



Status of Post Mortem and XPOC data collection issues

Jean-Christophe Garnier
LHC MPP, 16/04/2015

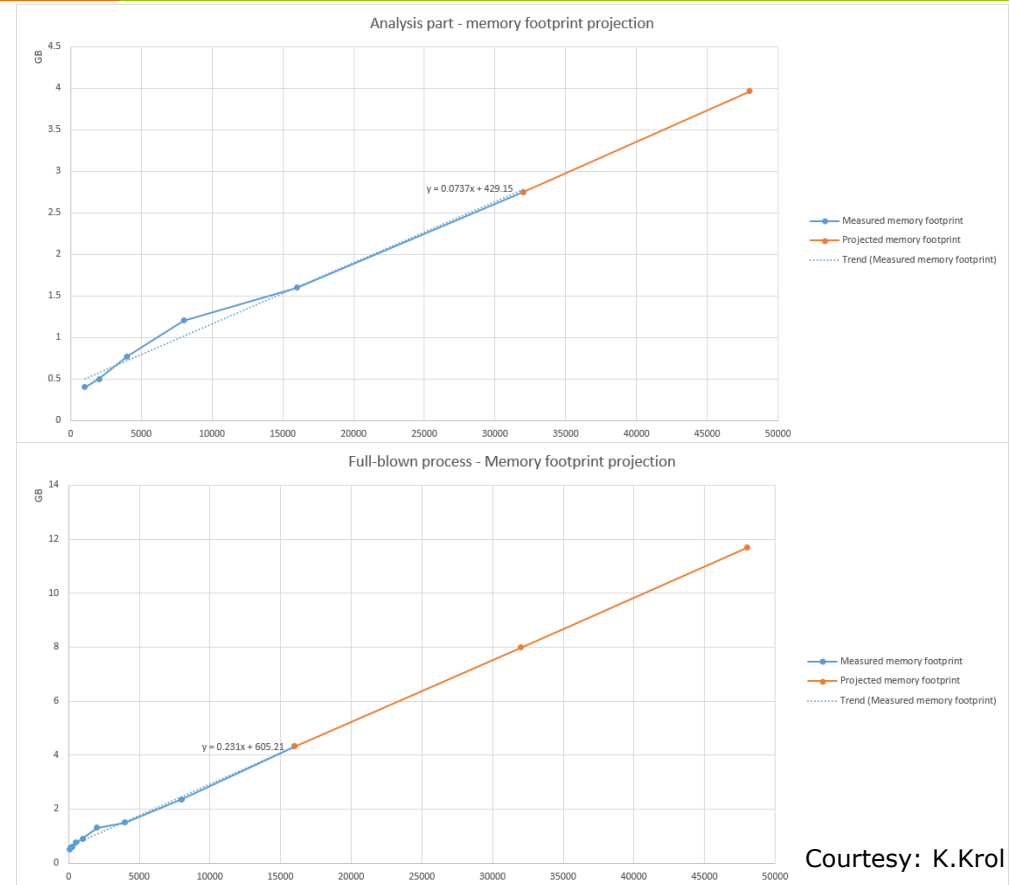
On behalf of the TE-MPE-MS Software Team

Global PM Status

- 83% of storage used
 - Disk upgrade to be foreseen 1st technical stop in June
- Some data sources are not yet used in analysis
 - Incorrect device names
 - Incorrect PM class
 - Incorrect fields
- Systems with known issues
 - BCT
 - BPM
 - RF

BLM Signal Resolution

- BLM turn loss signal resolution increased to 25600 points currently
 - Could go up to 48k
- Analysis server can take 25600 points.
- Analysis GUI was upgraded to handle them

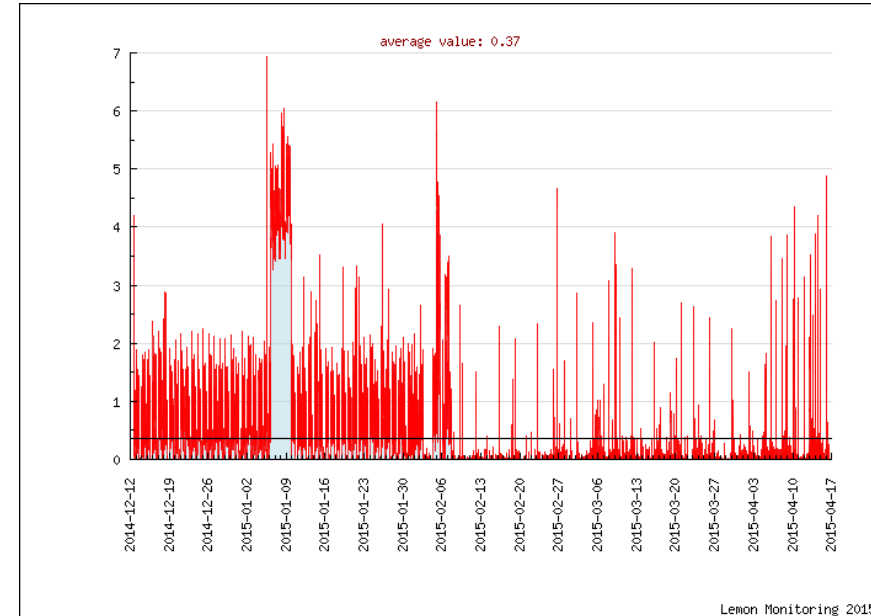


XPOC Data Collection issues

- Reported first time December 2014
 - <https://issues.cern.ch/browse/LPM-848>
- Problem: XPOC events are incomplete
 - Event building accepts front-end data up to
 - 10s after event in inject&dump mode
 - 100s when GPM occurs in parallel
 - Delay occurs during the PM data collection, between the Front-end reception and the notification of the event-builder

XPOC Data Collection issues – Season 1

- Data acquisition delays up to 30 seconds
 - Storage back-up process was producing too many I/Os on the storage and consuming a lot of CPU
 - PM server stuck on I/O wait most of the time
- Changed back-up policy, reduced delay to 12 seconds
- Then changed FESA class to send data 5 seconds earlier -> below threshold



CPUutil field: PercIOWait

XPOC Data Collection issues – Season 2

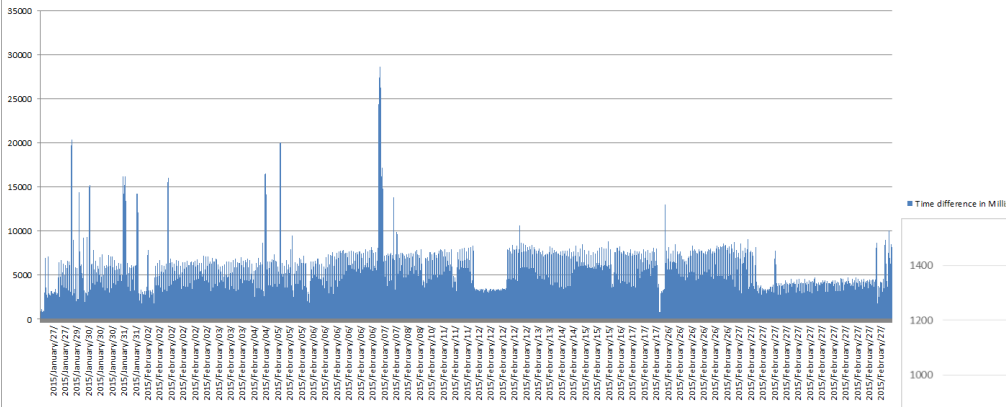
- Data acquisition delays up to 16 minutes!!!
 - Reviewed chain of notifications with CMW team from PM.FE to PM.BE to PMXPOC server
 - shouldn't be blocking, asynchronous updates
 - Reviewed file system accesses with BE-CO sysadmins
 - For sure delays in stat of directories (up to 130K dumps from LBDS in same day)
 - PM doesn't stat though

XPOC Data Collection issues – Season 2

- Problem disappeared on 13/04/2016
 - Last bad XPOC: 16:10:28
 - First good XPOC: 16:49:56
- What changed that day/time?
 - XPOC server was redeployed but nothing changed except some spring xsd versions ...
- A 3rd PM backend server is in place, with no listeners and extra timing information to see where the time is spent if the problem occurs again ...

Some charts ...

Time difference in Millis



PM front-end to back-end delay in seconds

