

# Enabling grammar engine

Starting the WebSpellChecker Server release 5.1.0 and higher, the new grammar engine [requires](#) Java 8 and higher. After the installation, on start, the Application Server (AppServer) will try to auto-detect a path to an existing Java Virtual Machine (JVM). Also, you have an option to set a path to JVM manually or change the auto-detected path to your custom one. This manual will help you with this.

## 1. Install Java

First of all, you need to make sure that you have installed Java Runtime Environment (JRE) or Java Development Kit 8+, as both of them contain a Java Virtual Machine (JVM) that is required to run Java programs. The new grammar engine is written in Java.

## 2. Stop AppServer

Before any changes in the AppServer configuration file (AppServerX.xml), [stop AppServer](#).

## 3. Specify path to JVM in AppServer configuration file

- Locate the **AppServerX.xml** configuration file in the WebSpellChecker installation folder on your server.



The default path to the AppServerX.xml file: <WebSpellChecker\_Installation\_Path>/AppServer/AppServerX.xml

- Find a section with parameters responsible for the configuration of Java Virtual Machine (JVM) that are required for the grammar engine: <PathToJavaVirtualMachine>...</PathToJavaVirtualMachine>

### AppServerX.xml

```
<!-- At least java 8 is required to use langtool grammar engine. In case of empty tag AppServer tries to detect
path to jvm library automatically. -->
<!-- You can put path to jvm library here. Path example for Linux: /usr/lib/jvm/java-8-oracle/jre/lib/amd64
/server/libjvm.so. -->
<!-- Path example for Windows: C:/Program Files/Java/jre1.8.0_121/bin/server/jvm.dll -->
<PathToJavaVirtualMachine></PathToJavaVirtualMachine>
<!-- Put maximum heap size restriction in megabytes for langtool in java virtual machine. -->
<JVMMaxMemorySizeMb>256</JVMMaxMemorySizeMb>
```

- Use the **PathToJavaVirtualMachine** parameter to specify a correct path to a JVM on your server.

### AppServerX.xml

```
<PathToJavaVirtualMachine>your_path_to_JVM</PathToJavaVirtualMachine>
```

## 4. Start AppServer

As soon as a correct path to JVM is specified in AppServerX.xml, [start AppServer](#) for the changes to take effect.

## 5. Verify operability

As soon as these steps are done, the status should change to **"active":true**. You can also check the grammar by visiting /samples/ that are shipped with the package.

1. Check the status:

```

{
  "SpellCheckEngine": {
    "active": true
  },
  "GrammarCheckEngine": {
    "active": true,
  },
  "EnglishAIModel": {
    "active": true
  },
  "GermanAIModel": {
    "active": true
  },
  "SpanishAIModel": {
    "active": true,
  },
  "EnglishAutocomplete": {
    "active": true,
  }
}

```

2. Go to the Demo Sample pages ([http\(s\)://your\\_host\\_name:port/wscservice/samples](http(s)://your_host_name:port/wscservice/samples)) that shipped with the WebSpellChecker Server package and choose any of the demo samples with enabled Grammar.
3. Additionally, go to logs (e.g. Child-0.log or Child-1.log) files that are located in AppServer/Logs folder and check if there are any errors that appear after you specified path to your JVM. Here is an example of errors that are thrown by AppServer if a path to JVM is not found.

```

MM/DD/YY:HH:MM:50.821      #18794:0      Subsystem_General      Error      Could not find path to jvm.
dll. At least java 8 is required to use grammar engine. You can specify path to jvm library in AppServerX.xml
in 'PathToJavaVirtualMachine' tag.
MM/DD/YY:HH:MM:50.821      #18794:0      Subsystem_General      Error      Function execution error
(name:check_grammar1, result:-1, params:check_grammar1
test message
-1
en_US
)

```