

Online Summary

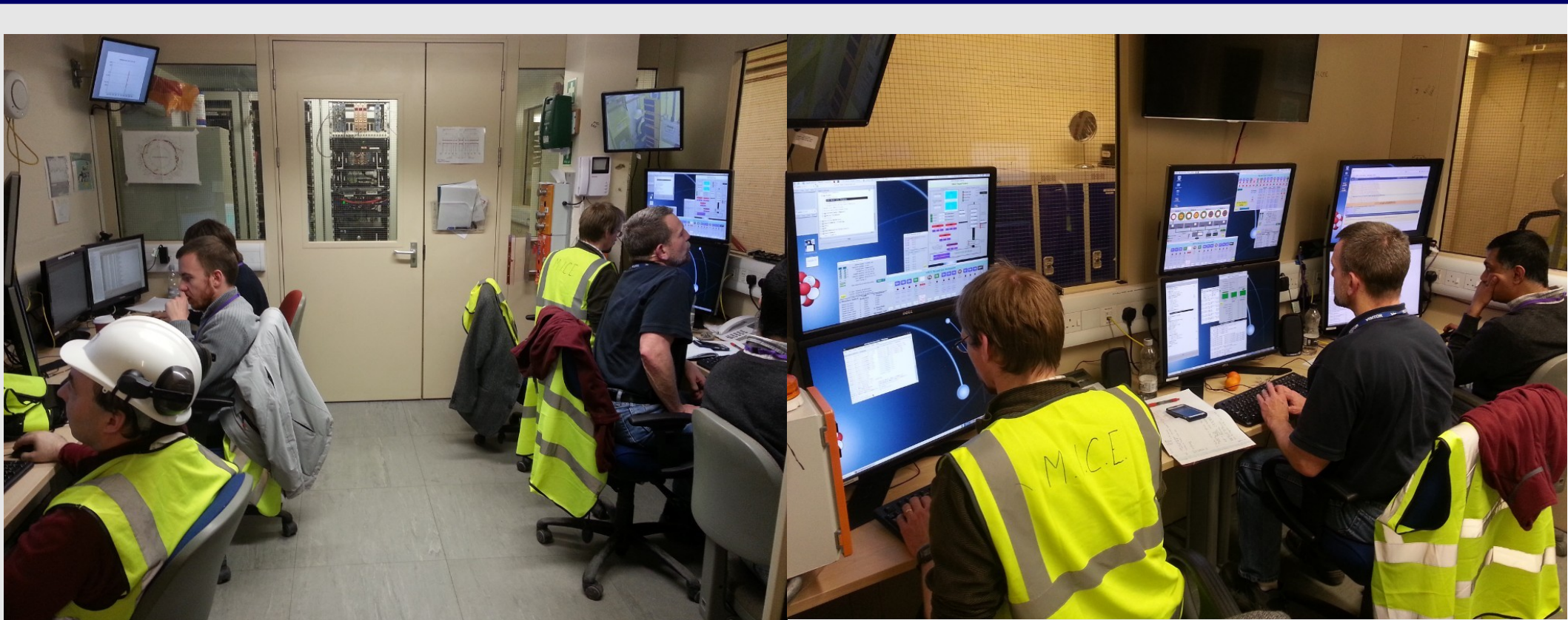
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- Summary

MLCR Thin Update

- An effort was made to increase screenspace in the MLCR, using dual screened, high resolution displays.
- MLCR now uses “thin clients” labelled micethin00 to micethin05, and serve a general purpose
 - Miceopipc's have been removed from the control room, however all thin clients are configured with the C&M software.
 - DAQ, OnMon, OnRec can all be accessed via ssh tunnels, and X-forwarding.
 - We should make it seamless and easy for shifters. Perhaps using password less ssh / start scripts on the thin clients may help?
- Display of the Alarm Handler and Web Whiteboards has been chosen to use large 32” TV's such that these can be read from a distance.
 - Alarm handler display is now mounted and cabled. Software config in progress.
 - Web whiteboards are mounted. Need configuring

Control Room in use



KVM / Mousehole / Networking

- Within the MLCR, the KVM system can be used to access a number of machines in RR1. This machine is now on the right hand side of the door, shared use with micethin02.
- Mousehole is now inside the RAL DMZ, this means:
 - Only ssh to micenet machines is available (unless explicitly requested).
 - **Ping does not work from Mousehole!**
 - To access ports on a MICE-net machine from outside RAL, it is possible to use a tunnel inside a tunnel..
- New network switch installed in January 2015. Old switch had “occasional reboots”
- Wireless is to be made available in hall.
 - Craig has access point on order.

RR2 / MES

- The new Rack Room is being filled with IOC's and equipment racks.
- Plan to have a thin client also present in RR2
 - Micethin06 has SL6.4 installed.
 - Controls S/W will need installing when the machine is deployed.

- Two old miceopipc's are now present at a workbench on the mezzanine
- Provides a “satellite”, “in hall” place for working, or using equipment.
- Wireless will also be available to this location, for use of personal laptops outside the control room.

- Finally, two laptops which can be used on micenet exist (one is loaded with S/W), and will be available for use anywhere there's a network port.

Spares/Backups

- Survey of the MLCR was made recently.
- Spotted a number of older machines, which nbd. Warranties are coming to an end.
 - Aiming to replace many of these with year end money.
 - Money allocated.
 - Machines TBD.
- Also aiming to replenish a number of spare HDD's + thin clients.

- Backup infrastructure is in place in the MLCR.
- To add your files to the backups see Matt's instructions on:
 - <http://micewww.pp.rl.ac.uk/projects/online/wiki/MICENETBackups>
- These files are backed up daily with rdiffbackup

Nagios Monitoring

- Monitoring the health of our machines will help us maintain a proactive approach to maintenance
- Nagios is currently in the process of deployment.
- Goto <https://nagios.micenet.rl.ac.uk> (from inside micenet).

Nagios
 General: Home, Documentation
 Current Status: Tactical Overview, Map, Hosts, Services, Host Groups (Summary, Grid), Service Groups (Summary, Grid), Problems (Services, Hosts, Network Outages), Quick Search, Reports

Current Network Status
 Last Updated: Wed Jan 21 23:48:37 GMT 2015
 Updated every 90 seconds
 Nagios® Core™ 3.5.1 - www.nagios.org
 Logged in as mice

Host Status Totals

Up	Down	Unreachable	Pending
80	9	0	0

All Problems: 9 | All Types: 89

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
205	2	0	39	0

All Problems: 41 | All Types: 246

View Service Status Detail For All Host Groups
 View Status Overview For All Host Groups
 View Status Summary For All Host Groups
 View Status Grid For All Host Groups

Host Status Details For All Host Groups

Limit Results: 100

Host	Status	Last Check	Duration	Status Information
HA_PLC01	DOWN	01-21-2015 23:44:54	3d 12h 11m 23s	CRITICAL - Host Unreachable (172.16.246.180)
HA_PT01	DOWN	01-21-2015 23:44:54	3d 12h 11m 23s	CRITICAL - Host Unreachable (172.16.246.181)
HX_INV01	DOWN	01-21-2015 23:44:54	3d 12h 11m 23s	CRITICAL - Host Unreachable (172.16.246.186)
backup1	UP	01-21-2015 23:45:34	3d 12h 14m 50s	PING OK - Packet loss = 0%, RTA = 0.44 ms
cagateway1	UP	01-21-2015 23:45:34	3d 12h 13m 28s	PING OK - Packet loss = 0%, RTA = 0.13 ms
camhall07	UP	01-21-2015 23:45:34	3d 12h 12m 6s	PING OK - Packet loss = 0%, RTA = 0.80 ms
camhall08	UP	01-21-2015 23:45:34	3d 12h 14m 49s	PING OK - Packet loss = 0%, RTA = 0.70 ms
camhall09	UP	01-21-2015 23:45:34	3d 12h 16m 13s+	PING OK - Packet loss = 0%, RTA = 0.55 ms
camhall10	DOWN	01-21-2015 23:45:04	3d 12h 11m 13s	CRITICAL - Host Unreachable (172.16.246.90)
camhall11	UP	01-21-2015 23:45:34	3d 12h 13m 27s	PING OK - Packet loss = 0%, RTA = 1.07 ms
camhall12	UP	01-21-2015 23:45:34	3d 12h 12m 5s	PING OK - Packet loss = 0%, RTA = 0.60 ms

DAQ - Y. Karadzhov

- Event building problems:
 - The reprocessing of the December 2011 data revealed a problem in the binary data.
 - The problem is presented only in the very long runs.
 - This isn't a new problem. It was first time reported by Jean-Sebastien (CM24 June 2009)
 - The DATE Local Data Concentrators get out of sync (one misses a readout).
 - The software for recovering of the corrupted data was implemented as part of the Unpacking library.
 - Two standalone programs are available:
 - Very fast program that can test the quality of the data of a given run (1-2 min for testing one run).
 - A program for rebuilding of the problematic runs (5-10 min for recovering the run data).
 - Including checks to spot this in the MLCR.

DAQ - Y. Karadzhov

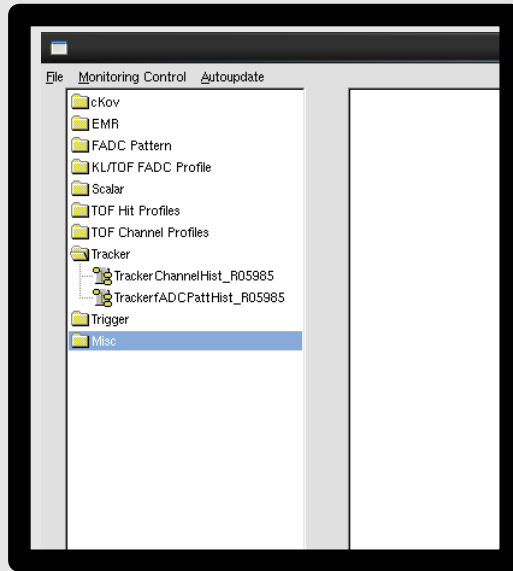
- New Versions of DATE:
 - Minor problems (not critical)
 - InfoBrowser crashes - the only cure I managed to find is to restart the InfoBrowserServer
 - DAQCONTROL GUI doesn't want to start. Some debugging in the shell scripts is needed in order to fix this.
 - Serious problem (still not critical)
 - The new versions of DATE come with a significant changes in the structure of the recorded binary data.
 - The consequence of this is, that we will need two different versions of the unpacking library for analysing the StepI and StepIV data.
 - Sane implementation to support both Step I and Step IV is in the design steps.

Online Monitoring - R. Gardner

- Online Monitoring runs live using the DATE monitoring facility.
 - Runs throughout data taking.
- Should be used to provide immediate data quality check, and to debug unpacking operations/board health.
 - No reconstruction takes place.
- Equipment Monitored
 - TDC V1290 (TOF) - Hits per channel, dt spectra
 - FADC V1724 (TOF and KL) - ADC spectra for all boards/per board
 - FADC V1731 (CKOV and EMR) - Hits per channel, ADC spectra per board
 - Scalar V830 – Scalar plots
 - VLSB (Tracker) (recently added) - Hits per channel, ADC/TDC per channel
 - Also info from DAQ Triggers for Start/End of burst, number of physics events, equipment triggers.

Online Monitoring - R. Gardner

- Feedback from previous running indicates difficulty in locating appropriate histograms for shifter and expert alike.
 - All histograms in one long list.
- Addressed issue by sorting plots into detector categories.



Mice Online Monitoring

MICE

Online Monitoring - R. Gardner

- Mock Data Run
 - Triggers seen from V1290 boards when running TOF detector triggers from DAQ.
 - Tracker plots added to OnMon, signals seen. Raw TDC/ADC for each channel
Hits per channel.
- Reference Plots
 - Now have plots for all detectors/equipment
 - Document with full list will be made available.
 - In process of choosing plots with good data to use as reference plots.
 - Have step I data for TOF, KL, Ckov, EMR.
 - Will need to wait for first batch of Step IV data for Tracker
 - Will send reference plots to detector groups for validation.
- Comparison Methods
 - Adapting Chi2Test method in ROOT to compare reference data to live data.
 - Tested for 1D histograms. i.e. Channel hit plots.
 - Can also check for empty channels/plots!

Online Monitoring - R. Gardner

- Detector groups should contact Rhys (soon) if any more plots are desired.
- Chosen reference plots will be sent out soon for each group to check.
- Integrate the histogram comparison method into the OnMon data pipeline. Test for slowdown/adverse effects.
 - Add alarms for shifter benefit
 - Add options for detector/DAQ experts to modify reference plots or comparison parameters.
 - Alarms will be handled using existing alarm handler infrastructure in epics.

Summary

- We survived the Mock data challenge!
- Still plenty of work to be done before Step IV.
- A number of changes are being made:
 - Paul Smith is leaving MICE.
 - Paolo is coming on-board, mainly focusing on infrastructure
 - Yordan is taking over online, which will mainly focus on daq/online monitoring/etc.
- DAQ is becoming more stable, now ironing out bugs from version change.
- Lots of development and plans for the online monitoring.

Thanks for listening.