

D4Science Infrastructure - Task #5169

Prepare environment to test Generic Worker on Dataminer

Sep 27, 2016 03:34 PM - Gianpaolo Coro

Status:	Closed	Start date:	Sep 27, 2016
Priority:	Normal	Due date:	
Assignee:	Andrea Dell'Amico	% Done:	100%
Category:	High-Throughput-Computing	Estimated time:	0.00 hour
Target version:	Dataminer and StatMan provisioning		
Infrastructure:	Development		
Description			
Some machines are required to finally test the porting of GW on Dataminer. First, the installation of Dataminer running on the latest version of the GHN should be tested, since both the GHN libraries and the DM pom have changed. The GWs can be two machines behind a proxy. Dataminer2-d can be reused for this aim and one/two Generic Workers can be recycled.			

History

#1 - Sep 29, 2016 02:52 PM - Gianpaolo Coro

I have organised the DataMiner pom in order to limit the spread of dependencies and to detect the libraries that should be deleted after the installation.

The new pom is here:

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

The libraries to be deleted after the installation are:

```
52n-wps-algorithm-3.3.1
52n-wps-algorithm-3.3.2-SNAPSHOT
52n-wps-client-lib-3.2.0
52n-wps-commons-3.3.1
52n-wps-database-3.3.1
52n-wps-io-3.3.1
52n-wps-io-impl-3.3.1
52n-wps-server-3.3.1
52n-wps-server-3.3.2-SNAPSHOT
common-configuration-scanner-1.1.0-SNAPSHOT
common-encryption-1.0.2-SNAPSHOT
common-gcore-stubs-1.2.2-SNAPSHOT
commons-beanutils-1.7.0
common-scope-1.2.1-SNAPSHOT
common-scope-maps-1.0.4-SNAPSHOT
jackrabbit-jcr-commons-1.4
jackrabbit-api-1.4
jaxen-1.1.1
jcl-over-slf4j-1.6.4
jcr-1.0
slf4j-api-1.7.5
```

The libraries to leave in the WEB-INF/lib after the installation are:

```
ic-client
discovery-client
common-gcore-resource
```

Finally, downloading dataminer-algorithms.jar is **not** necessary anymore.

Instead, downloading the files inside the files in trunk/data-analysis/DataMinerConfiguration/algorithms is **still** necessary.

#2 - Oct 04, 2016 10:34 AM - Gianpaolo Coro

The GW-Dataminer machines should be placed behind a proxy named dataminer-d-workers.d4science.org

#3 - Oct 04, 2016 07:43 PM - Andrea Dell'Amico

- Status changed from New to In Progress

- % Done changed from 0 to 80

I tried using the zip file at last.

The deploy fails with the following exception:

```
2016-10-04 19:38:04,614 [localhost-startStop-1] ERROR org.apache.catalina.core.ContainerBase.[Catalina].[localhost].[/wps]- Exception sending context initialized event to listener instance of class org.n52.security.service.config.support.SecurityConfigContextListener
org.n52.security.service.config.ConfigurationException: unexpected exception occurred during configuration processing: java.lang.NoClassDefFoundError: org/apache/commons/beanutils/BeanPredicate
    at org.n52.security.service.config.XmlSecurityConfig.init(XmlSecurityConfig.java:235)
    at org.n52.security.service.config.XmlSecurityConfig.setConfiguration(XmlSecurityConfig.java:147)
    at org.n52.security.service.config.XmlSecurityConfig.<init>(XmlSecurityConfig.java:105)
    at org.n52.security.service.config.support.SecurityConfigContextListener.contextInitialized(SecurityConfigContextListener.java:95)
    at org.apache.catalina.core.StandardContext.listenerStart(StandardContext.java:4992)
    at org.apache.catalina.core.StandardContext.startInternal(StandardContext.java:5490)
    at org.apache.catalina.util.LifecycleBase.start(LifecycleBase.java:150)
    at org.apache.catalina.core.ContainerBase.addChildInternal(ContainerBase.java:901)
    at org.apache.catalina.core.ContainerBase.addChild(ContainerBase.java:877)
    at org.apache.catalina.core.StandardHost.addChild(StandardHost.java:649)
    at org.apache.catalina.startup.HostConfig.deployDirectory(HostConfig.java:1247)
    at org.apache.catalina.startup.HostConfig$DeployDirectory.run(HostConfig.java:1898)
    at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:471)
    at java.util.concurrent.FutureTask.run(FutureTask.java:262)
    at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1145)
    at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:615)
    at java.lang.Thread.run(Thread.java:745)
Caused by: java.lang.NoClassDefFoundError: org/apache/commons/beanutils/BeanPredicate
    at org.n52.security.service.config.XmlSecurityConfig.initService(XmlSecurityConfig.java:318)
    at org.n52.security.service.config.XmlSecurityConfig.initServices(XmlSecurityConfig.java:274)
    at org.n52.security.service.config.XmlSecurityConfig.init(XmlSecurityConfig.java:226)
    ... 16 more
Caused by: java.lang.ClassNotFoundException: org.apache.commons.beanutils.BeanPredicate
    at org.apache.catalina.loader.WebappClassLoader.loadClass(WebappClassLoader.java:1720)
    at org.apache.catalina.loader.WebappClassLoader.loadClass(WebappClassLoader.java:1571)
    ... 19 more
[2016-10-04 19:38:04,616 [localhost-startStop-1] ERROR org.apache.catalina.core.StandardContext- Error listenerStart
2016-10-04 19:38:04,617 [localhost-startStop-1] ERROR org.apache.catalina.core.StandardContext- Context [/wps] startup failed due to previous errors
```

It seems that something is missing.

#4 - Oct 04, 2016 07:44 PM - Andrea Dell'Amico

Gianpaolo Coro wrote:

The GW-Dataminer machines should be placed behind a proxy named dataminer-d-workers.d4science.org

haproxy is ready.

#5 - Oct 05, 2016 12:31 AM - Gianpaolo Coro

Could you retry now please?

Anyway, I fear that some snapshots of the authorization libraries are not updated. Please, see if you got an error in the catalina.out when calling this URL (after installing the war):

```
http://dataminer2-d.d4science.org/wps/WebProcessingService?Request=GetCapabilities&Service=WPS&gcube-token=f9d49d76-cd60-48ed-9f8e-036bcc1fc045-98187548
```

#6 - Oct 05, 2016 10:14 AM - Andrea Dell'Amico

Gianpaolo Coro wrote:

Could you retry now please?

Anyway, I fear that some snapshots of the authorization libraries are not updated. Please, see if you got an error in the catalina.out when calling this URL (after installing the war):

```
http://dataminer2-d.d4science.org/wps/WebProcessingService?Request=GetCapabilities&Service=WPS&gcube-token=f9d49d76-cd60-48ed-9f8e-036bcc1fc045-98187548
```

The dataminer app now starts correctly. That URL fails indeed:

```
10:09:22.698 [catalina-exec-5] INFO RequestValidator: accessing validator with token f9d49d76-cd60-48ed-9f8e-036bcc1fc045-98187548
10:09:22.796 [catalina-exec-5] WARN RequestValidator: rejecting call to DataMiner in invalid context /gcube/devNext/NextNext
```

But the token request returned with success. The command was

```
java TokenGenerator <TOKEN_GIVEN_BY_LUCIO> dataminer2-d-d4s.d4science.org 80 /home/gcube/.containerxml/2-container.xml /gcube/devNext /gcube/devNext/devNext
```

You can see the token got in the answer in /home/gcube/SmartGears/container.xml

#7 - Oct 05, 2016 10:40 AM - Andrea Dell'Amico

A question about the

http://thredds.d4science.org/thredds/fileServer/public/netcdf/gebco_08_OCEANS_CLIMATOLOGY_METEOROLOGY_ATMOSPHERE_.nc file that we need to download at each installation.

Can it live outside tomcat/webapps/wps? if so, it should be downloaded once, and not at every upgrade.

#8 - Oct 05, 2016 10:41 AM - Lucio Lelii

```
java TokenGenerator dataminer2-d-d4s.d4science.org 80 /home/gcube/.containerxml/2-container.xml /gcube/devNext /gcube/devNext/devNext
```

The problem is the last context in the command, it is a not existing vre and not the one in wich gianpaolo is trying to contact the dataminer

#9 - Oct 05, 2016 10:50 AM - Andrea Dell'Amico

Lucio Lelii wrote:

```
java TokenGenerator dataminer2-d-d4s.d4science.org 80 /home/gcube/.containerxml/2-container.xml /gcube/devNext /gcube/devNext/devNext
```

The problem is the last context in the command, it is a not existing vre and not the one in wich gianpaolo is trying to contact the dataminer

Interesting, it was configured that way since months. Changing it right now.

#10 - Oct 05, 2016 11:39 AM - Andrea Dell'Amico

It seems it's working now. The correct scopes are /gcube/devNext /gcube/devNext/NextNext

#11 - Oct 05, 2016 11:39 AM - Andrea Dell'Amico

- Status changed from In Progress to Feedback

#12 - Oct 05, 2016 12:11 PM - Gianpaolo Coro

I'm calling the service with the NextNext token, but I see these errors on the GHN referring to the gCubeApps scope:

This is the test url:

```
http://dataminer2-d-d4s.d4science.org/wps/WebProcessingService?Request=GetCapabilities&Service=WPS&gcube-token=f9d49d76-cd60-48ed-9f8e-036bcc1fc045-98187548
```

```
10:55:48.092 [pool-1-thread-5] ERROR ProfileManager: cannot publish container (see details)
java.lang.IllegalStateException: a map for /gcube/gCubeApps is undefined
    at org.gcube.common.scope.impl.ScopedServiceMap.currentMap(ScopedServiceMap.java:63) ~[common-scope-1.2.0-4.0.0-125717.jar:na]
    at org.gcube.common.scope.impl.ScopedServiceMap.endpoint(ScopedServiceMap.java:44) ~[common-scope-1.2.0-4.0.0-125717.jar:na]
    at org.gcube.resources.discovery.icclient.ICClient.getStub(ICClient.java:74) ~[ic-client-1.0.1-4.0.0-126578.jar:na]
    at org.gcube.resources.discovery.icclient.ICClient.submit(ICClient.java:39) ~[ic-client-1.0.1-4.0.0-126578.jar:na]
    at org.gcube.resources.discovery.client.impl.DelegateClient.submit(DelegateClient.java:50) ~[discovery-client-1.0.1-4.0.0-125857.jar:na]
    at org.gcube.informationssystem.publisher.utils.RegistryStubs.getEndPoints(RegistryStubs.java:49) ~[registry-publisher-1.2.6-4.0.0-126697.jar:na]
    at org.gcube.informationssystem.publisher.utils.RegistryStubs.getStubs(RegistryStubs.java:62) ~[registry-publisher-1.2.6-4.0.0-126697.jar:na]
    at org.gcube.informationssystem.publisher.RegistryPublisherImpl.registryUpdate(RegistryPublisherImpl.java:180) ~[registry-publisher-1.2.6-4.0.0-126697.jar:na]
    at org.gcube.informationssystem.publisher.RegistryPublisherImpl.update(RegistryPublisherImpl.java:128) ~[registry-publisher-1.2.6-4.0.0-126697.jar:na]
    at org.gcube.informationssystem.publisher.ScopedPublisherImpl.update(ScopedPublisherImpl.java:54) ~[registry-publisher-1.2.6-4.0.0-126697.jar:na]
    at org.gcube.smartgears.handlers.container.lifecycle.ProfilePublisher.update(ProfilePublisher.java:81) ~[common-smartgears-1.2.7-4.0.0-128702.jar:na]
    at org.gcube.smartgears.handlers.container.lifecycle.ProfileManager.publish(ProfileManager.java:224) [common-smartgears-1.2.7-4.0.0-128702.jar:na]
    at org.gcube.smartgears.handlers.container.lifecycle.ProfileManager.access$300(ProfileManager.java:50) [common-smartgears-1.2.7-4.0.0-128702.jar:na]
    at org.gcube.smartgears.handlers.container.lifecycle.ProfileManager$1.publishAfterChange(ProfileManager.java:122) [common-smartgears-1.2.7-4.0.0-128702.jar:na]
    at sun.reflect.GeneratedMethodAccessor39.invoke(Unknown Source) ~[na:na]
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43) ~[na:1.7.0_80]
]
    at java.lang.reflect.Method.invoke(Method.java:606) ~[na:1.7.0_80]
    at org.gcube.common.events.impl.Observer.onEventImmediate(Observer.java:99) [common-events-1.0.1-4.0.0-126364.jar:na]
    at org.gcube.common.events.impl.Observer.onEvent(Observer.java:93) [common-events-1.0.1-4.0.0-126364.jar:na]
    at org.gcube.common.events.impl.DefaultHub.notifyObservers(DefaultHub.java:171) [common-events-1.0.1-4.0.0-126364.jar:na]
    at org.gcube.common.events.impl.DefaultHub.fire(DefaultHub.java:93) [common-events-1.0.1-4.0.0-126364.jar:na]
    at org.gcube.smartgears.handlers.container.lifecycle.ProfileManager$1.onChanged(ProfileManager.java:97) [common-smartgears-1.2.7-4.0.0-128702.jar:na]
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method) ~[na:1.7.0_80]
    at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57) ~[na:1.7.0_80]
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    at org.gcube.common.events.impl.DefaultHub$1.run(DefaultHub.java:194) [common-events-1.0.1-4.0.0-126364.jar:na]
    at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:471) [na:1.7.0_80]
    at java.util.concurrent.FutureTask.run(FutureTask.java:262) [na:1.7.0_80]
    at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1145) [na:1.7.0_80]
    at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:615) [na:1.7.0_80]
    at java.lang.Thread.run(Thread.java:745) [na:1.7.0_80]
10:55:48.094 [localhost-startStop-2] WARN BasicUsageRecord: Unable to automatically set the scope using scope provider. The record will not be valid if the scope will not be explicitly set.
10:55:48.102 [pool-1-thread-5] ERROR ProfileManager: cannot publish container (see details)
java.lang.IllegalStateException: a map for /gcube/gCubeApps is undefined
```

```

        at org.gcube.common.scope.impl.ScopedServiceMap.currentMap(ScopedServiceMap.java:63) ~[common-scope-1.2.0-4.0.0-125717.jar:na]
        at org.gcube.common.scope.impl.ScopedServiceMap.endpoint(ScopedServiceMap.java:44) ~[common-scope-1.2.0-4.0.0-125717.jar:na]
        at org.gcube.resources.discovery.icclient.ICClient.getStub(ICClient.java:74) ~[ic-client-1.0.1-4.0.0-126578.jar:na]
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        at java.lang.reflect.Method.invoke(Method.java:606) ~[na:1.7.0_80]
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    ]
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        at org.gcube.common.events.impl.DefaultHub$1.run(DefaultHub.java:194) [common-events-1.0.1-4.0.0-126364.jar:na]
        at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:471) [na:1.7.0_80]
        at java.util.concurrent.FutureTask.run(FutureTask.java:262) [na:1.7.0_80]
        at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1145) [na:1.7.0_80]
        at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:615) [na:1.7.0_80]
        at java.lang.Thread.run(Thread.java:745) [na:1.7.0_80]

```

#13 - Oct 05, 2016 01:22 PM - Gianpaolo Coro

The issue was due to a common-scope library left in the web application. The newly installed service works. All the regression tests were passed. I'm going to test the cloud computations using one machine as orchestrator and another one as worker.

#14 - Oct 05, 2016 06:00 PM - Gianpaolo Coro

- Status changed from Feedback to Closed

- % Done changed from 80 to 100

Tests have been done with Cloud computing algorithms using two DataMiners as Worker nodes. Everything works fine with medium-time-running computations.

The production environment or the EGI infrastructure will give the occasion to test larger jobs.

The execution time reduction is more than 85%, but we are doing more precise measurements.

#15 - Oct 05, 2016 06:01 PM - Gianpaolo Coro

- *Parent task set to #688*