MICE Experiment Management Office

1st March 2016; 14:00 GMT

Phone details: http://mice.iit.edu/phonebridge.html

Present: S. Boyd, V. Blackmore (DC), A. Bross, P. Hanlet, P. Kyberd, K. Long, D. Rajaram, C. Whyte
Apologies: D. Adams, A. Nichols, C. Rogers

Notes

1. **Introduction: KL**
   - Preparation for, and initial operations, going well. However, during the shift of 29Feb16 an event occurred in which PMH restarted the DKsoln state machine, which is under development, remotely. This caused the DKsoln alarm limits to change which, in turn, caused the alarms to fire in the control room. The shift crew then called M. Tucker to check into the apparent problem. Bottom line is that a number of our procedures were not followed, including:
     - Interdiction against changes to online system during running without express permission of MOM, using the change-control system; and
     - Poor record keeping by Shift Crew.
   - SB will write a report documenting what happened and restating the procedures that are in place.
     [Note added, KL thinks we should file a "Near Miss", VB (DC) will coordinate the filing of the Near Miss paperwork.]
   - We went over the change control process and the need to use the maintenance day to test code before it is rolled out.
   - Valid alarm limits will be set for DKsoln operation tonight. If this turns out not to be possible, then appropriate instructions will be left for the shift crew.
   - When starting a run, shifters entered "forbidden characters" in the comment field. [In detail, the offending character was a parenthesis. The list of allowed characters is displayed under the RC comment box.] This caused the CDB server to reject the message, refusing to insert the entry into the database. Upon failure, the server sent an error flag back to Run Control. But Run Control does not properly react to the status coming back from the server and it allowed the run to proceed. This resulted in data being taken, with *no* record being inserted into the CDB. The information that was meant to be inserted is still available from the server logs. Janusz and DR are going through it to double check the format before we insert the records into the CDB by hand.

2. Minutes and actions: All

Notes of last time to be written and circulated. Comments then from all by email. The status of the actions:

- **KL/DR:** Seek MC production manager.
  - **Done.** D. Maletic from Belgrade came to RAL for two weeks to work on developing a GRID infrastructure for MC production. Good progress was made and are now ready to take this forward. DM will become the Production Manager. **KL** will negotiate with S. Ricciardi to see if she can provide local support.
- **DC (PH):** Liaise with system experts to define passwords so that the implementation of the expert layer can be expedited.
  - **In progress:** Outstanding system is the FC. So, **VB** will chase the only FC for a password.
- **PH:** Remind system experts to complete and return the spreadsheets needed to implement the CDB entries for the state-machines.
  - **Ongoing:** PMH is now finishing the implementation of the decay solenoid. He has the spreadsheet for the FC and the SS, which need to be implemented. E. Overton was sent the template to fill for the tracker. Eventually need to include the target, this is not presently a priority.
- **SB:** Schedule data taking to allow scan of muon rate versus pion contamination.
  - **Stands.**
- **DR:** Coordinate the spill-by-spill readout of the Hall probes.
  - **Stands.** Y. Kharadzhov needs the list of PVs from PMH. YK plans to implement and test between user runs.

3. Physics Coordinators report: CR

- CR running analysis workshop, so summary of status from KL. Work progresses on the three papers in progress (07Oct15 emittance paper, scattering paper and cooling demo paper). For details probably best to look at slides of the analysis meeting.
- Wise people proposed for 07Oct15 emittance paper:
  - Scott Berg, Paul Kyberd
- Rob Ryne confirmed as available for internal refereeing of cooling demo paper.

4. S/w&C (and MAUS): DR

- Geometry:
  - Now correct for data and MC. Some last-minute issues with sign conventions solved. Data and MC validation done.
  - Legacy geometry no longer supported.
  - DR checking consistency of geometry constants back to June. Once checks are complete full reprocessing of all data will begin. It is expected that this will start at the end of tomorrow.
- Data & MC processing
  - Data processing now with MAUS v2; issue to do with loading of calibration-card loading has been addressed.

- MC test jobs on straight tracks and the the 07Oct15 configuration now complete. For the moment must plan to use GRID resources to get sufficient number of events.
- MC for the cooling demo paper has been produced. J.B. Lagrange is checking the test processing, if OK then will process for him.

- Speed of MC
  - Remains an issue. Once all of the above is implemented/stable, DR can move the focus onto the MC processing time.

5. CAM status: PMH

- Separation of controls network: tests were performed two weeks ago, all worked as expected. When MICE goes into running state, SSH access to IOCs is prevented and existing sessions are logged out. EPICS address lists now all IP based. The only remaining code change that is required is to make the addressing of the CDB use IP address. The possibility of using a soft link will also be considered.
- Recently M. Palmer had asked PMH to reconsider the complete separation of the controls network. This would protect against, for example, a failure of a module that floods the network with traffic. ***Agreed*** to revisit the specification document of the MLCR network configuration and thereby agree future reconfiguration. Agreed actions:
  - **DC:** Convene DR, PMH, EO, HN, MC, PH, PF, YK to review previous MLCR network specification and recommend further reconfiguration.
- Agree to propose key to make the state go to SSH lock-out.
  - **MOM and PMH** propose schedule to sort this out.
  - **DC:** make proposal for the key system to get to lock out
- PMH noted that spreadsheets for the FC is complete, so this can now be implemented. Implementation of the DKsoln state machine will be completed this week. Need to complete work on the SS state machine too.

6. Commissioning and operations: SB

- See report at: http://micewww.pp.rl.ac.uk/projects/memo/wiki/20160301-Ops-Report
- Points noted:
  - DKsoln:
    - Working on PS integration today; agreed to propose a soak test before declaring the device fit to use for data taking.
  - AFC:
    - Work on evacuating the interspace has brought "vacuum" to 80mbar. Work continues.
  - BLOC:
    - Have relatively few blocks, so, SB has agreed to add a half of a normal shift credit per day when the experiment is not running 16/7 or 24/7,

7. DONM

- 15Mar16

8. AoB

None.

Summary of actions:

- **KL:** Negotiate with S. Ricciardi to see if she can provide local support for the MC processing.
- **DC (PH):** Liaise with system experts to define passwords so that the implementation of the expert layer can be expedited.
- **PH:** Remind system experts to complete and return the spreadsheets needed to implement the CDB entries for the state-machines.
- **SB:** Schedule data taking to allow scan of muon rate versus pion contamination.
- **DR:** Coordinate the spill-by-spill readout of the Hall probes.
- **DC:** Convene DR, PMH, EO, HN, MC, PH, PF, YK to review previous MLCR network specification and recommend further reconfiguration.
- **MOM(PK) and PMH:** propose schedule for the implementation of the transition to "SSH lockout" during data taking.
- **DC:** make proposal for the key system to get to trigger SSH lock out.