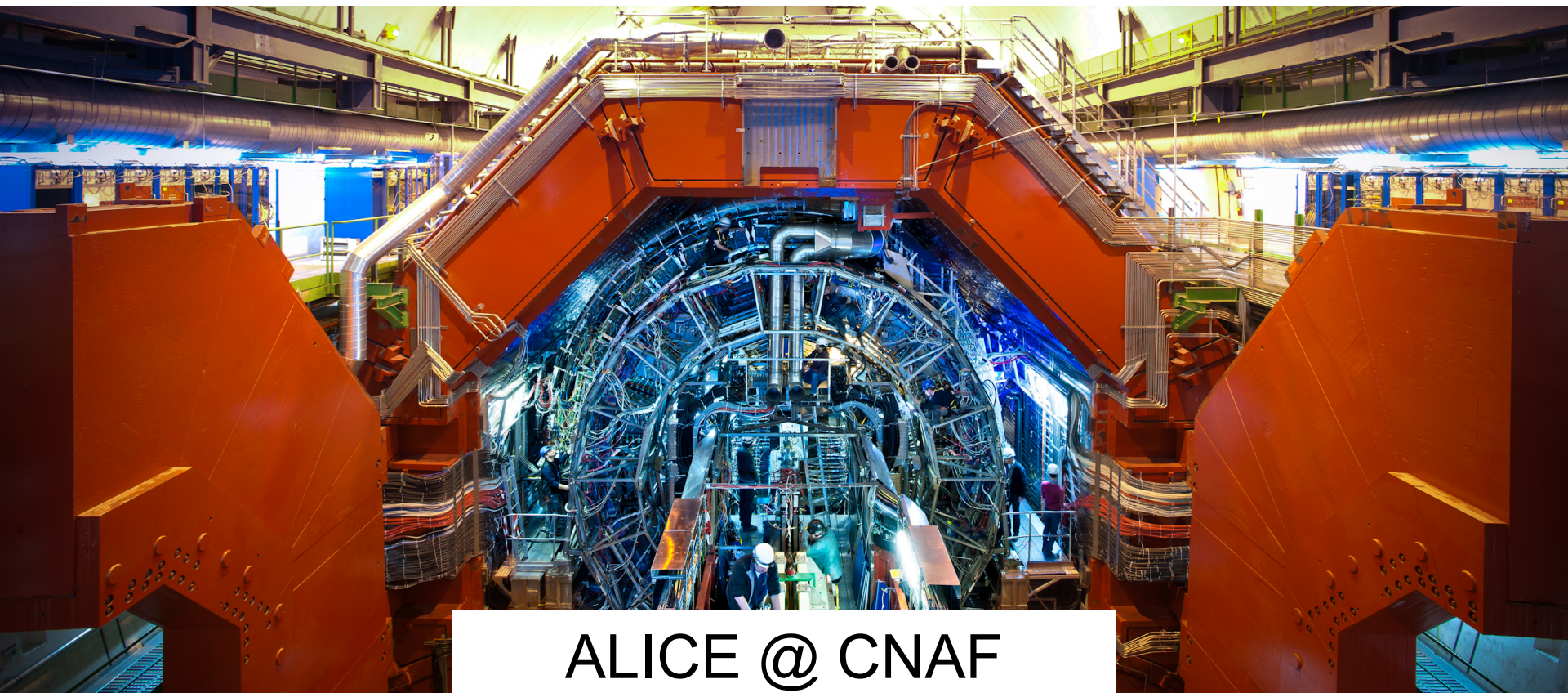
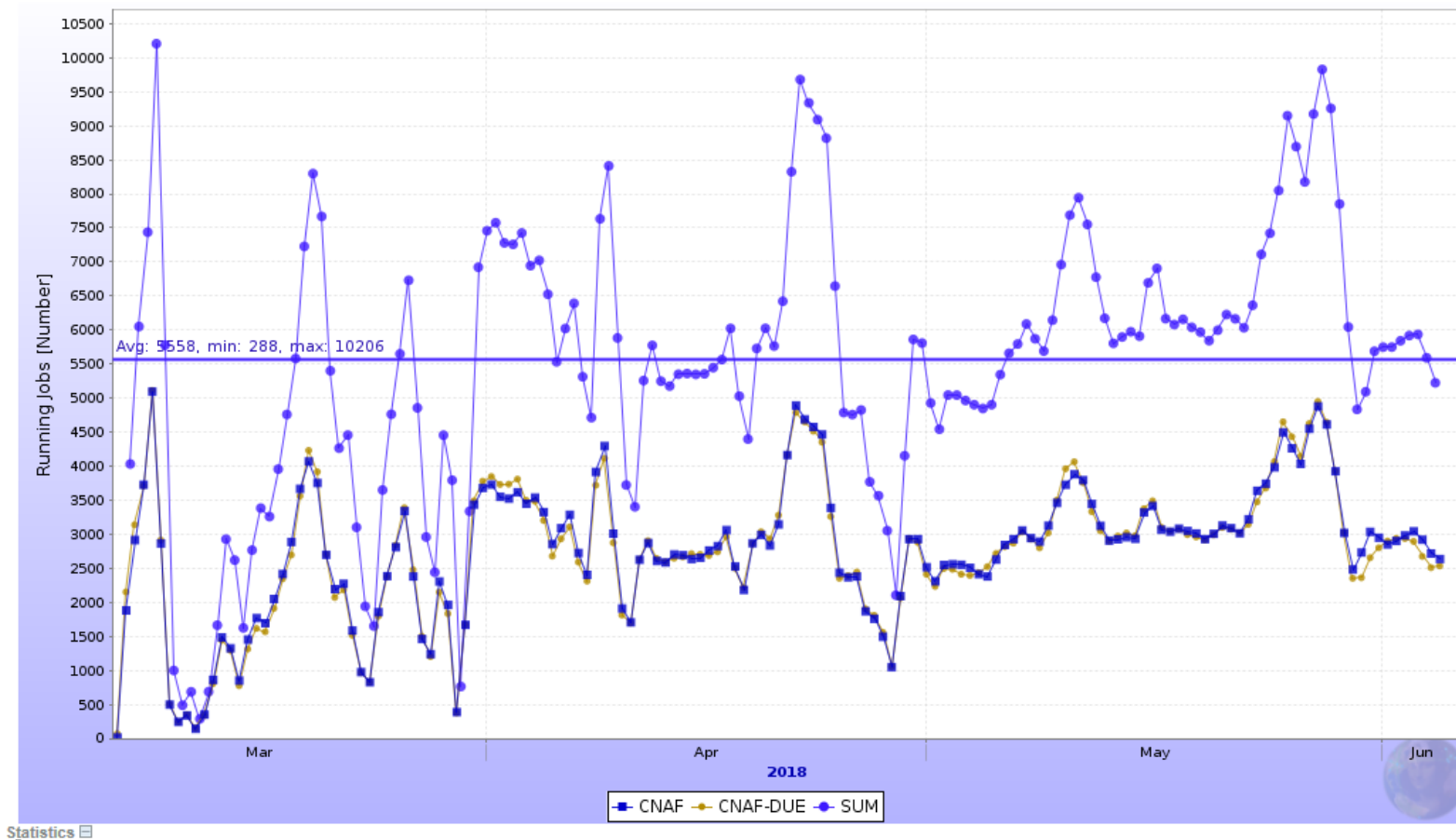




ALICE @ CNAF

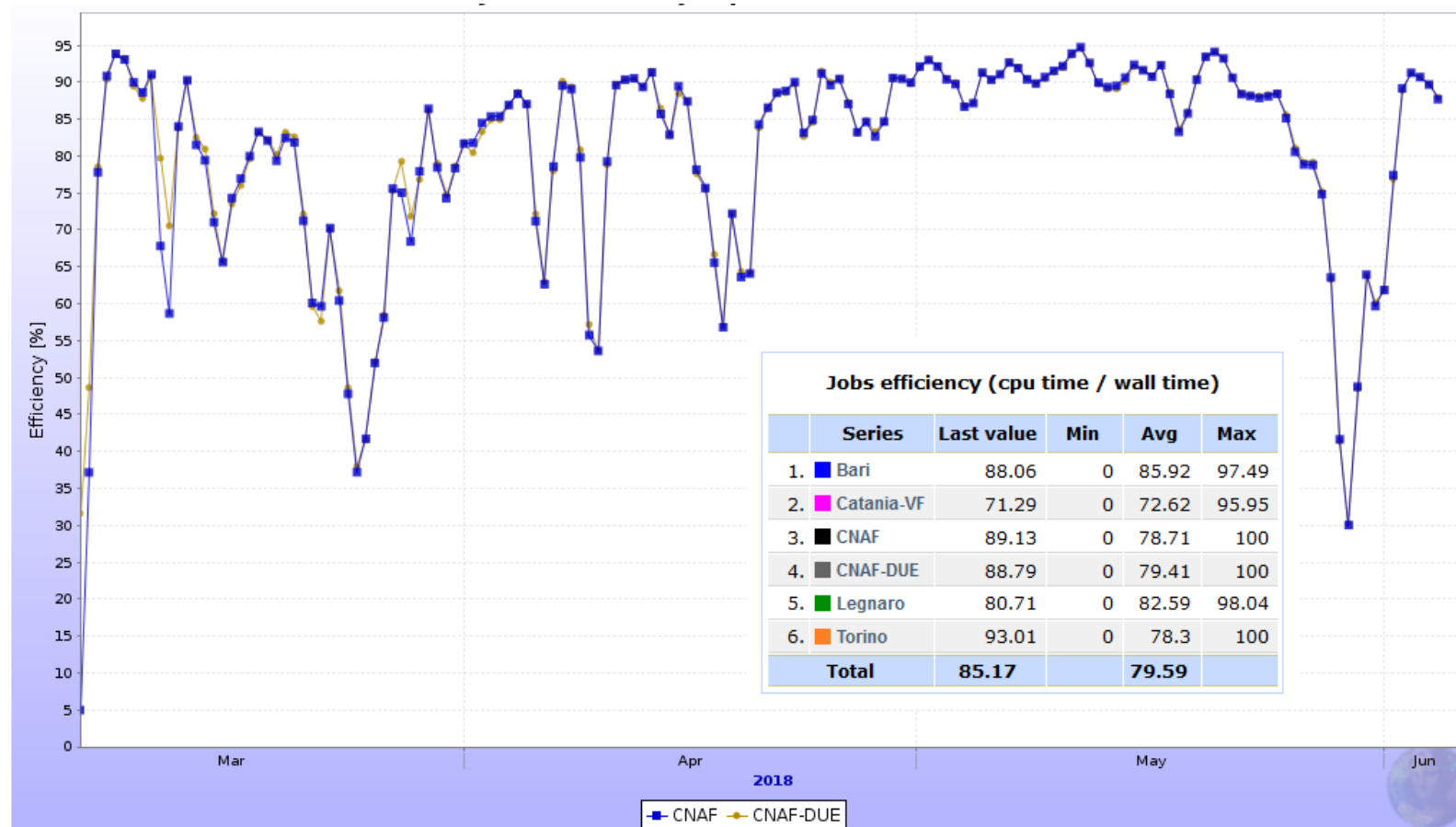
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ALICE activity running jobs at CNAF



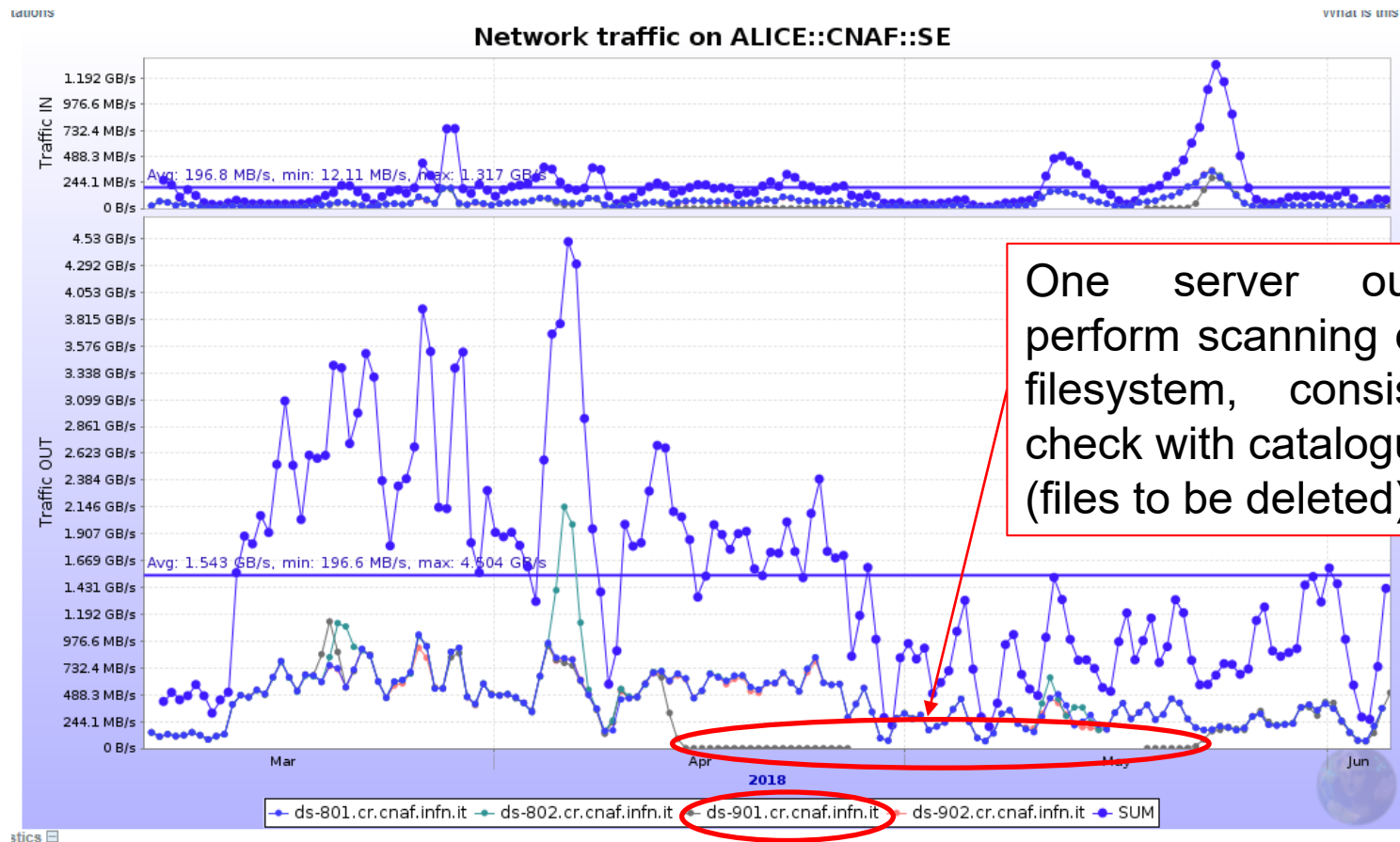
ALICE activity

jobs efficiency at CNAF



ALICE activity

CNAF::SE traffic



ALICE operations

Disk status

Disk storage elements

	CNAF												
SE Name	AliEn SE	Catalogue statistics						Storage-provided information					
SE Name	AliEn name	Size	Used	Free	Usage	No. of files	Type	Size	Used	Free	Usage	Version	
1. CNAF - SE	ALICE::CNAF::SE	3.405 PB	3.148 PB	262.7 TB	92.47%	84,379,659	FILE	3.405 PB	3.179 PB	231.3 TB	93.37%	Xrootd v4.1.3	
Total		3.405 PB	3.148 PB	262.7 TB		84,379,659		3.405 PB	3.179 PB	231.3 TB			

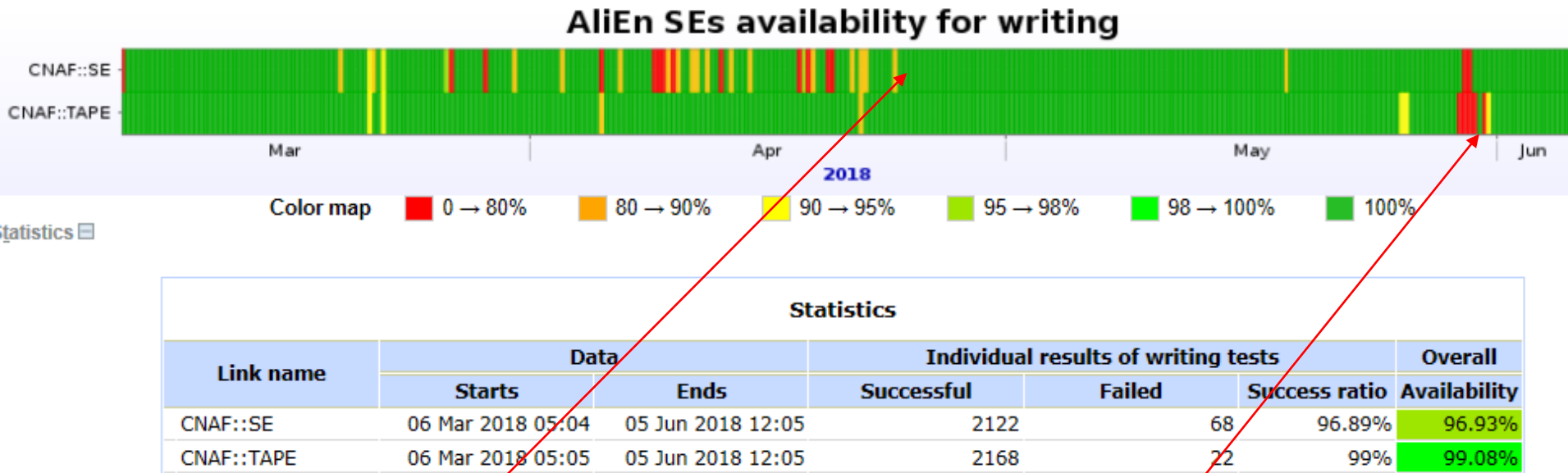
Tape storage elements

	CNAF												
SE Name	AliEn SE	Catalogue statistics						Storage-provided information					
SE Name	AliEn name	Size	Used	Free	Usage	No. of files	Type	Size	Used	Free	Usage	Version	EOS Ver
1. CNAF - TAPE	ALICE::CNAF::TAPE	436.1 TB	6.743 PB	-	1583%	4,410,023	FILE	407.5 TB	363 TB	44.5 TB	89.08%	Xrootd v4.1.3	
Total		436.1 TB	6.743 PB	0		4,410,023		407.5 TB	363 TB	44.5 TB			

File catalogue and disk usage now are aligned

ALICE operations

SE availability



cronjob installed to check the status of xrootd servers

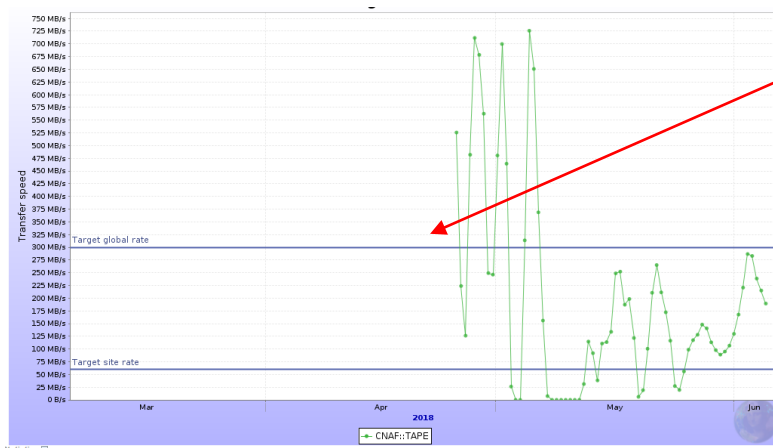
/storage/gpfs_tsm_alice unmounted on ds-104, do we need to set an alarm ?

ALICE operations

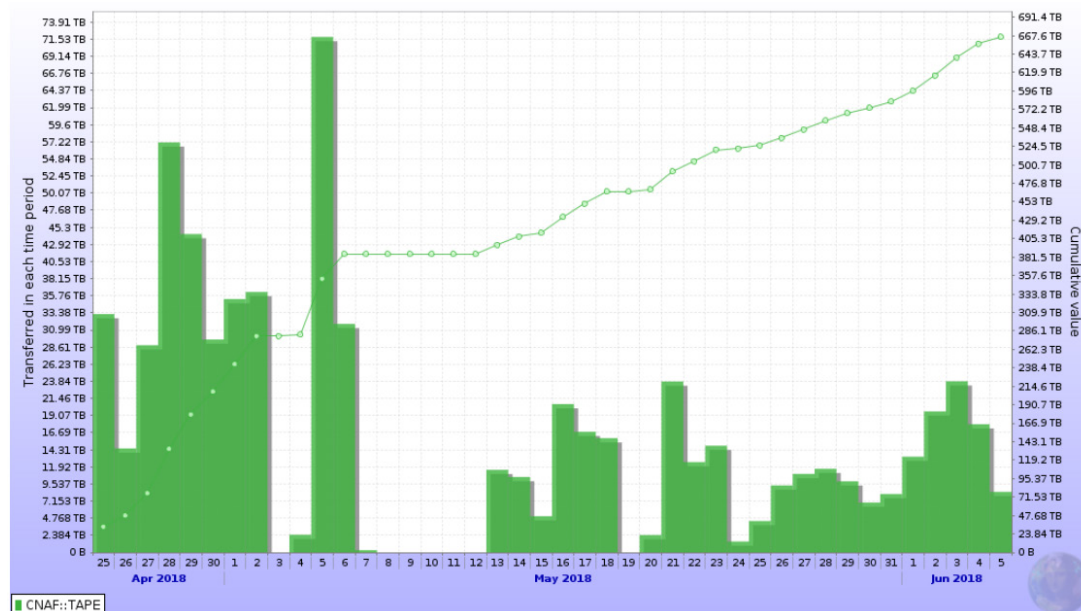
RAW replication on TAPE

Raw data replicated at CNAF since April

Traffic on tape day by day



SEs average transfer rates					
Series	Last value	Min	Avg	Max	Total
1. CNAF::TAPE	189.3 MB/s	0 B/s	194.3 MB/s	3.232 GB/s	645.1 TB
Total	189.3 MB/s		194.3 MB/s		645.1 TB





Thank you a lot!

Stefano Piano – INFN sez. Trieste

Pledge 2018

	Spring request (*)		Fall request (*)		PLEDGE 2018 (REBUS)	
	Tier1	Tier2	Tier1	Tier2	Tier1	Tier2
CPU (HS06)	52020	74460	52190	67660	52020	61050
DISK (TB)	5440	6970	5185	5967	5140	6659
TAPE (TB)	13500		13510		13530	

(*) ALICE requests scaled for INFN share (excluding CERN):
~17% for CPU and disk, ~33% for tape

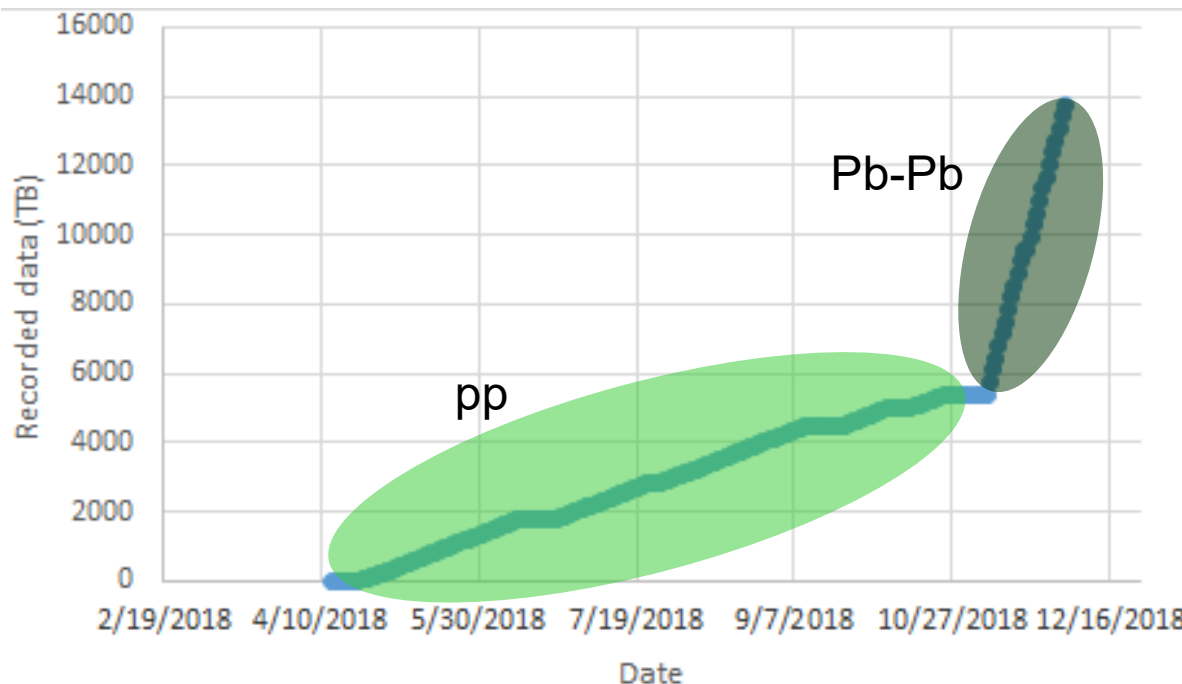
ALICE resources request 2019

ALICE		2017			2018		2019		
		CRSG recomm.	Pledged	Used	CRSG recomm.	Pledged	Request	2019 req. /2018 CRSR	C-RSG recomm.
CPU	Tier-0	292	292	389	350	350	430	123%	430
	Tier-1	256	235.5	295	307	279.5	365	119%	365
	Tier-2	366	279.6	299	312.9	312.9	376	120%	376
	HLT	n/a	n/a	26	n/a	n/a	n/a	n/a	0
	Total	914	807.1	1010	969.9	942.4	1171	121%	1171
	<i>Others</i>			39					
Disk	Tier-0	22.4	22.4	19.3	26.2	26.2	34.3	131%	34.3
	Tier-1	25.4	21.8	18.245	30.5	30.4	37.9	124%	37.9
	Tier-2	31.4	22.7	20.06	29	29	33.9	117%	33.9
	Total	79.2	66.9	57.6	85.7	85.6	106.1	124%	106.1
Tape	Tier-0	36.9	36.9	29.7	49.1	49.1	44.2	90%	44.2
	Tier-1	30.9	30.6	22.3	40.9	42.2	37.7	92%	37.7
	Total	67.8	67.5	52	90	91.3	81.9	91%	81.9

RAW data volume expected in 2018

pp:
 $430 \text{ Hz (readout rate)} * 1.7 \text{ MB (event size)} * 86400 \text{ (seconds)} * 0.57 \text{ (combined efficiency)} * 150 \text{ (days)} = 5.4 \text{ PB}$

Pb-Pb
 With the increased HLT compression, data rate from 10 GB/s to 7.1 GB/s



(Scenario 1):
 Data taking at 7.1GB/s
 100M MB events, 250 M central events plus several triggered samples, including muon arm events ($750 \mu\text{b}^{-1}$).

(Scenario 2):
 Data taking at 7.6GB/s
 additional 100M MB events
 increasing the size of the tape buffer at CERN
 increase the number of events to be processed offline

$7.1\text{GB/s [7.6GB/s]} * 86400 \text{ (seconds)} * 0.57 \text{ (combined efficiency)} * 24 \text{ (days)} = 8.3\text{PB [9PB]}$