

# LHCb use cases on the NAF

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## Conditions

- *data available on mass storage (dCache)*
- *private data (e.g. ntuples) stored on Lustre*
- *availability of LHCb software*
- *use customized software & environment on NAF*

## Use:

- over 2011: LHCb used 7% of CPU resources
- one power user: C. Clangenberg, usage: 6%
- NAF used by  $\mathcal{O}(20)$  users
- NAF exclusively used as local farm with batch-nodes.
- *i.e.* with LHCb software & private software

All use-cases successfully performed on the NAF!

Ganga used for job-submission, transparent for use on the Grid.



- MC studies to assess reconstruction efficiencies and backgrounds
- ntuples produced & analyzed on NAF and/or home institute
- experimental-data processing centrally managed (on Grid)
- Physics working groups request central production of filtered datasets (streams)
- users produce ntuples from these streams (on Grid)
- ntuples analyzed at home institutes/NAF



# Conclusions

- LHCb uses NAF mostly in burst mode: before conferences/thesis deadlines
- sufficient Lustre & dCache space for LHCb
- sufficient cpu-power
- data & software downloaded/installed using custom build manager



## Answers to NAF

- *through Ganga, use of Grid & NAF more or less transparent*
- *filtering of data performed on grid*
- *Luster used for storage of ntuples*
- *to AFS or not to AFS: no issue for LHCb*
- *dCache mostly used to store MC data*
- *Some data sets at NAF, others in Heidelberg or at Tier-1's*
- *User support channeled through local support in HD (i.e. JB & AZ)*
- *So far, ssh seems sufficient (no complaints)*
- *no known use cases of/for smartphones or tablets*

