

Contents

1. Setup:Installation Guide/Webservices/LatexRenderer	2
2. Setup:Installation Guide/Security Settings/File System Permissions	3
3. Setup:Installation Guide/System Preparation/Windows/Apache Tomcat	7

Setup:Installation Guide/Webservices/LatexRenderrer

A [quality version](#) of this page, [approved](#) on *13 September 2019*, was based off this revision.

Contents

1 Tip for this Document	3
2 Installation of the LatexRenderrer application	3
3 Restart Tomcat	3
4 Troubleshooting	3

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

Tip for this Document

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

Installation of the LatexRenderrer application

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

Restart Tomcat

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

This completes the installation of LatexRenderrer.

Troubleshooting

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

File System Permissions

A [quality version](#) of this page, [approved](#) on *27 October 2021*, was based off this revision.

Contents

1	Tips for this Document	4
2	Affected Folders	4
3	Assignment of Permissions with Windows	4
4	Assignment of Permissions with Linux	5

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

Tips for this Document

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

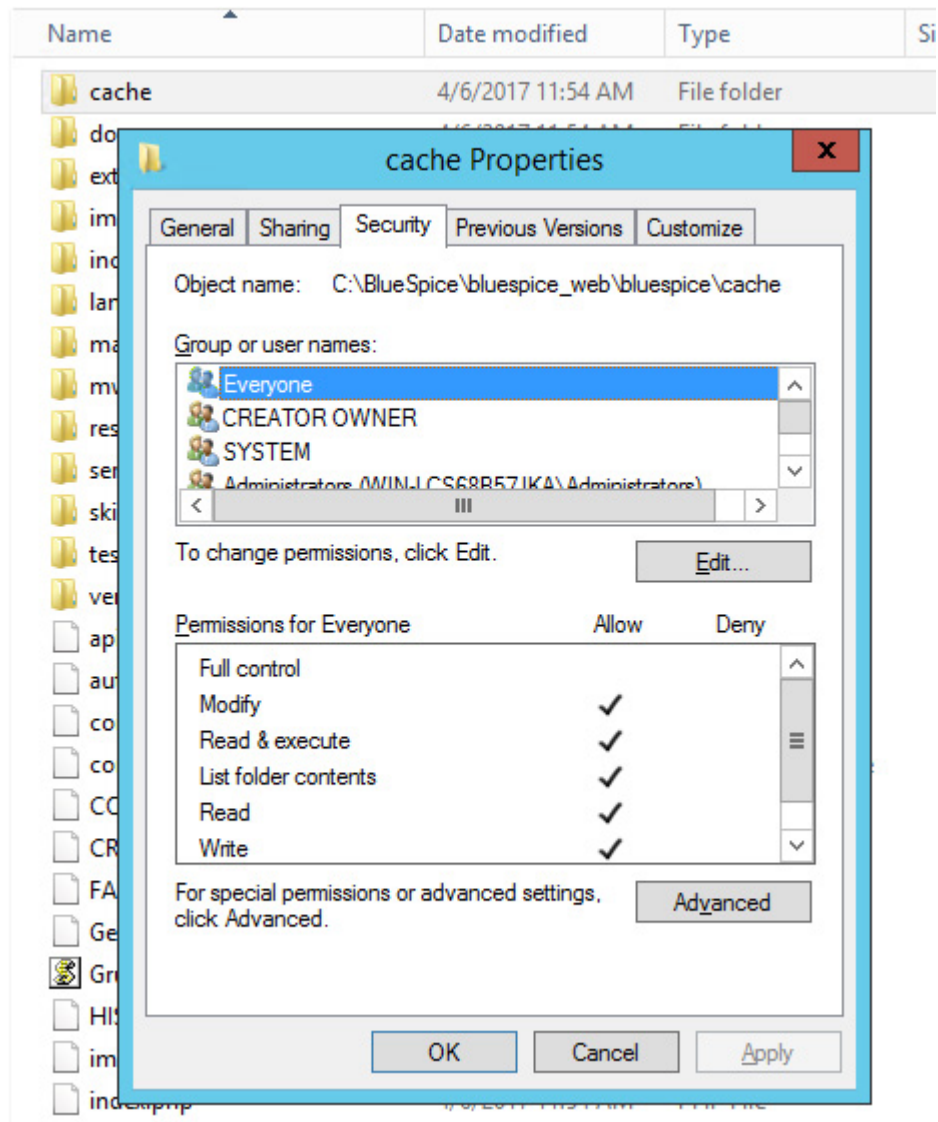
Affected Folders

The folders, which require write permissions, are:

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

Assignment of Permissions with Windows

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



Assignment of Permissions with Linux

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

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

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

```
#!/bin/bash

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

WWW_HOME=`eval echo ~$WWW_USER`
```

```
WWW_CFG=$WWW_HOME/.config

if [ $# -eq 0 ]; then
    echo "You must enter the path of your MediaWiki installation."
    exit
elif [ ! -d $1 ]; then
    echo "$1 does not exist or is no path."
    exit
fi

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/BlueSpiceFoundation/config" \
    "$PATH/extensions/Widgets/compiled_templates" \
)

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

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

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

/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 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.

Apache Tomcat on Windows

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

Contents

1 Download	8
2 Installing Apache Tomcat	9
3 Configuring Apache Tomcat	13
4 Reviewing the installation	16
5 Installing the web apps	17
6 Next step	17



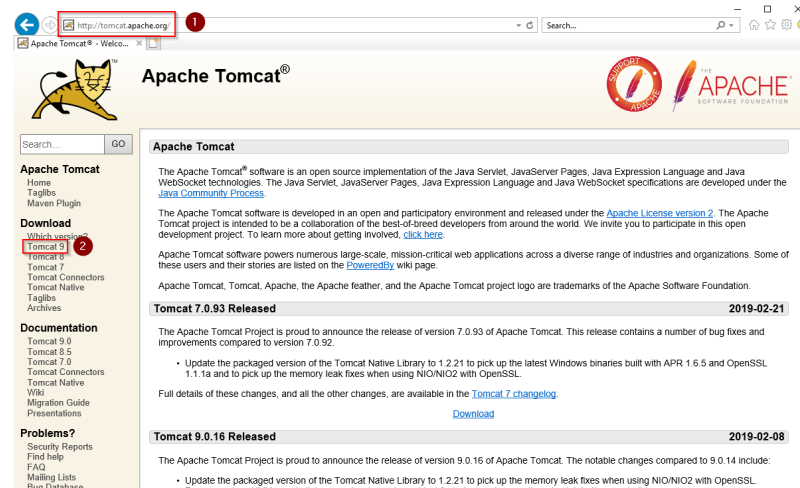
Apache Tomcat is required for the PDF export, VisualDiff (BlueSpice pro only) and the LaTeX renderer (BlueSpice pro only). The following steps are optional and only required if you want to use one or more of these services in your BlueSpice installation.



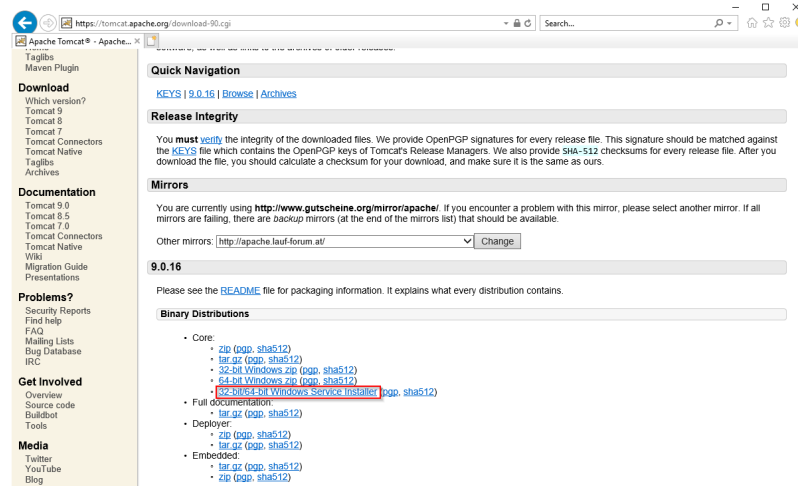
Operation of Apache Tomcat requires [OpenJDK](#). If you have not installed it, follow the link above.

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.

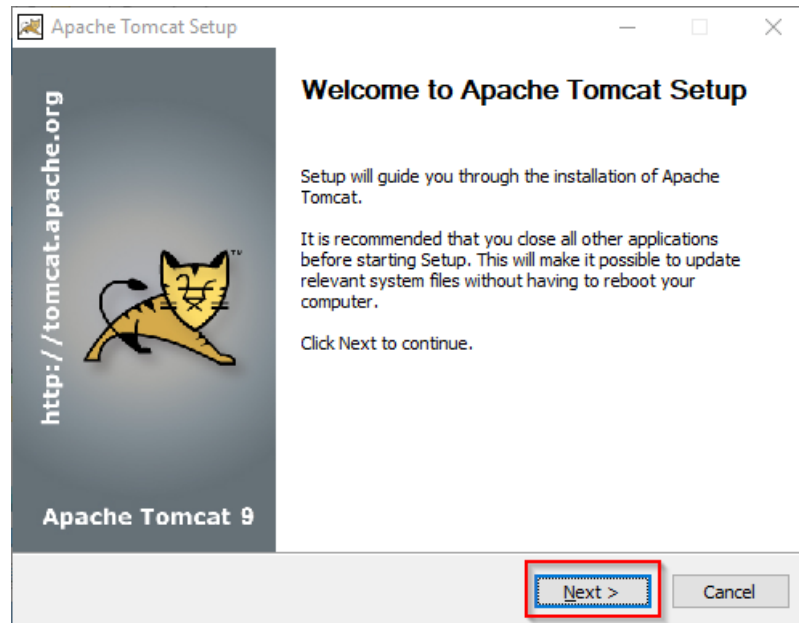


This guide uses version 9.0.16 of Apache Tomcat and is just an example of the latest version that you can download at the time of installation.

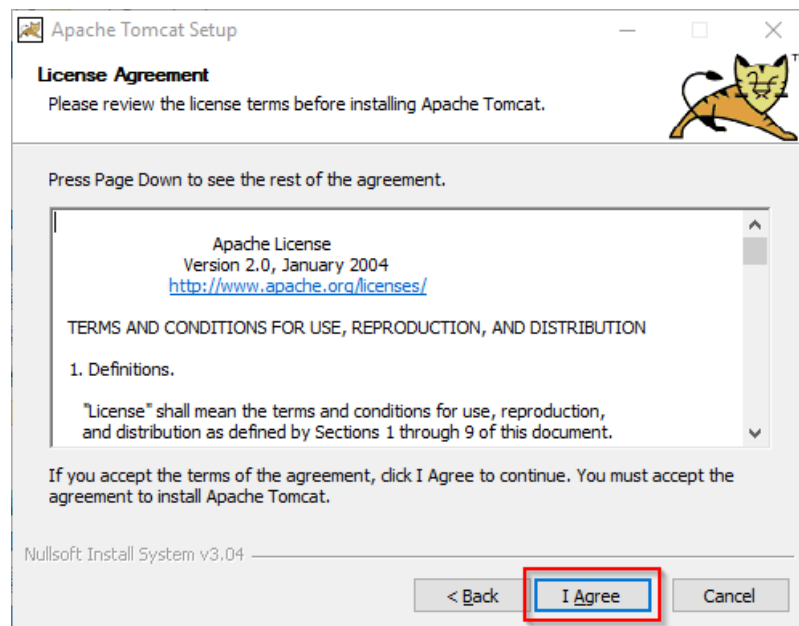
Installing Apache Tomcat

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

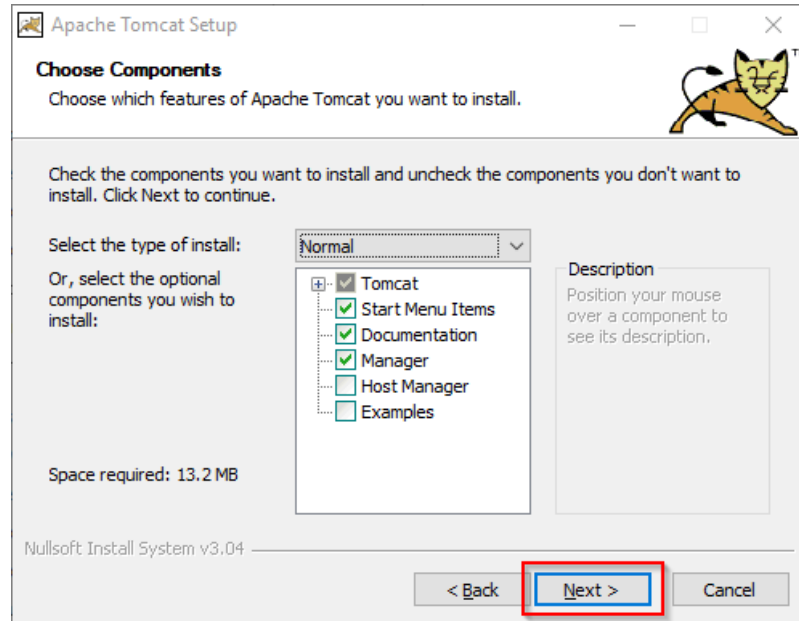
Start the installation by clicking "Next >":



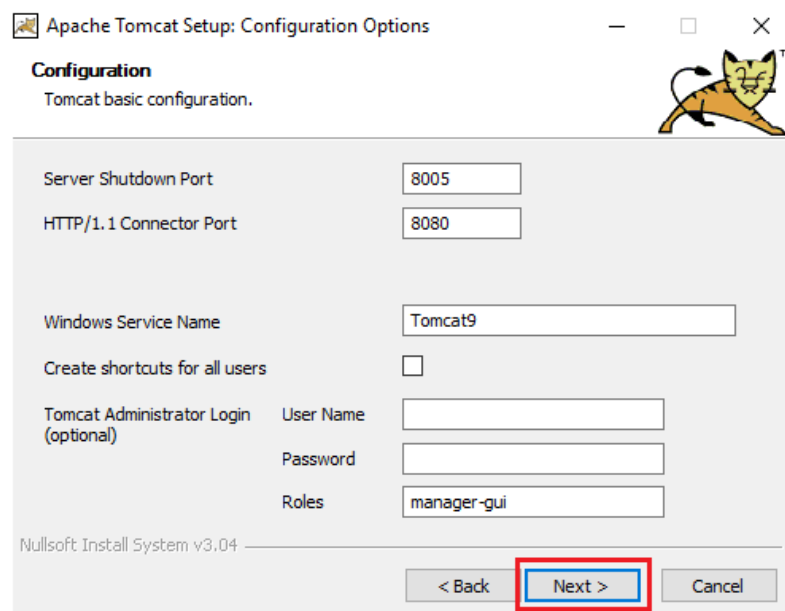
Confirm the license agreement by clicking "I Agree":



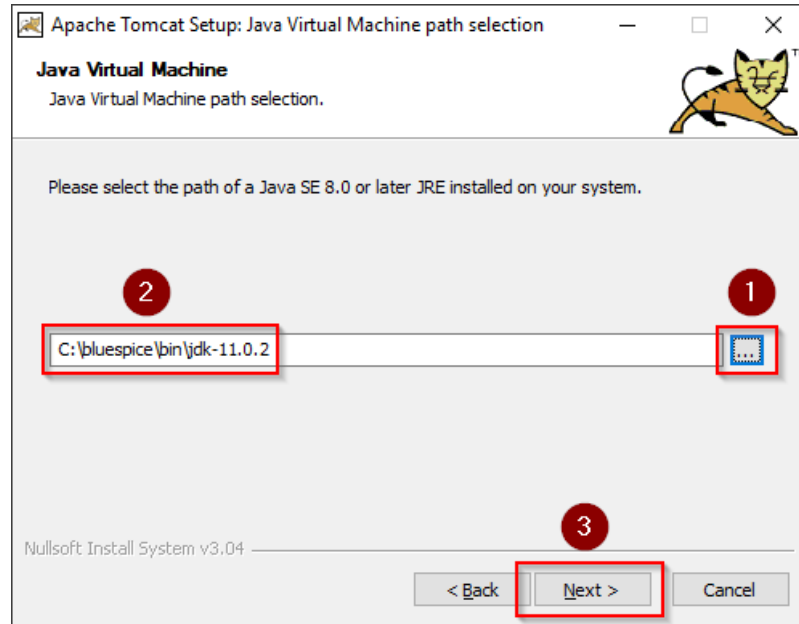
Click "Next >":



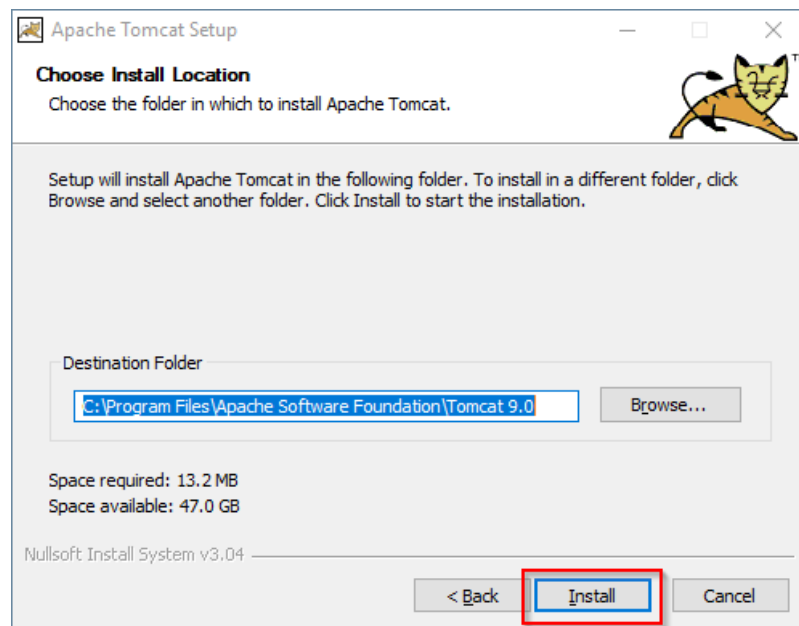
Click "Next >" again:



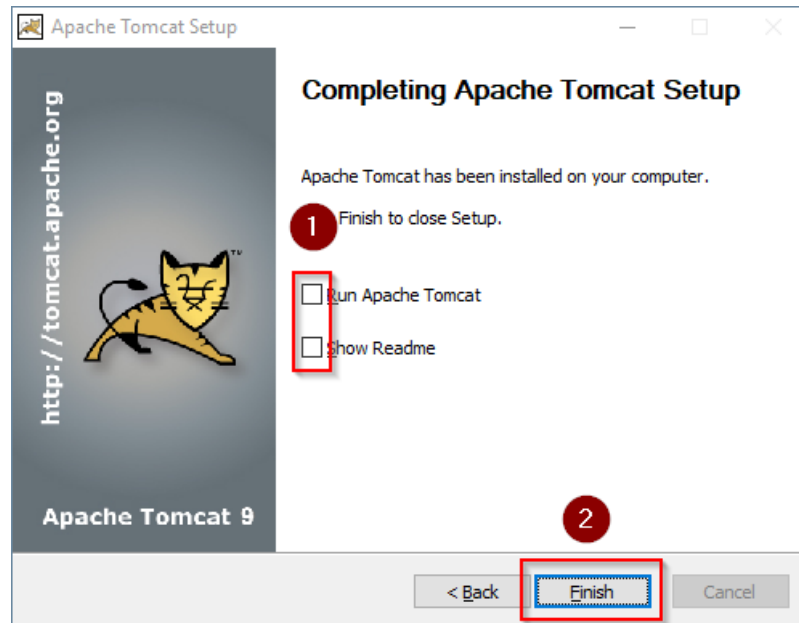
Select (1) the home directory of your [OpenJDK Installation](#) (2) and click "Next>" (3):



Start the Tomcat Installation:



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



Configuring Apache Tomcat

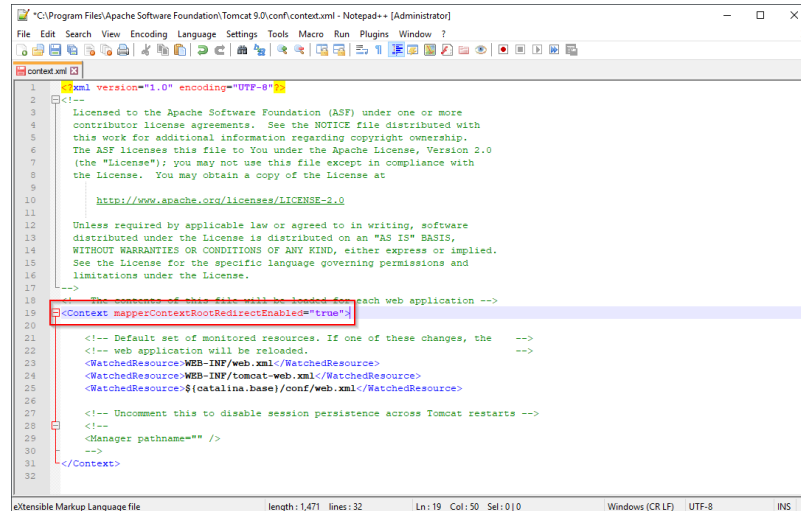
Change to the installation directory of Tomcat. By default, you can find it at `C:\Program Files\Apache Software Foundation\Tomcat 9.0\conf`.

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
```

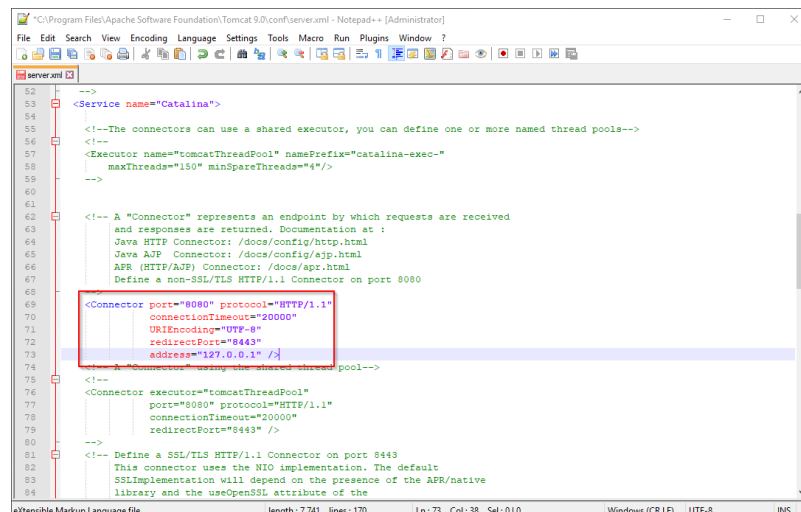
Save and close the file.

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:

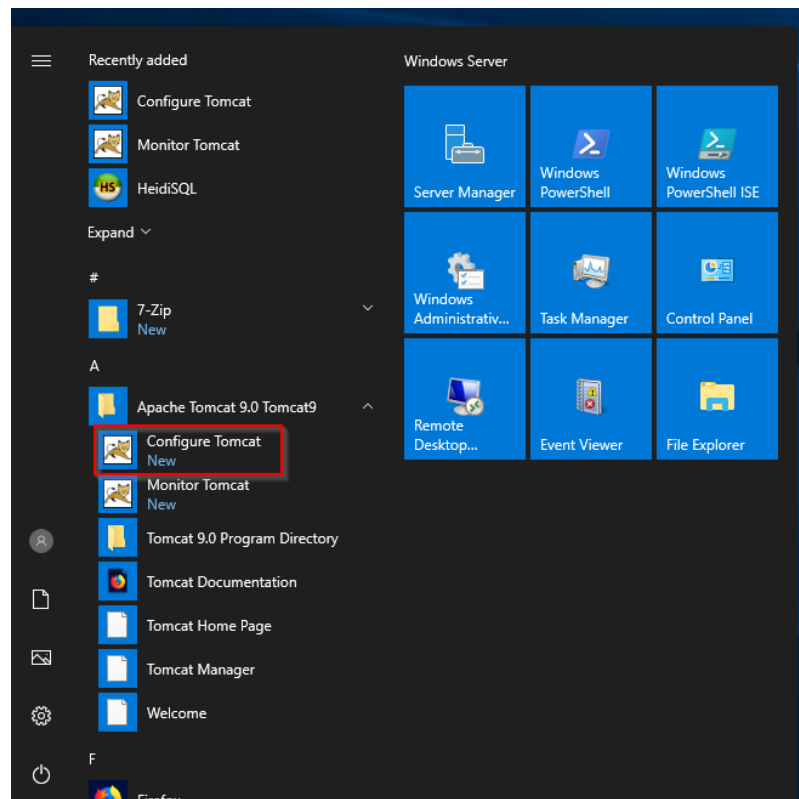
```
<Connector port="8080" protocol="HTTP/1.1"
  connectionTimeout="20000"
  URIEncoding="UTF-8"
  redirectPort="8443"
  address="127.0.0.1" />
```



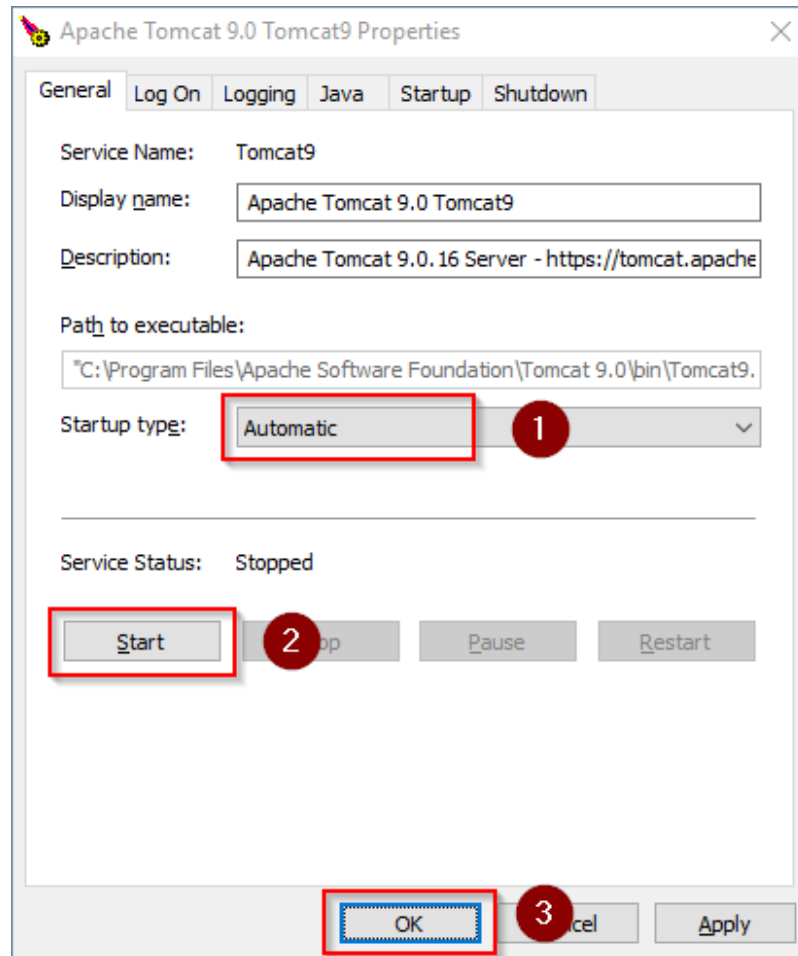
```
52  <!--
53  <Service name="Catalina">
54
55  <!-- The connectors can use a shared executor, you can define one or more named thread pools-->
56  <!--
57  <Executor name="tomcatThreadPool" namePrefix="catalina-exec-"
58  maxThreads="150" minSpareThreads="4"/>
59  -->
60
61
62  <!-- A "Connector" 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
86  <JRE> tag.
87  -->
88  <!--
89  <Connector port="8443" protocol="HTTPS"
90  SSLEngine="true"
91  keyFile="conf/sslkeyserver.pem"
92  keyStore="conf/tomcat.keystore"
93  trustStore="conf/tomcat.truststore"
94  maxThreads="150" minSpareThreads="4" />
95  -->
96  </Service>
97
98  <!-- Define a Valve to insert an header into each response.
99  The default configuration of the Valve is to insert the output
100  of the 'AccessLogValve' class. The output of the Valve is formatted
101  like so:
102  %h %l %u %r %s %S
103  The format code 'u' will generate a long URI. Please be cautious
104  not to use the same log file for different contexts.
105  -->
106  <Valve className="org.apache.catalina.valves.AccessLogValve"
107  valveName="access_log_valve"
108  pattern="%h %l %u %r %s %S" />
109
110  <!-- Define an AJP_1_3 Connector for serving Jakarta Commons HTTP
111  -->
112  <!--
113  <Connector port="8009" protocol="AJP_1_3"
114  maxThreads="150" minSpareThreads="4" />
115  -->
116
117  <!-- Define an AJP_1_4 Connector for serving Jakarta Commons HTTP
118  -->
119  <!--
120  <Connector port="8009" protocol="AJP_1_4"
121  maxThreads="150" minSpareThreads="4" />
122  -->
123  </Server>
124
```

Save and close the file.

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



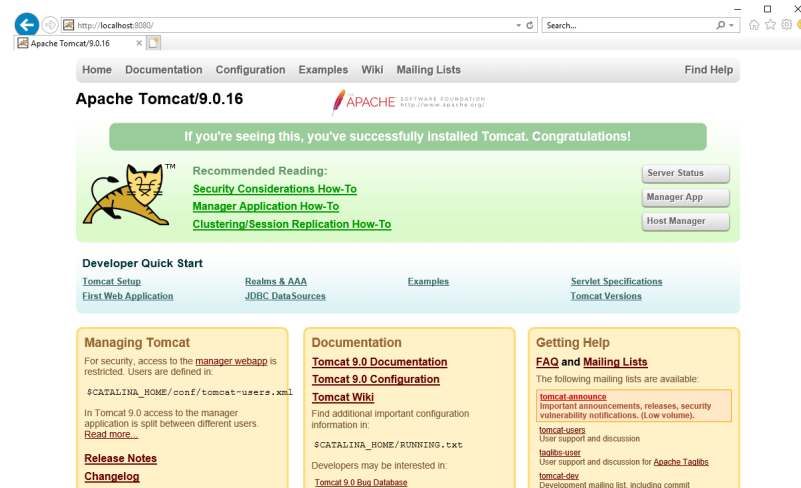
Set "Startup type" to "Automatic" (1) and start Tomcat (2). Then exit the configuration console (3):



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](#)".