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Subject: help getting started with Mokka in ILCDIRAC  
Posted by [jeans](#) on Wed, 20 Nov 2013 04:09:51 GMT  
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I'm trying to use ILCDIRAC to simulate a few ILD events using Mokka and its particle gun.

This is the python script I'm using:

Quote:

```
from DIRAC.Core.Base import Script
Script.parseCommandLine()
```

```
from ILCDIRAC.Interfaces.API.DiraclLC import DiracLC
dirac = DiracLC(True,"daniel_mokka_job_repository.rep")
```

```
from ILCDIRAC.Interfaces.API.NewInterface.UserJob import UserJob
job = UserJob()
job.setName("MokkaDiracTest")
job.setJobGroup("MMTEST")
job.setOutputSandbox(['*.log', '*.slcio', "gear.xml"])
job.setCPUTime(50000)
job.setSystemConfig('x86_64-slc5-gcc43-opt')
from ILCDIRAC.Interfaces.API.NewInterface.Applications import Mokka
mo = Mokka()
mo.setVersion("08.00.03")
mo.setSteeringFile("ff_orig.steer")
mo.setMacFile("ff_orig.mac")
res = job.append(mo)

print job.submit(dirac)
```

the input steering file ff\_orig.steer:

Quote:

```
/Mokka/init/BatchMode true
/Mokka/init/detectorModel ILD_o1_v05
/Mokka/init/dbHost pollin1.in2p3.fr
/Mokka/init/user consult
/Mokka/init/dbPasswd consult
/Mokka/init/lcioWriteMode WRITE_NEW
/Mokka/init/lcioStoreCalHitPosition true
/Mokka/init/MokkaGearFileName gear.xml
/Mokka/init/lcioFilename ./mokka_test.slcio
```

```
/Mokka/init/startEventNumber 0  
exit
```

and the macro file ff\_orig.mac

Quote:

```
/generator/generator particleGun  
/gun/position 0 0 0 mm  
/gun/energy 5 GeV  
/gun/direction 0 1 0  
/gun/thetaSmearing 360  
/gun/phiSmearing 360  
/gun/particle gamma  
/tracking/verbose 0  
/run/beamOn 5
```

This job fails, I attach the input and output tar balls.  
Can you help me figure out the reason? Thanks!

Another question: some parameters, such as number of events, can be specified in both the macro file and directly to the Mokka() object in DIRAC (like mo.setNbEvts(5)). If I were to give inconsistent values in these two places, which one would get precedence?

Thanks for your help,  
Daniel.

## File Attachments

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1) [9121021\\_InputSandbox.tar](#), downloaded 252 times

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Subject: Re: help getting started with Mokka in ILCDIRAC (output tarball)  
Posted by [jeans](#) on Wed, 20 Nov 2013 04:12:53 GMT  
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I attach the output tarball of my test mokka job.

The job seems to be trying to use the macro file  
mokkamac.mac  
rather than the requested file ("ff\_orig.mac"), but I don;t know if that is the real reason for job  
failure...

thanks,  
Daniel.

## File Attachments

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1) [9121021\\_OutputSandbox.tar](#), downloaded 269 times

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Subject: Re: help getting started with Mokka in ILCDIRAC

Posted by [sailer](#) on Wed, 20 Nov 2013 10:46:46 GMT

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There is a problem with Mokka version 08.00.03, which makes it unusable. Please use a different version of Mokka (e.g. 080003). The files to set up mysql are not part of the tarball used for this version.

If you add \*.steer and to the output file you can see the Mokka steering file, it should contain /Mokka/init/initialMacroFile ff\_orig.mac (you can also see the line at the beginning of the mokka\_...log file.

I think, when you specify your own macro file that is used as it is, so the number of events given via /run/beamOn" will take precedence of setNbEvts().

The morkamac.mac file is created by ILCDIRAC automatically based on the input file and the number of events. so the error to run "cat morkamac.mac" can be ignored.

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Subject: Re: help getting started with Mokka in ILCDIRAC

Posted by [jeans](#) on Thu, 21 Nov 2013 07:58:47 GMT

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Thanks, Andr  , I've now got it working.

For the reference of others, I'll post the scripts which worked for me:

The python script for ilcdircac (testmokka.py):

Quote:

```
from DIRAC.Core.Base import Script
Script.parseCommandLine()
```

```
from ILCDIRAC.Interfaces.API.DiraclLC import DiracLC
dirac = DiracLC(True,"daniel_mokka_job_repository.rep")
from ILCDIRAC.Interfaces.API.NewInterface.UserJob import UserJob
job = UserJob()
job.setName("MokkaDiracTest")
job.setJobGroup("MMTEST")
job.setOutputSandbox(["*.log","*.slcio","*.xml","*.steer"])
job.setCPUTime(50000)
job.setSystemConfig('x86_64-slc5-gcc43-opt')
from ILCDIRAC.Interfaces.API.NewInterface.Applications import Mokka
mo = Mokka()
mo.setVersion("080003")
mo.setOutputFile("test_mokka.slcio")
mo.setDetectorModel("ILD_o1_v05")
mo.setSteeringFile("tttt.steer")
mo.setMacFile("tttt.mac")
res = job.append(mo)
print job.submit(dirac)
```

the steering file tttt.steer:

Quote:

```
/Mokka/init/lcioWriteMode WRITE_NEW
/Mokka/init/lcioStoreCalHitPosition true
/Mokka/init/dbHost pollin1.in2p3.fr
/Mokka/init/user consult
/Mokka/init/dbPasswd consult
```

and the macro file tttt.mac:

Quote:

```
/generator/generator particleGun
/gun/position 0 0 0 mm
/gun/energy 5 GeV
/gun/direction 0 1 0
/gun/thetaSmearing 360
/gun/phiSmearing 360
/gun/particle mu-
/run/beamOn 30
```

I believe that I had to specify the number of events with the explicit "/run/beamOn 30" command in

the Mokka macro. Using `mo.setNbEvts()` method seemed to have no effect.

put all 3 files in the same directory, set up the ILCDIRAC environment (something like "source bashrc"), then run  
> python testmokka.py

looking at the mokka steering file and log file in the output tarball were useful for debugging.

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Subject: policy for ilcsoft updates in ilcdircac  
Posted by [jeans](#) on Fri, 20 Dec 2013 01:34:47 GMT  
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Dear all,

Could you tell me what the policy for including recent ilcsoft releases in ilcdircac is?

Since we would like to run CALICE software using the system, this information would help us to decide some policy on which ilcsoft version to build our software against.

Thanks,  
Daniel.

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Subject: Re: policy for ilcsoft updates in ilcdircac  
Posted by [cgreffe](#) on Fri, 20 Dec 2013 07:37:36 GMT  
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Dear Daniel,

so far we have simply added software versions upon request (within reason), since this requires to package the software into a tar ball. In the future, once we have moved to using CVMFS for our software installations, I expect that all ILCsoft versions will be available.

With the current software tar balls we advise to download the respective software version from the grid (`/ilc/prod/software/`) and build your software against that using plain SLC5, i.e. gcc 4.1 (although SLC6 - gcc 4.4, should now be used on most sites).

The CALICE software could of course be included into the available packages if this is useful for you.

Cheers,  
Christian

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Subject: Changing detector geometry in ILCDirac  
Posted by [mgaughran](#) on Fri, 22 Aug 2014 15:44:43 GMT  
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Dear all,

When attempting to use custom detector geometry for the SiD Sim-Reco chain, there are two instances of lcsim being used. The first one accesses the detector geometry as required, using the alias.properties file, and produces valid data. The final step in the chain uses lcsim to produce the DST file, but this time is unable to access the zip file containing the detector geometry.

If I include the zip file (brought in through the input sandbox) in the output sandbox, Dirac is unable to find it for some reason. It is as though the zip file is removed after one of the earlier stages, although I see no instance of this in the code. This problem can be reproduced using Christian Grefe's code, found [here](#).

The fact that the first instance of lcsim works suggests that I have input the correct files, and there is simply a certain option that I am missing that prevents the removal of the detector geometry zip file. Is there either a way to ensure the persistence of this zip file, or prevent the second lcsim run from requiring the detector geometry (as it isn't necessary outside Dirac)?

Thanks,  
Martin Gaughran

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Subject: Re: Changing detector geometry in ILCDirac  
Posted by [jfstrube](#) on Tue, 26 Aug 2014 01:12:11 GMT  
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This sounds like a bug to me. You can report bugs using the "Report a problem" tab at [ilcdirc.cern.ch](http://ilcdirc.cern.ch)

If you do, please post the bug reference url here, so people don't have to answer twice. Also mention that you posted to the forum in the bug report.

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Subject: Re: Changing detector geometry in ILCDirac

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Posted by [sailer](#) on Tue, 26 Aug 2014 09:11:58 GMT

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Hi Martin, Jan,

We contacted Martin via e-mail yesterday with a possible workaround for this problem: Instead of providing the detector.zip file we asked him to try to give a web-url with the detector.zip file in the alias.properties so then lcsim would obtain the file from the web. This is also how we do it for the production jobs.

And I will create a jira ticket to investigate the reason why the zip file disappears.

Cheers,  
Andre

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Subject: Re: Changing detector geometry in ILCDirac  
Posted by [mgaughran](#) on Wed, 27 Aug 2014 11:07:22 GMT  
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Dear all,

Sorry for having replied so late, this is the first day working since Friday. It turns out that slicPandora is in fact responsible for deleting the zip file in the chain. I would imagine that linking lcsim to the zip file on the web would still sort out the problem, as it would download it from the web each time it ran, and separately use the local zip file for slicPandora. Would you know of any easy way to link to an LFN from an alias.properties? It would be simpler than having to sort out a separate web location.

Thanks,  
Martin Gaughran

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Subject: Re: Changing detector geometry in ILCDirac  
Posted by [jfstrube](#) on Wed, 27 Aug 2014 11:23:01 GMT  
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It's unfortunately not possible to use an LFN in lcsim.org.

The easiest would be to use your CERN account and enable web hosting.  
cern.ch/account  
->services

->web services

You could try to use zip files with different names, but I don't know if naming conventions are enforced.

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