

New ILCDIRAC Interface

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ILCDIRAC tutorial

Outline

New ILCDIRAC
Interface

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What is this about:

- Presentation about ILCDIRAC's new interface
- What has to be changed in existing code
- Some examples

Not for beginners! Beginners should start from the [HeadFirstTalk](#).
Contains also examples based on new interface. Check [here](#) for
API documentation.

Current status:

- Tight inter dependance between applications and jobs
- All applications independant: code duplication

Ideas:

- Decouple applications from job
- Better architecture: use object oriented concepts like inheritance

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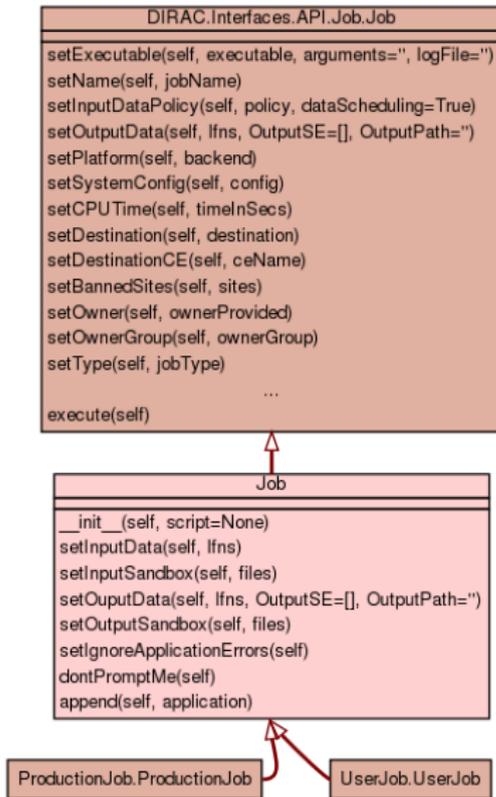
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- Possible to subclass any, to change fonctionnality
- As names suggest: users should use UserJob, while ProductionJob is reserved for production

More on usage later.

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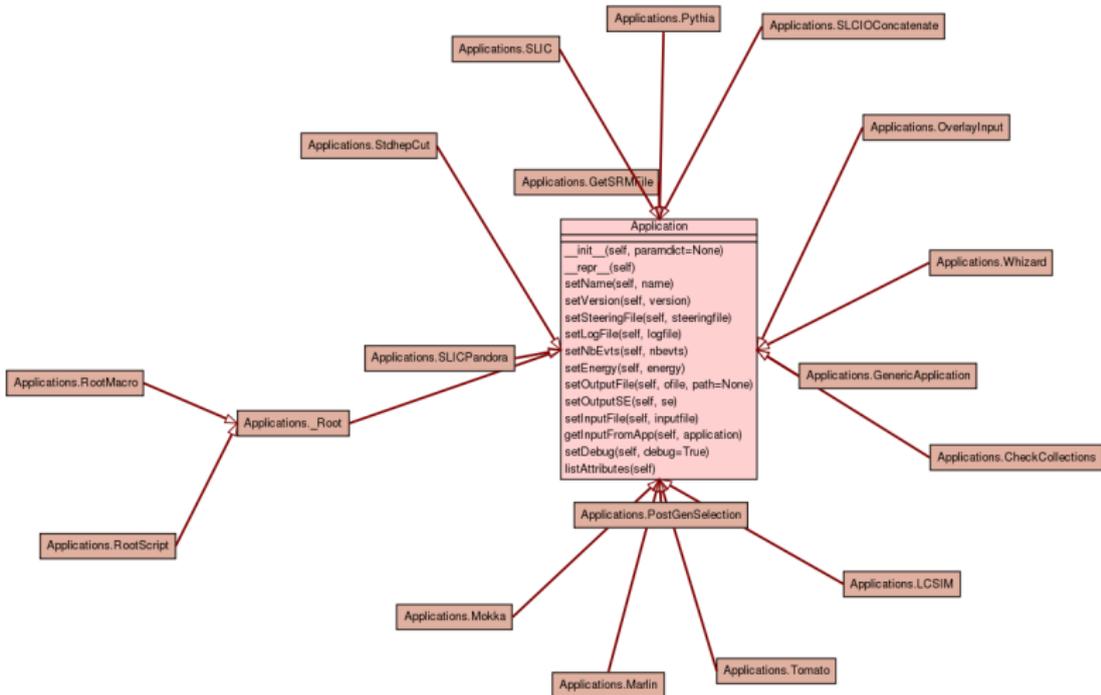
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- Share lots of fonctionnality: inherit it from main Application class
- Easier to maintain
- Easier to code for users: No positionnal arguments, more checks possible, more stability, etc.
- Linking can be done between any application: Entry points and output are names identically
- Adding new application easier than before: interface more convenient

Examples

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Following are a few “simple” examples. More complete ones can be found in `$DIRACROOT/ILCDIRAC/Interfaces/API/NewInterface/Examples`.

Example (how it used to be)

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```
from DIRAC.Core.Base import Script
Script.parseCommandLine()
from ILCDIRAC.Interfaces.API.ILCJob import *
from ILCDIRAC.Interfaces.API.DiraclLC import *
d = DiracLC()
j = ILCJob()
j.setName("Sometest")
j.setJobGroup("TestGroup")
res = j.setMokka(appVersion="0706P08", steeringFile="clic_ild_cdr.steer",
                inputGenfile="SomeFile.stdhep", nbOfEvents=10,
                outputFile='MyFile.slcio')

if not res['OK']:
    exit()
print d.submit(j)
```

Example (Now)

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Things to come

```
from DIRAC.Core.Base import Script
Script.parseCommandLine()
from ILCDIRAC.Interfaces.API.NewInterface.UserJob import *
from ILCDIRAC.Interfaces.API.NewInterface.Applications import *
from ILCDIRAC.Interfaces.API.DiraclLC import *
d = DiracLC()
j = UserJob()
j.setName("Sometest")
j.setJobGroup("TestGroup")
mo = Mokka()
mo.setVersion("0706P08")
mo.setSteeringFile(" clic_ild_cdr.steer")
mo.setInputFile(" lfn :/ ilc / user / s / spos / SomeFile . stdhep ")
mo.setOutputFile(" MyFile . slcio ")
mo.setNbEvts(10)
res = j.append(mo)
if not res[ 'OK' ]:
    print res[ 'Message' ]
    exit()
print d.checkparams(j)
```

Same but shorter

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Things to come

```
from DIRAC.Core.Base import Script
Script.parseCommandLine()
from ILCDIRAC.Interfaces.API.NewInterface.UserJob import *
from ILCDIRAC.Interfaces.API.NewInterface.Applications import *
from ILCDIRAC.Interfaces.API.DiraILC import *
d = DiraILC()
j = UserJob()
j.setName("Sometest")
j.setJobGroup("TestGroup")
mo = Mokka({"Version":"0706P08", "SteeringFile":"clic_ild_cdr.steer",
           "InputFile":"SomeFile.stdhep", "OutputFile":"MyFile.slcio",
           "NbEvts":10})
res = j.append(mo)
if not res['OK']:
    print res['Message']
    exit()
print d.submit(j)
```

One could even get rid of 1 line, but not if linking is needed.

Linking example

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```
from DIRAC.Core.Base import Script
Script.parseCommandLine()
from ILCDIRAC.Interfaces.API.NewInterface.UserJob import *
from ILCDIRAC.Interfaces.API.NewInterface.Applications import *
from ILCDIRAC.Interfaces.API.DiraclLC import *
d = DiracLC()
j = UserJob()
j.setName("Sometest")
j.setJobGroup("TestGroup")
mo = Mokka({"Version":"0706P08", "SteeringFile":"clic_ild_cdr.steer",
           "InputFile":"Ifn / ilc / SomeFile.stdhep", "OutputFile":"MyFile",
           "Energy":3000., "NbEvts":10})
res = j.append(mo)
if not res['OK']:
    print res['Message']
    exit()
ma = Marlin({"Version":"v0111Prod", "SteeringFile":"clic_ild_cdr_steering",
            "OutputDstFile":"MyDst.slcio"})
ma.getInputFromApp(mo)
res = j.append(ma)
if not res['OK']:
    print res['Message']
    exit()
```

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- When job is submitted, users will get a dump of the properties and will be asked to confirm (with a possibility to disable this)
- Will add a copy method: define some things only once, and modify them when needed
- Will implement service that will hold available versions
- Service that knows production steering files
Currently available [here](#).
- We can think about providing already-filled application instances.