

D4Science Infrastructure - Task #1503

Task # 1502 (Closed): Automate the dataminer installation as a loadbalanced service

Install a dev dataminer VM

Nov 23, 2015 04:10 PM - Andrea Dell'Amico

Status:	Closed	Start date:	Nov 23, 2015
Priority:	Normal	Due date:	
Assignee:	_InfraScience Systems Engineer	% Done:	100%
Category:	System Application	Estimated time:	0.00 hour
Target version:	Computational Infrastructure upgrade to smartgears		
Infrastructure:	Development		
Description			
Create a new VM to install dataminer in the dev infrastructure			
Related issues:			
Related to D4Science Infrastructure - Task #422: Report libraries and configu...			Closed Jul 23, 2015

History

#1 - Nov 23, 2015 04:17 PM - Andrea Dell'Amico

- Target version changed from 197 to Computational Infrastructure upgrade to smartgears

#2 - Nov 26, 2015 11:46 AM - Andrea Dell'Amico

- Status changed from New to In Progress

Hostname and IP address will be: dataminer2-d-d4s.d4science.org 146.48.123.47

#3 - Nov 26, 2015 05:02 PM - Andrea Dell'Amico

I just learned that Ubuntu trusty can install an R version >= 3.0. Reinstalling as Ubuntu 12.04.

#4 - Nov 27, 2015 08:12 PM - Andrea Dell'Amico

- % Done changed from 0 to 60

The R part seems to be complete now. The procedure needed a huge amount of modifications to the procedure described in the wiki: https://wiki.gcube-system.org/index.php/DataMiner_Installation to ensure the right components version.

Next monday I'm going to work to the web application.

(Added @fabio.sinibaldi@isti.cnr.it to the watchers list because it needs to replicate the same R installation).

#5 - Dec 01, 2015 12:17 PM - Andrea Dell'Amico

- Related to Task #422: Report libraries and configuration components for DataMiner added

#6 - Dec 01, 2015 04:52 PM - Andrea Dell'Amico

The dev machine is running, R and the dataminer webapp are installed. @gianpaolo.coro@isti.cnr.it is testing the installation.

#7 - Dec 01, 2015 05:01 PM - Gianpaolo Coro

The pom dependencies of DataMiner are not in the wps application folder. E.g. the following call fails because it cannot find a class in the ecological-engine jar:

```
http://dataminer2-d-d4s.d4science.org/wps/WebProcessingService?request=Execute&service=WPS&Version=1.0.0&gcube-token=4ccc2c35-60c9-4c9b-9800-616538d5d48b&lang=en-US&Identifier=org.gcube.dataanalysis.wps.statisticalmanager.synchserver.mappedclasses.clusterers.DBSCAN&DataInputs=OccurrencePointsClusterLabel=OccClustersTest;epsilon=10;min_points=1;OccurrencePointsTable=http://goo.gl/VDzpch;FeaturesColumnNames=depthmean|sstmnmax|salinitymean;
```

Only the main DataMiner jar is there.

#8 - Dec 01, 2015 11:39 PM - Andrea Dell'Amico

I see. I used maven to install that jar, with the command

```
mvn org.apache.maven.plugins:maven-dependency-plugin:2.8:copy -Dartifact=org.gcube.dataanalysis:dataminer:1.0.0-SNAPSHOT -DoutputDirectory=/home/gcube/tomcat/webapps/wps/WEB-INF/lib
```

There are a lot of jars under the maven repository directory, but it seems stuff related to maven itself:

```
/home/gcube/.m2/repository/org/apache/maven/plugins/maven-dependency-plugin/2.8/maven-dependency-plugin-2.8.jar
/home/gcube/.m2/repository/org/apache/maven/reporting/maven-reporting-api/3.0/maven-reporting-api-3.0.jar
/home/gcube/.m2/repository/org/apache/maven/reporting/maven-reporting-impl/2.0.5/maven-reporting-impl-2.0.5.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-sink-api/1.0/doxia-sink-api-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-core/1.0/doxia-core-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-site-renderer/1.0/doxia-site-renderer-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-decoration-model/1.0/doxia-decoration-model-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-module-apt/1.0/doxia-module-apt-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-module-fml/1.0/doxia-module-fml-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-module-xdoc/1.0/doxia-module-xdoc-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/doxia/doxia-module-xhtml/1.0/doxia-module-xhtml-1.0.jar
/home/gcube/.m2/repository/org/apache/maven/shared/maven-doxia-tools/1.0.2/maven-doxia-tools-1.0.2.jar
/home/gcube/.m2/repository/org/apache/maven/shared/file-management/1.2.1/file-management-1.2.1.jar
/home/gcube/.m2/repository/org/apache/maven/shared/maven-shared-io/1.1/maven-shared-io-1.1.jar
/home/gcube/.m2/repository/org/apache/maven/shared/maven-dependency-analyzer/1.4/maven-dependency-analyzer-1.4.jar
/home/gcube/.m2/repository/org/apache/maven/shared/maven-dependency-tree/2.1/maven-dependency-tree-2.1.jar
/home/gcube/.m2/repository/org/apache/maven/shared/maven-common-artifact-filters/1.4/maven-common-artifact-filters-1.4.jar
/home/gcube/.m2/repository/org/apache/maven/shared/maven-invoker/2.0.11/maven-invoker-2.0.11.jar
/home/gcube/.m2/repository/org/apache/velocity/velocity/1.5/velocity-1.5.jar
/home/gcube/.m2/repository/org/codehaus/plexus/plexus-utils/3.0.9/plexus-utils-3.0.9.jar
/home/gcube/.m2/repository/org/codehaus/plexus/plexus-interactivity-api/1.0-alpha-4/plexus-interactivity-api-1.0-alpha-4.jar
/home/gcube/.m2/repository/org/codehaus/plexus/plexus-i18n/1.0-beta-7/plexus-i18n-1.0-beta-7.jar
/home/gcube/.m2/repository/org/codehaus/plexus/plexus-velocity/1.1.7/plexus-velocity-1.1.7.jar
/home/gcube/.m2/repository/org/codehaus/plexus/plexus-archiver/2.3/plexus-archiver-2.3.jar
/home/gcube/.m2/repository/org/codehaus/plexus/plexus-io/2.0.6/plexus-io-2.0.6.jar
/home/gcube/.m2/repository/org/codehaus/plexus/plexus-component-annotations/1.5.5/plexus-component-annotations-1.5.5.jar
/home/gcube/.m2/repository/org/eclipse/aether/aether-util/0.9.0.M2/aether-util-0.9.0.M2.jar
/home/gcube/.m2/repository/org/gcube/dataanalysis/dataminer/1.0.0-SNAPSHOT/dataminer-1.0.0-20150923.103012-4.jar
/home/gcube/.m2/repository/org/gcube/dataanalysis/dataminer/1.0.0-SNAPSHOT/dataminer-1.0.0-SNAPSHOT.jar
/home/gcube/.m2/repository/junit/junit/3.8.1/junit-3.8.1.jar
/home/gcube/.m2/repository/commons-cli/commons-cli/1.0/commons-cli-1.0.jar
/home/gcube/.m2/repository/commons-collections/commons-collections/3.2.1/commons-collections-3.2.1.jar
/home/gcube/.m2/repository/commons-lang/commons-lang/2.6/commons-lang-2.6.jar
/home/gcube/.m2/repository/oro/oro/2.0.8/oro-2.0.8.jar
/home/gcube/.m2/repository/commons-io/commons-io/1.4/commons-io-1.4.jar
/home/gcube/.m2/repository/commons-validator/commons-validator/1.2.0/commons-validator-1.2.0.jar
/home/gcube/.m2/repository/commons-beanutils/commons-beanutils/1.7.0/commons-beanutils-1.7.0.jar
/home/gcube/.m2/repository/commons-logging/commons-logging/1.0.4/commons-logging-1.0.4.jar
/home/gcube/.m2/repository/commons-digester/commons-digester/1.6/commons-digester-1.6.jar
/home/gcube/.m2/repository/xml-apis/xml-apis/1.0.b2/xml-apis-1.0.b2.jar
/home/gcube/.m2/repository/asm/asm/3.3.1/asm-3.3.1.jar
/home/gcube/.m2/repository/rapidminer-custom/52n-wps-server/3.3.2/52n-wps-server-3.3.2.jar
```

#9 - Dec 02, 2015 11:02 AM - Gianpaolo Coro

Please try using "dependency:copy-dependencies" as maven goal

#10 - Dec 02, 2015 11:56 AM - Andrea Dell'Amico

- Status changed from In Progress to Feedback

- % Done changed from 60 to 100

The correct goal from the command line is copy-dependencies, so the right command is:

```
mvn org.apache.maven.plugins:maven-dependency-plugin:2.8:copy-dependencies -Dartifact=org.gcube.dataanalysis:dataminer:1.0.0-SNAPSHOT -DoutputDirectory=/home/gcube/tomcat/webapps/wps/WEB-INF/lib
```

But it needs a POM. I generated a fake one and uploaded it to the target machine, into the directory from where the command is executed:

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>org.gcube</groupId>
  <artifactId>dataminer</artifactId>
  <packaging>jar</packaging>
  <version>1.0.0-SNAPSHOT</version>
  <dependencies>
    <dependency>
      <groupId>org.gcube.dataanalysis</groupId>
      <artifactId>dataminer</artifactId>
      <version>1.0.0-SNAPSHOT</version>
    </dependency>
  </dependencies>
</project>
```

#11 - Dec 03, 2015 10:54 AM - Gianpaolo Coro

There is still something to adjust, which prevents the services to work.

From the guide, you should download also the following dependency (please confirm this is included in your installation script):

```
<dependency>
  <groupId>rapidminer-custom</groupId>
  <artifactId>52n-wps-server</artifactId>
  <version>3.3.2</version>
</dependency>
```

and substitute it to the corresponding one in the war.

Furthermore, I see both 3.3.1 and 3.3.2 52 north libraries in the WEB-INF/lib directory, e.g.

52n-wps-server-3.3.1.jar

52n-wps-server-3.3.2.jar

Those of the original war should be left and only the one above should be overwritten.

#12 - Dec 03, 2015 12:27 PM - Andrea Dell'Amico

Gianpaolo Coro wrote:

There is still something to adjust, which prevents the services to work.

From the guide, you should download also the following dependency (please confirm this is included in your installation script):

```
<dependency>
  <groupId>rapidminer-custom</groupId>
  <artifactId>52n-wps-server</artifactId>
  <version>3.3.2</version>
</dependency>
```

Yes.

and substitute it to the corresponding one in the war.

Furthermore, I see both 3.3.1 and 3.3.2 52 north libraries in the WEB-INF/lib directory, e.g.

52n-wps-server-3.3.1.jar

52n-wps-server-3.3.2.jar

Those of the original war should be left and only the one above should be overwritten.

There are a lot of jar files from the 52n 3.3.1 distribution that are downloaded as org.gcube.dataanalysis dataminer dependencies. Until the dependency mess is solved I'm adding a task that removes the following files:

```
52n-wps-io-impl-3.3.1.jar
52n-wps-database-3.3.1.jar
52n-wps-server-3.3.1.jar
52n-wps-algorithm-3.3.1.jar
52n-wps-commons-3.3.1.jar
52n-wps-io-3.3.1.jar
```

#13 - Dec 04, 2015 10:32 AM - Gianpaolo Coro

There are still a number of problems:

1 - Two files are missing, which enable the web application as a gCube web application. I missed to report them in the Wiki but I have just updated the page as follows:

Download the following xml files and copy them into the web application WEB-INF folder, to make the application be enabled on a gCube container:

<http://data.d4science.org/id?fileName=web.xml&smp-id=56615ae0e4b0158fcb561817&contentType=application%2Fxml>

<http://data.d4science.org/id?fileName=gcube-app.xml&smp-id=56615ae0e4b0158fcb561815&contentType=application%2Fxml>

2 - I see some issues with the libraries in the WEB-INF/lib folder:

(i) snapshot libraries are present as well as 3.8.0 libraries, thus they are not at the latest version (3.9.0). Furthermore, snapshots should not appear at all.

(ii) the following libraries are present along with a newer version in the lib folder and should be deleted:

commons-beanutils-1.7.0.jar
dom4j-1.6.jar
jaxen-1.1.1.jar
jcl-over-slf4j-1.6.4.jar
jdom-1.0.jar
logback-classic-1.0.13.jar
logback-core-1.0.13.jar
slf4j-api-1.7.5.jar
spring-beans-2.0.6.jar
spring-context-2.0.6.jar
spring-core-2.0.6.jar

I think that the points above depend on the settings.xml, in which only the gcube-releases and the gcube-externals repository should have the flag "enabled" set to true.

@andrea.dellamico@isti.cnr.it could you please verify this configuration file and repeat the downloading from Maven?

#14 - Dec 04, 2015 11:45 AM - Andrea Dell'Amico

Gianpaolo Coro wrote:

There are still a number of problems:

1 - Two files are missing, which enable the web application as a gCube web application. I missed to report them in the Wiki but I have just updated the page as follows:

Download the following xml files and copy them into the web application WEB-INF folder, to make the application be enabled on a gCube container:

<http://data.d4science.org/id?fileName=web.xml&smp-id=56615ae0e4b0158fcb561817&contentType=application%2Fxml>

<http://data.d4science.org/id?fileName=gcube-app.xml&smp-id=56615ae0e4b0158fcb561815&contentType=application%2Fxml>

OK

2 - I see some issues with the libraries in the WEB-INF/lib folder:

(i) snapshot libraries are present as well as 3.8.0 libraries, thus they are not at the latest version (3.9.0). Furthermore, snapshots should not appear at all.

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commons-beanutils-1.7.0.jar
dom4j-1.6.jar
jaxen-1.1.1.jar
jcl-over-slf4j-1.6.4.jar
jdom-1.0.jar
logback-classic-1.0.13.jar
logback-core-1.0.13.jar
slf4j-api-1.7.5.jar
spring-beans-2.0.6.jar
spring-context-2.0.6.jar
spring-core-2.0.6.jar

I think that the points above depend on the settings.xml, in which only the gcube-releases and the gcube-externals repository should have the flag "enabled" set to true.

@andrea.dellamico@isti.cnr.it could you please verify this configuration file and repeat the downloading from Maven?

OK, so what I need to do is to completely disable the gcube-snapshots repository, while the others remain configured as follows:

```
<snapshots>
  <enabled>false</enabled>
</snapshots>
<releases>
  <enabled>true</enabled>
```

Right?

#15 - Dec 04, 2015 12:14 PM - Gianpaolo Coro

Yes, but both in the repositories and the plugins sections.

#16 - Dec 04, 2015 12:26 PM - Andrea Dell'Amico

Gianpaolo Coro wrote:

Yes, but both in the repositories and the plugins sections.

Of course.

Done, and run the playbook again, tomcat restarted.

There are some SNAPSHOT named jars files:

```
52n-wps-algorithm-3.3.2-SNAPSHOT.jar
52n-wps-algorithm-impl-3.3.2-SNAPSHOT.jar
52n-wps-client-lib-3.3.2-SNAPSHOT.jar
52n-wps-commons-3.3.2-SNAPSHOT.jar
52n-wps-database-3.3.2-SNAPSHOT.jar
52n-wps-io-3.3.2-SNAPSHOT.jar
52n-wps-io-impl-3.3.2-SNAPSHOT.jar
52n-wps-mc-3.3.2-SNAPSHOT.jar
52n-wps-webadmin-3.3.2-SNAPSHOT.jar
commons-vfs2-2.1-SNAPSHOT.jar
dataminer-1.0.0-SNAPSHOT.jar
```

All but common-vfs2 and dataminer come from the 52 north webapp archive.

#17 - Dec 04, 2015 12:46 PM - Gianpaolo Coro

Now the libs and the configuration seem fine. Just logback-classic-1.0.13.jar remains as an old lib and should be deleted.

Unfortunately, the scope passed to the application is still null. I'm using the following request and token:

<http://dataminer2-d-d4s.d4science.org/wps/WebProcessingService?Request=GetCapabilities&Service=WPS&gcube-token=d7a4076c-e8c1-42fe-81e0-bdec1e8074a>

We need @lucio.lelii@isti.cnr.it help here to check the WHN configuration on that machine.

#18 - Dec 04, 2015 01:04 PM - Andrea Dell'Amico

Gianpaolo Coro wrote:

Now the libs and the configuration seem fine. Just logback-classic-1.0.13.jar remains as an old lib and should be deleted.

Cleaned up this one too.

#19 - Dec 04, 2015 03:45 PM - Gianpaolo Coro

The problem is that the authorization libraries cannot be in the webapp folder too.

@andrea.dellamico@isti.cnr.it could you create a rule to delete the following libraries from the WEB-INF/lib?

```
common-scope-1.2.0-3.9.0.jar
common-authorization-1.0.0-3.9.0.jar
```

Currently, they have been deleted by hand just to test.

In order to properly work, the rule should delete all the common-scope-x and common-authorization-x libraries, and generally all the libraries already present in the SmartGears distribution. Note that these are declared as "provided" in the dataminer pom. I don't know why they are in the WEB-INF/lib then.

The following are the dependencies of SmartGears which should not go in the webapp folder (taken from <https://svn.d4science-ii.research-infrastructures.eu/gcube/branches/distributions/maven-smartgears-bom/1.0/pom.xml>)

```
<dependencies>
  <dependency>
    <groupId>org.gcube.core</groupId>
    <artifactId>common-smartgears</artifactId>
    <version>[1.0.0-SNAPSHOT,</version>
    <scope>provided</scope>
  </dependency>
  <dependency>
    <groupId>org.gcube.core</groupId>
    <artifactId>common-smartgears-app</artifactId>
    <version>[1.0.0-SNAPSHOT,</version>
```

```

        <scope>compile</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.core</groupId>
        <artifactId>common-encryption</artifactId>
        <version>[1.0.2-SNAPSHOT, 2.0.0-SNAPSHOT]</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.core</groupId>
        <artifactId>common-events</artifactId>
        <version>[1.0.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.core</groupId>
        <artifactId>common-configuration-scanner</artifactId>
        <version>[1.0.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.resources</groupId>
        <artifactId>common-gcube-resources</artifactId>
        <version>[1.0.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.resources</groupId>
        <artifactId>registry-publisher</artifactId>
        <version>[1.0.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.core</groupId>
        <artifactId>common-gcube-stubs</artifactId>
        <version>[1.1.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.core</groupId>
        <artifactId>common-scope</artifactId>
        <version>[1.2.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.resources.discovery</groupId>
        <artifactId>ic-client</artifactId>
        <version>[1.0.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.resources.discovery</groupId>
        <artifactId>discovery-client</artifactId>
        <version>[1.0.0-SNAPSHOT,)</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.core</groupId>
        <artifactId>common-validator</artifactId>
        <version>[1.0.0-SNAPSHOT, 2.0.0-SNAPSHOT]</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-api</artifactId>
        <version>1.7.5</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.gcube.core</groupId>
        <artifactId>common-validator</artifactId>
        <version>[1.0.0-SNAPSHOT, 2.0.0-SNAPSHOT]</version>
        <scope>provided</scope>
    </dependency>
    <dependency>

```

```
<groupId>org.gcube.common</groupId>
<artifactId>authorization-client</artifactId>
<version>[1.0.0-SNAPSHOT,2.0.0-SNAPSHOT)</version>
<scope>provided</scope>
</dependency>
```

```
<dependency>
  <groupId>org.gcube.common</groupId>
  <artifactId>common-authorization</artifactId>
  <version>[1.0.0-SNAPSHOT,2.0.0-SNAPSHOT)</version>
  <scope>provided</scope>
</dependency>
```

```
<dependency>
  <groupId>org.gcube.accounting</groupId>
  <artifactId>accounting-lib</artifactId>
  <version>[1.0.0-SNAPSHOT,2.0.0-SNAPSHOT)</version>
  <scope>provided</scope>
</dependency>
```

```
</dependencies>
```

#20 - Dec 04, 2015 04:02 PM - Andrea Dell'Amico

This is getting crazy.

I'm going to remove all the webapps and reinstall, to see if it's a consequence of the old wrong maven settings. Otherwise I'll find and delete all the duplicate jars, but we need a reliable way to install only the needed jars. I cannot (read "do not want") manually check a list of files at every release, only because we don't know what we are going to install.

#21 - Dec 04, 2015 04:22 PM - Lucio Lelii

the smartest thing to do is to include a dependency to the smartgear-bom in the webapp.

#22 - Dec 04, 2015 04:28 PM - Andrea Dell'Amico

Lucio Lelii wrote:

the smartest thing to do is to include a dependency to the smartgear-bom in the webapp.

Is it possibile to solve this before going to production (and generating an EGI image for the dataminer?)

I've reinstalled the webapps, in the meantime. I still had to remove the pom dependencies. The complete list of duplicates from the 3.9.0 release is:

```
- accounting-lib-1.1.0-3.9.0.jar
- authorization-client-1.0.0-3.9.0.jar
- common-authorization-1.0.0-3.9.0.jar
- common-clients-2.1.0-3.9.0.jar
- common-configuration-scanner-1.0.0-3.9.0.jar
- common-encryption-1.0.2-3.9.0.jar
- common-gcore-resources-1.3.1-3.9.0.jar
- common-gcore-stubs-1.2.1-3.9.0.jar
- common-generic-clients-1.0.0-3.9.0.jar
- common-scope-maps-1.0.2-3.9.0.jar
- common-validator-1.0.0-3.9.0.jar
- discovery-client-1.0.1-3.9.0.jar
- ic-client-1.0.1-3.9.0.jar
```

#23 - Dec 04, 2015 04:31 PM - Lucio Lelii

In your list common-scope-1.2.0-3.9.0.jar is missing.

#24 - Dec 04, 2015 04:36 PM - Andrea Dell'Amico

Lucio Lelii wrote:

In your list common-scope-1.2.0-3.9.0.jar is missing.

That file isn't in wps/WEB-INF/lib. Or did anyone remove it just after I reinstalled?

#25 - Dec 04, 2015 05:03 PM - Lucio Lelii

In the first installation it was there and I have removed it. I don't know why in this new installation it is disappeared.

#26 - Dec 04, 2015 05:13 PM - Andrea Dell'Amico

I tried again and it was there. I now removed only the two jars

```
common-scope-1.2.0-3.9.0.jar
common-authorization-1.0.0-3.9.0.jar
```

Can you check if it works now?

#27 - Dec 05, 2015 08:03 PM - Andrea Dell'Amico

- File *pom.xml* added

- File *dependencies-list.txt* added

@gianpaolo.coro@isti.cnr.it told me that logback-core must not be removed. I reinstalled again, after the dependencies installation the removal task deletes the following files:

```
- 52n-wps-server-3.3.2-SNAPSHOT.jar
- 52n-wps-io-impl-3.3.1.jar
- 52n-wps-database-3.3.1.jar
- 52n-wps-server-3.3.1.jar
- 52n-wps-algorithm-3.3.1.jar
- 52n-wps-commons-3.3.1.jar
- 52n-wps-io-3.3.1.jar
- commons-beanutils-1.7.0.jar
- dom4j-1.6.jar
- jaxen-1.1.1.jar
- jcl-over-slf4j-1.6.4.jar
- jdom-1.0.jar
- logback-core-1.0.13.jar
- slf4j-api-1.7.5.jar
- spring-beans-2.0.6.jar
- spring-context-2.0.6.jar
- spring-core-2.0.6.jar
- common-scope-1.2.0-3.9.0.jar
- common-authorization-1.0.0-3.9.0.jar
```

I also attach the pom file that is used to download the dataminer dependencies and the list of jar files installed by the 'copy-dependencies' maven goal that uses that pom. The first two files:

```
52n-wps-server-3.3.2.jar
```

```
dataminer-1.0.0-SNAPSHOT.jar
```

from the list are the one that we need to install as part of the dataminer setup.

I was told that the new pom.xml should not download dependencies that are already satisfied, but it's not the case.

#28 - Dec 06, 2015 12:20 AM - Gianpaolo Coro

There is still something wrong in the installation. I find inconsistent libraries both in the tomcat/lib and in the WEB-INF/lib that prevent the application to run (e.g. not updated slf4j and logback in tomcat libs, not updated libraries in the webapp).

This is the list of libraries in the webapp that **make** the application work (tested both on dataminer1 and 2):

```
52n-security-authentication-2.2-M2.jar
52n-security-authn-web-2.2-M2.jar
52n-security-config-2.2-M2.jar
52n-security-core-2.2-M2.jar
52n-security-decision-2.2-M2.jar
52n-security-enforcement-2.2-M2.jar
52n-security-licensing-2.2-M2.jar
52n-security-precondition-2.2-M2.jar
52n-security-support-net-2.2-M2.jar
52n-security-xml-schema-2.1.0.jar
52n-security-xml-seconfig-2.1.0.jar
52n-wps-algorithm-3.3.2-SNAPSHOT.jar
52n-wps-algorithm-impl-3.3.2-SNAPSHOT.jar
52n-wps-client-lib-3.2.0.jar
52n-wps-client-lib-3.3.2-SNAPSHOT.jar
52n-wps-commons-3.3.2-SNAPSHOT.jar
52n-wps-config-1.2.1.jar
52n-wps-database-3.3.2-SNAPSHOT.jar
52n-wps-io-3.3.2-SNAPSHOT.jar
52n-wps-io-impl-3.3.2-SNAPSHOT.jar
```


52n-wps-mc-3.3.2-SNAPSHOT.jar
52n-wps-server-3.3.2.jar
52n-wps-webadmin-3.3.2-SNAPSHOT.jar
52n-xml-ows-v110-1.1.0.jar
52n-xml-wps-v100-1.1.0.jar
52n-xml-xlink-v110-1.0.0.jar
abdera-bundle-1.1.2.jar
accounting-lib-1.1.0-3.9.0.jar
activation-1.1.jar
activemq-core-5.6.0.jar
activemq-protobuf-1.1.jar
agent-library-2.0.0-3.9.0.jar
ant-1.6.5.jar
antlr-2.7.7.jar
antlr-runtime-3.4.jar
aopalliance-1.0.jar
asm-3.3.1.jar
axiom-api-1.2.10.jar
axiom-impl-1.2.10.jar
bcprov-jdk15-124.jar
bounce-0.14.0.jar
c3p0-0.9.1.2.jar
cglib-2.2.2.jar
common-clients-2.1.0-3.9.0.jar
common-configuration-scanner-1.0.0-3.9.0.jar
common-encryption-1.0.2-3.9.0.jar
common-fw-clients-1.1.0-3.9.0.jar
common-gcore-clients-2.2.0-3.9.0.jar
common-gcore-resources-1.3.1-3.9.0.jar
common-gcore-stubs-1.2.1-3.9.0.jar
common-gcube-calls-1.0.1-3.9.0.jar
common-generic-clients-1.0.0-3.9.0.jar
common-jaxws-calls-1.0.1-3.9.0.jar
commons-beanutils-1.8.3.jar
commons-beanutils-core-1.8.0.jar
commons-codec-1.5.jar
commons-collections-3.2.jar
commons-configuration-1.6.jar
common-scope-maps-1.0.2-3.9.0.jar
commons-digester-1.8.jar
commons-exec-1.3.jar
commons-httpclient-3.1.jar
commons-httpclient-contrib-ssl-3.1.jar
commons-io-2.0.jar
commons-lang-2.5.jar
commons-lang3-3.3.2.jar
commons-logging-1.0.4.jar
commons-net-3.1.jar
commons-pool-1.5.4.jar
commons-vfs2-2.1-SNAPSHOT.jar
common-uri-1.0.1-3.9.0.jar
common-validator-1.0.0-3.9.0.jar
concurrent-1.3.4.jar
cors-filter-1.9.3.jar
dataminer-1.0.0-SNAPSHOT.jar
derby-10.2.2.0.jar
discovery-client-1.0.1-3.9.0.jar
dom-2.3.0-jaxb-1.0.6.jar
dom4j-1.6.1.jar
ecological-engine-1.8.6-3.9.0.jar
ecological-engine-external-algorithms-1.1.7-3.9.0.jar
ecological-engine-geospatial-extensions-1.3.5-3.9.0.jar
ecological-engine-smart-executor-1.1.1-3.9.0.jar
ecological-engine-wps-extension-1.0.4-3.9.0.jar
ehcache-core-2.5.1.jar
executor-service-1.2.2-3.6.0.jar
executor-stubs-1.2.2-3.6.0.jar
ezmorph-1.0.4.jar
fusemq-leveldb-1.1.jar
gcf-1.6.3-3.9.0.jar
gdal-1.0.0.jar
geoapi-pending-3.1-M04.jar
geonetwork-2.1.1-3.9.0.jar
geonetwork-manager-1.1.jar
geopeo-1.0.2.jar

geoserver-manager-1.5.2.jar
geotk-analytics-3.20.jar
geotk-coverage-3.20.jar
geotk-coverageio-3.20.jar
geotk-coverageio-store-3.20.jar
geotk-coverage-sql-3.20.jar
geotk-datastore-core-3.20.jar
geotk-display-3.20.jar
geotk-engine-core-3.20.jar
geotk-feature-3.20.jar
geotk-filter-3.20.jar
geotk-filter-cql-3.20.jar
geotk-geometry-3.20.jar
geotk-go2-3.20.jar
geotk-go2-style-extension-3.20.jar
geotk-index-tree-3.20.jar
geotk-jtswrapper-3.20.jar
geotk-metadata-3.20.jar
geotk-metadata-sql-3.20.jar
geotk-processing-core-3.20.jar
geotk-processing-coverage-3.20.jar
geotk-referencing-3.20.jar
geotk-render-3.20.jar
geotk-storage-3.20.jar
geotk-style-3.20.jar
geotk-temporal-3.20.jar
geotk-utility-3.20.jar
geotk-utility-pending-3.20.jar
geotk-xml-base-3.20.jar
geotk-xml-gml-3.20.jar
geotk-xml-ogc-3.20.jar
geotk-xml-ows-3.20.jar
geotk-xml-se-3.20.jar
geotk-xml-service-3.20.jar
geotk-xml-sld-3.20.jar
geotk-xml-wms-3.20.jar
geronimo-activation_1.1_spec-1.0.2.jar
geronimo-j2ee-management_1.1_spec-1.0.1.jar
geronimo-javamail_1.4_spec-1.6.jar
geronimo-jms_1.1_spec-1.1.1.jar
geronimo-stax-api_1.0_spec-1.0.1.jar
ghn-core-runtime-1.0.0.jar
gis-interface-2.1.2-3.9.0.jar
gmlpacket-2.0-0.4.jar
graphlayout-1.2.1.jar
grs2library-2.1.2-3.9.0.jar
gsay-service-1.0.0.jar
gson-1.7.1.jar
guava-13.0.1.jar
guava-annotations-r03.jar
guava-base-r03.jar
guava-collections-r03.jar
guava-primitives-r03.jar
guice-3.0.jar
guice-multibindings-3.0.jar
hadoop-core-1.0.0.jar
hamcrest-core-1.3.jar
hawtbuf-1.9.jar
hawtbuf-proto-1.9.jar
hawtdispatch-1.9.jar
hawtdispatch-scala-1.9.jar
hawtdispatch-transport-1.9.jar
hawtjni-runtime-1.5.jar
hibernate3-3.0.0.jar
hibernate-spatial-1.0-M2.jar
hibernate-spatial-postgis-1.0-M2.jar
htmlparser-1.0.5.jar
httpclient-4.2.1.jar
httpcore-4.2.1.jar
ibatis-sqlmap-2.3.0.jar
ic-client-1.0.1-3.9.0.jar
is-client-1.5.1-3.6.0.jar
is-collector-stubs-3.0.0-3.6.0.jar
jackrabbit-api-1.4.jar
jackrabbit-core-1.4.jar

jackrabbit-jcr-commons-1.4.jar
jackrabbit-spi-1.4.jar
jackrabbit-spi-commons-1.4.jar
jackrabbit-text-extractors-1.4.jar
jackrabbit-webdav-2.3.3.jar
jackson-annotations-2.3.3.jar
jackson-core-2.3.3.jar
jackson-core-asl-1.9.2.jar
jackson-databind-2.3.3.jar
jackson-mapper-asl-1.9.2.jar
jahmm-0.6.1.jar
jai_imageio-1.1.jar
jama-1.0.2.jar
jasypt-1.8.jar
java-cup-0.11a.jar
java-property-utils-1.9.1.jar
javax.inject-1.jar
jaxen-1.1.4.jar
jaxen-limited-1.1.2.jar
jcip-annotations-1.0.jar
jcl-over-slf4j-1.7.5.jar
jcommon-1.0.16.jar
jcr-1.0.jar
jdom-1.1.jar
jetty-6.1.26.jar
jetty-util-6.1.26.jar
jfreechart-1.0.13.jar
jgrapht-0.8.2.jar
jgrapht-jdk1.6-0.8.2.jar
joda-time-2.2.jar
json-lib-2.2.2-jdk15.jar
jsp-2.1-6.1.14.jar
jsp-api-2.1-6.1.14.jar
jsr-275-0.9.3.jar
jstl-1.2.jar
jta-1.1.jar
jts-1.12.jar
jug-2.0.0.jar
jul-to-slf4j-1.7.5.jar
junit-4.11.jar
kahadb-5.6.0.jar
kxml2-2.3.0.jar
leveldb-0.2.jar
leveldb-api-0.2.jar
leveldbjni-1.2.jar
leveldbjni-linux32-1.2.jar
leveldbjni-linux64-1.2.jar
leveldbjni-osx-1.2.jar
log4j-1.2.16.jar
log4j-over-slf4j-1.7.5.jar
logback-classic-1.1.2.jar
logback-core-1.1.2.jar
lucene-core-2.2.0.jar
madgikcommonslibrary-1.5.0-3.9.0.jar
mail-1.4.jar
mapscript-6.0.3.jar
marytts-d4science-5.0.0.jar
maxent-princeton-3.3.3.jar
mc-runtime-1.1-20150212.235551-8.jar
mc-schema-1.1-20150212.235552-13.jar
mongo-java-driver-3.0.4.jar
mqtt-client-1.0.jar
netcdf-4.2.0.jar
objenesis-1.2.jar
ogckml2.2-1.0.0.jar
opendap-2.2.0.jar
org.osgi.core-4.1.0.jar
pentaho-package-manager-1.0.0.jar
pjl-comp-filter-1.6.4.jar
postgis-2.0.0SVN.jar
postgis-driver-1.0.jar
postgresql-8.4-702.jdbc4.jar
quartz-2.2.1.jar
rapidMiner-1.0.0.jar
rapidminer-plugintext-1.0.0.jar

registry-publisher-1.2.5-3.9.0.jar
REngine-0.6-8.jar
RserveEngine-0.6-8.jar
scala-library-2.9.1.jar
serializer-2.7.1.jar
servlet-api-2.5-20081211.jar
servlet-api-2.5-6.1.14.jar
slf4j-api-1.7.6.jar
slf4j-log4j12-1.7.10.jar
smart-executor-api-1.2.0-3.9.0.jar
smart-executor-client-1.1.0-3.9.0.jar
snappy-java-1.0.3.jar
spd-client-library-3.1.1-3.9.0.jar
spd-model-3.0.1-3.9.0.jar
spring-aop-3.0.6.RELEASE.jar
spring-asm-3.0.6.RELEASE.jar
spring-beans-3.0.6.RELEASE.jar
spring-context-3.0.6.RELEASE.jar
spring-core-3.0.6.RELEASE.jar
spring-expression-3.0.6.RELEASE.jar
spring-web-2.0.6.jar
stax2-api-3.0.1.jar
stax-utils-20060502.jar
storage-manager-core-2.3.0-3.9.0.jar
storage-manager-wrapper-2.2.1-3.9.0.jar
streams-2.0.2-3.9.0.jar
stringtemplate-3.2.1.jar
taxamatchpostgres-1.2.0.jar
transfer-library-1.0.0-3.9.0.jar
trees-1.4.2-3.9.0.jar
vecmath-1.5.2.jar
weka-dev-3.7.6.jar
woodstox-core-asl-4.0.6.jar
xalan-2.7.1.jar
xercesImpl-2.7.1.jar
XMeans-1.0.3.jar
xml-apis-1.0.b2.jar
xmlbeans-2.4.0.jar
xmlpull-1.1.3.1.jar
xpp3_min-1.1.4c.jar
xstream-1.4.6.jar

This is the list of libraries in the tomcat/lib when the application works:

accounting-lib-1.1.0-3.9.0.jar
accounting-lib-persistence-couchdb-1.0.0-3.9.0.jar
authorization-client-1.0.0-3.9.0.jar
common-authorization-1.0.0-3.9.0.jar
common-clients-2.1.0-3.9.0.jar
common-configuration-scanner-1.0.0-3.9.0.jar
common-encryption-1.0.2-3.9.0.jar
common-events-1.0.1-3.9.0.jar
common-gcore-resources-1.3.1-3.9.0.jar
common-gcore-stubs-1.2.1-3.9.0.jar
common-generic-clients-1.0.0-3.9.0.jar
common-scope-1.2.0-3.9.0.jar
common-scope-maps-1.0.2-3.9.0.jar
commons-io-2.4.jar
common-smartgears-1.2.4-3.9.0.jar
common-smartgears-utils-1.0.1-3.9.0.jar
common-validator-1.0.0-3.9.0.jar
couchdb-connector-1.0.0-3.9.0.jar
discovery-client-1.0.1-3.9.0.jar
ic-client-1.0.1-3.9.0.jar
jackson-core-asl-1.9.13.jar
jackson-mapper-asl-1.9.13.jar
logback-classic-1.1.2.jar
logback-core-1.1.2.jar
registry-publisher-1.2.5-3.9.0.jar
slf4j-api-1.7.10.jar
slf4j-log4j12-1.7.10.jar
slf4j-nop-1.7.10.jar

We should understand together why the automatic installation is not creating the above set of libraries, by precisely analyzing the generation steps. In particular, let's check the versions of slf4j-api, sl4j-log4j, sl4j-nop, ic-client, is-client, is-collector-stubs, logback-classic and logback-core

#29 - Dec 06, 2015 11:37 AM - Andrea Dell'Amico

The libraries you did find installed in /home/gcube/tomcat/lib are the ones installed by the latest smartgears installation. You can find the same files in all the smart executor production nodes, and I don't want to add mess to an already messy situation manually changing them.

On the other side, we have a pom definition that downloads way too many files.

A clean solution would be having maven download and install a set of dependencies that do not conflict with the smartgears libraries, as I hope that those libraries are external to the smartgears war file because they can be used by more apps than smartgears itself. Otherwise it should be better put those jars inside the smartgears war and exploit the native tomcat class isolation functionality to avoid conflicts.

#30 - Dec 06, 2015 11:41 AM - Andrea Dell'Amico

By the way, before changing the pom that installs the dataminer dependencies, the application worked without having to touch the jars inside /home/gcube/tomcat/lib, so it can work with older versions of logback and slf4j.

#31 - Dec 07, 2015 04:20 PM - Gianpaolo Coro

Could you try using the following project, containing an updated pom (which should select specific slf4j and logback), for the copy-dependency?

<https://svn.d4science.research-infrastructures.eu/gcube/trunk/data-analysis/DataMiner>

Let's rely on this also for further modifications.

#32 - Dec 08, 2015 11:43 PM - Andrea Dell'Amico

Gianpaolo Coro wrote:

Could you try using the following project, containing an updated pom (which should select specific slf4j and logback), for the copy-dependency?

<https://svn.d4science.research-infrastructures.eu/gcube/trunk/data-analysis/DataMiner>

Let's rely on this also for further modifications.

I reinstalled using it. Note that the project is private, so I manually got the pom file. The only difference from the last try is that there's a new jar: slf4j-api-1.7.6.jar inside wps/WEB-INF/lib

#33 - Dec 09, 2015 12:00 AM - Gianpaolo Coro

The latest configuration before you last re-installation had been hand-modified by me. If you refer to that, you will see little difference with the current installation.

In fact, in the current installation the libraries are consistent and the service works!

#34 - Dec 09, 2015 12:06 AM - Andrea Dell'Amico

Gianpaolo Coro wrote:

The latest configuration before you last re-installation had been hand-modified by me. If you refer to that, you will see little difference with the current installation.

The diff was against the dependencies-list.txt file I attached.

In fact, in the current installation the libraries are consistent and the service works!

That's good news, at last :).

#35 - Dec 09, 2015 12:11 AM - Andrea Dell'Amico

I'd like to provision dataminer1-d-d4s.d4science.org too so that we have two completely identical services.

#36 - Dec 09, 2015 10:15 AM - Gianpaolo Coro

Please go on!

#37 - Dec 09, 2015 04:01 PM - Andrea Dell'Amico

I had more than one problem caused by the modified pom. They didn't show up on dataminer2-d-d4s because of the local maven cache. I now worked around them and now the only difference between the two installations should be this one:

```
dataminer1-d-d4s: dataminer-1.0.0-3.9.0.jar
dataminer2-d-d4s: dataminer-1.0.0-SNAPSHOT.jar
```

If the test of dataminer1-d-d4s ends successfully I'll install dataminer-1.0.0-3.9.0.jar on dataminer2-d-d4s too. After that we need to test that the

service still works when queried through the load balancer.

#38 - Dec 09, 2015 04:28 PM - Gianpaolo Coro

dataminer1 works.

#39 - Dec 09, 2015 04:47 PM - Andrea Dell'Amico

Thanks to @lucio.levii@isti.cnr.it we now have a new maven command to install the dependencies that does not import the ones already provided by smartgears:

```
mvn -DexcludeScope=provided org.apache.maven.plugins:maven-dependency-plugin:2.8:copy-dependencies -Dartifact=org.gcube.dataanalysis:dataminer:1.0.0-3.9.0 -DoutputDirectory=/home/gcube/tomcat/webapps/wps/WEB-INF/lib
```

We still need to manually remove the wrong 52n dependencies but the situation is less messed up now.

#40 - Dec 10, 2015 05:01 PM - Gianpaolo Coro

Both the dataminer services work well now. I'm going to test the balancer.

#41 - Dec 11, 2015 07:16 PM - Gianpaolo Coro

The load balancer works well now. We are ready to put Dataminer in the production environment.

#42 - Dec 14, 2015 11:35 AM - Andrea Dell'Amico

- Status changed from Feedback to Closed

Files			
pom.xml	6.77 KB	Dec 05, 2015	Andrea Dell'Amico
dependencies-list.txt	5.36 KB	Dec 05, 2015	Andrea Dell'Amico