Files locked on Windows

Files are locked on Windows and can't be replaced

Detailed Description

Jetty buffers static content for webapps such as html files, css files, images etc and uses memory mapped files to do this if the NIO connectors are being used. The problem is that on Windows, memory mapping a file causes the file to be locked, so that the file cannot be updated or replaced. See Sun bug: http://bugs.sun.com/bugdatabase/view_bug.do?bug_id=4715154. This means that effectively you have to stop Jetty in order to update a file.

Remedy

Jetty provides a configuration switch in the `webdefault.xml` file for the `DefaultServlet` which enables or disables the use of memory mapped files. If you are running on Windows and are having file locking problems, you should set this switch to disable memory mapped file buffers.

The default `webdefault.xml` file is found in the `lib/jetty.jar` at `org/mortbay/jetty/webapp/webdefault.xml`. Extract it to a convenient disk location and edit it to change `useFileMappedBuffer` to `false`:

```
<init-param>

<param-name>useFileMappedBuffer</param-name>
  <param-value>true</param-value> <!--
change to false -->
</init-param>
```

Then, ensure that your custom webdefault.xml file is applied to all of your webapps. You can do that by changing the configuration of the WebAppDeployer in `etc/jetty.xml`:

```
<Call name="addLifeCycle">
      <Arg>
        <New
class="org.mortbay.jetty.deployer.WebAppDepl
oyer">
          <Set name="contexts"><Ref
id="Contexts"/></Set>
          <Set
name="webAppDir"><SystemProperty
name="jetty.home"
default="."/>/webapps</Set>
          <Set
name="parentLoaderPriority">false</Set>
          <Set name="extract">true</Set>
          <Set
name="allowDuplicates">false</Set>
          <Set
name="defaultsDescriptor">/home/fred/jetty/m
ywebdefaults.xml</Set> <!-- set to your
customized defaults file -->
        </New>
      </Arg>
    </Call>
```

Alternatively, if you have individually configured your webapps with context xml files, you need to call the `WebAppContext.setDefaultsDescriptor(String path)` method:

```
<New id="myWebAppContext"
class="org.mortbay.jetty.webapp.WebAppContex
t">
  <Set name="contextPath">/</Set>
  <Set name="war">./webapps/fredapp</Set>
  <Set
name="defaultsDescriptor">/home/fred/jetty/m
ywebdefaults.xml</Set>
  .
  .
 </New>
```

Alternate Remedy

A WebAppContext can be forced to always copy a web app directory on deployment to avoid the file locking issue. This can be set in a context deployment file as follows:

```
<New id="myWebAppContext"
class="org.mortbay.jetty.webapp.WebAppContex
t">
  <Set name="contextPath">/</Set>
  <Set name="war">./webapps/fredapp</Set>
  <Set name="copyWebDir">true</Set>
  .
  .
 </New>
```

It seems one can also configure the default jetty Servlet directly in the web.xml. For example:

```
<web-app ...>
...
<servlet>
    <servlet-name>default</servlet-name>

<servlet-class>org.mortbay.jetty.servlet.Def
aultServlet</servlet-class>
    <init-param>

<param-name>useFileMappedBuffer</param-name>
      <param-value>false</param-value>
    </init-param>
    <load-on-startup>0</load-on-startup>
  </servlet>
...
</web-app>
```

...Altough, it may completely redefine the default servlet configuration (not sure about that, if anyone can confirm). You could anyway simply extract the webdefault file as explained above, and copy-paste th complete default servlet definition in your web.xml, changing that useFileMappedBuffer parameter to false.