# SHRINE 4.0.0 Appendix A.5 - More Details: Tomcat Configuration

Sets up the receiving end of AJP over NIO2 connection with Apache.

For security reasons, Tomcat should open port 8009 **only** to localhost, and should reside on the same host as Apache.

This is the same Tomcat as the one installed when setting up Shrine, ideally version 9.0.52 as per SHRINE 4.0.0 Chapter 5 - Set up Apache Tomcat.

For security reasons, Tomcat should accept requests on port **8009**, but only from localhost, and redirect to the SSL port **6443**. Port 8009 and 6443 should not be reachable from outside the localhost, which is a change from the non-SSO Shrine installation where clients connect to port 6443.

Verify that there already is a Connector listening to https requests on port **6443**. It should look like this:

```
    <Connector port="6443" protocol="org.apache.coyote.http11.Http11NioProtocol"
               maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
               clientAuth="false" sslProtocol="TLS"
               keystoreFile="/opt/shrine/shrine.keystore"
               keystorePass="changeit"
               keyAlias="*.catalyst.harvard.edu"
    />
```

Configure the AJP connector. Note the **`allowedRequestAttributesPattern=".*"`** attribute. That is needed for the AJP connection to pass the attributes specified in "`attribute-map.xml`" file (see above) to the ServletRequest object as request attributes, and of the correct name (as opposed to request headers). See also SHRINE 4.0.0 Appendix A.3 - More Details : Shibboleth Configuration on the same topic.

**The connector directive below should be merged into the existing Shrine's server.xml**.

```
<Connector protocol="org.apache.coyote.ajp.AjpNio2Protocol"
  packetSize="65536"
  proxyName="[your-hostname]"
  proxyPort="443"
  enableLookups="true"
  address="0.0.0.0"
  port="8009"
  allowedRequestAttributesPattern=".*"
  secretRequired="false"
  redirectPort="6443"
  tomcatAuthentication="false"/>
```

## Next Step:

SHRINE 4.0.0 Appendix A.6 - More Details: SP Metadata