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## Setup:Installation Guide/System Preparation/Windows

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- [IIS Web Server](#)
- [Visual C++ Redistributable for Visual Studio 2015](#)
- [PHP Manager](#)
- [PHP 7.3](#)
- [MariaDB](#)
- [OpenJDK](#)
- [Apache Tomcat](#)
- [Elasticsearch](#)
- [Git](#)
- [Node.js](#)
- [Parsoid](#)
- [Python](#)
- [PhantomJS](#) (**BlueSpice pro only**)

## Apache Tomcat on Windows

A [quality version](#) of this page, [approved](#) on *2 August 2021*, was based off this revision.

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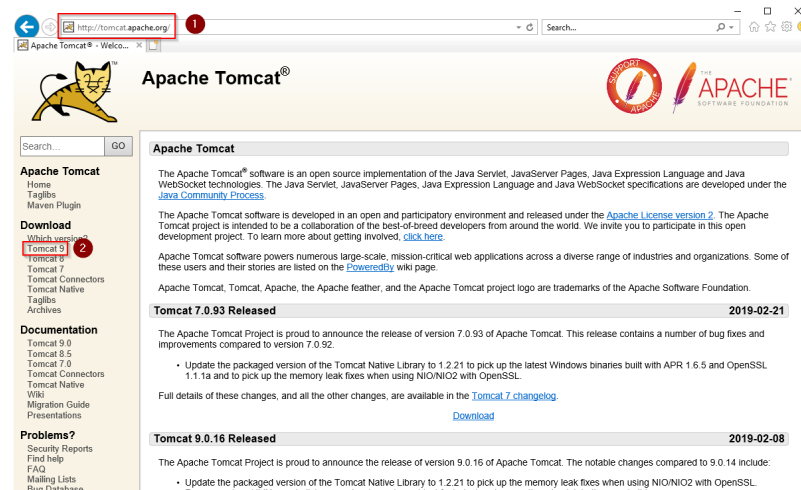
**Apache Tomcat is required for the PDF export, VisualDiff (BlueSpice pro only) and the LaTeX renderer (BlueSpice pro only). The following steps are optional and only required if you want to use one or more of these services in your BlueSpice installation.**



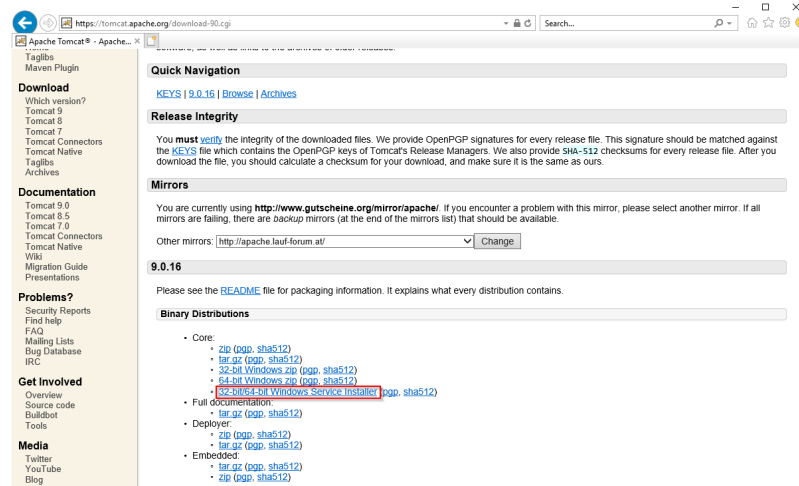
Operation of Apache Tomcat requires [OpenJDK](#). If you have not installed it, follow the link above.

## Download

Open the [official download page](#) (1) in your browser and go to the version 9 (2) download page.



Download the "32-bit/64-bit Windows Service Installer"



Please note that the download on your Windows server with Internet Explorer only works if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.

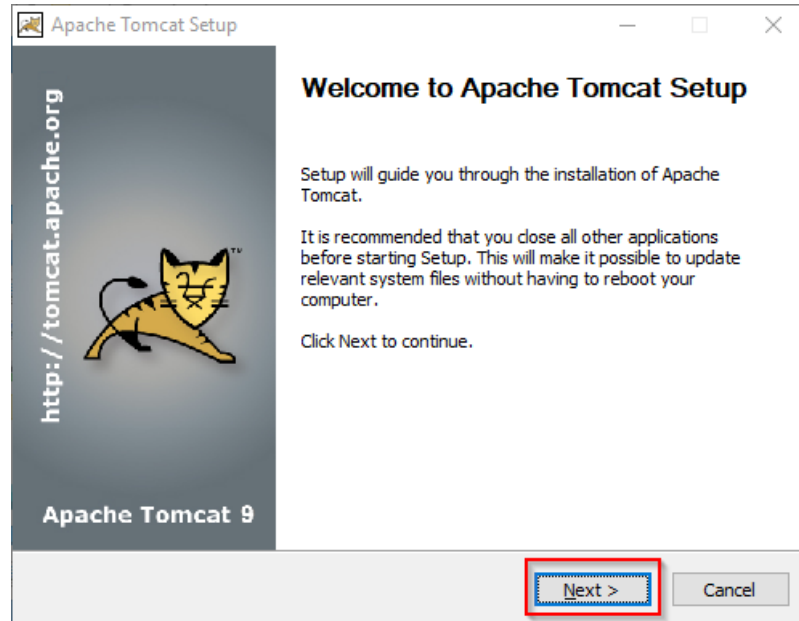


This guide uses version 9.0.16 of Apache Tomcat and is just an example of the latest version that you can download at the time of installation.

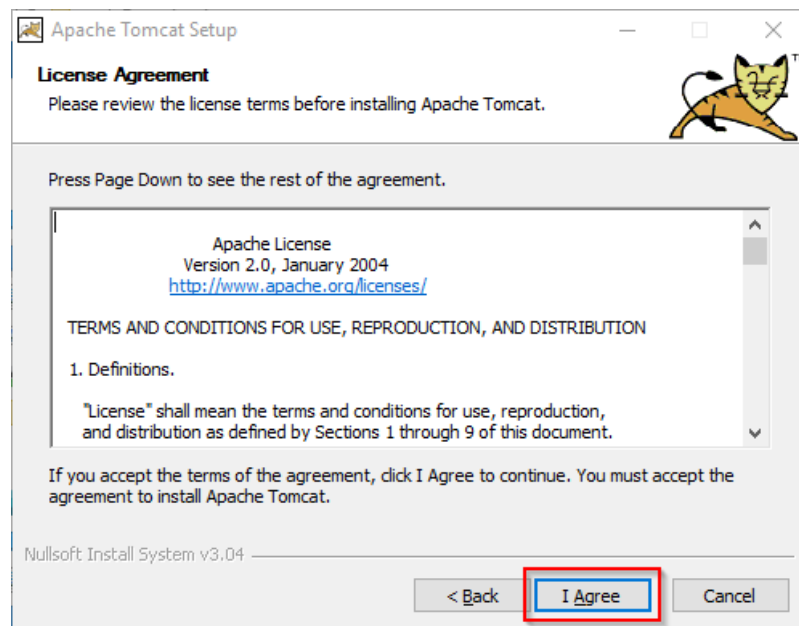
## Installing Apache Tomcat

Open the downloaded file "apache-tomcat-9.0.16.exe".

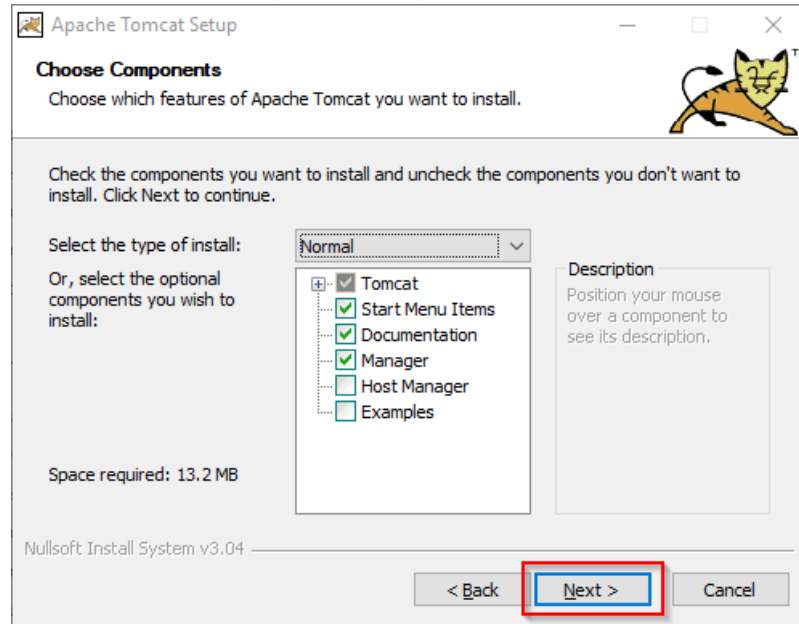
Start the installation by clicking "Next >":



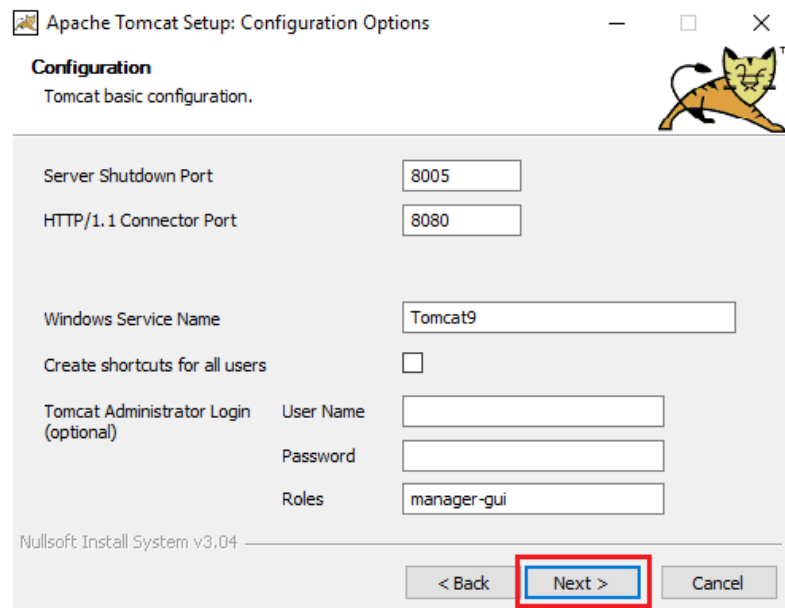
Confirm the license agreement by clicking "I Agree":



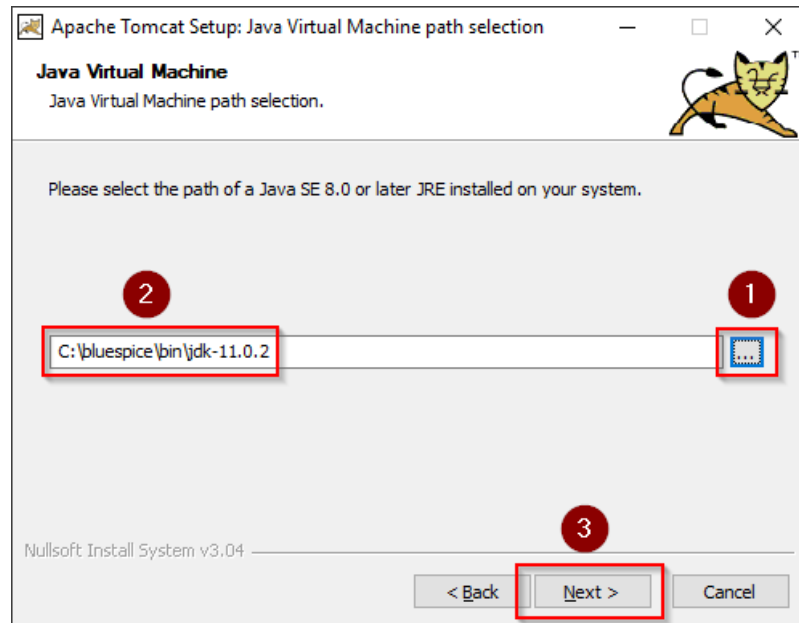
Click "Next >":



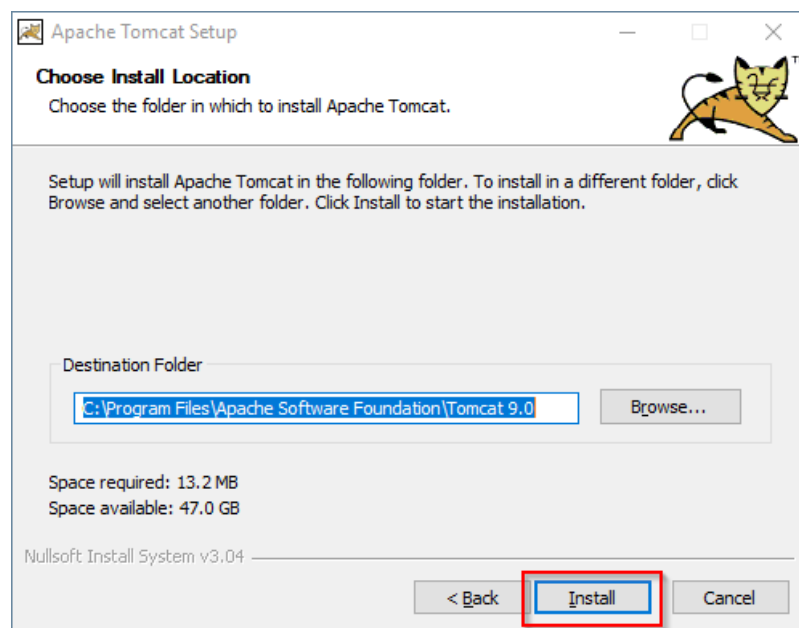
Click "Next >" again:



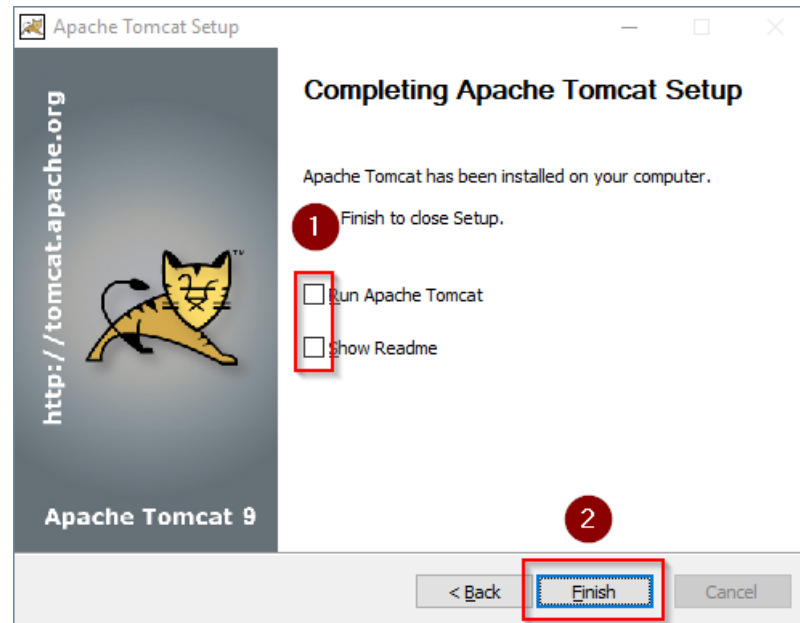
Select (1) the home directory of your [OpenJDK Installation](#) (2) and click "Next>" (3):



Start the Tomcat Installation:



At the end of the installation, leave both preselected checkboxes (1) and finish the setup (2)



## Configuring Apache Tomcat

Change to the installation directory of Tomcat. By default, you can find it at `C:\Program Files\Apache Software Foundation\Tomcat 9.0\conf`.

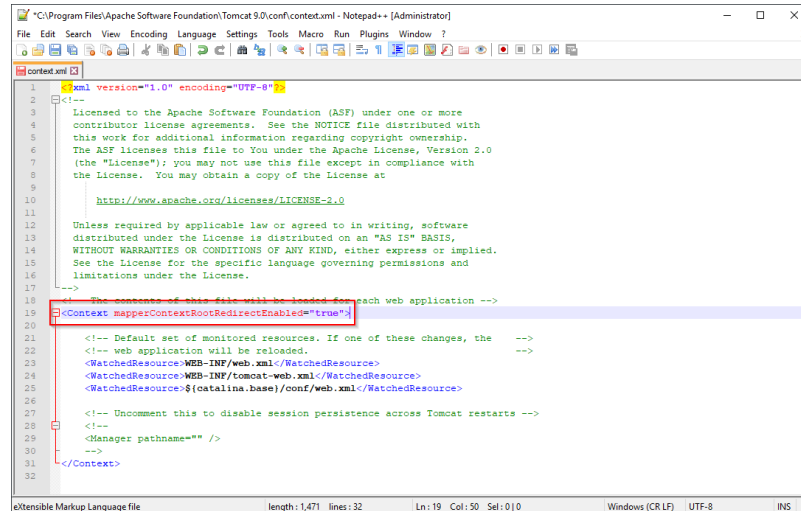
Open the context.xml file in a text editor and replace the one-time line

```
<Context>
```

with

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





```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <!--
3  Licensed to the Apache Software Foundation (ASF) under one or more
4  contributor license agreements. See the NOTICE file distributed with
5  this work for additional information regarding copyright ownership.
6  The ASF licenses this file to You under the Apache License, Version 2.0
7  (the "License"); you may not use this file except in compliance with
8  the License. You may obtain a copy of the License at
9
10     http://www.apache.org/licenses/LICENSE-2.0
11
12  Unless required by applicable law or agreed to in writing, software
13  distributed under the License is distributed on an "AS IS" BASIS,
14  WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
15  See the License for the specific language governing permissions and
16  limitations under the License.
17  -->
18  <!-- The contents of this file will be loaded for each web application -->
19  <Context mapperContextRootRedirectEnabled='true'>
20
21  <!-- Default set of monitored resources. If one of these changes, the
22  <!-- web application will be reloaded. -->
23  <WatchedResource>WEB-INF/web.xml</WatchedResource>
24  <WatchedResource>WEB-INF/tomcat-web.xml</WatchedResource>
25  <WatchedResource>${catalina.base}/conf/web.xml</WatchedResource>
26
27  <!-- Uncomment this to disable session persistence across Tomcat restarts -->
28  <!--
29  <Manager pathname="" />
30  -->
31  </Context>
```

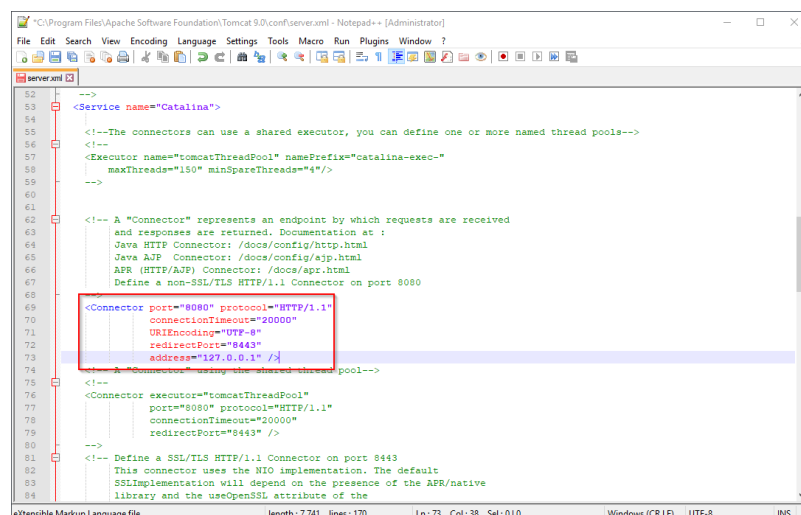
Save and close the file.

In the same directory, open the file server.xml in a text editor and make sure that the complete block

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

looks like this:

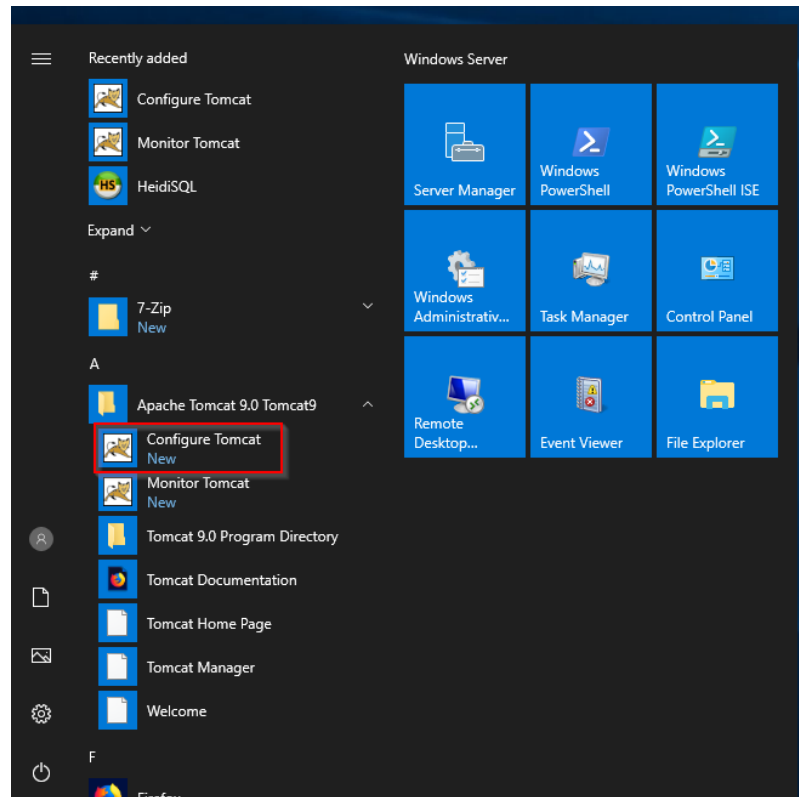
```
<Connector port="8080" protocol="HTTP/1.1"
  connectionTimeout="20000"
  URIEncoding="UTF-8"
  redirectPort="8443"
  address="127.0.0.1" />
```



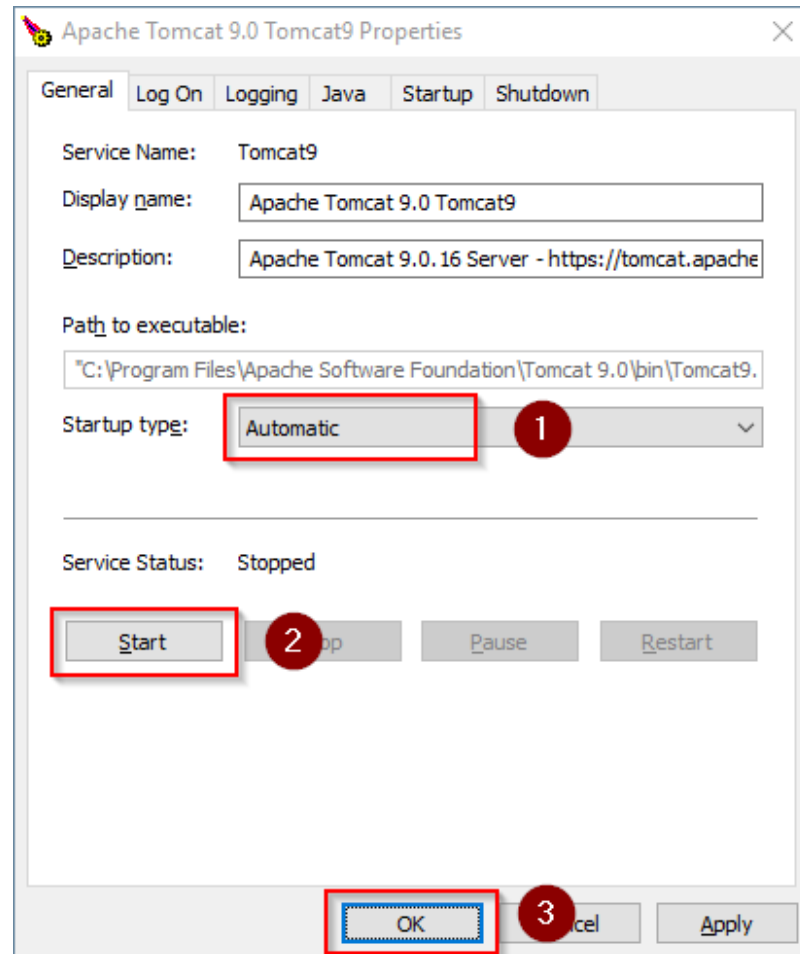
```
52  <!--
53  <Service name="Catalina">
54
55  <!-- The connectors can use a shared executor, you can define one or more named thread pools-->
56  <!--
57  <Executor name="tomcatThreadPool" namePrefix="catalina-exec-"
58  maxThreads="150" minSpareThreads="4"/>
59  -->
60
61  <!-- A "Connector" represents an endpoint by which requests are received
62  and responses are returned. Documentation at :
63  Java HTTP Connector: /docs/config/http.html
64  Java AJP Connector: /docs/config/ajp.html
65  APR (HTTP/AJP) Connector: /docs/apr.html
66  Define a non-SSL/TLS HTTP/1.1 Connector on port 8080
67
68  <Connector port="8080" protocol="HTTP/1.1"
69  connectionTimeout="20000"
70  URIEncoding="UTF-8"
71  redirectPort="8443"
72  address="127.0.0.1" />
73
74  <!-- A "Connector" using the shared thread pool-->
75  <!--
76  <Connector executor="tomcatThreadPool"
77  port="8080" protocol="HTTP/1.1"
78  connectionTimeout="20000"
79  redirectPort="8443" />
80  -->
81  <!-- Define a SSL/TLS HTTP/1.1 Connector on port 8443
82  This connector uses the NIO implementation. The default
83  SSLImplementation will depend on the presence of the APR/native
84  library and the useOpenSSL attribute of the
```

Save and close the file.

Find the entry "Configure Tomcat" in the start menu and open it:



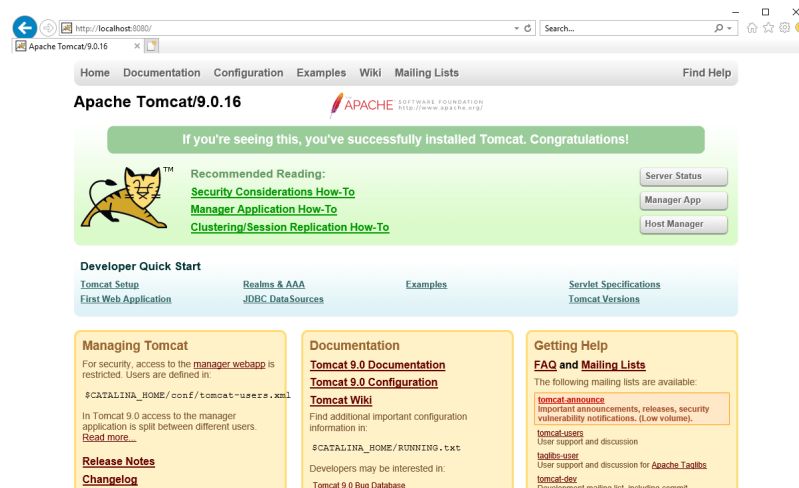
Set "Startup type" to "Automatic" (1) and start Tomcat (2). Then exit the configuration console (3):



## Reviewing the installation

To check if Tomcat is working correctly, open the address <http://localhost:8080/> in a browser on the server.

You should now see the homepage of the Tomcat server:



## Installing the web apps

After the successful installation of BlueSpice, please follow the next steps to install the web services and activate the respective BlueSpice extension:

- [PDF-Export](#)
- [VisualDiff](#) (BlueSpice pro only)
- [LatexRenderer](#) (nurBlueSpice pro only)

## Next step

If you have completed all steps successfully, you can delete the previously downloaded "apache-tomcat-9.0.16.exe" file from your hard drive and continue to the next step " [Elasticsearch](#)".

## Elasticsearch on Windows

A [quality version](#) of this page, [approved](#) on *16 December 2021*, was based off this revision.

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**Elasticsearch is a prerequisite for running Advanced Search. The steps listed here are optional and only required if you plan to use them in your BlueSpice installation.**



To run Elasticsearch, OpenJDK is required. If you have not installed it, [install it now](#).

## Download Elasticsearch

---

BlueSpice is currently compatible with Elasticsearch 6.8.x as of version 6.8.21. Elasticsearch > 6.8.x is currently **NOT supported!**

The latest version can be found at [this list](#). This results in the following direct download link: <https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-<version number>.zip>. For example, <https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-6.8.21.zip>.

Follow the download instructions of your browser.



Please note that the download on your Windows Server with Internet Explorer will only work if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.

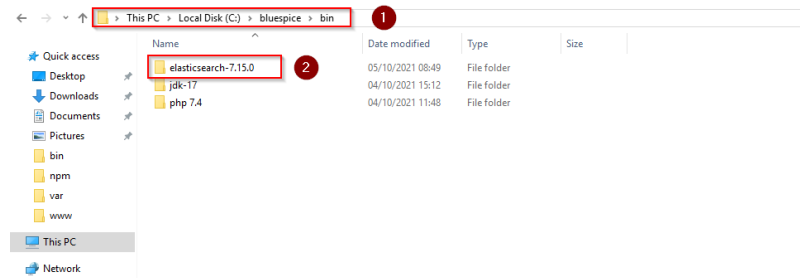


In the following, Elasticsearch version 6.8.21 is used and is only an example of the latest version of the 6.8.x version, which you can download at the time of your installation.

## Unpacking Elasticsearch

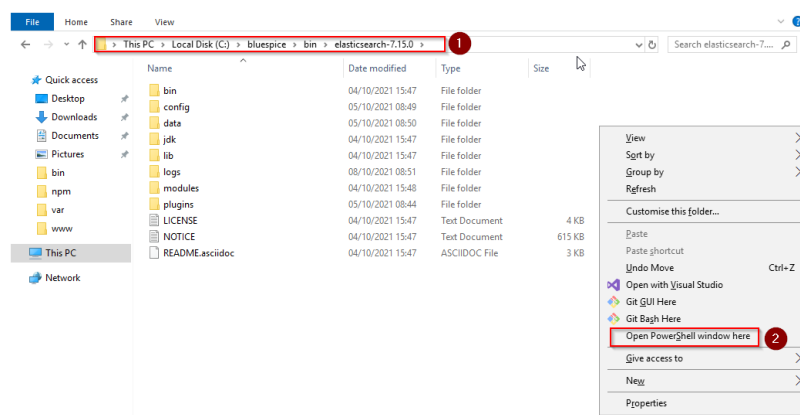
---

Unpack the contents of the ZIP archive (2) just downloaded into the folder "C:\bluespice\bin\elasticsearch-6.8.21" (1):

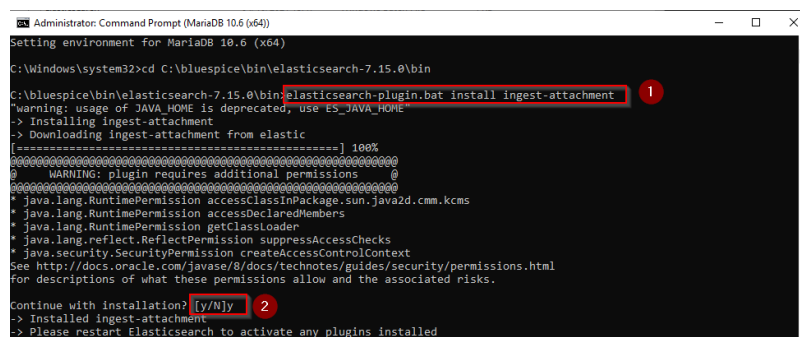


## Installing the plugin ingest-attachment

Change to the directory "C:\bluespice\bin\elasticsearch-6.8.21\bin" (1) and right-click on a free area of the Explorer window with the Shift key pressed. Then click "Open Windows Powershell Here" (2):



Execute the command "elasticsearch-plugin.bat install ingest-attachment" (1) and after downloading the plugin, confirm the installation request with "y" (2):





If your server does not have an active internet connection, then [download the plug-in ingest-attachment as zip archive](#) and install it, as [documented directly by the manufacturer](#).

## Installing the Elasticsearch service

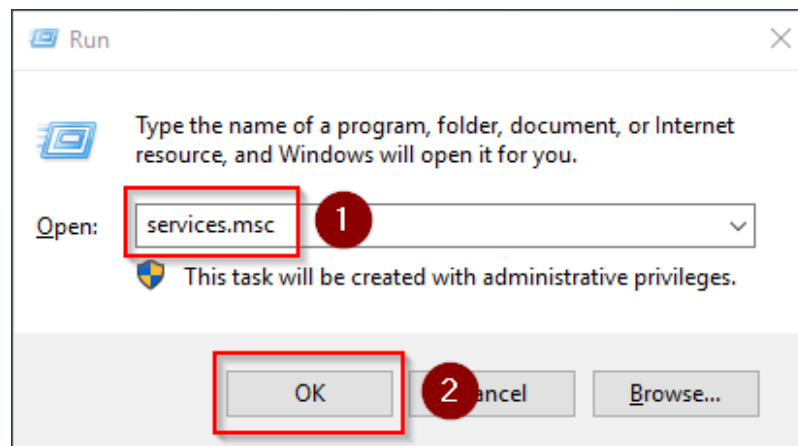
Next, run the elasticsearch-service.bat install command and wait for the process to complete:

```
C:\bluespice\bin\elasticsearch-7.15.0\bin>elasticsearch-service.bat install
Warning: usage of JAVA_HOME is deprecated, use ES_JAVA_HOME
Installing service 'elasticsearch-service-x64'
Using ES_JAVA_HOME (64-bit): "C:\bluespice\bin\jdk-17"
-Des.networkaddress.cache.ttl=60;-Des.networkaddress.cache.negative.ttl=10;-XX:+AlwaysPreTouch;-Xss1m;-Djava.awt.headless=true;-Dfile.encoding=UTF-8;-Djna.nosys=true;-XX:-OmitStackTraceInFastThrow;-XX:+ShowCodeDetailsInExceptionMessages;-Dio.netty.noUnsafe=true;-Dio.netty.noKeySetOptimization=true;-Dio.netty.recycler.maxCapacityPerThread=0;-Dio.netty.allocation.pool.numDirectArenas=0;-Dlog4j.shutdownhookEnabled=false;-Dlog4j2.disable.jmx=true;-Djava.locale.providers=SPI,COMPAT;-Dopensearch.java.base/java.io.ALL-UNNAMED;-XX:+UseG1GC;-Djava.io.tmpdir=C:\Users\ADMINI~1\AppData\Local\Temp\elasticsearch;-XX:+HeapDumpOnOutOfMemoryError;-XX:HeapDumpPath=data;-XX:ErrorFile=logs/hs_err_pid%p.log;-Xlog:gc*,gc+age=trace,safepoint:file=logs/gc.log:utctime,pid,tags:filecount=32,filesize=64m;-Xms1023m;-Xmx1023m;-XX:MaxDirectMemorySize=536870912;-XX:G1HeapRegionSize=4m;-XX:InitiatingHeapOccupancyPercent=30;-XX:G1ReservePercent=15
The service 'elasticsearch-service-x64' has been installed.
C:\bluespice\bin\elasticsearch-7.15.0\bin>
```

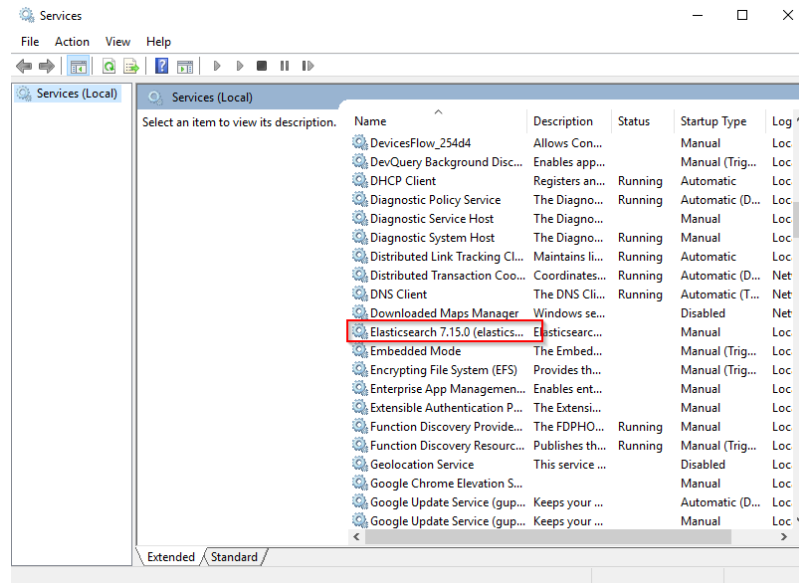
## Configuring and starting the Elasticsearch service

Press the key combination Windows+R.

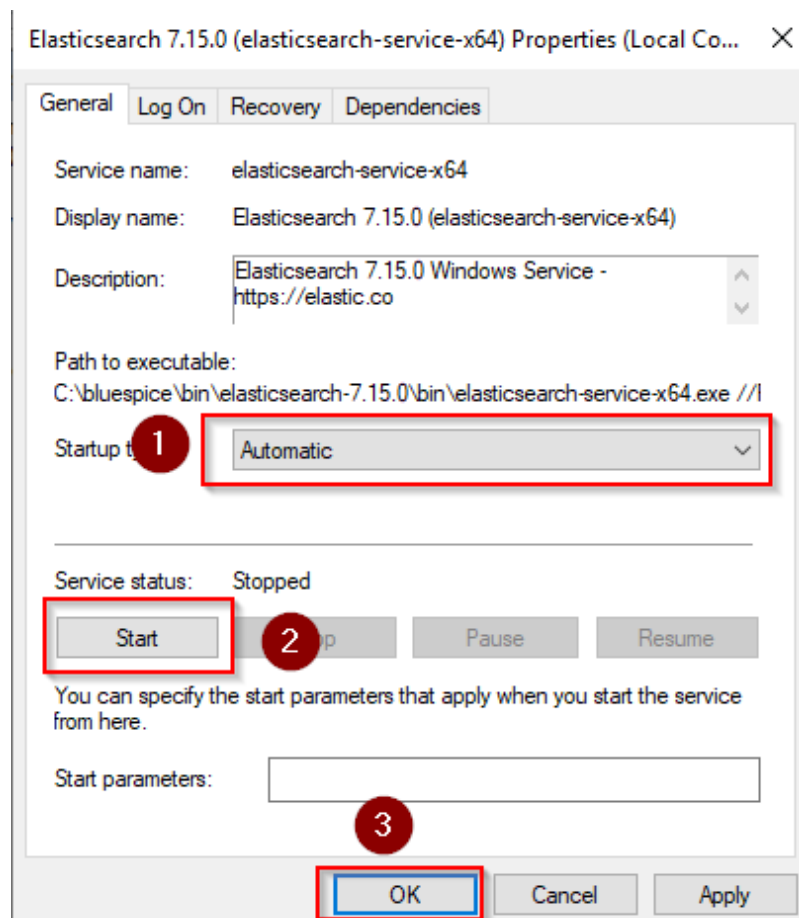
In the following dialog box, enter "services.msc" (1) and confirm with "OK" (2):



Search for the service "Elasticsearch 6.8.21" and open it with a double-click:



Select the startup type "Automatic" (1) and start the service (2). After the service is started, close the window with "OK" (3):





## Next step

---

If you have completed all steps successfully, you can delete the previously downloaded file "elasticsearch-6.8.21.zip" from your hard disk and continue to the next step "[Git](#)".

## Git on Windows

A [quality version](#) of this page, [approved](#) on *2 August 2021*, was based off this revision.

### Contents

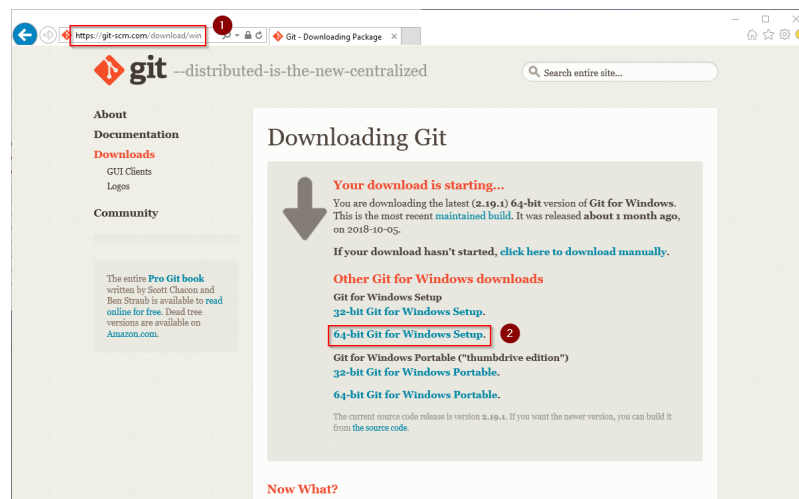
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**Git is an application for software version management. It is required for the installation of Node.js, which in turn is required for the operation of the rendering service "Parsoid" for the Visual Editor. The steps listed here are optional and only required if you want to use them in your BlueSpice installation.**

## Download

In the Internet Explorer, open the [official download page on git-scm.com](https://git-scm.com/download/win) (1). If the optimal download for your operating system does not start automatically, click on "64-bit Git for Windows Setup" (2):



Follow the further download instructions and download the installation package to your hard disk.



Please note that the download on your Windows Server with Internet Explorer only works if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.

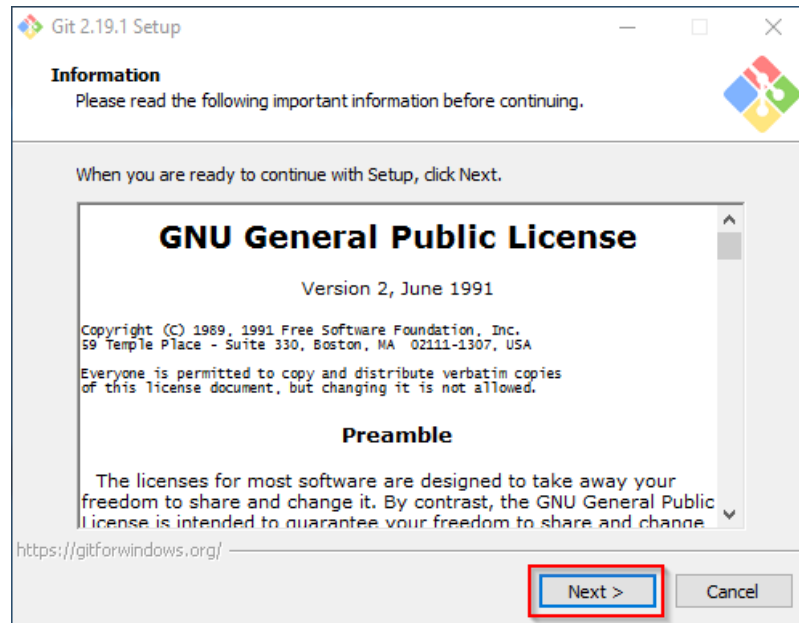


Git version 2.19.1 will be used below as an example. You can download the latest version of Git at the time of installation.

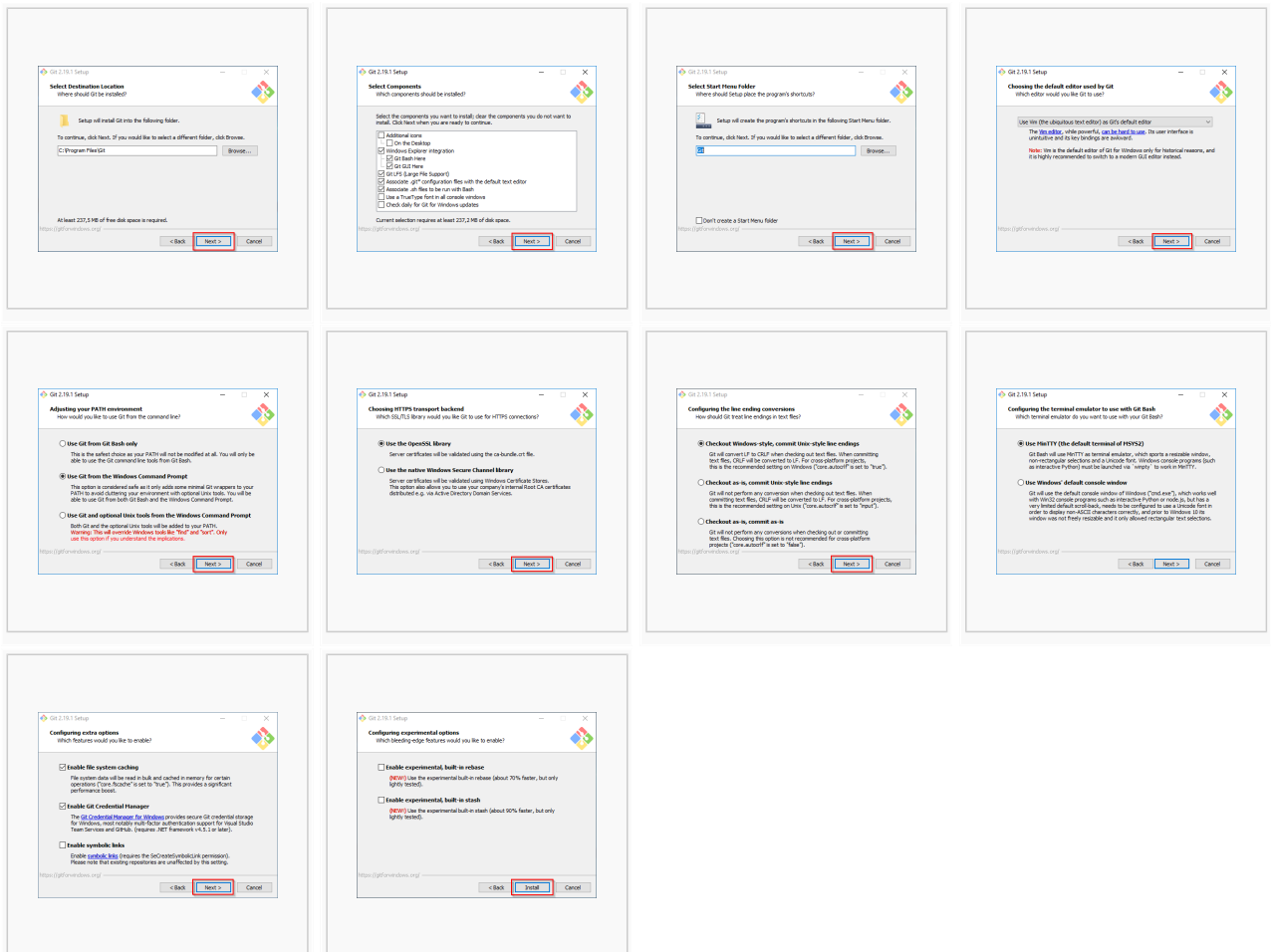
## Installing Git

Open the downloaded Git-2.19.1-64-bit.exe file.

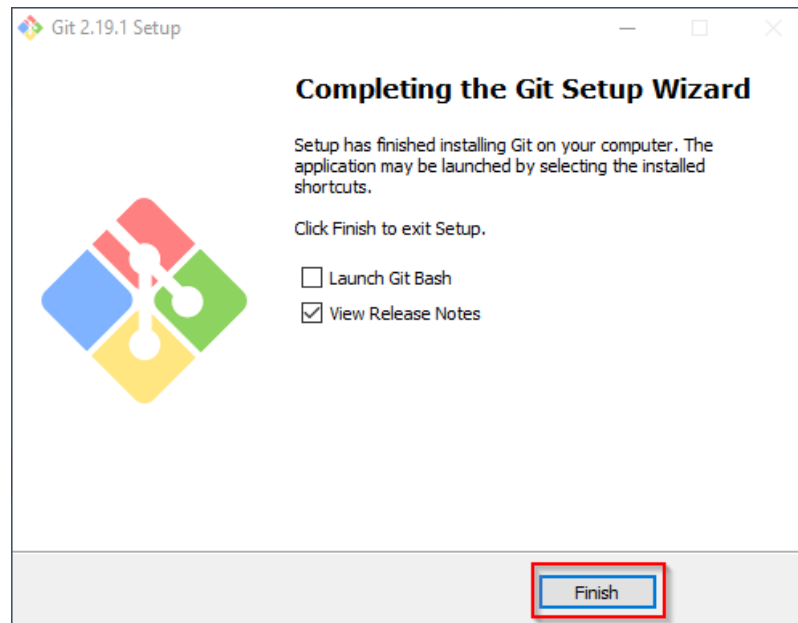
Start the installation by clicking "Next >":



Click, as pictured here, through the further installation steps:



You can close the setup program now:



## Next step

If you have completed all steps successfully, you can delete the previously downloaded file "Git-2.19.1-64-bit.exe" from your hard disk and go to the next step" [Node.js](#)".

## Setup:Installation Guide/System Preparation/Windows/IIS Web Server

A [quality version](#) of this page, [approved](#) on *2 August 2021*, was based off this revision.

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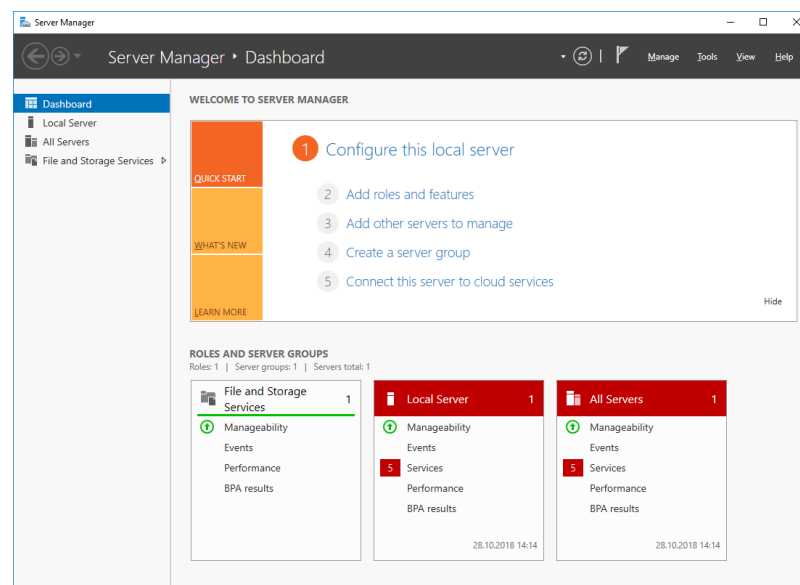
**The web server delivers your BlueSpice installation to the users' browsers. Without a web server, BlueSpice cannot be used. The steps listed here are required.**

## Introduction

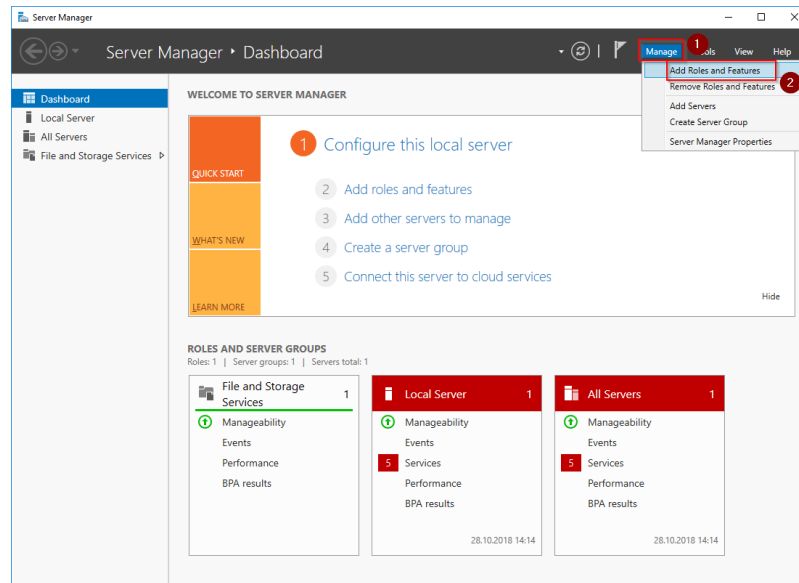
We recommend to use the most system-optimized software possible for a live operation of BlueSpice both under Linux and under Windows. For this reason, the documentation of an installation of Apache (XAMP) under Windows is omitted. This chapter lists the steps that are necessary to install the Microsoft IIS Web Server service on Windows Server  $\geq$  2012.

## The Server Manager and managing roles

First, open the Server Manager. Unless otherwise configured, it starts automatically as soon as you log in to the server. Otherwise, you will find it in the start menu under the search term "Server Manager". You are now in the following view:



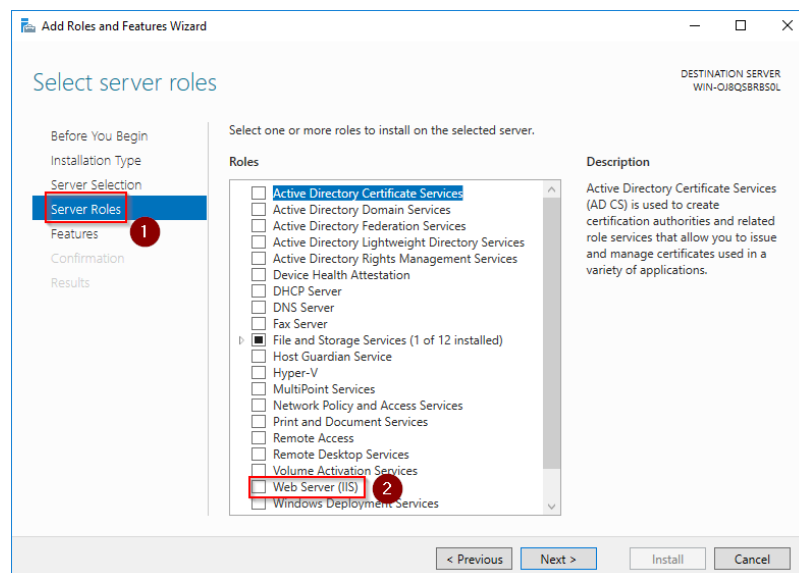
Click "Manage" (1) und then "Add Roles and Features" (2):



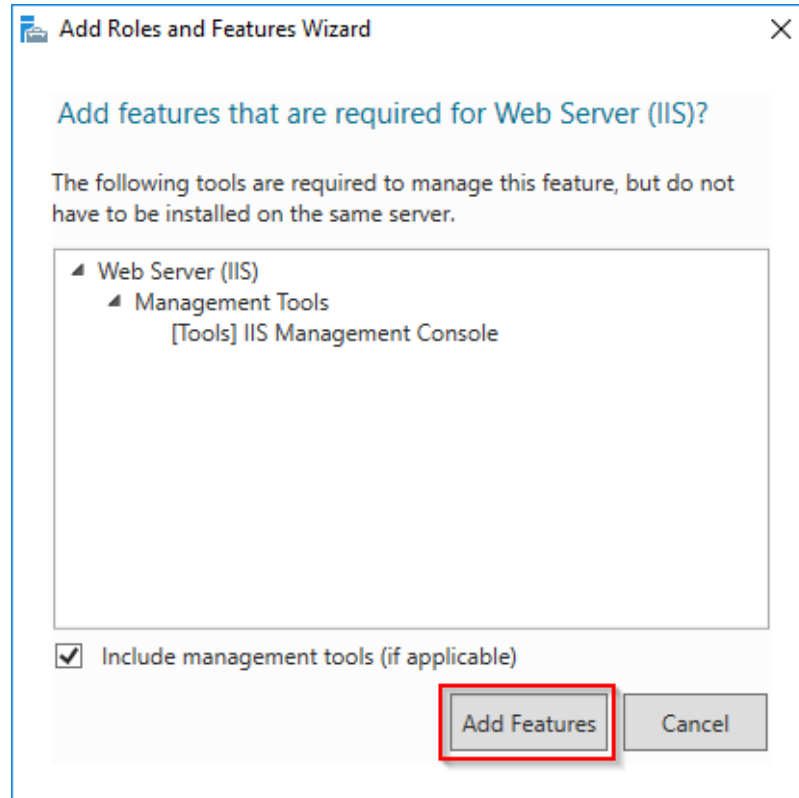
## Installing IIS in the Role Manager

You are now in the Role Manager.

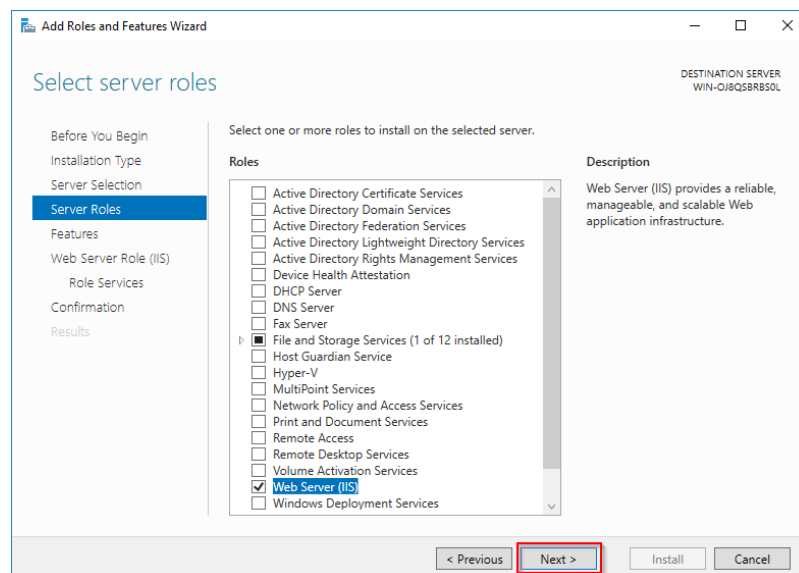
Click "Next >" until you reach the "Server Roles" area (1). There, you activate the role "Web Server (IIS)" (2):



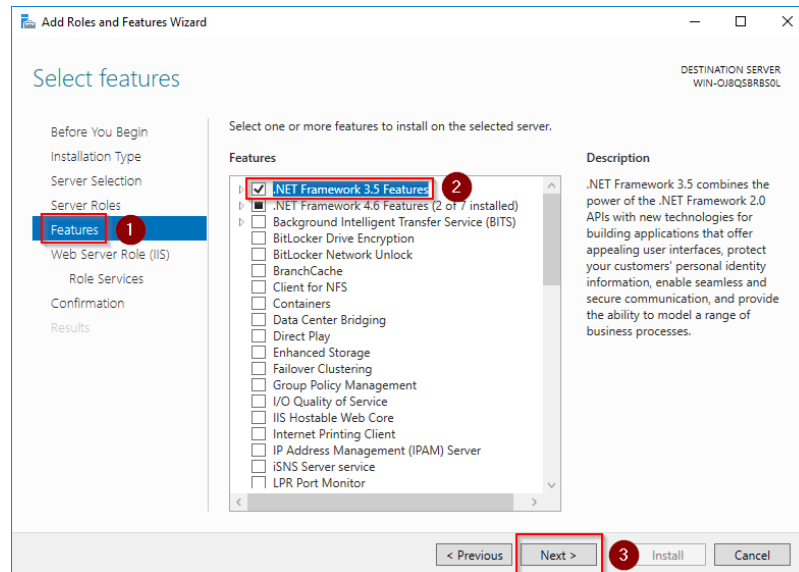
Confirm the pop-up that shows the selection of the role with "Add Features":



Click "Next >":

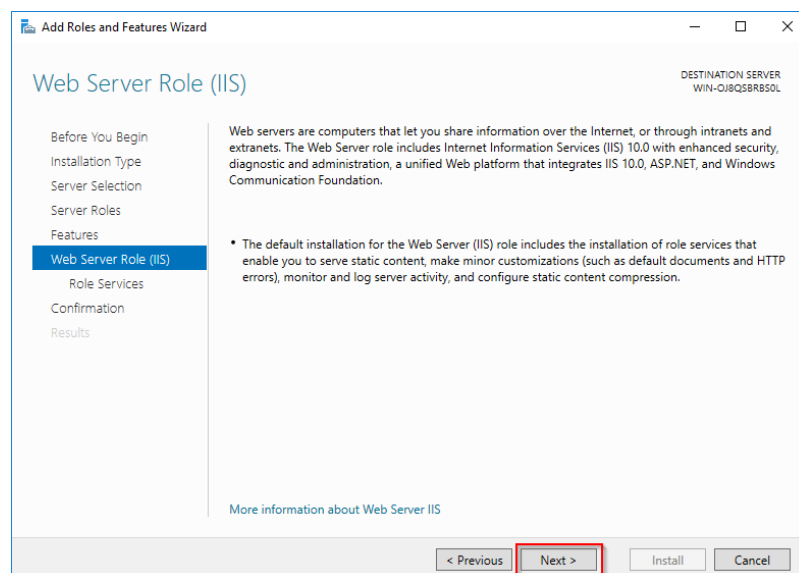


You are now in the "Features" area(1). Activate ".NET Framework 3.5 Features" (2) and click "Next >" (3):



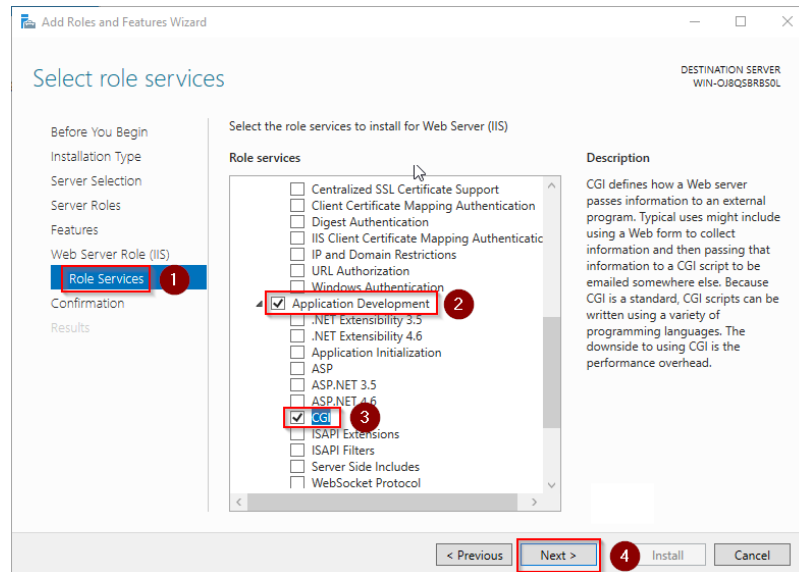
The .NET Framework 3.5 is not directly required for running IIS. However, tools that will be installed later, which are also partially connected with IIS, definitely require it. For this reason, we install it now.

Confirm the following dialog with "Next >":

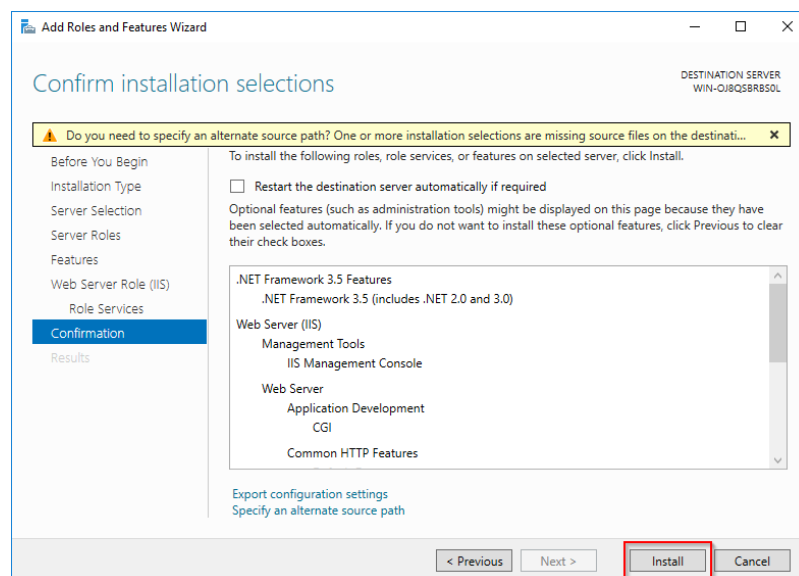


Under "Role Services" (1) select "Application Development" (2) with the option "CGI" (3) and confirm with "Next >" (4):

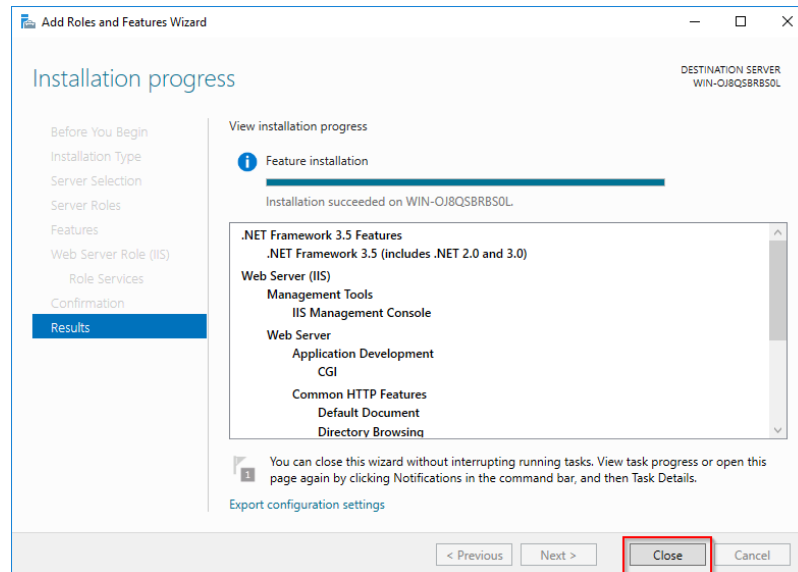




Click "Install" to start the installation:

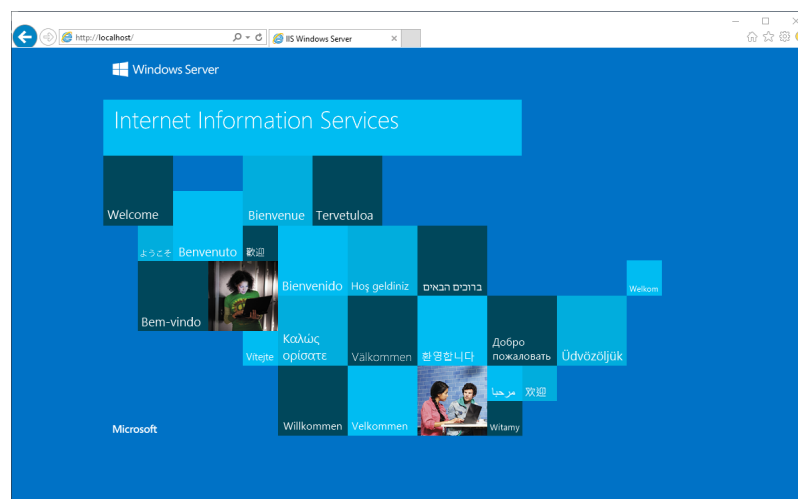


As soon as the installation has finished, click "Close" to exit the dialog box.



If the installation terminates with a problem, this is usually caused by the .NET Framework 3.5 in combination with a WSUS server in your domain. The easiest solution for this is to remove the server from the domain, repeat all of the above steps, and then re-adding the server to the domain.

With the successful completion of all these steps, the IIS web server is now installed. Check the functionality by starting Internet Explorer on the server and calling the URL <http://localhost/>. If installed correctly, you will see the welcome page of the IIS Web server:



## Next step

When you have successfully completed all the steps above, go to the next step "[Visual C++ Redistributable for Visual Studio 2015](#)".

## Introduction to the Bluespice installation guide for Windows

A [quality version](#) of this page, [approved](#) on *25 June 2020*, was based off this revision.

To make sure your BlueSpice installation is successful, we show you how to prepare a complete Windows Server environment before running BlueSpice on it.

The documentation is as detailed as possible and illustrated with screenshots.

Nevertheless, we assume that you already have some previous experience in the installation and operation of Windows Server systems.

Prerequisite is an already installed Windows Server from version 2012 without already additionally installed software.

First start with [Installing the IIS Web Server](#).

## MariaDB on Windows

A [quality version](#) of this page, [approved](#) on *2 August 2021*, was based off this revision.

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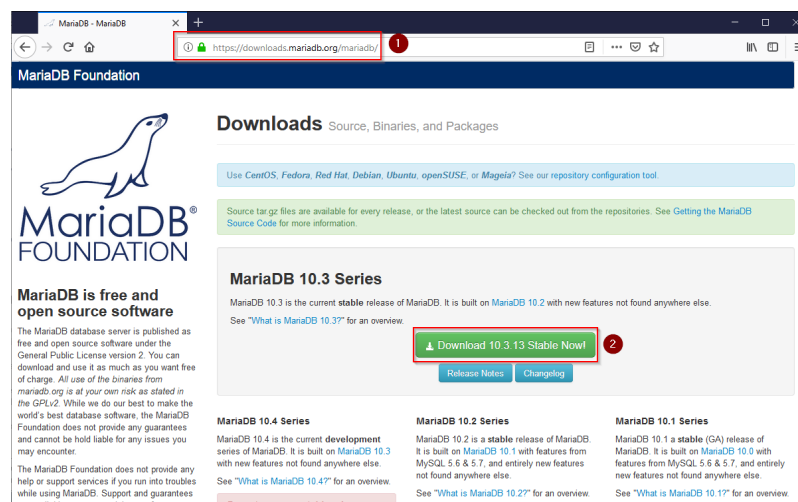
**BlueSpice stores your content in a database for which you need to install a corresponding server. The steps listed here are required.**

## Introduction

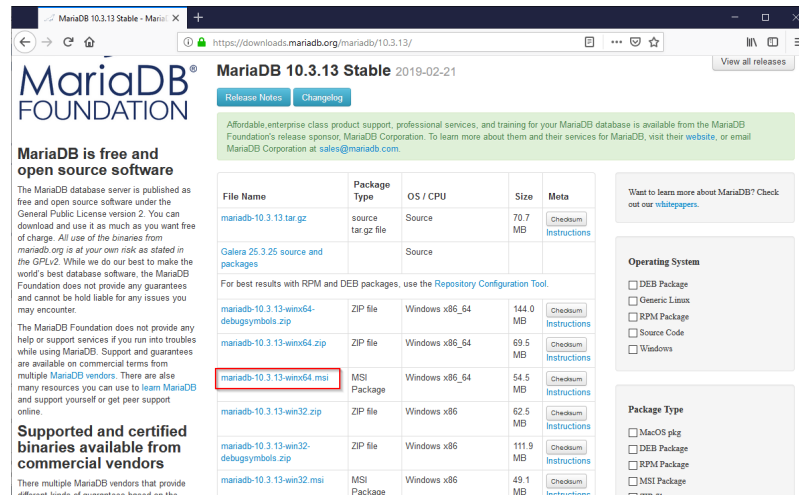
Alternatively, you can use MySQL at this point, but we recommend the database server MariaDB as described below.

## Download

In Internet Explorer, open the [official download page](https://downloads.mariadb.org/mariadb/) (1). Click on the corresponding download link (2).



Select the MSI package in the 64bit version:



File Name	Package Type	OS / CPU	Size	Meta
<a href="#">mariadb-10.3.13.tar.gz</a>	source tar.gz file	Source	70.7 MB	<a href="#">Checksum</a> <a href="#">Instructions</a>
Galera 25.3.25 source and packages				
For best results with RPM and DEB packages, use the <a href="#">Repository Configuration Tool</a> .				
<a href="#">mariadb-10.3.13-winx64-debugsymbols.zip</a>	ZIP file	Windows x86_64	144.0 MB	<a href="#">Checksum</a> <a href="#">Instructions</a>
<a href="#">mariadb-10.3.13-winx64.zip</a>	ZIP file	Windows x86_64	69.5 MB	<a href="#">Checksum</a> <a href="#">Instructions</a>
<a href="#">mariadb-10.3.13-winx64.msi</a>	MSI Package	Windows x86_64	54.5 MB	<a href="#">Checksum</a> <a href="#">Instructions</a>
<a href="#">mariadb-10.3.13-winx32.zip</a>	ZIP file	Windows x86	62.5 MB	<a href="#">Checksum</a> <a href="#">Instructions</a>
<a href="#">mariadb-10.3.13-winx32-debugsymbols.zip</a>	ZIP file	Windows x86	111.9 MB	<a href="#">Checksum</a> <a href="#">Instructions</a>
<a href="#">mariadb-10.3.13-winx32.msi</a>	MSI Package	Windows x86	49.1 MB	<a href="#">Checksum</a> <a href="#">Instructions</a>

Follow the further download instructions and download the installation package to your hard disk.



Please note that the download on your Windows Server with Internet Explorer only works if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.

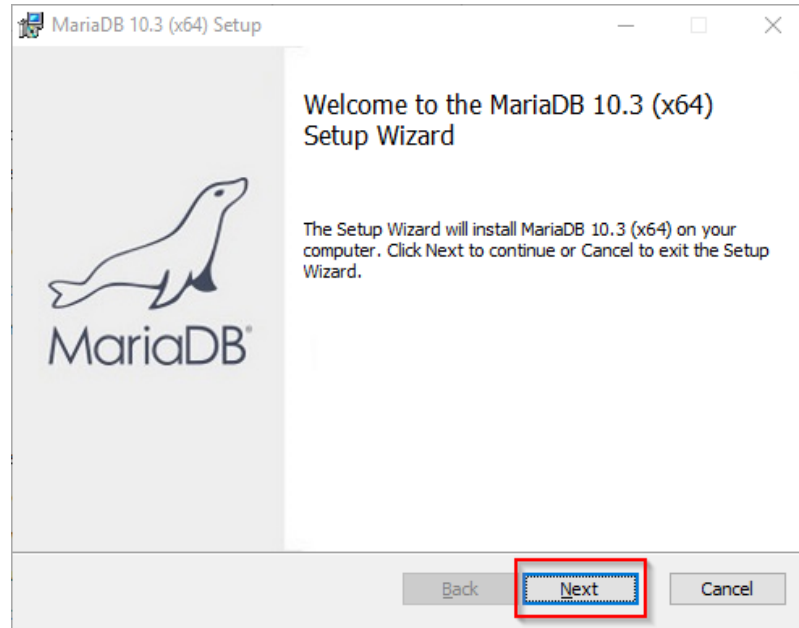


In the following the MariaDB version 10.3.13 is used and serves as an example only for the latest version, which you can download at the time of your installation.

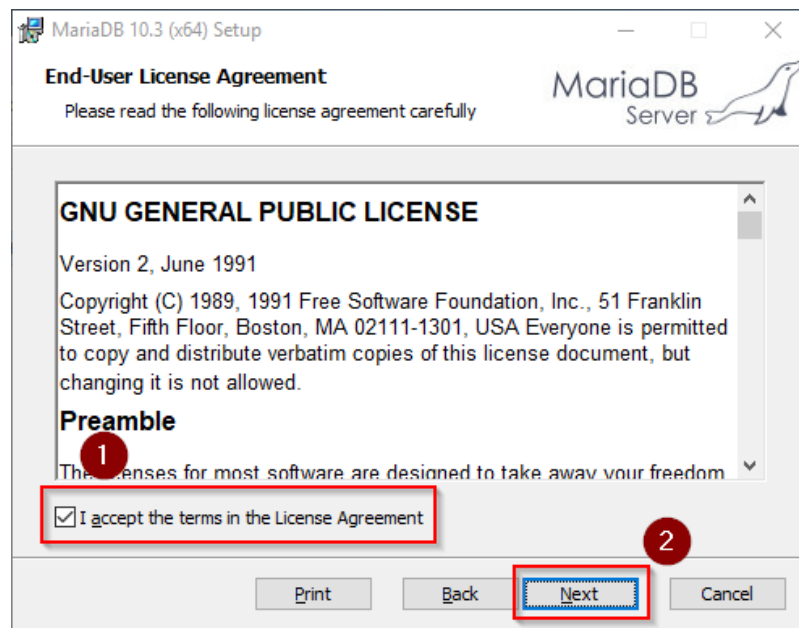
## Installing MariaDB

Open the file that you just downloaded: "mariadb-10.3.13-winx64.msi".

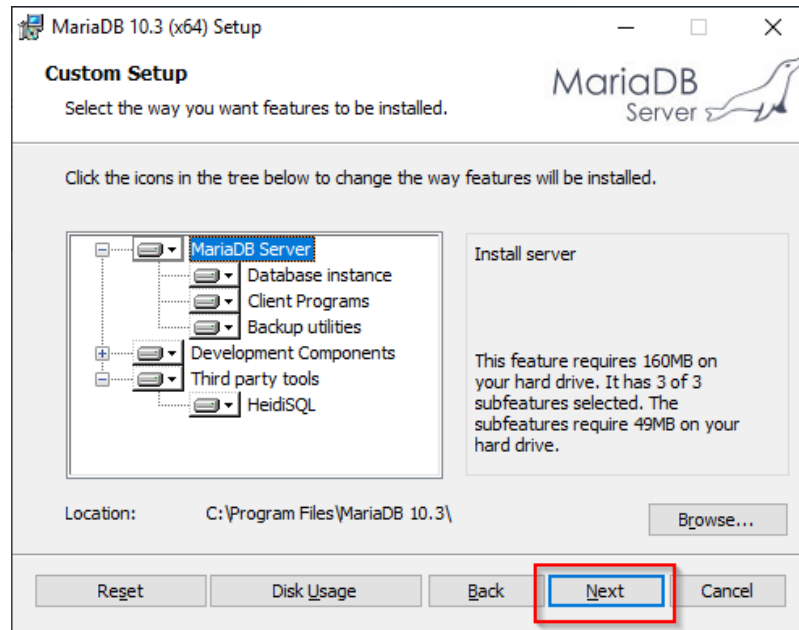
Start the installation by clicking "Next":



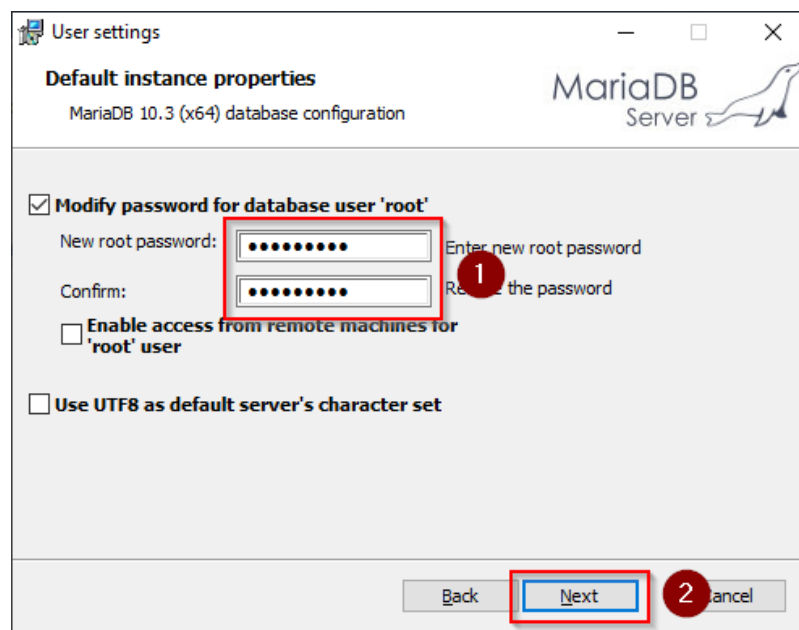
Confirm the license agreement (1) and click "Next" (2):



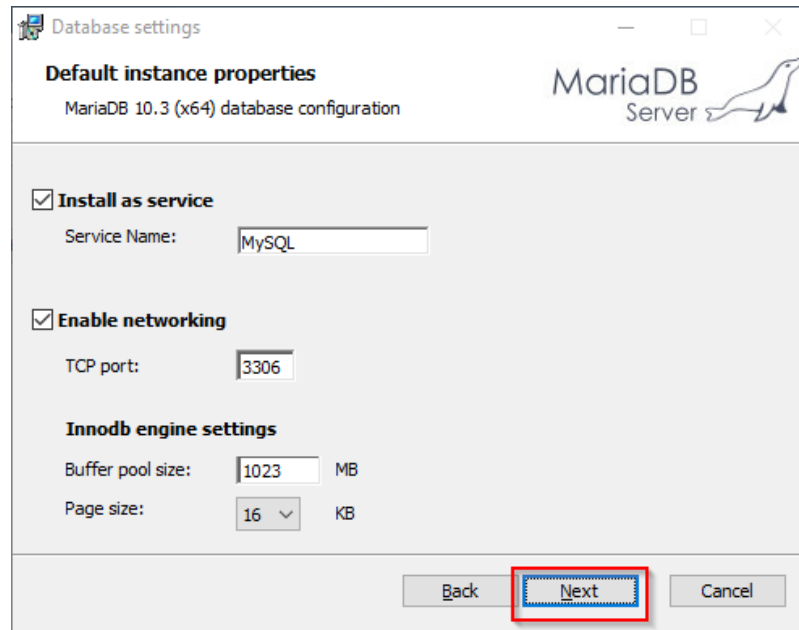
The next step you confirm by clicking on "Next".



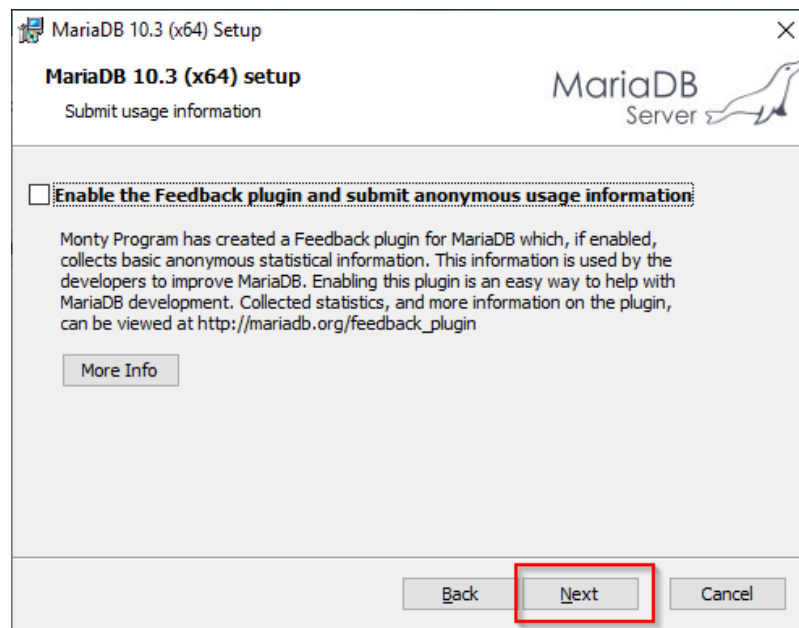
Provide a password. It will be used for the administrative user ("root") of the database server (1). Then, click "Next" (2):



Confirm the next step by clicking "Next":

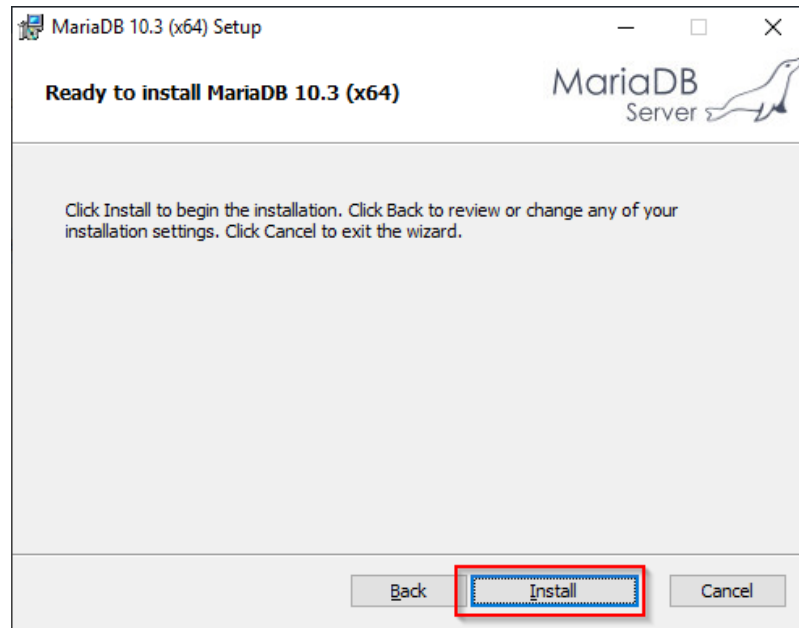


Confirm the next step by clicking "Next":

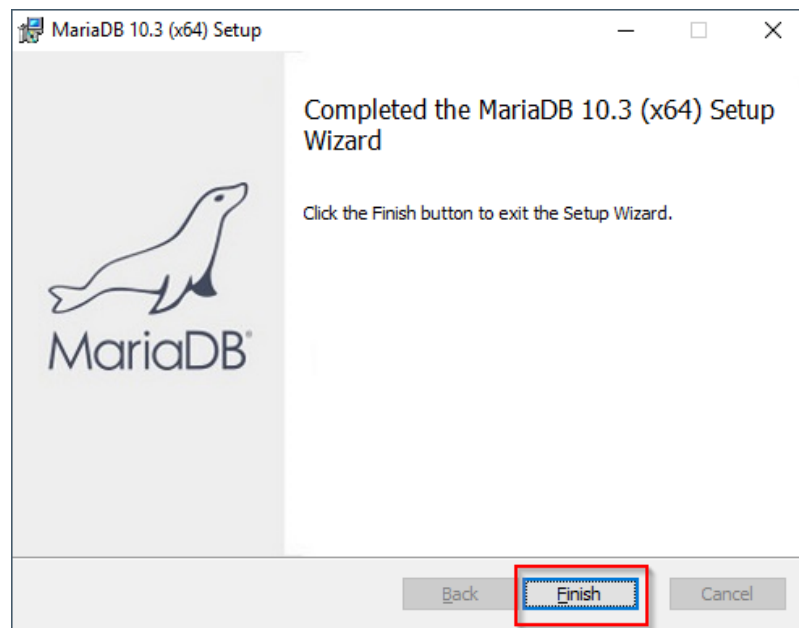


Now start the installation:





When the installation is complete, exit the installer:



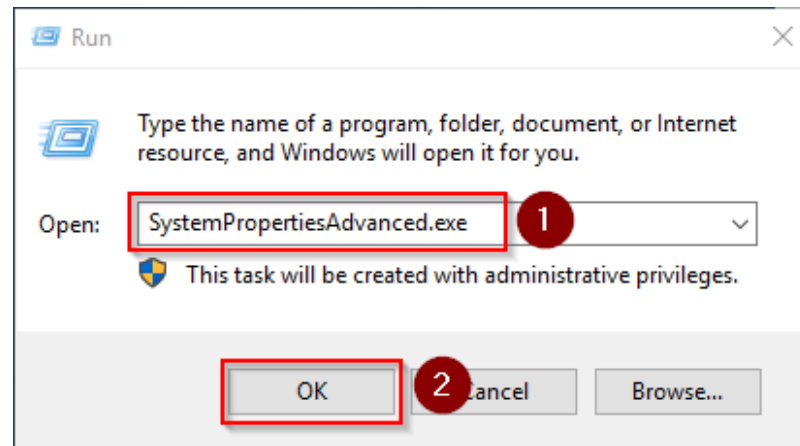
## Setting the environment variable

---

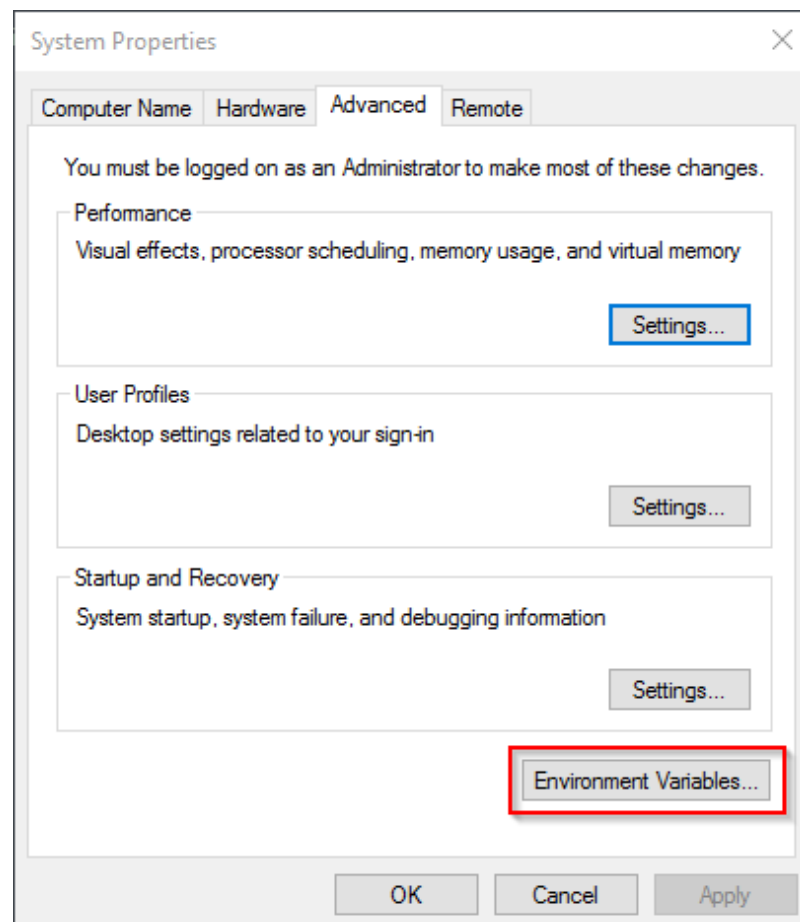
To use MariaDB easily on the command line of Windows, it is necessary to configure an environment variable in Windows accordingly. To do this, perform the following steps:

Enter the key combination Windows + R.

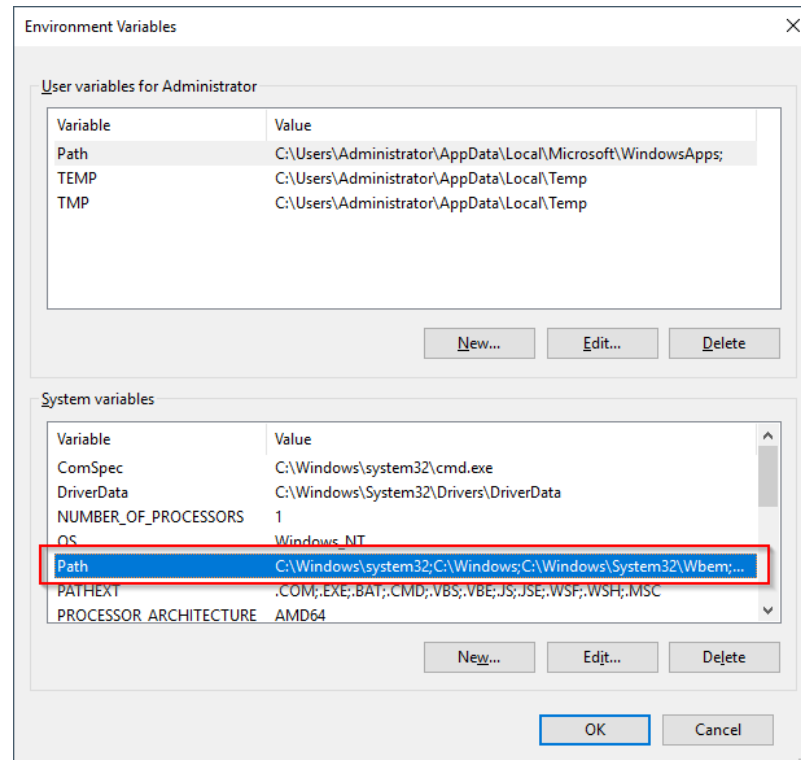
In the following dialog, enter "SystemPropertiesAdvanced.exe" (1) and confirm with OK (2):



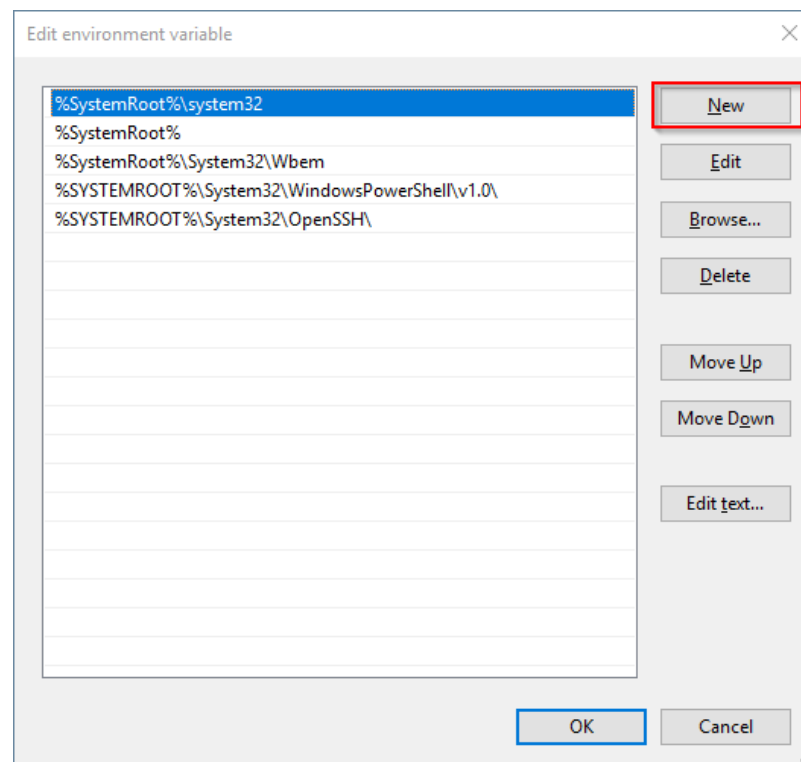
Click "Environment Variables":



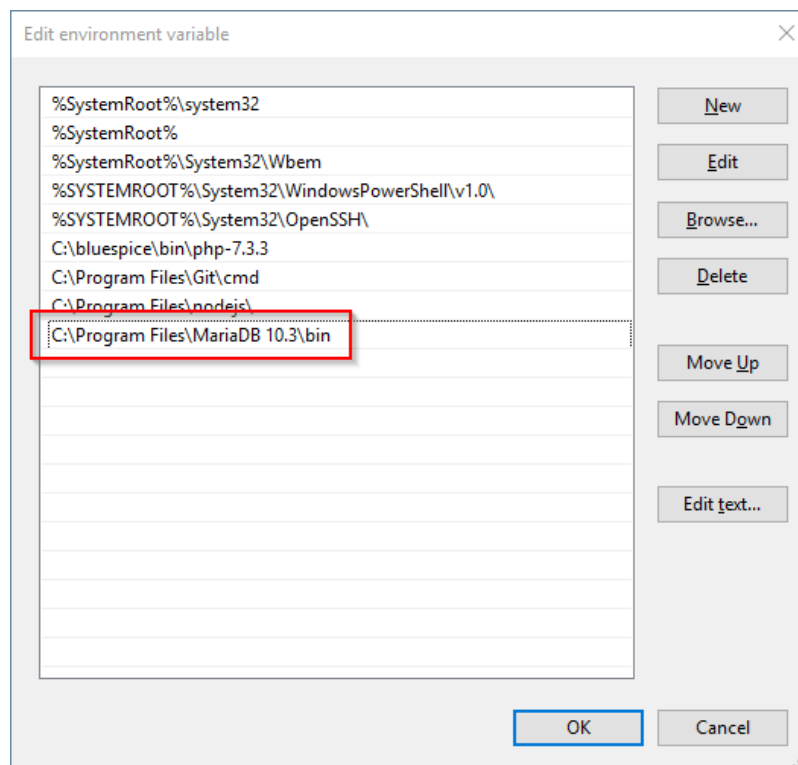
In the bottom pane of the now opened window double-click on the line "Path":



Click "New":



Add the path to your installation of MariaDB, which contains i.a. the file `mysql.exe` is located. By default, this is the path `C:\Program Files\MariaDB 10.3\bin`.



Close all previously opened windows one after the other by clicking "OK".

## Next step

If you have completed all steps successfully, you can delete the previously downloaded "`mariadb-10.3.13-winx64.msi`" file from your hard disk and continue to the next step "[OpenJDK](#)".

## Node.js on Windows

A [quality version](#) of this page, [approved](#) on *9 June 2021*, was based off this revision.

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**Node.js is required for the operation of the rendering service "Parsoid" for the Visual Editor. The steps listed here are optional and only required if you plan to use them in your BlueSpice installation.**

## Download

---



This guide uses the Node.js version 10.13.0 as an example. You can download any 10.x version of Node.js.

BlueSpice is NOT compatible with a Node.js version greater than 10.x!

In Internet Explorer, open the [official website of Node.js](#) (1). Download the latest LTS version 10.x.

Follow the further download instructions and download the installation package to your hard drive.



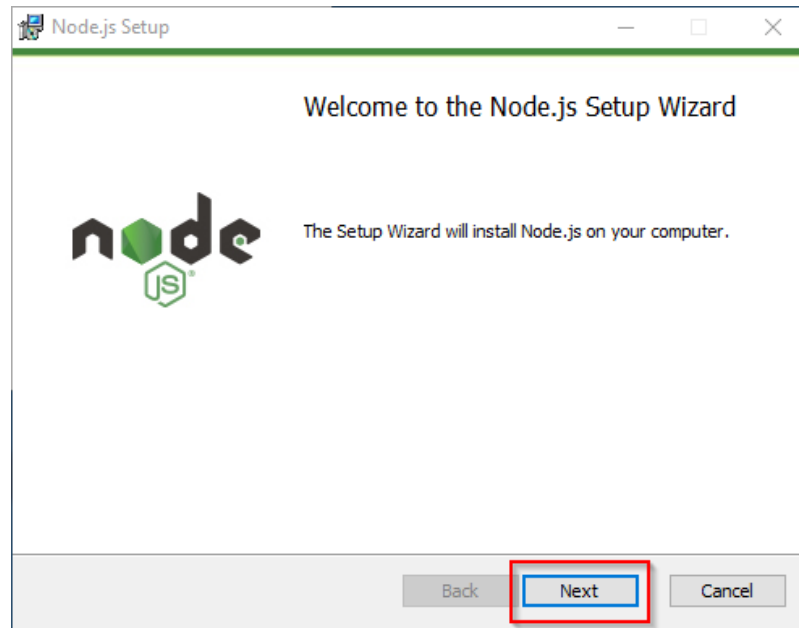
Please note that the download on your Windows Server with Internet Explorer only works if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.

## Installing Node.js

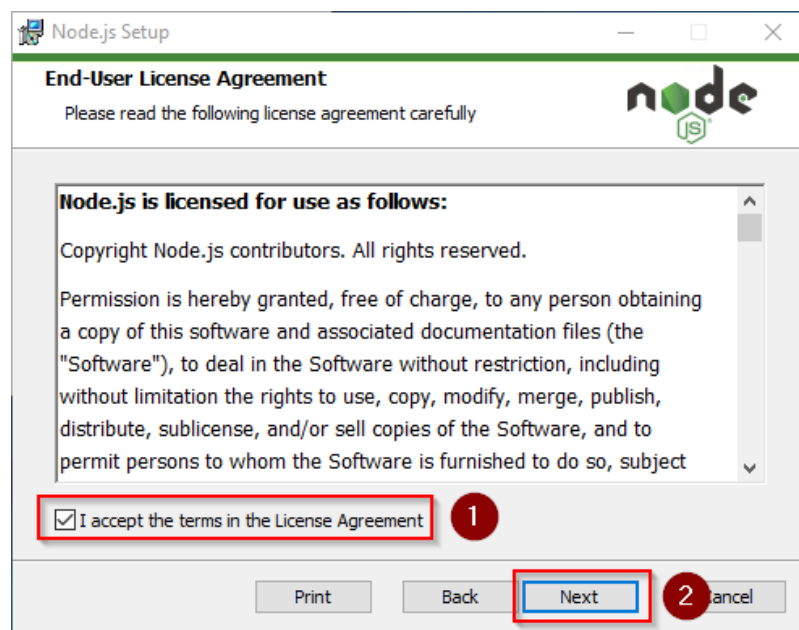
---

Open the downloaded file "node-v10.13.0-x64.msi".

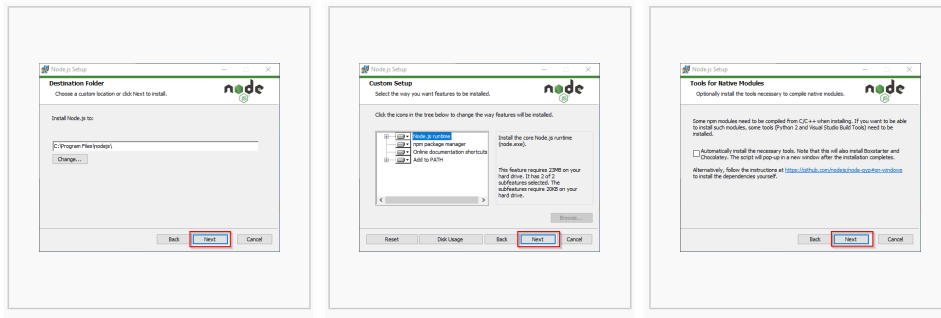
Start the installation by clicking "Next>":



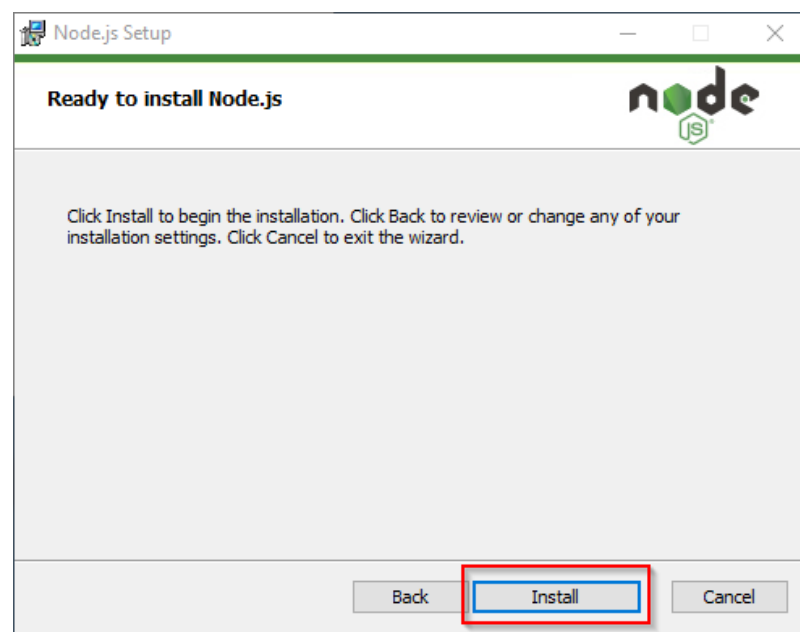
Confirm the license (1) and click "Next >" (2):



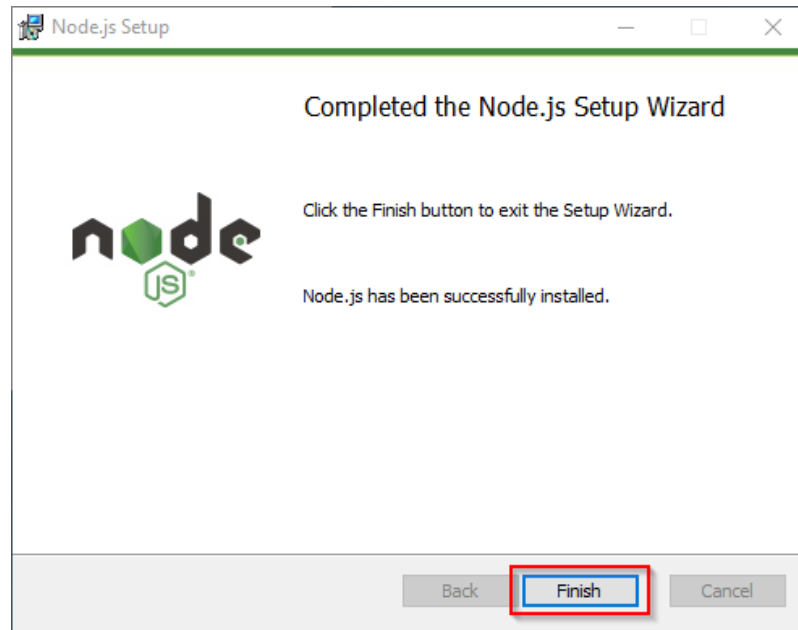
Confirm the further installation steps by clicking "Next >":



Start the installation by clicking "Install":



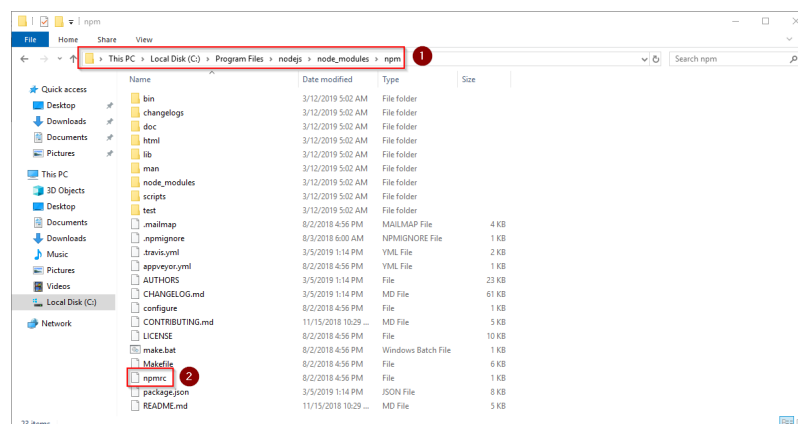
You can close the setup program after finishing the installation:



## Adjusting the Installation path of the Node.js packages

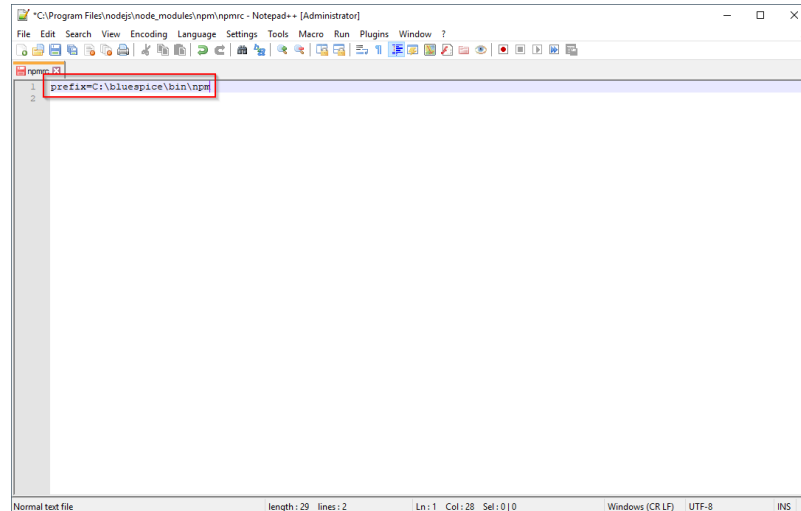
By default, Node.js installs its packages in the profile directory of the logged-in user. Since Node.js is intended solely to operate as a user-independent server application under BlueSpice, it is strongly recommended that you change the default path for these packages:

In the Node.js installation folder, open the file `node_modules\npm\npmrc` in a text editor:



Edit this file and enter the new default path for your Node.js packages:





Save the file and close the editor.



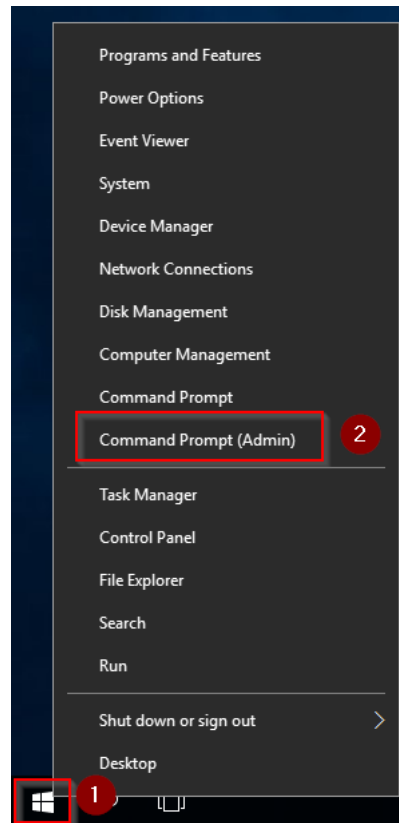
This documentation is based on the [folder structure recommended by us](#). For this reason, the default path for the Node.js packages is set to the folder C:\bluespice\bin\npm. If you have different requirements, you must adapt these paths accordingly.

## Installing the Windows Build Tools

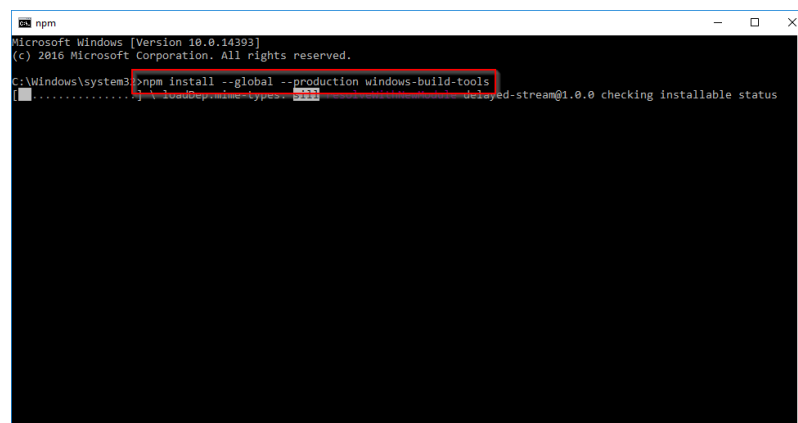
---

The Node.js package windows-build-tools is required for installing the relevant BlueSpice applications.

To install, first open the Windows command prompt as administrator. To do this, right-click "Start" (1) and select "Command Prompt (Administrator)" (2):

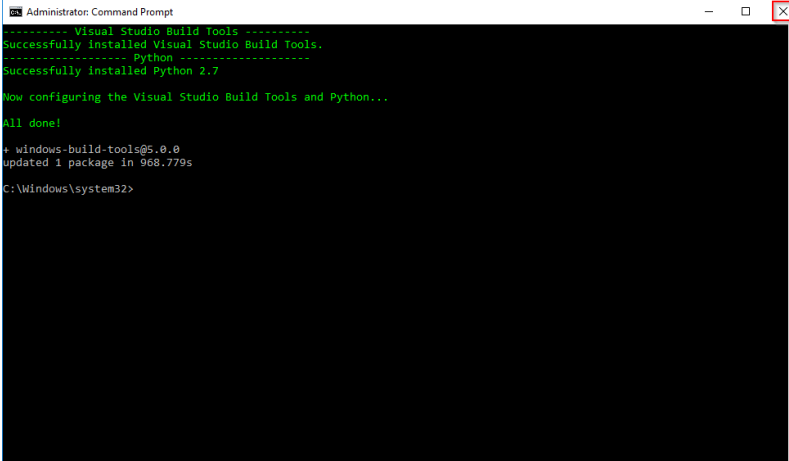


Execute the command "npm install --global --production windows-build-tools":



This command may take a long time and not show any activity for a long time. However, it is still active and must not be canceled! Additionally, Windows Server may restart during the process without warning. In this case, restart the installation as described above.

After successful installation, you can close the command prompt:



```
Administrator: Command Prompt
----- Visual Studio Build Tools -----
Successfully installed Visual Studio Build Tools.
----- Python -----
Successfully installed Python 2.7
Now configuring the Visual Studio Build Tools and Python...
All done!
+ windows-build-tools@5.0.0
updated 1 package in 968.779s
C:\Windows\system32>
```

## Next step

If you have completed all steps successfully, you can delete the previously downloaded file "node-v10.13.0-x64.msi" from your hard disk and continue to the next step "[Parsoid](#)".

## OpenJDK on Windows

A [quality version](#) of this page, [approved](#) on *25 June 2020*, was based off this revision.

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**Java is a prerequisite for the operation of Advanced Search, PDF export, VisualDiff (BlueSpice pro only) and the LaTeX renderer (BlueSpice pro only). The steps listed here are optional and only required if you plan to use one or more of these services in your BlueSpice installation.**

## Introduction

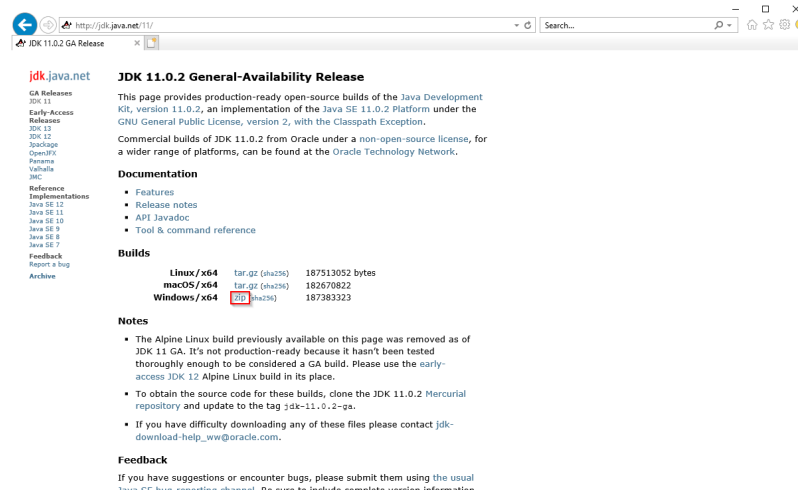
For licensing reasons, we decided to use the alternative OpenJDK published under the [GPL](#) instead of the Java Runtime Environment. Of course, you are free to use the JRE of <https://java.com/>, but here we only document OpenJDK.

## Download

Open the [official download page](#) (1) in your browser and select the version marked "Ready for use" (2).



Select the ZIP archive in the 64bit version for Microsoft Windows



Follow the further download instructions and download the ZIP archive to your hard disk.



Please note that the download on your Windows Server with Internet Explorer will only work if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.



In this guide, version 11.0.2 of OpenJDK is used and serves only as an example for the latest version, which you can download at the time of your installation.

## Unpacking the ZIP archive

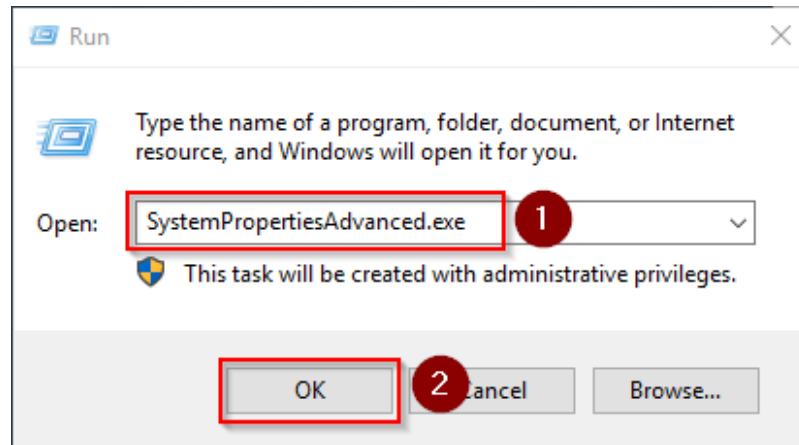
Unzip the ZIP archive that you just downloaded into a suitable system path on your hard drive.

{{Template:Hint|text=This documentation is based on the [[Setup: Installation Guide/Advanced /Windows\_Folder\_Structure | folder structure recommended by us ]]. For this reason, OpenJDK is unpacked into the folder C:\bluespice\bin\jdk-11.0.2. If you have different folder requirements, you must adapt these paths accordingly.}}

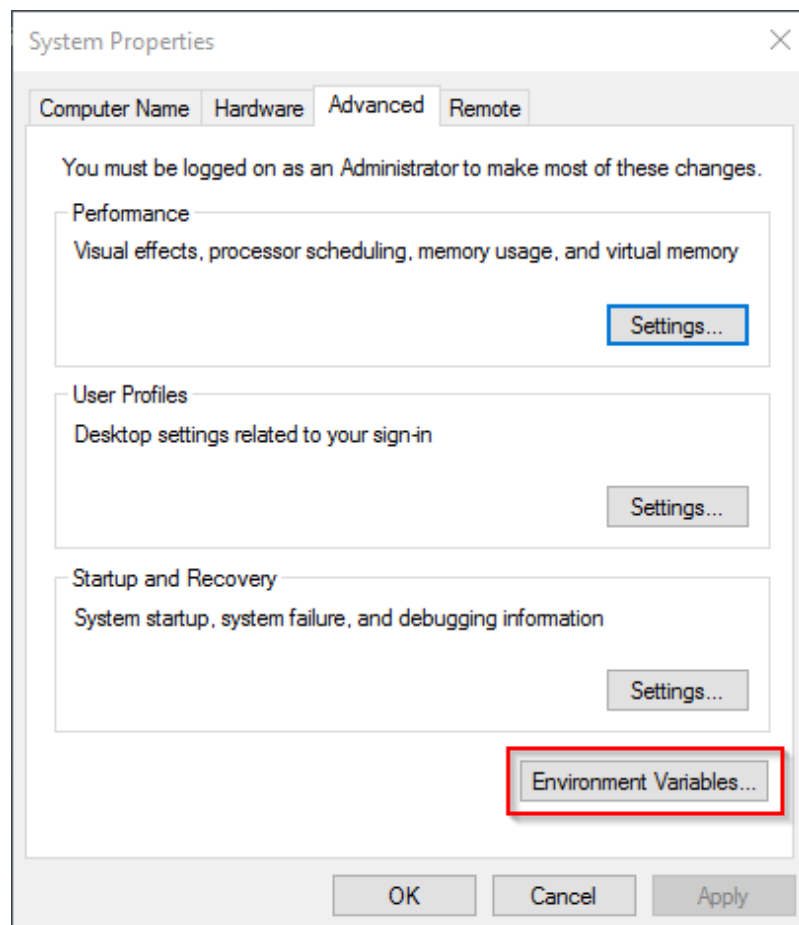
## Setting the environment variable

Press the key combination Windows+R.

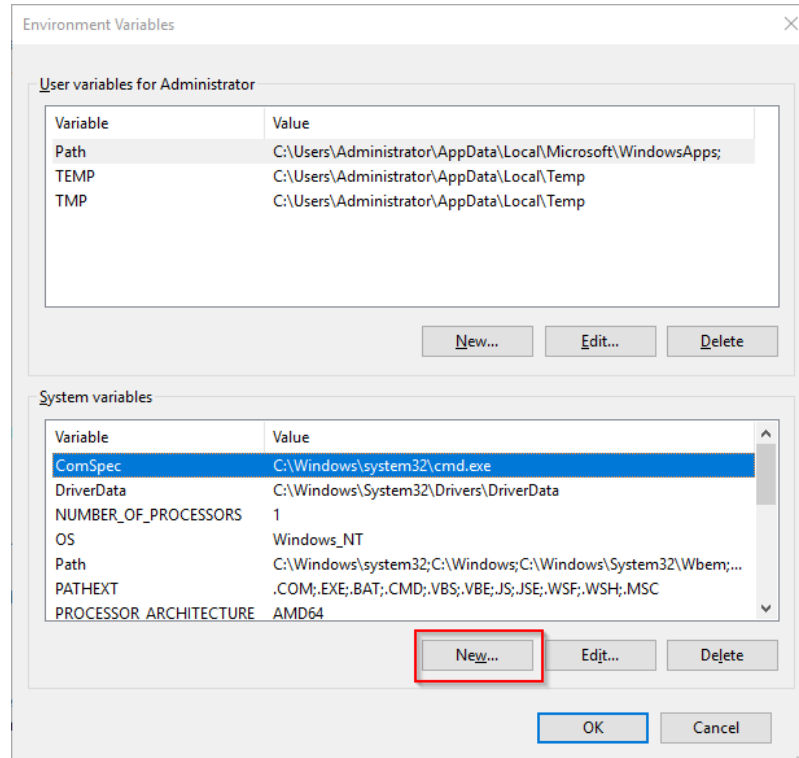
In the following dialog, enter "SystemPropertiesAdvanced.exe" (1) and confirm with OK (2):



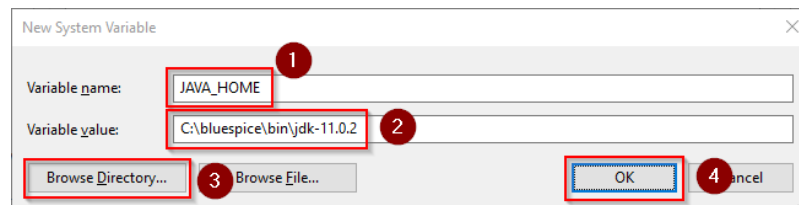
Click "environment variables":



Click "New...":



Set the name of the variable "JAVA\_HOME" (1). As the value of the variable, specify the directory of your OpenJDK installation that you have just copied to C:\ bluespice\bin (2). Here you can use the "browse directory" button (3). Then click "OK" (4):



Close all newly opened windows one after the other by clicking on "OK".

## Next step

If you have completed all steps successfully, you can delete the previously downloaded "openjdk-11.0.2\_windows-x64\_bin.zip" file from your hard disk and go to the next step "[Apache Tomcat](#)".

## PHP 7.3 on Windows

A [quality version](#) of this page, [approved](#) on 2 August 2021, was based off this revision.

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5 Checking the environment variable .....	53
6 Configuring IIS for PHP .....	54
7 Next step .....	62





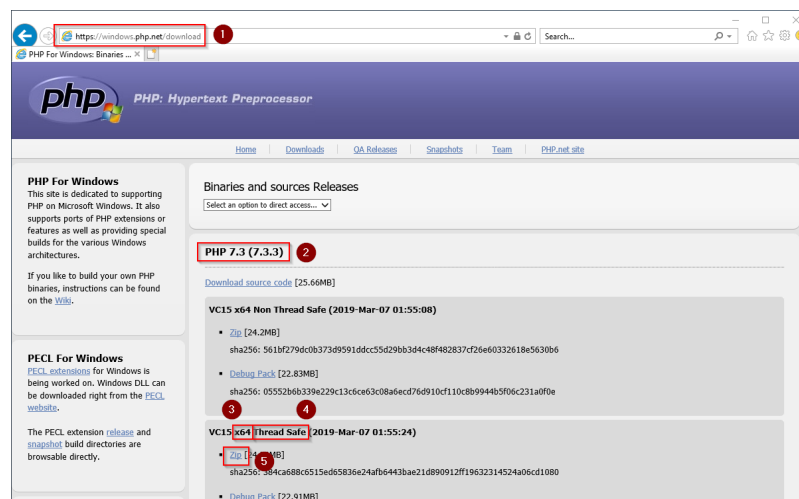
The source code of BlueSpice is based on the scripting language "PHP". It must be installed on your server in order to operate BlueSpice. The steps listed here are required.

## Introduction

PHP is not installed with a "classic installation package", but the sources are downloaded and integrated in IIS via the [previously installed PHP Manager](#).

## Downloading PHP

In your browser, open the [official download page for Windows on php.net](#) (1). Find the latest version 7.3.x (2) 64-bit (3) Thread-Safe (4) and download it here (5):



Follow the download instructions.



Please note that the download on your Windows Server with Internet Explorer will only work if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.



The following is PHP version 7.3.3 and is only an example of the latest version 7.3.x that you can download at the time of your installation.

## Unzipping the ZIP archive

---

Unzip the ZIP archive just downloaded into a useful system path on your hard drive.



This documentation assumes the [recommended folder structure](#).

For this reason PHP will be unpacked into the folder C:\bluespice\bin\php-7.3.3. If you have a different folder structure, you must adapt these paths accordingly.

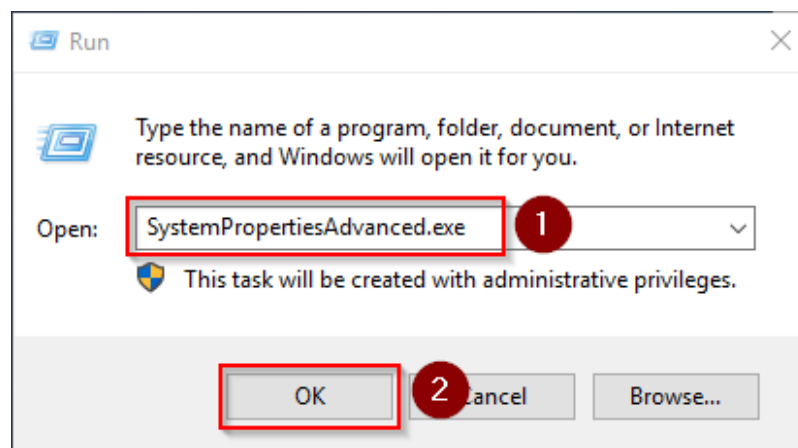
## Setting the environment variable

---

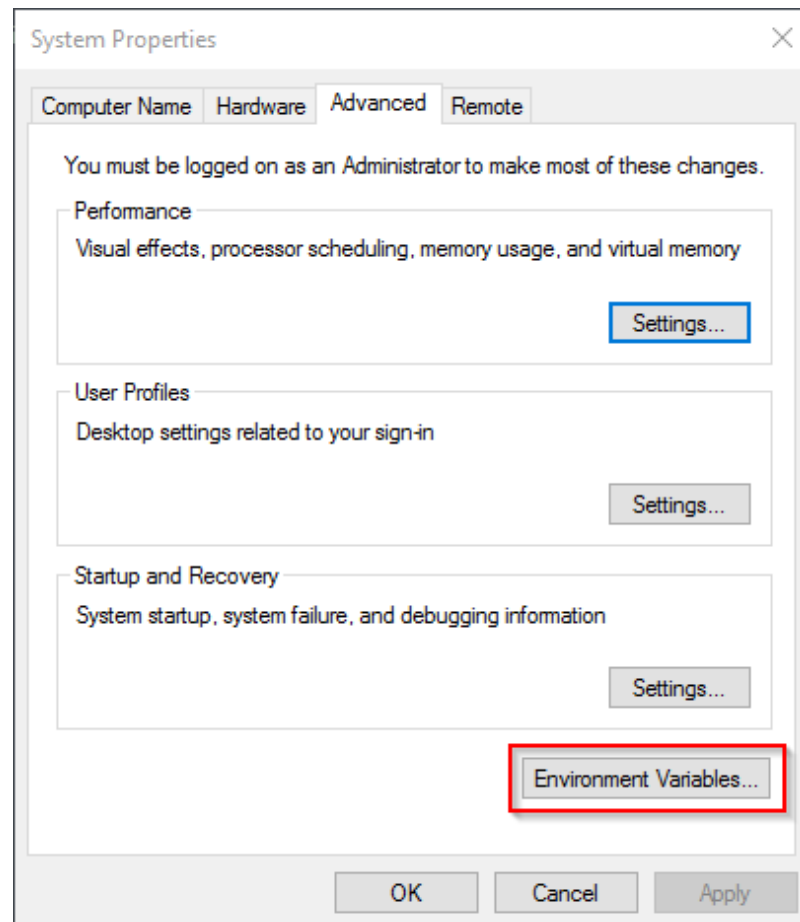
In order to use PHP easily on the command line of Windows, it is necessary to configure an environment variable in Windows accordingly. To do this, perform the following steps:

Enter the key combination Windows+R.

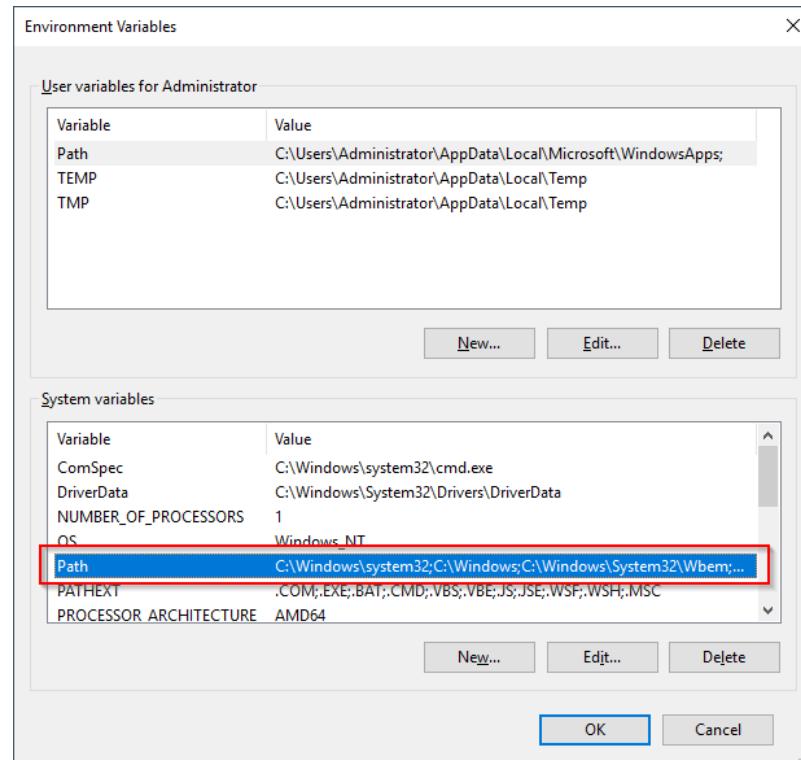
In the following dialog enter "SystemPropertiesAdvanced.exe" (1) and confirm with OK (2):



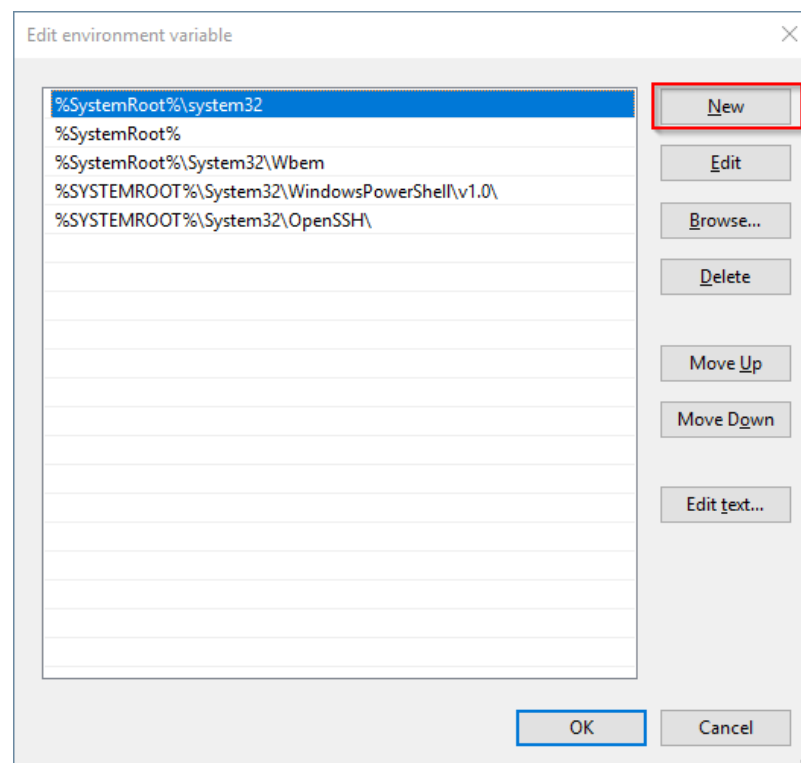
Click "Environment variables":



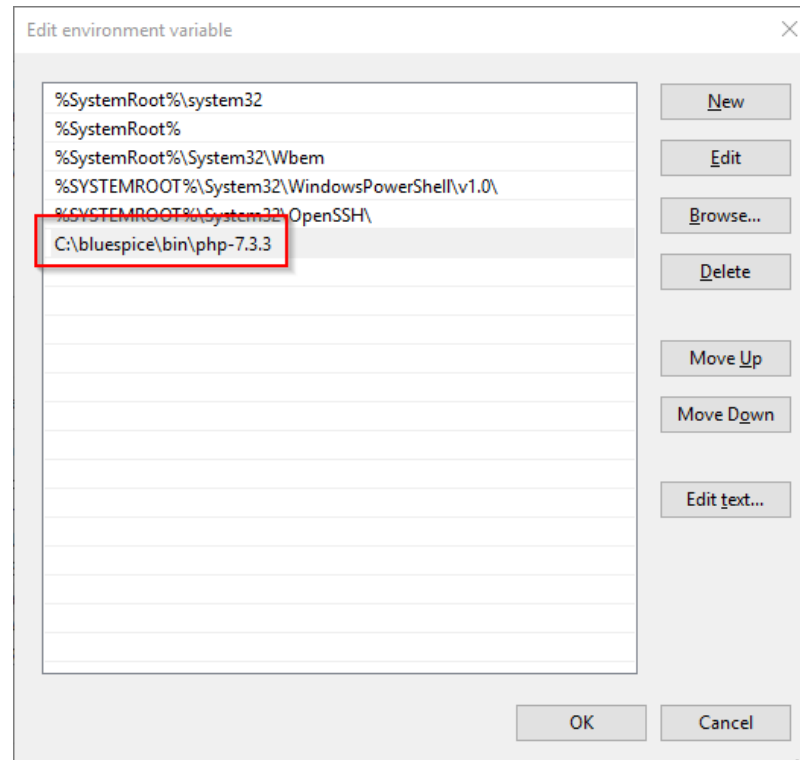
In the lower part of the now opened window double-click on the line "Path":



Click "New":



Add the path to your unpacked PHP version, which contains the php.exe file:



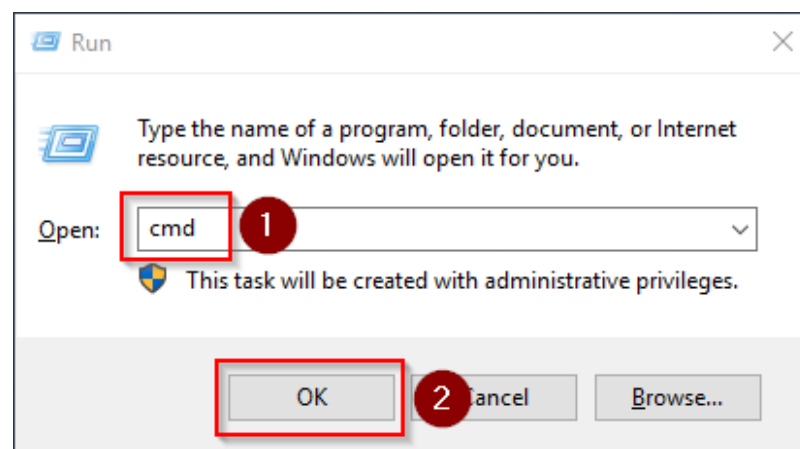
Close all newly opened windows one after the other by clicking on "OK".

## Checking the environment variable

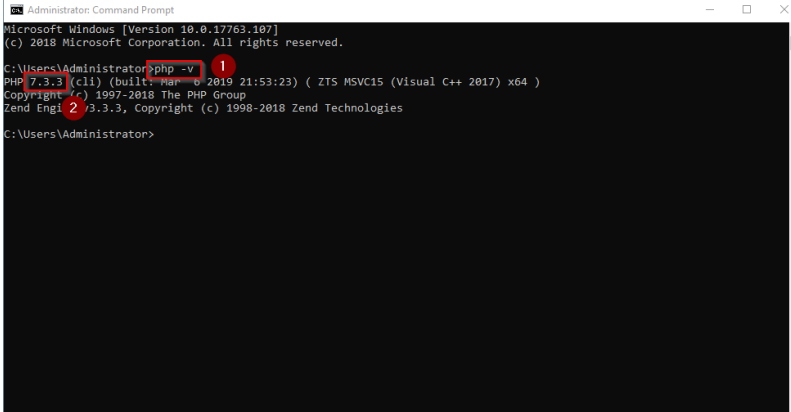
To make sure the environment variable is set correctly, perform the following steps:

Enter the key combination Windows+R.

In the following dialog, enter "cmd" (1) and confirm with OK (2):



At the command prompt, type "php -v" (1) and press the Enter key. The found PHP version will be displayed (2).



```
Administration: Command Prompt
Microsoft Windows [Version 10.0.17763.107]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>php -v 1
PHP 7.3.3 (cli) (built: Mar  6 2019 21:53:23) ( ZTS MSVC15 (Visual C++ 2017) x64 )
Copyright (c) 1997-2018 The PHP Group
Zend Engine 3.3.3, Copyright (c) 1998-2018 Zend Technologies

C:\Users\Administrator>
```

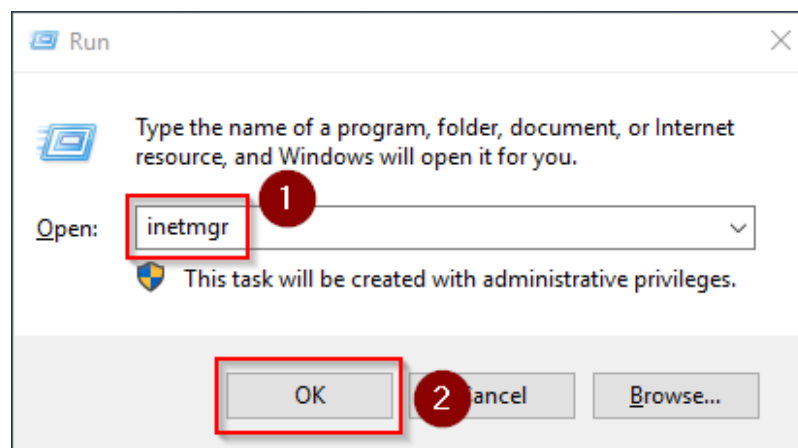
If this is not the case, then the path to the php.exe file in the environment variables was incorrectly specified.

## Configuring IIS for PHP

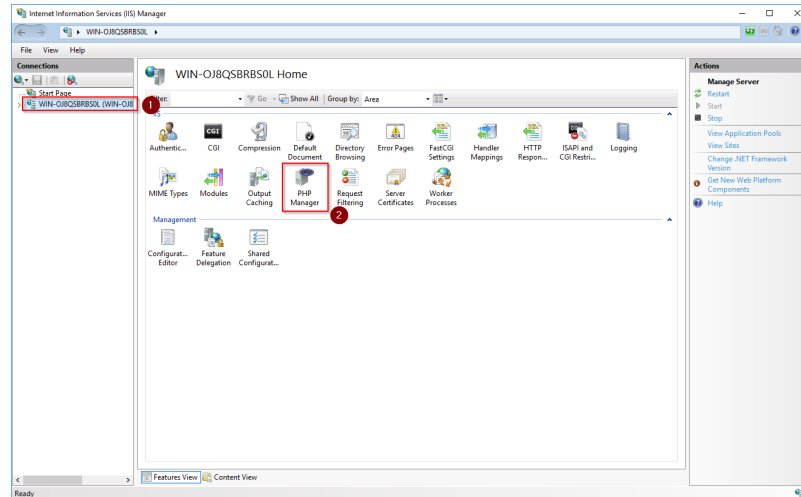
In the following steps, PHP will be included in IIS and IIS will be configured to provide a working basic setup:

First, call IIS Manager. To do this, enter the key combination Windows+R.

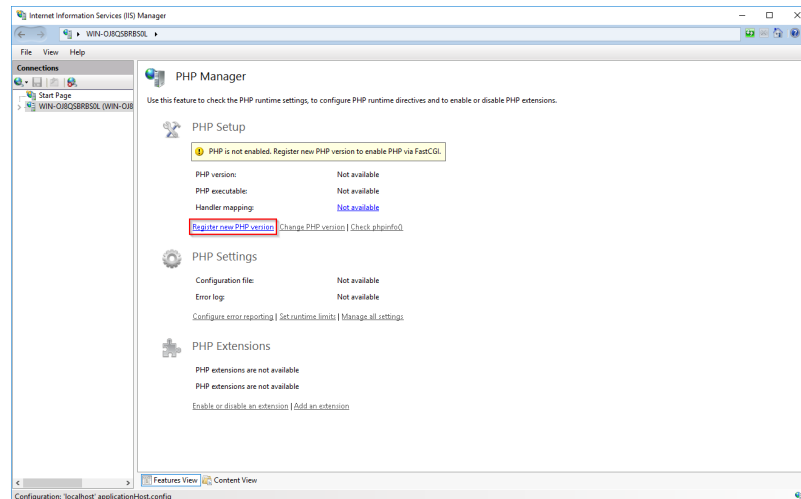
In the following dialog, enter "inetmgr" (1) and confirm with "OK" (2):



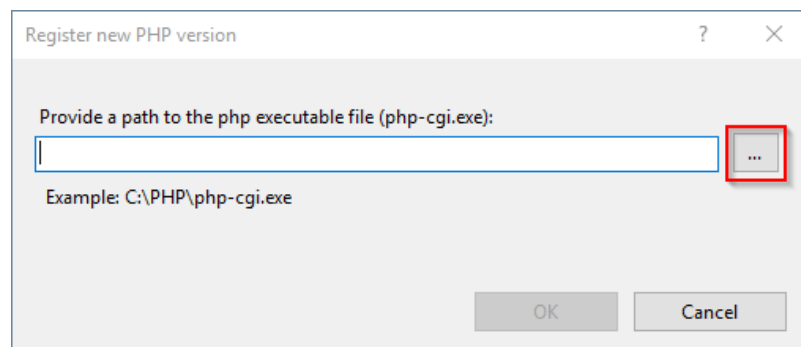
In the left pane, select your server name (1) and then double-click "PHP Manager" (2):



Click "Register new PHP version":

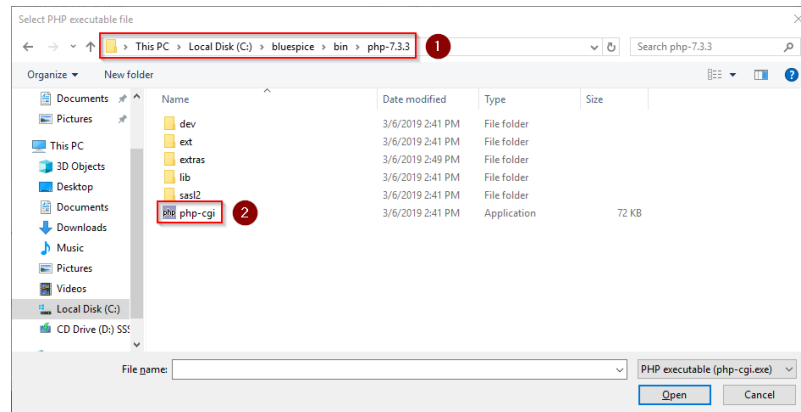


In the following window select the browse "(...)" button:

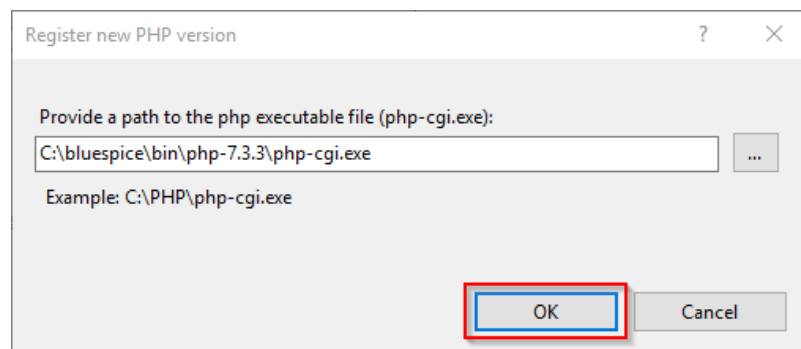


To manage the PHP settings in the next window:

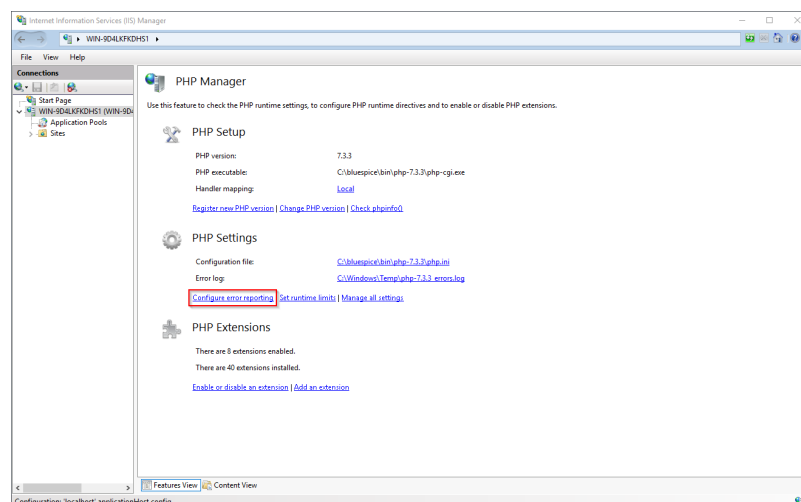
Change to the path to which you previously unzipped PHP (1), mark the "php-cgi.exe" (2) and confirm the dialog with "Open" (3):



Confirm again with "OK":

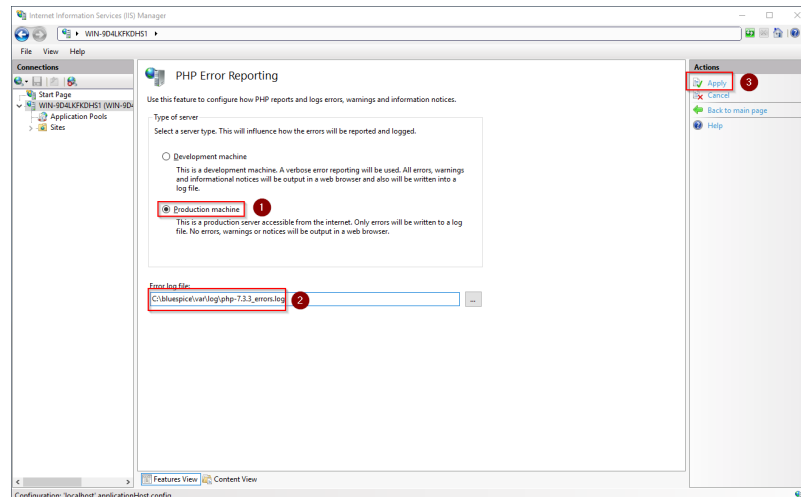


Click on "Configure error reporting":



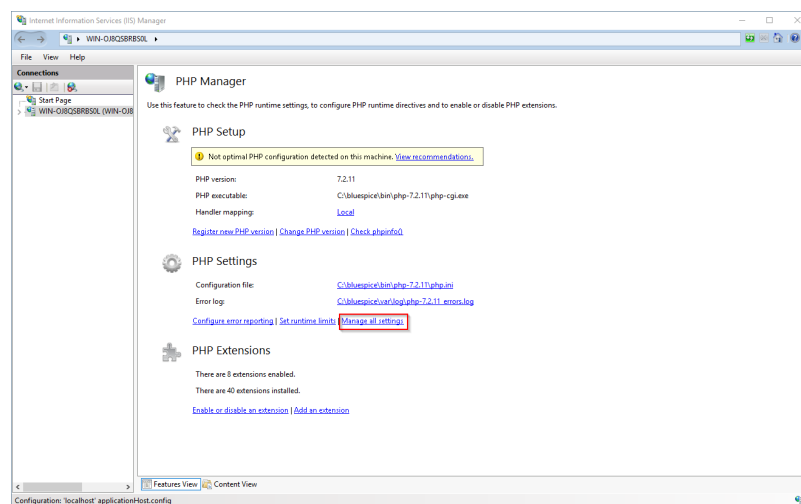
Activate the item "Production machine" (1) and select a path and a file of your choice where PHP should save its log (2). Confirm with "Apply" (3):





This documentation assumes the [recommended folder structure](#). If the path you specify here does not yet exist, please create it before clicking "Apply".

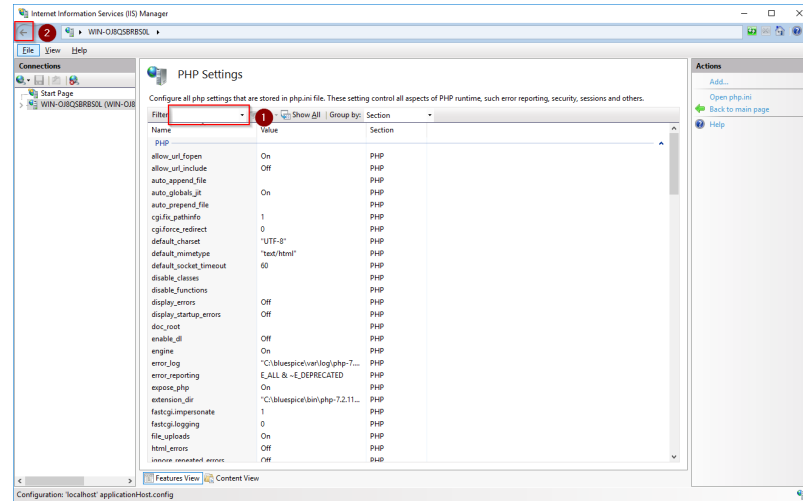
Click "Manage all settings":



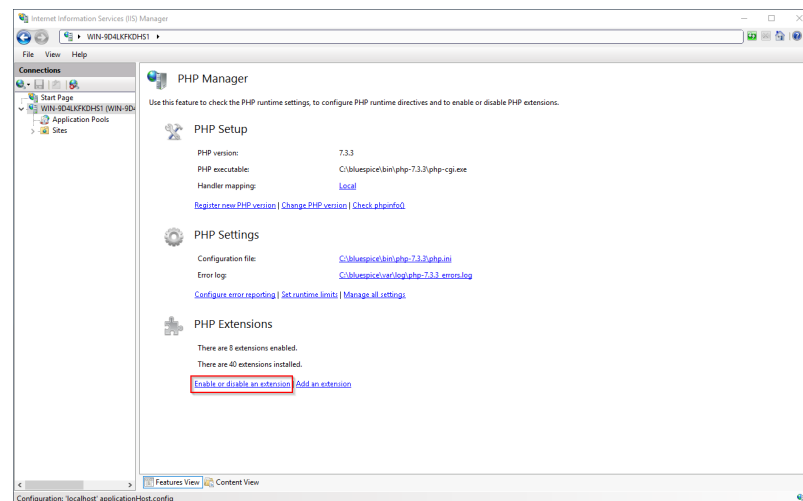
Adjust the following settings:

Name	Value	Section
date.timezone	"Europe/Berlin" or your timezone	Date
max_execution_time	600	PHP
post_max_size	128M	PHP
upload_max_filesize	128M	PHP

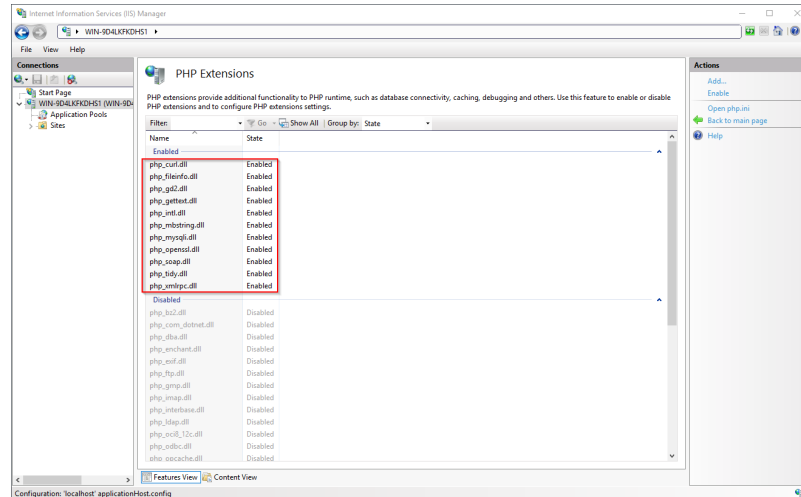
To find these options faster, you can also use the filter (1). Go back afterwards (2):



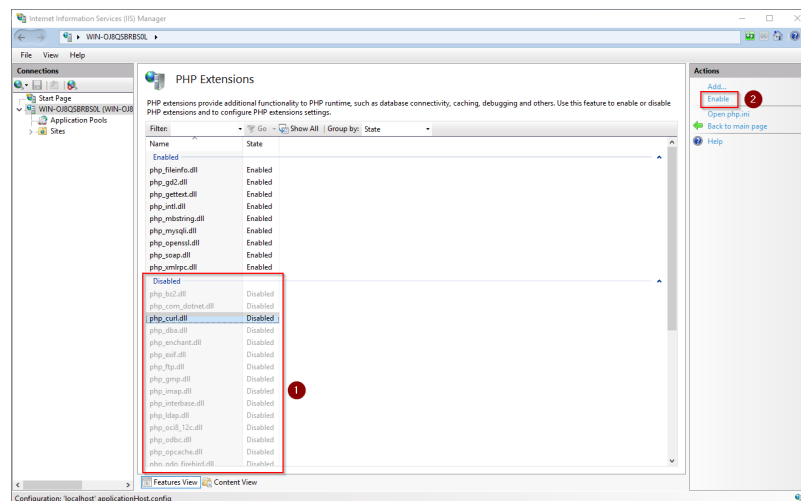
In the main window, click "Enable or disable an extension":



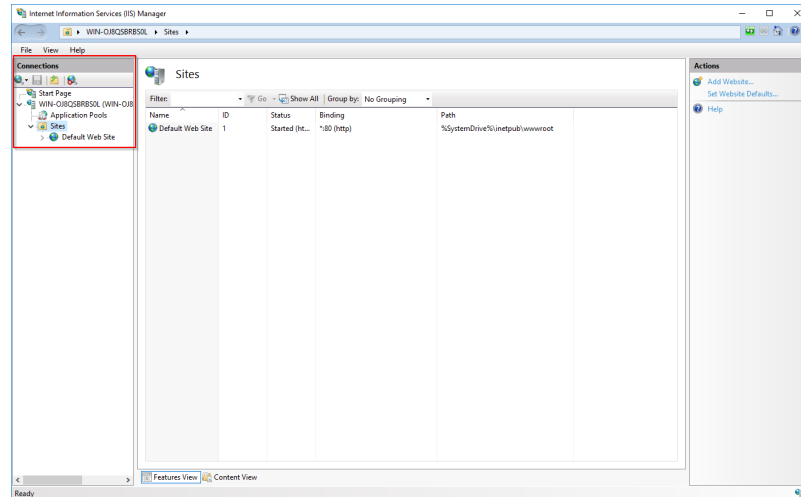
Make sure that the following extensions are enabled:



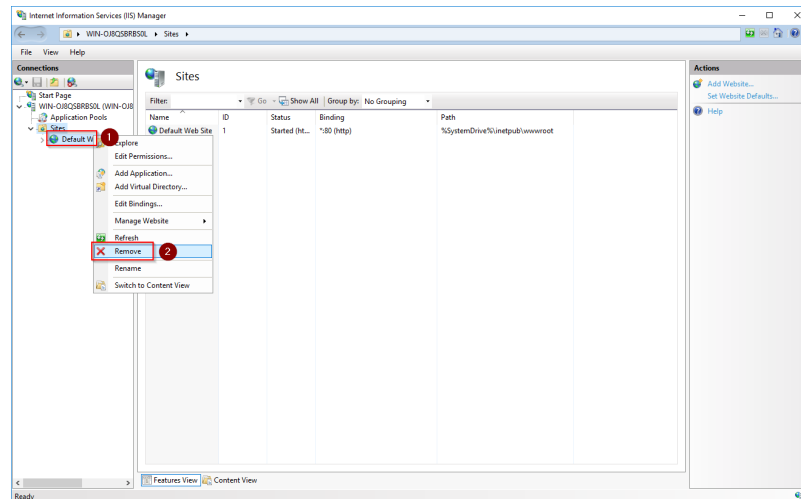
To activate an extension, select it in the "Disabled" section (1) and activate it by clicking on "Enable" (2):



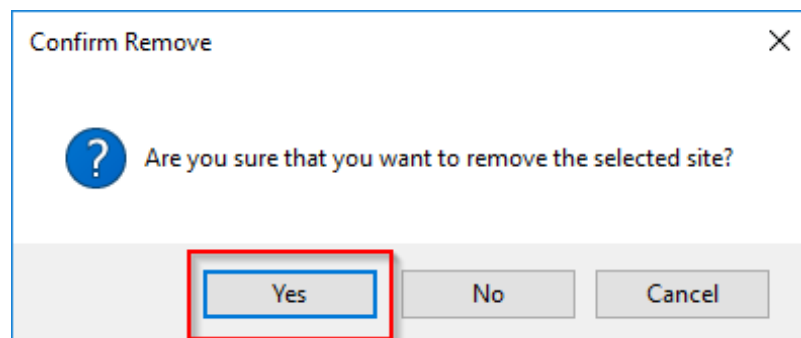
In the next step, expand the tree on the left until the "Default Web Site" becomes visible:



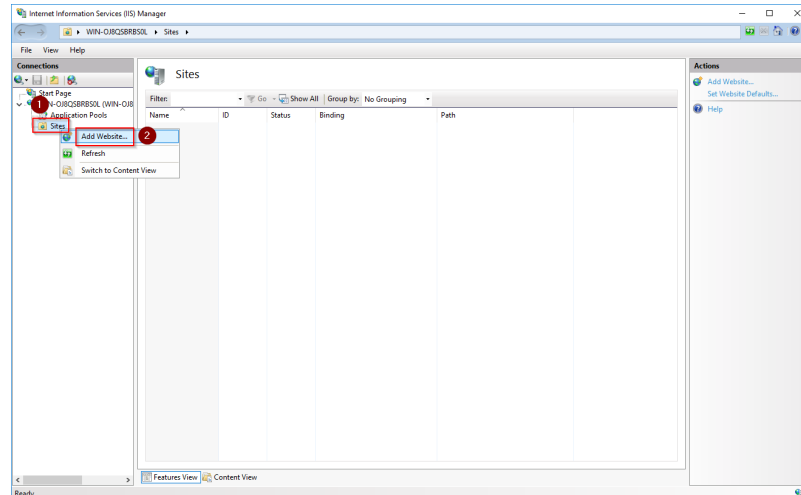
Right-click (1) and then click "Remove" (2):



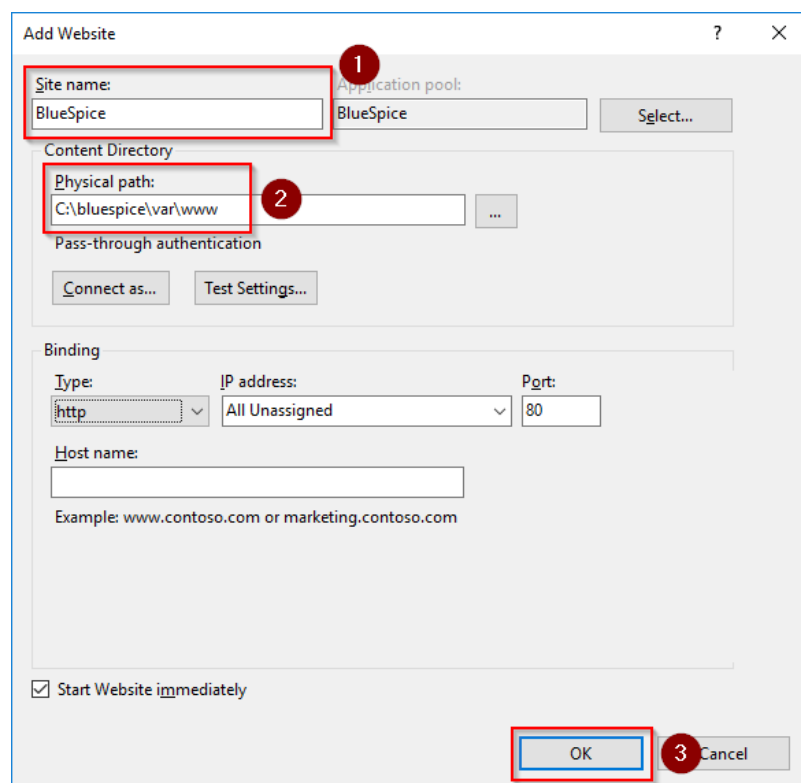
Confirm the following dialog with "Yes":



Right-click on "Sites" (1) and click on "Add Website" (2):

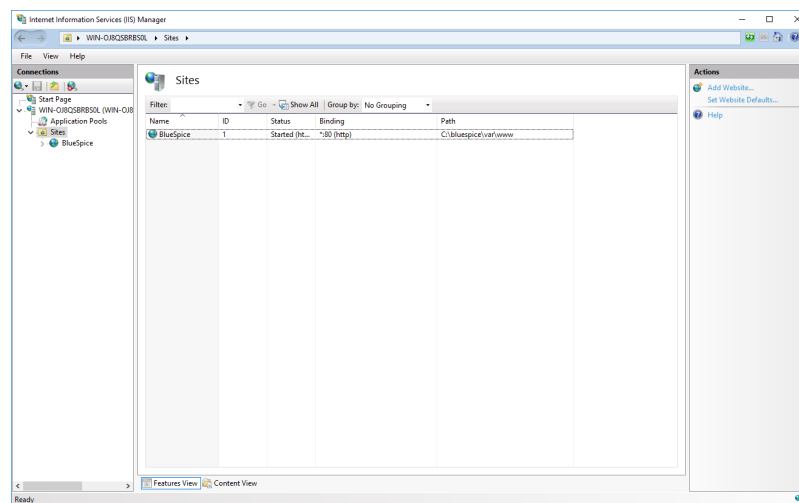


Enter the site name "BlueSpice" (1) and select the path on your server where your BlueSpice installation will be located later (2). Confirm with "OK" (3):



This documentation assumes the [recommended folder structure](#). If the path you specify here does not yet exist, please create it before clicking "OK".

The new page is now listed in the IIS overview page:



## Next step

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

## PHP Manager on Windows

A [quality version](#) of this page, [approved](#) on *2 August 2021*, was based off this revision.

### Contents

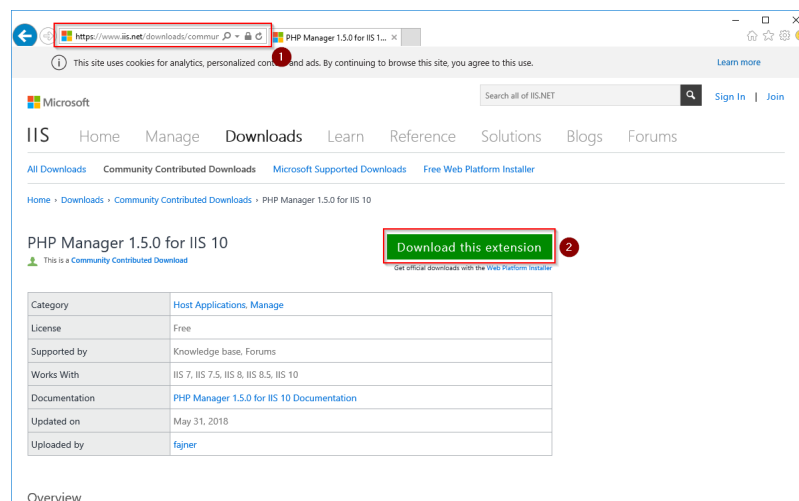
1 Download .....	63
2 Installing PHP Manager .....	64
3 Next step .....	65



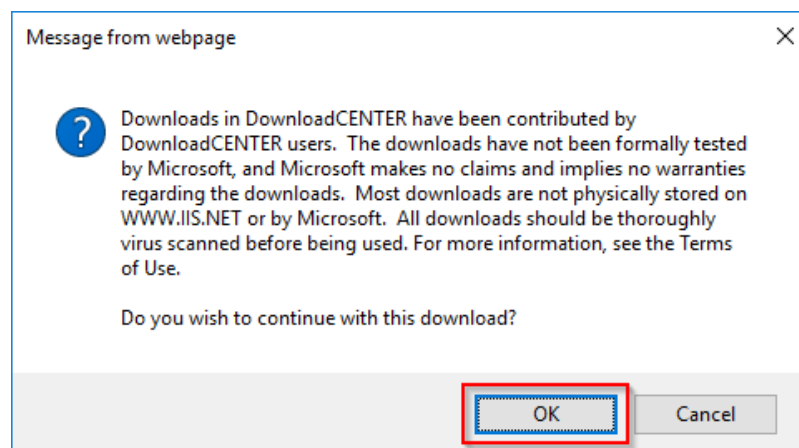
**PHP Manager conveniently integrates PHP into your IIS installation. The steps listed here are required.**

## Download

In Internet Explorer, open the [official download page on iis.com](https://www.iis.net/downloads/community) (1). Click "Download this extension" (2).



Confirm the following dialog with "OK":



Follow the further download instructions and download the installation package to your hard disk.



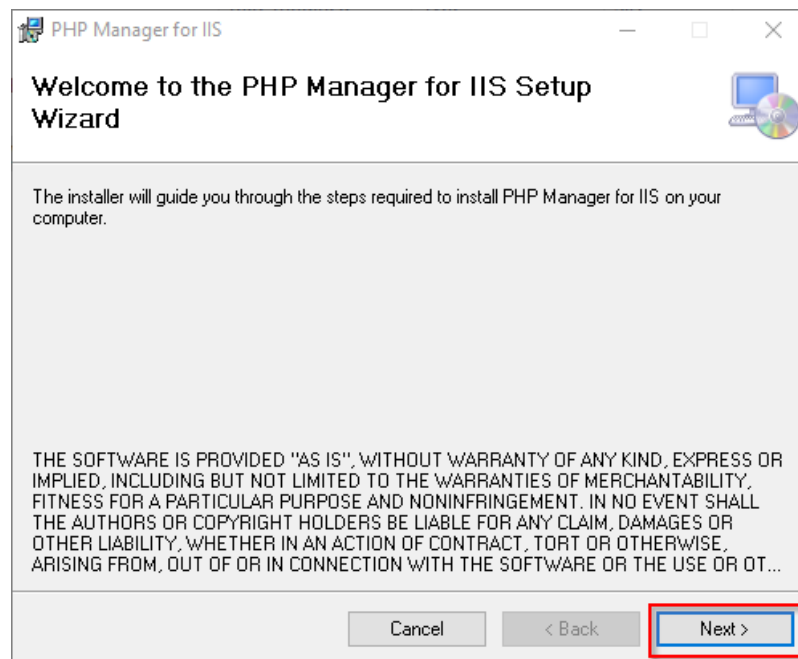
Please note that the download on your Windows server with Internet Explorer only works if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please note the technical documentation from Microsoft.

## Installing PHP Manager

---

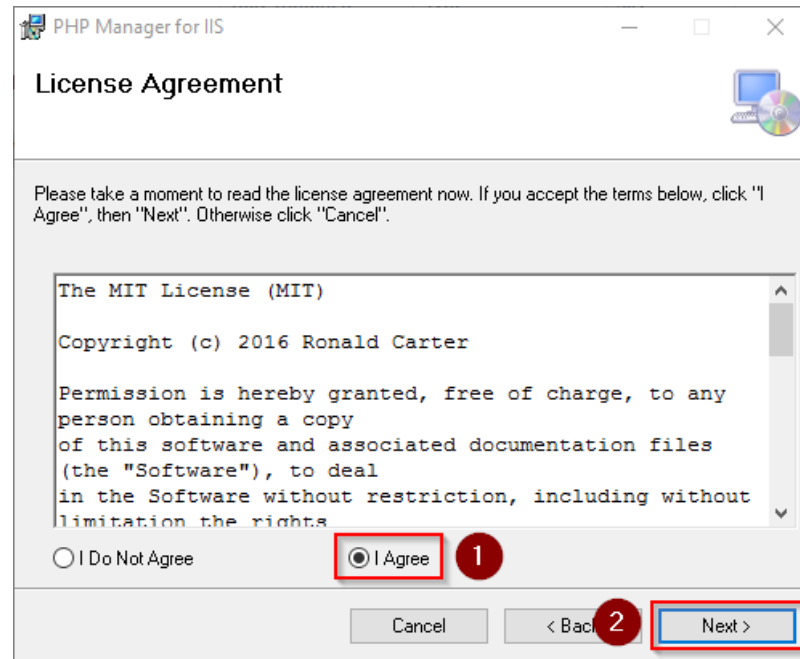
Open the downloaded PHPManagerForIIS\_V1.5.0.msi file.

Start the installation by clicking "Next >":

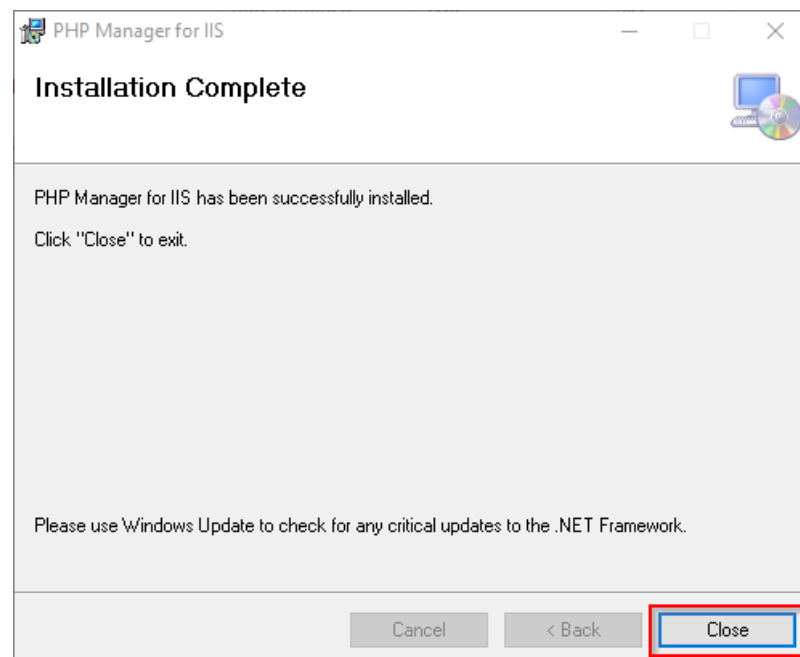


Confirm the license (1) and click on "Next >" (2):





The installation is now executed and completed without further confirmation. You can close the setup program when finished:



## Next step

If you have completed all steps successfully, you can delete the previously downloaded "PHPManagerForIIS\_V1.5.0.msi" file from your hard disk and continue to the next step ["PHP 7.3"](#).

## Installing Parsoid on Windows

A [quality version](#) of this page, [approved](#) on *4 November 2021*, was based off this revision.

### Contents

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3 Parsoid installation and configuration check .....	68
4 Installation as a service .....	69
5 Next step .....	72



**Parsoid is the rendering service for the Visual Editor. The steps listed here are optional and only required if you want to use Visual Editor in your BlueSpice installation. After your BlueSpice Installation, you still have to [activate VisualEditor](#).**

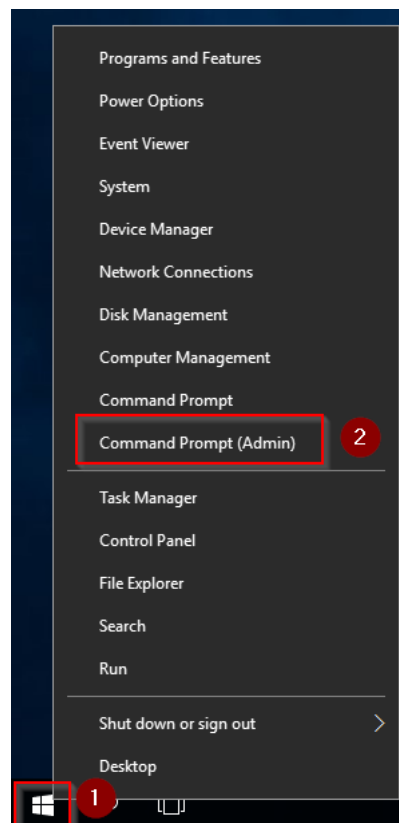


For the installation and operation of Parsoid, [Git](#) and [Node.js](#) are required. If you have not installed them yet, follow the links that are provided here.

## Installing Parsoid

**Important!** Please make sure to use the correct version of Parsoid during installation. The currently supported version is Parsoid 0.10.0.

1. First, open the Windows Command Prompt as administrator. To do this, right-click "Start" (1) and select "Command Prompt (Administrator)" (2):



2. Change into the directory `C:\bluespice\bin\npm\node_modules` and execute the command:

```
npm install --global parsoid
```

3. Change into the parsoid directory C:\bluespice\bin\npm\node\_modules\parsoid:

```
cd parsoid
```

4. Execute the command:

```
npm install
```

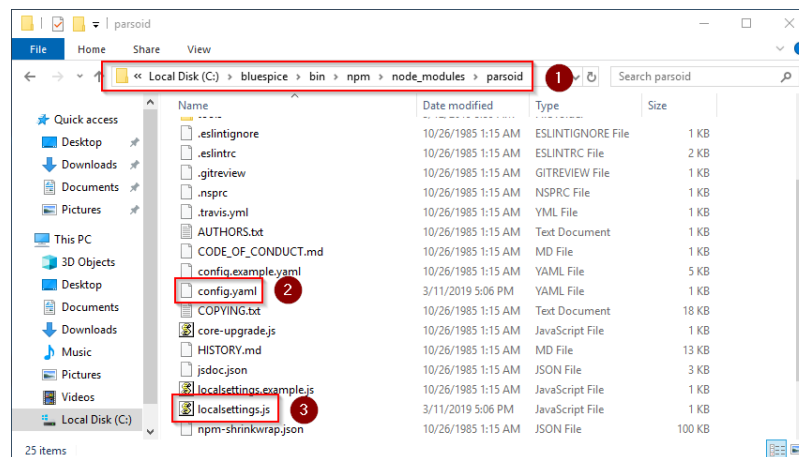
Keep the command prompt open and complete the next steps.

## Creating the configuration file

In the BlueSpice codebase you will find two files in the folder `extensions/BlueSpiceVisualEditorConnector/docs/parsoid`:

- `config.yaml`
- `localsettings.js`

Copy them into the folder C:\bluespice\bin\npm\node\_modules\parsoid\.

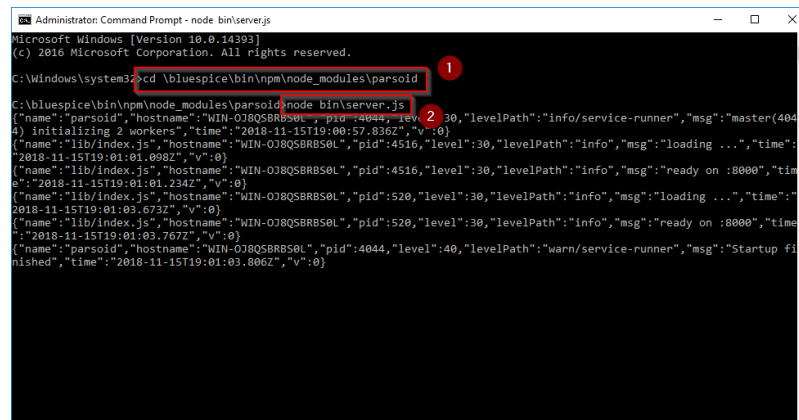


This provides an already finished configuration of Parsoid, which should work in the standard setup without further adjustments.

## Parsoid installation and configuration check

To test the installation and configuration, go back to the command prompt.

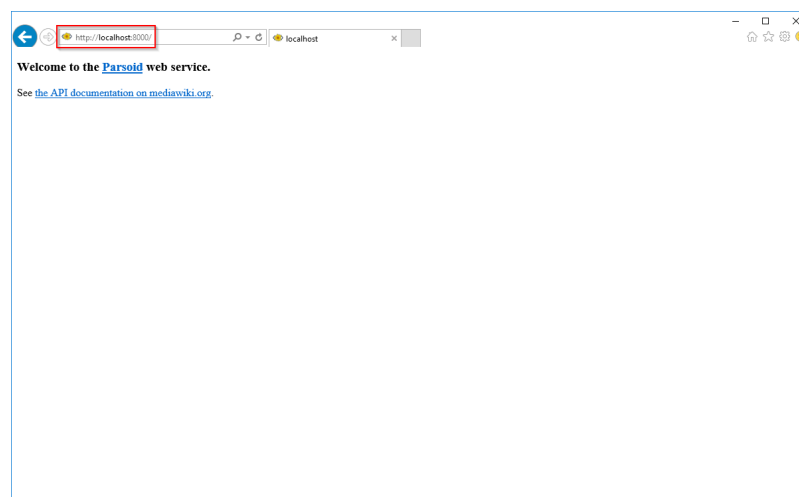
Change into the directory `C:\bluespice\bin\npm\node_modules\parsoid` (1) and start the service with the command `"node bin\server.js"` (2):



```
Administrator: Command Prompt - node bin\server.js
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Windows\system32\cmd \bluespice\bin\npm\node_modules\parsoid 1
C:\bluespice\bin\npm\node_modules\parsoid>node bin\server.js 2
{"name":"parsoid","hostname":"WIN-038Q5BR850L","pid":4044,"level":30,"levelPath":"info/service-runner","msg":"master(4044) initializing 2 workers","time":"2018-11-15T19:00:57.836Z","v":0}
{"name":"lib/index.js","hostname":"WIN-038Q5BR850L","pid":4516,"level":30,"levelPath":"info","msg":"loading ...","time":"2018-11-15T19:01:01.098Z","v":0}
{"name":"lib/index.js","hostname":"WIN-038Q5BR850L","pid":4516,"level":30,"levelPath":"info","msg":"ready on :8000","time":"2018-11-15T19:01:01.234Z","v":0}
{"name":"lib/index.js","hostname":"WIN-038Q5BR850L","pid":520,"level":30,"levelPath":"info","msg":"loading ...","time":"2018-11-15T19:01:03.673Z","v":0}
{"name":"lib/index.js","hostname":"WIN-038Q5BR850L","pid":520,"level":30,"levelPath":"info","msg":"ready on :8000","time":"2018-11-15T19:01:03.767Z","v":0}
{"name":"parsoid","hostname":"WIN-038Q5BR850L","pid":4044,"level":40,"levelPath":"warn/service-runner","msg":"Startup finished","time":"2018-11-15T19:01:03.806Z","v":0}
```

The service should now start without an error message. For further review, call the URL "<http://localhost:8000>" in Internet Explorer. You should see the following page:

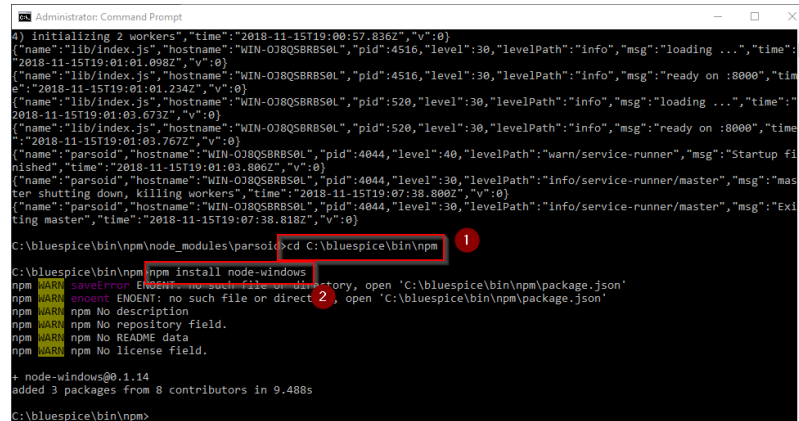


Change back to the command prompt and quit Parsoid by pressing `"Ctrl+C"`. Keep the command prompt open and go to the next step.

## Installation as a service

To run Parsoid in the background in the future, you need to install Parsoid in a Windows service. To do this, proceed as follows:

In the command prompt, change to the directory `"C:\bluespice\bin\npm"` (1) and execute the command `"npm install node-windows"` (2):



```
4) initializing 2 workers", "time": "2018-11-15T19:00:57.836Z", "v": 0}
{"name": "lib/index.js", "hostname": "WIN-038Q5BR850L", "pid": 4516, "level": 30, "levelPath": "info", "msg": "loading ...", "time": "2018-11-15T19:01:01.092Z", "v": 0}
{"name": "lib/index.js", "hostname": "WIN-038Q5BR850L", "pid": 4516, "level": 30, "levelPath": "info", "msg": "ready on :8000", "time": "2018-11-15T19:01:01.234Z", "v": 0}
{"name": "lib/index.js", "hostname": "WIN-038Q5BR850L", "pid": 520, "level": 30, "levelPath": "info", "msg": "loading ...", "time": "2018-11-15T19:01:03.673Z", "v": 0}
{"name": "lib/index.js", "hostname": "WIN-038Q5BR850L", "pid": 520, "level": 30, "levelPath": "info", "msg": "ready on :8000", "time": "2018-11-15T19:01:03.767Z", "v": 0}
{"name": "parsoid", "hostname": "WIN-038Q5BR850L", "pid": 4044, "level": 40, "levelPath": "warn/service-runner", "msg": "Startup finished", "time": "2018-11-15T19:01:03.806Z", "v": 0}
{"name": "parsoid", "hostname": "WIN-038Q5BR850L", "pid": 4044, "level": 30, "levelPath": "info/service-runner/master", "msg": "master shutting down, killing workers", "time": "2018-11-15T19:07:38.800Z", "v": 0}
{"name": "parsoid", "hostname": "WIN-038Q5BR850L", "pid": 4044, "level": 30, "levelPath": "info/service-runner/master", "msg": "Exiting master", "time": "2018-11-15T19:07:38.818Z", "v": 0}

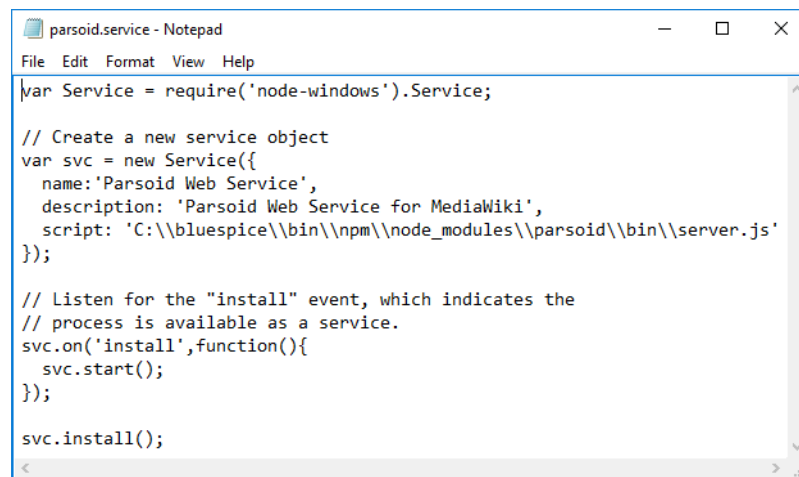
C:\bluespice\bin\npm\node_modules\parsoid>cd C:\bluespice\bin\npm

C:\bluespice\bin\npm>npm install node-windows
npm WARN saveError ENOENT: no such file or directory, open 'C:\bluespice\bin\npm\package.json'
npm WARN enoent ENOENT: no such file or directory, open 'C:\bluespice\bin\npm\package.json'
npm WARN npm No description
npm WARN npm No repository field.
npm WARN npm No README data
npm WARN npm No license field.

+ node-windows@0.1.14
added 3 packages from 8 contributors in 9.488s

C:\bluespice\bin\npm>
```

Using a text editor, create the file "C:\bluespice\bin\npm\node\_modules\parsoid\ parsoid.service" with the help of [this linked content](#):



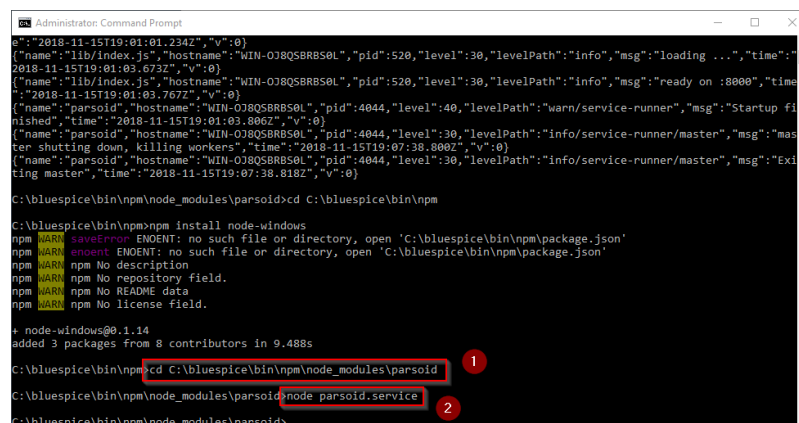
```
var Service = require('node-windows').Service;

// Create a new service object
var svc = new Service({
  name: 'Parsoid Web Service',
  description: 'Parsoid Web Service for MediaWiki',
  script: 'C:\\bluespice\\bin\\npm\\node_modules\\parsoid\\bin\\server.js'
});

// Listen for the "install" event, which indicates the
// process is available as a service.
svc.on('install', function() {
  svc.start();
});

svc.install();
```

In the command prompt, change into the directory "C:\bluespice\bin\npm\node\_modules\parsoid" (1) and execute the command "node parsoid.service" (2):



```
0: "2018-11-15T19:01:01.234Z", "v": 0}
{"name": "lib/index.js", "hostname": "WIN-038Q5BR850L", "pid": 520, "level": 30, "levelPath": "info", "msg": "loading ...", "time": "2018-11-15T19:01:03.673Z", "v": 0}
{"name": "lib/index.js", "hostname": "WIN-038Q5BR850L", "pid": 520, "level": 30, "levelPath": "info", "msg": "ready on :8000", "time": "2018-11-15T19:01:03.767Z", "v": 0}
{"name": "parsoid", "hostname": "WIN-038Q5BR850L", "pid": 4044, "level": 40, "levelPath": "warn/service-runner", "msg": "Startup finished", "time": "2018-11-15T19:01:03.806Z", "v": 0}
{"name": "parsoid", "hostname": "WIN-038Q5BR850L", "pid": 4044, "level": 30, "levelPath": "info/service-runner/master", "msg": "master shutting down, killing workers", "time": "2018-11-15T19:07:38.800Z", "v": 0}
{"name": "parsoid", "hostname": "WIN-038Q5BR850L", "pid": 4044, "level": 30, "levelPath": "info/service-runner/master", "msg": "Exiting master", "time": "2018-11-15T19:07:38.818Z", "v": 0}

C:\bluespice\bin\npm\node_modules\parsoid>cd C:\bluespice\bin\npm

C:\bluespice\bin\npm>npm install node-windows
npm WARN saveError ENOENT: no such file or directory, open 'C:\bluespice\bin\npm\package.json'
npm WARN enoent ENOENT: no such file or directory, open 'C:\bluespice\bin\npm\package.json'
npm WARN npm No description
npm WARN npm No repository field.
npm WARN npm No README data
npm WARN npm No license field.

+ node-windows@0.1.14
added 3 packages from 8 contributors in 9.488s

C:\bluespice\bin\npm>cd C:\bluespice\bin\npm\node_modules\parsoid

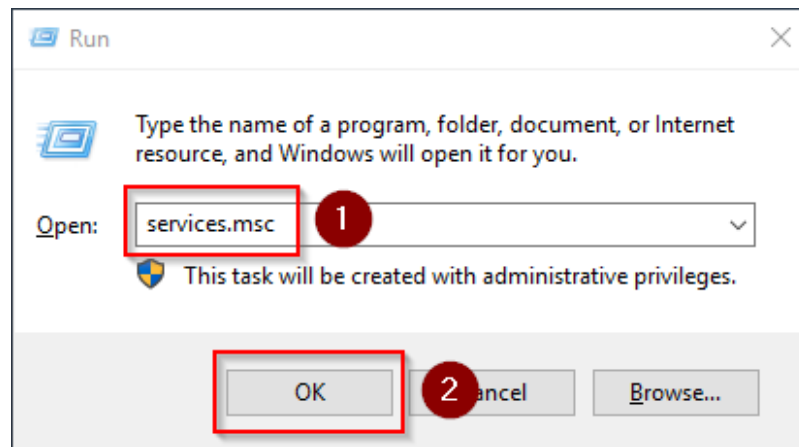
C:\bluespice\bin\npm\node_modules\parsoid>node parsoid.service

C:\bluespice\bin\npm\node_modules\parsoid>
```

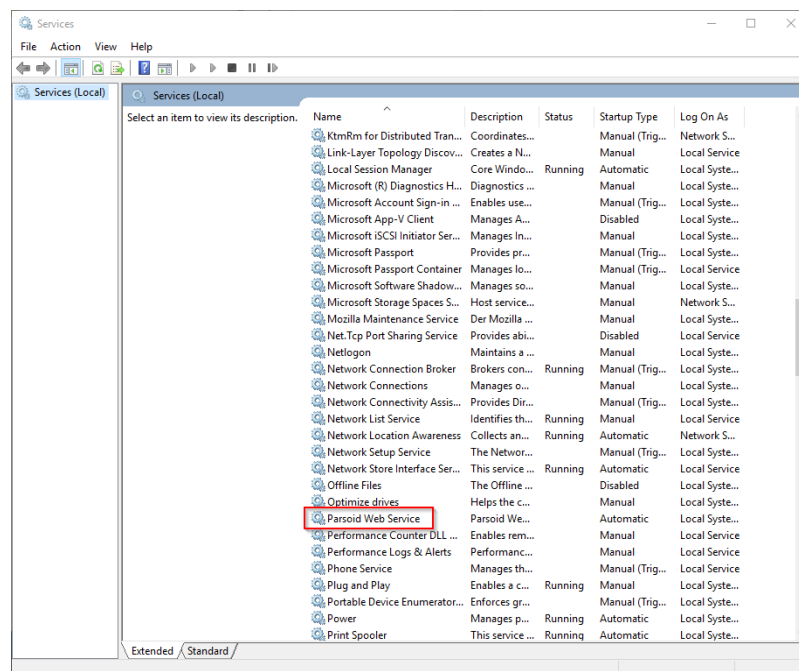
You can now close the command prompt.

Then enter the key combination Windows+R.

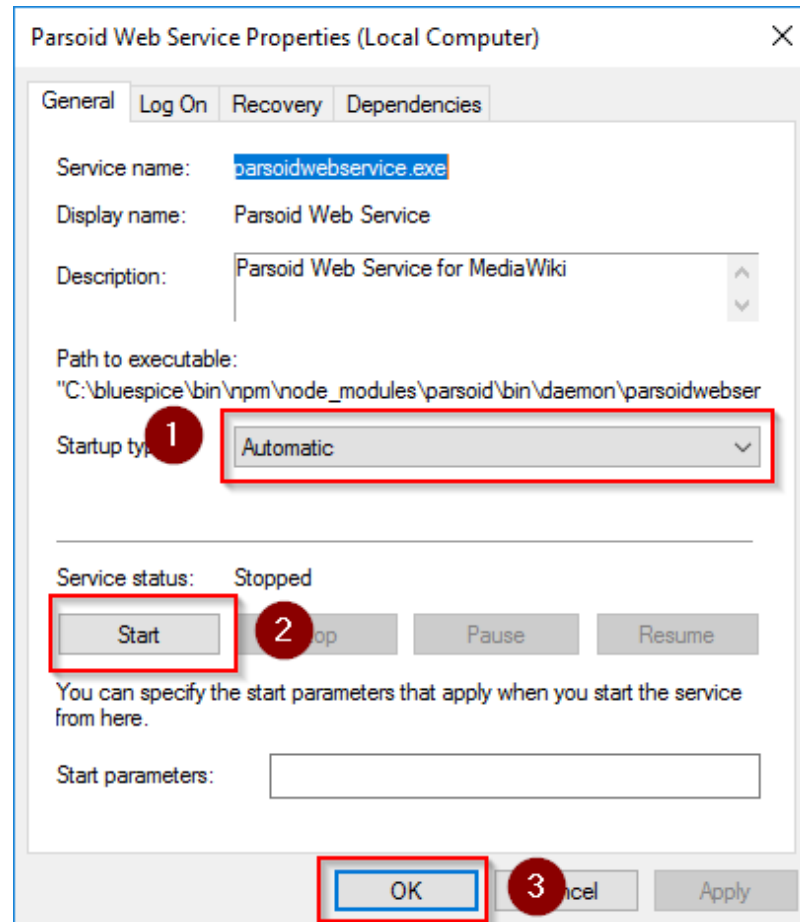
In the following dialog box, enter "services.msc" (1) and confirm with "OK" (2):



Find the service "Parsoid Web Service" and open it with a double-click:



Select the startup type "Automatic" (1) and start the service (2). After the service is started, close the window with "OK" (3):



In Internet Explorer, check the URL "<http://localhost:8000>", as already explained in the previous step, whether the Parsoid service started successfully.

## Next step

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

## Parsoid-Service Installation File "parsoid.service"

A [quality version](#) of this page, [approved](#) on 2 August 2021, was based off this revision.

This is the content for the file "parsoid.service". You can find detailed information on the [Parsoid documentation](#) page:

```
var Service = require('node-windows').Service;

// Create a new service object
var svc = new Service({
  name: 'Parsoid Web Service',
  description: 'Parsoid Web Service for MediaWiki',
  script: 'C:\\bluespice\\bin\\npm\\node_modules\\parsoid\\bin\\server.js'
});
```



```
// Listen for the "install" event, which indicates the
// process is available as a service.
svc.on('install',function(){
    svc.start();
});

svc.install();
```

## Installing and configuring PhantomJS on Windows

A [quality version](#) of this page, [approved](#) on *12 October 2020*, was based off this revision.

### Contents

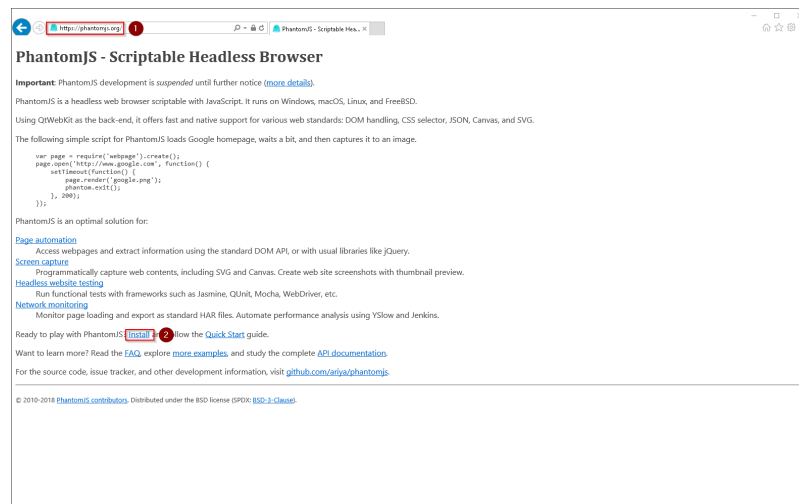
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3 Configuring BlueSpice .....	75
4 Finishing the system preparation .....	75



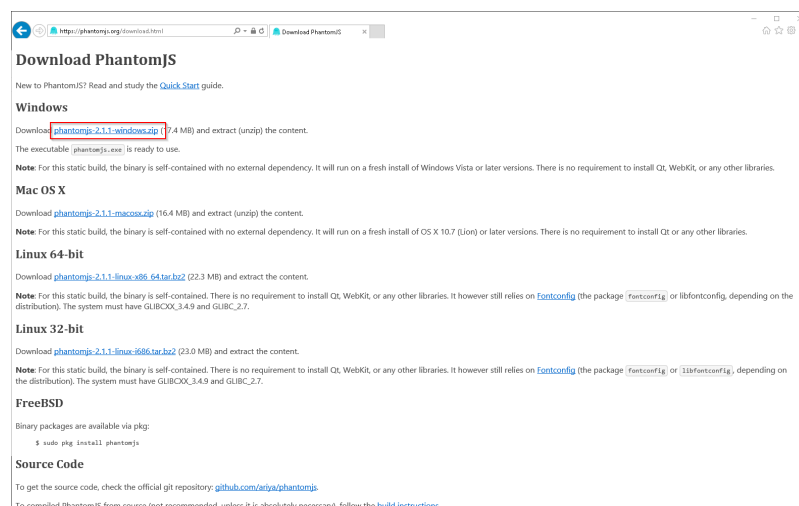
**PhantomJS is a so-called headless browser that can render screenshots of web pages. This is required for the web page preview in Advanced Search and the Recent Changes Overview in your BlueSpice installation. These are functionalities of BlueSpice pro. For this purpose, the steps listed here are required for BlueSpice pro.**

## Downloads

In Internet Explorer, open the [official website of the project](http://phantomjs.org) (1). Click "Install" (2).



Download the appropriate ZIP archive for Windows.



Please note that the download on your Windows Server with Internet Explorer will only work if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.



In this guide, we use PhantomJS version 2.1.1 as an example. You can download the latest version at the time of installation.

## Installing PhantomJS

PhantomJS does not need to go through a setup process. Unpack the downloaded ZIP archive. In the folder `phantomjs-3.1.1-windows\bin` you will find the executable file `phantomjs.exe`.

Simply move it to `C:\bluespice\bin`.

{{Template:Hint|text=This guide is based on the folder structure recommended by us [[Setup:Installation Guide/Advanced/Windows Folder Structure|recommended by us]]. For this reason, the default path to the folder `C:\bluespice\bin` is set here. If you have other requirements, you must adapt these paths accordingly.}}

## Configuring BlueSpice

BlueSpice must have knowledge of the location of `phantomjs.exe`. After the BlueSpice installation, proceed as follows:

1. Open the folder of your BlueSpice installation
2. Switch to the subfolder `settings.d`
3. In this subfolder, create a new file named `090-PhantomJS.php`
4. Fill this file with the following content:

```
<?php
$bsgArticlePreviewCapturePhantomJSExecutable = "C:\\bluespice\\bin\\phantomjs.exe";
```

## Finishing the system preparation

If you have completed all steps successfully, you can now continue with [installing BlueSpice](#).

## Installing Python on Windows

A [quality version](#) of this page, [approved](#) on *25 October 2021*, was based off this revision.

### Contents

<a href="#">1 Downloading Python</a>	<a href="#">77</a>
--------------------------------------	--------------------

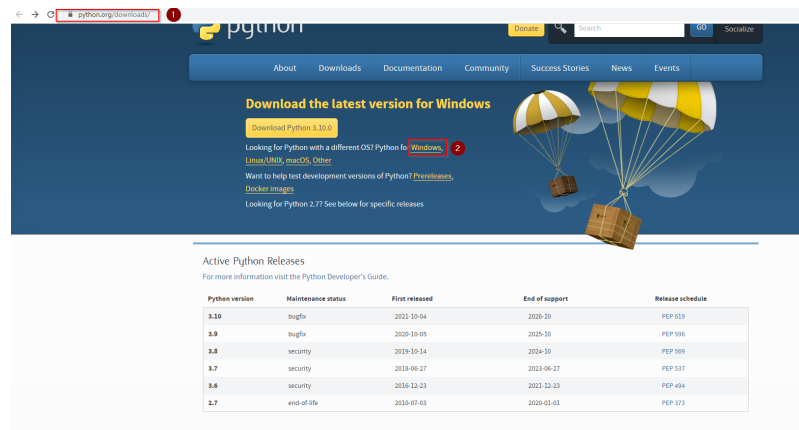
2	Installing Python .....	78
3	Installing Pygmentize .....	79
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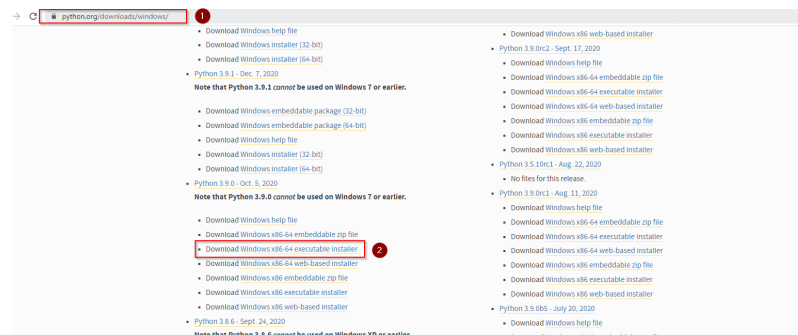
**Python with the extension Pygmentize is needed for the rendering of the MediaWiki extension "SyntaxHighlight", which is part of BlueSpice. The steps listed here are required.**

## Downloading Python

In Internet Explorer, open the [official download page](#) (1). Switch to the download page for Windows (2).



Select the "executable installer" (64-bit):



Follow the further download instructions and download the installation package to your hard drive.



Please note that the download on your Windows Server with Internet Explorer will only work if you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.



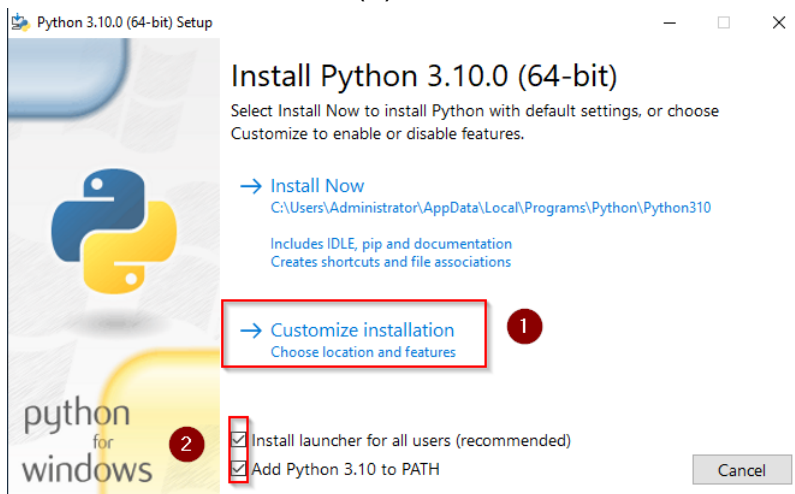
In this guide, Python is used in version 3.10.0 as an example. You can download the latest version at the time of installation.

## Installing Python

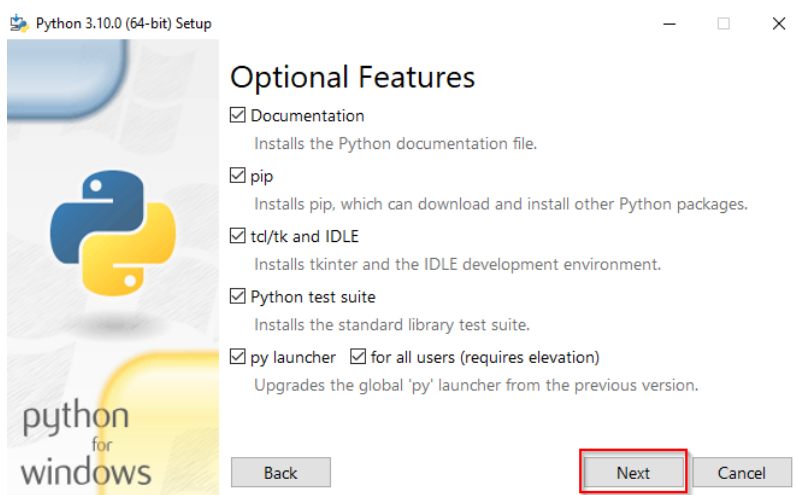
Open the just-downloaded python-3.10.0-amd64.exe file.

Start the installation by clicking "Next".

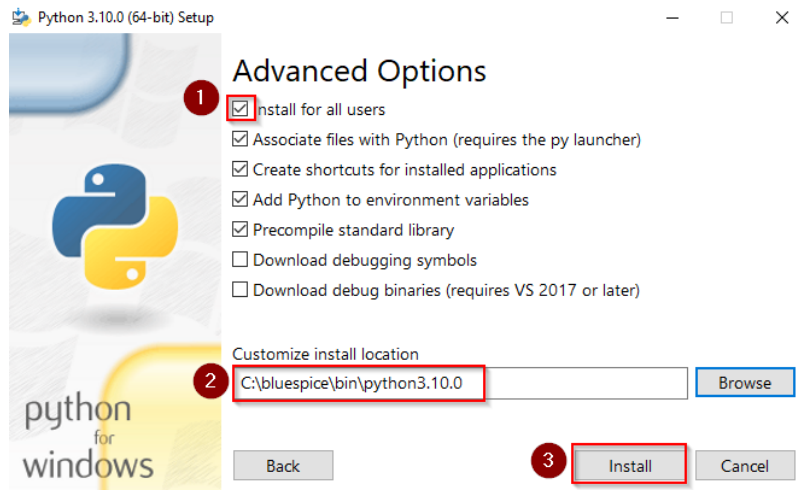
Confirm both checkboxes (1) and then click "Customize installation" (2):



Confirm the next step with "Next":

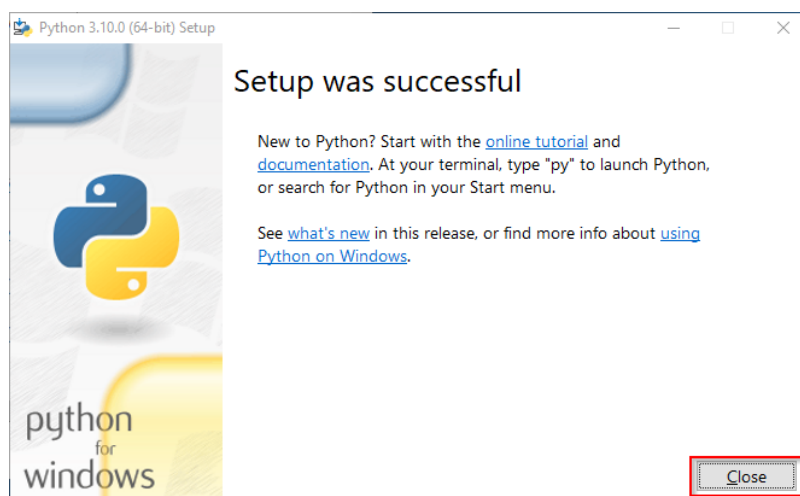


Make sure to install Python for all users (1) . Choose an appropriate path, if possible without spaces and special characters (2), and start the installation by clicking "Install" (3).



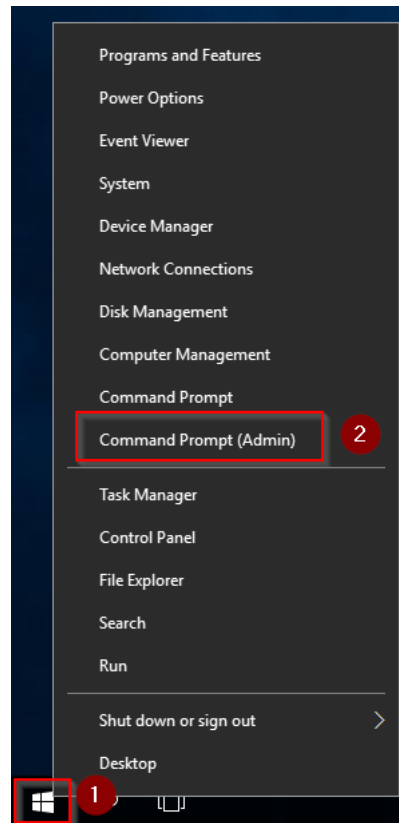
This documentation is based on the folder structure [recommended by us](#). For this reason, the default path for Python installation is set to the folder C:\bluespice\bin\python-3.10.0. If you have different requirements, you must adapt these paths accordingly.

Finish the installation by clicking "Close":



## Installing Pygmentize

Open the command prompt with admin permissions. To do this, right-click "Start" (1) and select "Command Prompt (Administrator)" (2):



Enter the command "*pip install pygments*" and wait for the process to finish:

```
Administrator: Eingabeaufforderung
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. Alle Rechte vorbehalten.

C:\Windows\system32>pip install pygments
Collecting pygments
  Downloading https://files.pythonhosted.org/packages/5c/73/1dfa428150e3ccb0fa3e68db406e5be48698f2a979ccbec795f28f44048
/Pygments-2.4.2-py2.py3-none-any.whl (883kB)
    100% |#####| 890kB 6.6MB/s
Installing collected packages: pygments
Successfully installed pygments-2.4.2
You are using pip version 19.0.3, however version 19.2.3 is available.
You should consider upgrading via the 'python -m pip install --upgrade pip' command.

C:\Windows\system32>
```

**Important!** The `pygmentize` binary needs to be executable by the webserver user ([see installation instructions for SyntaxHighlight](#)).

## Next step

If you have completed all steps successfully, you can delete the previously downloaded file "python-3.10.0-amd64.exe" from your hard drive. If you install BlueSpice pro, go to the next step "[PhantomJS](#)". If you install BlueSpice free, you can now continue with [Installing BlueSpice](#).



## Setup:Installation Guide/System Preparation/Windows/Visual C++ Redistributable for Visual Studio 2015

A [quality version](#) of this page, [approved](#) on *25 June 2020*, was based off this revision.

### Contents

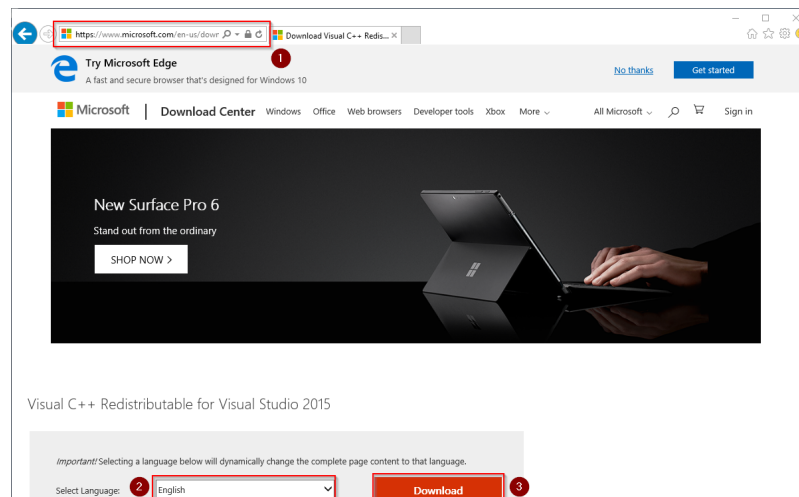
1 Download at Microsoft .....	82
2 Installing Visual C++ Redistributable for Visual Studio 2015 .....	83
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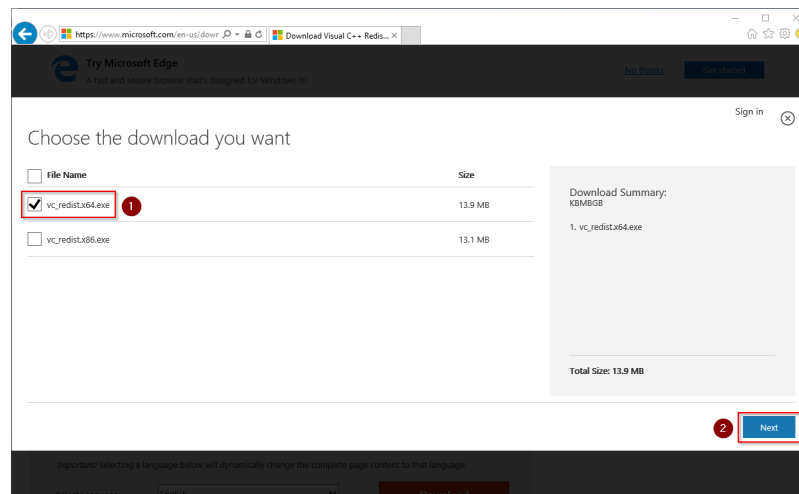
**The installation of Visual C ++ Redistributable for Visual Studio 2015 is required to run PHP in version 7.x on Windows. The steps listed here are required.**

## Download at Microsoft

In Internet Explorer open the [Microsoft download page](#) (1). Select your language (2) and click "Download" (3).



On the following page, select the 64-bit version (1) and click "Next" (2):



Follow the additional download instructions and download the installation package to your hard drive.

Please note that the download on your Windows Server with Internet Explorer will only work if

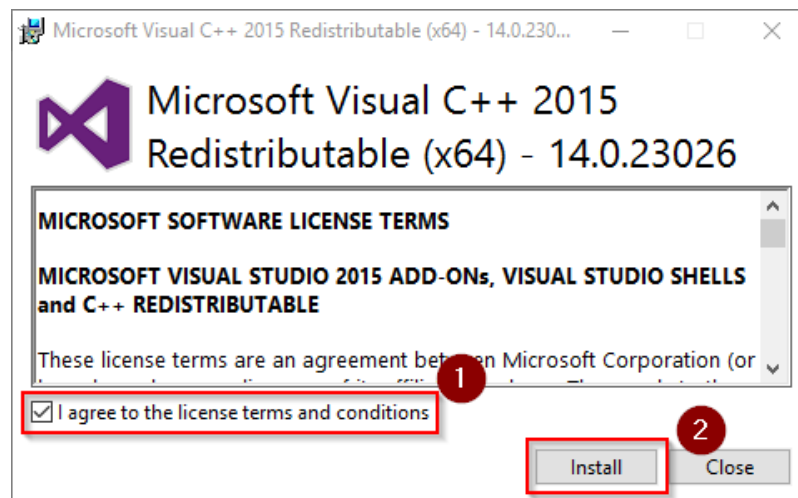


you have configured the Internet Explorer Advanced Security Settings in the Server Manager. Please refer to the technical documentation from Microsoft.

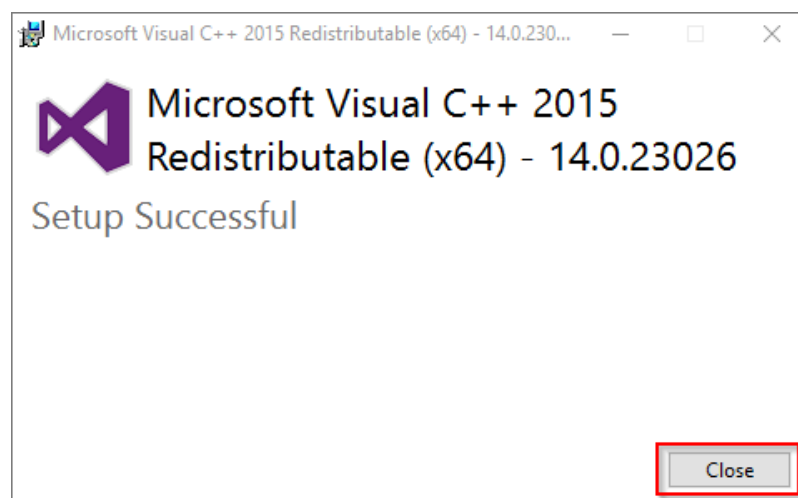
## Installing Visual C++ Redistributable for Visual Studio 2015

Open the downloaded file "vc\_redist.x64.exe".

Start the installation by confirming the license (1) and by clicking on "Install" (2):



The installation is now executed and completed without further confirmation. You can close the setup program when finished:



## Next step

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If you have completed all steps successfully, you can delete the previously downloaded file "vc\_redist.x64.exe" from your hard drive and proceed to the next step "[PHP Manager](#)".