MAKING WEB SPACE SERVER AND WEB SERVICES PLAY NICELY IN A SINGLE INSTANCE OF THE GLASSFISH APPLICATION SERVER

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INTRODUCTION

It is likely that, at some point or another, a SOA-based solution will require a graphical user interface. In a typical 4 layer SOA stack SOA 1, the Presentation Layer, is delivered as a series of Web Applications, by preferences through a Portal-based solution. Sun Web Space Server 10 is a Free and Open Source Portal solution that can be readily integrated into a SOA infrastructure, for example one based on the GlassFish ESB v2.1 – the Free and Open Source ESB. How Web Space Server can be added to the GlassFosh ESB v2.1 infrastructure is discussed in the blog entry "Adding Sun WebSpace Server 10 Portal Server functionality to the GlassFish ESB v2.1 Installation", at http://blogs.sun.com/javacapsfieldtech/entry/adding_sun_webspace_server_10.

Web Space Server takes over the web container, in a manner of speaking, causing all web references to be redirected through to the portal infrastructure. This makes it impossible to interact with web services deployed to the instance of GlassFish. Web Services and Web Space Server do not play nicely together when installed in the manner discussed in the Blog.

This entry provides instructions which will allow Web Services and Web Space Server to play nicely in the same instance of GlassFish by changing the servlet context which the Web Space Server manages from / to a different one. This will allow all other servlet contexts to be treated qas though the Web Space Server was not installed and will allow the two sets of functionality to coexist.

The credit for this solution goes to users@webspace.dev.java.net, in particular Srikanth Konjarla, Deepak Gothe and Allan Foster.

CHANGING WEB SPACE SERVER SERVLET CONTEXT

By default the servlet context which Web Space Server manages starts at root "/". We need to re-configure Web Space Server so it manages the servlet context tree rooted at a different location. Let's say we would like the hierarchy rooted at "/wss" to be managed by Web Space Server.

Blog "Adding Sun WebSpace Server 10 Portal Server functionality to the GlassFish ESB v2.1 Installation", at http://blogs.sun.com/javacapsfieldtech/entry/adding_sun_webspace_server_10, calls for the Web Space Server distribution archive to be unzipped to a convenient directory. In my case this was "G:\GlassFisgESB_v2.1RC2_Distro\webspace-for-glassfish". I still have the distribution archive unzipped to that location. If you do not have the distribution archive then get it and unpack it to a convenient location. We will need the distribution tree to make the changes we need to make.

Let's call this convenient location INSTALL_ROOT. For me this will be "G:\GlassFisgESB_v2.1RC2_Distro\webspace-for-glassfish".

Blog entry "Modifying portal-ext.properties" at http://wikis.sun.com/display/websynergy/Modifying+portal-ext.properties discusses how to add custom properties and override default properties for the Web Space Server. Blog entry "Webspace and Install Root", at http://wikis.sun.com/display/websynergy/Webspace+and+Install+Root, discusses the structure of the Web Space Server distribution, which helps in working out where the customized configuration should go.

Original instructions provided by Srikanth Konjarla caused me trouble because I did not understand that the references he made were to the unzipped Web Space Server distribution. After a few email exchanges the matter got clarified and I was able to change the context root managed by Web Space Server. The original instructions were:

1. Set <context-root>/wss</context-root> in sun-web.xml of the Webspace server.
2. Set portal.ctx=/wss in portal-ext.properties
3. Re-deploy the webspace war file. You can use the synchronize.xml after making changes in customs area

Let's translate this into something a novice, like me, can cope with.

CHANGE SUN-WEB.XML

Change working directory to INSTALL_ROOT (see above).
Change working directory to "./var/webspace/war-workspace/sources/webspace/WEB-INF".
Edit sun-web.xml and change the value of context-root node from "/" to "/wss".
Anotherwords

```
      <context-root>/</context-root>
```

to

```
      <context-root>/wss</context-root>
```

CREATE PORTAL-EXT.PROPERTIES

Change working directory to INSTALL_ROOT (see above).
Change working directory to "./var/webspace/war-workspace/customs".
Under "customs" create a directory hierarchy "./webspace/WEB-INF/classes" to obtain a path "{INSTALL_ROOT}/var/webspace/war-workspace/customs/webspace/WEB-INF/classes".
In the final directory, lcasses, create a text file called portal-ext.properties.
Edit portal-ext.properties and add a single line

```
portal.ctx=/wss
```

Save the modified file.

RE-DEPLOY WEBSPACE WAR FILE

This step has actually has 2 steps. First we need to create a webspace.war with the modified sun-web.xml and portal-ext.properties. Then we need to re-deploy webspace.war by starting the GlassFish Application Server.

STEP 2

Make sure the GlassFish Application Server is running so that undeplyment can be performed. Once Step 1 completes the GlassFish Application Server will be shut down.

Change working directory to INSTALL_ROOT (see above).
Change working directory to "./var/webspace/war-workspace".
Open a command window in that location and execute the ant script synchronize.xml:

```
ant –f synchronize.xml
```

In due course the script will prompt for "war to synchronize", offering webspace as the war. Accept the default. The script will produce output similar to that shown below.

```
G:\GlassFisgESB_v2.1RC2_Distro\webspace-for-glassfish\var\webspace\war-workspace>ant -
f synchronize.xml
Buildfile: synchronize.xml
```

```
check-ant:

set-war-properties:
    [input] Enter war to synchronize  [webspace]


set-last-install:

synchronize:
    [mkdir] Created dir:
C:\DOCUME~1\mczapski\LOCALS~1\Temp\mczapski\webspacesynchronize
     [copy] Copying 3768 files to
C:\DOCUME~1\mczapski\LOCALS~1\Temp\mczapski\webspacesynchronize\webspace
     [copy] Copied 553 empty directories to 4 empty directories under
C:\DOCUME~1\mczapski\LOCALS~1\Temp\mczapski\webspacesynchronize\webspace
     [copy] Copying 1 file to
C:\DOCUME~1\mczapski\LOCALS~1\Temp\mczapski\webspacesynchronize\webspace
      [jar] Building jar: G:\GlassFisgESB_v2.1RC2_Distro\webspace-for-
glassfish\var\webspace\war-workspace\finals\webspace.war

automatic-finalize:

undeploy-war:
     [exec] Command undeploy executed successfully.
   [delete] Deleting:
G:\GlassFishESBv21\glassfish\domains\domain1\autodeploy\webspace.war_deployed
     [echo] Stopping GlassFish. Ignore error messages if GlassFish is already stopped.
     [echo] Execute G:/GlassFishESBv21/glassfish/bin/asadmin stop-domain if install
hangs.
     [exec] Domain domain1 stopped.
     [copy] Copying 1 file to G:\GlassFishESBv21\glassfish\domains\domain1\autodeploy

manual-finalize:
   [delete] Deleting directory
C:\DOCUME~1\mczapski\LOCALS~1\Temp\mczapski\webspacesynchronize
     [echo]
     [echo] Synchronization is complete. GlassFish has been stopped.

BUILD SUCCESSFUL
Total time: 2 minutes 52 seconds
G:\GlassFisgESB_v2.1RC2_Distro\webspace-for-glassfish\var\webspace\war-workspace>
```

STEP 2

Start the GlassFish Application Server

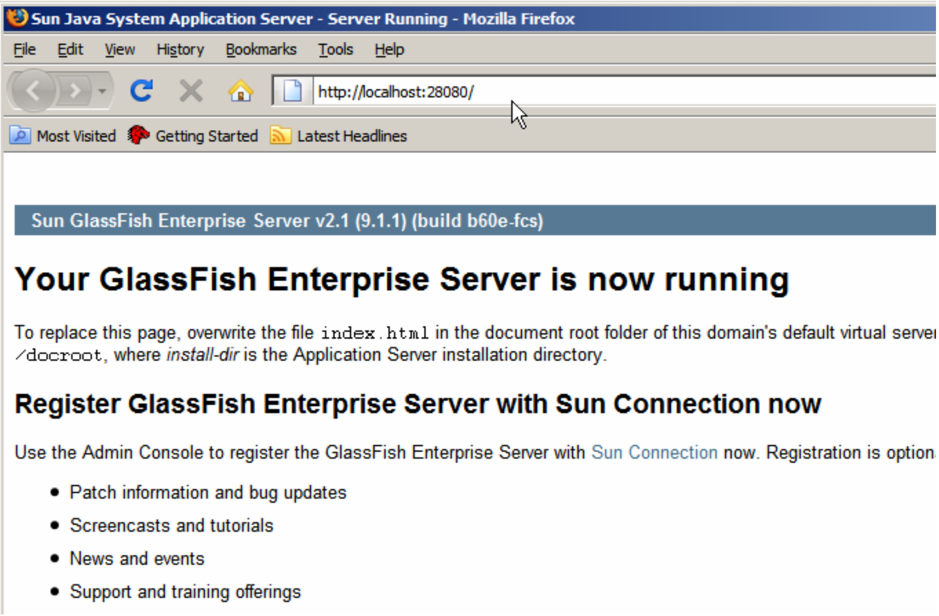
As the GlassFish Application Server starts the webspace.war will be re-deployed.

TESTING CHANGES

Once the Application Server is up and the Web Space Server WAR fle is re-deployed, which takes a bit of time, we can test the changes. Note that deployment of the webspace war will take several minutes longer then getting GlassFish Application Server started. Be patient. Wait for the server to stop churning away and go quiet. In server.log you should see a message similar to this:

```
[#|2009-06-21T14:43:46.375+1000|INFO|sun-
appserver2.1|javax.enterprise.system.tools.deployment|_ThreadID=17;_ThreadName=Timer-
12;|[AutoDeploy] Successfully autodeployed :
G:\GlassFishESBv21\glassfish\domains\domain1\autodeploy\webspace.war.|#]
```

Let's start a web browser with the URL http://localhost:28080 (if you used non-default ports when installing GlassFishESB, as I have done, or http://localhost:8080 if you used default ports). You should see a non-portal page, similar to the one below.


Sun Java System Application Server - Server Running - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:28080/
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Sun GlassFish Enterprise Server v2.1 (9.1.1) (build b60e-fcs)

Your GlassFish Enterprise Server is now running

To replace this page, overwrite the file `index.html` in the document root folder of this domain's default virtual server `/docroot`, where *install-dir* is the Application Server installation directory.

Register GlassFish Enterprise Server with Sun Connection now

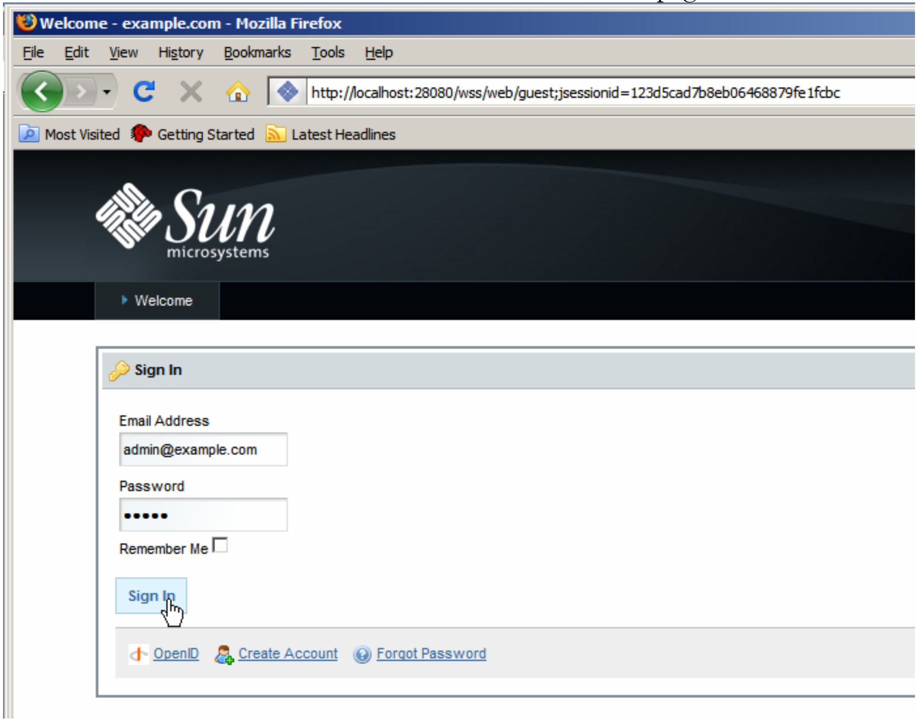
Use the Admin Console to register the GlassFish Enterprise Server with Sun Connection now. Registration is option

- Patch information and bug updates
- Screencasts and tutorials
- News and events
- Support and training offerings

Recall that previously http://localhost:28080 would have gotten us a portal login page.

Let’s now ask for http://localhost:28080/wss, the new portal servlet context root.

In due course, once the Web Space Server pages get comiled, or whatever happens in the interminable time one has to wait the first time around, a page similar to this will be shown:


Welcome - example.com - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:28080/wss/web/guest;jsessionid=123d5cad7b8eb06468879fe1fcbc
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Sun microsystems
Welcome

Sign In

Email Address: admin@example.com

Password: •••••

Remember Me □

Sign In
OpenID
Create Account
Forgot Password

The new Servlet Context has been established. All URLs starting with /wss will be redirected to the Web Space Server. All other URLs will be treated as though no Web Space Server was installed in the GlassFish Application Server environment.

Thanks again to users@webspace.dev.java.net, and in particular Srikanth Konjarla, Deepak Gothe and Allan Foster, for helping me out with this.