

## Contents

1. Setup:Installation Guide/System Preparation/Linux/Apache and PHP .....	2
2. Setup:Installation Guide/System Preparation/Linux/MariaDB .....	5

## Installing Apache and PHP on Linux

### Contents

1 Introduction .....	3
2 Installation .....	3
3 Configuring PHP .....	3
4 Configuring Apache .....	4
5 Next step .....	5

**Important!** The web server delivers your BlueSpice installation to the user's browser. Without a web server, BlueSpice cannot be used. The source code of BlueSpice is based on the scripting language "PHP". This must also be installed on your server in order to operate BlueSpice. The steps listed here are required.

## Introduction

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Apache or Nginx are available as web servers under Linux. BlueSpice can theoretically also be operated with Nginx, but in this documentation only Apache is treated in detail. Of course, you can also install Nginx with the appropriate expertise and operate it according to the here documented Virtualhost configuration of Apache.

**Note:** If "User is not in the sudoers file." type "su" in the terminal and execute. Write a "sudo" in front of a command.

## Installation

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Install Apache and PHP using the Aptitude package manager with the following steps:

```
apt update; \  
apt install apache2 \  
libapache2-mod-php7.4 \  
php7.4 \  
php7.4-cli \  
php7.4-common \  
php7.4-curl \  
php7.4-gd \  
php7.4-intl \  
php7.4-json \  
php7.4-mbstring \  
php7.4-mysql \  
php7.4-opcache \  
php7.4-tidy \  
php7.4-xml \  
php7.4-zip; \  
apt clean
```

Depending on requirements, further PHP extensions may be necessary, e.g. for an LDAP connection.

## Configuring PHP

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After the installation has been completed, first configure PHP. First change to the directory `/etc/php/7.4/apache2` through the terminal and then execute the `php.ini` file with the command `nano php.ini`.

Find the following settings and change the values accordingly. If a setting is commented out with a semicolon in front of it, please remove it.

```
date.timezone = Europe/Berlin
max_execution_time = 600
post_max_size = 128M
upload_max_filesize = 128M
```

Set the value for 'date.timezone' according to your own time zone.

Save and exit the php.ini again.

## Configuring Apache

**Note:** In this documentation, we assume the recommended installation with [ShortURL](#). In this case, the root directory of the web server is in `/var/www/bluespice`, but the actual source code of BlueSpice is in `/var/www/bluespice/w`. This configuration is designed accordingly.

### Multiple virtual hosts

This guide applies to cases where BlueSpice is being installed on a dedicated server. If you have other virtual hosts configured, you may need to specify an alias for the `/w/` subfolder. Add the following to your Apache's http-specific configuration: `Alias /w/ /path/to/w/` (e.g., `Alias /w/ /var/www/html/example.com/w/`)

To configure a VirtualHost for BlueSpice, please proceed as follows:

1. Change to the directory `/etc/apache2/sites-available`.
2. In a text editor of your choice, open the file `bluespice.conf`, which does not yet exist, and create it. Copy the entire contents of the following file into this new configuration file:
  1. For BlueSpice free: [apache\\_vhost\\_bluespice\\_free.txt](#)
  2. For BlueSpice pro: [apache\\_vhost\\_bluespice\\_pro.txt](#)
3. In rows 3 and 4, replace "SERVERNAME" and "SERVERALIAS" according to your server name and domain. If the server is explicitly operated with only one VirtualHost for BlueSpice, you can also completely remove these two lines.
4. Save the file and close it.

Delete the VirtualHost created by default during the Apache installation with the command `a2dissite 000-default`. Then activate the just created VirtualHost with the command `a2ensite bluespice`.

Next, activate the Module Rewrite, which we configured in the `bluespice.conf`, by entering the following command: `a2enmod rewrite`

Next, create the directory `/var/www/bluespice` (`mkdir /var/www/bluespice`) and restart Apache with the command `service apache2 restart`.

Next, call up the URL of your BlueSpice server (localhost). If configured correctly, Apache should respond to the request with the error message "Not found", which is completely correct at the time of installation.



## Next step

If you have successfully completed all these steps, you can proceed to the next step " [MariaDB](#)".

## MariaDB on Linux

### Contents

1	Installing MariaDB .....	6
2	Create database user for BlueSpice .....	6
3	Next Step .....	6

**Important!** BlueSpice stores your content in a database for which you need to install a corresponding server. The steps listed here are required.

## Installing MariaDB

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Install MariaDB via Aptitude:

```
apt update; \  
apt install mariadb-server mariadb-client; \  
apt clean
```

## Create database user for BlueSpice

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After installation, immediately create a database user for MariaDB directly with the following command:

```
mysql -e "GRANT ALL ON bluespice.* TO 'bluespice'@'127.0.0.1' IDENTIFIED BY '<a  
password of your choice>';"
```

**Important!** Remember the username and password for later parts of the Installation.

## Next Step

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If you have completed all steps successfully, you can proceed to the next step "[Jetty](#)".