
Generator Services Project Tuning Tools Support

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Outline

- Overview of Generators Services project
 - Tuning tools support
 - repository of tools
 - web services
 - Discussion on HepData
 - improvements for the coming LHC data
 - Summary
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Generator Services project overview

❑ GENSER

- repository of MC generators (binaries and source) on afs
- ready to use in the experiments software framework
- used in all official production

❑ Validation

- regression testing of the generators
- comparison to data

❑ HepMC

- C++ event record

❑ MCDB

- database of parton-level MC events used by CMS
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Tuning tools support

- ❑ new workpackage within the Generator Services project
 - ❑ resources partly coming from Generator Services, partly from LPCC
 - contributions very welcome
 - ❑ activities identifies so far
 - repository of tuning tools (a la GENSER)
 - web resources for tuning and validation
 - possible (future) involvement in tuning of particular generators
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Tuning tools support

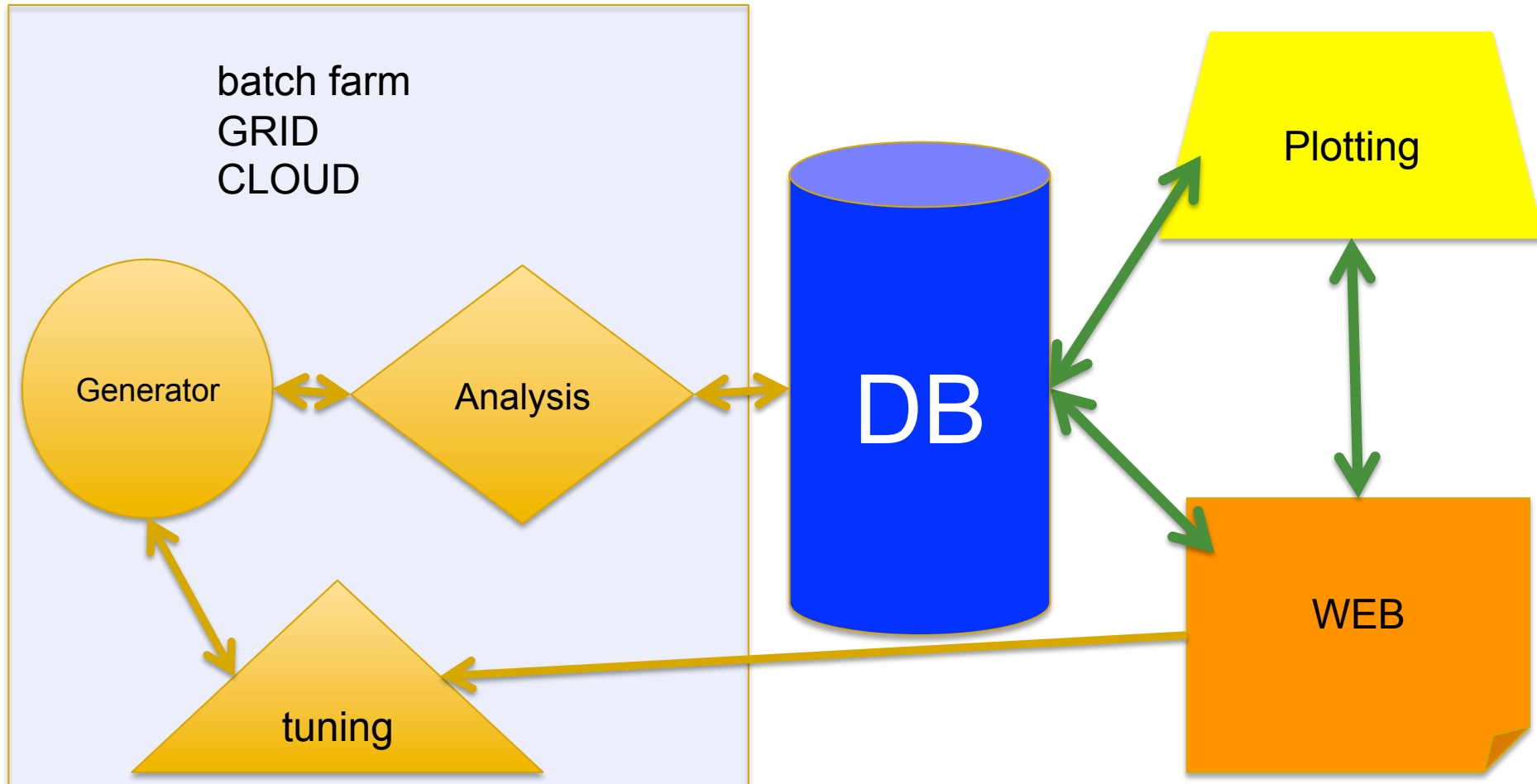
Repository of tools

- same structure as GENSER (generators repository)
 - installed in `/afs/cern.ch/sw/lcg/external/MCGenerators/...`
 - so far installed: Professor
 - to be installed: Proffit
 - other suggestions welcome
 - available on all LCG-supported platforms
 - can be easily integrated within the experiments software framework
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Tuning tools support Web services (1/2)

- provide web pages with validation of different tunes (with emphasis on LHC data)
 - Rivet validation tool
 - HepMC Analysis Tool
 - static web page with plots generated by us
 - dynamic web page with possibility of changing generators parameters
 - uploading possibility (analysis, data, etc)
 - future possible interfacing to GRID, cloud computing, etc
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Tuning tools support Web services (2/2)



Discussion on HepData

- very useful to have a database of LHC data
 - discussion with Mike Whalley on possible improvements of HepData
 - we need to encourage/facilitate submission of LHC data to HepData
 - common/standard format of data files
 - automatic uploading/submission of files
 - HepData mirror/backup at CERN (?)
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Summary

- support for the tuning activity will be assured by Generator Services project and LPCC
 - activities started
 - repository of tools
 - web resources for validation of tunes
 - discussion with the HepData maintainer on the possible improvements
 - common format
 - automatic uploading
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