SuperBelle Data Handling with AMGA

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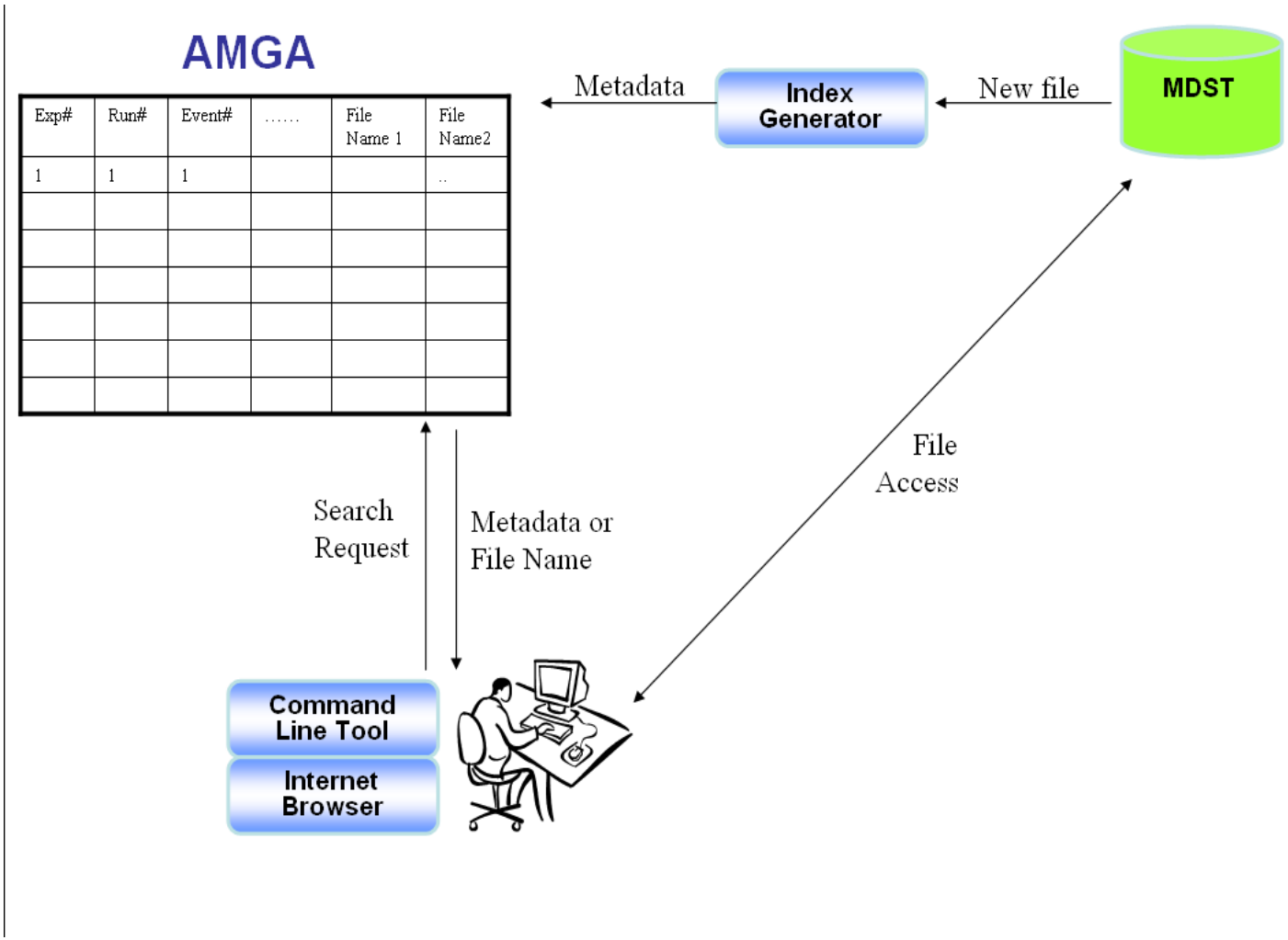
Overview

1. The Data Handling Scenario with AMGA
2. Starting Point
3. To extract the useful information
4. The information parameters
5. Summary and next plan

The Data Handling Scenario with AMGA



- We should establish the architecture of the database.
- To establish, we will get the information parameters from Belle.

Starting Point

- Installation Belle lib: 150.183.234.69

  Belle Lib : b20090127_0910
  postgreSQL:postgresql-8.1.11-1
  pntdb :pntdb_dumpall-bwg80-20090427_1842.gz
- Configuration of the AMGA : kenobi.kisti.re.kr
  - It is based on the postgreSQL.
- We extracted the simple parameters from Belle lib.

To extract the information from the data files

- To make the catalog, we need to extract the information from Belle data.
- For testing and programming, we used the signal MC($B \to \phi\pi$ decays)
- Example of the extraction in data

```
process_event ../../mdst/phipi0-genpak-b20070402_1209-0.mdst 0
 flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 11
 flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 12
 flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 13
 flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 14
```

To extract the information from the directories

- We should understand the directory of Belle to make the catalog.
- We get the information from check_process_url(get the data information for Belle.)
- The information from check_process_url

process_event bfss02:/bdata/mcprod/dat/e000055/evtgen/uds/00/all/0607/on_resonance/00/evtgen-uds-00-all-e000055r000007-b20070607_2106.mdst 0
process_event bfss02:/bdata/mcprod/dat/e000055/evtgen/uds/00/all/0607/on_resonance/00/evtgen-uds-00-all-e000055r000012-b20070607_2106.mdst 0

- We have a problem for looking the real data. The check_process_url was not operated.
- We should check what it is changed?

The information parameters

- The Belle2 will support the Grid.
- The Belle2 will be 50-60 times data size than Belle.
- From the data files
  - exp number
  - run number
  - evt number
  - we will include the number of tracks:
- From the directories
  - file system:nfs, afs, http, rootd: we will include this for Belle2
  - data (real or MC)
  - data type(on resonance or off resonance)
  - type(uds,charm,mixed,charged,real)
  - skim(HadronBJ, fullrec and so on)
  - stream(0-9)
  - version of Belle Lib
  - and so on: If you have the good parameters, give the idea.
- Your suggestions are welcome.

How to access AMGA: making by AMGA Team

- Command Line Interface
  - belle_amga_search exp 1 run 2
  - belle_amga_write exp 1 run 2 evt 111 file srm://..
- Programming API
  - belle_amga_connect (host,port,dir)
  - belle_amga_search (condition)
  - belle_amga_eot ()
  - belle_amga_fetch (variable)
  - belle_amga_write (...)
  - belle_amga_close ()
- Web Interface:

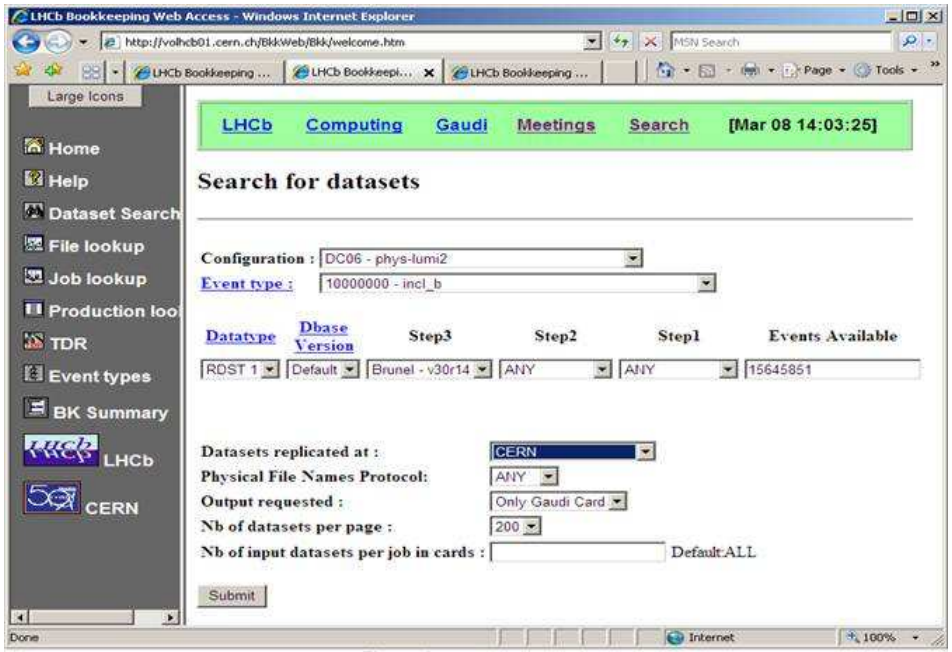


Figure 1

Summary and Next step

1. Belle Lib and AMGA was established
2. We get the ways of the extraction from Belle data.
3. We are looking for the good parameters.
4. Is there any missing?
5. To connect the information parameters with AMGA.
6. To use the number of tracks, we should study more and more

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