Grid Status

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Data Mover

Permanent storage of data from the MICE DAQ.

- Initial transfer/"File Compactor" *still* triggered manually (moveFiles script)
- Autonomous process - "Data Mover" - then makes copy at RAL Tier 1 for tape archival.
- Separate agents then make copies at Imperial and Brunel

MLCR DataMover PC is being moved to SL6, will move to state tracking in MySQL DB, other tweaks.

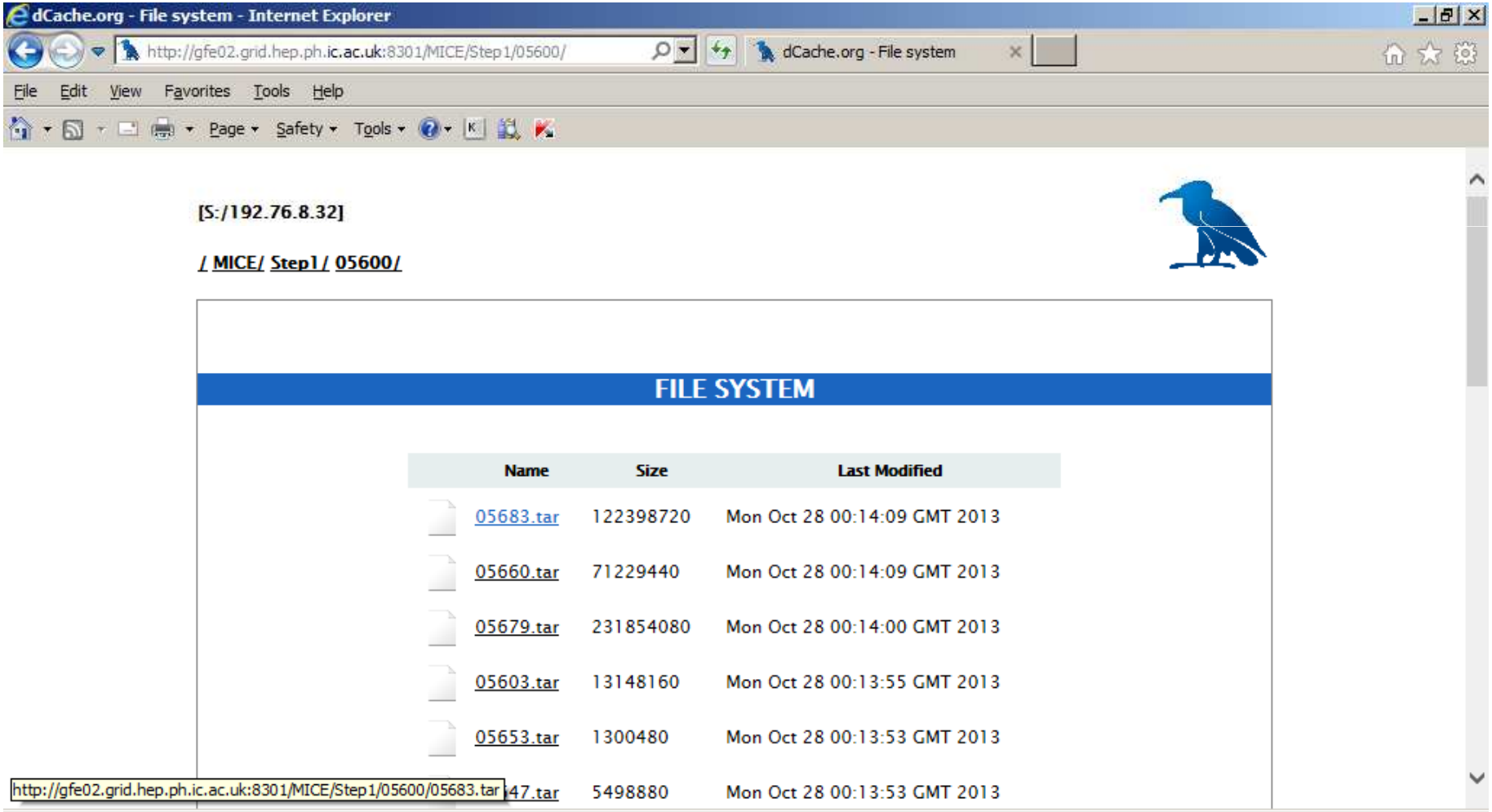
MICE Raw Data

Raw data on Grid, for up to October 2013 run inclusive

- Data validation up to last October (run 5683)
- All data tarballs valid (internal checksums OK)
- All data tarballs have two copies on tape at Tier 1 Castor
- All data tarballs have overall checksums match between Castor and MLCR copy
- Copies of data at RAL PPD, Imperial College (web) and Brunel (Grid/WebDAV)

MICE Data

Copies of data at RAL PPD, Imperial College (web) and Brunel (Grid/WebDAV)



CVMFS

CVMFS

- a read-only filesystem based on HTTP; uses caching to give (usable) global coverage
- the master copy, Stratum-0, is at the RAL Tier1
- installed on Grid clusters at Brunel, Imperial and RAL PPD and Tier 1
- MAUS is compiled and built at Imperial, then the binaries moved to the Stratum-0 and replicated across the Grid
- Now a manual, interactive process so we get more feedback during the install
- Have so far installed MAUS 0.6.0, 0.8.1, 0.8.5

Offline Reco

MAUS installed at RAL Tier1 for Offline Reco

- automated process waiting for new raw data files
- when a new data file appears, makes Offline Reco and run-specific Monte-Carlo job using latest approved MAUS
- uses fast-response queue at RAL Tier1
- automatically runs MAUS jobs, creates output tarballs, saves them to Grid disk and tape :)

Steps tested in principle during EMR run. Needs automation (dongle) and exercising of the system.

Batch Reprocessing

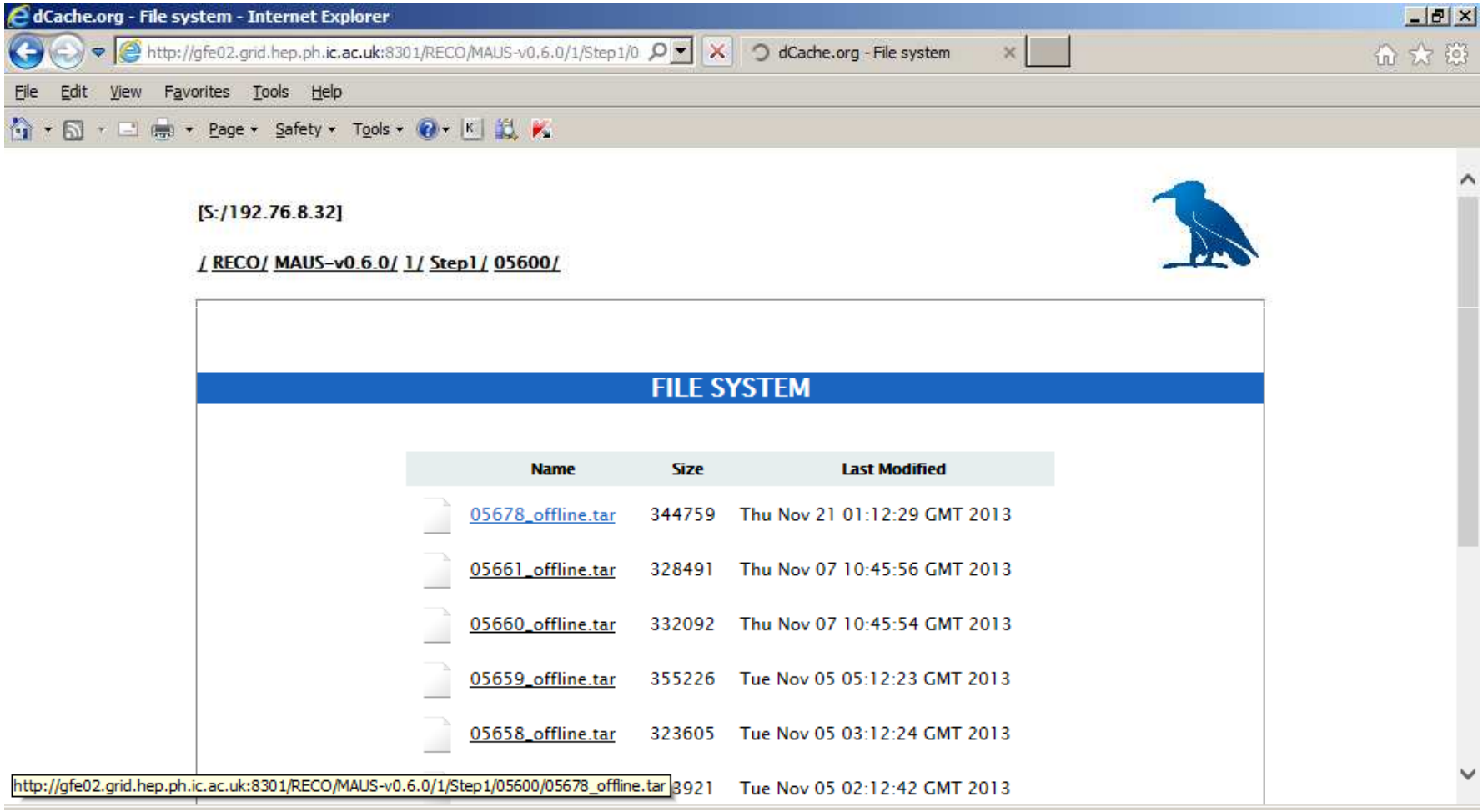
A manually-triggered process, in response to a particular MAUS release becoming available via CVMFS:

- makes Offline Reco and run-specific Monte-Carlo job using that MAUS release for every run in a specified Step.
- uses Tier2 sites across the UK
- automatically runs MAUS jobs, creates output tarballs, saves them to Grid disk and tape :)
- Demonstrated last autumn with MAUS-v0.6.0 – took a few weeks

MAUS 0.8.1 and 0.8.5 failing with major memory leaks (killed at 6 GB)

Reco Data

- Saved to Grid disk and tape, with web access



Miscellaneous Data

Longstanding drive to archive a variety of data from other activities in MICE, e.g.:

- Testbeam and cosmic data
- Field Maps
- Geometry and surveys
- Muon Beams library
- EPICS Archiver archive

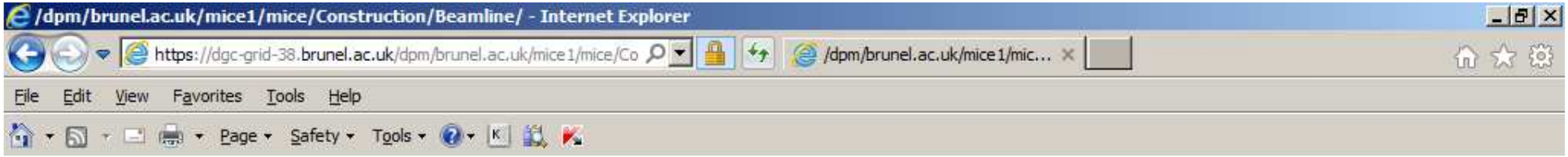
(Data curation seems to be becoming a topic with the funding agencies)

The Grid storage is my responsibility (wearing my Archivist hat) but *preparation, indexing and making data available rests with its creator!*

https://micewww.pp.rl.ac.uk/projects/computing-software/wiki/GridDataStorage

Other Data

- Saved to Grid disk and tape, with web access



/dpm/brunel.ac.uk/mice1/mice/Construction/Beamline/

Mode	UID	GID	Size	Modified	Name
drwxr-xr-x	101	109	2	Wed, 02 Oct 2013 19:36:09 GMT	Magnets/
drwxr-xr-x	101	109	6	Wed, 02 Oct 2013 19:41:27 GMT	Maps/
drwxr-xr-x	101	109	1	Wed, 02 Oct 2013 19:42:21 GMT	Windows/

Request by /C=UK/O=eScience/OU=Brunel/L=ECE/CN=henry nebrensky (No proxy)

Powered by LCGDM-DAV 0.14.0

https://dgc-grid-38.brunel.ac.uk/dpm/brunel.ac.uk/mice1/mice/Construction/Beamline/Magnets/

Future

Near future:

- Batch Offline Reco run with MAUS-v0.8x
- Data Mover to SL6

Step IV:

- automated Data Mover at end of each run
- robot dongles for mover and reco certificates
- data distribution to RAL PPD and Glasgow

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- MC Production