RAL Tape Report

Castor F2F 19th Feb 2009

Tim Folkes, RAL

Current status

- 10,000 slot SL8500
  - 5,000 for use by Castor
  - 2,400 in use
- 18 T10KA drives
  - 16 production 2 on test/certification systems

Science & Technology
Facilities Council

Future plans

- Second SL8500 purchased
  - Won't be installed until new machine room available
  - Migrate current drives/media to new library
  - Then move old robot over and connect via pass-through.
  - Castor then have 10,000 slots available

Future Plans

- Migrate to T10KB drives
  - Had planned to do this this year
  - LHC delays halted this plan
  - Probably(?) need to do this next Financial year
  - Probably migrate "big" users (CMS/Atlas) to these via repack
  - Leave "small" users on T10KA
  - Plans likely to change ☺

Tape servers

- All servers now 64 bit

- 4 or 8 GB memory

- Running 2.1.7-15
  - Upgrade to 2.1.7-24 while we can

Performance

VO	read-write	KB transferred	Tape Xfer MB/sec	Tape Elapsed MB/sec	Files/hr	Average file size MB
alice		561,770	3.0	0.1	25.3	10.2
	WRITE	561,770	3.0	0.1	25.3	10.2
atlas		12,210,700,332	61.6	39.8	65.5	2,186.7
	READ	10,226,416,149	60.6	46.2	66.1	2,514.5
	WRITE	1,984,284,183	67.2	23.2	63.7	1,308.0
cms		38,142,942,659	102.7	35.9	54.0	2,397.3
	READ	246,224,740	58.0	10.7	80.3	480.9
	WRITE	37,896,717,919	103.2	36.5	53.4	2,461.0
lhcb		799,344,318	57.2	3.2	15.8	728.7
	READ	99,533,933	17.3	0.5	14.0	129.8
	WRITE	699,810,385	85.4	13.3	22.5	2,120.6
test		29,834,006	10.9	0.6	0.8	2,712.2
	READ	29,834,006	10.9	0.6	0.8	2,712.2
other		518,725,843	10.5	2.9	181.4	58.5
	WRITE	518,725,843	10.5	2.9	181.4	58.5
Grand Total		51,702,108,928	81.3	27.9	61.3	1,640.2

Repack

- In use to free up sparse tapes.
- Would like to use to recover data on disk when a tape breaks (used to have –S option)
- Will use to migrate to T10KB drives if needed
- On 2.1.7-19, probably go to 2.1.7-24 till 2010

Questions/developments

- Have cases of "incorrect or missing trailer label".
  - Any ideas how this happens?
  - tpread has –T option to get round this, how can we tell repack to use this option when reading?
- Why many tapes going RDONLY, especially with users with lots of small files?

Science & Technology
Facilities Council

Questions/Development

- Spotting errors, tape based view
  - rtstat does report on tape errors
    - We have ops running this daily
  - DLF just gives VO based view of errors
    - Could we have a tape DLF?
  - How do others monitor tape errors?

Science & Technology
Facilities Council

Questions/Developments

- SL8500 monitoring
  - Anyone managed to get SNMP monitoring of the SL8500 to work? If so how?

- Redundancy with multiple SL8500s
  - How do you have failover set up?
    - Multiple VLANS to ACSLS?
    - Multiple ACSLS servers?

Science & Technology
Facilities Council

Questions ?

Tim Folkes, RAL