

OPM - Bug Fix Assembly - Part 2 Deployment Guide

Revision History

Author	Revision Number	Date
yedtoss	1	02/17/2014

Deployment Instructions	3
1. Organization of Submission	3
2. Application Setup	3
3. Ant .Properties File	4
4. Build Scripts Setup	4
5. Database Setup	5
6. Deployment Instructions	6
7. Starting	6
8. Verification	7
8.1. Login	7
8.2. General Guide for testing	8
8.3. Unit Tests	8
9. Resource Contact List	8

Deployment Instructions

1. Organization of Submission

Folder	Description
conf	Contains application configuration files
lib	Contains dependencies
src	Contains all source files
docs	Contains documentation (this file)
test_files	Contains the test files
log	Contains the test log files
conf/jpa	Contains the JPA mapping and persistence configuration
conf/ejb	Contains the EJB configuration
conf/rules	Contains the business rule definitions
conf/web	Contains the web application configuration files (including spring MVC bean definitions)
conf/ear	Contains application wide configuration (including the datasource definition)
conf/jboss	Contains application changes to the JBoss configuration
src/web	Contains the web application sources
src/java/core	Contains java sources shared across modules
src/java/ejb	Contains java sources for the EJB module
src/java/web	Contains java sources for the front end web application
src/java/tests	Contains java test sources
build-dependencies.xml	Declaration of build dependencies
build.properties	Externalized build configuration
build.xml	Ant build script

2. Application Setup

The application is tested with the following stack

- Java 6 (<http://www.oracle.com/technetwork/java/javase/downloads/index.html>)
- JBoss EAP 6.1 (<http://www.jboss.org/jbossas/downloads/>)
- Ant 1.8.1 (<http://ant.apache.org/>)
- PostgreSQL 9.2.4 (<http://www.postgresql.org/>)

The following 3rd party libraries are packaged with the submission

- Drools 5.5
- Jackson 2.3.1
- Spring MVC 3.2.3
- Spring Security 3.1.4
- Hibernate 4.2.3
- Joda-Time 2.3
- JUnit 4.10

3. Ant .Properties File

Property Name	File property is stored	Example Setting
jboss.home	build.properties	C:/Downloads/jboss-eap-6.1
loggerName	build.properties	gov.opm.scrd
supervisorRoleName	build.properties	supervisor
adminRoleName	build.properties	Admin
defaultPreferenceId	build.properties	1
defaultReportGenerationDataId	build.properties	1
log_dir	build.properties	C:/Downloads/opm_log
pendingPaymentStatusIds	build.properties	2,4,6,8,10,12,14,16,18,20,22,24,26,28
approvedPaymentStatusId	build.properties	29
disapprovedPaymentStatusId	build.properties	30
postedPendingApprovalStatus.id	build.properties	1
postedPendingApprovalStatus. name	build.properties	Posted - Pending Approval
redepositPeriodType.id	build.properties	1
redepositPeriodType. name	build.properties	Deposit (D)
dedepositPeriodType.id	build.properties	2
dedepositPeriodType. name	build.properties	Redeposit (R)
csrsRetirementType.id	build.properties	2
csrsRetirementType. name	build.properties	CSRS
successCalculationStatus.id	build.properties	1
successCalculationStatus. name	build.properties	Success
db.driver	build.properties	org.postgresql.Driver
db.url	build.properties	jdbc:postgresql://localhost:5432/scrdd
db.user	build.properties	postgres
db.pass	build.properties	123456

4. Build Scripts Setup

build.xml – compiles, packages and deploys the application

Main targets:

clean	removes all generated files
compile-core	compiles shared java sources
compile_tests	compiles java test sources
test	run the test cases
compile-ejb	compiles EJB java sources
compile-war	compiles web application java sources
configure-ear	performs replacement of values for EAR configuration files
configure-ejb	performs replacement of values for EJB configuration files
configure-war	performs replacement of values for web app configuration files
db-clear	clears the contents of the tables

db-create	creates the tables and sequences
db-drop	drops the tables and sequences
db-test-data	recreates the test data
deploy	deploys the EAR artifact
deploy-jdbc-driver	copies the jdbc driver module into jboss
dist-core	creates the core distribution
dist-ear	creates the EAR artifact
dist-ejb	creates the EJB distribution
dist-war	builds the war file

Default target: deploy

5. Database Setup

Note: for some steps, you can use the ant script to execute them, but make sure you configure the build.properties first.

- Setup PostgreSQL 9.2.4
- Create the database “**scrd**” using your client. (You may change the DB name, but update your JDBC URL accordingly)

```
postgres=# CREATE DATABASE scrd;  
CREATE DATABASE
```

- Execute **script src/sql/create-schema.sql** and **src/sql/triggers.sql** to create the required objects (“**ant db-create**” will perform the same step)
- Execute “**ant db-test-data**” to insert test data

Setup Database Driver module on JBoss

- Copy conf/jboss/modules into the modules folder of your EAP installation - `${jboss.home}/modules/system/layers/base` (“**ant deploy-jdbc-driver**” will perform the same step)
- Add the following entry to `${jboss.home}/standalone/configuration/standalone.xml` just after the h2 driver declaration on the datasources/drivers subsystem

```
<driver name="postgresql-jdbc4" module="org.postgresql">  
  <driver-class>org.postgresql.Driver</driver-class>  
</driver>
```

```

<subsystem xmlns="urn:jboss:domain:datasources:1.1">
  <datasources>
    <datasource jndi-name="java:jboss/datasources/ExampleDS" pool-name="ExampleDS" enabled="true">
      <connection-url>jdbc:h2:mem:test;DB_CLOSE_DELAY=-1</connection-url>
      <driver>h2</driver>
      <security>
        <user-name>sa</user-name>
        <password>sa</password>
      </security>
    </datasource>
    <drivers>
      <driver name="h2" module="com.h2database.h2">
        <xa-datasource-class>org.h2.jdbcx.JdbcDataSource</xa-datasource-class>
      </driver>
      <driver name="postgresql-jdbc4" module="org.postgresql">
        <driver-class>org.postgresql.Driver</driver-class>
      </driver>
    </drivers>
  </datasources>
</subsystem>

```



Note: This step can also be done via the jboss command line interface with the following command:

```
/subsystem=datasources/jdbc-driver=postgresql-jdbc4:add(driver-
name=postgresql-jdbc4, driver-class-name=org.postgresql.Driver,
driver-module-name=org.postgresql)
```

```

D:\scred\servers\jboss-eap-6.1\bin>jboss-cli.bat --connect
[standalone@localhost:9999 /] /subsystem=datasources/jdbc-driver=postgresql-jdbc
4:add(driver-name=postgresql-jdbc4, driver-class-name=org.postgresql.Driver, dri
ver-module-name=org.postgresql)
{"outcome" => "success"}
[standalone@localhost:9999 /]

```

Cleanup scripts: (execute only when done with testing)

- When needed, execute `src/sql/clear-data.sql` to clear the database tables (“[ant db-clear](#)” will perform the same step)
- When needed, execute script `src/sql/drop-schema.sql` to delete all application objects (“[ant db-drop](#)” will perform the same step)

6. Deployment Instructions

- Modify `build.properties` to reflect the deployment environment settings. (`log_dir` must be an existing directory)
- Setup the database as described in the previous section
- Execute “`ant deploy`”

7. Starting

Start JBoss. The application is automatically started when the JBoss server is started.

You can start JBoss by going to directory `jboss-eap-6.1/bin`. Then execute [standalone.bat](#) or [standalone.sh](#) depending on your OS.

Please note that you may receive a warning (JBAS011054) regarding EAP 6.1 and Spring 3.2.3, you may safely ignore this warning per

<https://community.jboss.org/thread/231638?start=0&tstart=0>

8. Verification

Follow deployment steps and start the application. Note that for testing it is recommended to run following command when deploying

```
ant db-drop
ant db-create
ant db-test-data
```

When started, open the default URL in your browser <http://localhost:8080/scrd/>, this should show you the pages.

Note: you may want to turn on DEBUG logging on the server, just add following line to the server configuration (jboss-eap-6.1/standalone/configuration/standalone.xml) under the logging subsystem – make the changes the before starting the server:

```
<logger category="gov.opm.scrd">
  <level name="DEBUG"/>
</logger>
```

Make sure you change the threshold of the appender to DEBUG too.



```
<subsystem xmlns="urn:jboss:domain:logging:1.2">
  <console-handler name="CONSOLE">
    <level name="DEBUG"/>
    <formatter>
      <pattern-formatter pattern="%K{level}%d{HH:mm:ss,SSS} %-5p [%c] (%t) %s%E%n"/>
    </formatter>
  </console-handler>
  <periodic-rotating-file-handler name="FILE" autoflush="true">
    <formatter>
      <pattern-formatter pattern="%d{HH:mm:ss,SSS} %-5p [%c] (%t) %s%E%n"/>
    </formatter>
    <file relative-to="jboss.server.log.dir" path="server.log"/>
    <suffix value=".yyyy-MM-dd"/>
    <append value="true"/>
  </periodic-rotating-file-handler>
  <logger category="com.arjuna">
    <level name="WARN"/>
  </logger>
  <logger category="gov.opm.scrd">
    <level name="DEBUG"/>
  </logger>
  <logger category="org.apache.catalina.util.Modeler">
    <level name="WARN"/>
  </logger>
</subsystem>
```

8.1. Login

- 1) Open <http://localhost:8080/scrd/>, use "user1" and "123456" to login:

Login with Username and Password

User:

Password:

☐ Remember me on this computer.

8.2. General Guide for testing

Download the bug fix list here

<http://apps.topcoder.com/wiki/download/attachments/93159486/OPM+SCRD+Issues+List+02+10+2014.xls>

Repeat all the steps in each Minor and Trivial Bugs (column F) . Verify that the bug is resolved.

8.3. Unit Tests

Run [ant test](#). Note that the ant tests took up to 1.7 GB of RAM in my system. Don't limit ant memory or increase it accordingly. Also make sure Java process can use up to 1.7 GB of memory.

For example you can use ANT_OPTS and JAVA_OPTS environment variables with the value “-Xmx2048m -Xms1024m”. You might need to use a 64 bits Java.

Make sure you are connected to Internet before running the command otherwise you will get xml drool:kagent error for example.

You should get

```
test:
BUILD SUCCESSFUL
Total time: 4 minutes 51 seconds
```

9. Resource Contact List

Name	Resource Email
yedtoss	