

# Servlet TCK 5.0

## Running

### Tomcat

#### setenv.[sh|bat]

Set the following system properties

- -Dorg.apache.catalina.STRICT\_SERVLET\_COMPLIANCE=true

#### context.xml

Make the following changes:

```
<Context crossContext="true" resourceOnlyServlets="jsp">

    <CookieProcessor className="org.apache.tomcat.util.http.LegacyCookieProcessor" alwaysAddExpires="true"
forwardSlashIsSeparator="false" />

    ...

</Context>
```

#### server.xml

Enable h2c on port 8080, and add some trailer headers

```
<Connector ... allowedTrailerHeaders="myTrailer, myTrailer2" >

    <UpgradeProtocol className="org.apache.coyote.http2.Http2Protocol" />

</Connector>
```

Enable TLS on port 8443

```
<Connector port="8443" protocol="HTTP/1.1" SSLEnabled="true">

    <SSLHostConfig protocols="TLSv1.2" truststoreFile="conf/cacerts.jks">

        <Certificate certificateKeystoreFile="conf/clientcert.jks"

            certificateKeystorePassword="changeit"

            type="RSA" />

    </SSLHostConfig>

</Connector>
```

Note: Set protocols="TLSv1.2" to disable TLSv1.3 since the TCK requires post-handshake authentication and the Java 11 client does not support that.

#### tomcat-users.xml

Make the following changes:

```
<user username="CN=CTS, OU=Java Software, O=Sun Microsystems Inc., L=Burlington, ST=MA, C=US" roles="
Administrator"/>
<user username="j2ee" password="j2ee" roles="Administrator,Employee" />
<user username="javajoe" password="javajoe" roles="VP,Manager" />
```

#### web.xml

Remove the sections setting the default character encoding for requests and responses to UTF-8.

## Test Suite

Download the Jakarta Servlet 5.0.0 TCK

<https://download.eclipse.org/ee4j/jakartaee-tck/jakartaee9/promoted/servlet-tck-5.0.0.zip>

Extract to SERVLET\_TCK\_HOME

```
cd $SERVLET_TCK_HOME/bin/certificates
```

Convert `cts_cert` to a truststore doing: "keytool -import -alias cts -file cts\_cert -storetype JKS -keystore cacerts.jks" password should be "changeit"

Add `$SERVLET_TCK_HOME/bin/certificates/cacerts.jks` and `$SERVLET_TCK_HOME/bin/certificates/clientcert.jks` in the Tomcat conf folder

```
Edit $SERVLET_TCK_HOME/bin/ts.jte
```

You'll need to set the following properties (adjust the paths and values for your environment)

```
web.home=/path/to/tomcat
```

```
servlet.classes=${web.home}/lib/servlet-api.jar:${web.home}/lib/annotations-api.jar
```

```
webServerHost=localhost
```

```
webServerPort=8080
```

```
securedWebServicePort=8443
```

```
command.testExecute += -Djavax.net.ssl.trustStore=${ts.home}/bin/certificates/cacerts.jks
```

```
command.testExecute -= -Djava.endorsed.dirs=${endorsedlib.dir} (Java 11 only)
```

```
set JAVA_HOME
```

```
cd $SERVLET_TCK_HOME/bin
```

```
ant gui
```

Accept the defaults and then run the tests

## Expected results

A default 10.0.x build (as of 10.0.0-M10) with the above configuration and the 5.0.0 TCK triggers 1 test failure with the following JREs:

- Adopt OpenJDK 8u275 b01
- Adopt OpenJDK 11.0.9 b11 (TCK and Tomcat)

1 Expected failures

- 1 x default context path test as Tomcat configuration always overrides this

Fixed TCK bugs

- [PR 338](#)
  - Incorrect major version (1 failure),
  - Using LF rather an CRLF (15 failures)
  - Strange `/j_security_check` test (2 failures)
  - Missing annotation marker in Java 8 signature tests (1 failure)
  - Re-do Java 11 signature test based on Java 8
  - Fix regression in error page tests (1 failure)
  - Java 11 issues with HTTP/2 client