

## Kepler - Bug #3735

### R actor produces 'null' message when R not found on PATH

01/08/2009 11:14 AM - Matt Jones

<b>Status:</b>	Resolved	<b>Start date:</b>	01/08/2009
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	ben leinfelder	<b>% Done:</b>	0%
<b>Category:</b>	actors	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	1.1.0	<b>Spent time:</b>	0.00 hour
<b>Bugzilla-Id:</b>	3735		

**Description**

Edward Lee reports that the R actor produces a 'null' error message when one of the demo workflows that requires R is run on a system lacking R.

The R actor (and other external execution actors like Matlab) should check to see if the R executable is available and the R system functioning before it tries to execute. Maybe this can be done on `init()` so that it happens before a workflow is run.

When R is not found, a sensible error message should be displayed, one that preferably points the user to an easy solution of the problem.

An alternative (and probably better) approach is to have the R actor formally specify a dependency on the R system executable for the local platform, so that when the R actor is installed, the module installer checks that its dependencies are all satisfied. This would be possible under the new modularization system that includes the ability to formally specify dependency graphs in module metadata.

#### History

##### #1 - 01/09/2009 02:06 PM - ben leinfelder

I've tried a few things to have Kepler *not* find my R installation. Removing the R executable from my PATH gives me this error message (as expected and desired):

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There has been a problem launching the R application!  
It may be that R is not installed on your system, or it may not be on your path and cannot be located by Kepler. Please make sure R is installed and the R command line executable is in the path.

For more information, see section 8.2.2 of the Kepler User Manual.

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I've not yet been able to recreate 'null' error message. I'm using the `demos/getting-started/00-StatisticalSummary.xml` workflow to test this.

##### #2 - 01/09/2009 10:37 PM - Christopher Brooks

I was there when Edward ran the demo and we *may* have seen a message about R not being installed. Even if we did, there are two points:

1) A user dialog with just the word "null" in it is not very user friendly and is a bug. The message should be more explicit, even if there is a preceding message dialog that is well worded.

If, under Mac OS X, I don't have R in my path, I see a reasonable message dialog and then when I hit ok, I get a error dialog that says "null"

The stack trace is:

```
java.lang.NullPointerException
at org.ecoinformatics.seek.R.RExpression.postfire(RExpression.java:767)
at ptolemy.actor.AtomicActor.iterate(AtomicActor.java:439)
at ptolemy.actor.sched.StaticSchedulingDirector.fire(StaticSchedulingDirector.java:188)
at ptolemy.actor.CompositeActor.fire(CompositeActor.java:415)
at ptolemy.actor.Manager.iterate(Manager.java:718)
at ptolemy.actor.Manager.execute(Manager.java:349)
at ptolemy.actor.Manager.run(Manager.java:1138)
at ptolemy.actor.Manager$3.run(Manager.java:1179)
```

I fixed this bug.

However, RExpression has a bigger problem in that it pops up dialogs directly instead of using the `ptolemy.gui.MessageHandler` facility. The problem is that if RExpression probably can't be used in a non-graphical environment (it certainly can't be compiled without swing). There should be a bug report for this issue. In general, actor code that calls `JOptionPane.showMessageDialog()` is suspect.

2) The real bug is that the first demo should not require additional software that the user might not have installed yet. We are offering access to Kepler via svn, so we should expect that new Kepler users will download Kepler via svn and try it out without first installing R. The solution is to have some Non-R demos at the first and to have the R demos very clearly marked. As a first demo, I propose the predator/prey demo, it is easily understood. So, there should be a bug report for this as well.

Sorry about the confusion on this.

I'll close this after I create new bugs to address the above issue

**#3 - 01/12/2009 08:48 AM - ben leinfelder**

I've now removed `JOptionPane` from the `RExpression2` actor (the `JRI` implementation of the `RExpression` actor).

**#4 - 01/12/2009 09:27 AM - Christopher Brooks**

I'm closing this one:

- I searched the tree for `JOptionPane.showMessageDialog` and replaced it with either `throw new IllegalArgumentException(this, or else`
- `MessageHandler.message(`
- Previously, I had changed the order of the demos on the about page and had fixed the R actor so the null message no longer appeared

**#5 - 03/27/2013 02:24 PM - Redmine Admin**

Original Bugzilla ID was 3735