

## Application: gvSIG desktop - gvSIG bugs #4322

### Nasty StackOverflowError in plugin system while SPI lookup

08/16/2016 08:59 PM - Andrea Antonello

<b>Status:</b>	Closed	<b>% Done:</b>	0%
<b>Priority:</b>	Urgent	<b>Spent time:</b>	0.00 hour
<b>Assignee:</b>			
<b>Category:</b>	Application		
<b>Target version:</b>	2.3.0-2442 (rev. org.gvsig.desktop-2.0.149)		
<b>Severity:</b>	Critical	<b>Add-on version:</b>	
<b>gvSIG version:</b>	2.3.0	<b>Add-on build:</b>	
<b>gvSIG build:</b>	2441	<b>Add-on resolve version:</b>	
<b>Operative System:</b>	Linux	<b>Add-on resolve build:</b>	
<b>Keywords:</b>		<b>Proyecto:</b>	
<b>Has patch:</b>	Yes	<b>Hito:</b>	
<b>Add-on name:</b>	Unknown		

#### Description

Recently some changes have been done to the `org.gvsig.andami.plugins.PluginClassLoader` class.

These seem to be potentially dangerous for certain SPI lookup sequences. It can happen that the `org.gvsig.andami.plugins.PluginClassLoader.getResources(String)` method ends up in a recursion loop (in debug I saw pass the main app and the jcrs plugins often) ending in a stackoverflow as:

```
java.lang.StackOverflowError
at java.lang.StringCoding$StringEncoder.encode(StringCoding.java:304)
at java.lang.StringCoding.encode(StringCoding.java:344)
at java.lang.String.getBytes(String.java:918)
at java.io.UnixFileSystem.getBooleanAttributes0(Native Method)
at java.io.UnixFileSystem.getBooleanAttributes(UnixFileSystem.java:242)
at java.io.File.exists(File.java:819)
at sun.misc.URLClassPath$FileLoader.getResource(URLClassPath.java:1245)
at sun.misc.URLClassPath$FileLoader.findResource(URLClassPath.java:1212)
at sun.misc.URLClassPath$1.next(URLClassPath.java:240)
at sun.misc.URLClassPath$1.hasMoreElements(URLClassPath.java:250)
at java.net.URLClassLoader$3$1.run(URLClassLoader.java:601)
at java.net.URLClassLoader$3$1.run(URLClassLoader.java:599)
at java.security.AccessController.doPrivileged(Native Method)
at java.net.URLClassLoader$3.next(URLClassLoader.java:598)
at java.net.URLClassLoader$3.hasMoreElements(URLClassLoader.java:623)
at sun.misc.CompoundEnumeration.next(CompoundEnumeration.java:45)
at sun.misc.CompoundEnumeration.hasMoreElements(CompoundEnumeration.java:54)
at sun.misc.CompoundEnumeration.next(CompoundEnumeration.java:45)
at sun.misc.CompoundEnumeration.hasMoreElements(CompoundEnumeration.java:54)
at org.gvsig.andami.plugins.PluginClassLoader.getResources(PluginClassLoader.java:392)
at org.gvsig.andami.plugins.PluginClassLoader.getResources(PluginClassLoader.java:397)
at org.gvsig.andami.plugins.PluginClassLoader.getResources(PluginClassLoader.java:397)
at org.gvsig.andami.plugins.PluginClassLoader.getResources(PluginClassLoader.java:397)
at org.gvsig.andami.plugins.PluginClassLoader.getResources(PluginClassLoader.java:397)
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....
```

This has been tested with previous versions (ex. build 2426) and it works.

Cesar supplied me with a andami plugin containing the PluginClassLoader without the latest changes and the problem is not there.

I mark this as urgent, since I would not trust this behavior not to happen also at startup in certain conditions.

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**Related issues:**

Related to Application: gvSIG desktop - gvSIG bugs # 4296: Scripting composer...

**Closed**

**07/25/2016**

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**Associated revisions**

**Revision 42929 - 08/21/2016 10:57 AM - Joaquín del Cerro Murciano**

refs #4322, patch from Cesar Martinez. Fix infinite loop in getResources of PluginClassLoader.

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**History**

**#1 - 08/16/2016 09:27 PM - Cesar Martinez Izquierdo**

The problem seems to be caused by the following combined causes:

- A getResources() method was added to PluginClassLoader, overriding default ClassLoader behaviour (revision <https://redmine.gvsig.net/redmine/projects/gvsig-desktop/repository/revisions/42774> )
- A dependency loop is created between org.gvsig.geoprocess.app.sextante and org.gvsig.geoprocess.app.mainplugin plugins

Checking the config.xml files:

- org.gvsig.geoprocess.app.sextante declares a dependence on org.gvsig.geoprocess.app.mainplugin on its config.xml
- org.gvsig.geoprocess.app.mainplugin DOES NOT declare a dependence on org.gvsig.geoprocess.app.sextante, however org.gvsig.geoprocess.app.sextante becomes included on the pluginLoaders list at runtime (can be checked by debugging)

I think this may be caused by the system used to register gvSIG & Sextante geoprocesses, which probably modifies the classloader dependences of org.gvsig.geoprocess.app.mainplugin at runtime (but it should be investigated and confirmed)

**#2 - 08/17/2016 03:40 PM - Cesar Martinez Izquierdo**

- *Has patch set to Yes*
- *File pluginClassLoaderGetResources.diff added*

I have created a patch to avoid the infinite loop when a cross-reference is found.

I think we should re-design the way in which Sextante/gvSIG algorithms are loaded, removing the existing cross-reference, as it might cause problems on other parts of gvSIG.

For the moment, this patch solves the most evident problem.

**#3 - 08/21/2016 10:58 AM - Joaquín del Cerro Murciano**

- Status changed from New to Fixed

Metido el parche.

Gracias.

**#4 - 08/21/2016 11:21 AM - Joaquín del Cerro Murciano**

- Related to gvSIG bugs #4296: Scripting composer: double-clicking on a text file causes a StackOverflowError added

**#5 - 08/23/2016 11:38 AM - Álvaro Anguix**

- Status changed from Fixed to Closed

**Files**

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pluginClassLoaderGetResources.diff	1.54 KB	08/17/2016	Cesar Martinez Izquierdo
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