

# WebSocket 1.1 TCK

## Running

### Tomcat

Set the following system properties

- `org.apache.tomcat.websocket.DISABLE_BUILTIN_EXTENSIONS=true`
- `org.apache.tomcat.websocket.ALLOW_UNSUPPORTED_EXTENSIONS=true`
- `org.apache.tomcat.websocket.DEFAULT_PROCESS_PERIOD=0`

Make the following changes to `server.xml`

- add `backgroundProcessorDelay="1"` to the `<Engine ... >` element

### Test Suite

Download latest promoted build

<http://download.eclipse.org/ee4j/jakartaee-tck/jakartaee8/promoted/websocket-tck-1.1.1.zip>

Extract to `WEBSOCKET_TCK_HOME`

Edit `$WEBSOCKET_TCK_HOME/bin/ts.jte`

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

```
webServerHost=localhost
```

```
webServerPort=8080
```

```
securedWebServicePort=8443
```

```
websocket.api=/home/mark/repos/asf-public/tomcat/trunk/output/build/lib/websocket-api.jar
```

```
websocket.classes=/home/mark/repos/asf-public/tomcat/trunk/output/build/lib/tomcat-websocket.jar:/home/mark/repos/asf-public/tomcat/trunk/output/build/lib/servlet-api.jar:/home/mark/repos/asf-public/tomcat/trunk/output/build/lib/tomcat-util.jar:/home/mark/repos/asf-public/tomcat/trunk/output/build/lib/tomcat-api.jar:/home/mark/repos/asf-public/tomcat/trunk/output/build/bin/tomcat-juli.jar
```

Add the following to the command `testExecute` property (to prevent entropy issues slowing the tests down)

```
-Djava.security.egd=file:/dev/./urandom
```

Do not reduce `ws_wait` below the default of 5s as it is likely to trigger test failures.

```
set JAVA_HOME
```

```
Run ant gui
```

Accept the defaults and then run the tests

## Expected results (Java EE 8)

A default 9.0.x build (as of yyyy-mm-dd) without any configuration triggers 20 test failures

*To be confirmed. Tomcat 9 was last tested with a nightly build of the WebSocket 1.1 TCK. It has yet to be tested with the 1.1.1 release of the TCK.*

2 unclear specification

- 2 x URI <https://github.com/eclipse-ee4j/websocket-api/issues/228>

11 Faulty tests

- 1 x <https://github.com/eclipse-ee4j/jakartaee-tck/issues/33> (batching)
- 2 x <https://github.com/eclipse-ee4j/jakartaee-tck/issues/35> (batching)
- 8 x <https://github.com/eclipse-ee4j/jakartaee-tck/issues/37> (async concurrency)

5 Tests 'fixed' by appropriate system property configuration (see above)

- 4 x extensions (TCK assumes invalid extensions are ignored)
- 1 x timeout related test expects more frequent expiration checks

2 Tests 'fixed' by appropriate server.xml configuration

- 2 x timeout related tests requiring even more frequent expiration checks
  - Still see intermittent failures on these

A further 19 test failures caused by Tomcat bugs have been fixed

- 4 x Deployment failure didn't undeploy all WebSockets
- 4 x @PathParam not validated for correct type
- 6 x Throw DeploymentException rather than IAE
- 1 x Improve checking of multiple @OnMessage for the same type
- 4 x exception in encoder leading (incorrectly) to empty message