



Business Intelligence at REST Elixir Repertoire

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Installation Guide on Unix Platform

Elixir Repertoire Server 7.x.x

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1 Pre-requisites

1.1 Java (JVM) information

It is strongly recommended that Java Runtime Environment (JRE) or Java Development Kit (JDK) versions 1.5.0_12 and above by Sun Microsystems be used for Repertoire Versions 7.x.x as earlier versions of open source Java that is shipped together with the OS package may not be compatible. Download or copy over the JRE/JDK file to an appropriate directory and expand through the issuing of the following command as an example:

```
./jdk1.6.0_03.bin
```

If the file is an rpm file, issue the following command as an example:

```
./jdk1.6.0_03.bin.rpm
```

The installation will begin with the User License Agreement being displayed on screen. Scroll down to the end and input 'yes' or 'y' to proceed with the installation of the JDK. Once installed, ensure that the Java path in the Repertoire Server startServer.sh file is correctly mapped to the appropriate Java directory (refer to section 2.6). It is advisable not to overwrite or delete the existing Java installation as other applications may be running on it.

2 Installation

2.1 Adding an Elixir Repertoire Server Group

In the Unix environment, as root, create a group e.g. "elixiruser" by inputting the following at command line:

```
groupadd elixiruser
```

2.2 Adding an Elixir Repertoire Server User

As root, create a user "elixir" to the group e.g. "elixiruser" at command line:

```
useradd elixir -g elixiruser
```

2.3 Installation of the Repertoire Server

If logged on as “root”, log off and log on as “elixir” user to copy or download the Repertoire-Server-X.X.X.zip file to the installation directory (e.g /opt/elixir).

Proceed to unzip the Repertoire Server zip file:

```
unzip Repertoire-Server-X.X.X.zip
```

If the unzip application is not included with your default OS installation, use the Java jar command as an alternative:

```
jar -xf Repertoire-Server-X.X.X.zip
```

2.4 Installation of Repertoire Server License

Place the ERS license in the /ext folder of the /Repertoire-Server-X.X.X installation.

2.5 Deployment of JDBC drivers

Place all JDBC drivers (jar files) in the /ext folder of the / Repertoire-Server-X.X.X installation. For example, if the Repertoire Server requires an Oracle 11g driver, download or obtain the appropriate driver from the vendor and copy the jar file to the /ext folder:

```
cp ojdbc6.jar /Repertoire-Server-X.X.X/ext
```

2.6 /bin – StartServer.sh

Modify the startServer.sh file to directly include the JRE/JDK bin path. For example, if using the “vi” editor (see 3.4 for more details), execute the "vi" command:

```
vi startServer.sh
```

Then press "i" to edit the shell script to look like the following example:

```
/usr/java/jdk1.6.0_03/bin/java -mx512M -jar \ RepertoireServer-Launcher.jar
```

2.7 Executing startServer.sh

Log on as “elixir” and not as "root" when executing the startServer shell script for the first time. At the /bin directory, execute the startServer shell script:

```
nohup ./Repertoire-Server-X.X.X/RepertoireServer/bin/startServer.sh &
```

Note that this will allow Repertoire Server to be able to continue to run after user has logged out of the terminal.

2.8 Verifying successful startup of the Repertoire Server

To check that the Repertoire Server has started successfully, the following command can be issued.

A PID consisting of numbers will be assigned to this process

```
ps -ef | grep “Repertoire”
```

2.9 Stopping the Repertoire Server

The Repertoire Server can be stopped using the admin username and password by executing the stopServer shell script found in the /bin directory of the Repertoire Server installation:

```
./stopServer.sh --user username --pass password
```

For more help,

```
./stopServer.sh --help
```

3 Others

3.1 Starting and Stopping the Repertoire Server Automatically

The process of starting and stopping the Repertoire Server can be automated through the following:

1. Log in as “root” to the Unix OS.
2. Access the “/etc/init.d” directory:

```
cd /etc/init.d
```

3. Create a script called “repertoire”:

```
vi repertoire
```

4. Declare the following variables in the script, using the example below:

```
user=elixir
repertoire=/opt/elixir/Repertoire-Server-7.3.0/RepertoireServer
startup=$repertoire/bin/startServer.sh
shutdown=$repertoire/bin/stopServer.sh
export JAVA_HOME=/opt/java/jdk1.6.0_06
```

Where:

- user: the account used to log on to the Repertoire Server
- repertoire: the Repertoire Server installation path
- startup: the location of the “startServer.sh” shell script
- shutdown: the location of the “stopServer.sh” shell script
- export JAVA_HOME: the location of Java used by the Repertoire Server

5. Once declared, input the rest of the script, ensuring that the “--user” and “--pass” values reflect the actual username and password used to log on to the server for the “\$shutdown” command:

```
start(){
echo -n $"Starting Repertoire Server ... "
cd $repertoire/bin
su - $user -c "cd $repertoire/bin; $startup &"
RETVAL=$?
echo
```

```

}

stop(){
echo -n $"Stopping Repertoire Server ... "
cd $repertoire/bin
$shutdown --user admin --pass sa
sleep 15
RETVAL=$?
echo
}

restart(){
stop
start
}

status(){
numproc=`ps -ef | grep Repertoire | grep -v "grep Repertoire" | wc -l`
if [ $numproc -gt 0 ]; then
echo "Repertoire Server is running ..."
else
echo "Repertoire Server has stopped ..."
fi
}

# See how we were called.
case "$1" in
start)
start
;;
stop)
stop
;;
status)
status repertoire
;;
restart)
restart
;;
*)
echo $"Usage: $0 {start|stop|status|restart}"
exit 1
esac

exit 0
/

```

6. When done, save the script and return to the command line (/etc/init.d). Make the “repertoire” script executable by inputting the following:

```
chmod 755 repertoire
```

7. Add the “repertoire” script as a service to be managed by the system by keying in the following at the command line:

```
chkconfig -add repertoire
```

8. Activate the service at the command line:

```
chkconfig repertoire on
```

9. Run a check on the “repertoire” service by keying in the following at the command line:

```
chkconfig --list
```

The system will return a list of services. Locate the “repertoire” service. Its status should look like the following example:

```
repertoire 0:off 1:off 2:off 3:on 4:off 5:on 6:off
```

Restart the server for the service to come into effect once the abovementioned steps have been carried out without any problems.

3.2 Forced Shutdown of the Repertoire Server

Only when absolutely necessary (e.g. the stopServer.sh fails or is not responding), execute the “kill” command followed by the process id at the terminal level to force a shutdown of the Repertoire Server:

```
kill [process ID]
```

The process ID of the Repertoire Server can be obtained by running the “ps -ef” command.

3.3 Running Elixir Repertoire Server in secure mode

To run the Repertoire Server in secure (https) mode, create an “ssl” subdirectory in the /config directory. Run the following command within /ssl :


```
keytool -keystore keystore -alias jetty -genkey -keyalg RSA
```

Enter a password when prompted and answer the questions accordingly. Press enter to leave the key password the same as the password. Edit ERS2.xml:

```
vi ERS2.xml
```

Then press "i" to disable plain mode and edit the following:

```
<!-- use these for secure mode (https) -->  
<ers:property name="Secure">true</ers:property>  
<ers:property name="Port">8443</ers:property>  
<ers:property name="Password">secret</ers:property>
```

Change the `<ers:property name="Password">` property to the password that was provided to the keystore.

Users who access the Repertoire Server in secure mode are now required to input the respective URL using https protocol:

```
https://hostname:8443/
```

During their first log in attempt, users will be prompted to accept the certificate

3.3.1 Encrypting the password for secure mode access

Password encryption must be carried out using the same version of Java used to run the Repertoire Server. To encrypt the password, go to /bin and run encrypt.sh:

```
./encrypt.sh password
```

The system will return an encrypted string. Copy the encrypted string and edit the password parameter ERS2.xml as shown in the example below:

```
<ers:property name="Secure">true</ers:property>  
<ers:property name="Port">8443</ers:property>  
<ers:property name="Password"  
encrypted="true">/RGVXI0+wFThMDABrZyz+w==</ers:property>
```

3.4 Basic vi commands

Below are some basic vi commands used to edit the configuration files within the terminal environment.

To edit a file:

```
vi [filename]
```

Navigation	Keys	Alt Keys
Left	h	Left arrow
Right	l	Right arrow
Up	k	Up arrow
Down	j	Down arrow

To insert (edit):

```
i
```

Other commands:

Key input	Description
:w [filename]	Saves the current document
:q	Quits the editor
:wq or :x	Save and quit the editor
:e [filename]	Loads the specified file name into the editor

More information on using the vi terminal editor can be found here:

<http://en.wikipedia.org/wiki/Vi>

Summary

Elixir Repertoire offers a wide array of functionalities for maximum business impact, while leveraging Java Standard & Enterprise Edition for cross-platform compatibility. Satisfied customers worldwide rely on Elixir Repertoire to improve operations efficiency as well as increase corporate profitability.

For additional information, please contact the Elixir at sales@elixirtech.com

About Elixir Technology Pte Ltd

Elixir Technology provides Integrated Business Intelligence with Elixir Repertoire™ - an award-winning product for Dashboard, Reporting, Data ETL and Scheduling. Supporting “Web 2.0” with RESTful web services architectural approach on SOA, Elixir Repertoire aims to power the new generation enterprise applications with Business Intelligence that is simplified yet powerful, feature-rich yet affordable.

With over 600 customers across 50 countries, Elixir was named to Deloitte Technology Fast 500 Asia Pacific 2007 for its fast growth, and a Red Herring 100 Asia Finalist for its product innovation.

Elixir Technology is headquartered in Singapore with an R&D arm in UK, represented by a worldwide network of partners.

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