

Darshan: Usage example on JUQUEEN

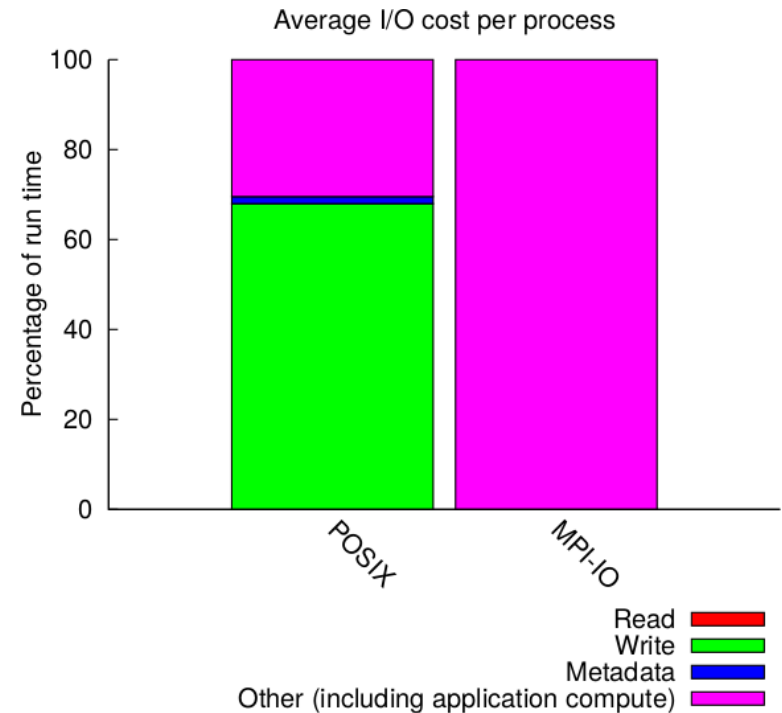
- Load module
 - `module load darshan`
- Recompile
 - `make MPICC=mpicc`
Note on Fortran 90: the mpich wrapper for Fortran 90 on BG/Q uses MPI in a way that conflicts with Darshan. `mpif77` should be used for linking
- Tell runjob where to save the output (in submit script)
 - `runjob ... --envs \
DARSHAN_LOG_PATH=$HOME/darshanlogs ...`
- Analyse output
 - `darshan-job-summary.pl mylog.darshan.gz`
 - `evince mylog.pdf`

Darshan: Usage example on JURECA/JUROPA3

- Load module
 - module load intel-para darshan-runtime
- Tell srun to use Darshan (in submit script)
 - ```
LD_PRELOAD=$EBROOTDARSHANMINRUNTIME/lib/libdarshan.so \
DARSHAN_LOG_PATH=/path/to/your/logdir \
srun -n 32 ./executable
```
- Analyse output
  - module load intel-para darshan-util
  - darshan-job-summary.pl mylog.darshan.gz
  - evince mylog.pdf

# Darshan: Interpret the summary

- Average and statistical information on I/O patterns
  - Relative time for I/O
  - Most common access sizes
- Additional metrics
  - File count
  - I/O size histogram
  - Timeline for read / write per task
  - ...



## Most Common Access Sizes

| access size | count |
|-------------|-------|
| 4194304     | 256   |