# Option: Replace commons-collections-3.2.1.jar with patched version

**JBoss 7.1.1 Instructions:**

1. **Shutdown JBoss**
Example command for JBoss 7.1.1:
/opt/jboss/bin/jboss-cli.sh --connect :shutdown
2. **Change to ‘Apache Commons module’ directory**
cd /opt/jboss/modules/org/apache/commons/collections/main
3. **Backup** existing ‘commons-collections-3.2.1.jar’ somewhere and **Replace** the file with:
<https://www.i2b2.org/software/patch/commons-collections-3.2.1.jar> (577604 bytes)
4. **Startup JBoss**
Example command for JBoss 7.1.1:
/opt/jboss/bin/standalone.sh -b 0.0.0.0 &

**Notes:**

* The commons-collections-3.2.1.jar file located at <https://www.i2b2.org/software/patch/commons-collections-3.2.1.jar> has the following 3 class files (InvokerTransformer.class, InstantiateFactory.class, and InstantiateTransformer.class) removed from the JAR as outlined at <https://access.redhat.com/security/vulnerabilities/2059393> which you can verify with the command to view the contents of the file by typing: jar -tf commons-collections-3.2.1.jar
* The patched file is provided on an AS-IS basis only. You can manually patch your JAR file and remove the 3 class files as outlined above.

# Option: Upgrade commons-collections.3.2.1 to 3.2.2 from Apache

**JBoss 7.1.1 Instructions:**

1. Download commons-collections.3.2.2-bin.tar.gz from Apache’s web site: <https://commons.apache.org/proper/commons-collections/download_collections.cgi>
2. Unzip the archive on your web server using the command: tar -zxvf commons-collections.3.2.2-bin.tar.gz
3. Find commons-collections.3.2.2-bin.jar from the extracted archive, and copy it to /opt/jboss/modules/org/apache/commons/collections/main
4. In the /opt/jboss/modules/org/apache/commons/collections/main directory, edit the file “module.xml” to refer to commons-collections.3.2.2.jar instead of 3.2.1.