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Setup:Installation Guide/System Preparation/Windows /Elasticsearch

 Elasticsearch is available up to BlueSpice 4.3. Newer versions of BlueSpice 4 support [OpenSearch](#).

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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



The content of this section refers to external sources and is current at the time of writing this documentation. We cannot guarantee how long these sources will remain unchanged. Please let us know if you notice any discrepancies to the information provided here.

BlueSpice ist derzeit mit Elasticsearch 6.x ab Version 6.8.21 kompatibel. Elasticsearch > 6.8.x wird derzeit nicht unterstützt.

Die jeweils aktuelle Version können Sie [dieser Liste](#) entnehmen. Daraus ergibt sich folgender direkter Download-Link: <https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-<Versionsnummer>.zip> also bspw. <https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-6.8.23.zip>.

Folgen Sie dabei den Download-Anweisungen Ihres Browsers.



In the following, the Elasticsearch version 6.8.23 is used and only serves as an example for the latest version of the 6.x version series, which you can download at the time of your installation.

Unpacking the ZIP archive

Unpack the ZIP archive that you have just downloaded in a Archiv in a suited system path of your hard drive.

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



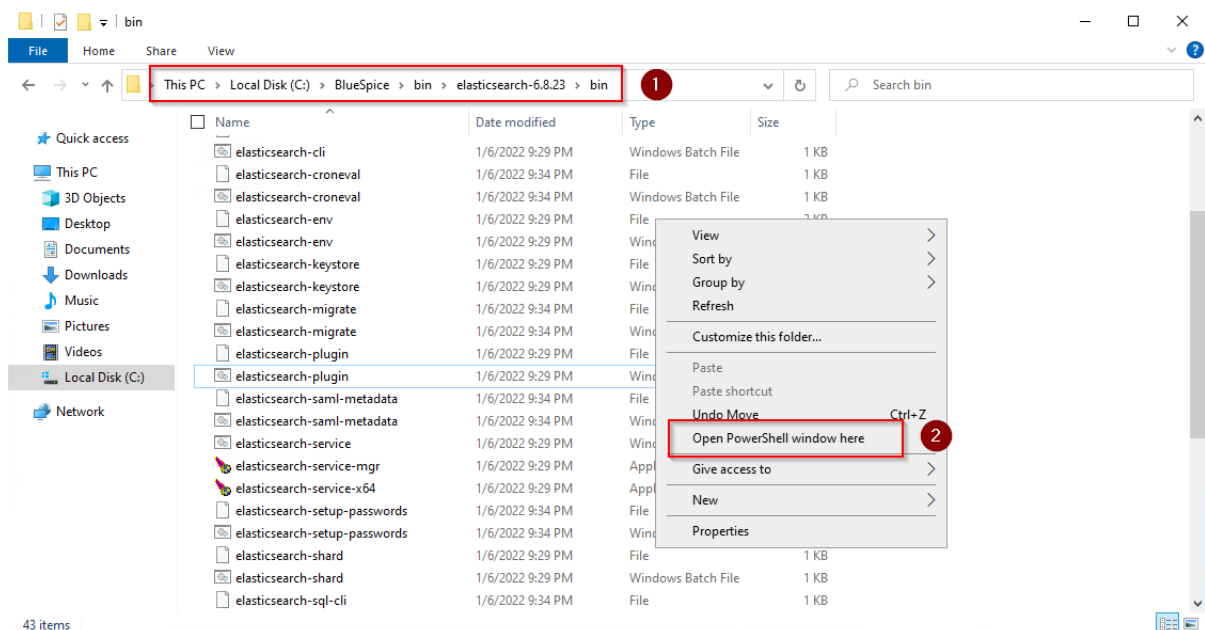
this reason, Elasticsearch is unpacked at this point in the folder C:\bluespice\bin\elasticsearch-6.8.23. If you have individual wishes, adjust these paths according to your own understanding.

Installing the plugin ingest-attachment

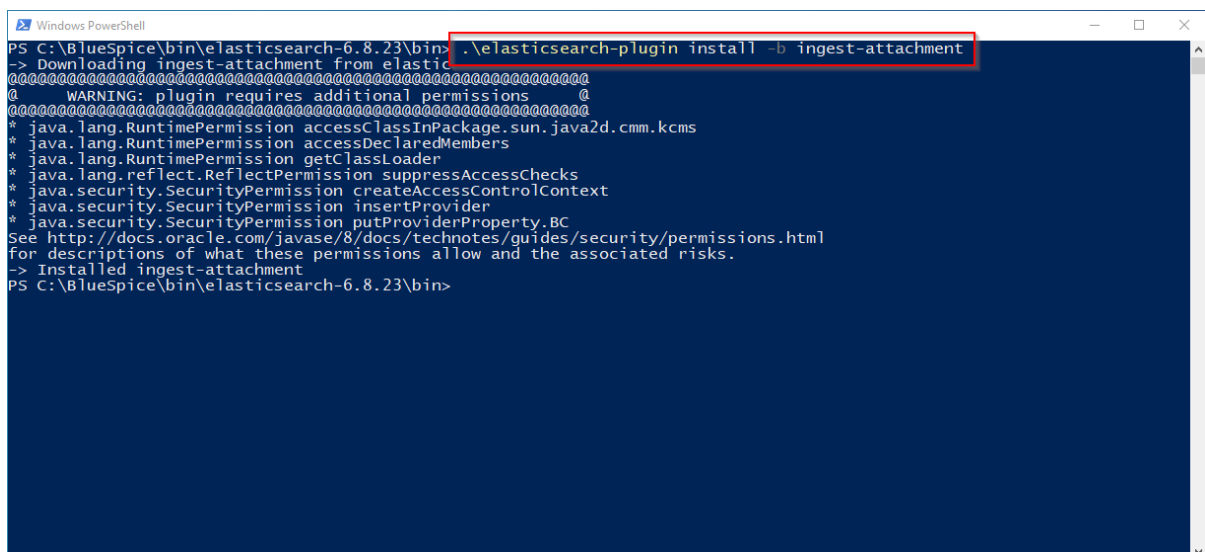
Change to the directory "C:\bluespice\bin\elasticsearch-6.8.23\bin" (1).

Right-click on a free area of the Explorer window with the Shift-key pressed.

Click "Open PowerShell window here" (2):



Execute the command ". \elasticsearch-plugin install -b ingest-attachment":





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

Run the "elasticsearch-service.bat install" command and wait for the process to complete:

```

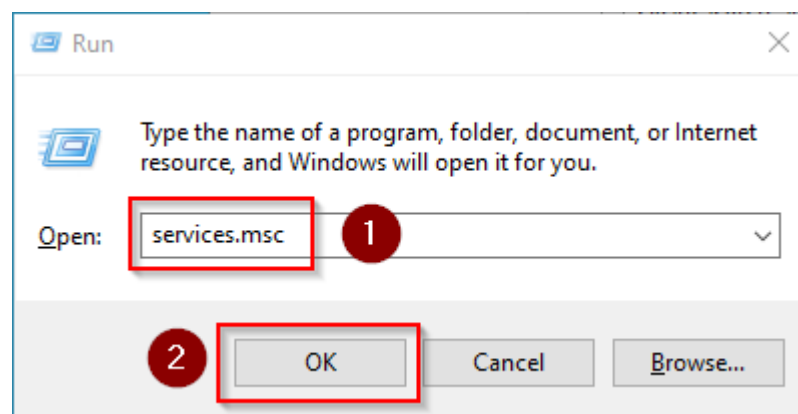
PS C:\BlueSpice\bin\elasticsearch-6.8.23\bin> .\elasticsearch-plugin install -b ingest-attachment
-> Downloading ingest-attachment from elastic
#####
@      WARNING: plugin requires additional permissions      @
#####
* java.lang.RuntimePermission accessClassInPackage.sun.java2d.cmm.kcms
* java.lang.RuntimePermission accessDeclaredMembers
* java.lang.RuntimePermission getClassLoader
* java.lang.reflect.ReflectPermission suppressAccessChecks
* java.security.SecurityPermission createAccessControlContext
* java.security.SecurityPermission insertProvider
* java.security.SecurityPermission putProviderProperty.BC
See http://docs.oracle.com/javase/8/docs/technotes/guides/security/permissions.html
for descriptions of what these permissions allow and the associated risks.
-> Installed ingest-attachment
PS C:\BlueSpice\bin\elasticsearch-6.8.23\bin> .\elasticsearch-service install
Installing service      : "elasticsearch-service-x64"
Using JAVA_HOME (64-bit): "C:\BlueSpice\bin\jdk-17.0.2"
-Xms1g;-Xmx1g;-XX:+UseG1GC;-XX:G1ReservePercent=25;-XX:InitiatingHeapOccupancyPercent=30;-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;-Dlog4j.shutdownHookEnabled=false;-Dlog4j2.disable.jmx=true;-Dlog4j2.formatMsgNoLookups=true;-Djava.io.tmpdir=C:\Users\~\AppData\Local\Temp\6\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;-Djava.locale.providers=COMPAT;-XX:UseAVX=2
The service 'elasticsearch-service-x64' has been installed.
PS C:\BlueSpice\bin\elasticsearch-6.8.23\bin>

```

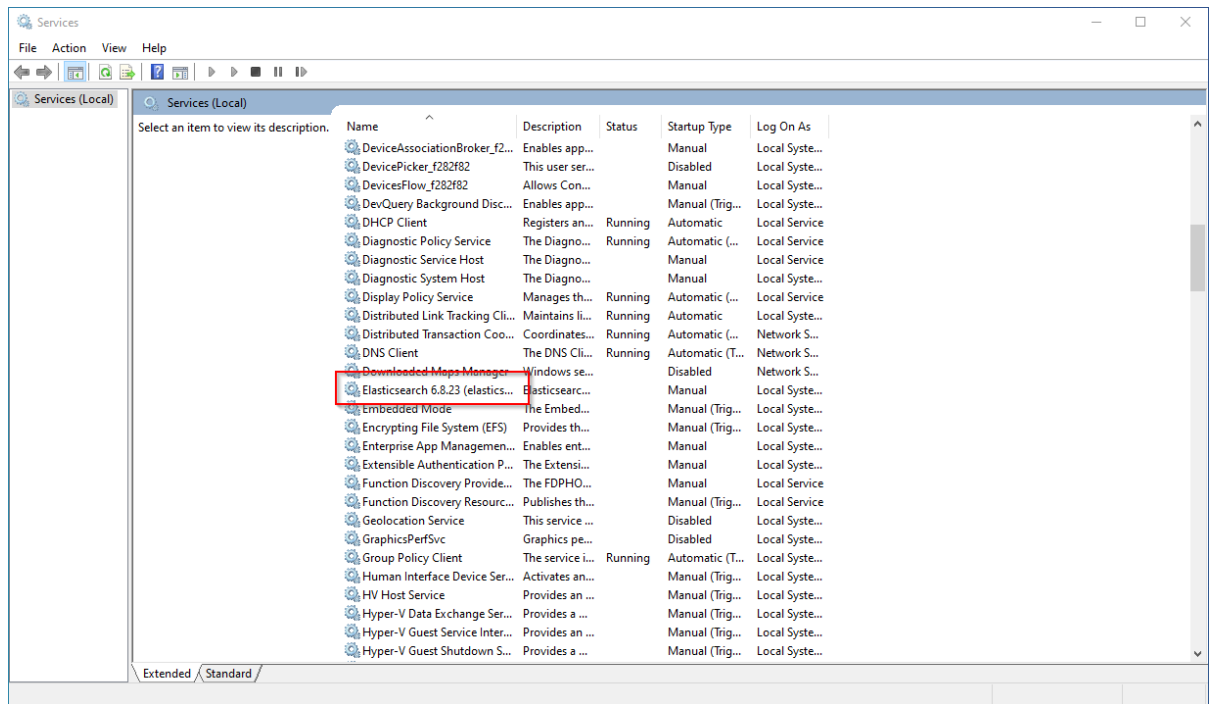
Configuring and starting the Elasticsearch service

Press the key combination Windows+R.

Enter "services.msc" (1) in the dialog window and **click** "OK" (2):

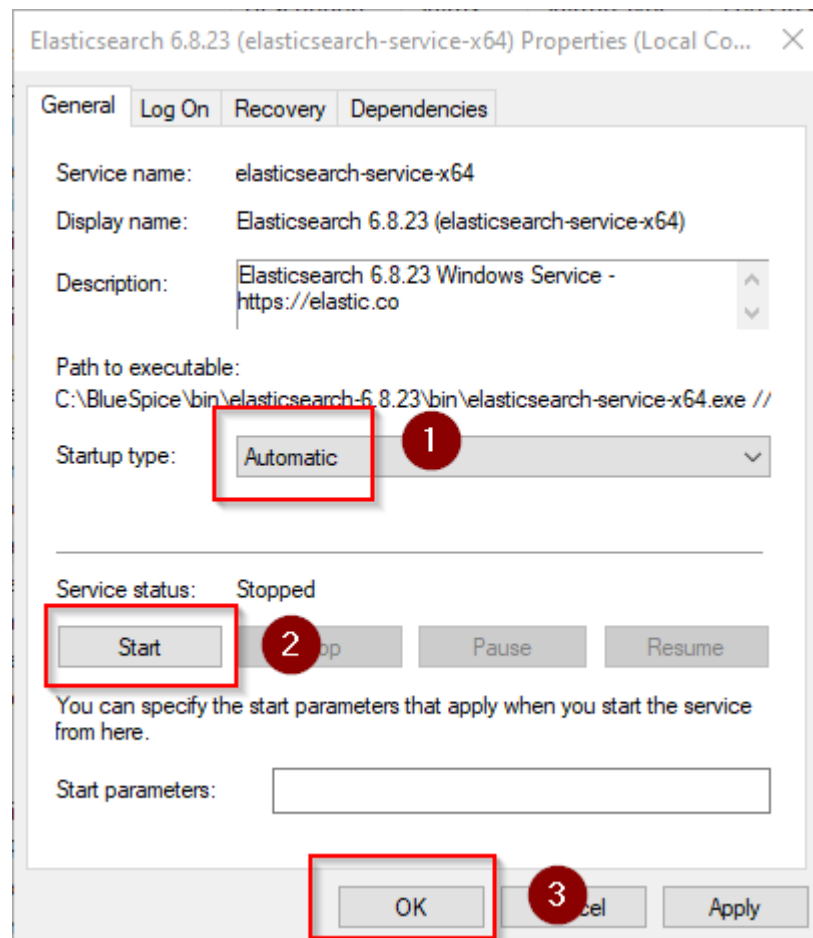


Search for the service "Elasticsearch 6.8.23" and open it with a double-click:



Select the startup type "Automatic" (1) and start the service (2).

Click "OK" (3) to close the window after the service is started:



Next step

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

Windows Folder Structure

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Introduction

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

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

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

Folder structure

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

The folder structure based on Unix operating systems is:

```
bluespice/
├── backup/           # für Backups
├── bin/              # für Zusätzliche Programme sowie eigene Skripte
├── etc/              # für Konfigurationsdateien
├── opt/
│   ├── bluespice/
│   │   ├── cache/    # BlueSpice-eigener Cache
│   │   ├── images/   # Datei-Uploads
│   │   └── widgets/  # Gerenderte Widgets
├── tmp/              # Temporäre Dateien
└── var/
    ├── log/          # LOG-Dateien des Webserver
    └── www/           # Die eigentliche BlueSpice-Applikation
```

Folder names for program installations

When installing programs in \\bluespice\\bin, please always ensure that these programs are installed in subfolders that do not contain any special characters and/or spaces.

OpenJDK on Windows

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OpenJDK is a prerequisite for operating the Extended Search and the PDF export. The steps listed here are therefore optional and only required if you want to use one or more of these services in your BlueSpice installation.



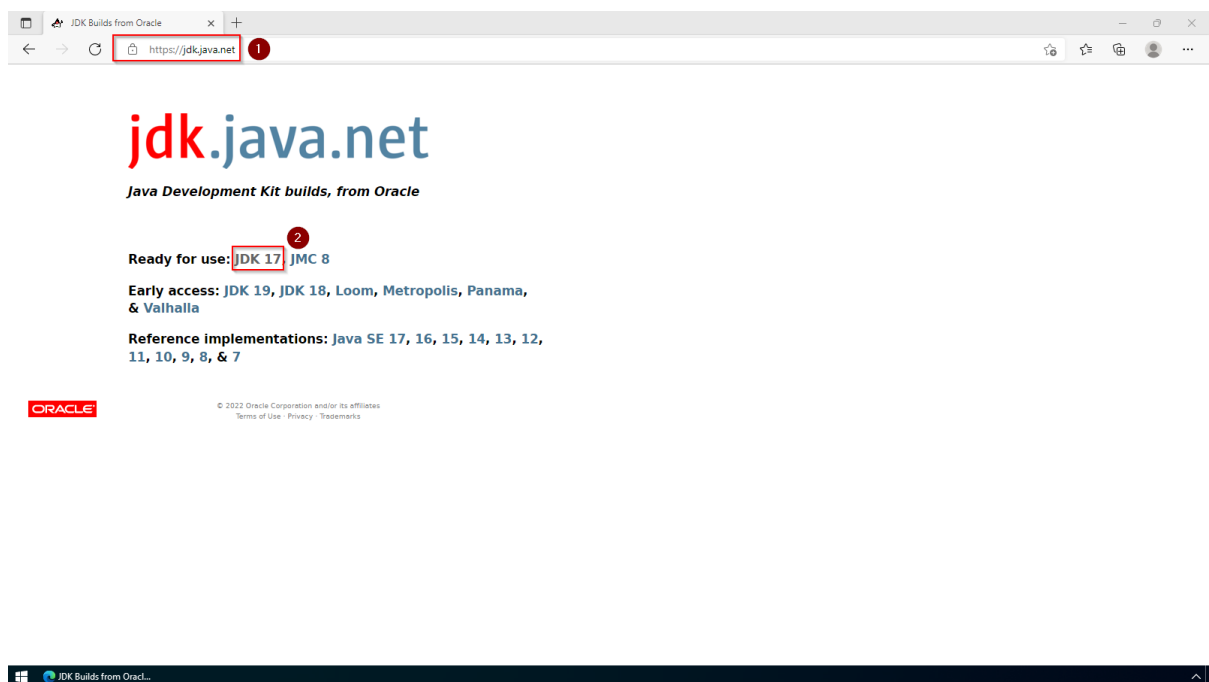
In the following documentation, we work with OpenJDK in version 17.0.2, the current version at the time of writing. You can also use other versions as long as they meet the system requirements we have published. Please note that you then have to adjust the information in this documentation accordingly.

Download

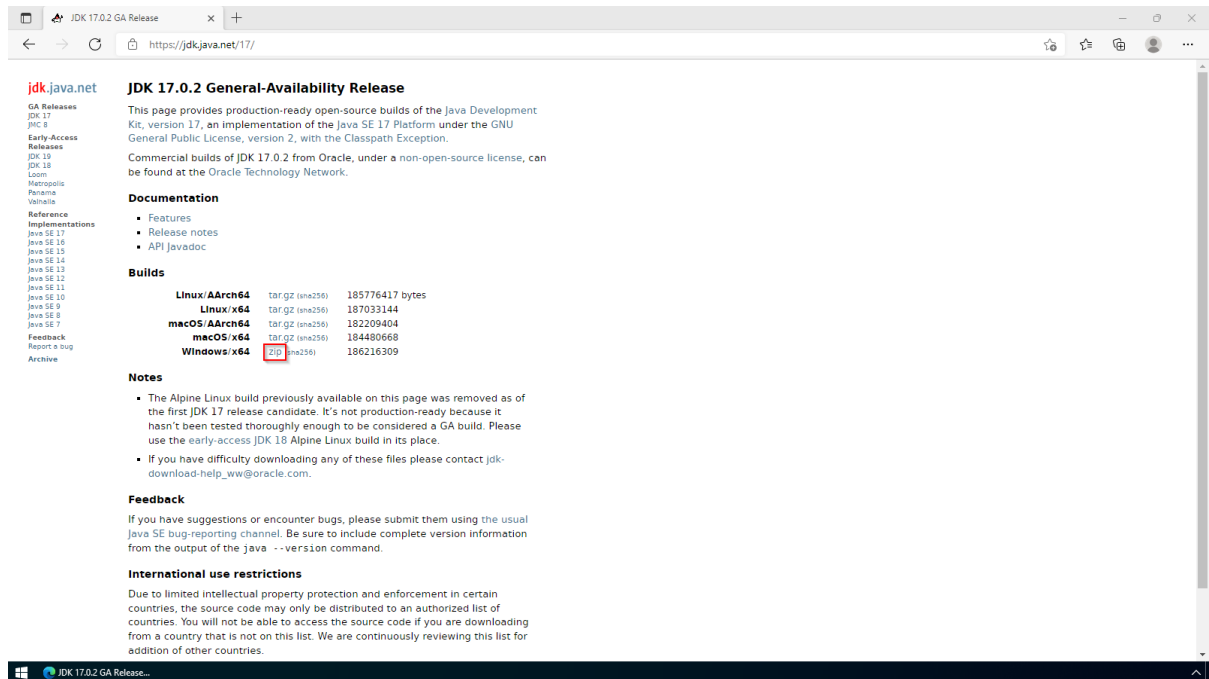


The content of this section refers to external sources and is current at the time of writing this documentation. We cannot guarantee how long these sources will remain unchanged. Please let us know if you notice any discrepancies to the information provided here.

Open the [official website at java.net](https://jdk.java.net) (1) and **click** "JDK 17" (2):



Download the ZIP archive for Windows:



Unpacking the ZIP archive



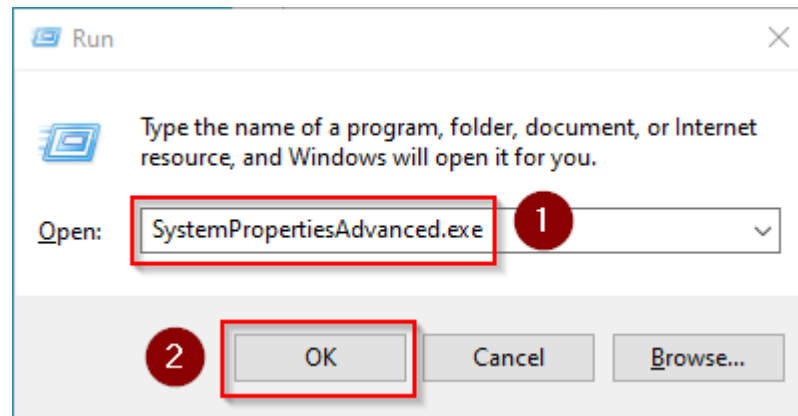
This documentation is based on the [folder structure recommended by us](#). If you want to adjust this individually, you have to adjust the paths yourself according to your own level of knowledge.

Unpack the downloaded ZIP archive to `C:\BlueSpice\bin`. The file structure `C:\BlueSpice\bin\jdk-17.0.2` should be the result.

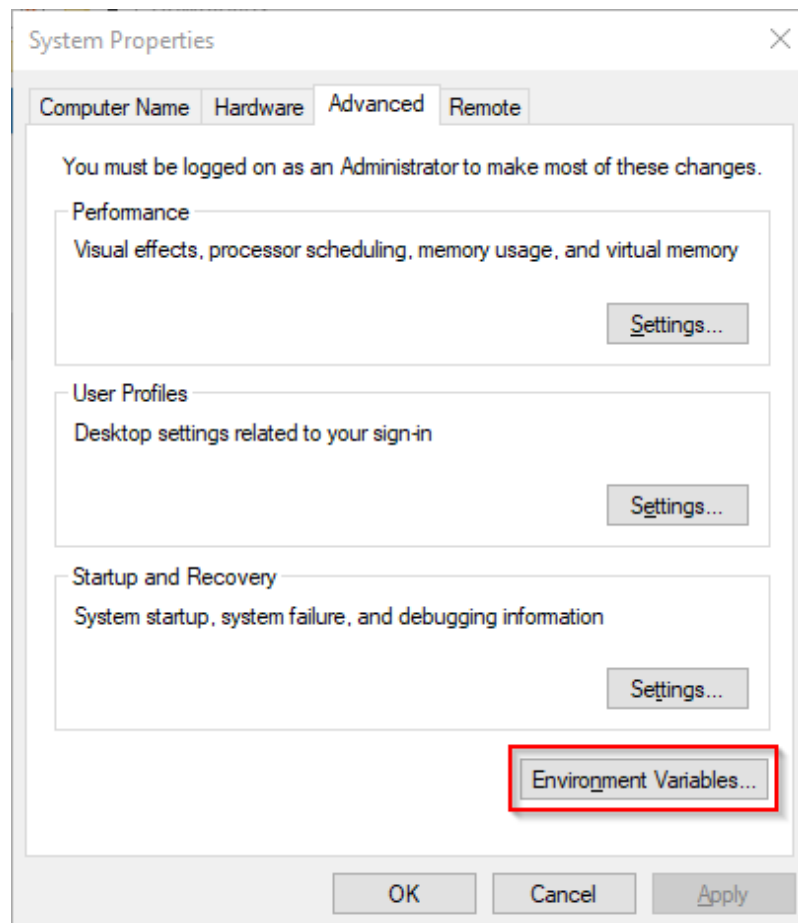
Setting the environment variable

Enter the key combination Windows+R.

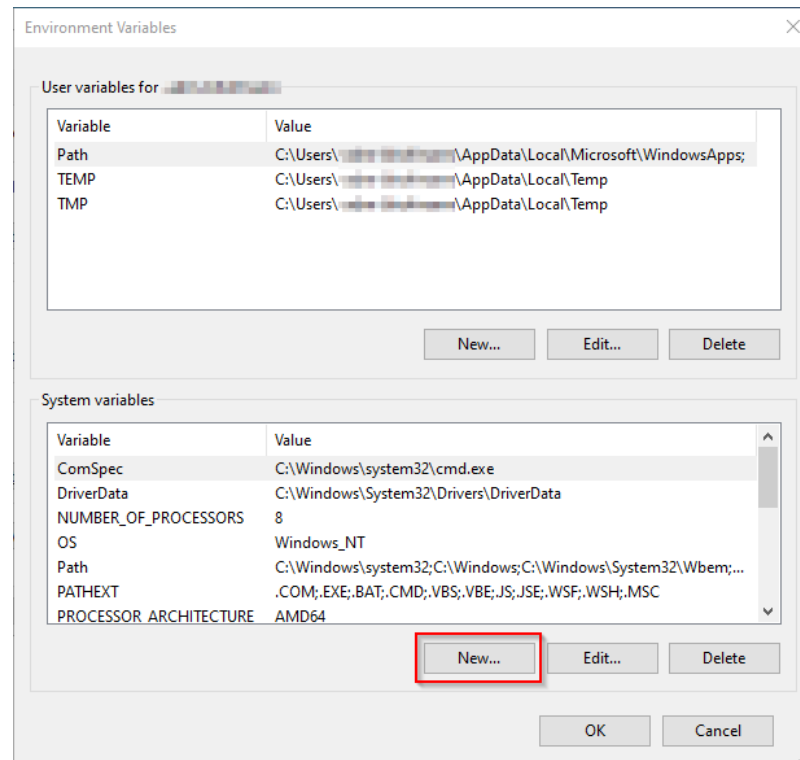
Enter "SystemPropertiesAdvanced.exe" (1) in the dialog window and **click** "OK" (2):



Click "Environment Variables...":



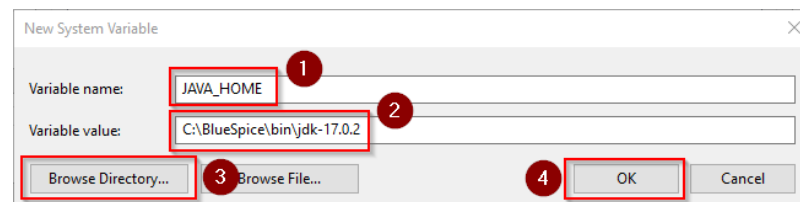
Click "New...":



Set the variable name to "JAVA_HOME" (1), and the variable value to the directory of your OpenJDK installation that you just copied to *C:\bluespice\bin* (2).

You can use the "Browse directory" button (3) for that.

Click "OK" (4):



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

Next step

If you have successfully completed all of the above steps, proceed to the next step: [Apache Tomcat](#).

Setup:Installation Guide/System Preparation/Windows /OpenSearch



OpenSearch is available from BlueSpice 4.4. Earlier versions of BlueSpice 4 support [Elasticsearch](#).

Installation

Follow the official installation instructions on [opensearch.org](https://opensearch.org/docs/latest/install-and-configure/install-opensearch/windows/). Example for Debian:

<https://opensearch.org/docs/latest/install-and-configure/install-opensearch/windows/>

Plugin installation

You also need the plugin *ingest-attachment*. Install it as described here:

<https://opensearch.org/docs/latest/install-and-configure/plugins/>

Next step

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

Setup:Installation Guide/System Preparation/Windows/Python

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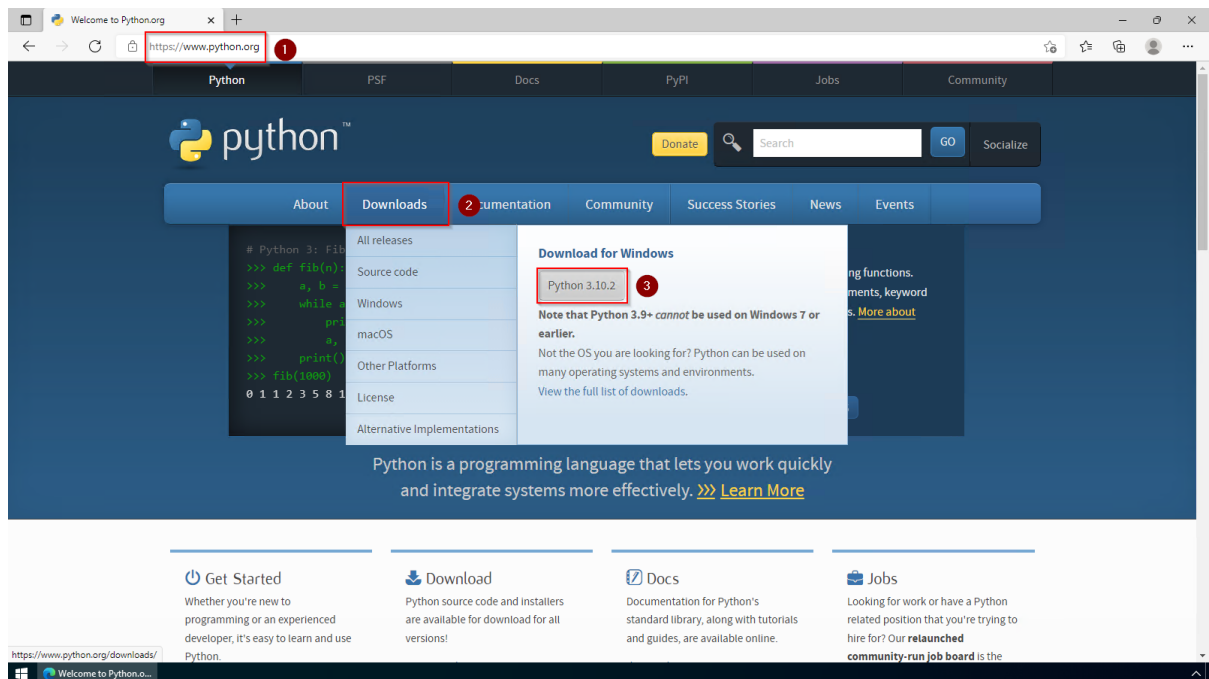
Python with the Pygmentize extension is required for rendering the MediaWiki extension **SyntaxHighlight**, which is part of BlueSpice. If you do not need the functionality, the installation of Python is not relevant for the installation and operation of BlueSpice.

Download



The content of this section refers to external sources and is current at the time of writing this documentation. We cannot guarantee how long these sources will remain unchanged. Please let us know if you notice any discrepancies to the information provided here.

Download Python directly at [python.org](https://www.python.org).



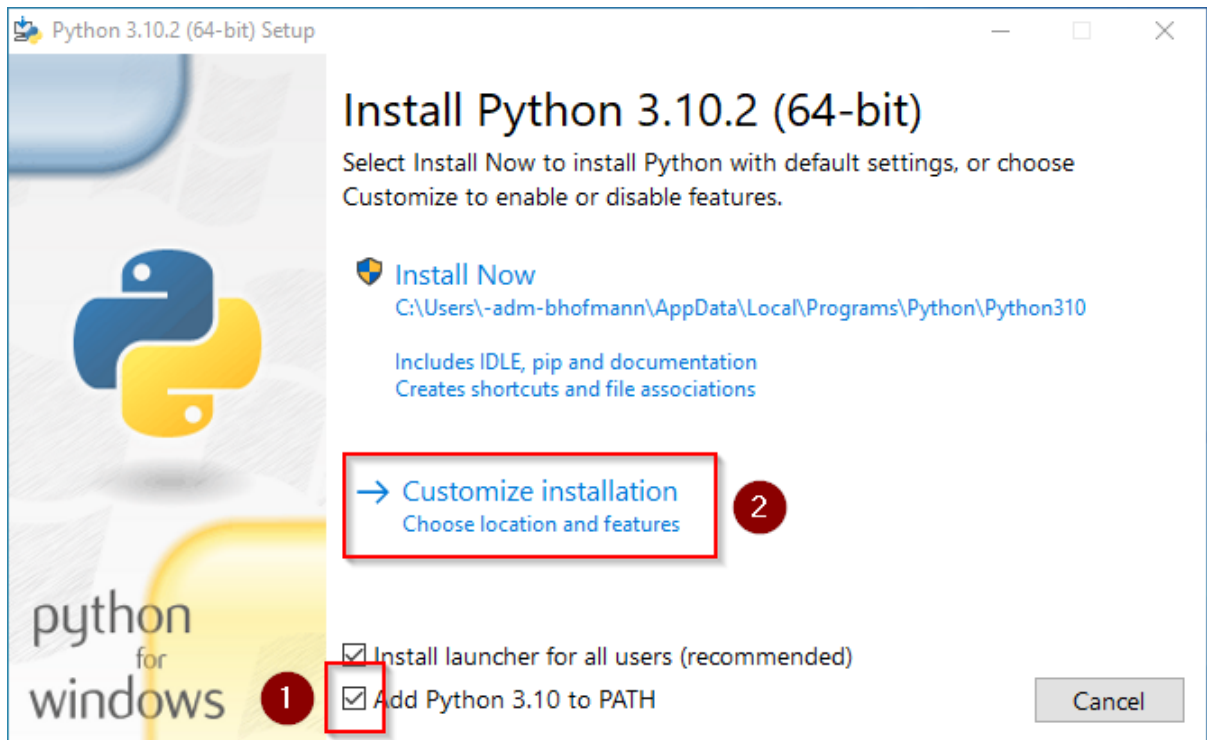
In the following, Python in version 3.10.2 is used and only serves as an example for the most current version that you can download at the time of your installation.

Installation

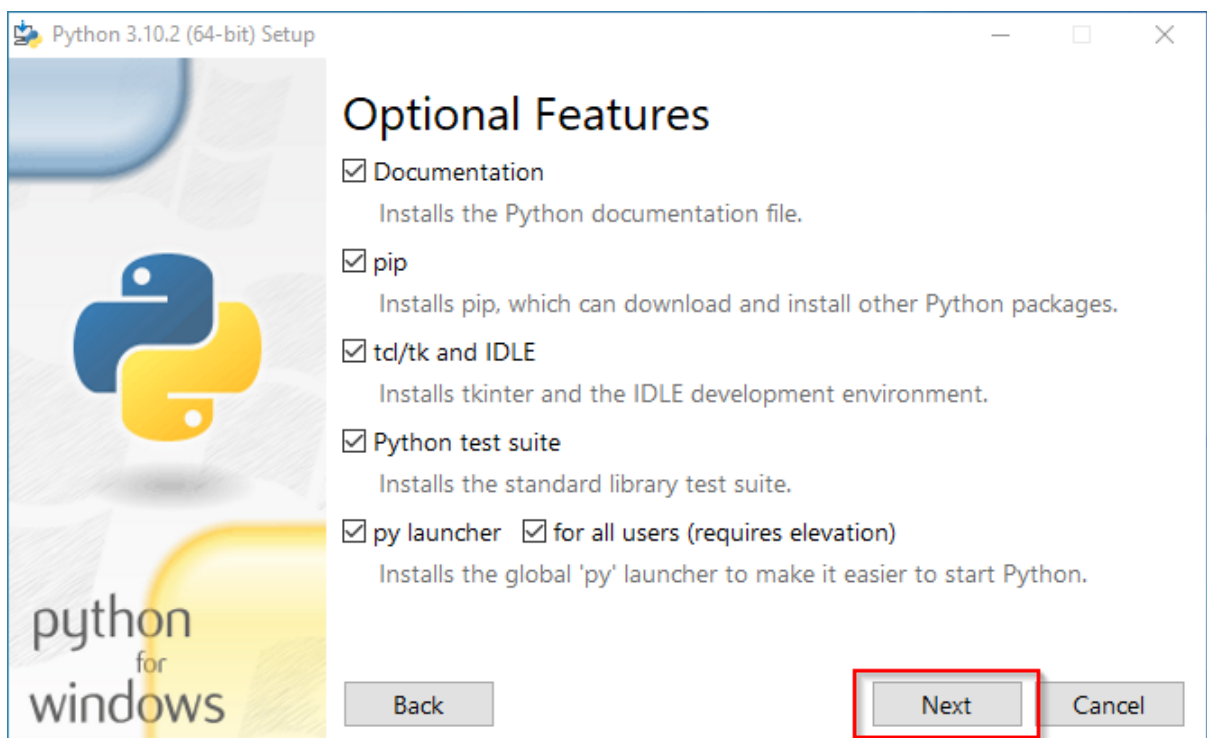
Open the file that you have just downloaded.

Select both checkboxes (1).

Click "Customize installation" (2):

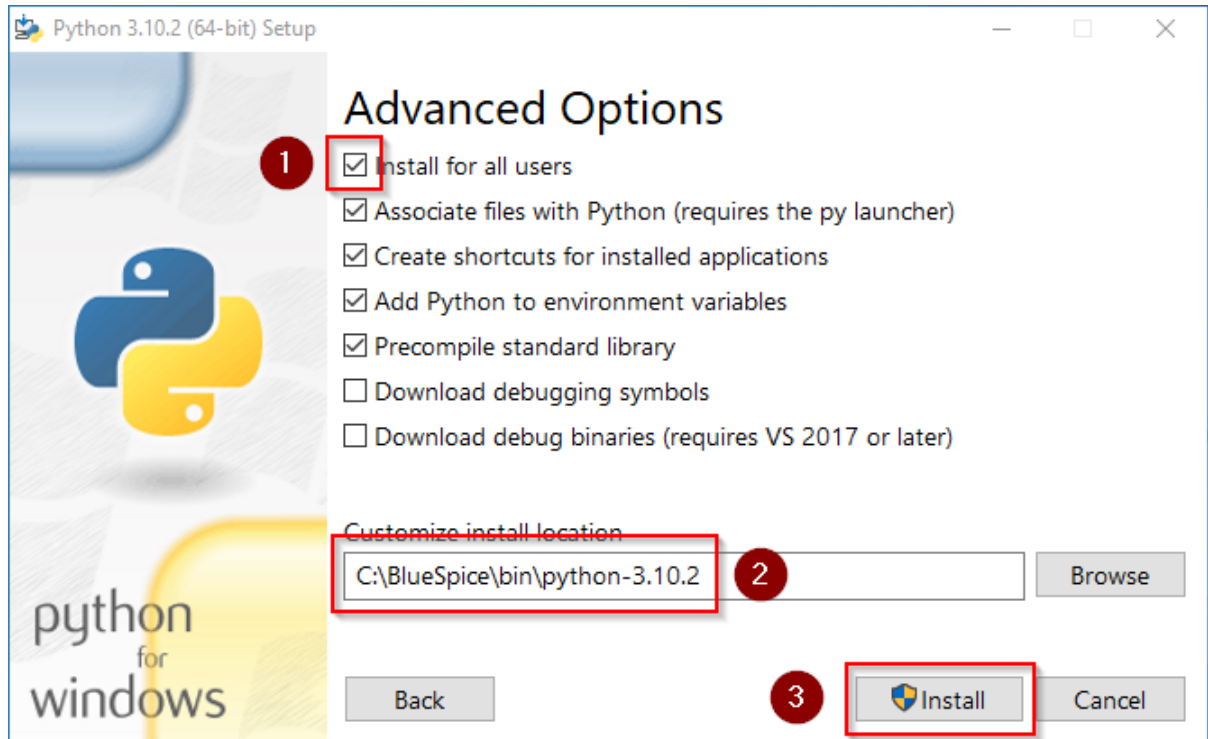


Click "Next" in the Optional Features window.



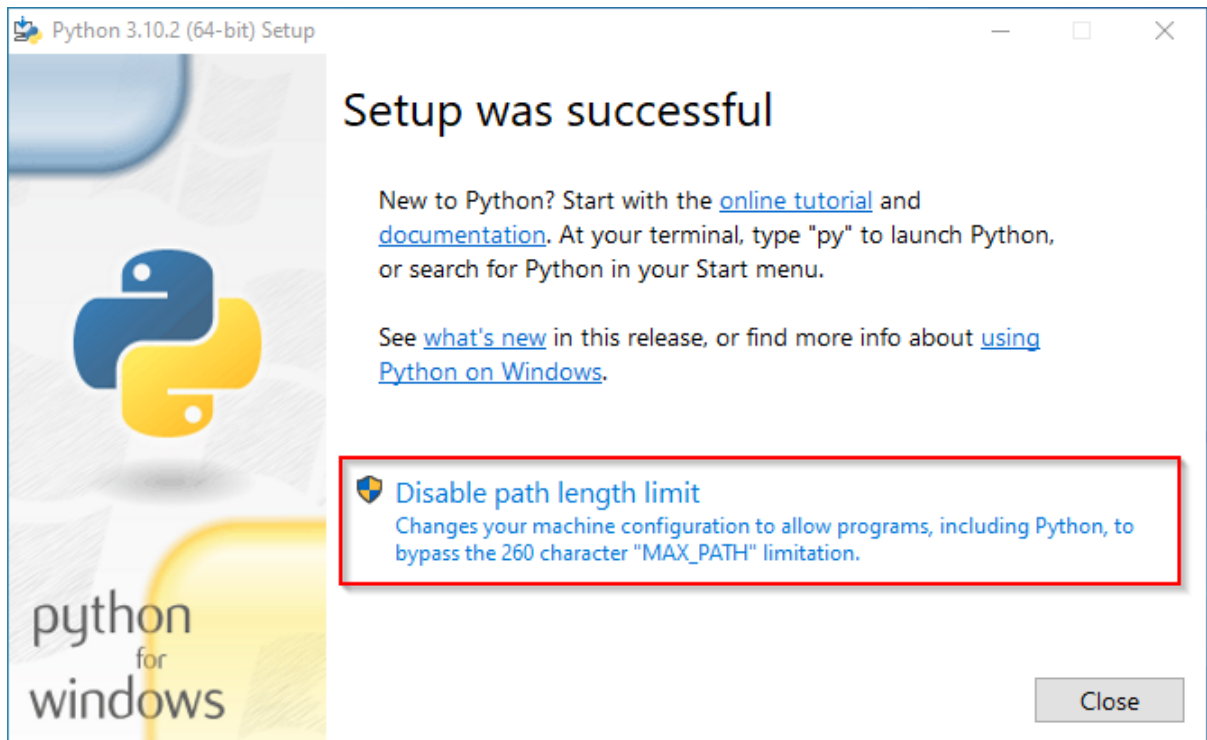
Make sure to install Python for all users (1) . Choose an appropriate path, if possible without spaces and special characters (2)

Click "Install" to start the installation (3).

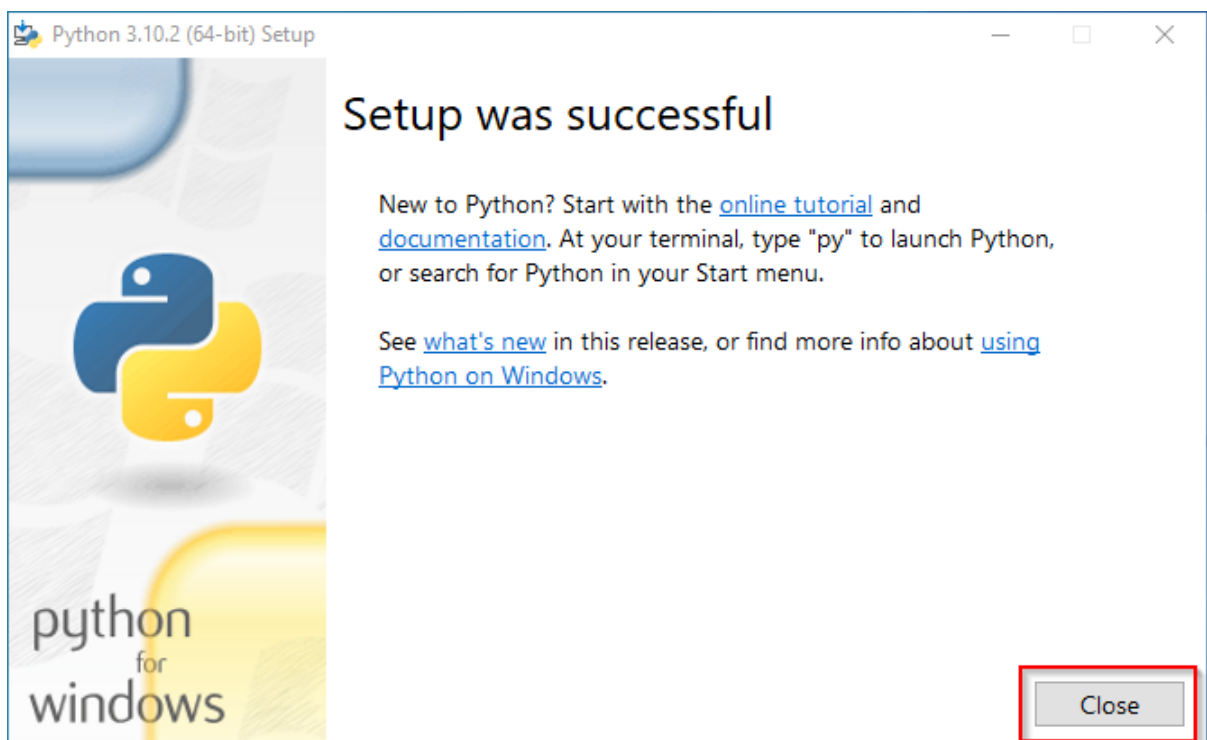


This documentation assumes the [folder structure recommended by us](#). For this reason, Python is unpacked at this point in the folder C:\bluespice\bin\python-3.10.2. If you have individual wishes, adjust these paths according to your own understanding.

Deactivate the limitation of the path length to 260 characters after the installation:

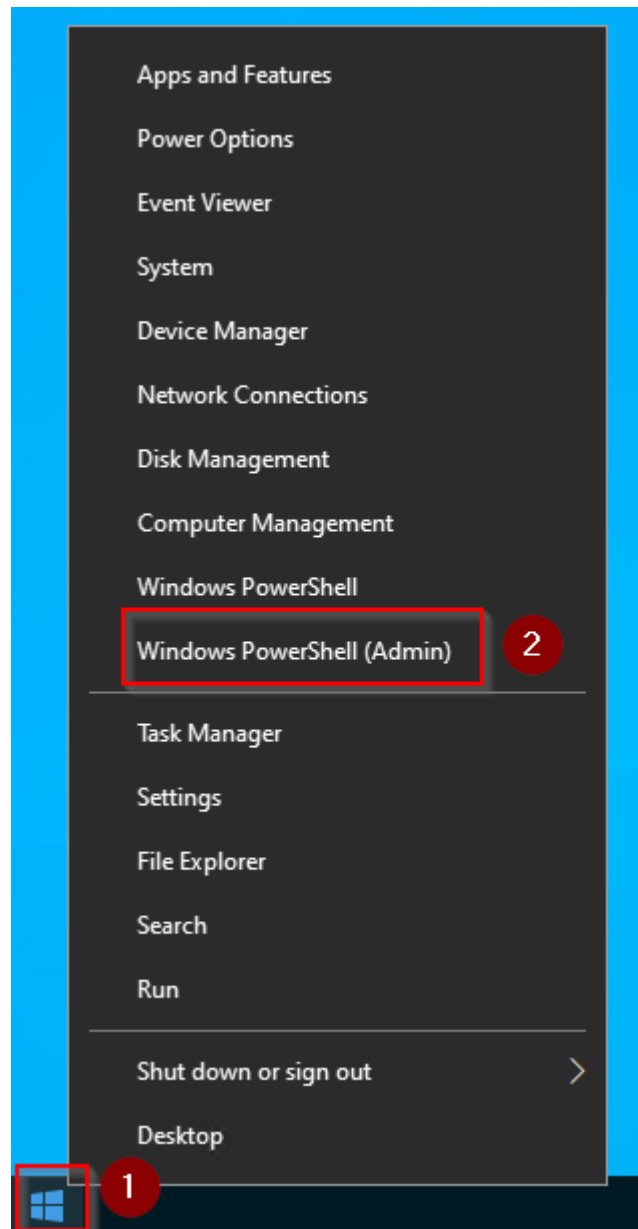


Click "Close" to finish the installation.

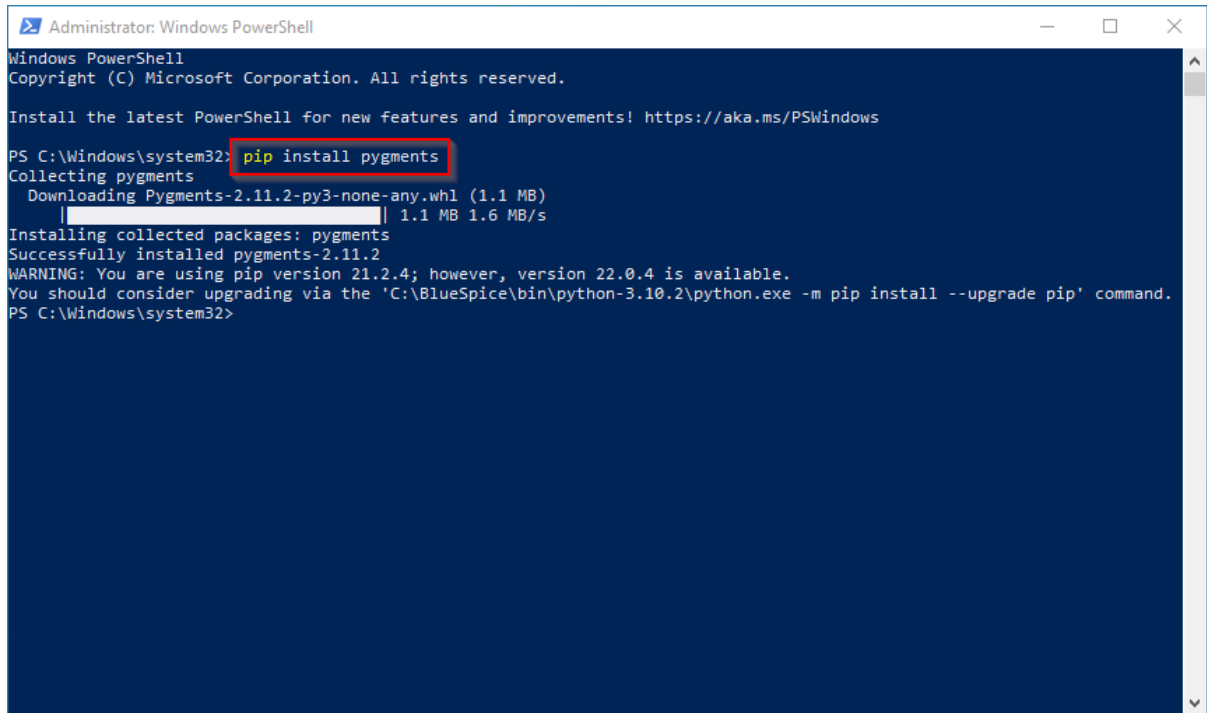


Installing Pygmentize

Open the PowerShell (the command prompt in older Windows versions). To do this, **right-click** "Start" (1) and select "Command Prompt (Administrator)" (2):



Geben Sie den Befehl "pip install pygments" ein und warten Sie, bis der folgende Prozess



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Windows\system32> pip install pygments
Collecting pygments
  Downloading Pygments-2.11.2-py3-none-any.whl (1.1 MB)
    | 1.1 MB 1.6 MB/s
Installing collected packages: pygments
Successfully installed pygments-2.11.2
WARNING: You are using pip version 21.2.4; however, version 22.0.4 is available.
You should consider upgrading via the 'C:\BlueSpice\bin\python-3.10.2\python.exe -m pip install --upgrade pip' command.
PS C:\Windows\system32>
```

Completion

Your Windows server is now fully prepared for the actual installation of BlueSpice.