# The Zeuthen Batch-System – A First Approach

- please have a look at http://dvinfo.ifh.de/Batch_System_Usage
- so far only used data on afs scratch (didn't use copy local option)
- qrsh worked out of the box...
  - but yesterday not at all... (Your "qrsh" request could not be scheduled, try again later.) hmm?
- setting up you environment for qsub can be more difficult
  - e.g. ini root514 sometime didn't work (might depend on the actual machine you end up on)
- performance comparism = run simple analysis (2000 events of ttbar analysis)

| method | data location | CPU-time | Hz | CPU | Bogomips |
|---|---|---|---|---|---|
| hyade3 | afs | 592.20 | 3 | 1x2.4GHz | 4x4757.91 |
| pub4 | afs | 684.21 | 3 | 4x2.4GHz | 4x4744.80 |
| qrsh | afs | 368.69 | 5 | various | various |
| qsub | afs | 373.56 | 5 | various | various |
| laptop | local | 351.76 | 6 | 1x2.0GHz | 4x1597.87 |
| atlhlt2 | afs | 223.50 | 9 | 4x3.0GHz | 4x5985.04 |

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- available options for qrsh and qsub (taken from http://dvinfo.ifh.de/Batch_System_Usage)
  - set your project, if different from your default or in case you don't have a default

    -P atlas
  - choose specific Shell, if different from your standard one

    -S /bin/zsh
  - choose architecture (ia32, amd64) and operation system (sl3,sl5)

    -l arch=ia32 -l os=sl3 sl3 and ia32 will be gone soon though!!!
  - soft and hard limits for memory, cpu time and wallclock time and reserve memory

    -l s_vmem=600M -l s_cpu=03:00:00 -l s_rt=03:00:00
    -l h_vmen=600M -l h_cpu=48:00:00 -l h_rt=15:00:00
    -l tmp_free=5G (not tested yet)
  - inherit the environment from your current shell (usefull for qrsh, but so much for qsub)

    -V

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- exemplary submission script

```
#!/bin/zsh
#$ -S /bin/zsh
#$ -l arch=amd64
#$ -l h_cpu=00:15:00
#$ -l h_vmem=600M
#$ -j y
#$ -o /afs/ifh.de/group/atlas/users/scratch/mehlhase/TopPhysics/SFrameNeu/CycleAnalysis/batch
#$ -m ae
#$ -M mehlhase@ifh.de
#$ -P atlas

source /afs/ifh.de/user/m/mehlhase/scripts/setupSFrameNeu
cd ..
make clean
make
cd dev
make clean
make
cd ../CycleAnalysis
make clean
make
cd run
sframe_main ../example/example_top.xml
cd ..
```

parameters are read even though commented

in case you load the environment properly
you can even compile your code on the farm