# Webservices

## JAXB

<https://de.wikipedia.org/wiki/Java_Architecture_for_XML_Binding>

## Apache CXF

<https://de.wikipedia.org/wiki/Apache_CXF>

Unterstützt Frontends:

* JAX-WS (SOAP)
* JAX-RS (REST)

Unterstützt Data Bindings:

* JAXB
* Aegis
* XMLBeans
* SDO

JAXB ist default data binding für CXF (<http://cxf.apache.org/docs/jaxb.html>).

Apache-Maven-Plugins für die Verwendung im Buildprozess:

### maven-jaxb2-plugin

<https://java.net/projects/maven-jaxb2-plugin/pages/Home>

<plugins>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.1</version>

<configuration>

<source>1.6</source>

<target>1.6</target>

</configuration>

</plugin>

<plugin>

<groupId>org.jvnet.jaxb2.maven2</groupId>

<artifactId>maven-jaxb2-plugin</artifactId>

<version>0.8.3</version>

<executions>

<execution>

<goals>

<goal>generate</goal>

</goals>

</execution>

</executions>

<configuration>

<generateDirectory>target/generated-sources</generateDirectory>

<schemaDirectory>${basedir}/src/main/resources/schema</schemaDirectory>

<schemaIncludes>

<schemaInclude>demo.xsd</schemaInclude>

</schemaIncludes>

</configuration>

</plugin>

### cxf-codegen-plugin

<http://cxf.apache.org/docs/maven-cxf-codegen-plugin-wsdl-to-java.html>

<plugin>

<groupId>org.apache.cxf</groupId>

<artifactId>cxf-codegen-plugin</artifactId>

<version>2.7.2</version>

<executions>

<execution>

<id>generate-sources</id>

<phase>generate-sources</phase>

<configuration>

<wsdlOptions>

<wsdlOption>

<wsdl>${basedir}/src/main/resources/wsdl/demo.wsdl</wsdl>

<frontEnd>jaxws21</frontEnd>

<wsdlLocation>classpath:wsdl/demo.wsdl</wsdlLocation>

</wsdlOption>

</wsdlOptions>

<sourceRoot>target/generated-sources</sourceRoot>

</configuration>

<goals>

<goal>wsdl2java</goal>

</goals>

</execution>

</executions>

</plugin>

application-context.xml:

<bean id=*"DemoServiceImpl"* class=*"de.path.to.application.DemoServiceImplClass"*/>

<jaxws:endpoint implementor=*"#DemoServiceImpl"* address=*"/path"* wsdlLocation=*"classpath:wsdl/demo.wsdl"*>

<jaxws:properties>

<entry key=*"mtom-enabled"* value=*"true"* />

<entry key=*"schema-validation-enabled"* value=*"true"* />

</jaxws:properties>

</jaxws:endpoint>

# Java NIO

[java.nio](http://docs.oracle.com/javase/8/docs/api/java/nio/package-summary.html)

<https://en.wikipedia.org/wiki/Non-blocking_I/O_%28Java%29>

import java.nio.\*;

# Commons IO

<http://commons.apache.org/io/>

<dependency>

<groupId>commons-io</groupId>

<artifactId>commons-io</artifactId>

<version>2.4</version>

</dependency>

# StringUtils / ExceptionUtils / NumberUtils

<dependency>

<groupId>org.apache.commons</groupId>

<artifactId>commons-lang3</artifactId>

<version>3.3.2</version>

</dependency>

**import** org.apache.commons.lang3.StringUtils;

**import** org.apache.commons.lang3.exception.ExceptionUtils;

**import** org.apache.commons.lang3.math.NumberUtils;

# Joda-Time

<dependency>

<groupId>joda-time</groupId>

<artifactId>joda-time</artifactId>

<version>2.5</version>

</dependency>

**import** org.joda.time.\*;

Alternative: neue Date & Time API von **Java 8**

# Object Dumping

**import** path.to.MultilineRecursiveToStringStyle; //MultilineRecursiveToStringStyle.java

**import** org.apache.commons.lang3.builder.ReflectionToStringBuilder;

***LOGGER***.error("Content of object: " + ReflectionToStringBuilder.*toString*(object, **new** MultilineRecursiveToStringStyle()));

# Flyway

<plugin>

<groupId>com.googlecode.flyway</groupId>

<artifactId>flyway-maven-plugin</artifactId>

<version>2.3</version>

<configuration>

<url>${dbURL}</url>

<user>${dbUser}</user>

<password>${dbPass}</password>

<encoding>UTF-8</encoding>

<locations>

<location>filesystem:${basedir}/db/</location>

</locations>

</configuration>

<dependencies>

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

<version>5.1.22</version>

</dependency>

</dependencies>

<executions>

<execution>

<id>cleanVersioning</id>

<goals>

<goal>validate</goal>

<goal>migrate</goal>

<goal>info</goal>

</goals>

<phase>initialize</phase>

<configuration>

<initOnMigrate>true</initOnMigrate>

<initVersion>2</initVersion>

</configuration>

</execution>

</executions>

</plugin>

# Guava

<dependency>

<groupId>com.google.guava</groupId>

<artifactId>guava</artifactId>

<version>19.0</version>

</dependency>