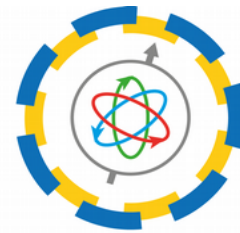


Between DAQ and Framework



of J-PET

or

Short description of tape storage and disk buffer together with CPUs used for J-PET data analysis and MonteCarlo simulation

Eryk Czerwiński, 2018.09.10

DAQ output



~3 hld files per minute
1 raw hld file 2 GB

~100 MB/s
(LHCb@CERN, Run 2, 750 MB/s)

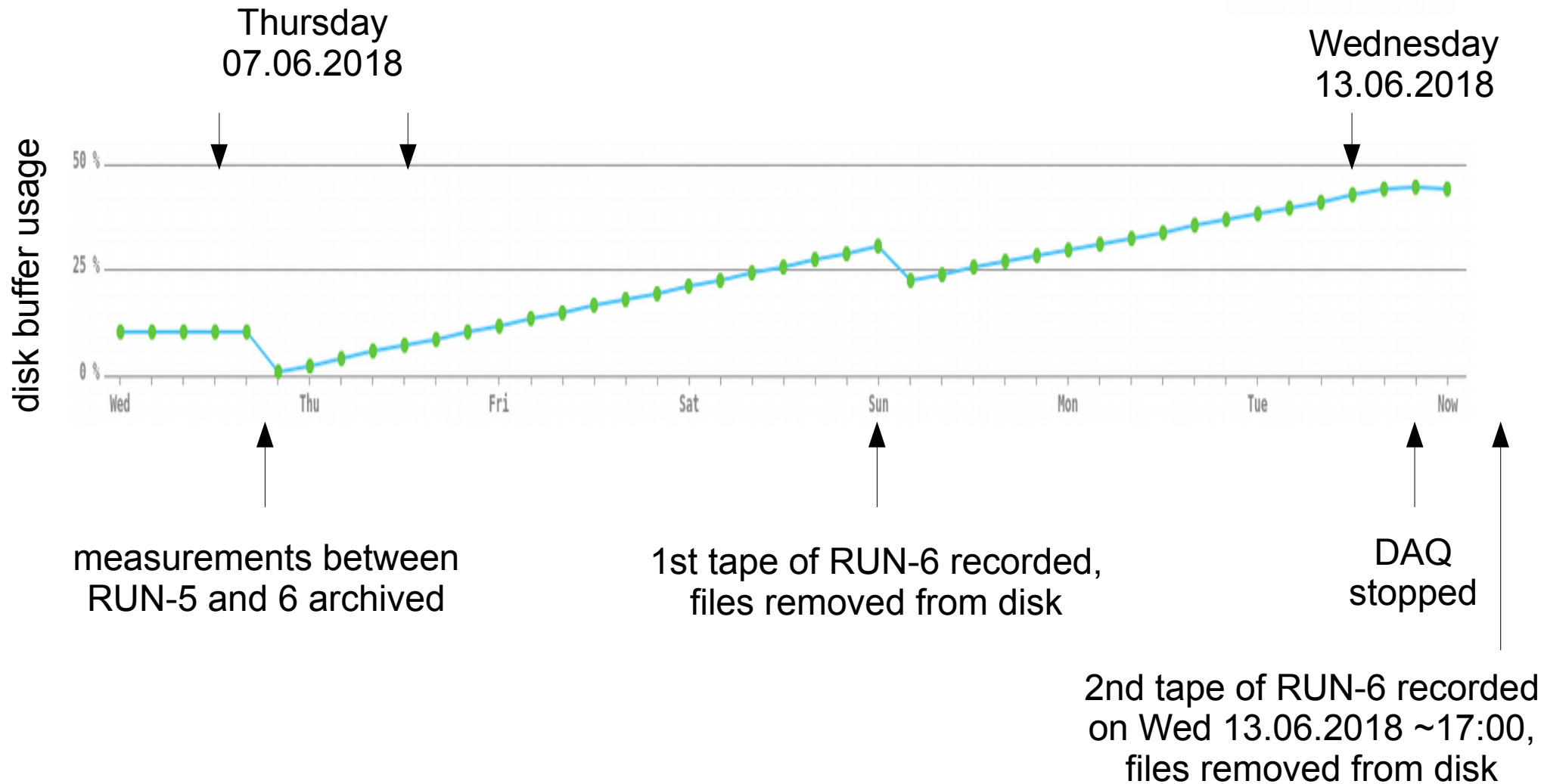
	~ # of files [10^3]
RUN 1+2	14
RUN 3+4	18
RUN 5	168
RUN 6	259

TOTAL ~0.9 PB of uncompressed data

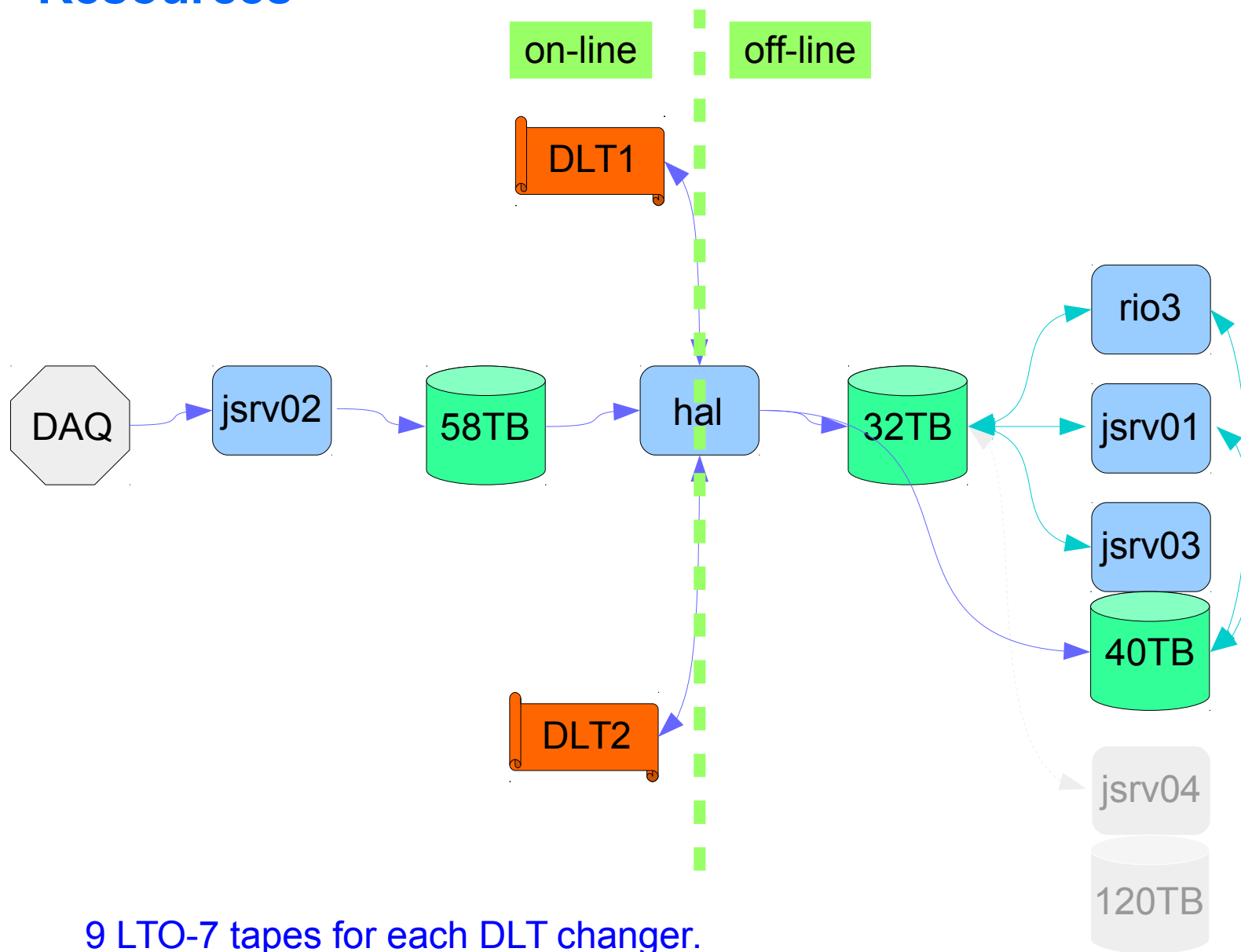
Compression ratio 55% with xz - slow
65% with bz2 (lzip2) - fast

TOTAL ~0.5 PB of compressed data (almost 90 LTO-7 tapes)

Online disk buffer



Resources



Resources



jsrv01 (offline) 2 x Intel Xeon E5-2620 v2	(2.1 GHz, in total 12 cores),	32 GB RAM
jsrv02 (online) 1 x Intel Xeon E5-2620 v2	(2.1 GHz, in total 6 cores),	8 GB RAM
jsrv03 (offline) 2 x Intel Xeon E5-2695 v4	(2.1 GHz, in total 32 cores),	192 GB RAM, 40 TB storage as RAID-6
jsrv04 (offline) 2 x Intel Xeon Platinum 8168	(2.7 GHz, in total 48 cores),	512 GB RAM, 120 TB storage
hal (online/offline) 2 x Intel Xeon E5-2698 v3	(2.3 GHz, in total 32 cores),	384 GB RAM, 6 TB storage SSD
rio3 (offline) 2 x Intel Xeon E5-2630 v2	(2.6 GHz, in total 12 cores),	32 GB RAM
jnas01 (offline)	32 TB storage as RAID-6	
jbox02 (online)	58TB storage as RAID-0 (→ RAID-6 ?)	

Future



- installation of jsrv04 in upcoming weeks
- cluster based on SLURM* and virtual machines starting next month
- allways more CPUs, disks, **tapes**
- *bigger tape changers*

*Simple Linux Utility for Resource Management

The End