

## **WSE Deployment within the OMII Container**

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This document provides details pertaining to the deployment of WS-Evening Web Services – WseSink, WseSource and WseSM – and the SoapMonitor service within the OMII container. We have tested this software with version 1.2 of the OMII container. We leverage ANT to deploy and undeploy the aforementioned services. We assume that the users have successfully installed ANT on their machine.

We now list the directories relevant to this demo. The variable names here are self-descriptive.

OMII HOME: /usr/local/OMII

OMII TOMCAT HOME: <omii\_home>/jakarta-tomcat-5.0.25

OMII AXIS HOME: <omii\_home>/axis-1\_2beta

WSE Base (distribution) Directory: <omii\_home>/webservices/wse

WSE Client Directory: <omii\_home>/webservices/wse/dist/client

WSE Server Directory: <omii\_home>/webservices/wse/dist/server

**Step 1:** Execute the ANT target command **build-all** in the WSE Base Directory (/usr/local/OMII/webservices/wse).

As depicted in the figures (Figure 1) below this results in the creation of the client and server distribution.

```

root@156-56-104-135:/usr/local/OMII/webservices/wse
File Edit View Terminal Tabs Help
[root@156-56-104-135 wse]# ant build-all
Buildfile: build.xml

prepare:
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/classes

compile:
  [javac] Compiling 291 source files to /usr/local/OMII/webservices/wse/classes
s
  [copy] Copying 313 files to /usr/local/OMII/webservices/wse/classes
  [jar] Building jar: /usr/local/OMII/webservices/wse/lib/NbWebInfra.jar

client-dir:
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist
  [echo] Building directory structure for Client distribution
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/client
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/client/bin
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/client/lib
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/client/config
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/client/docs
  [echo] Completed building directory structure for Client
  [javac] Compiling 291 source files to /usr/local/OMII/webservices/wse/dist/c
client/bin
  [copy] Copying 24 files to /usr/local/OMII/webservices/wse/dist/client/conf
ig
  [copy] Copying 23 files to /usr/local/OMII/webservices/wse/dist/client/lib
  [copy] Copying 1 file to /usr/local/OMII/webservices/wse/dist/client

build-client:
  [echo] Building Client Distribution..
  [echo] .....
  [echo] Completed Client Distribution..
    
```

**Figure 1: Output of the build-all (Part 1)**

```

root@156-56-104-135:/usr/local/OMII/webservices/wse
File Edit View Terminal Tabs Help
build-client:
  [echo] Building Client Distribution..
  [echo] .....
  [echo] Completed Client Distribution..

server-dir:
  [echo] Building directory structure for Server distribution.
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/server
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/server/docs
  [mkdir] Created dir: /usr/local/OMII/webservices/wse/dist/server/config
  [echo] Completed building directory structure for Server.
  [echo] Building Server Distribution..
  [echo] .....
  [copy] Copying 24 files to /usr/local/OMII/webservices/wse/dist/server/conf

lg
  [copy] Copying 23 files to /usr/local/OMII/webservices/wse/dist/server/lib
  [copy] Copying 1 file to /usr/local/OMII/webservices/wse/dist/server

ServerWar:
  [war] Building war: /usr/local/OMII/webservices/wse/wse.war
  [copy] Copying 1 file to /usr/local/OMII/webservices/wse/dist/server

build-server:
  [echo] Completed Server Distribution..

build-all:
  [echo] .....
  [echo] Completed Client and Server Distribution..

BUILD SUCCESSFUL
Total time: 19 seconds
[root@156-56-104-135 wse]#

```

**Step 2:**

We now proceed to deploy the WseSource, WseSink, WseSM and tSoapMonitor services within Tomcat running on port 18080 (Here we note that this port number could be any other number and is under the user's control) within the OMII Container. The user first needs to use the **cd** shell command to enter the WSE Server Directory (/usr/local/OMII/webservices/wse/dist/server)

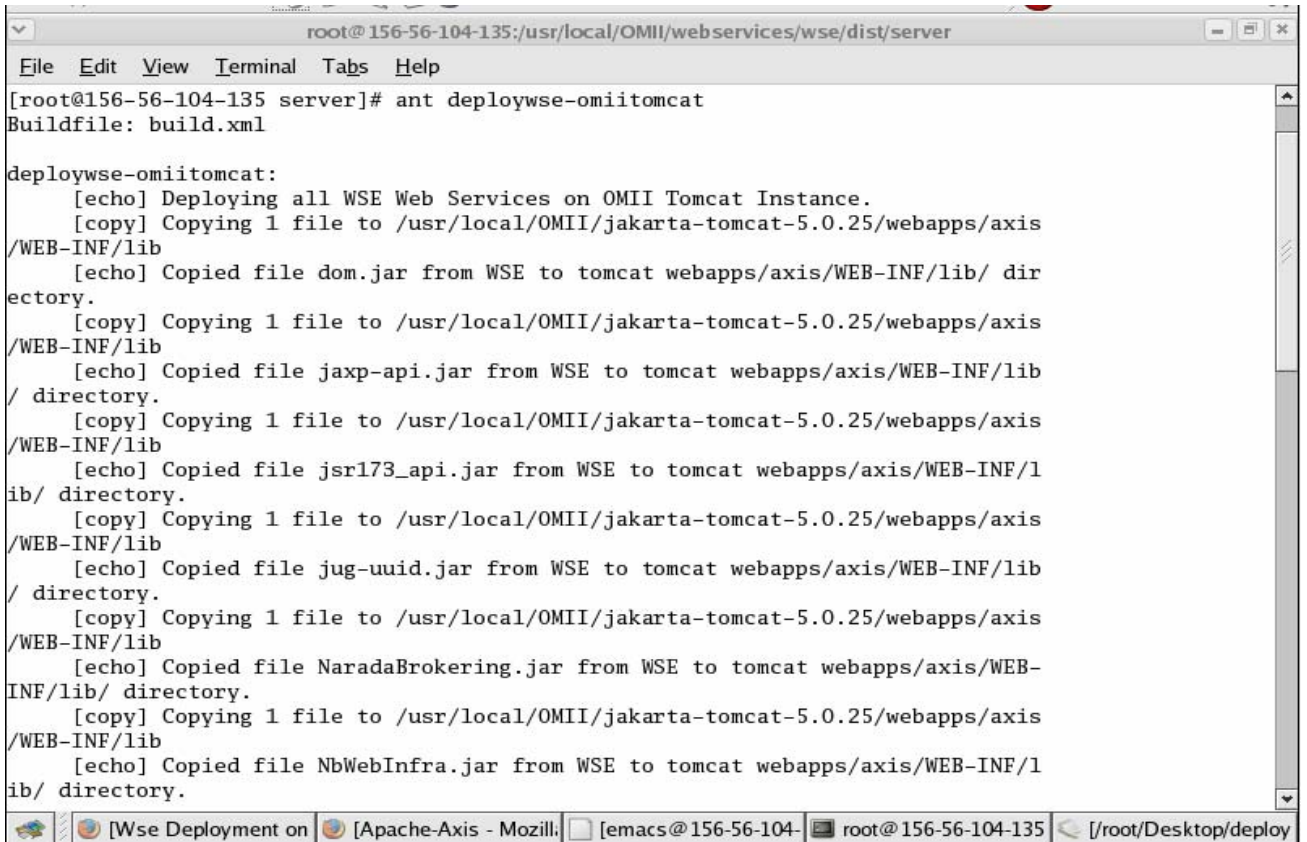
```

root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
File Edit View Terminal Tabs Help
[root@156-56-104-135 ~]# cd /usr/local/OMII/webservices/wse/dist/server
[root@156-56-104-135 server]# pwd
/usr/local/OMII/webservices/wse/dist/server
[root@156-56-104-135 server]#

```

**Step 3:** Next the user needs to execute the ANT target command **deploywse-omiitomcat**. This command copies all the necessary files including jar files, classes and resource files to the relevant locations within the OMII Container.

The figures below depict the result of the execution of this ANT target command. The successful completion of this command is a precursor to the deployment of web services within the OMII container.



```

root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
File Edit View Terminal Tabs Help
[root@156-56-104-135 server]# ant deploywse-omiitomcat
Buildfile: build.xml

deploywse-omiitomcat:
  [echo] Deploying all WSE Web Services on OMII Tomcat Instance.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file dom.jar from WSE to tomcat webapps/axis/WEB-INF/lib/ dir
ectory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file jaxp-api.jar from WSE to tomcat webapps/axis/WEB-INF/lib
/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file jsr173_api.jar from WSE to tomcat webapps/axis/WEB-INF/l
ib/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file jug-uuid.jar from WSE to tomcat webapps/axis/WEB-INF/lib
/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file NaradaBrokering.jar from WSE to tomcat webapps/axis/WEB-
INF/lib/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file NbWebInfra.jar from WSE to tomcat webapps/axis/WEB-INF/l
ib/ directory.

```

The screenshot shows a terminal window with the following details:

- Window title: root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
- Menu bar: File Edit View Terminal Tabs Help
- Terminal content:
 

```

[root@156-56-104-135 server]# ant deploywse-omiitomcat
Buildfile: build.xml

deploywse-omiitomcat:
  [echo] Deploying all WSE Web Services on OMII Tomcat Instance.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file dom.jar from WSE to tomcat webapps/axis/WEB-INF/lib/ dir
ectory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file jaxp-api.jar from WSE to tomcat webapps/axis/WEB-INF/lib
/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file jsr173_api.jar from WSE to tomcat webapps/axis/WEB-INF/l
ib/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file jug-uuid.jar from WSE to tomcat webapps/axis/WEB-INF/lib
/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file NaradaBrokering.jar from WSE to tomcat webapps/axis/WEB-
INF/lib/ directory.
  [copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
  [echo] Copied file NbWebInfra.jar from WSE to tomcat webapps/axis/WEB-INF/l
ib/ directory.

```
- Taskbar: [Wse Deployment on] [Apache-Axis - Mozill] [emacs@156-56-104-] root@156-56-104-135 [/root/Desktop/deploy

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```

root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
File Edit View Terminal Tabs Help
[echo] Copied file NbWebInfra.jar from WSE to tomcat webapps/axis/WEB-INF/lib/
directory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file sax.jar from WSE to tomcat webapps/axis/WEB-INF/lib/ dir
ectory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file saxon8.2.jar from WSE to tomcat webapps/axis/WEB-INF/lib
/
directory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file saxon8.2-jdom.jar from WSE to tomcat webapps/axis/WEB-IN
F/lib/ directory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file saxon8.2-sql.jar from WSE to tomcat webapps/axis/WEB-INF
/lib/ directory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file saxon8.2-xom.jar from WSE to tomcat webapps/axis/WEB-INF
/lib/ directory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file xbean.jar from WSE to tomcat webapps/axis/WEB-INF/lib/ d
irectory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file xbean_xpath-2.0.0-beta1.jar from WSE to tomcat webapps/a

```

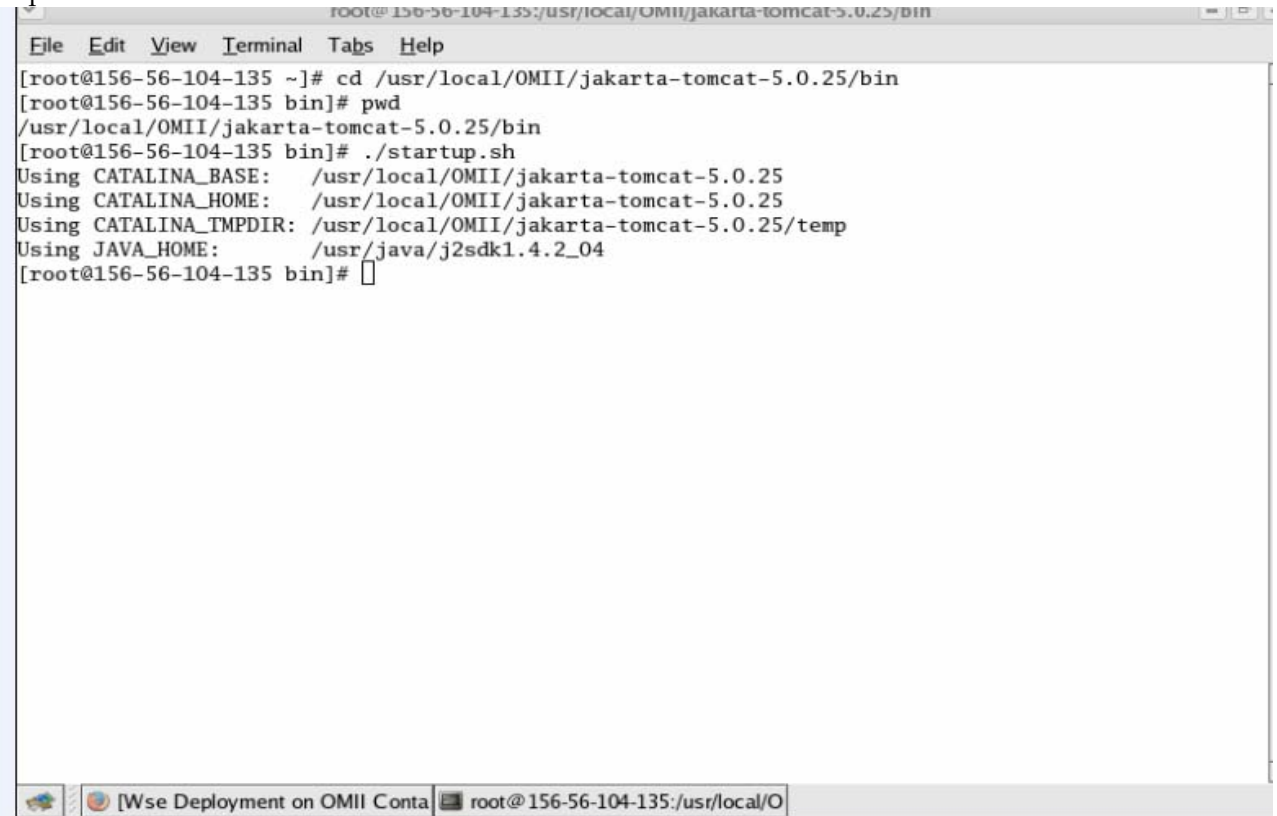
```

root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
File Edit View Terminal Tabs Help
/WEB-INF/lib
[echo] Copied file xbean.jar from WSE to tomcat webapps/axis/WEB-INF/lib/ d
irectory.
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/lib
[echo] Copied file xbean_xpath-2.0.0-beta1.jar from WSE to tomcat webapps/a
xis/WEB-INF/lib/ directory.
[copy] Copying 399 files to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/a
xis/WEB-INF/classes/cgi
[echo] Copied classes from WSE to tomcat webapps/axis/WEB-INF/classes/cgi d
irectory.
[copy] Copying 314 files to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/a
xis/WEB-INF/classes/schema
[echo] Copied classes from WSE to tomcat webapps/axis/WEB-INF/schema/ direc
tory.
[mkdir] Created dir: /usr/local/OMII/jakarta-tomcat-5.0.25/bin/config
[echo] Created directory 'config' in tomcat 'bin' directory.
[copy] Copying 24 files to /usr/local/OMII/jakarta-tomcat-5.0.25/bin/config
[echo] Copied files from 'config' folder
[copy] Copying 1 file to /usr/local/OMII/jakarta-tomcat-5.0.25/webapps/axis
/WEB-INF/classes
[echo] Copied log4j.properties from WSE to OMII tomcat Container
[echo] .....
[echo] ***Completed deploying WS-Eventing Files***
[echo] .....

BUILD SUCCESSFUL
Total time: 1 second
[root@156-56-104-135 server]# █

```

**Step 4:** Next the user needs to start Tomcat. This can be done by accessing the OMII TOMCAT HOME directory and executing the **startup.sh** shell script. The result of this execution is depicted below.



```
root@156-56-104-135:/usr/local/OMII/jakarta-tomcat-5.0.25/bin
File Edit View Terminal Tabs Help
[root@156-56-104-135 ~]# cd /usr/local/OMII/jakarta-tomcat-5.0.25/bin
[root@156-56-104-135 bin]# pwd
/usr/local/OMII/jakarta-tomcat-5.0.25/bin
[root@156-56-104-135 bin]# ./startup.sh
Using CATALINA_BASE:   /usr/local/OMII/jakarta-tomcat-5.0.25
Using CATALINA_HOME:   /usr/local/OMII/jakarta-tomcat-5.0.25
Using CATALINA_TMPDIR: /usr/local/OMII/jakarta-tomcat-5.0.25/temp
Using JAVA_HOME:       /usr/java/j2sdk1.4.2_04
[root@156-56-104-135 bin]#
```

**Step 5:** To deploy the SoapMonitor Web Service the user needs to execute the ANT target command **soapmonitor** within the WSE Server Directory. The command and the arguments that this command takes is depicted in the snippet below. Here <machine\_name> corresponds to the machine hosting Tomcat and the OMII Container.

```
/usr/local/OMII/webservices/wse/dist/server>
ant deploy-soapmonitor -Dwse.soapmonitor.axisadmin=-lhttp://<machine_name>
:18080/axis /services/ AdminService -Dwse.soapmonitor.wsddfile=config/wse/deploy-
monitor.wsdd
```

A sample execution of this command is depicted in the figure below.

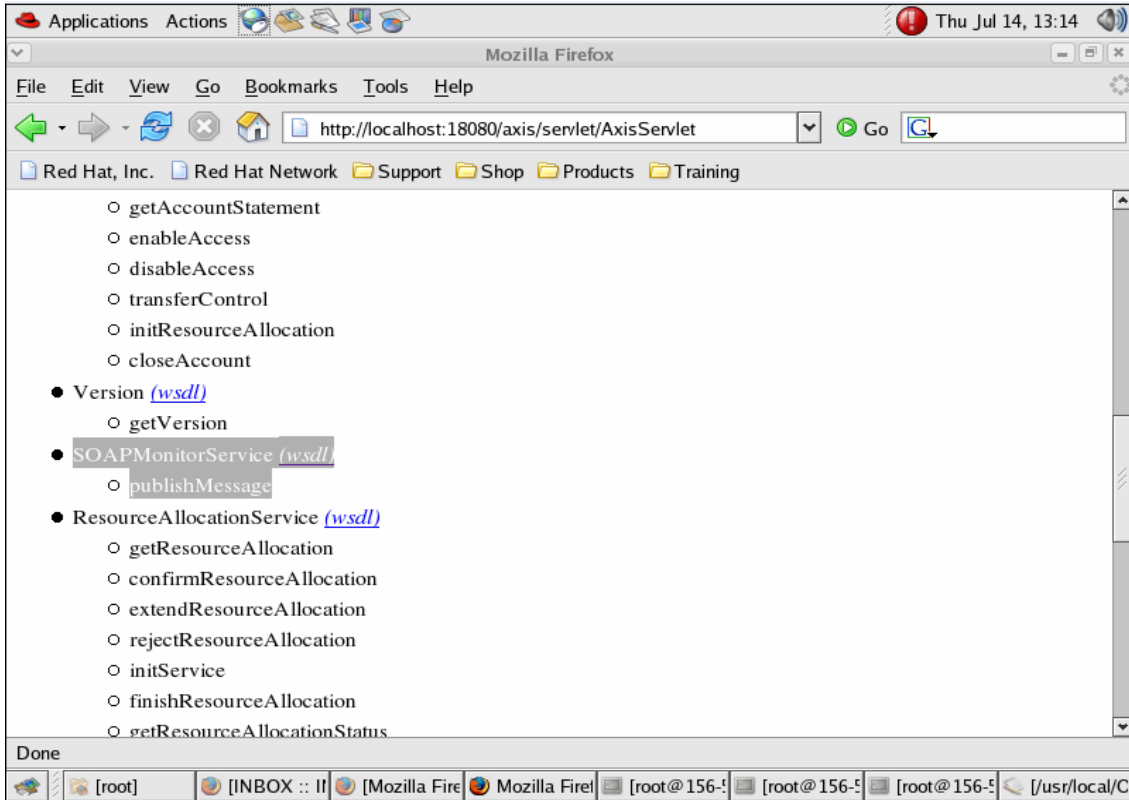


```
root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
File Edit View Terminal Tabs Help
[root@156-56-104-135 server]# ant deploy-soapmonitor -Dwse.soapmonitor.axisadmin=
services/AdminService -Dwse.soapmonitor.wsddfile=config/wse/deploy-monitor.wsdd
Buildfile: build.xml

deploy-soapmonitor:
  [echo] Deploying the soap monitor service ...
  [java] log4j:WARN No appenders could be found for logger (org.apache.axis.
  [java] log4j:WARN Please initialize the log4j system properly.
  [java] Processing file config/wse/deploy-monitor.wsdd
  [java] <Admin>Done processing</Admin>

BUILD SUCCESSFUL
Total time: 3 seconds
[root@156-56-104-135 server]#
```

A simple way to verify the deployment of the SOAP Monitor Web Service is by pointing the web browser to the following URL: <http://<machine-name>:18080/axis/servlet/AxisServlet> . A sample execution of the aforementioned step is depicted in the figure below.



**Step 6:** To deploy the WseSink Web Service the user needs to execute the **deploy-sink** ANT target command within the WSE Server Directory. The command and the arguments that this command takes is depicted in the snippet below.

```

/usr/local/OMII/webservices/wse/dist/server >
ant deploy-sink -Dwse.sink.axisadmin=-lhttp://<machine_name> :18080/axis
/services/ AdminService - Dwse.sink.wsddfile=config/wse/eventingSink.wsdd
    
```

The result of a sample execution of this command is depicted below.

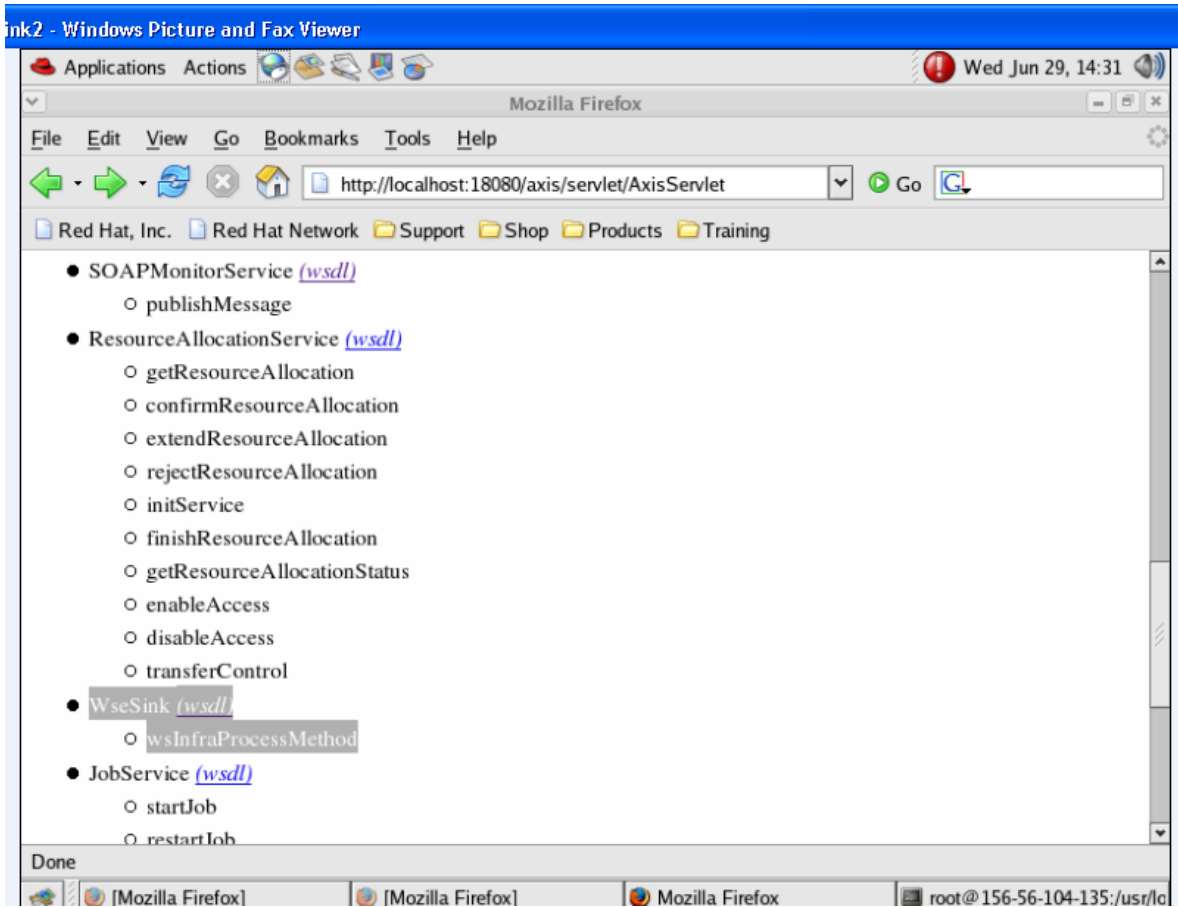
```
Total time: 8 seconds
[root@156-56-104-135 server]# ant deploy-sink -Dwse.sink.axisadmin=-lhttp://localhost:18080/axis/
services/AdminService -Dwse.sink.wsddfile=config/wse/eventingSink.wsdd
Buildfile: build.xml

deploy-sink:
    [echo] Deploying the WSE Sink Web Service on Axis...
    [java] log4j:WARN No appenders could be found for logger (org.apache.axis.i18n.ProjectResour
ceBundle).
    [java] log4j:WARN Please initialize the log4j system properly.
    [java] Processing file config/wse/eventingSink.wsdd
    [java] <Admin>Done processing</Admin>

BUILD SUCCESSFUL
Total time: 6 seconds
[root@156-56-104-135 server]#
```



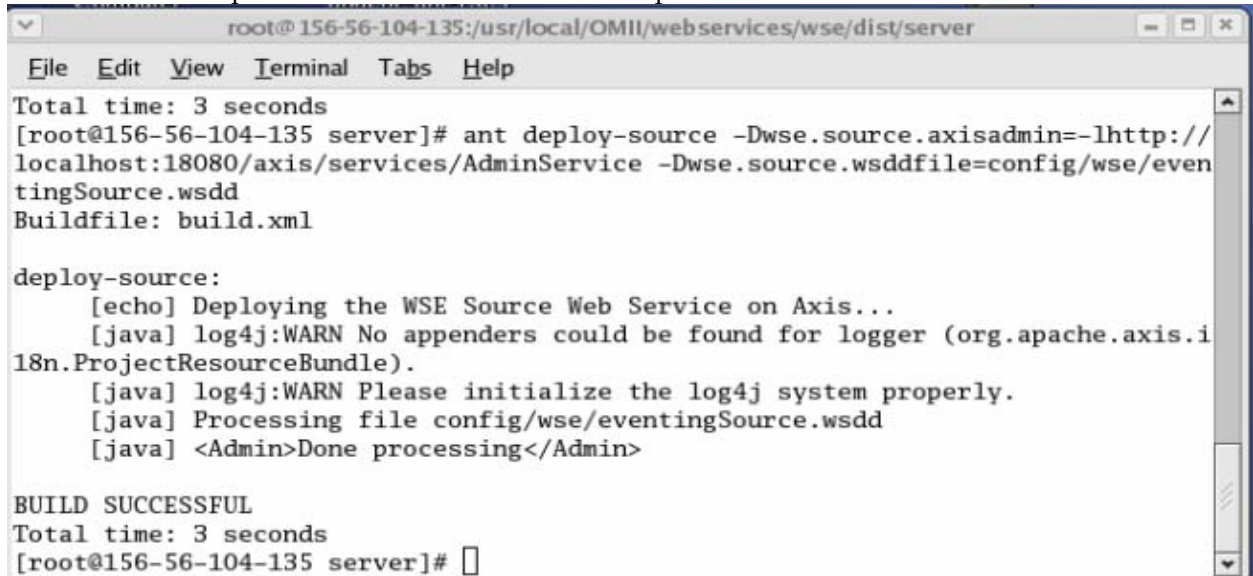
A simple way to verify the deployment of the WseSink Web Service is by pointing the web browser to the following URL: <http://<machine-name>:18080/axis/servlet/AxisServlet>. A sample execution of the aforementioned step is depicted in the figure below.



**Step 7:** To deploy the WseSource Web Service the user needs to execute the **deploy-source** ANT target command within the WSE Server Directory. The command and the arguments that this command takes is depicted in the snippet below.

```
/usr/local/OMII/webservices/wse/dist/server >
ant deploy-source -Dwse.source.axisadmin=-lhttp://<machine_name>:18080/axis
/services/AdminService -Dwse.source.wsddfile=config/wse/eventingSource.wsdd
```

The result of a sample execution of this command is depicted below.

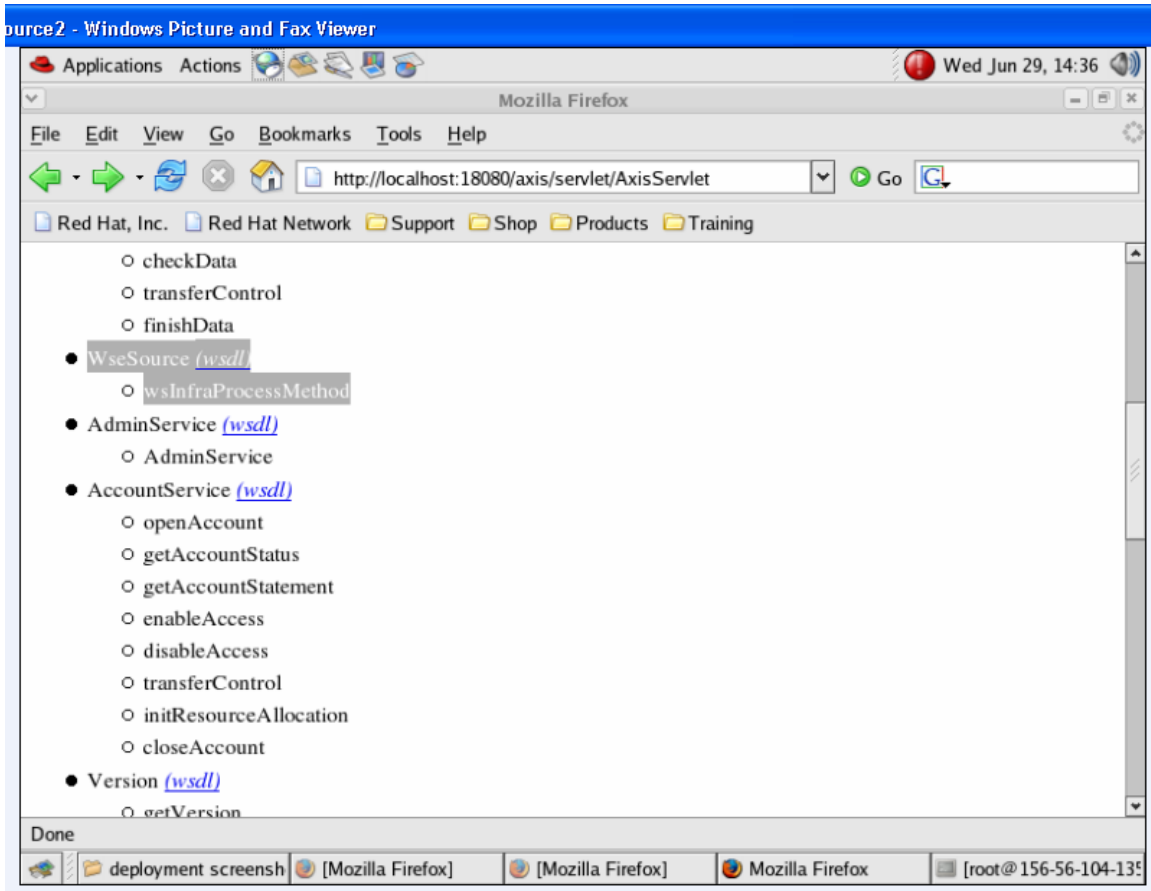


```
root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
File Edit View Terminal Tabs Help
Total time: 3 seconds
[root@156-56-104-135 server]# ant deploy-source -Dwse.source.axisadmin=-lhttp://
localhost:18080/axis/services/AdminService -Dwse.source.wsddfile=config/wse/even
tingSource.wsdd
Buildfile: build.xml

deploy-source:
  [echo] Deploying the WSE Source Web Service on Axis...
  [java] log4j:WARN No appenders could be found for logger (org.apache.axis.i
18n.ProjectResourceBundle).
  [java] log4j:WARN Please initialize the log4j system properly.
  [java] Processing file config/wse/eventingSource.wsdd
  [java] <Admin>Done processing</Admin>

BUILD SUCCESSFUL
Total time: 3 seconds
[root@156-56-104-135 server]#
```

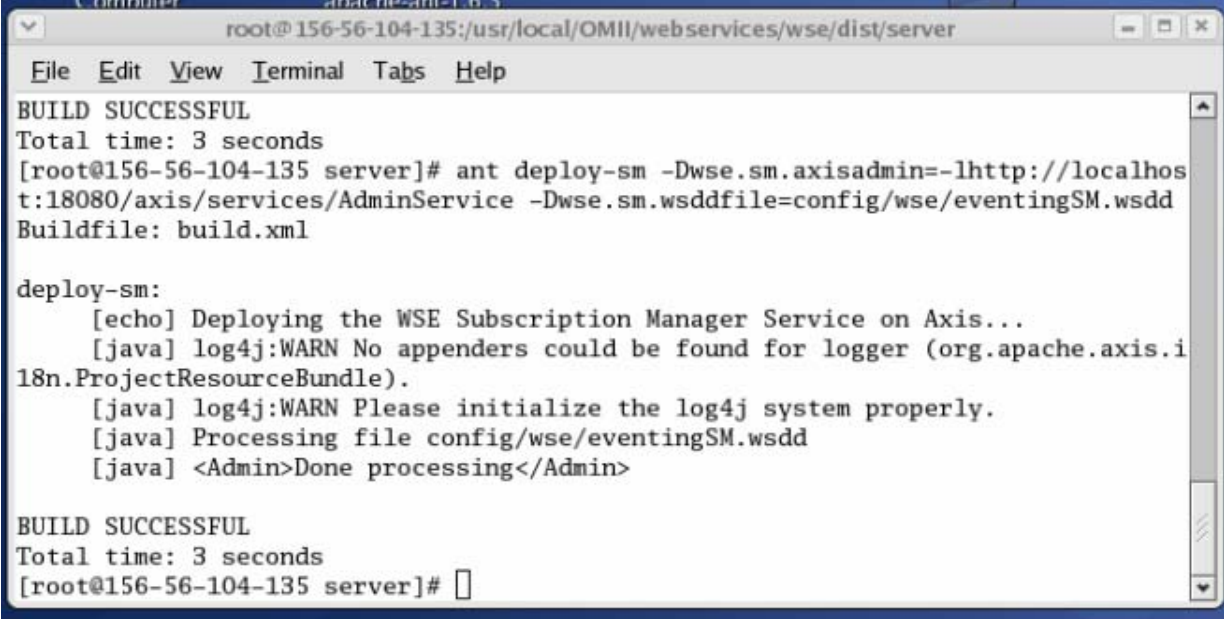
A simple way to verify the deployment of the WseSource Web Service is by pointing the web browser to the following URL: <http://<machine-name>:18080/axis/servlet/AxisServlet>. A sample execution of the aforementioned step is depicted in the figure below. For the user's convenience we have highlighted the WseSource service in this figure.



**Step 8:** To deploy the Subscription Manager WseSM Web Service the user needs to execute the **deploy-sm** ANT target command within the WSE Server Directory. The command and the arguments that this command takes is depicted in the snippet below.

```
/usr/local/OMII/webservices/wse/dist/server >
ant    deploy-sm    -Dwse.sm.axisadmin=-lhttp://<machine_name>:18080/axis
/services/AdminService -Dwse.sm.wsddfile=config/wse/eventingSM.wsdd
```

The result of a sample execution of this command is depicted below.

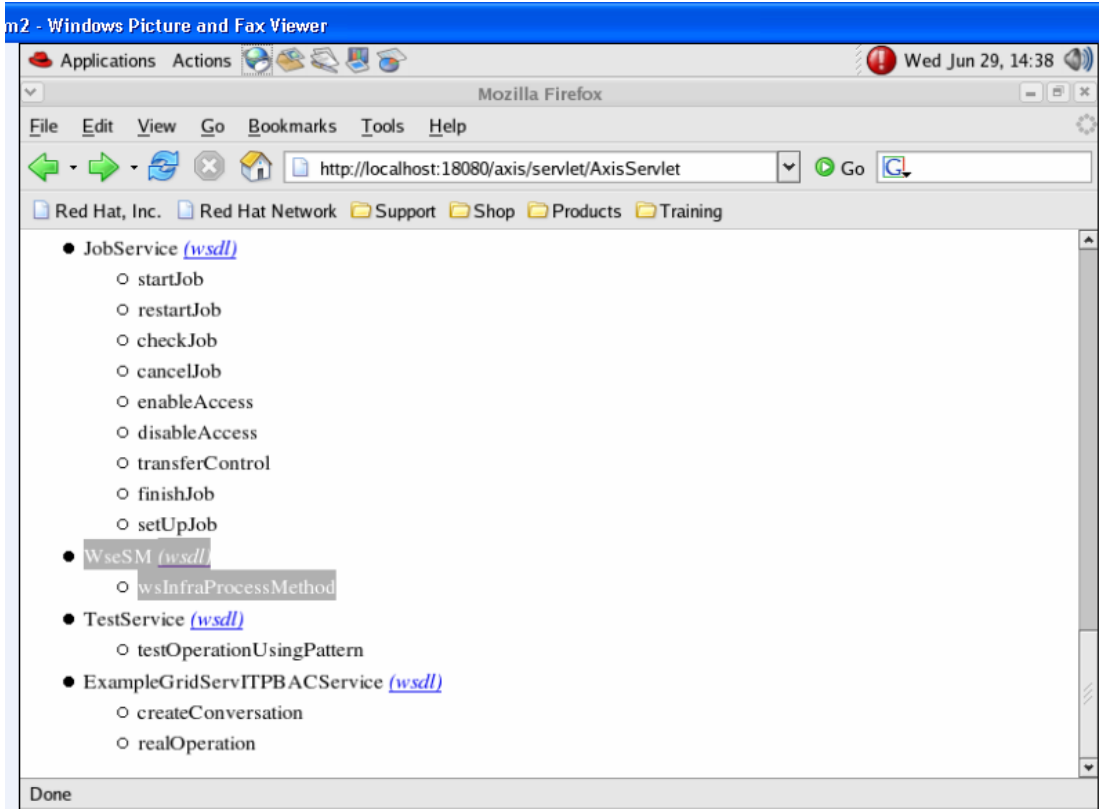


```
root@156-56-104-135:/usr/local/OMII/webservices/wse/dist/server
File Edit View Terminal Tabs Help
BUILD SUCCESSFUL
Total time: 3 seconds
[root@156-56-104-135 server]# ant deploy-sm -Dwse.sm.axisadmin=-lhttp://localhost:18080/axis/services/AdminService -Dwse.sm.wsddfile=config/wse/eventingSM.wsdd
Buildfile: build.xml

deploy-sm:
  [echo] Deploying the WSE Subscription Manager Service on Axis...
  [java] log4j:WARN No appenders could be found for logger (org.apache.axis.i
18n.ProjectResourceBundle).
  [java] log4j:WARN Please initialize the log4j system properly.
  [java] Processing file config/wse/eventingSM.wsdd
  [java] <Admin>Done processing</Admin>

BUILD SUCCESSFUL
Total time: 3 seconds
[root@156-56-104-135 server]#
```

A simple way to verify the deployment of the WseSM Web Service is by pointing the web browser to the following URL: <http://<machine-name>:18080/axis/servlet/AxisServlet>. A sample execution of the aforementioned step is depicted in the figure below. For the user's convenience we have highlighted the WseSM service in this figure.



Users can also un-deploy ALL the Web Services (running within the container) mentioned in this document. We have included ANT target commands which perform this function for the user. Please note that the Tomcat within the OMII container should be up and running for these commands to take effect.

The snippet corresponding to the commands that un-deploy targeted services have been depicted here for the user's perusal.

**WseSink:**

```
/usr/local/OMII/webservices/wse/dist/server>
ant undeploy-sink - Dwse.sink.axisadmin=- lhttp://<machine_name>:
18080/axis/services/AdminService -
Dwse.sink.wsddfile=config/wse/undeploySink.wsdd
```

**WseSource:**

```
/usr/local/OMII/webservices/wse/dist/server>ant undeploy-source -
Dwse.source.axisadmin=-lhttp
://<machine_name>: 18080/axis/services/AdminService -
Dwse.source.wsddfile=config/wse/undeploySource.wsdd
```

**WseSM:**

```
/usr/local/OMII/webservices/wse/dist/server>ant undeploy-sm -Dwse.sm.axisadmin=-
lhttp://<machine_name>: 18080/axis/services/AdminService -Dwse.
sm.wsddfile=config/wse/undeploySM.wsdd
```

**SoapMonitor:**

```
/usr/local/OMII/webservices/wse/dist/server> ant undeploy-soapmonitor -
Dwse.soapmonitor.axisadmin=-
lhttp://<machine_name>: 18080/axis/services/AdminService -
Dwse.soapmonitor.wsddfile=config/wse/undeploySoapMonitor.wsdd
```

A command which un-deploys all the Web Services and deletes all files related to these services is also available. For the correct execution of the command a user needs to ensure that the Tomcat process is no longer running. The snippet outlining this command is depicted below.

```
/usr/local/OMII/webservices/wse/dist/server>ant undeploywse-omiitomcat
```