE
- BLUESPICE-RELEASE-HISTORY
- BLUESPICE-RELEASE-NOTES
- installcheck.php
- LocalSettings.BlueSpice.php
- *nsfr\_img\_auth.php (nur BlueSpice pro)*



Move this file to `<installpath-bluespice>` and integrate it in the already existing folder.

## Renaming of Relevant Folders

Rename the following folders in `<installpath-bluespice>` as follows:

- extensions/BlueSpiceFoundation/data.template  
--> extensions/BlueSpiceFoundation/data
- extensions/BlueSpiceFoundation/config.template  
--> extensions/BlueSpiceFoundation/config

## Adjusting File System Permissions

Make sure that the following folders in `<installpath-bluespice>` are accessible and writable by the webserver:

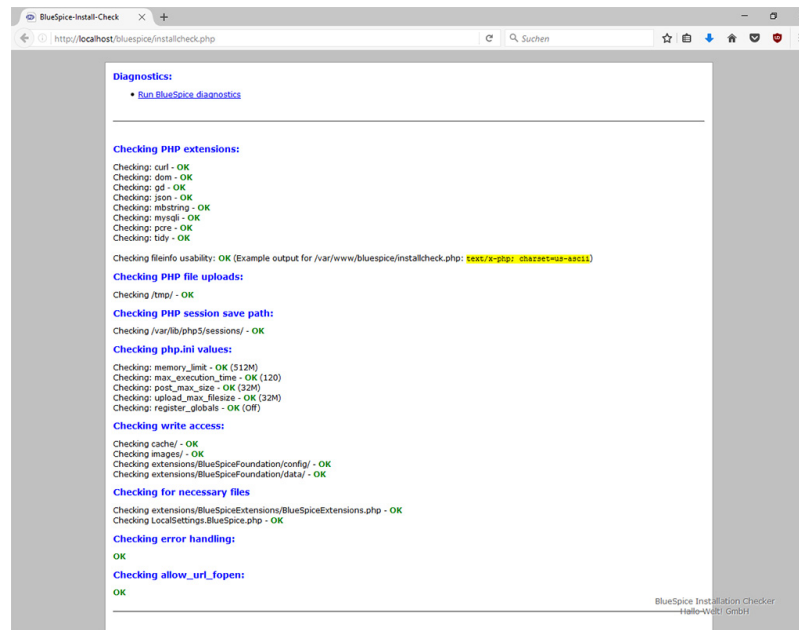
- cache
- images
- extensions/BlueSpiceFoundation/data
- extensions/BlueSpiceFoundation/config

Detailed information about the file system permissions can also be found in the [security settings](#).

## Checking the Installation Requirements

Call up the file `installcheck.php` at `<bluespice-url>` in your browser (example: <http://localhost/installcheck.php>).

Correct all red (error) and ideally yellow (warning) declared messages (mostly in the `php`).



## Integrating BlueSpice in MediaWiki

Now it's time to integrate BlueSpice into MediaWiki. To do this, open the file `LocalSettings.php` in the folder `<installpath-bluespice>` in a text editor and add the following at the end of the code:

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

Save and exit the file.



**Beginning with BlueSpice version 2.27.1, all default settings as well as single modules of BlueSpice are outsourced, so BlueSpice can be integrated into MediaWiki with only this one line. For more technical information about this also take a look at our [documentation for advanced users](#).**

## Installation of BlueSpice

Open a command line and switch to the folder `<installpath-bluespice>`. Execute the following command:

```
php maintenance/update.php (Linux)  
php maintenance\update.php (Windows)
```



**With Windows, please take care that the [environment variables](#) are set correctly to access the php command.**



**With Linux, please keep in mind that after running the `update.php`, the [file system permissions](#) need to be adjusted again.**



When the script is finished with the "Done" message, proceed to the next step.

```
...event_agent field does not exist in echo_event table, skipping modify field patch.
Modifying event_variant field of table echo_event ...done.
Modifying event_extra field of table echo_event ...done.
Modifying event_agent_ip field of table echo_event ...done.
...have etp_id field in echo_target_page table.
...have notification_bundle_base field in echo_notification table.
...echo_event table does not contain event_timestamp field.
...have eeb_event_hash field in echo_email_batch table.
...have event_page_id field in echo_event table.
...index echo_event_type already set on echo_event table.
...index echo_user_timestamp already set on echo_notification table.
Creating titlekey table...ok.
Rebuilding titlekey table...
... 1 ok.
...hitcounter table does not exist, skipping modify field patch.
Creating hit_counter_extension table ...done.
Creating hit_counter table ...done.
...page table does not contain page_counter field.
Creating bs_editnotifyconnector table ...done.
Creating bs_namespacemanager_backup_page table ...done.
Creating bs_namespacemanager_backup_revision table ...done.
Creating bs_namespacemanager_backup_text table ...done.
Adding page_content_model field to table bs_namespacemanager_backup_page ...done.
Adding rev_sha1 field to table bs_namespacemanager_backup_revision ...done.
Adding rev_content_model field to table bs_namespacemanager_backup_revision ...done.
Creating bs_permission_templates table ...done.
Creating bs_dashboards_configs table ...done.
Creating bs_usagetracker table ...done.
Creating bs_pagetemplate table ...done.
Creating bs_pageassignments table ...done.
...se_text field does not exist in bs_saferedit table, skipping modify field patch.
Creating bs_readers table ...done.
...have readers_ts field in bs_readers table.
...site_stats is populated...done.
Checking existence of old default messages...done.
Populating rev_len column
...doing rev_id from 1 to 200
Populating ar_len column
...archive table seems to be empty.
rev_len and ar_len population complete [0 revision rows, 0 archive rows].
Populating rev_sha1 column
...doing rev_id from 1 to 200
Populating ar_sha1 column
...archive table seems to be empty.
Populating ar_sha1 column legacy rows
rev_sha1 and ar_sha1 population complete [0 revision rows, 0 archive rows].
Populating img_sha1 field

Done 0 files in 0.0 seconds
Fixing protocol-relative entries in the externallinks table...
Done, 0 rows updated.
Populating fa_sha1 field from fa_storage_key

Done 0 files in 0.0 seconds
Updating *_from_namespace fields in links tables.
...doing page_id from 1 to 200
Purging caches...done.

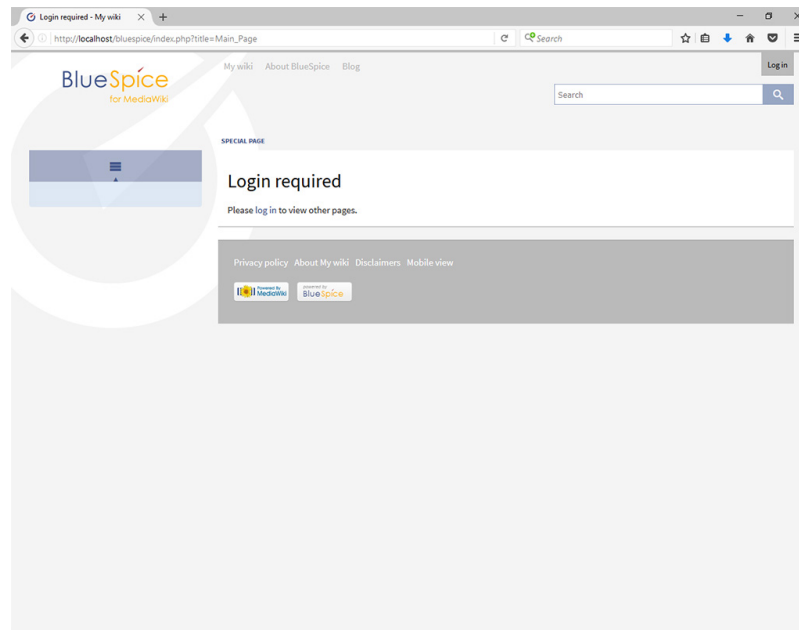
Done in 1.6 s.
root@bluespice: /var/www/bluespice#
```

If the script should stop during the process, restart it.

## Check the Installation

---

Call `<bluespice-url>` in your browser. BlueSpice should now be successfully installed and a login with your access data should be possible.



## Further configuration

---

Your BlueSpice installation is now ready to use. You can also do some further configuraiton:

- Setup of the [extended search](#)
- Setup of the [PDF export](#)
- Setup of [VisualDiff](#) (**only BlueSpice pro**)
- Setup of [LatexRenderer](#) (**BlueSpice pro only**)

Also, some [security settings](#) are recommended.

## 3.1. File System Permissions

---

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For trouble-free usage of your BlueSpice installation, the web server requires write permissions to several folders of the file system. However, it is recommended to keep the rights for all other files and folders to a minimum. This document shows you the relevant folders and the correct permissions setting.

### Tips for this Document

---

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g `C:\inetpub\wwwroot\bluespice` (Windows) or `/var/www/bluespice` (Linux).

### Affected Folders

---

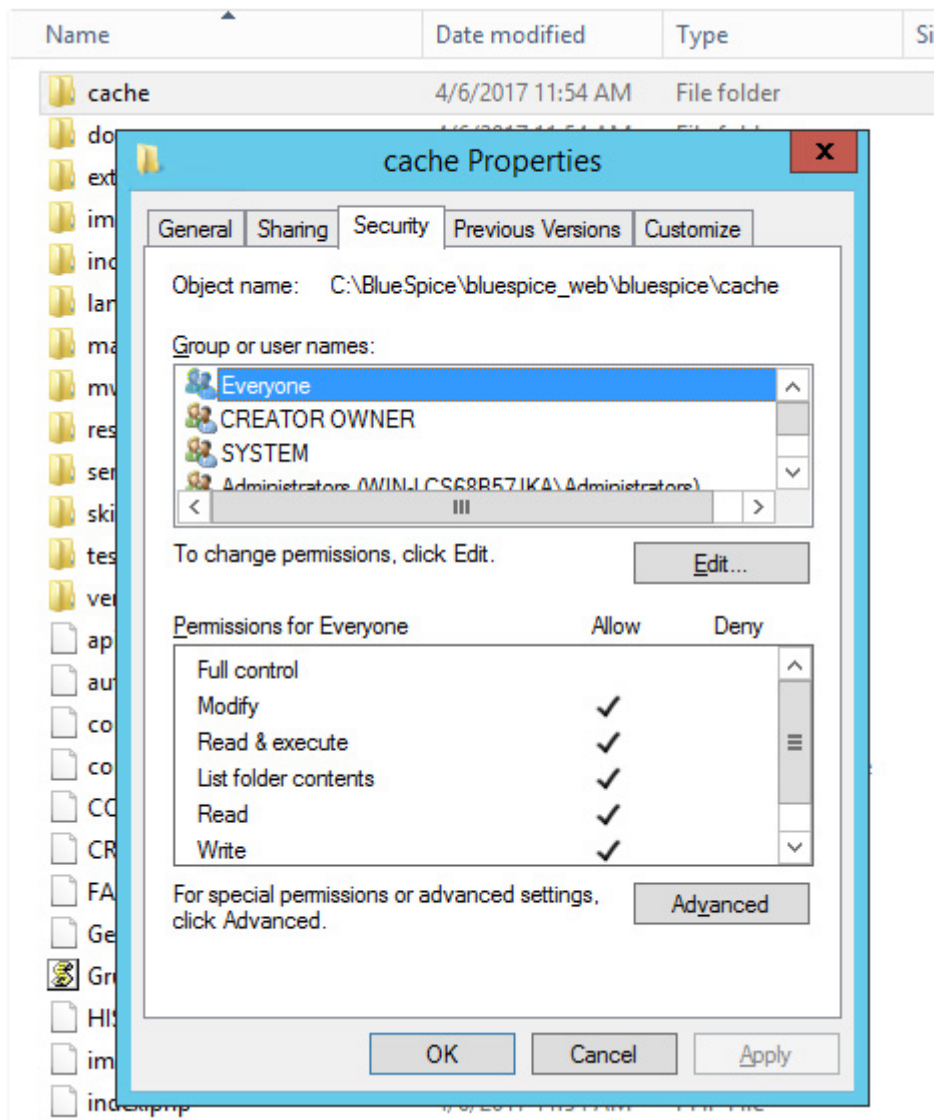
The folders, which require write permissions, are:

- `<installpath-bluespice>/cache`
- `<installpath-bluespice>/images`
- `<installpath-bluespice>/extensions/BlueSpiceFoundation/config`
- `<installpath-bluespice>/extensions/BlueSpiceFoundation/data`
- `<installpath-bluespice>/extensions/Widgets/compiled_templates` (**only BlueSpice pro**)

### Assignment of Permissions with Windows

---

Assign "change" rights for this folder for the local user "Everyone".



## Assignment of Permissions with Linux

Here you can assign rights much more strictly, which is also recommended. Transfer the directory <installpath-bluespice> recursively to the user root (CHMOD for Files 644, CHMOD for Directories 755) and after this, transfer the mentioned directory recursively to the user and the group, under which the Apache Web Server runs (Debian/Ubuntu e.g. "www-data").

In the following, we provide a bash script, which works through this tasks for you with only one command.

To do so, create the file /usr/local/bin/setWikiPerm and copy the following code into this file:

```
#!/bin/bash
WWW_USER="www-data"
WWW_GROUP="www-data"

WWW_HOME=`eval echo ~$WWW_USER`
WWW_CFG=$WWW_HOME/.config

if [ $# -eq 0 ]; then
```

```

        echo "You must enter the path of your MediaWiki installation."
        exit
    elif [ ! -d $1 ]; then
        echo "$1 does not exist or is no path."
        exit
    fi

    PATH=`echo "$1" | sed -e 's#/###'`

    /usr/bin/find $PATH -type d -exec /bin/chmod 755 {} \;
    /usr/bin/find $PATH -type f -exec /bin/chmod 644 {} \;

    /bin/chown -R root:root $PATH

    pathes=(
        "$PATH/cache" \
        "$PATH/images" \
        "$PATH/_sf_instances" \
        "$PATH/extensions/BlueSpiceFoundation/data" \
        "$PATH/extensions/BlueSpiceFoundation/config" \
        "$PATH/extensions/Widgets/compiled_templates" \
    )

    for i in "${pathes[@]}; do
        if [ -d $i ]; then
            /bin/chown -R $WWW_USER:$WWW_GROUP $i
        fi
    done

    if [ ! -d $WWW_CFG ]; then
        /bin/mkdir $WWW_CFG
    fi

    /bin/chown -R $WWW_USER:$WWW_GROUP $WWW_CFG

    /bin/chmod 755 $PATH/extensions/SyntaxHighlight_GeSHi/pygments/create_pygmentize_bundle
    /bin/chmod 755 $PATH/extensions/SyntaxHighlight_GeSHi/pygments/pygmentize

    /usr/bin/find $PATH/extensions/Scribunto/engines/LuaStandalone/binaries/*_linux_* -name

```

If needed, replace the content of the variables

```

WWW_USER="www-data"
WWW_GROUP="www-data"

```

with the appropriate user and group of your distribution.

After this, assign CHMOD 755 to this file. Now you can run the script and let it do the complete permission setting automatically with the following command:

```

setWikiPerm <installpath-bluespice>

```



**Note that when the update.php is executed on the console, the rights can be partially discarded. For this reason, set the rights to "update.php" again.**

## 3.2. Environment variables

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2 Figure out Paths .....	23
3 Enter Environmental Variables .....	23

For using console commands for PHP and MySQL in a comfortable way, some settings in the environment variables should be done. This document describes how to do this.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.

### Figure out Paths

Please try to figure out in which paths of your Windows installation the following files are located:

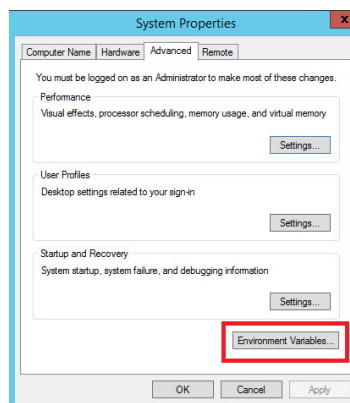
- php.exe
- mysql.exe

This document uses these paths as **an example** for the description:

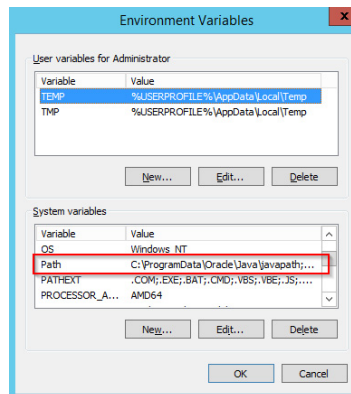
- C:\Program Files (x86)\PHP\php-5.6.30\php.exe
- C:\Program Files\MariaDB 10.1\bin\mysql.exe

### Enter Environmental Variables

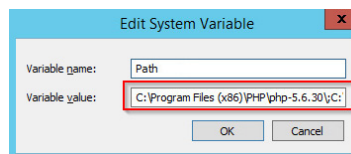
1. Press the key combination "Windows + R" to start the input request
2. Start the program "SystemPropertiesAdvanced.exe"
3. Click at "Environment Variables"



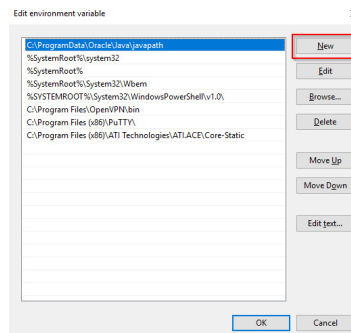
4. Open the variable "Path" at "System variables" with a double click



5. With Windows 2012: In the line "Value of Variables", add the paths to php.exe and mysql.exe, separated by semicolon, directly at the beginning of the line. Regarding the path example, this would be **"C:\Program Files (x86)\PHP\php-5.6.30;C:\Program Files\MariaDB 10.1\bin\;"**



6. Windows 2016 and above: Add two new entries with their respective pathnames



7. Close all windows by clicking on "OK"
8. Restart the command line

Now you should be able to call up the commands "php" and "mysql" without problems in the command line.



## 4. Configuration of the webservice

---

- [Extended Search](#)
- [PDF-Export](#)
- [VisualDiff](#) (**BlueSpice pro only**)
- [LatexRenderer](#) (**BlueSpice pro only**)

## 4.1. ExtendedSearch

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3 Configuring Tomcat .....	27
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3.2 Windows .....	27
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5 Restarting Tomcat .....	27
6 Activating the Extended Search in BlueSpice .....	28

This document describes the installation of the extended search for BlueSpice. Please take into account, that the [Apache Tomcat server](#) must be installed and configured completely.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C: \inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).
- The placeholder `<tomcat-webapps>` stands for the path to the Webapps directory of your Tomcat server, e.g. C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps (Windows) or /var/lib /tomcat8/webapps (Linux).

### Setting-up the Solr-Cores

Create the following directory:

```
/opt/bluespice/data (Linux)  
C:\BlueSpice\bluespice_data (Windows)
```

Move the directory "solr" from `<installpath-bluespice>/extensions/BlueSpiceExtensions /ExtendedSearch/webservices` to the just created directory.

Switch to this directory and go to the subfolder `bluespice/conf/lang`. Choose `stopwords_<LANG>.txt` there, which matches your language and replace the file `stopwords.txt` in the folder `bluespice/conf` (one level higher) with this file.



**With Linux, please transfer the folder `/opt/bluespice/data/solr` recursively to the user and group, under which the Tomcat server is running.**

## Configuring Tomcat

The Tomcat server needs to know the directory to the Solr core. The following describes how to configure this.

### Linux

The distributions differ at this point regarding the configuration file. How this needs to be configured with the distribution you are using can be found in the documentation of the distributor. The following steps explain the configuration using Debian/Ubuntu and Tomcat 8:

Open the file `/etc/default/tomcat8` and add the following line at the end:

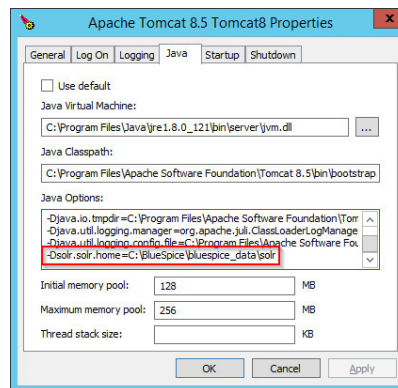
```
JAVA_OPTS="${JAVA_OPTS} -Dsolr.solr.home=/opt/bluespice/data/solr"
```

Save the changes and exit the file.

### Windows

Open the [configuration interface of Tomcat](#) and switch to the tab "Java". At the field "Java Options", add this as the last point in the line:

```
-Dsolr.solr.home=C:\BlueSpice\bluespice_data\solr
```



Save this settings by clicking at "Apply".

## Copying of the Solr Application

Move the file "solr.war" from the directory `<installpath-bluespice>/extensions/BlueSpiceExtensions/ExtendedSearch/webservices` to `<tomcat-webapps>`

## Restarting Tomcat

Restart the Tomcat Webserver like described [here](#).

## Activating the Extended Search in BlueSpice

Go to the directory `<installpath-bluespice>/extensions/BlueSpiceExtensions`. If the file **BlueSpiceExtensions.local.php** does not exist already, please copy the file **BlueSpiceExtensions.default.php** and paste it in the folder. Rename it to **BlueSpiceExtensions.local.php**. Open this file in a text editor.

Scroll to the end of the file. There you can find the following line:

```
#require_once( __DIR__."/ExtendedSearch/ExtendedSearch.setup.php" );
```

Delete the first character (**#**), save and exit the file.

Open a command line and change to the directory `<installpath-bluespice>`. Run the following command there:

```
php maintenance/update.php (Linux)  
php maintenance\update.php (Windows)
```



**With Windows, please take care that the [environment variables](#) are set correctly to access the command "php".**



**With Linux, please take care that after running the `update.php`, the [file system permissions](#) must be set again.**

As soon as the script finished its work with the message "Done", run a further maintenance script to create the search index:

```
php extensions/BlueSpiceExtensions/ExtendedSearch/maintenance/searchUpdate.php (Linux)  
php extensions\BlueSpiceExtensions\ExtendedSearch\maintenance\searchUpdate.php (Windows)
```

Running this script may take some time. This depends on the amount of content, which has been created in the wiki. When the script was completely executed, the extended search is installed successfully and is ready to use.

## 4.2. PDF export

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3 Restart Tomcat .....	29
4 Activating the PDF Export in BlueSpice .....	29
5 Troubleshooting .....	31

This document describes the installation of BlueSpice - PDF export. Please make sure that the [Apache Tomcat server](#) is completely installed and configured at the BlueSpice server.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C: \inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).
- The placeholder `<tomcat-webapps>` stands for the path to the Webapps directory of your Tomcat server, e.g. C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps (Windows) or /var/lib /tomcat8/webapps (Linux).

### Copying the BShtml2PDF Application

Move the file "BShtml2PDF.war" from the directory `<installpath-bluespice>/extensions /BlueSpiceExtensions/UEModulePDF/webservices` to `<tomcat-webapps>`

### Restart Tomcat

Restart the Tomcat Webserver like described [here](#).

### Activating the PDF Export in BlueSpice

Go to the directory `<installpath-bluespice>/extensions/BlueSpiceExtensions`. If the file **BlueSpiceExtensions.local.php** does not exist already, please copy the file **BlueSpiceExtensions.default.php** and place it in the same folder under the name **BlueSpiceExtensions.local.php**. Open this file in a text editor.

Scroll to the end of the file. You will find the following lines there:

```
#require_once( __DIR__."/UniversalExport/UniversalExport.setup.php" );  
#require_once( __DIR__."/UEModulePDF/UEModulePDF.setup.php" );
```

Remove the first character (`#`), save the file and exit it.

Open a command line and change to the `<installpath-bluespice>` folder. Execute the following command:

```
php maintenance/update.php (Linux)  
php maintenance\update.php (Windows)
```



**In Windows, make sure that the [environment variables](#) are set correctly to access the `php` command.**



**Note that you must update the [file system permissions](#) after running `update.php`.**

When the script is finished with the "Done" message, the web service is successfully installed.

```
...event_agent field does not exist in echo_event table, skipping modify field patch.
Modifying event_variant field of table echo_event ...done.
Modifying event_extra field of table echo_event ...done.
Modifying event_agent_ip field of table echo_event ...done.
...have etp_id field in echo_target_page table.
...have notification_bundle_base field in echo_notification table.
...echo_event table does not contain event_timestamp field.
...have eeb_event_hash field in echo_email_batch table.
...have event_page_id field in echo_event table.
...index echo_event_type already set on echo_event table.
...index echo_user_timestamp already set on echo_notification table.
Creating titlekey table...ok.
Rebuilding titlekey table...
... 1 ok.
...hitcounter table does not exist, skipping modify field patch.
Creating hit_counter_extension table ...done.
Creating hit_counter table ...done.
...page table does not contain page_counter field.
Creating bs_editnotifyconnector table ...done.
Creating bs_namespacemanager_backup_page table ...done.
Creating bs_namespacemanager_backup_revision table ...done.
Creating bs_namespacemanager_backup_text table ...done.
Adding page_content_model field to table bs_namespacemanager_backup_page ...done.
Adding rev_shal field to table bs_namespacemanager_backup_revision ...done.
Adding rev_content_model field to table bs_namespacemanager_backup_revision ...done.
Creating bs_permission_templates table ...done.
Creating bs_dashboards_configs table ...done.
Creating bs_usagetracker table ...done.
Creating bs_pagetemplate table ...done.
Creating bs_pageassignments table ...done.
...se_text field does not exist in bs_saferedit table, skipping modify field patch.
Creating bs_readers table ...done.
...have readers_ts field in bs_readers table.
...site_stats is populated...done.
Checking existence of old default messages...done.
Populating rev_len column
...doing rev_id from 1 to 200
Populating ar_len column
...archive table seems to be empty.
rev_len and ar_len population complete [0 revision rows, 0 archive rows].
Populating rev_shal column
...doing rev_id from 1 to 200
Populating ar_shal column
...archive table seems to be empty.
Populating ar_shal column legacy rows
rev_shal and ar_shal population complete [0 revision rows, 0 archive rows].
Populating img_shal field

Done 0 files in 0.0 seconds
Fixing protocol-relative entries in the externallinks table...
Done, 0 rows updated.
Populating fa_shal field from fa_storage_key

Done 0 files in 0.0 seconds
Updating * from namespace fields in links tables.
...doing page_id from 1 to 200
Purging caches...done.

Done in 1.6 s.
root@bluespice:/var/www/bluespice#
```

## Troubleshooting

If there is a problem with PDF export in BlueSpice, first check the [file system permissions](#).

## 4.3. VisualDiff (BlueSpice pro only)

### Contents

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This document describes the installation of VisualDiff from BlueSpice. **VisualDiff is a exclusive component of BlueSpice pro!** Please note that the [Apache Tomcat server](#) must be installed and configured on the BlueSpice server.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder <installpath-bluespice> stands for the path to your BlueSpice installation, e.g C:\inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).
- The placeholder <tomcat-webapps> stands for the path to the Webapps directory of your Tomcat server, e.g. C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps (Windows) or /var/lib/tomcat8/webapps (Linux).

### Copy of BShtmlDiff

Move the file "BShtmlDiff.war" from the directory <installpath-bluespice>/extensions/BlueSpiceVisualDiff/VisualDiff/webservices to <tomcat-webapps>

### Restart Tomcat

Restart the Tomcat Webserver like described [here](#).

**This completes the installation of VisualDiff.**

### Troubleshooting

If there is a problem with VisualDiff in BlueSpice, first check the [file system permissions](#).



## 4.4. LatexRenderer (BlueSpice pro only)

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2 Installation of the LatexRenderer application .....	33
3 Restart Tomcat .....	33
4 Troubleshooting .....	33

This document describes the installation of LatexRenderer from BlueSpice. **LatexRenderer is a exclusive component of BlueSpice pro!** Please note that the [Apache Tomcat server](#) must be installed and configured on the BlueSpice server.

### Tip for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder <installpath-bluespice> stands for the path to your BlueSpice installation, e.g C:\inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).
- The placeholder <tomcat-webapps> stands for the path to the Webapps directory of your Tomcat server, e.g. C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps (Windows) or /var/lib/tomcat8/webapps (Linux).

### Installation of the LatexRenderer application

Move the file "BSLaTeX2PNG.war" from the directory <installpath-bluespice>/extensions/BlueSpiceLatexRenderer/LatexRenderer/webservices to <tomcat-webapps>

### Restart Tomcat

Restart the Tomcat Webserver like described [here](#).

**This already completes the installation of LatexRenderer.**

### Troubleshooting

If there is a problem with LatexRenderer in BlueSpice, first check the [file system permissions](#).

## 5. Additional settings and optimization

---

- [Caching](#)
- [Cronjobs](#)
- [Time zone](#)

## 5.1. Caching

### Contents

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6 Increase PHP Memory Limit .....	36
7 Activate Bytecode Cache in PHP .....	36
8 Deactivate JobQueue .....	37

This document describes different caching options to enhance the performance of your BlueSpice installation.

### Tips for the Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g `C:\inetpub\wwwroot\bluespice` (Windows) or `/var/www/bluespice` (Linux).

### Linux vs. Windows

Please note that with equal hardware conditions, BlueSpice empirically runs more performantly on Linux than on Windows servers.

### Indicate Cache-Directory

This forces BlueSpice to use the filesystem instead of the database for some internal caches. To do this, create the file `<installpath-bluespice>/settings.d/001-Directories.php` and add the following content:

```
<?php
$wgCacheDirectory = "$IP/cache";
```

Save and close the file.



**Note that the directory "cache" in `<installpath-bluespice>` must be writable by the web server. For more information, read the [file system permissions](#).**

## Name Resolution of the Database

If this hasn't already been done while [setting up MediaWiki](#), please make sure that the database server will be addressed via IP if it runs on the same server than BlueSpice. Especially Windows has problems with the resolution of "localhost".

To do this, open `<installpath-bluespice>/LocalSettings.php` and locate the variable `$wgDBserver`. The line should ideally be:

```
$wgDBserver = "127.0.0.1";
```

## Activate Memcached

Create the file `<installpath-bluespice>/settings.d/001-Memcached.php` and add the following content:

```
<?php
$wgMainCacheType = CACHE_MEMCACHED;
$wgSessionCacheType = CACHE_DB;
$wgMemCachedServers = [ "127.0.0.1:11211" ];
```

Save and close the file.



**The prerequisite is an installed and configured memcached server on the BlueSpice server. Read the [memcached](#) article for more information.**

## Increase PHP Memory Limit

A higher memory limit of PHP results in a faster execution. ¶ This can be changed in `php.ini`. Locate and adjust the following option:

```
memory_limit = 512M (means 512 MB - varies from the available memory)
```

After saving and closing `php.ini`, the web server must be restarted.

## Activate Bytecode Cache in PHP

Since PHP 5.5 the bytecode cache "opcache" is included.

This needs to be activated in the `php.ini` first. Check if the module is integrated there. This is done via the line:

```
zend_extension=opcache.dll (Windows)
zend_extension=opcache.so (Linux)
```



**Please also note the specification of the distributor for activating PHP modules under Linux.**

Please, do the following configuration of the opcache in php.ini. Normally, all options should already exist, but are commented out by semicolon (;) at the beginning of the line. Locate the respective option in php.ini, remove the semicolon at the beginning of the line and adjust the settings as follows:

```
opcache.enable=1
opcache.memory_consumption=512 (means 512 MB - varies from the available memory)
opcache.max_accelerated_files=5000
opcache.validate_timestamps=1
opcache.revalidate_freq=2
```

After saving and closing php.ini, the web server must be restarted.

## Deactivate JobQueue

---

For this, read the [paragraph "runJobs.php"](#) in the "Cronjobs" article.

## 5.2. Cronjobs

### Contents

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2 runJobs.php .....	38
3 processBsEmailBatch.php .....	38
4 runNotifications.php (only BlueSpice pro) .....	39

This document describes cronjobs and related configurations, which should be set for your BlueSpice (depending on the used version).

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g. C: \inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).

### runJobs.php

Time-consuming processes will be moved to a processing queue in the background of BlueSpice. With every page impression, a part of these will be processed. For the case that there are lots of processes in the queue and there are relatively little page impressions, the tasks will not be processed promptly.

For this reason, the queue should be processed regularly by cronjob.

Now create a cronjob (Windows: "Scheduled task") depending on your operating system. The command to execute is:

```
php <installpath-bluespice>/maintenance/runJobs.php (Linux)  
php.exe <installpath-bluespice>\maintenance\runJobs.php (Windows)
```



**It is recommended to specify the complete path to php.exe under Windows. For more information, see the [environment variables](#) document.**

Execute the cronjob every **15 minutes**.

### processBsEmailBatch.php

For reports via email sent from MediaWiki, please create a cronjob and run it daily. The command for this is:

```
php <installpath-bluespice>/extensions/BlueSpiceEchoConnector/maintenance/processBsEmailBatch.php  
php.exe <installpath-bluespice>\extensions\BlueSpiceEchoConnector\maintenance\processBsEmailBatch.php
```



**It is recommended to specify the complete path to php.exe under Windows. For more information, see the [environment variables](#) document.**

## runNotifications.php (only BlueSpice pro)

---

The BlueSpiceReminder notifies the users by email about upcoming tasks in BlueSpice. For this, a cronjob needs to be executed once a day. This is the command:

```
php <installpath-bluespice>/extensions/BlueSpiceReminder/Reminder/maintenance/runNotifications.php  
php <installpath-bluespice>\extensions\BlueSpiceReminder\Reminder\maintenance\runNotifications.php
```



**It is recommended to specify the complete path to php.exe under Windows. For more information, see the [environment variables](#) document.**

## 5.3. Time zone

### Contents

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2 Changing the Time Zone .....	40

Even if every user can change his time zone himself in the user settings, BlueSpice sets the default time zone "Europe/Berlin" when the user first logs in. This document describes how to change this if necessary.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder <installpath-bluespice> stands for the path to your BlueSpice installation, e.g C:\inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).

### Changing the Time Zone

Open the file <installpath-bluespice>/settings.d/001-DefaultSettings.php. In delivery stat, you can find these two lines there:

```
$wgLocaltimezone = 'Europe/Berlin';  
$wgDefaultUserOptions['timecorrection'] = 'ZoneInfo|' . (date("I") ? 120 : 60) . '|Europe/
```

Replace "Europe / Berlin" with your time zone. An overview of all possible time zones can be found in the [official PHP documentation](#).

Save and close the file.



## 6. Further system configuration

---

- [Environment variables \(Windows\)](#)
- [Apache Tomcat](#)
- [Memcached](#)

## 6.1. Apache Tomcat

---

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This document describes the configuration of the Apache Tomcat server, which is needed for the [Webservices](#) of BlueSpice.

### Installation

---

#### Linux

---

Install the latest version of the Apache Tomcat server in the package manager of your distribution. The package manager dissolves all dependencies and installs the required packages.

#### Windows

---

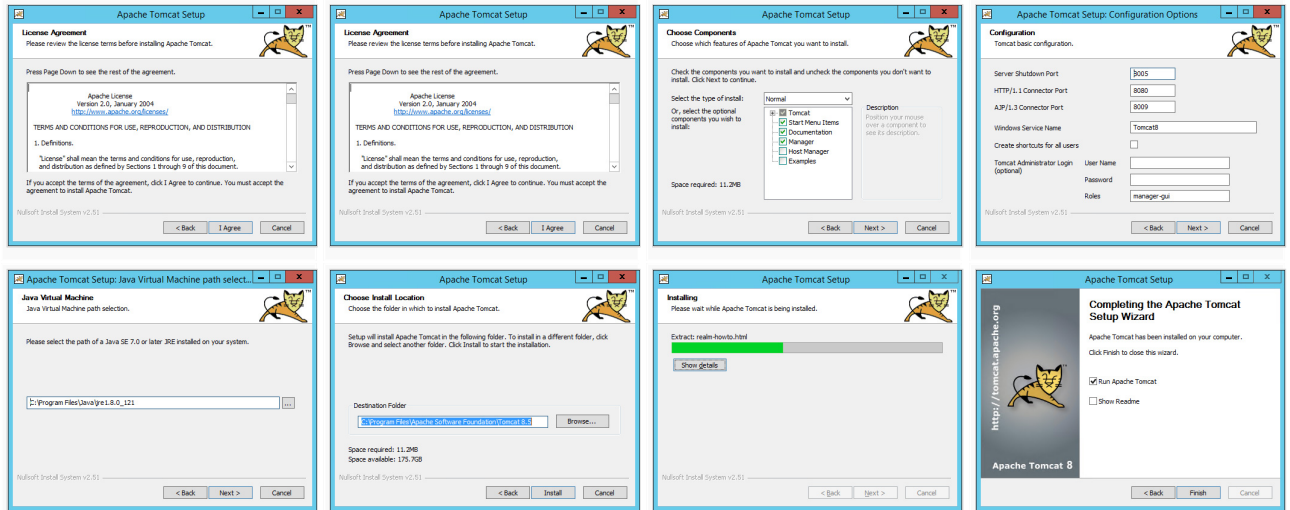
#### Java

---

Apache Tomcat requires the Java Runtime Environment. If these is not already installed at your system, download ([www.java.com](http://www.java.com)) and install it. We recommend the 64 bit version for latest systems.

## Tomcat

Download the "32-bit/64-bit Windows Service Installer" from the [Tomcat project website](#). No modifications are necessary during the installation process. Confirm the single steps with "Next".



## Installation Check

If the Apache Tomcat server has been installed and started correctly can be checked by calling up `http://<host name-or-ip-of-the-server>:8080`. With a correct installation, the default page of the server will be displayed.

## Configuration

Now, two configuration files of the Tomcat server need to be adjusted:

- context.xml
- server.xml

Those can - per default - be found at:

- with Windows: `C:\Program Files\Apache Software Foundation\Tomcat 8.5\conf`
- with Linux: `/etc/tomcatX` (the "X" stands for the particular Tomcat version)

### context.xml

Replace the line

```
<context>
```

with

```
<Context mapperContextRootRedirectEnabled="true">
```

---

## server.xml

---

Please make sure that the complete block

```
<Connector port="8080" protocol="HTTP/1.1"  
... />
```

is as follows:

```
<Connector port="8080" protocol="HTTP/1.1"  
connectionTimeout="20000"  
URIEncoding="UTF-8"  
redirectPort="8443"  
address="127.0.0.1" />
```

---

## Restart Tomcat

---

Restart the Tomcat server:

- Linux: *service tomcatX restart* (the "X" stands for the particular Tomcat version)
- Windows: See below: [Restart Tomcat](#)

---

## Special features under Windows

---

---

### Configure Tomcat

---

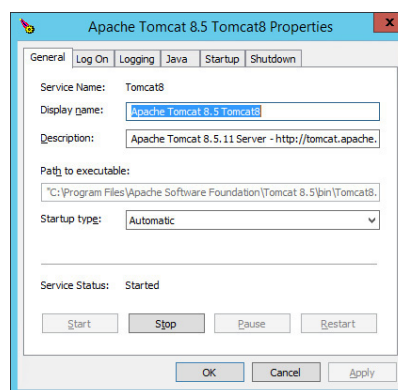
All of the following settings need to be done in the configuration interface of Tomcat. These can be found in the start menu under "Configure Tomcat".

---

### Restart Tomcat

---

The restart can be performed in the first tab of the configuration interface. Stop and then start the service there.



## Setup Autostart

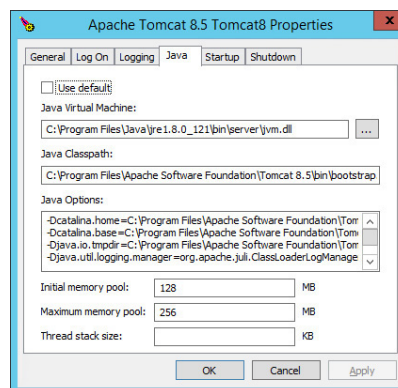
Tomcat will not automatically be started with Windows. This needs to be configured in the first tab, where you also start the service. Switch to "Automatic" under "Startup type" and save this changes with a click on "Apply".

## Particular Caution: Java Update

Tomcat requires Java. The path for this is firmly defined in Tomcat. Java, however, changes the installation path with every update. Those needs to be configured in Tomcat after every update to guarantee the functionality of Tomcat.

To do this, switch to the tab "Java" and change the path to jvm.dll under "Java Virtual Machine" - normally this is

```
C:\Program Files\Java\>\bin\server\jvm.dll.
```



## 6.2. Memcached

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This document describes how to set up the memcached server, with which you can achieve some speed optimization. For the configuration of BlueSpice, also read the paragraph "Activate Memcached" in the "Caching" article.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).

### Linux

#### Installation

Install the memcached server in the package manager of your distribution.

#### Configuration

Open the file that contains the memcached configuration (for example, `/etc/memcached.conf` under Debian / Ubuntu). Locate the `-m` argument and increase the amount of memory available depending on the capabilities of your server:

```
-m 1024
```

Save and close the file, and restart memcached.

## Check the Server

---

Verify that the memcached server is running:

```
netstat -tulpn | grep 11211
```

If you receive an output that is similar to this, memcached has started successfully:

```
root@bluespice:/var/www/bluespice# netstat -tulpn | grep 11211
tcp  0 0 127.0.0.1:11211  0.0.0.0:*    LISTEN  15163/memcached
udp  0 0 127.0.0.1:11211  0.0.0.0:*    15163/memcached
root@bluespice:/var/www/bluespice#
```

## Windows

---

The use of Nick Pirocanac's MemCachedD Manager is highly recommended. This makes the configuration very simple.

## Requirements

---

An installed .NET Framework version 3.5 is required for the MemCachedD Manager.

## Download

---

Download the MemCachedD Manager from [software.informer.com](http://software.informer.com).

## Installation

---

During the installation you have hardly any setting possibilities, so you can "click" through the installation process without any changes.

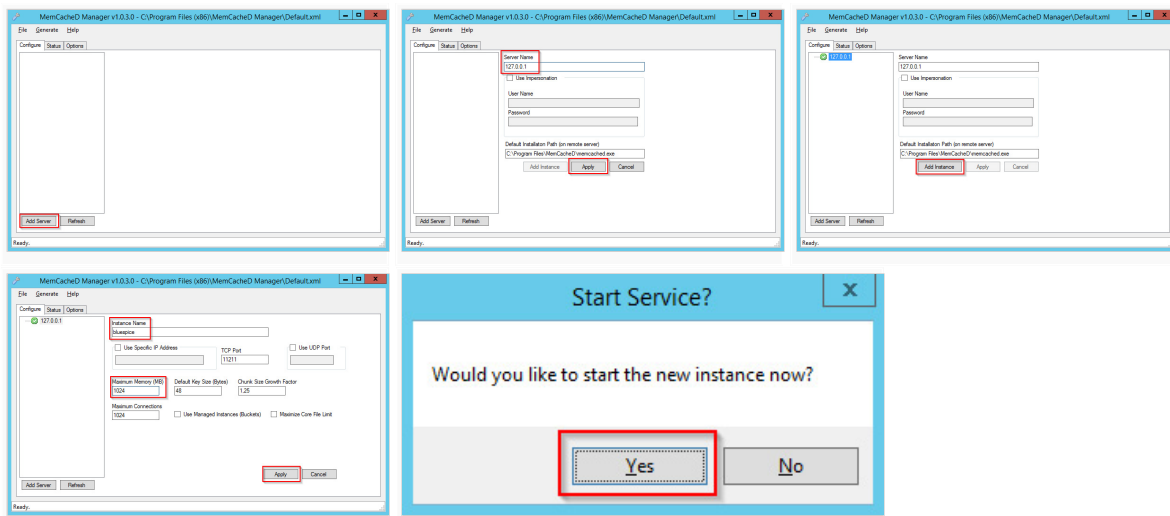
## Starting the MemCachedD Manager

---

Always start the MemCachedD Manager from the start menu **as administrator** (right click -> Run as administrator)!

## Configuration

1. In MemCached Manager, click "Add Server"
2. Enter the local IP "127.0.0.1" under "Server Name" and click on "Apply"
3. Click "Add Instance"
4. Enter any desired name under "Instance Name"
5. Under Maximum Memory, increase the available memory depending on the capabilities of your server
6. Click "Apply"
7. Start the new created instance by clicking on "Yes"



The Memcached Server is now installed and configured.



## 6.3. Improve speed performance

---

BlueSpice is optimized for fast read accesses. If your BlueSpice is running slowly, it can have different reasons. Often the search engine is not set up or the corresponding Tomcat server is not available. Also, an incorrect configuration (e.g., caches) may be the cause. Or the performance of your server is too low.

In this Howto you will find the most important solutions for increasing the speed of your BlueSpice instance.

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## Apache Tomcat Server not available

---

BlueSpice uses the search engine Apache Lucene / Solr, which supports important services of the wiki. Should saving a page take a long time, this is an indication that you have a problem with the search engine. Or you can simply enter a search query: If the input and the search page does not look as described [here](#), the [search engine](#) is not installed correctly.

- Please check the [Installation manual](#) to see if you have completed the installation.
- Restart the Apache Tomcat Server.

## Measures to increase performance

---

### Specify cache directory

---

When you specify a cache directory, the Wiki uses the filesystem for some internal caches instead of the database

```
## Set $wgCacheDirectory to a writable directory on the web server
## to make your wiki go slightly faster. The directory should not
## be publically accessible from the web.
$wgCacheDirectory = "$IP/cache";
```

Please make sure that the folder named here can be described by your web server. See also the notes in the [Installation manual](#).

Learn more: [https://www.mediawiki.org/wiki/Manual:\\$wgCacheDirectory](https://www.mediawiki.org/wiki/Manual:$wgCacheDirectory)

## Resize the name resolution of the database server

---

Especially under Windows, the name resolution of "localhost" can lead to delays. Use the IP address instead of the DNS name in the database. To do this, change the server configuration accordingly in LocalSettings.php:

```
$wgDBserver = "127.0.0.1"; #change IP value to your DB server IP
```

## Enable memcached

---

Use Memcached as the central cache type. Note that Memcached must be installed and active on the server!

To do this in LocalSettings.php insert this configuration at the end:

```
$wgMainCacheType = CACHE_MEMCACHED;  
$wgMemCachedServers = array( "127.0.0.1:11233" );
```

## Enable Bytecode Cache in PHP

---

Since PHP 5.5, the bytecode cache opcache is delivered with. This must however be activated in the php.ini.

```
opcache.enable=1
```

Additional settings:

```
opcache.memory_consumption=512  
opcache.max_accelerated_files=10000  
opcache.validate_timestamps=1  
opcache.revalidate_freq=2
```

After changing the php.ini, the web server must be restarted.

Learn more: <http://php.net/manual/de/opcache.configuration.php> und <http://www.hostingadvice.com/how-to/enable-php-5-5-opcache-ubuntu-14-04/>

## Increase PHP Memory Limit

---

A higher memory limit of PHP results in a faster execution. This must be specified in php.ini:

```
memory_limit = 256M
```

After changing the php.ini, the web server must be restarted.

## Set up JobQueue

---

Some tasks from MediaWiki can be delayed. Typically, they are processed by calling pages on the wiki. This can lead to delays. To prevent this, the JobQueue must be set up. Create a cronjob or task that runs this script every 10 minutes:

```
php maintenance/runJobs.php --maxjobs 100
```

## Renew the L10N cache

---

Only in the case of absolute emergency, you can manually update the local cache, otherwise it will be rewritten every page call. To do this in LocalSettings.php insert this configuration at the end:

```
$wgLocalisationCacheConf['manualRecache'] = true;
```

Then execute the following command:

```
php /maintenance/rebuildLocalisationCache.php --force --lang="de,de-formal,en"
```

This command should also be set up as an hourly cronjob.

Learn more: [https://www.mediawiki.org/wiki/Manual:\\$wgLocalisationCacheConf](https://www.mediawiki.org/wiki/Manual:$wgLocalisationCacheConf)

## 7. Security settings

---

- [File System Permissions](#)
- [Deactivating installcheck file](#)
- [Save Directories](#)

## 7.1. Deactivating installcheck file

---

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As soon as the setup of BlueSpice is completed, you should prevent the execution of the `installcheck.php` while using the wiki productively.

A short instruction can be found in this document.

### Tips for this Document

---

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C:\inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).

### Deactivating installcheck.php

---

Switch to the directory `<installpath-bluespice>` and open the `installcheck.php` file in a text editor. Insert a new line after the first line and insert

```
die( 'Deactivated.' );
```

Save and exit the file. The `installcheck.php` is no longer accessible now.

If you need to restore this file at a later time, it is sufficient to temporarily disable inserted line by placing the `#` character at the beginning of the line.

## 7.2. Save Directories

---

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### Tips for this Document

---

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C: `\inetpub\wwwroot\bluespice` (Windows) or `/var/www/bluespice` (Linux).

### Explanation for Saving Directories

---

It is highly recommended, to lock several directories to save them from access from external browsers, so that calling up the directory or the content delivers the HTTP status code (Forbidden).

To find out how this works with the webserver you are using, please read the documentation of your webserver software.

The following directories should be saved:

- `<bluespice-url>/cache`
- `<bluespice-url>/images`  
Please keep in mind that you need to unblock the subfolder `<bluespice-url>/images/bluespice/flexiskin` afterwards, because this subfolder must be accessible.
- `<bluespice-url>/mw-config`

## 8. Advanced configuration

---

- [Configuration Folder settings.d](#)
- [Activation and deactivation of BlueSpice-extensions](#)
- [Rebuilding the search index](#)

## 8.1. Configuration Folder settings.d

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### Tip for theDocument

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C: `\inetpub\wwwroot\bluespice` (Windows) or `/var/www/bluespice` (Linux).



**This document provides background information for advanced users. We recommend not to make any changes on BlueSpice, if you are not familiar with the following information.**

### Explanation For the Folder settings.d

Starting with BlueSpice version 2.27.1, all default settings as well as the modules of BlueSpice are outsourced. All configurations can now be found in separate files in the `/settings.d` folder.

The files in this folder integrate the standard MediaWiki extensions required for BlueSpice, perform recommended default configurations, and also integrate all BlueSpice-related extensions (free or pro).

The files in the `/settings.d` folder are automatically integrated in alphabetical order and are therefore prefixed with numbers.

If you want to add additional configurations yourself, you can save your own files here. For this, it is recommended to use the prefix `001-`.

Additional configurations, which are not packed per default but can be used, can be found at [auf github.com](#).



## 8.2. Activation and deactivation of BlueSpice extensions

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In some cases you could need the possibility to activate or deactivate single extensions of BlueSpice. This document will show you how to do this.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C: `\inetpub\wwwroot\bluespice` (Windows) or `/var/www/bluespice` (Linux).

### Create a configuration file which will be not overriten while you update BlueSpice

All BlueSpice-extensions are configured in the file `<installpath-bluespice>/extensions/BlueSpiceExtensions/BlueSpiceExtensions.default.php` by default. You should not use this file to configure these extensions because it will be overwritten while you update BlueSpice. Copy this file to `<installpath-bluespice>/extensions/BlueSpiceExtensions/BlueSpiceExtensions.local.php` and do all changes in this file.

### Deactivation of extensions

Search the relevant extension in `<installpath-bluespice>/extensions/BlueSpiceExtensions/BlueSpiceExtensions.local.php`. Uncomment the line which includes the extension by typing `"/` at the beginning of the line.

### Activation of extensions

If you wish to activate extensions which are deactivated please search the relevant extension in `<installpath-bluespice>/extensions/BlueSpiceExtensions/BlueSpiceExtensions.local.php`. Remove the commentation at the beginning of the line (`'#' or '/'`).

After that open a command line and switch to the folder `<installpath-bluespice>`. Execute the following command:

```
php maintenance/update.php (Linux)  
php maintenance\update.php (Windows)
```



**With Windows, please take care that the [environment variables](#) are set correctly to access the php command.**



**With Linux, please keep in mind that after running the update.php, the [file system permissions](#) need to be adjusted again.**

When the script is finished with the "Done" message, proceed to the next step.

```
...event_agent field does not exist in echo_event table, skipping modify field patch.
Modifying event_variant field of table echo_event ...done.
Modifying event_extra field of table echo_event ...done.
Modifying event_agent_ip field of table echo_event ...done.
...have etp_id field in echo_target_page table.
...have notification_bundle_base field in echo_notification table.
...echo_event table does not contain event_timestamp field.
...have eeb_event_hash field in echo_email_batch table.
...have event_page_id field in echo_event table.
...index echo_event_type already set on echo_event table.
...index echo_user_timestamp already set on echo_notification table.
Creating titlekey table...ok.
Rebuilding titlekey table...
... 1 ok.
...hitcounter table does not exist, skipping modify field patch.
Creating hit_counter_extension table ...done.
Creating hit_counter table ...done.
...page table does not contain page_counter field.
Creating bs_editnotifyconnector table ...done.
Creating bs_namespacemanager_backup_page table ...done.
Creating bs_namespacemanager_backup_revision table ...done.
Creating bs_namespacemanager_backup_text table ...done.
Adding page_content_model field to table bs_namespacemanager_backup_page ...done.
Adding rev_sha1 field to table bs_namespacemanager_backup_revision ...done.
Adding rev_content_model field to table bs_namespacemanager_backup_revision ...done.
Creating bs_permission_templates table ...done.
Creating bs_dashboards_configs table ...done.
Creating bs_usagetracker table ...done.
Creating bs_pagetemplate table ...done.
Creating bs_pageassignments table ...done.
...se_text field does not exist in bs_saferedit table, skipping modify field patch.
Creating bs_readers table ...done.
...have readers_ts field in bs_readers table.
...site_stats is populated...done.
Checking existence of old default messages...done.
Populating rev_len column
...doing rev_id from 1 to 200
Populating ar_len column
...archive table seems to be empty.
rev_len and ar_len population complete [0 revision rows, 0 archive rows].
Populating rev_sha1 column
...doing rev_id from 1 to 200
Populating ar_sha1 column
...archive table seems to be empty.
Populating ar_sha1 column legacy rows
rev_sha1 and ar_sha1 population complete [0 revision rows, 0 archive rows].
Populating img_sha1 field

Done 0 files in 0.0 seconds
Fixing protocol-relative entries in the externallinks table...
Done, 0 rows updated.
Populating fa_sha1 field from fa_storage_key

Done 0 files in 0.0 seconds
Updating *_from_namespace fields in links tables.
...doing page_id from 1 to 200
Purging caches...done.

Done in 1.6 s.
root@bluespice: /var/www/bluespice#
```

1888eb1aespice:/var/www/bluespice/

## 8.3. Rebuilding the search index

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In some cases it is needed to rebuild the search index. This document will show you the steps to do this.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- The placeholder <installpath-bluespice> stands for the path to your BlueSpice installation, e.g C:\inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).

### Rebuilding the search index

Please open a command line on your system and change to <installpath-bluespice>. Execute the following command:

```
php extensions/BlueSpiceExtensions/ExtendedSearch/maintenance/searchUpdate.php (Linux)  
php extensions\BlueSpiceExtensions\ExtendedSearch\maintenance\searchUpdate.php (Windows)
```



**With Windows, please take care that the **environment variables** are set correctly to access the php command.**

Depending on the size of your contents and uploads this can take a while.

## 9. SyntaxHighlight GeSHi

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The MediaWiki-extensions [SyntaxHighlight\\_GeSHi](#) is not running correctly in some cases of setups. This document will show you how to configure your system environment that you can use the extension.

### Tips for this Document

- Please, read this manual completely and work through the single installation steps one after another.
- For editing the configuration files with a text editor, the files must be saved in UTF-8 coding without BOM (Byte Order Mark).
- The placeholder `<installpath-bluespice>` stands for the path to your BlueSpice installation, e.g C:\inetpub\wwwroot\bluespice (Windows) or /var/www/bluespice (Linux).

### SyntaxHighlight\_GeSHi and Linux

If you are using Linux as BlueSpice server it's enough make two files executable (*chmod 755*):

```
<installpath-bluespice>/extensions/SyntaxHighlight_GeSHi/pvaments/create_pymentize_bundle  
<installpath-bluespice>/extensions/SyntaxHighlight_GeSHi/pygments/pygmentize
```

For more information please refer to the article "[File System Permissions](#)".

### SyntaxHighlight\_GeSHi and Windows

First, please install [latest version of Python 2.7.x](#). It is recommended to use the standard installation path (C:\Python27).

After that please open your windows command line and change to the subfolder "Scripts" in the Python installation path. Install the needed package "pygments" by using this command:

```
pip.exe install pygments
```

Now tell your BlueSpice installation where the pygmentize.exe can be found by setup this variable in your LocalSettings.php:

```
$wgPygmentizePath = "c:\\Python27\\Scripts\\pygmentize.exe";
```

At the end please take care that the temporary directory of your PHP installation (default: C:\Windows\Temp) is fully writable by your webserver.

With these steps you should have a working system setup to use the SyntaxHighlight\_GeSHi without problem.