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# Installation BlueSpice 4 with Installer

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## Download installation package

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Download the installation package from the bluespice.com website.

Store the installation package in a web root of your choice (see our [folder structure recommendations](#) for Windows installations), where you can access it via your browser.

Make sure that [file system permissions](#) are set up properly.

## Introduction

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BlueSpice 4 is installed as a complete package with MediaWiki 1.39 and BlueSpice 4. This installation guide gives you step-by-step instructions to install BlueSpice.

**Important!** If you do a fresh install of BlueSpice 4, it might be necessary to run `update.php` afterwards if you get an error.

This document only describes the steps for installing the web application itself. For the installation of extended functions such as [VisualEditor](#) and [Extendedsearch](#), please refer to the corresponding documentation.

We will not go into details about your operating system installation here, but assume that you have already checked the [system requirements](#) and your server configuration. You can find more details in our detailed [installation guide](#).

Further help on optimizing the operating system can be found in our [compendium](#).

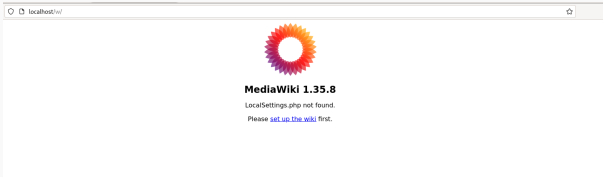

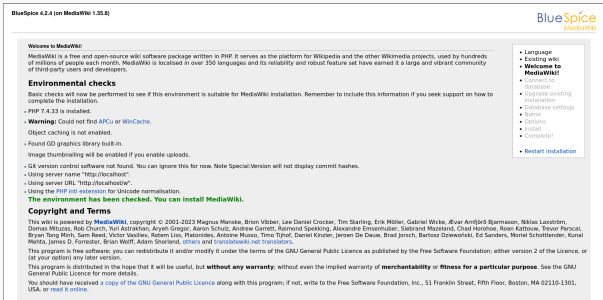
## Step-by-step installation

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**Note:** If you also install the paid extension "BlueSpiceWikiFarm", make sure that the codebase is not located directly in the DocumentRoot of your web server or VirtualHost - it must be located in the /w subfolder!

**Note:** If Error "Fatal exception of type MWException" shows up, you need to check the rights of your Bluespice Folder and give it reading- and writing permissions. If there is still a error you need to add `"$wgShowExceptionDetails = true"` to your `localsettings.php` file and reload your URL to get preciser information of your error.

First use your browser to call up the URL under which the web application can be reached. Then complete the following steps:

	<p><b>Step 1: Start the installation setup</b></p> <p>First, open the URL of your web application in your browser. Then click on "set up the wiki" to start the installation.</p> <p>If you don't meet all necessary requirements for PHP yet, you won't be able to view this setup page yet. Please make the necessary corrections to your PHP installation first. Otherwise, you are now on the page shown in the screenshot (click on the thumbnail to see the full screenshot).</p>
	<p><b>Step 2: Select your language</b></p> <p>You are now in the language selection. "Your language" defines the language that guides you through the installer,</p> <p>"Wiki language" the later language settings of your wiki.</p>
	<p><b>Step 3: MediaWiki installation check</b></p> <p>This step takes you to the MediaWiki installation check. Please read this check carefully, as possible hints may not block the installation itself, but may lead to restrictions of the wiki functionality in practice. Make the necessary corrections to your system and reload the page in your browser before proceeding with the setup.</p>
	<p><b>Step 4: Establish the database connection</b></p> <p>In this step, you configure the database connection. Here you can either specify the root user of your MySQL server and in the following step have the installer create an additional user who only has access to the BlueSpice database. The database will also be created automatically if it does not yet exist. Or, alternatively, you can</p>

create a user and a database in advance and directly enter this information here. You can find more information on the manual creation of users and databases in the [official Mediawiki documentation](#).

## Step 5: Create the BlueSpice database user

Depending on the procedure you followed in the previous step, you can now define an exclusive user for your BlueSpice database. If you have already created the user explicitly for the database in advance, leave the check mark at "Use the same database account as during the installation process".

## Step 6: Create your wiki name and administrator account

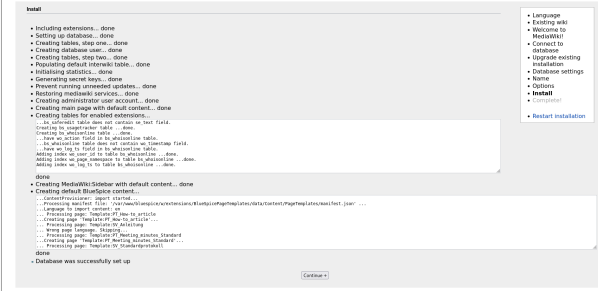
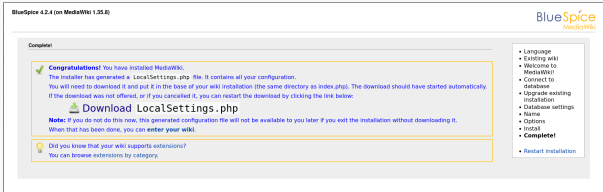
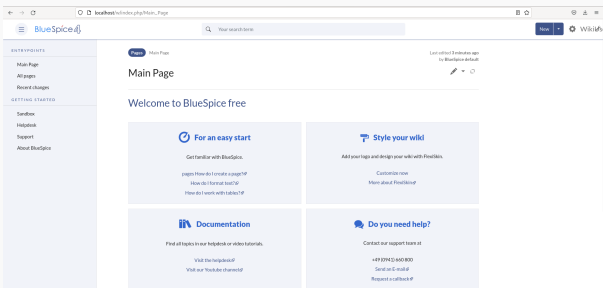
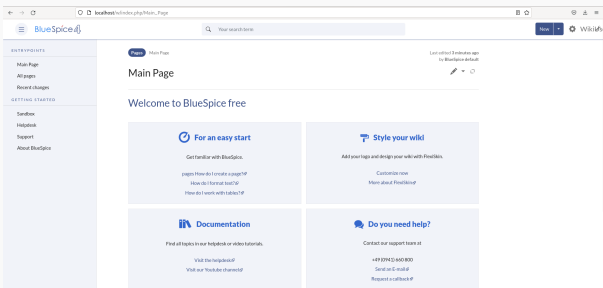
Enter the name for your wiki. This name is displayed in the title bar of your browser and in various other places such as in notification mails. Pay extra attention to the correct spelling because this name can afterwards only be changed with a certain effort and certain risks. Next, enter the username, password and e-mail address of the first wiki administrator. The administrator account is then created by the wiki during setup.

## Step 7: Options

In this step, you specify the e-mail address for notification e-mails.

## Step 8: Installation

This step announces the installation of the wiki. If you don't need to make any changes to the previous steps, click "Next" to start the installation process.

	<h3>Step 9: Installation status</h3> <p>After the successful installation of BlueSpice, you see a confirmation page that you confirm with "Next".</p>
	<h3>Step 10: Download LocalSettings.php</h3> <p>In the last step of the installation, you will be asked to download the configuration file "LocalSettings.php" of your installation. Download it and place it in the root directory of your BlueSpice codebase.</p>
	<h3>Step 11: Rename the template folders</h3> <ol style="list-style-type: none"> <li>1. Open the folder <code>&lt;installpath-bluespice&gt;\extensions\BluesSpiceFoundation</code> and rename the subfolder <code>config.template</code> to <code>config</code> and create the new folder <code>data</code>. These folders should have read and write access see <a href="#">File System Permissions</a>. <b>Note:</b> Since BlueSpice 4.3.0, <code>config.template</code> directory no longer exists, so step of renaming it should be skipped</li> <li>2. Run <code>php &lt;installpath-bluespice&gt;\maintenance\update.php</code> from the console.</li> </ol>
	<h3>Step 12: Load the BlueSpice welcome page</h3> <p>If you now access the URL you specified for BlueSpice, you now see the BlueSpice welcome page. You can start using BlueSpice immediately.</p>

## BlueSpice WikiFarm

If you are installing **BlueSpice WikiFarm**, follow these [instructions](#). If not, skip to [Next steps](#).

Now open a command line and change to the folder `<installpath-bluespice>`.

Run the following command:

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

## Next steps

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**Note:** If the page is not loading, give the group "users" change-permissions for the folder C:\Windows\Temp.

For security reasons, it is recommended to prevent access to the path `mw-config/` after the installation. This can be implemented as follows:

Linux

Windows

In Apache, add the following entry to the file `000-bluespice.conf` :

```
<Directory /var/www/bluespice/w/mw-config>
    Require all denied
</Directory>
```

In IIS, create a file `web.config` in the sub-directory `mw-config/` with the following content:

```
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
  <system.webServer>
    <security>
      <authentication>
        <anonymousAuthentication enabled="false" />
      </authentication>
    </security>
  </system.webServer>
</configuration>
```

Please note that this entry may have to be removed temporarily if the web installer is used to update the application.

**Important!** As next step, you can configure [VisualEditor](#) and [Extendedsearch](#).

## Setup:Installation Guide

**Note:** For general questions regarding the installation, maintenance, and usage of BlueSpice free, go to our [community forum](#).

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## Introduction

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We are happy that you decided to install the latest version of BlueSpice 4.

Please follow these steps:

1. [Check the system requirements](#)
2. [Prepare the server environment](#)
3. [Install the BlueSpice application](#)
4. [Optimize the configuration](#)

## Check the system requirements

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- [System requirements](#)

## Prepare the server environment

---

- [Linux server environment](#)
- [Windows server environment](#)

## Install the BlueSpice application

---

Please select which installation type you need:

- [Full BlueSpice installation](#)
  - Extended Functions: [VisualEditor](#), [ExtendedSearch](#)
- [BlueSpice WikiFarm installation](#)
- [Docker image](#)

## Upgrade and patch updates

---

- [Patch update from BlueSpice 4.2.x to a higher version 4.2.x+n](#)
- [Upgrade from BlueSpice 3.2.x to BlueSpice 4.2.x](#)

## Migration from MediaWiki to BlueSpice

---

- [Migration from MediaWiki to BlueSpice](#)

## Optimize the configuration

---

If you don't need to set up a server environment "from scratch", you can directly refer to the setup instructions for individual system components. Just make sure that you really have everything configured as needed:

## Webservices for Apache Tomcat

- [Drawio](#)
- [Mathoid](#)
- [PDF-Export](#)

## Additional settings and optimizations

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

## Security settings

- [File System Permissions](#)
- [Save Directories](#)

## Compendium

- [Backup](#)
- [Configuration Folder settings.d](#)
- [ExtendedSearch Configuration](#)
- [Folder structure under Windows](#)
- [Maintenance scripts](#)
- [Maintenance scripts/batchStabilize](#)
- [Maintenance scripts/dumpPDF](#)
- [Maintenance scripts/executeTransfer](#)
- [Maintenance scripts/export](#)
- [Performance Optimization](#)
- [Performance Optimization/ManualRecache](#)
- [Performance Optimization/MySQL](#)
- [Performance Optimization/PHP](#)
- [VisualEditor Configuration](#)
- [Windows Folder Structure](#)

## Setup:Installation Guide/Advanced

- [Backup](#)
- [Configuration Folder settings.d](#)
- [ExtendedSearch Configuration](#)
- [Folder structure under Windows](#)
- [Maintenance scripts](#)
- [batchStabilize](#)

- [dumpPDF](#)
- [executeTransfer](#)
- [export](#)
- [Performance Optimization](#)
- [ManualRecache](#)
- [MySQL](#)
- [PHP](#)
- [VisualEditor Configuration](#)
- [Windows Folder Structure](#)

## ExtendedSearch configuration

If the [ElasticSearch service is up and running](#), you can enable BlueSpice Extended Search.

- Go to your BlueSpice install path. For example:

```
cd /var/www/bluespice
```

- Go to the folder *settings.d*:

```
cd settings.d
```

- Create a file in this folder and name it *020-BlueSpiceExtendedSearch.local.php*.
- Put the following content in the newly created file.

```
<?php
wfLoadExtension( 'BlueSpiceExtendedSearch' );
$GLOBALS['wgSearchType'] = 'BS\\ExtendedSearch\\MediaWiki\\Backend\\BlueSpiceSearch';
```

- Go to your BlueSpice install path again. For example:

```
cd /var/www/bluespice
```

- Run the following scripts to build the search index.

```
php extensions/BlueSpiceExtendedSearch/maintenance/initBackends.php --quick
php extensions/BlueSpiceExtendedSearch/maintenance/rebuildIndex.php --quick
php maintenance/runJobs.php
```

Done! The extended search functionality is now active.

Folder structure under Windows

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## Preface

---

Microsoft Windows distributes program installations and configurations, the Webroot under IIS etc. to various folders in the file system. Since BlueSpice is a web application based on PHP, it is not always easy to use the Windows default system paths in the application.

For this reason, we recommend creating your own folder structure for BlueSpice, all related data and additional program installations.

In the following we describe a proven folder structure. This is recommended by us.

## Folder structure

---

In the following, "\bluespice\" is defined as the base directory for the installation in the root directory of the drive (e.g. C:\bluespice or D:\bluespice).

The folder structure is based on Unix operating systems:

```
bluespice/
├── backup/           # for backups
├── bin/              # for additional programs and own scripts
├── etc/              # for configuration files
├── opt/
│   └── bluespice/
│       ├── cache/    # BlueSpice cache
│       ├── images/   # File uploads
│       └── widgets/  # Rendered widgets
├── tmp/              # Temporary files
└── var/
    ├── log/          # LOG files of the web server
    └── www/           # Actual BlueSpice application
```

## Folder names for program installations

---

When installing programs in \bluespice\, please make sure to install these programs in subfolders that do not contain special characters and/or spaces.

## VisualEditor configuration

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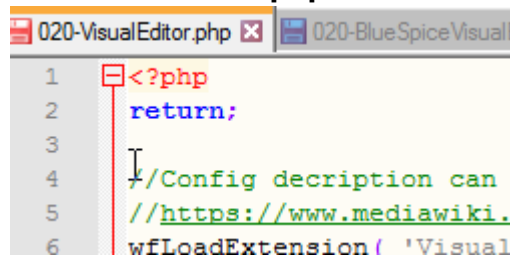
## Server settings

---

Before you can use VisualEditor in BlueSpice, you have to activate it in your installation:

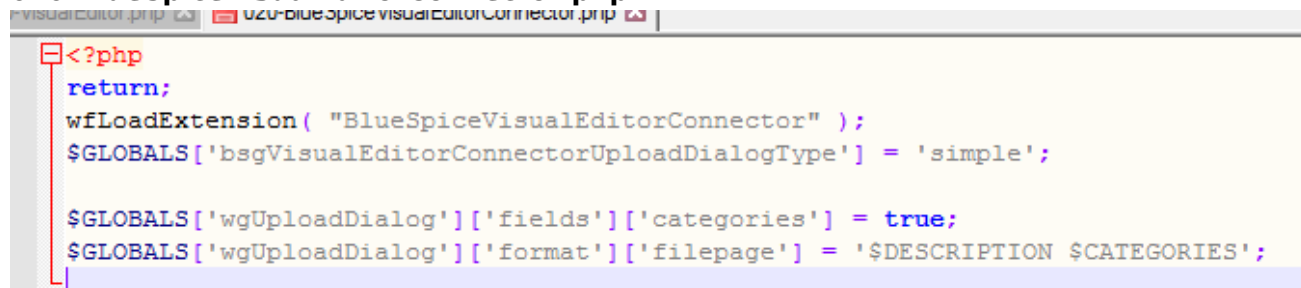
In the BlueSpice installation directory, locate the following files inside the folder „var\www\settings.d“:

### 020-VisualEditor.php:



```
1 <?php
2 return;
3
4 //Config decription can
5 //https://www.mediawiki.
6 wfLoadExtension( 'Visual
```

### 020-BlueSpiceVisualEditorConnector.php:



```
1 <?php
2 return;
3 wfLoadExtension( "BlueSpiceVisualEditorConnector" );
4 $GLOBALS['bsgVisualEditorConnectorUploadDialogType'] = 'simple';
5
6 $GLOBALS['wgUploadDialog']['fields']['categories'] = true;
7 $GLOBALS['wgUploadDialog']['format']['filepage'] = '$DESCRIPTION $CATEGORIES';
```

1. Remove the line containing the „return;“ command in both files and save them.
2. Restart your web server (recommended).

## Checking the Configuration manager

---

In case the VisualEditor is still not appearing, check if VisualEditor is shown as activated in the configuration manager of your wiki:

1. Go to *Global actions > Config manager*
2. Make sure the checkbox "Enable VisualEditor for BlueSpice extensions" is activated:

File:ve-config.png

By default, VisualEditor is only activated in the main (Pages) and the User namespaces.

## Activating VisualEditor for a namespace

---

1. Go to Global actions > Namespace manager In the column "VisualEditor", you can see which namespaces have VisualEditor activated. They have a green check mark.
2. Click the wrench icon in the "Actions" column. The wrench appears, when you hover over the row of the namespace:

File:ve-config-namespace.png

1. Activate the checkbox for VisualEditor in the dialog window and click "Done":

[File:ve-config-namespace-edit.png](#)

1. Refresh the Namespace manager page (F5) to confirm the change.

VisualEditor should now be working correctly in all namespaces that actively use it.

## Customizing the link to the help pages

By default, the help link for VisualEditor links to the help page for VisualEditor on the BlueSpice helpdesk.

[File:Setup:installation-ve-helplink.png](#)  
VisualEditor help link

The link can be changed to go to a custom URL:

To configure the url, add:

```
`$GLOBALS['bsgVisualEditorConnectorHelpUrl'] = 'https://your_url';`
```

to 'LocalSettings.php' or the appropriate config file.

## 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

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- 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

---

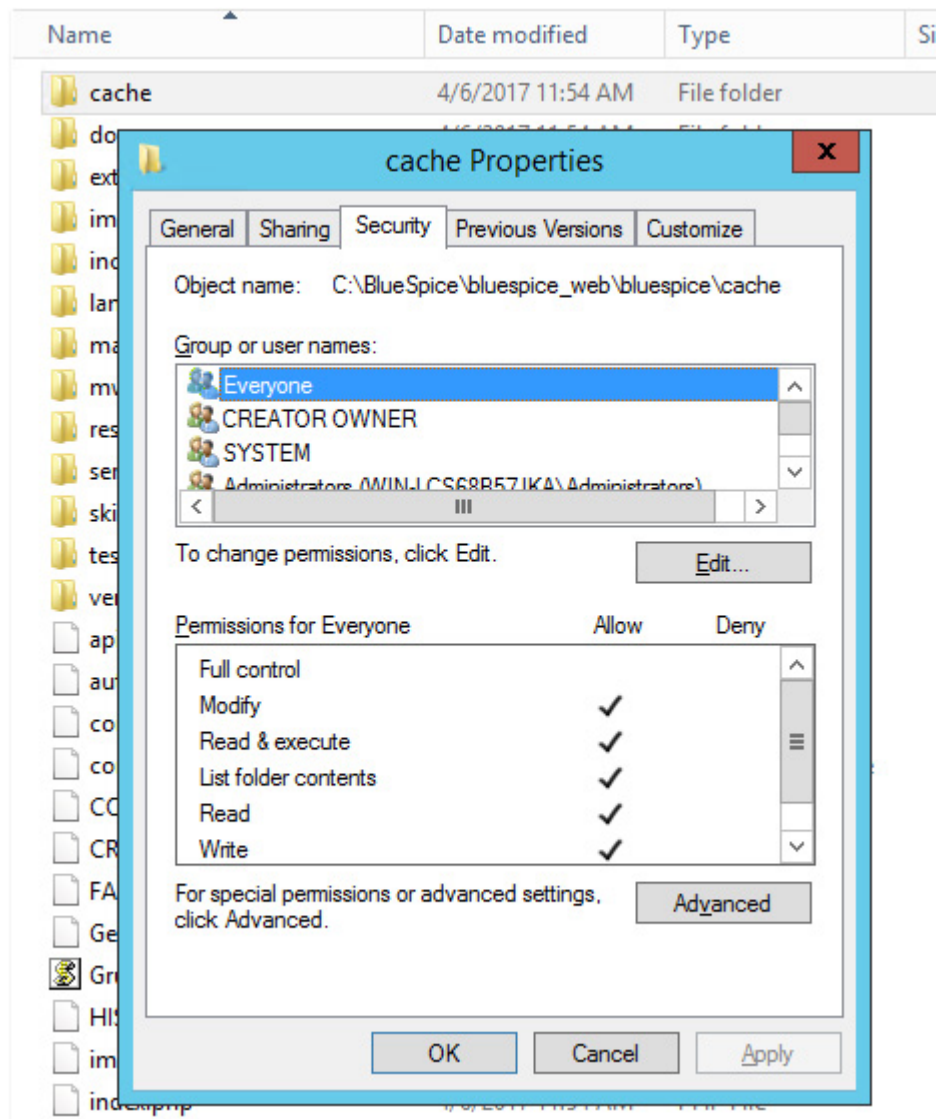
The folders, which require write permissions, are:

- `<installpath-bluespice>/cache`
- `<installpath-bluespice>/images`
- `<installpath-bluespice>/extensions/BlueSpiceFoundation/config` (only until BlueSpice v. 4.2.x) - v4.2.x
- `<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

    if [ ! -f $1/LocalSettings.php ]; then
        echo "$1 contains no LocalSettings.php"
        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" \
        "$PATH/_sf_archive" \
        "$PATH/_sf_instances" \
        "$PATH/extensions/BlueSpiceFoundation/data" \
        "$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

    /usr/bin/find $PATH/extensions -iname 'create_pygmentize_bundle' -exec /bin/chmod +x {} \;
    /usr/bin/find $PATH/extensions -iname 'pygmentize' -exec /bin/chmod +x {} \;
    /usr/bin/find $PATH/extensions -name 'lua' -type f -exec /bin/chmod 755 {} \;
```

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:** 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.

