

FGDP --- Guide for Installation

Introduction:

Jboss is the default J2EE server which I developed and tested with. For other Servers, please read the documents, and modify the ejb and web configure files to match the requirements.

FGDP may run in the platforms of Window-XP, Linux, and Unix
There is no relational database in FGDP. All data are stored in file system.

Install JDK6

Download JDK6 from <http://java.sun.com>, and install it into your system. Set \$JAVA_HOME, \$PATH, \$CLASSPATH environments

Install and Configure Jboss:

JBOSS is not a must. You can install FGDP in other enterprise application server. In that case, please modify the configuration files. This document only discuss how to run FGDP under Jboss.

Download Jboss from <http://www.jboss.org> site. I did test installation of FGDP at Jboss 3.2.5 server on both XP and Linux machine. I did not try others. If you success on other J2EE servers, please let me know.

Unzip the compressed file to the installation location. Set this location as \$JBOSS_HOME. Go to \$JBOSS_HOME/bin directory. Start server by running %>run.sh
The web server bundled with Jboss is Tomcat. The default http port is 8080. If Jboss is up, start you web browser to visit <http://localhost:8080/>. You will see the starting page of Jboss. Now we can move to next step.

In this document, I assume the system is a Linux box.

(A) Configure JBOSS:

(B) Configure JMS:

Edit the file:

```
$JBOSS_HOME/server/default/deploy/jms/jbossmq-destinations-service.xml
add the following between <server></server>
<mbean code="org.jboss.mq.server.jmx.Queue"
name="jboss.mq.destination:service=Queue,name=fgdpQueue">
  <depends optional-attribute-name="DestinationManager">
    jboss.mq:service=DestinationManager
  </depends>
  <depends optional-attribute-name="SecurityManager">
    jboss.mq:service=SecurityManager
  </depends>
  <attribute name="SecurityConf">
    <security>
      <role name="guest" read="true" write="true"/>
      <role name="publisher" read="true" write="true" create="false"/>
      <role name="noacc" read="false" write="false" create="false"/>
    </security>
  </attribute>
</mbean>
```

```
</security>
</attribute>
</mbean>
```

Configure FGDP:

(A) Create a file structure for FGDP. Reserve enough disk (>10G) for data storage. Call this location as \$FGDP_HOME.

```
FGDP
|---conf
|   |---fgdp.properties
|   |---md5.passwd
|   |---log4j.properties
|---log
|   |---fgdp.txt
|---data
|   |---system
|   |---users
```

Set the attributes of files as (0600) and directories as (0755) for the jboss server.

(B) install 3rd party libraries.

```
--- AffxFusion.jar [http://www.affymetrix.com]
--- cos.jar [http://www.servlets.com ]
--- jdom.jar [http://www.jdom.org/]
--- log4j.jar [http://www.apache.org]
```

Download all those package. Extract those jar files into \$JBASS_HOME/server/default/lib. Restart server.

(C) setup ASAP

ASAP is a OpenSource system developed by Bioinformatics Facility of Fox Chase Cancer Center to investigate new functional annotations on unknown sequences. FGDP wraps ASAP as a filter and annotation module. To use the this function, you must install ASAP system at this moment.

ASAP and its documents is at:

http://bioinformatics.fccc.edu/software/software_open.shtml

(D) Edit file of fgdp.properties

A sample file:

```
jndi.port=1099
```

```
fgdp.location=/usr/local/apps/fgdp
data.location=/usr/local/apps/fgdp/data
log.location=/usr/local/apps/fgdp/log
conf.location=/usr/local/apps/fgdp/conf
deploy.location=/usr/local/jobss/server/default/deploy/fgdp.ear
nmf.location=/usr/local/apps/fgdp/bin/NMF.exe
```

```
# maximum size for the file can be uploaded at one time
upload.maxsize=52428800
```

```
# if mail.server is commented,
```

```

# no email sent to user once a fgdp job completed
# to active email feature, uncomment mail.server line
#mail.server=mail.services.fccc.edu

asap.queryURL=http://crucibulum.fccc.edu/cgi-bin/ASAP2/fgdp_query.pl
asap.statusURL=http://crucibulum.fccc.edu/cgi-bin/ASAP2/fgdp_status.pl
asap.username=yue
asap.password=yue123
asap.planNumber=27

```

(E) Setup Login

FGDP's authentication use either Ldap or MD5 password file under JAAS framework.

Follow those steps:

(a). edit jboss-web.xml in fgdp package, add those lines to the file:

```

<jboss-web>
  <security-domain>java:/jaas/FGDP</security-domain>
</jboss-web>

```

(b). create a file: \$JBOSS_HOME/server/default/conf/fgdpjaas.config

example file:

```

/**
  FGDPLogin {
    edu.fccc.auth.LdapLogin required debug=true host="ldap://ldapmaster.fccc.edu:389"
    usernamefield="uid" basedn="ou=People,o=Fox Chase Cancer Center,c=US"
    firstnamefield="givenname" lastnamefield="sn" emailfield="mail";
  };
  **/
  FGDPLogin {
    edu.fccc.auth.MD5FileLogin required debug=true
    pwdFile="/your_path/md5.passwd";
  };

```

If you use LDAP, uncomment LDAP block, and comment MD5 block.

If use MD5 password file, the md5.passwd has such format:

```

#username:encrypted_password:firstname:lastname:email
abc:900150983cd24fb0d6963f7d28e17f72:Yue:Zhang:Yue_Zhang@fccc.edu

```

Using any MD5 related program to generate the password encrypted string. Otherwise, FGDP provides a class called edu.fccc.fgdp.auth.util.UserUpdate

To use it, simply call

```

(new UserUpdate(location_of_your_md5.passwd)).addUser(username, rawPassword,
firstname, lastname, email)

```

If use LDAP, uncomment it, and replace the parameters of your case.

(c). edit \$JBOSS_HOME/server/default/conf/login-config.xml, by adding:

<!--

```

<application-policy name = "FGDPLogin">
  <authentication>
    <login-module code="edu.fccc.auth.LdapLogin" flag="required">
      <module-option name="host">
        ldap://ldapmaster.fccc.edu:389

```

```

        </module-option>
        <module-option name="usernamefield">
            uid
        </module-option>
        <module-option name="basedn">
            ou=People,o=Fox Chase Cancer Center,c=US
        </module-option>
        <module-option name="firstnamefield">
            givenname
        </module-option>
        <module-option name="lastnamefield">
            sn
        </module-option>
        <module-option name="emailfield">
            mail
        </module-option>
    </login-module>
</authentication>
</application-policy>
-->

<application-policy name="FGDPLogin">
    <authentication>
        <login-module code="edu.fccc.auth.MD5FileLogin" flag="required">
            <module-option name="pwdFile">
                /your_path/md5.passwd
            </module-option>
        </login-module>
    </authentication>
</application-policy>

```

(F) Deploy Application:

- (a). Edit the file:
 \$JBOSS_HOME/server/default/deploy/jbossweb-tomcat\$.sar/web.xml
 before the line of </web-app> , add following:

```

<context-param>
    <param-name>fgdp.conf</param-name>
    <param-value>/your_Path/fgdp.properties</param-value>
</context-param>

```

- (b). copy the fgdp.ear file into \$JBOSS_HOME/server/default/deploy

(G). Test it:

open the FGDP start page:
 http://hostname:8080/fgdp

If you see the FGDP login page, so far so good.

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 Any technique questions, please contact with me.

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