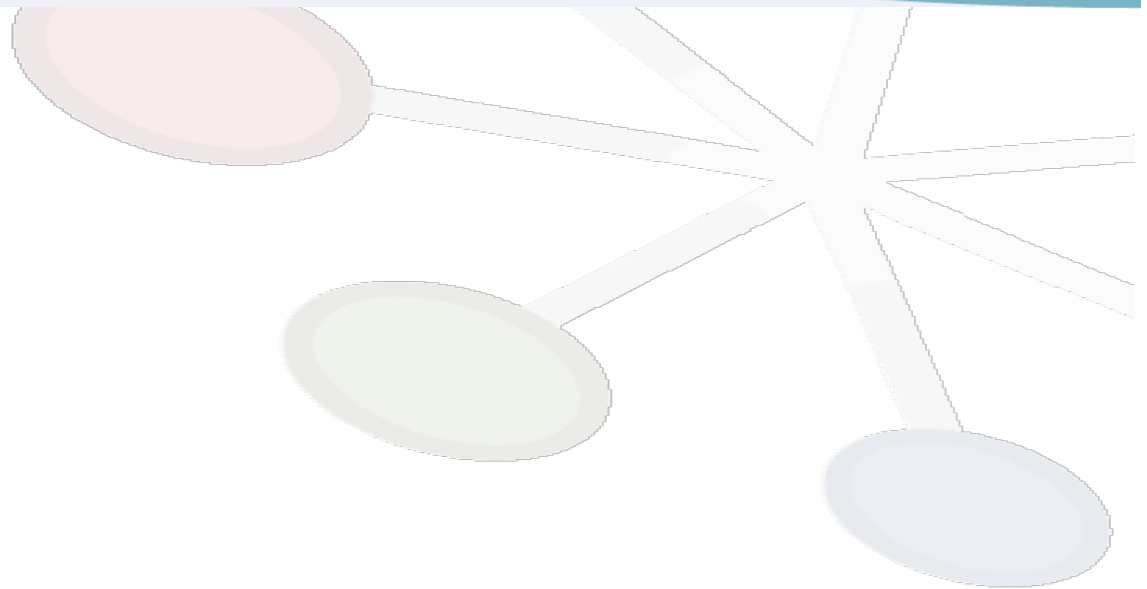


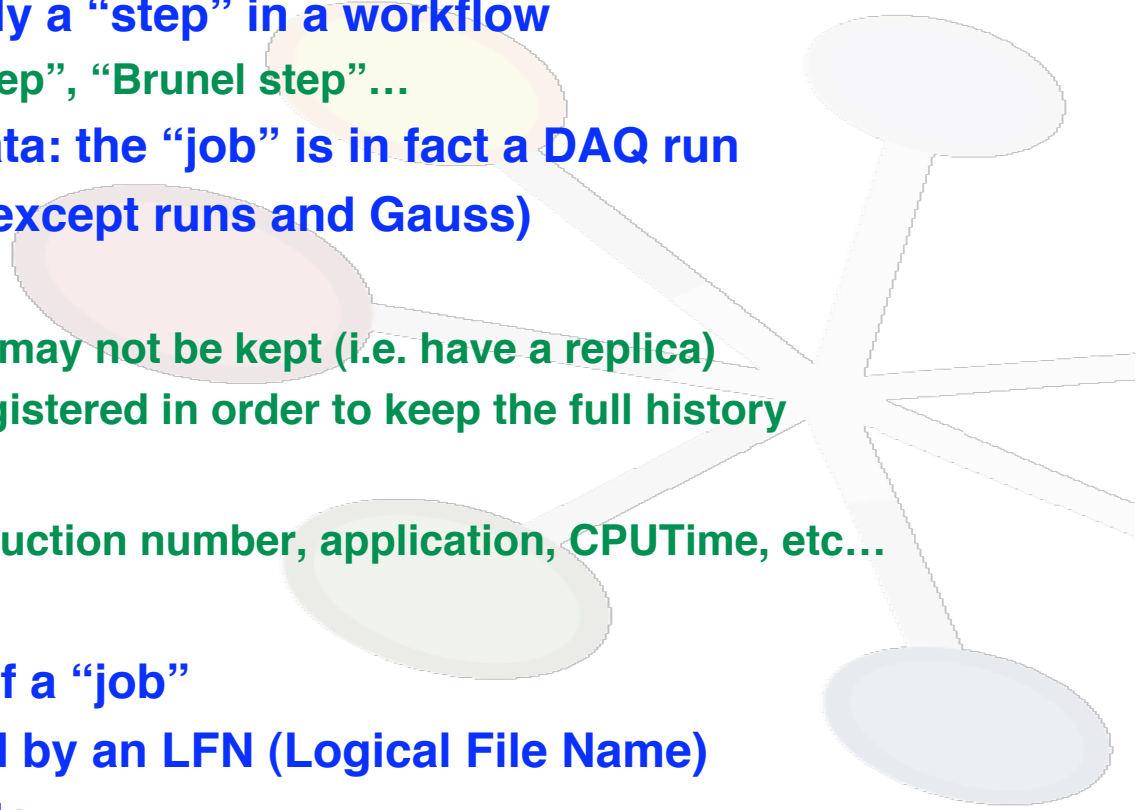


Bookkeeping Tutorial



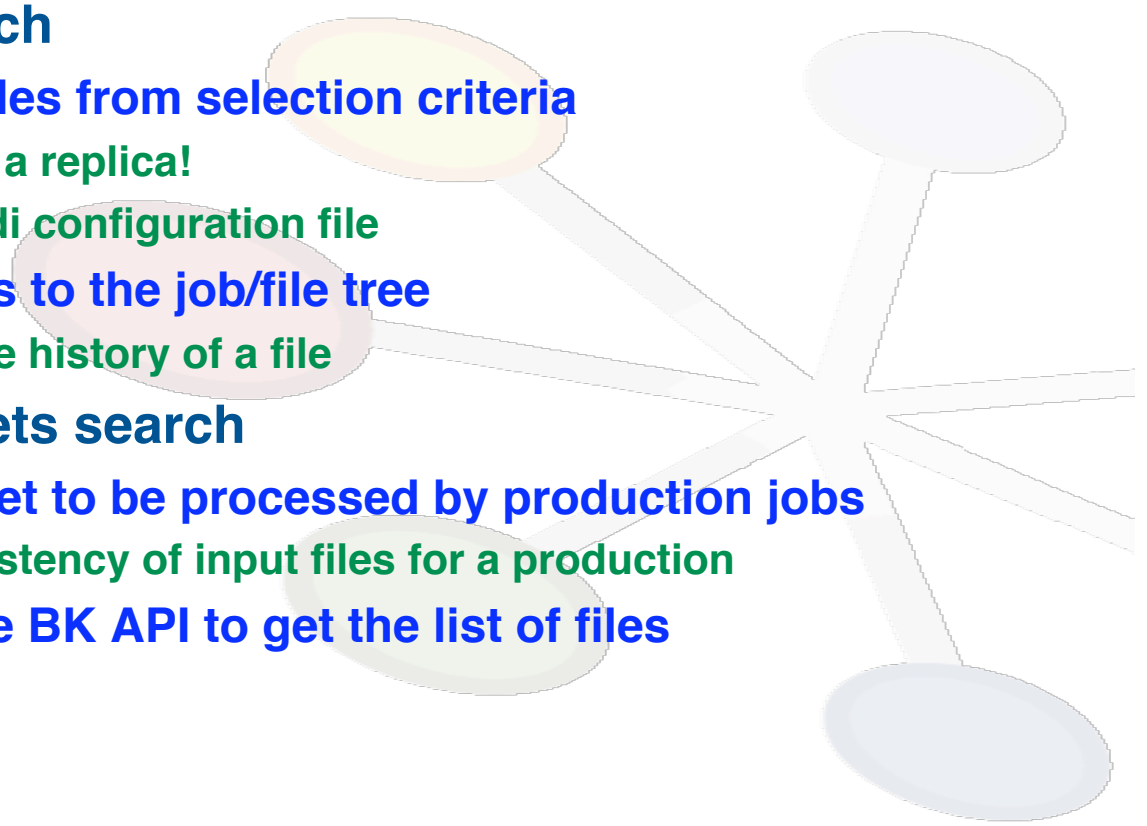


- **Contains records of all “jobs” and all “files” that are produced by production jobs**
- **Job:**
 - **In fact technically a “step” in a workflow**
 - ☆ **E.g. “Gauss step”, “Brunel step”...**
 - **For real RAW data: the “job” is in fact a DAQ run**
 - **Has input files (except runs and Gauss)**
 - **Has output files**
 - ☆ **Note that files may not be kept (i.e. have a replica)**
 - ☆ **All files are registered in order to keep the full history**
 - **Has metadata**
 - ☆ **Location, production number, application, CPUTime, etc...**
- **Files:**
 - **Always output of a “job”**
 - **Files are defined by an LFN (Logical File Name)**
 - **Contain metadata**
 - ☆ **Number of events, size, event type, etc...**





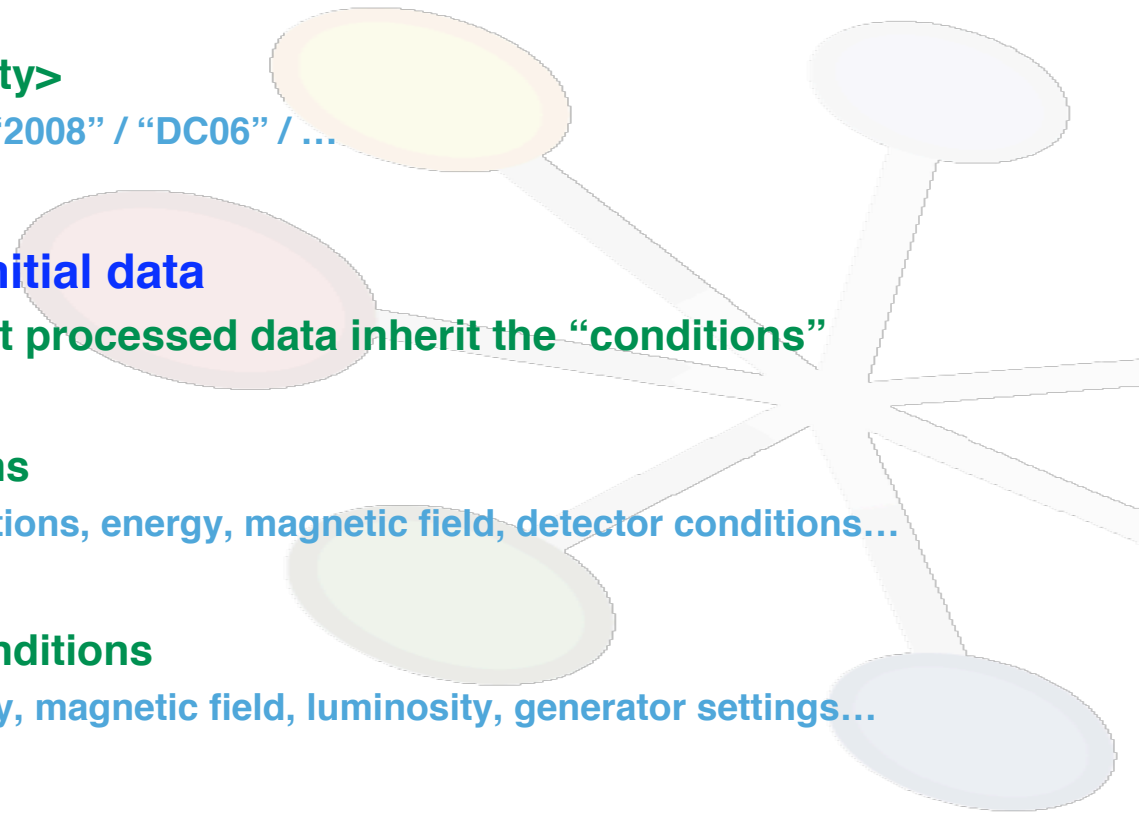
- **Provenance database**
 - **Contains the full history of productions**
 - ☆ **Traceability of datasets**
- **User dataset search**
 - **Select a list of files from selection criteria**
 - ☆ **Only files with a replica!**
 - ☆ **Generate Gaudi configuration file**
 - **Give also access to the job/file tree**
 - ☆ **E.g. investigate history of a file**
- **Production datasets search**
 - **Select the dataset to be processed by production jobs**
 - ☆ **Ensures consistency of input files for a production**
 - **Uses directly the BK API to get the list of files**





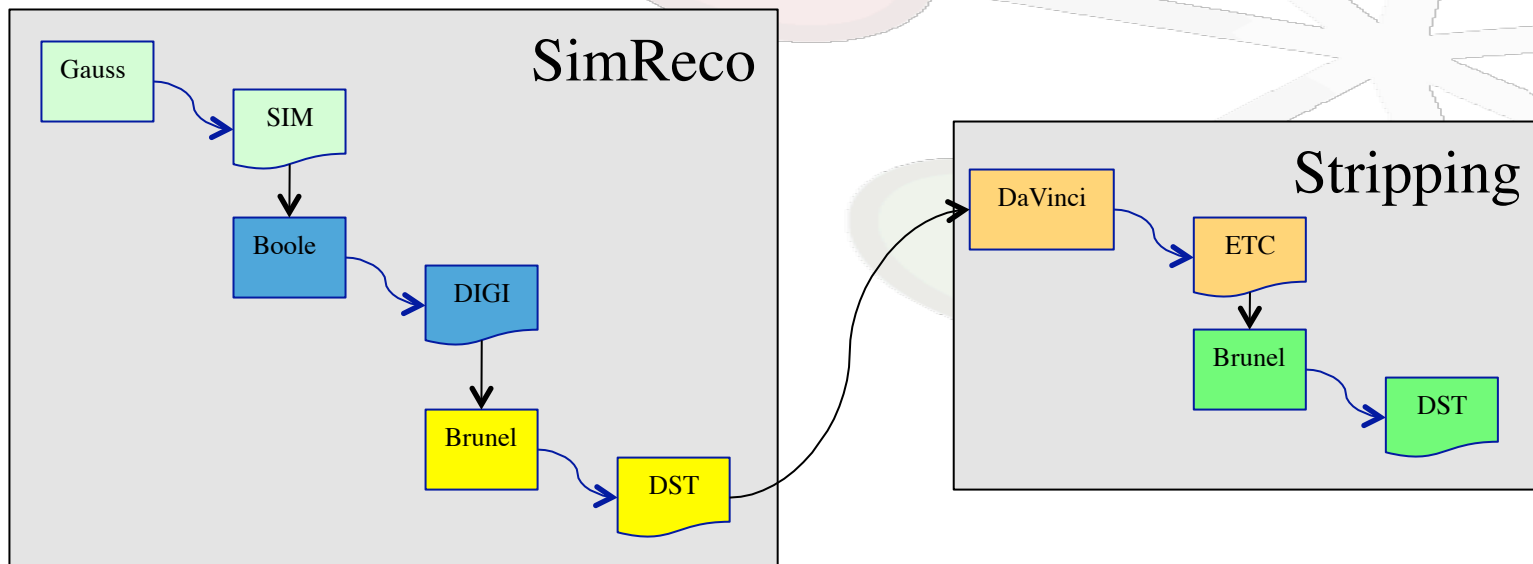
Bookkeeping partitioning

- **Configuration Name / version**
 - **Real data**
 - ☆ **<DAQ partition> / <activity>**
 - **Simulated data**
 - ☆ **“MC” / <activity>**
 - * **<activity> : “2008” / “DC06” / ...**
- **Conditions**
 - **Parameters of initial data**
 - ☆ **All subsequent processed data inherit the “conditions”**
 - **Real data**
 - ☆ **DAQ conditions**
 - * **Beam conditions, energy, magnetic field, detector conditions...**
 - **Simulated data**
 - ☆ **Simulation conditions**
 - * **Beam energy, magnetic field, luminosity, generator settings...**



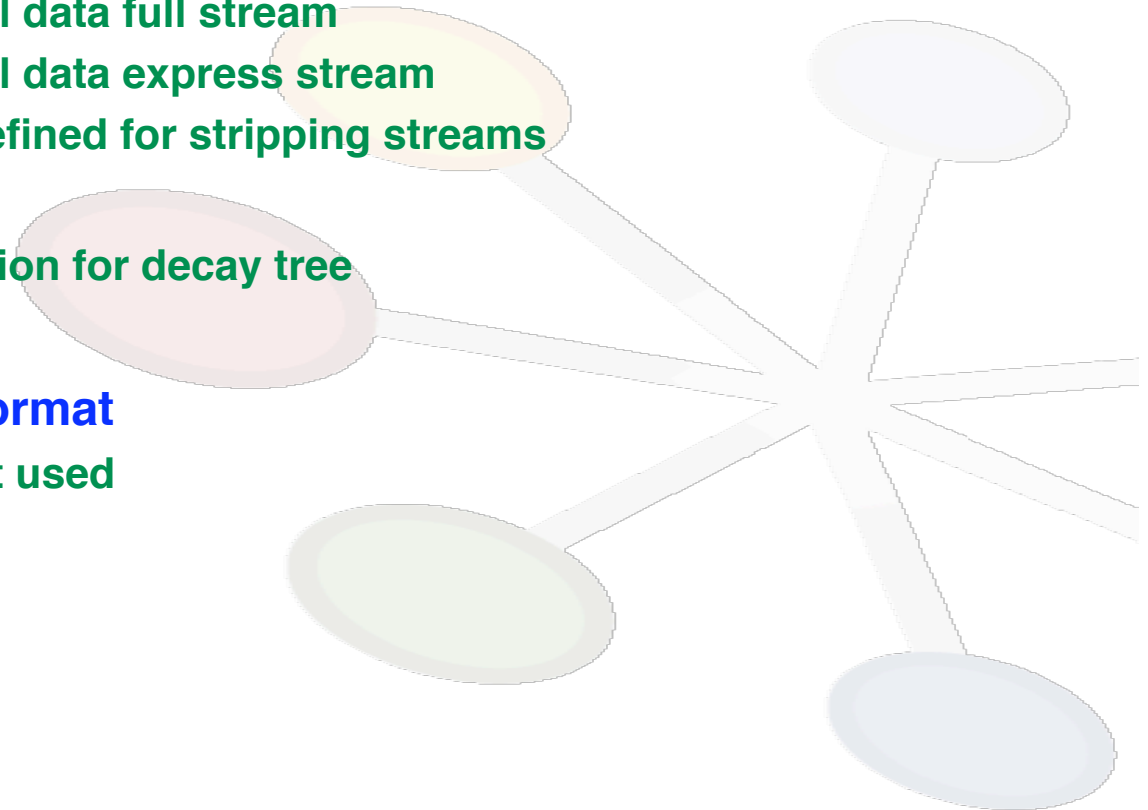


- **Associated to a level of processing**
 - **Within a given partition (config name / version + conditions)**
 - **Corresponds to the whole processing workflow**
 - ☆ **Single workflow for a given processing pass**
 - ☆ **Compatible versions of applications**
 - **Specifies the processing pass of input data when applicable**
 - ☆ **Sequence of processing**
 - **Re-processing creates branches**





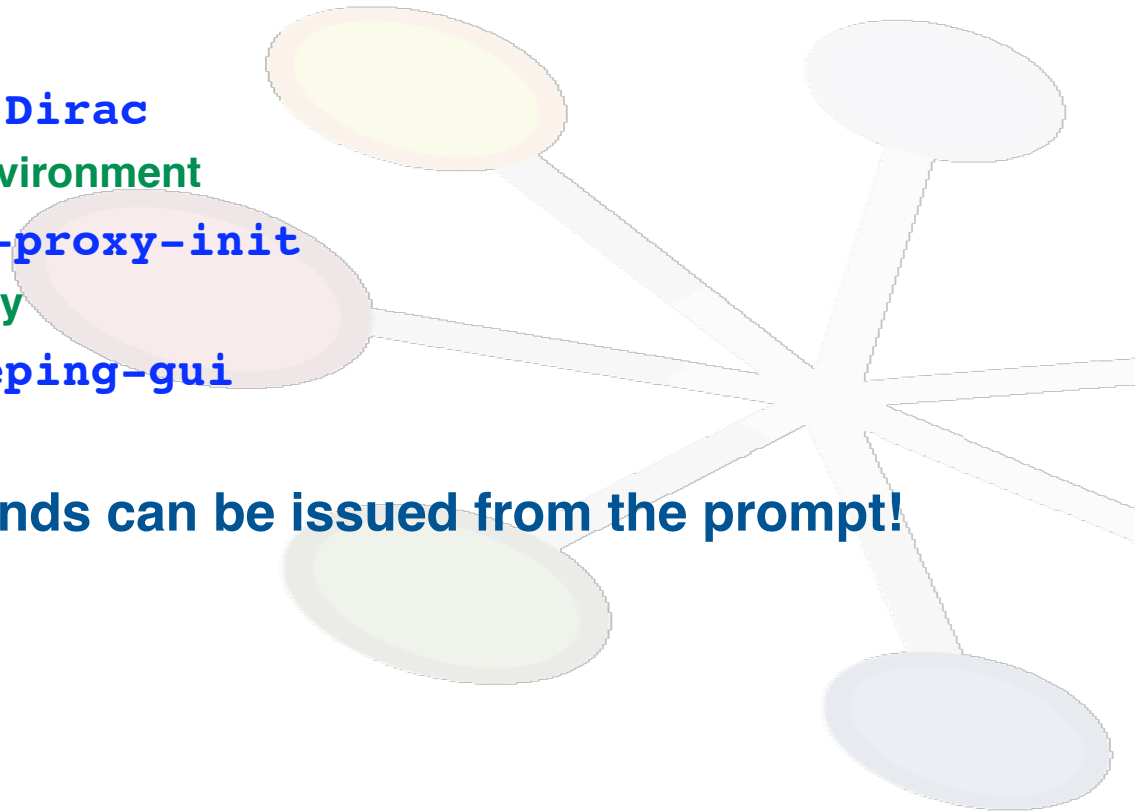
- **Event type**
 - **File property**
 - **Real data**
 - ☆ 90000000 : real data full stream
 - ☆ 90000001 : real data express stream
 - ☆ Types to be defined for stripping streams
 - **Simulated data**
 - ☆ LHCb convention for decay tree
- **File type**
 - **Data content / format**
 - ☆ Format not yet used





Running the bookkeeping GUI

- Needs a valid Grid certificate
- Needs an X server
- **lhcb-bkk**
 - **SetupProject Dirac**
 - ☆ Sets up the environment
 - **If needed: lhcb-proxy-init**
 - ☆ Creates a proxy
 - **dirac-bookkeeping-gui**
- Individual commands can be issued from the prompt!





The query tree

Feicim - LHCb Bookkeeping browser

File

Standard Advanced Queries

Tree	Description
LHCb	
Lhcb	
MC	
Configuration versions	
2007	
2008	
2008-HT	
2008-LT	
2008-QGSP	
2009	
DC06	
Simulation Conditions/DataTaking	
DC06 simulation 2 10 ³²	
DC06 simulation 5 10 ³²	
DC06 - velotest	
DC06-450GeV-CloseVelo-BOFF - Beam1	
DC06-450GeV-CloseVelo-BOFF - Beam2	
DC06-450GeV-CloseVelo-BOFF - Collisions	
DC06-450GeV-OpenVelo-BOFF - Beam1	
DC06-450GeV-OpenVelo-BOFF - Beam2	
DC06-450GeV-OpenVelo-BOFF - Collisions	
DC06-450GeV-SemiOpenVelo-BOFF - Beam1	
DC06-450GeV-SemiOpenVelo-BOFF - Beam2	
DC06-450GeV-SemiOpenVelo-BOFF - Collisions	
DC06-BcVegPy-lumi2	
DC06-BcVegPy-lumi5	
DC06-HiddenValley-lumi2	
test	

Queries

SimCond/ProcessingPass/Eventtype/Production/FileType/Program/Files

Event type/SimCond/ProcessingPass/Production/FileType/Program/Files

Feicim - LHCb Bookkeeping browser

File

Standard Advanced Queries

Tree	Description
LHCb	
Lhcb	
MC	
Configuration versions	
2007	
2008	
2008-HT	
2008-LT	
2008-QGSP	
2009	
DC06	
Simulation Conditions/DataTaking	
DC06 simulation 2 10 ³²	
Processing Pass	
DC06-Sim	
DC06-Sim + DC06-Reco_v30	
DC06-Sim + DC06-Reco_v30 + DC06-Stripping_v31	
DC06-Sim + DC06-Reco_v30 + DC06-Stripping_v31 + DC06-Stripping_v30	
DC06-Sim + DC06-Reco_v32	
DC06-Sim + DC06-Recon-LO-v1-lumi2	
DC06-Sim-Reco_v30	
DC06-Sim-Reco_v30 + DC06-Stripping_v31	
DC06-Sim-Reco_v31	
DC06-Sim-Reco_v31 + DC06-Stripping_v31	
DC06 simulation 5 10 ³²	
DC06 - velotest	
DC06-450GeV-CloseVelo-BOFF - Beam1	



- Right click on
 - Conditions
 - Processing pass

Name	Value
SimulationCondition	1
Simulation Description	DC06 simulation 2 10**32
MagneticField	-100%
Luminosity	Fixed 2 10**32
Generator	Pythia 6.325.2
DetectorCond	Normal
BeamEnergy	7 TeV
BeamCond	Collisions

Name	Value
Total ProcessingPass	DC06-Sim-Reco_v30
Step 6	
Step 5	
Step 3	
Step 2	Brunel v30r17/None/None/None/None
Step 1	Boole v12r10/None/None/None/None
Step 0	Gauss v25r13/None/None/None/None



Event type and file type

Feicim - LHCb Bookkeeping browser

File

Standard Advanced Queries

Tree	Description
12573011	Bu_DOK,Kmunu=DecProdCut
12873001	Bu_D0munu,Kpi=cocktail,D0muInAcc
File types	
DIGI	
DST	
Nb of Files/Events	5253/2611059
SIM	
12912001	Bu_smumu=DecProdCut
12912010	Bu_DOX,Kpi
12961000	Bu_Dst+X,incl
12962600	Bu_DstOX,Kpi
13102003	Bs_K+K-=CPV
File types	
DIGI	
DST	
Nb of Files/Events	2578/1281320
SIM	
13102013	Bs_pi+K-=CPV,DecProdCut
13102021	Bs_pi+pi-=DecProdCut
13102031	Bs_pp=DecProdCut
13102201	Bs_phigamma=DecProdCut
13104001	Bs_KstOKst0=DecProdCut
13104011	Bs_phiphi=DecProdCut
13112001	Bs_mumu=DecProdCut
13112011	Bs_emu=DecProdCut
13114001	Bs_phimumu=DecProdCut



Dataset selection

Logical File name

Feicim FileDialog

	FileName	EventStat	FileSize	CreationDate	JobStart	JobEnd	DataQuality	RunNu
1	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000030_5.dst	498	189997968		2007-02-28 15:43:00		UNCHECKED	
2	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000025_5.dst	497	196234160		2007-02-28 01:08:00		UNCHECKED	
3	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000024_5.dst	495	189763704		2007-03-02 00:33:00		UNCHECKED	
4	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000023_5.dst	498	196271742		2007-02-28 06:05:00		UNCHECKED	
5	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000022_5.dst	495	195368995		2007-02-28 22:42:00		UNCHECKED	
6	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000021_5.dst	497	195176521		2007-02-28 05:28:00		UNCHECKED	
7	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000020_5.dst	497	198966343		2007-02-28 17:51:00		UNCHECKED	
8	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000018_5.dst	497	205900504		2007-03-02 00:40:00		UNCHECKED	
9	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000017_5.dst	497	198383583		2007-03-01 22:52:00		UNCHECKED	
10	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000015_5.dst	495	191719312		2007-02-28 19:27:00		UNCHECKED	
11	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000014_5.dst	498	197659296		2007-02-28 05:58:00		UNCHECKED	
12	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000013_5.dst	496	203614011		2007-02-28 20:11:00		UNCHECKED	
13	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000012_5.dst	494	192735677		2007-02-28 20:16:00		UNCHECKED	
14	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000011_5.dst	497	194359219		2007-02-28 10:59:00		UNCHECKED	
15	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000010_5.dst	495	197569773		2007-03-02 06:04:00		UNCHECKED	
16	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000009_5.dst	499	193065553		2007-02-28 10:40:00		UNCHECKED	
17	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000008_5.dst	496	199831756		2007-02-28 11:20:00		UNCHECKED	
18	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000007_5.dst	496	192247815		2007-02-28 14:44:00		UNCHECKED	
19	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000006_5.dst	500	199618171		2007-02-28 22:49:00		UNCHECKED	
20	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000005_5.dst	497	200093977		2007-02-28 19:54:00		UNCHECKED	
21	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000004_5.dst	499	198549892		2007-02-28 20:13:00		UNCHECKED	
22	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000003_5.dst	497	193723278		2007-02-28 23:20:00		UNCHECKED	
23	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000002_5.dst	496	193155817		2007-02-28 05:36:00		UNCHECKED	
24	/lhcb/production/DC06/phys-v2-lumi2/00001768/DST/0000/00001768_00000001_5.dst	497	186271819		2007-02-28 10:43:00		UNCHECKED	
25	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000180_5.dst	496	190737773		2007-02-06 00:00:00		UNCHECKED	
26	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000179_5.dst	497	189177222		2007-02-06 00:00:00		UNCHECKED	
27	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000178_5.dst	498	194295262		2007-02-06 00:00:00		UNCHECKED	
28	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000177_5.dst	498	191802943		2007-02-05 00:00:00		UNCHECKED	
29	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000176_5.dst	496	198095883		2007-02-06 00:00:00		UNCHECKED	
30	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000175_5.dst	495	199234867		2007-02-06 00:00:00		UNCHECKED	
31	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000174_5.dst	499	194168853		2007-02-06 00:00:00		UNCHECKED	
32	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000173_5.dst	498	189380895		2007-02-06 00:00:00		UNCHECKED	
33	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000171_5.dst	497	193474487		2007-02-06 00:00:00		UNCHECKED	
34	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000170_5.dst	496	188972407		2007-02-05 00:00:00		UNCHECKED	
35	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000169_5.dst	498	194829232		2007-02-06 00:00:00		UNCHECKED	
36	/lhcb/production/DC06/phys-lumi2/00001629/DST/0000/00001629_00000165_5.dst	497	193007804		2007-02-06 00:00:00		UNCHECKED	

Configuration Name: MC
Configuration Version: DC06
Simulation Conditions: 1
Processing pass: DC06-Sim-Reco_v30
Event Type: 11154001
File Type: DST
Production: ALL
Program Name and version: ALL - ALL

Statistics

Number Of Files: 164
Number Of Events: 81479
Files size: 31.765908038 GB

Selected

Number Of Files: 9
Number Of Events: 4466
Files size: 1.780907718 GB

Save Files... Close



Saving configuration (a.k.a. options) file

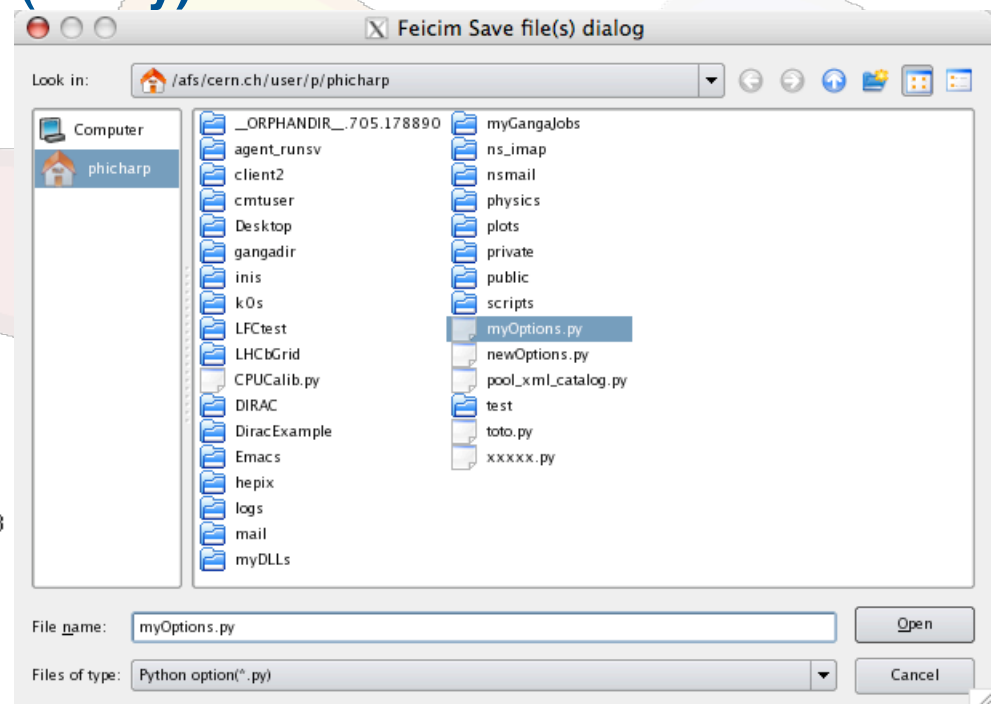
- Python configuration (default)
 - Still possible to create .opts (discouraged!)
 - .txt file for just a list of LFNs
- All files or selected files (if any)

```
[lxplus209] ~ > more myOptions.py
#-- GAUDI jobOptions generated on Wed Dec 10 15:28:19 2008
#-- Contains event types :
#-- 10012000 - 4 files - 10429 events - 5.05 GBytes
```

```
from Gaudi.Configuration import *
```

```
EventSelector().Input = [
" DATAFILE='LFN:/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001592_2.dst' TYP='POOL_ROOTTREE' OPT='READ ',
" DATAFILE='LFN:/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001601_2.dst' TYP='POOL_ROOTTREE' OPT='READ ',
" DATAFILE='LFN:/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001608_2.dst' TYP='POOL_ROOTTREE' OPT='READ ',
" DATAFILE='LFN:/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001615_2.dst' TYP='POOL_ROOTTREE' OPT='READ ']
```

```
[lxplus209] ~ > █
```





Dealing with PFNs or XML catalogs

- Using ganga + DIRAC
 - Bookkeeping integrated in ganga:
 - ☆ `dataset = browseBK()`
 - LFN handling is then automatic...
- If you really need XML catalog or PFNs, use `genXMLCatalog`
 - Ensures files are available on the specified site
 - Gets the PFN from the Storage Element
 - ☆ Not constructed “by hand”

```
[lxplus209] ~ > genXMLCatalog --help
Usage: genXMLCatalog <options> <config-files>
Options:
  -s, --site <site>: site name (default=CERN)
  -d, --depth <depth>: depths for ancestors in BK (default=1)
  -f, -p, --catalog <catalog-name>: XML file catalog name (default=./pool_xml_catalog.xml)
  -n, --newoptions <config-file>: generate a new config file (no catalog is created)
  -o, --options <config-file>: python config file to be parsed (for backward compatibility)
  <config-files>: list of python config files
  -v: verbose output
```



Dealing with XML catalog and PFNs

```
[lplus209] ~ > genXMLCatalog --site CERN --catalog myCatalog myOptions.py
POOL XML catalog myCatalog.xml successfully created
Add myCatalog.py to your list of options file
[lplus209] ~ > more myCa
myCatalog.py      myCatalog.xml      myCatalog.xml.temp
[lplus209] ~ > more myCatalog.*
::::::::::
myCatalog.py
::::::::::
FileCatalog().Catalogs = [ 'xmlcatalog_file:myCatalog.xml' ]
::::::::::
myCatalog.xml
::::::::::
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<!-- Edited By PoolXMLCatalog.py -->
<!DOCTYPE POOLFILECATALOG SYSTEM "InMemory">
<POOLFILECATALOG>

  <File ID="5E4AAA90-835A-DD11-AA07-0019B9F6E9F1">
    <physical>
      <pfn filetype="ROOT_All" name="castor://castorlhcb.cern.ch:9002/?svcClass=lhcbdata&castorVersion=2&path=/castor/cern.ch/grid/lhcb/production/DC06/v1r0/000
32069/DST/0000/00002069_00001615_2.dst"/>
    </physical>
    <logical>
      <lfn name="/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001615_2.dst"/>
    </logical>
  </File>
```

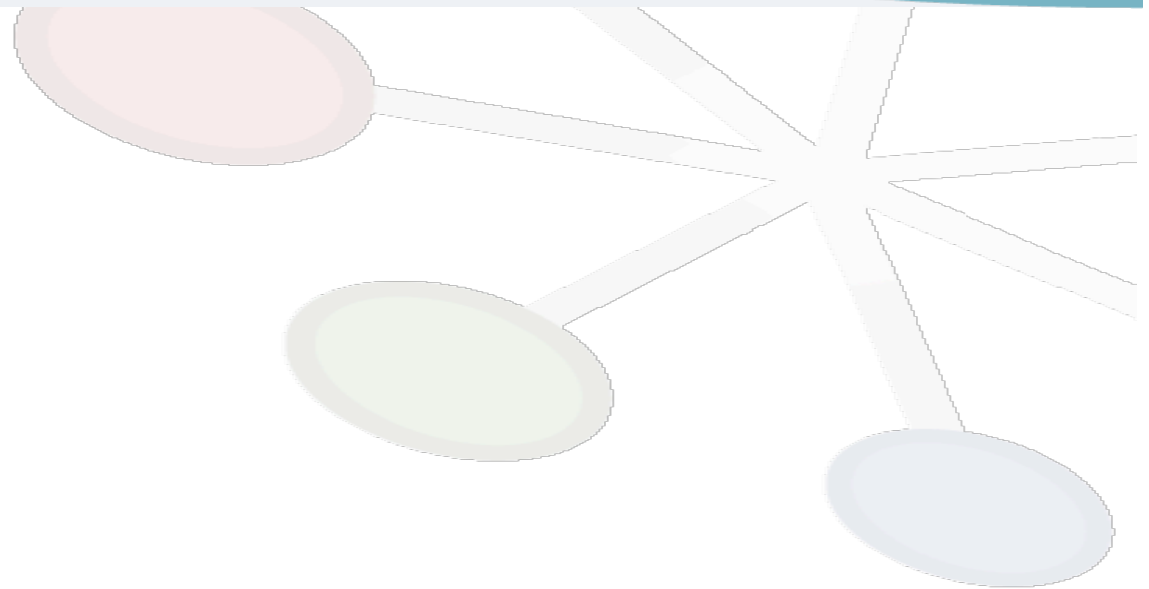
```
[lplus209] ~ > genXMLCatalog --site CERN --newoptions myPFNOptions myOptions.py
New options file myPFNOptions.py successfully created
[lplus209] ~ > more myPFNOptions.py
#-- GAUDI jobOptions generated on Wed Dec 10 15:28:19 2008
#-- Contains event types :
#-- 10012000 - 4 files - 10429 events - 5.05 GBytes

from Gaudi.Configuration import *

EventSelector().Input = [
'  DATAFILE= 'castor://castorlhcb.cern.ch:9002/?svcClass=lhcbdata&castorVersion=2&path=/castor/cern.ch/grid/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001592
.2.dst' TYP= 'POOL_ROOTTREE' OPT= 'READ ' ',
'  DATAFILE= 'castor://castorlhcb.cern.ch:9002/?svcClass=lhcbdata&castorVersion=2&path=/castor/cern.ch/grid/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001601
.2.dst' TYP= 'POOL_ROOTTREE' OPT= 'READ ' ',
'  DATAFILE= 'castor://castorlhcb.cern.ch:9002/?svcClass=lhcbdata&castorVersion=2&path=/castor/cern.ch/grid/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001608
.2.dst' TYP= 'POOL_ROOTTREE' OPT= 'READ ' ',
'  DATAFILE= 'castor://castorlhcb.cern.ch:9002/?svcClass=lhcbdata&castorVersion=2&path=/castor/cern.ch/grid/lhcb/production/DC06/v1r0/00002069/DST/0000/00002069_00001615
.2.dst' TYP= 'POOL_ROOTTREE' OPT= 'READ ' ']
```



DIRAC Monitoring web portal





- **Entry point to the DIRAC web portal**
 - <http://dirac.cern.ch>
- **Web implementation of (almost) a full desktop application**
 - **Monitoring of productions / jobs**
 - **Accounting (jobs, data management)**
 - **Allows to take actions on jobs**
- **Authentication / authorisation is mandatory**
 - **Anonymous access gives minimal access**
 - **Get a certificate and load it in our in your browser**
<https://twiki.cern.ch/twiki/bin/view/LHCb/FAQ/Certificate>
 - **DIRAC authorisation through “DIRAC groups”**
 - ☆ **Default: lhcb_user**
 - ☆ **Other groups: lhcb_prod, dirac_admin...**
 - ☆ **Future: specific groups per physics groups, PPG (for production authorisation)...**
 - ☆ **Capabilities depends on the group**



The DIRAC portal home page

DIRAC Overview as lhcb@LHCb-Production

https://lhcbweb.pic.es/DIRAC/info/general/diracOverview

Bonjour CERN EDH,HRT DIRAC2 Monitoring DIRAC3 Monitoring Logs SAM Results LHCb Computing Meetings LCG

DIRAC Overview as lhcb@L...

Systems Jobs Data Web Selected setup: LHCb-Production

DIRAC
COMMUNITY GRID SOLUTION

The DIRAC (Distributed Infrastructure with Remote Agent Control) project is a complete Grid solution for a community of users such as the LHCb Collaboration. DIRAC forms a layer between a particular community and various compute resources to allow optimized, transparent and reliable usage.

The DIRAC architecture consists of numerous cooperating Distributed Services and Light Agents built within the same DISET framework following the Grid security standards. DIRAC introduced the now widely used concept of Pilot Agents. This allows efficient Workload Management Systems (WMS) to be built. The workload of the community is optimized in the central Task Queue.

The WMS is carefully designed to be resilient to failures in the ever changing Grid environment. The DIRAC project includes a versatile Data Management System (DMS) which is optimized for reliable data transfers. The DMS automates the routine data distribution tasks.

The DIRAC Production Management System is built on

info > Documentation > Overview phicharp@lhcb (/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=charpent/CN=381668/CN=Philippe Charpentier)

Menus

DIRAC instance

DIRAC group

Identity





Job Monitoring

Monitoring info

Actions

The screenshot shows the DIRAC Job Monitoring interface. The browser address bar indicates the URL: https://lhcbweb.pic.es/DIRAC/LHCb-Production/lhcb_prod/jobs/JobMonitor/display. The page title is "Jobs monitoring as lhcb_pr...". The interface includes a navigation menu with options like "Systems", "Jobs", "Data", and "Web". The main content area displays a table of jobs with columns for JobId, Status, MinorStatus, ApplicationStatus, Site, JobName, LastUpdate [UTC], LastSignOfLife [...], SubmissionTim..., and Owner. The table contains 20 rows of job data. On the left side, there are several filter sections: "DIRAC Site:" (set to "All"), "Status:" (set to "All"), "Minor status:" (set to "All"), "Application status:" (set to "All"), "Owner:" (set to "wreece"), "JobGroup:" (empty), "Date:" (set to "YYYY-mm-dd"), and "JobID:" (empty). Below the filters are "Submit" and "Reset" buttons. At the bottom, there are "Global Sort", "Current Statistics", and "Global Statistics" sections. The footer shows the user information: "picharp@ lhcb_prod (/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=charpent/CN=381668/CN=Philippe Charpentier)".

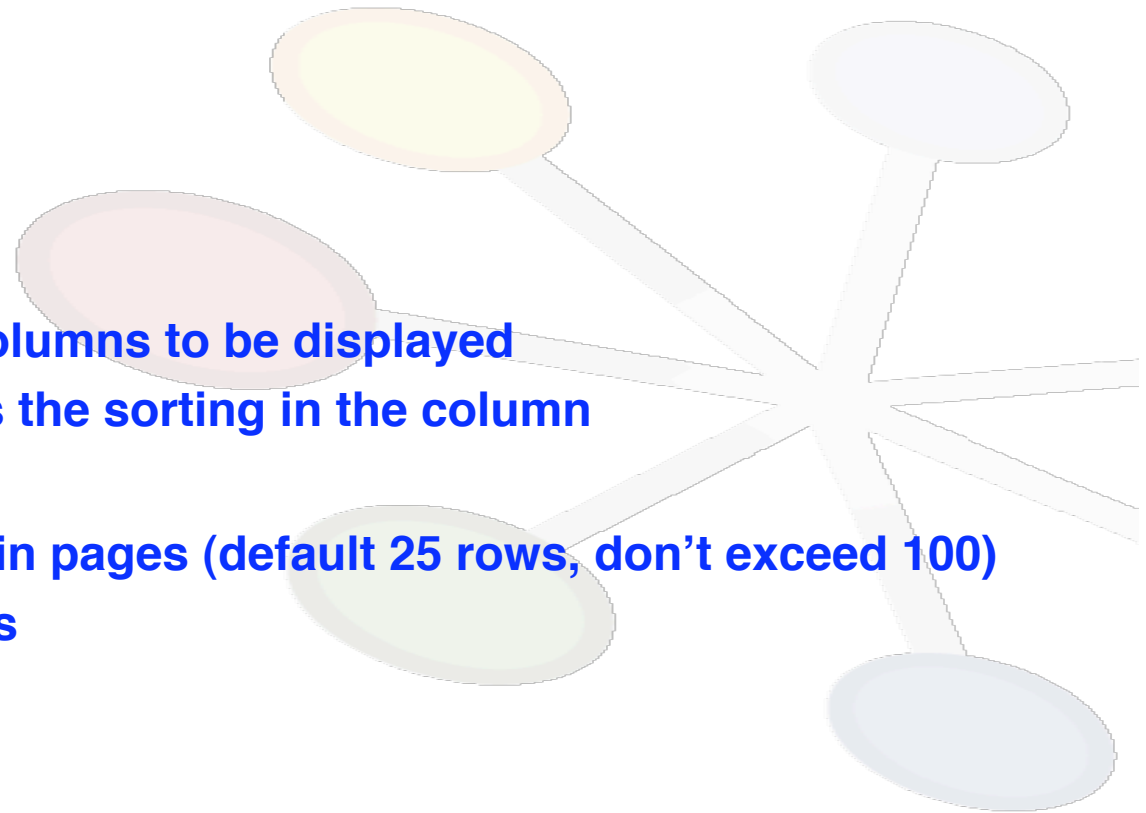
JobId	Status	MinorStatus	ApplicationStatus	Site	JobName	LastUpdate [UTC]	LastSignOfLife [...]	SubmissionTim...	Owner
1843543	Done	Execution Com...	diracJobMain.p...	LCG.CNAF.it	{Ganga_Root_...	2009-03-06 21:21	2009-03-06 21:21	2009-03-06 21:20	wreece
1843542	Done	Execution Com...	diracJobMain.p...	LCG.CNAF-T2.it	{Ganga_Root_...	2009-03-06 21:21	2009-03-06 21:21	2009-03-06 21:20	wreece
1843541	Stalled	Application	Initializing Gaudi...	LCG.CNAF.it	{Ganga_DaVinc...	2009-03-06 23:29	2009-03-06 21:20	2009-03-06 21:19	wreece
1843539	Done	Execution Com...	Executing RunS...	LCG.CNAF.it	OverSizedOutb...	2009-03-06 21:18	2009-03-06 21:18	2009-03-06 21:15	wreece
1843538	Done	Execution Com...	Executing RunS...	LCG.NIKHEF.nl	OutputData_{...	2009-03-06 21:14	2009-03-06 21:14	2009-03-06 21:12	wreece
1843537	Done	Execution Com...	Executing RunS...	LCG.NIKHEF.nl	{Ganga_Execut...	2009-03-06 21:11	2009-03-06 21:11	2009-03-06 21:10	wreece
1843536	Done	Execution Com...	Executing RunS...	LCG.CNAF-T2.it	{Ganga_Execut...	2009-03-06 21:08	2009-03-06 21:08	2009-03-06 21:07	wreece
1843535	Done	Execution Com...	Executing RunS...	LCG.CNAF.it	{Ganga_Execut...	2009-03-06 21:08	2009-03-06 21:08	2009-03-06 21:07	wreece
1843534	Done	Execution Com...	diracJobMain.p...	LCG.CNAF-T2.it	{Ganga_Root_...	2009-03-06 21:06	2009-03-06 21:06	2009-03-06 21:04	wreece
1843533	Done	Execution Com...	diracJobMain.p...	LCG.CNAF-T2.it	{Ganga_Root_...	2009-03-06 21:00	2009-03-06 21:00	2009-03-06 20:58	wreece
1843532	Done	Execution Com...	Executing RunS...	LCG.CNAF.it	{Ganga_Execut...	2009-03-06 20:59	2009-03-06 20:59	2009-03-06 20:58	wreece
1842339	Done	Execution Com...	Executing RunS...	LCG.GRIDKA.de	{Ganga_Execut...	2009-03-06 17:15	2009-03-06 17:15	2009-03-06 17:15	wreece
1842335	Failed	Application Finis...	Initializing Gaudi...	LCG.GRIDKA.de	{Ganga_DaVinc...	2009-03-06 17:19	2009-03-06 17:19	2009-03-06 17:01	wreece
1842334	Stalled	Application	Initializing Gaudi...	LCG.IN2P3.fr	{Ganga_DaVinc...	2009-03-06 19:29	2009-03-06 17:02	2009-03-06 17:01	wreece
1842325	Done	Execution Com...	diracJobMain.p...	LCG.CERN.ch	{Ganga_Root_...	2009-03-06 16:48	2009-03-06 16:48	2009-03-06 16:45	wreece
1842324	Done	Execution Com...	diracJobMain.p...	LCG.BHAM-HE...	{Ganga_Root_...	2009-03-06 16:49	2009-03-06 16:49	2009-03-06 16:44	wreece
1842320	Done	Execution Com...	Executing RunS...	LCG.CBPF.br	OverSizedOutb...	2009-03-06 16:42	2009-03-06 16:42	2009-03-06 16:35	wreece
1842319	Done	Execution Com...	Executing RunS...	LCG.Manchest...	OutputData_{...	2009-03-06 16:33	2009-03-06 16:33	2009-03-06 16:31	wreece
1842318	Done	Execution Com...	Executing RunS...	LCG.RAL-HEP.uk	{Ganga_Execut...	2009-03-06 16:30	2009-03-06 16:30	2009-03-06 16:29	wreece
1842317	Done	Execution Com...	Executing RunS...	LCG.ITPA.it	{Ganga_Execut...	2009-03-06 16:28	2009-03-06 16:28	2009-03-06 16:25	wreece

Selection





- **Selection**
 - For group `lhcb_user`, only see your own jobs
 - Can select with
 - ☆ **Status**
 - ☆ **Site**
 - ☆ **Date**
 - ☆ ...
- **Columns**
 - Can tailor the columns to be displayed
 - Clicking toggles the sorting in the column
- **Rows**
 - Jobs displayed in pages (default 25 rows, don't exceed 100)
 - Can scroll pages





Logging info

JobID	Status	Message	State
1843539	Done	Execution Com...	Executing
1843538	Done	Execution Com...	Executing
1843537	Do	JDL	ecuting
1843536	Do	Attributes	ecuting
1843535	Do	Parameters	ecuting
1843534	Do	Logging info	acJobM
1843533	Do	Peek StandardOutput	acJobM
1843532	Do	Get LogFile	ecuting
1842339	Do	Get PendingReq	
1842335	Fail	Get StagerRepo	
1842334	Sta	Get SandBox file	
1842325	Do	Actions	
1842324	Do	Pilot	
1842320	Do	Show value	
1842319	Do		

Logging info for JobID: 1843538 Executing RunS... LCG.CNAF.it OverSizedOutb... 2009-03-06

Source	Status	MinorStatus	ApplicationStatus	DateTime
JobManager	Received	Job accepted	Unknown	Fri Mar 06 2009 21:12:21 ...
JobPath	Received	False	Unknown	Fri Mar 06 2009 21:12:23 ...
JobSanity	Checking	JobSanity	Unknown	Fri Mar 06 2009 21:12:23 ...
JobScheduling	Checking	JobScheduling	Unknown	Fri Mar 06 2009 21:12:23 ...
TaskQueue	Waiting	Pilot Agent Submission	Unknown	Fri Mar 06 2009 21:12:23 ...
Matcher	Matched	Assigned	Unknown	Fri Mar 06 2009 21:12:26 ...
JobAgent	Matched	Job Received by Agent	Unknown	Fri Mar 06 2009 21:12:27 ...
JobAgent	Matched	Installing Software	Unknown	Fri Mar 06 2009 21:12:30 ...
JobWrapper	Running	Downloading InputSan...	Unknown	Fri Mar 06 2009 21:12:32 ...
JobWrapper	Running	Application	Unknown	Fri Mar 06 2009 21:12:35 ...
Job_1843538	Running	Application	Executing RunScriptSt...	Fri Mar 06 2009 21:12:38 ...
JobWrapper	Completed	Application Finished Su...	Executing RunScriptSt...	Fri Mar 06 2009 21:12:44 ...
JobWrapper	Done	Execution Complete	Executing RunScriptSt...	Fri Mar 06 2009 21:14:17 ...



Output peeking

JobID	Status	Message	State
1843539	Done	Execution Com...	Executing
1843538	Done	Execution Com...	Executing
1843537	Done		Executing
1843536	Done		Executing
1843535	Done		Executing
1843534	Done		acJobM
1843533	Done		acJobM
1843532	Done		Executing
1842339	Done		Executing
1842335	Fail		ializing
1842334	Sta		ializing
1842325	Done		
1842324	Done		
1842320	Done		
1842319	Done		

- JDL
- Attributes
- Parameters
- Logging info
- Peek StandardOutput**
- Get LogFile
- Get PendingRequest
- Get StagerReport
- Get SandBox file

```
Standard output for JobID: 1843538
-----
Last 20 lines of application output from JobWrapper on Fri Mar 6 21:12:44 2009 [UTC]:
CPU Total for job is 00:00:01 (h:m:s)
-----
2009-03-06 21:12:37 UTC dirac-jobexec.py INFO: JobID: 1843538
2009-03-06 21:12:37 UTC dirac-jobexec.py INFO: PYTHONPATH:
2009-03-06 21:12:37 UTC dirac-jobexec.py INFO: ['/tmp/jobdir/1269523.stro.nikhef.nl/https_3a_2f_2fwms2
2009-03-06 21:12:37 UTC dirac-jobexec.py INFO: DIRAC JobID 1843538 is running at site LCG.NIKHEF.nl
Executing StepInstance RunScriptStep1 of type ScriptStep1 ['ScriptStep1']
StepInstance creating module instance ScriptStep1 of type Script
2009-03-06 21:12:39 UTC Script/Script INFO: Script Module Instance Name: diracJobMainpy
2009-03-06 21:12:39 UTC Script/Script INFO: Command is: /tmp/jobdir/1269523.stro.nikhef.nl/https_3a_2f_
2009-03-06 21:12:39 UTC Script/Script INFO: diracJobMain.py execution completed with status 0
2009-03-06 21:12:39 UTC Script/Script INFO: Output written to Script1_GangaExecutable.log, execution com
```



Attributes

JobID	Status	Message	State
1843539	Done	Execution Com...	Executing
1843538	Done	Execution Com...	Executing
1843537	Done		Executing
1843536	Done		Executing
1843535	Done		Executing
1843534	Done		acJobM
1843533	Done		acJobM
1843532	Done		Executing
1842339	Done		Executing
1842335	Failed		ializing
1842334	Stalled		ializing
1842325	Done		acJobM
1842324	Done		acJobM
1842320	Done		Executing
1842319	Done		Executing

- JDL
- Attributes
- Parameters
- Logging info
- Peek StandardOutput
- Get LogFile
- Get PendingRequest
- Get StagerReport
- Get SandBox file
- Actions
- Pilot
- Show value

Attributes for JobID: 1843538

Name	Value
SystemPriority	0
ApplicationNumStatus	0
EndExecTime	2009-03-06 21:12:44
JobID	1843538
VerifiedFlag	True
RetrievedFlag	True
Status	Done
StartExecTime	None
RescheduleCounter	0
JobSplitType	Single
MinorStatus	Execution Complete
ApplicationStatus	Executing RunScriptStep1
SubmissionTime	2009-03-06 21:12:21
JobType	user
MasterJobID	0
KilledFlag	False
RescheduleTime	None
DIRACSetup	LHCb-Production
FailedFlag	False
CPUTime	0.0
OwnerDN	/DC=ch/DC=cern/OU=Organic Unit...
JobGroup	lhcb
JobName	OutputData_{Ganga_Executable_...
AccountedFlag	False
LastUpdateTime	2009-03-06 21:14:18



Parameters

JobID	Status	Message	State
1843539	Done	Execution Com...	Executing
1843538	Done	Execution Com...	Executing
1843537	Done		Executing
1843536	Done		Executing
1843535	Done		
1843534	Done		
1843533	Done		
1843532	Done		
1842339	Done		
1842335	Failed		
1842334	Stalled		
1842325	Done		
1842324	Done		
1842320	Done		
1842319	Done		

- JDL
- Attributes
- Parameters
- Logging info
- Peek StandardOutput
- Get LogFile
- Get PendingRequest
- Get StagerReport
- Get SandBox file
- Actions
- Pilot
- Show value

Parameters for JobID: 1843538 Executing RunS... LCG.CNAF.it OverSizedOut...

Name	Value
CacheSize(kB)	6144KB
AgentCompatiblePlatforms	slc4_ia32_gcc34
LocalBatchID	dc1843538
UploadedOutputData	/lhcb/user/w/wreece/1843/1843538/output.txt
LocalAccount	lhcbpi01
JobSanityCheck	Job: 1843538 JDL: OK,InputData: No input LFNs,
ModelName	Intel(R)Xeon(R)CPUE5420@2.50GHz
HostName	wn-val-004.farm.nikhef.nl
CPUScalingFactor	0.0
CPU(MHz)	2500.637
Pilot_Reference	https://wms216.cern.ch:9000/xEG5WQ6VTxE4y...
OK	1
TotalCPUTime(s)	1.73
PilotAgent	DIRAC version v4r9 build 0
OutputSandbox	MissingFiles: _output_sandbox.tgz, GangaExecut...
MatcherServiceTime	0.530229091644
Memory(kB)	4176148kB
AgentLocalSE	NIKHEF-RAW,NIKHEF-DST,NIKHEF_M-DST,NI...
JobPath	JobPath,JobSanity,JobScheduling,TaskQueue
LocalJobID	1269523.stro.nikhef.nl