



Monitoring & Control Systems

Too many MCS problems!

Following slides in ace meeting last Thursday:



iFIX “Problems” and “Features” and “Plans”

- Miscellaneous minor notes
 - CPR readout problems
 - Generates short trigger inhibit usually for one read cycle (~3 seconds)
 - May or may not show up on Global Alarms picture (too short)
 - CLC1 is making me nervous: if you see longer problems, go downstairs and check CLC1 (usually heartbeat?)
 - I have found the Hvclient (but not the Hvserver) either stalled in debug mode or dead
 - Correct action: call DAQ ace to halt run, bring up client and start, check that all sections come up to full voltage (CPR2 west and east as usual problems). If not, bring any sections up by hand.
 - Have CO check that there are no occupancy problems with CLC CPR CCR in YMON
 - TOF readout problems
 - One channel typically turns yellow (as does Global Alarm)
 - This is a known bad channel and TOF group has elected not to mask channel



iFIX “Problems” and “Features” and “Plans”

- Miscellaneous minor changes
 - Changes to Global Alarms picture
 - Thanks for your constructive criticism!
 - CLC, MNP, RPS, and BCS “D” button now link to correct page (may need to drag page out—on fix list)
 - CPR “D” button no longer linked to wrong picture showing state on MUON3; now says you must go and look on CLC1
 - ICI “D” button gives instructions on restarting ICICLE
 - GAM “H” button no longer linked to PISABOX—always green
 - Changes to HV Summary picture
 - Many changes over last few months (mostly due to CLC1)
 - Both BSC and RPS show min bar at 100% and max bar at 0% when turned off due to portion of these detectors always on
 - BSC-1 (C:LOSTP and C:LOSTPB) always on; BSC-234 (far forward counters) turn on and off
 - RPS counters always on; RPS scintillator fibers turn on and off
 - When BSC and RPS turned off; state is still marked ON—to fix
 - CPR has unneeded standby button—to fix



iFIX “Problems” and “Features” and “Plans”

- ICICLE
 - Problems seen with heartbeats
 - Heartbeat on Global Alarm picture: I would advise let it be for 15-30 minutes if ICICLE process log on SOLENOID2 looks normal, but then restart ICICLE as usual. Will probably increase check time.
 - Heartbeat to runControl via SmartSockets: Bill has increased heartbeat check; any problems? Of course, we have had recent general SmartSocket/RTserver problems.
 - Suspicion is CDFONPRD Oracle DB has grown so DB access times have grown, slowing down heartbeat updates
 - As always, log everything!
- iFIX general headaches
 - We are being pressured to replace Windows NT PCs as quickly as possible for security
 - MUON3: replacement has software/hardware, but expert not available to work on PC (muon group also needs to come up with replacement)
 - CDF-FS2: webserver to be replaced soon with Xeon
 - CDF-FS1: iFIX server replaced with Xeon; while being replaced all nodes will have to run in LOCAL mode (long shutdown when ready)



iFIX “Problems” and “Features” and “Plans”

- Adding backup disk to each iFIX node with image backup of C: drive
 - Means each PC needs to go down for 2 hours
 - All PCs on 1st floor but TOF1 and MUON3 done; none done on 2nd and 3rd floors
 - We have been waiting for opportunities to do this, but we are going to a more aggressive schedule since very few downtimes (did PISABOX yesterday)
- Just this week:
 - Found that “Alarm Areas Database” cannot be shared on network disk. Prevents saving of changes to local iFIX database. Only solution is to export and re-import database on every node. Can take 2-8 hours depending on complexity of database. Will probably just deal with this as need to change databases occur.
 - Adding second disk to VNODE2 was a disaster! After 2nd drive added, original C: drive would not work. Removing 2nd drive did not help. Attempts to recover original disk did not work. Suspicion is bad motherboard. Friday Mark determined motherboard OK; problem appears to be just disk. In process of restoring from Retrospect Backup DVDs. Should be back this week.



iFIX “Problems” and “Features” and “Plans”

- *“The more I use computers, the more I appreciate pencils.”*
- So, what are implications for (monitoring) aces?
 - No VNODE2; lucky because mostly just duplicates VNODE1 functionality, except:
 - SmartAlec, process and hardware which takes iFIX data and displays it on the safety status panels (will read “Status Panel not receiving data” until fixed)
 - Thus, you are the “fire watch”. Already on your job list to monitor FIRUS, VESDA, and the cameras. Realize one layer of warning is now gone, so stay alert.
 - General worry: are number of power cycles on PCs by aces causing more hardware/disk failures?
 - First, this is a change in what we have been advising. Aces have been doing as advised.
 - Avoid power cycle if at all possible. Please call J.C. Yun or I day or night if iFIX PC needs to be rebooted. During 0600-1500 weekdays look for Mark Knapp if the first fails. (Example: MUON3 cycled earlier this week, but Mark could have stopped Retrospect from server.)
 - Working on providing special iFIX account (maybe to process system tech?) just for shutting down iFIX and rebooting PC gracefully.



Monitoring & Control Systems

- During/since Thursday:
 - PTM stopped controlling plug PMT box temperatures 1000–1600 Thursday; still mostly within spec
 - But monitoring did not completely stop; some data points change
 - Coincident with VNODE2 going away? Then why did it come back?
 - Also, coincident with increased (but small) network traffic
 - MUON3 had problems due to me restarting but forgetting to turn CPR/CCR offline
 - CLC1 had problem due to CPR CAEN 527 freezing; had to be reset from front panel
 - Was not clear from messages in server and client windows
 - Add to ace instructions to check communications from main control panel before starting client
 - VNODE1 had problem when a restart was attempted due to attempts to write to VNODE2's DB; J.C. has temporarily changed all writes to VNODE2 tags to VNODE1 tags (so they are being written twice)
 - Need more robust solution