Secure the JBOSS (JMX) web console invoker in Digitool

The JBOSS deploy path can be located on the Digitool server
At the console type:
```
>jb_deploy
```
This will change to the deploy directory. Eg.:
```
/exlibris/dtl/j3_1/digitool/home/system/thirdparty/openserver/server/default/deploy
```
You will need to adjust this path if it differs from these instructions.

Step 1 - Remove http-invoker.sar
Remove http-invoker.sar/ from the deploy path:

Step 2 - Download this file from the Digitool server to your PC:
```
/exlibris/dtl/j3_1/digitool/home/system/thirdparty/openserver/server/default/deploy/management/web-
console.war
```
Extract the following two files from web-console.war (*using Total Commander for example or other archive extractor*)
and edit as follows:

WEB-INF/web.xml
Uncomment the security-constraint block and add a <login-config> block after the end of the <security-constraint> block
(if not already present).
```
 <security-constraint>
   <web-resource-collection>
   <web-resource-name>HtmlAdaptor</web-resource-name>
   <description>An example security config that only allows users with the
   role JBossAdmin to access the HTML JMX console web application
   </description>
   <url-pattern>/*</url-pattern>
   <http-method>GET</http-method>
   <http-method>POST</http-method>
   </web-resource-collection>
   <auth-constraint>
   <role-name>JBossAdmin</role-name>
   </auth-constraint>
   </security-constraint>


   <login-config>
      <auth-method>BASIC</auth-method>
      <realm-name>JBoss WEB Console</realm-name>
   </login-config>
```
(Find example of this file in secure_web-invoker.zip)

WEB-INF/jboss-web.xml
Uncomment the security-domain block. Make sure the JNDI name maps to the realm name (e.g. JMXConsole)

```
   <security-domain>java:/jaas/web-console</security-domain>
```
(Find example of this file in secure_web-invoker.zip)

Replace the files in web-console.war on the Digitool server with the edited versions.

Step 3 - Copy directory:

In secure_web-invoker.zip you will find a directory "props".

Copy it to this path on the Digitool server:

`/exlibris/dtl/j3_1/digitool/home/system/thirdparty/openserver/server/default/conf/props`

Step 4 - Edit this file:

`/exlibris/dtl/j3_1/digitool/home/system/thirdparty/openserver/server/default/conf/login-config.xml`

Change the path in these sections to the versions in the new "props" directory by adding "props/" to the front of the path:

```
<application-policy name = "jmx-console">
            <authentication>
                  <login-module
                        code="org.jboss.security.auth.spi.UsersRolesLoginModule" flag =
                        "required">
                        <module-option name="usersProperties">
                              props/jmx-console-users.properties</module-option>
                        <module-option name="rolesProperties">
                              props/web-console-roles.properties</module-option>
                  </login-module>
            </authentication>
      </application-policy>


      <application-policy name = "web-console">
            <authentication>
                  <login-module
                        code="org.jboss.security.auth.spi.UsersRolesLoginModule" flag =
                        "required">
                        <module-option name="usersProperties">
                              props/web-console-users.properties</module-option>
                        <module-option name="rolesProperties">
                              props/web-console-roles.properties</module-option>
                  </login-module>
            </authentication>
      </application-policy>
```
(Find example of this file in secure_web-invoker.zip)

Step 5 – Stop and start JBOSS

```
$jdtlh_bin/jboss_shutdown.sh
$jdtlh_bin/jboss_startup.sh
```