# LHC Injection tests –Observations – Issues – Future work

Eugenia – 12 th Aug 2008

Input from Julian, Greg, Marek, Niall, Pierre, JJGras, Maciej, Michel, Nicolas, Mike

## Timing

* Issue: RF synchronisation failed. Fix for beam1=> LHC Timing FESA class did not send the event. Instead the sequencer did it
  + a new external event (injection XTIM) was configured in the sequencer, to be able to start a sequence automatically when this is received
* Solution: look in the telegram for the next user string. If LHC, send event
  + being implemented =>Julian
  + Ready by mid week, need to test: LHC cycle + injection request to be send – When can it be scheduled? => Mike

## FESA/CMW server instabilities

* Stability of FE servers (BI/JJG input)
  + SR2 and SR3 BPM and BLMservers crashing, the others were a lot more stable but not used
  + Not seen as BI servers were in a forever restart loop
* XTIM server unstable – crashing several times especially on Friday pm

CWM/FESA teamsuspect crashes are related to increase load of clients and investigate problem now setting up a test environment =>Maciej, Michel, BI

## Logging

* Partial logging of BLM. BPM was stable for SR2 & SR3
  + Strategy for full&reliable implementation of BLM logging=> Nicolas, Marine

## Concentrators

* SR2/3 concentrator was stable
  + Provided a stable logging through the test
  + Concentrators load was high – many clients
* Strategy for full implementation of BPM/BLM capture concentrators=> meeting today BI, Marek, Greg
* Clarify strategy for new concentrators based on XTIM and Get instead of Subscribe => meeting today BI, Marek, Greg

## JMS Broker

New JMS version 5.1 seems to provide stable running of brokers:

* No crashes
* Between 85 and 100 connected physical clients...
  + Between 22 to 26 clients were CCC consoles
  + Others were office, CERNTS machines and CCR servers
  + Between 10 and 15 MB per second of data delivered to them.
  + Around 4 million messages a day were delivered, of various sizes from a few bytes up to a few megabytes
  + Resources used:
    - A constant CPU load of between 18% and 25%
    - 45% of cs-ccr-spsea2's memory (1.1G)

For 10th September

* Create an HA cluster on 2 dedicated servers (with battery-backed RAID) before September, and try this out very soon (beam2 test?)=> Niall, Enzo

## File space used by SDDS logging

We currently have :

* sps\_data : 500 Gb - 346 used - 143 free
* lhc\_data : 500 Gb - 132 used - 357 free

Beam 1 test created:

* sps\_data : 33,071,621,017 = 33 Gbytes (237000 files)
* lhc\_data : 16,619,794,352 = 17 Gbytes (36000 files)

If OP does not clean, we can survive beam2 test but not 9/10

## DIAMON

* DIAMON did not follow BI server problems properly => Mark B.
* New Beam 2 Injection Test group will be created with all general purpose serves => Pierre

## RBAC

RBAC proposed deployment:

* For all GUI used, have the RBAC logging enabled, mainly transparent to the user with the A1 via location, but with always the button to change user if needed
  + This means all equipment access will have a token
  + The application could have options greyed out if the developer has done so (as in DIAMON)
* Equipment involved :
  + PO are already all RBAC ready
  + BI is pushing to have BI devices RBAC ready
    - Configure RBAC to let only CO concentrators accessing BI data – excluding all other clients going directly to BI servers
  + All other devices will be RBAC transparent

What will do before the beam2 test => Pierre, Stephen, JJG

* All properties are correctly defined in the RBAC DB
* The access-map are correctlyextracted
* Organise an RBAC dry-run probably early next week=> Pierre, Stephen, JJG, OP