

The container interface is incompatible with the pipeline interface

What is the problem and why do we care?

- At job startup, the pipeline interface is invoked with the command: `bash pipeline_wrapper` (see for example: `/sdf/data/fermi/n/u41/L1/logs/DEV/AAA-testVerifyS3df-no-wrap/5.9/verify/000/slurm_pilot`)
- If we invoke the container with `<job executable="{preamble} ${container_wrap} python --version" batchOptions="{extra}" />` (as in [Brian's example](#)), the pipeline interface defined in `pipeline_wrapper` is NOT available inside the container
- **This is a showstopper:** L1Proc and other complex tasks use extensively the pipeline interface defined in `pipeline_wrapper`, to set/read pipeline variables, to create substreams, etc.

Possible solution (suggested by Brian on 20 Sep 2023)

- Write a lightweight interface to the pipeline environment, to obviate the need for invoking `pipelineSet` and `pipelineCreateStream`. Example [here](#).
- Implemented in GPLTools as `pipeline.py`. This seems to work as of 25 Jan 2024

How we isolated and documented the issue

- Task `AAA-testVerifyS3df-wrapper` (see xml [here](#)) loads the container with `${container_wrap}` at line 50:
 - `<job executable="{preamble} ${container_wrap} ${python27} ${L1ProcROOT}/verify.py" batchOptions="{extra}" />`
- Thereby losing access to the pipeline interface. For example, we try accessing `pipelineSet` and fail (full log [here](#), error at line 179):
 - `pipelineSet=`
`which: no pipelineSet in (/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin)`
- Task `AAA-testVerifyS3df-no-wrap` (see xml [here](#)) defines the container, but does not invoke it at execution (line 50):
 - `<job executable="{python27} ${L1ProcROOT}/verify.py" batchOptions="{extra}" />`
 - (notably, the python errors in lines 173-213 of the logfile confirm that the container is not loaded correctly in the executable)
- And still has access to the pipeline interface. For example, we try accessing `pipelineSet` and succeed (full log [here](#), lines 221-225):
 - `pipelineSet=`
`pipelineSet ()`
`{`
 `echo "Pipeline.$1: $2" >> ${PIPELINE_SUMMARY}`
`}`