LHCbDIRAC limits on the number of streams 9th computing workshop

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Limits for the streams out of the HLT

Limits

- More streams $\Rightarrow$ more writers
    - merging overhead (maybe solved ?)
    - Online storage: IO limitation to some extend
- Bandwidth to CASTOR is limited
- Per file overhead for transfers
- Operationally, if different processing $\Rightarrow$ more productions & transformations

Status

- Not OK to divide streams: operational issues offline
- Not OK to add streams: sorry, we're full

Limits for the streams out of the stripping

Limits

- More streams $\Rightarrow$ more output files $\Rightarrow$ higher likelihood that one fails to upload $\Rightarrow$ operationally (very) annoying.

- Large operational overhead for follow up (runs flushing, consistency checks, etc)

- More stream $\Rightarrow$ more merging jobs $\Rightarrow$ more operational work

- More streams $\Rightarrow$ more input for merging jobs $\Rightarrow$ input data (MINIBIAS stream in Stripping28)

Status

- Technically, adding 1 or 2 more streams would not kill LHCbDIRAC by itself. 50 would...

- Operationally, difficult to add any more streams.

Few more notes...

- In terms of resources and operations, the less overlap the better
- In Run 3, CPU will be an issue: multiplying streams and merging would mean more cpu intensive jobs which we cannot afford
- Ideally, all streams out of the stripping should be balanced