

## Setup:Installation Guide/System Preparation/Windows /Apache Tomcat

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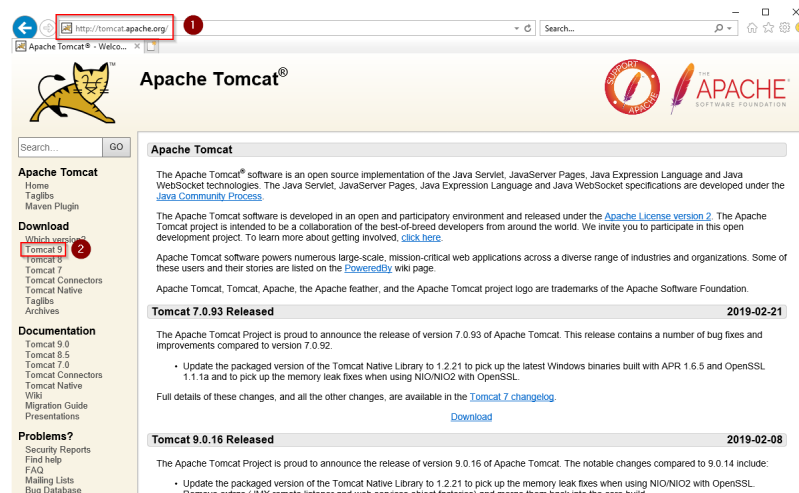
**Apache Tomcat is required for the PDF export, VisualDiff (BlueSpice pro only) and the LaTeX renderer (BlueSpice pro only). The following steps are optional and only required if you want to use one or more of these services in your BlueSpice installation.**



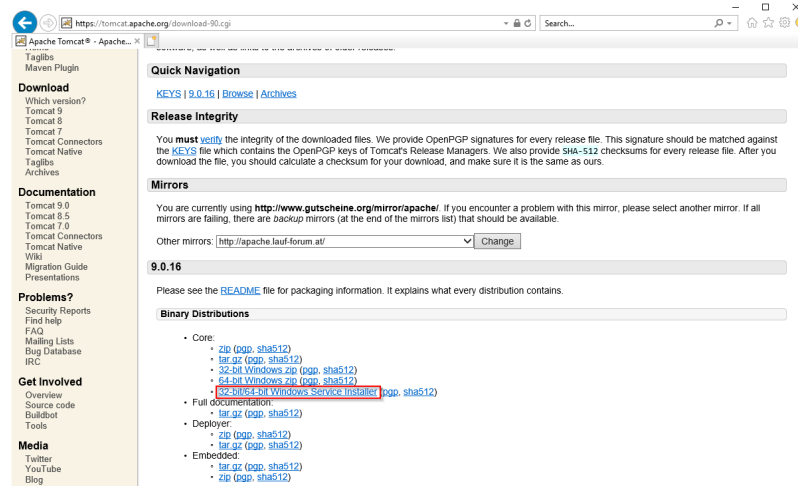
Operation of Apache Tomcat requires [OpenJDK](#). If you have not installed it, follow the link above.

## 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.

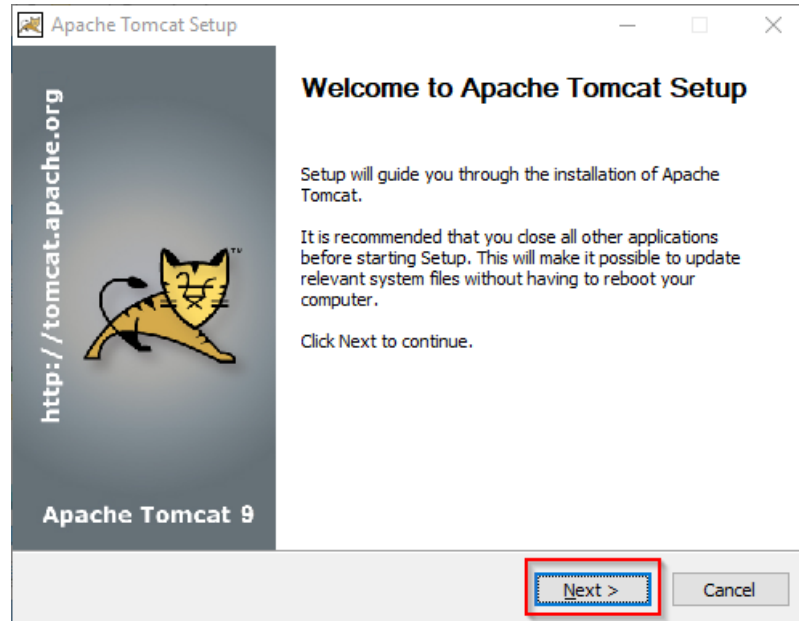


This guide uses version 9.0.16 of Apache Tomcat and is just an example of the latest version that you can download at the time of installation.

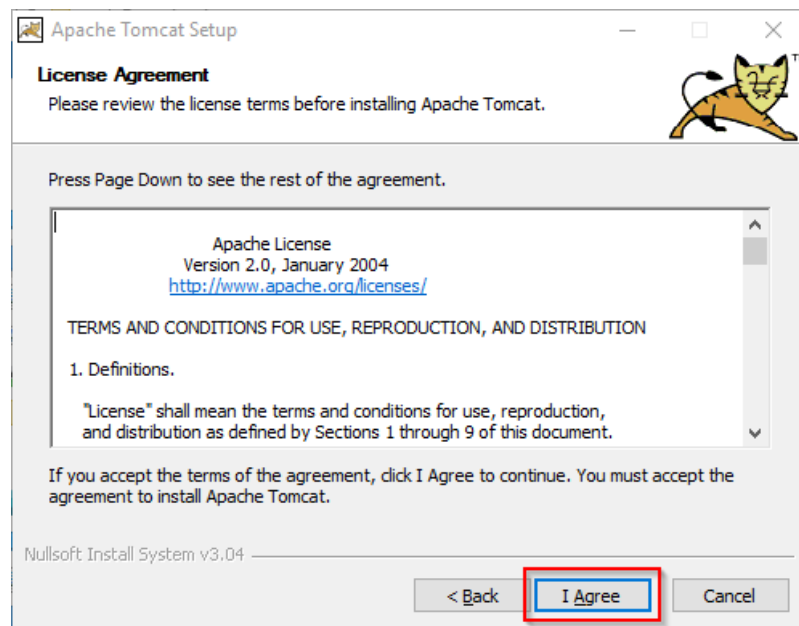
## Installing Apache Tomcat

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

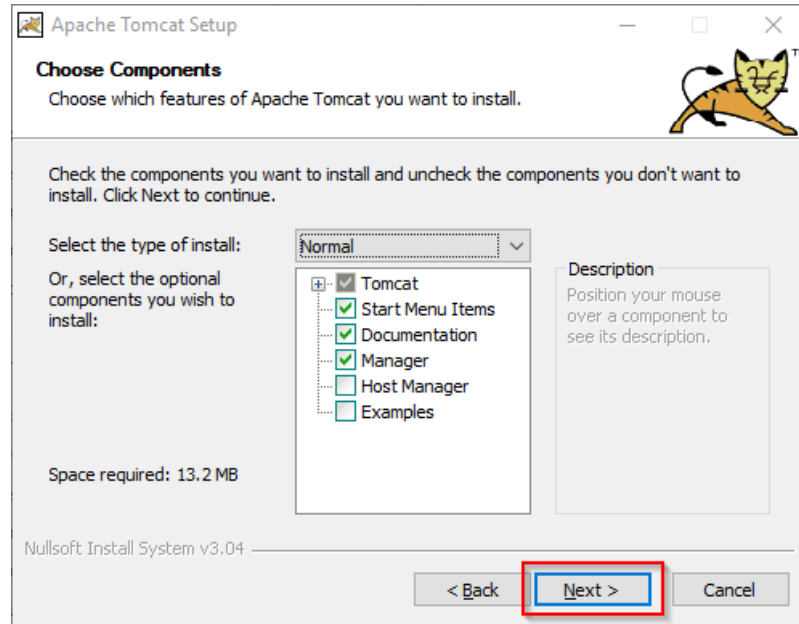
Start the installation by clicking "Next >":



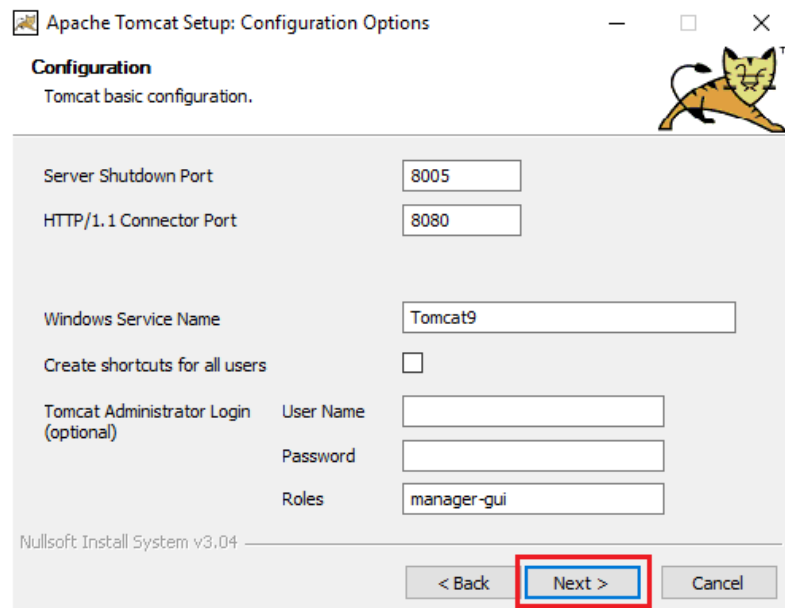
Confirm the license agreement by clicking "I Agree":



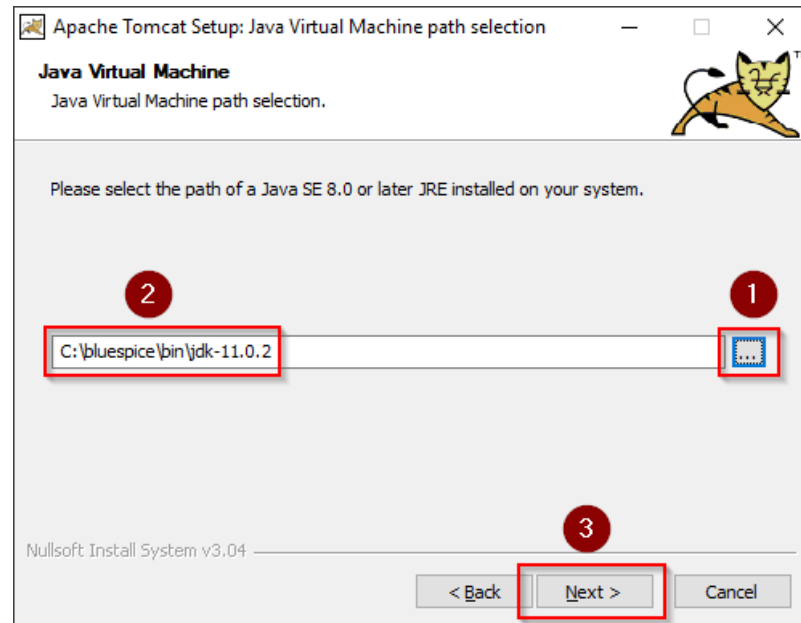
Click "Next >":



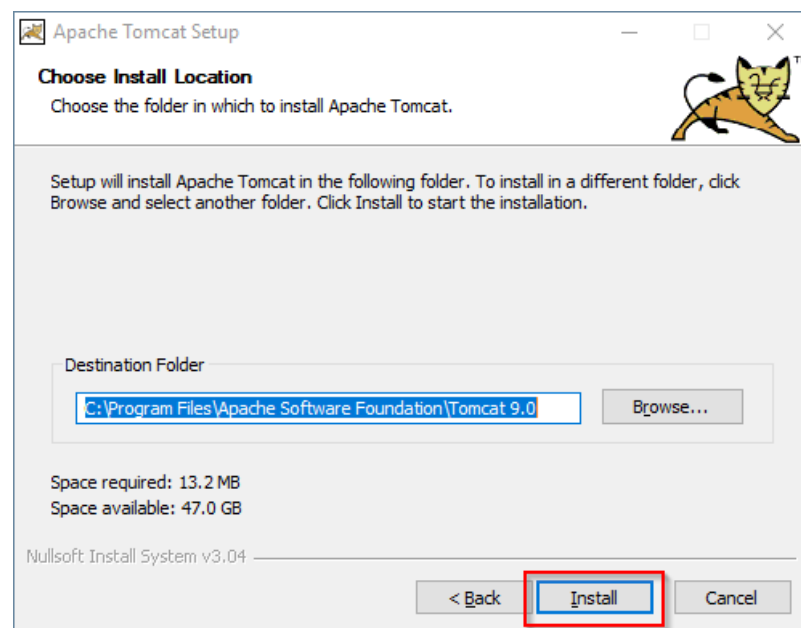
Click "Next >" again:



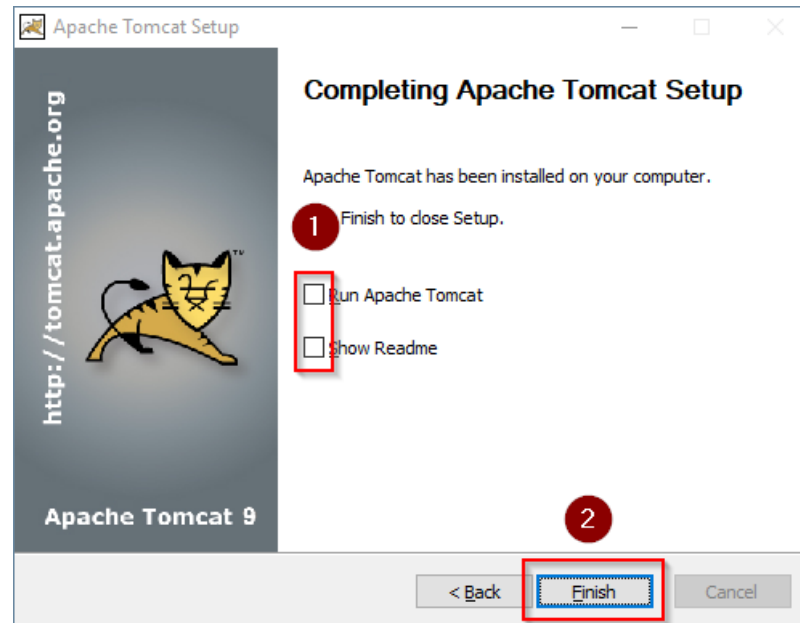
Select (1) the home directory of your **OpenJDK Installation** (2) and click "Next>" (3):



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>
32

```

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" />
```

```

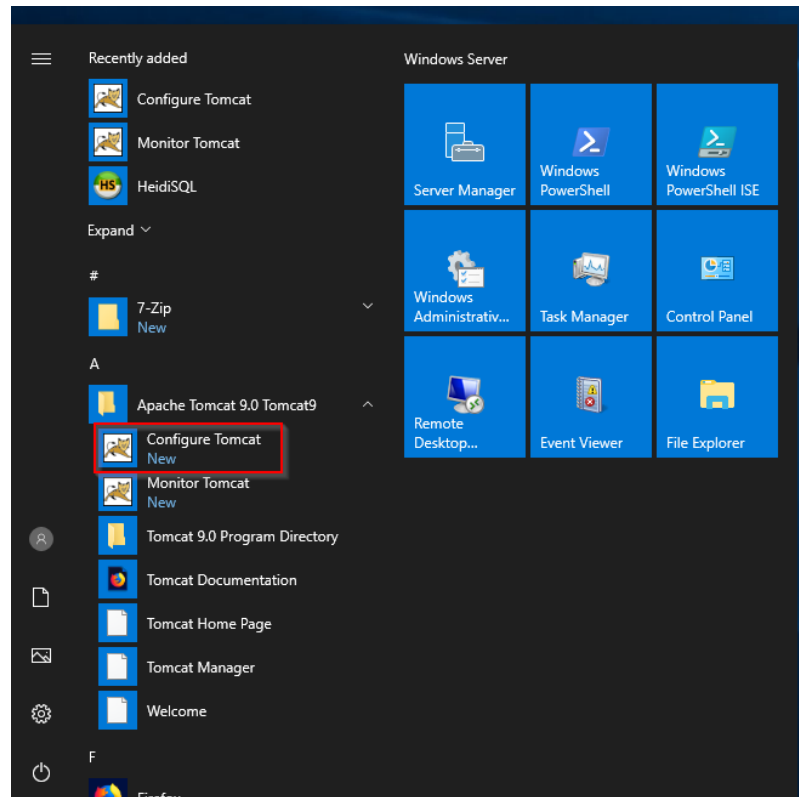
52  <!--
53  <Service name="Catalina">
54
55  <!-- The connectors can use a shared executor, you can define one or more named thread pools-->
56  <!--
57  <Executor name="tomcatThreadPool" namePrefix="catalina-exec-"
58  maxThreads="150" minSpareThreads="4"/>
59  -->
60
61
62  <!-- A "Connector" represents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

```

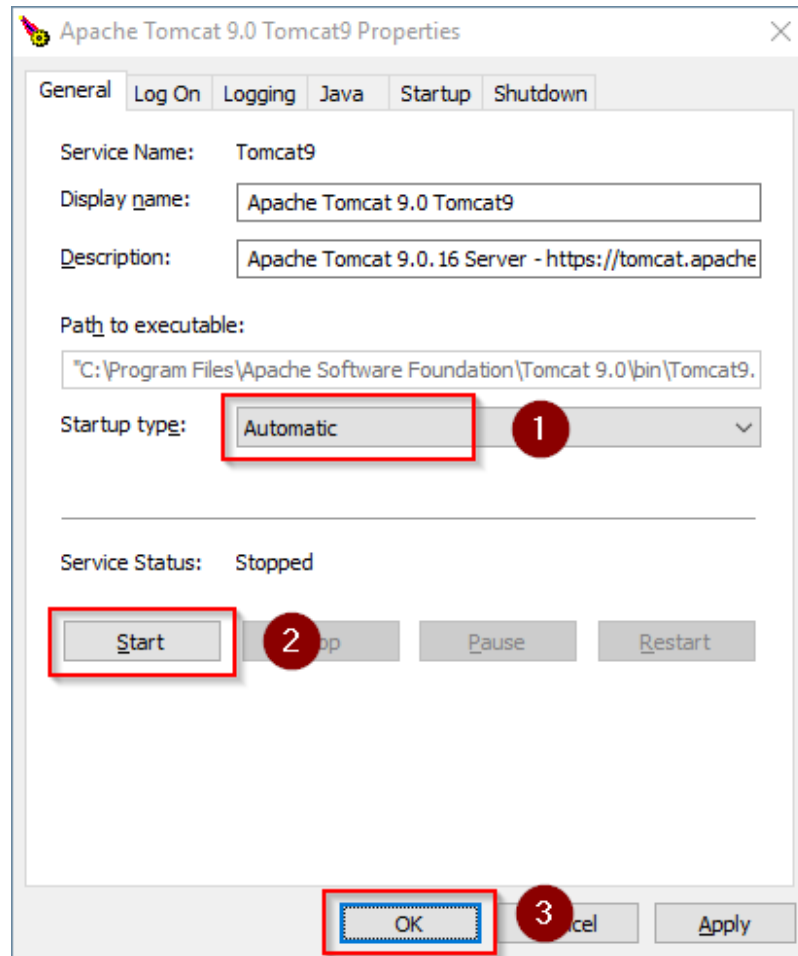


Save and close the file.

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



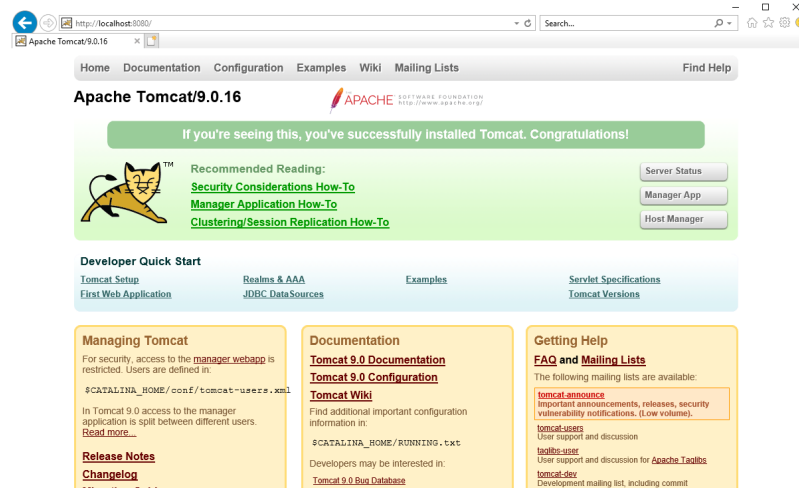
Set "Startup type" to "Automatic" (1) and start Tomcat (2). Then exit the configuration console (3):



## 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 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](#) " ,