

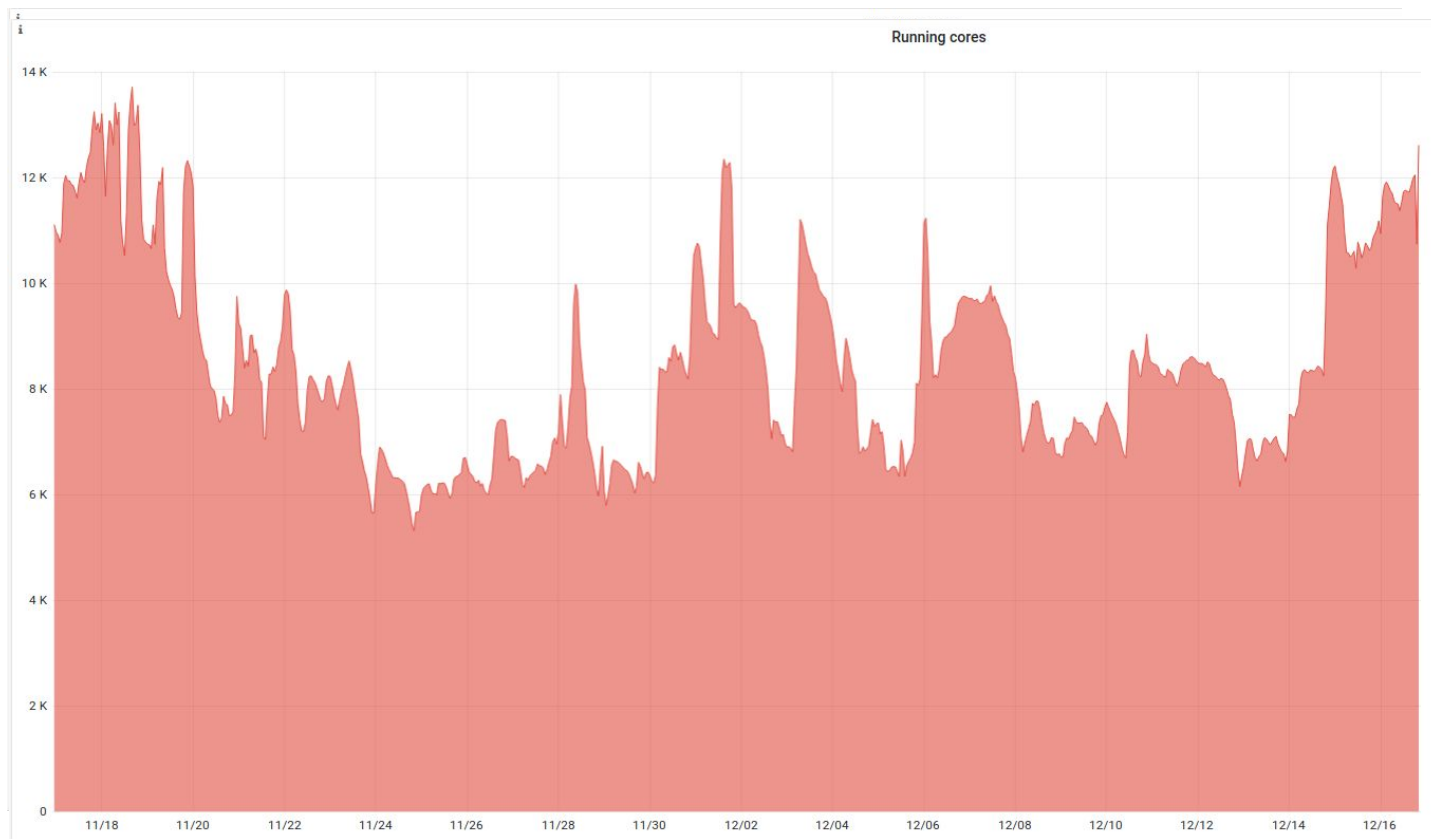
CMS - CdG T1

Daniele Spiga
INFN-PG

17.12.2021

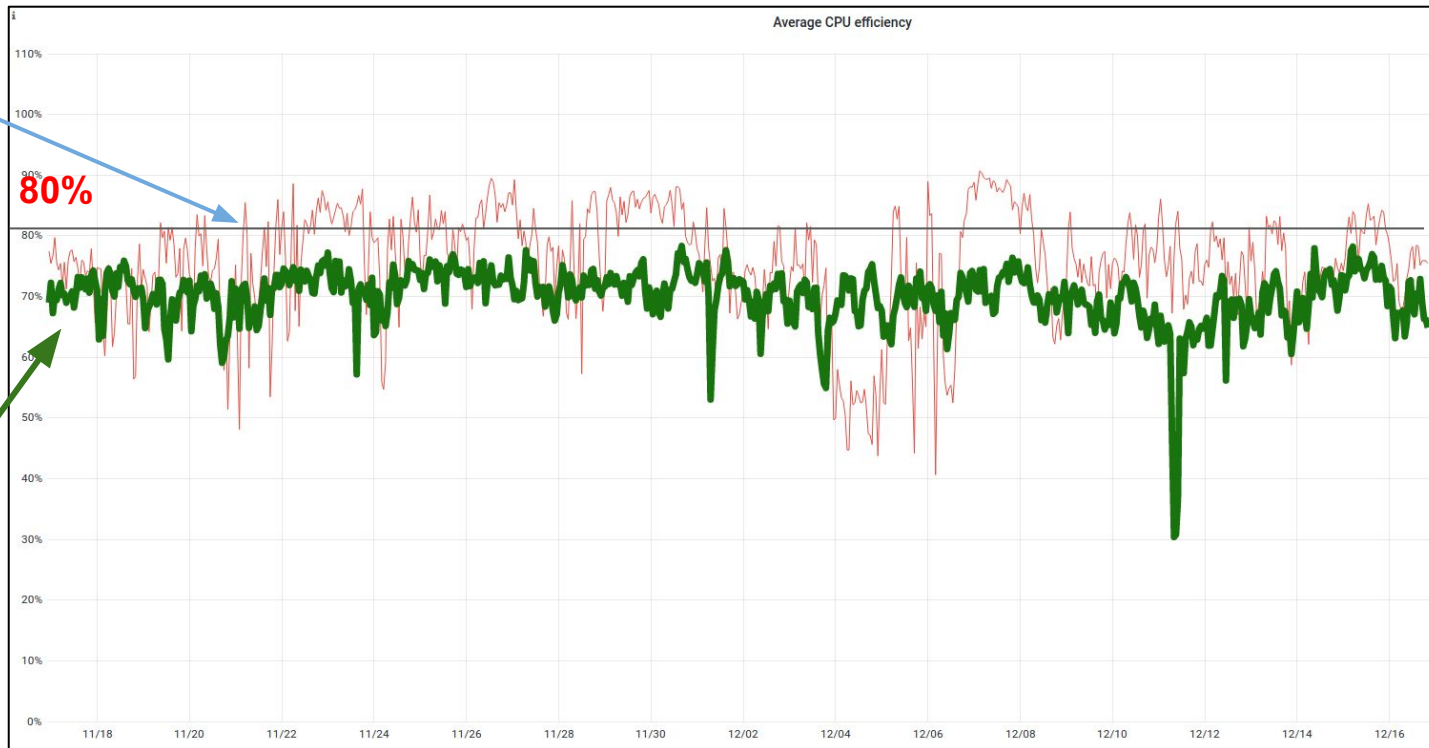


Utilizzo Risorse Tier1



Efficienza di CPU @CNAF

Efficienza
@CNAF



Andamento
medio di
tutti i Tier1
di CMS

Debugging XRootD setup

Reminder: Abbiamo riscontrato un problema “un po' subdolo” da debuggare che si manifesta nella lettura remota di dati via xrootd pool.

Ci sono tre effetti lato client:

- Max Thread reached
- Connection reset by peer
- Timeout

Alzare banalmente le soglie di protezione sposta il problema sul load dei server di xrootd

- Teoricamente dovremmo capire perchè (non banale ed è work in progress)
- E' anche in corso un confronto tecnico

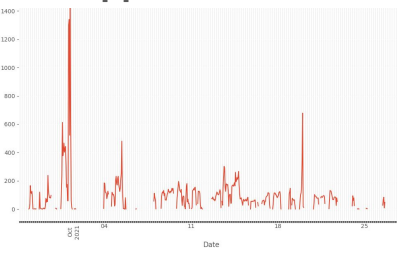
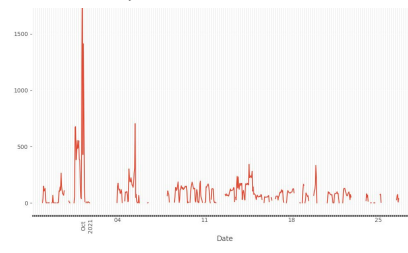
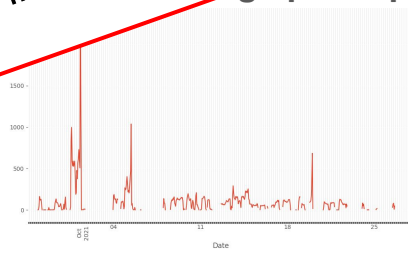
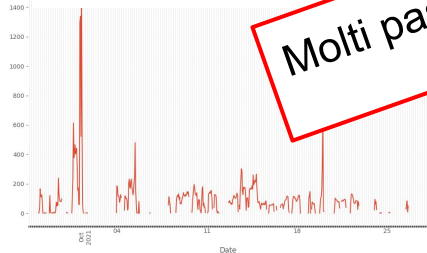
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xrootd.log_20210824:210826 02:31:22 891 XrdLink: Unable to receive from tbocall.114525:138@login.m100.cineca.it; connection reset by peer
xrootd.log_20210824:210826 02:38:19 24579 XrdLink: Unable to receive from tbocall.117013:98@login.m100.cineca.it; connection reset by peer
xrootd.log_20210824:210826 02:40:04 24606 XrdLink: Unable to receive from tbocall.121358:97@login.m100.cineca.it; connection reset by peer
xrootd.log_20210824:210823 04:06:24 10881 XrdLink: Unable to receive from cms001.3048:139@wna5001.cern.ch; connection reset by peer
xrootd.log_20210824:210823 04:08:54 31260 XrdLink: Unable to receive from tardis.2390:656@gridka.de; connection reset by peer
xrootd.log_20210824:210823 05:15:10 24422 XrdLink: Unable to receive from ?::253@lx...; connection reset by peer
xrootd.log_20210824:210823 06:11:01 27747 XrdLink: Unable to send to cmspilot...; connection reset by peer
xrootd.log_20210824:210823 13:32:57 32591 XrdLink: Unable to receive from ?::106@...; connection reset by peer
xrootd.log_20210824:210823 21:54:39 3351 XrdLink: Unable to send to ...; connection reset by peer
xrootd.log_20210824:210823 23:05:58 32538 XrdLink: Unable to ...; connection reset by peer
xrootd.log_20210824:210823 23:06:00 7319 XrdLink: Unable to ...; connection reset by peer
xrootd.log_20210824:210823 23:06:12 980 XrdLink: Unable to ...; connection reset by peer
xrootd.log_20210824:210823 23:20:21 1083 XrdLink: Unable to ...; connection reset by peer
xrootd.log_20210824:210824 00:41:11 748 XrdLink: Unable to ...; connection reset by peer
xrootd.log_20210824:210824 09:05:50 30440 XrdLink: Unable to receive from pcms02.2333:54@[2a00:139c:4:cd:0:1:5:71]; connection reset by peer
xrootd.log_20210824:210824 09:05:50 30440 XrdLink: Unable to receive from pcms02.2398:428@c01-122-114.gridka.de; connection reset by peer
xrootd.log_20210824:210824 09:05:50 30440 XrdLink: Unable to receive from pilcms12.375:690@t2-fw-01-w.lnl.infn.it; connection reset by peer

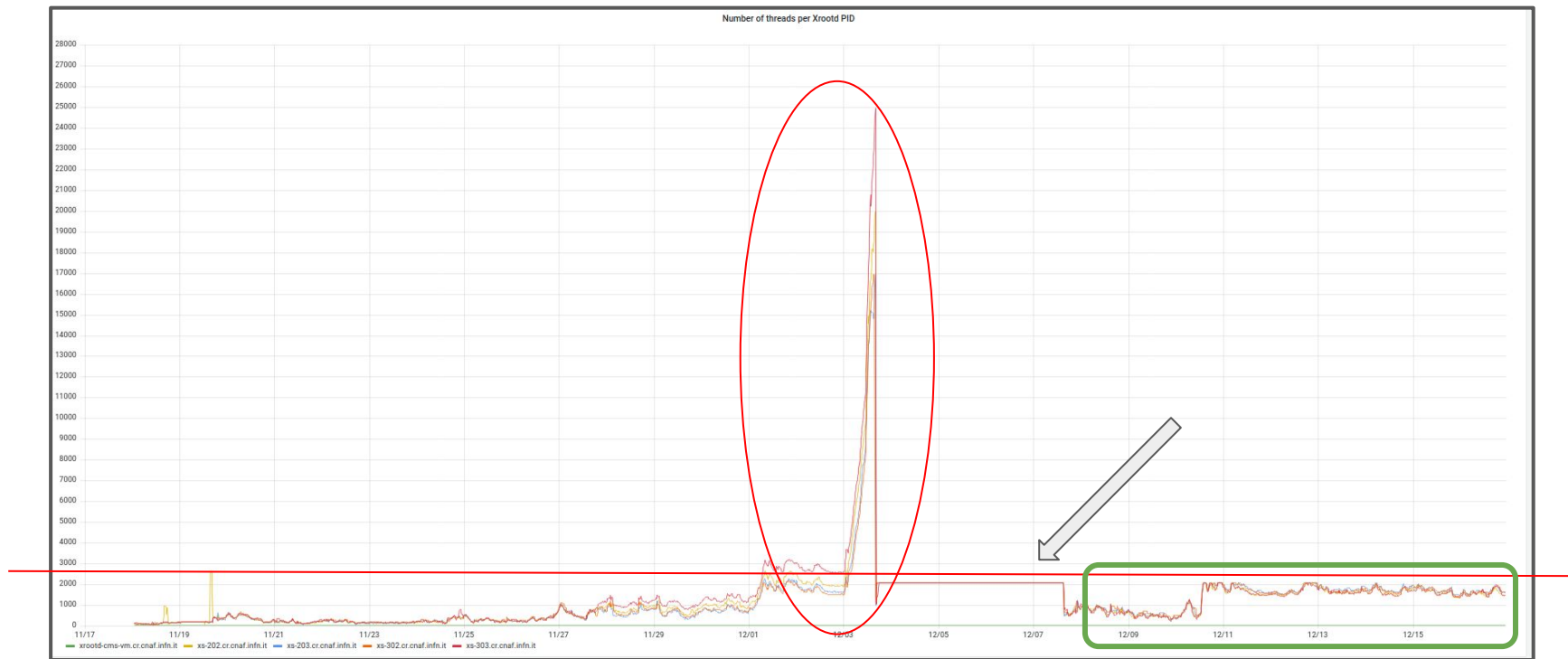
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Molti passi in avanti nell'ultimo mese!!!!, grazie Storage group

Abbiamo fatto ... per capire l'entità, non banale e forse non troppo affidabile



Threads setup, debugging and fine tuning





Quote Disco Aggiornate in Rucio

rse_id: dd251c7f3f7a40e0b3aef3d2c6d0875e
rse: T1_IT_CNAF_Disk
source: rucio
used: 6.798 PB
files: 1807689
updated_at: 2021-12-17 10:04:12

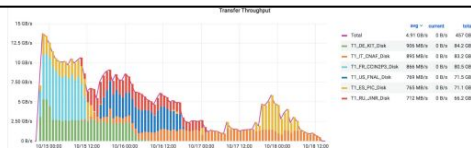
RSE: T1_IT_CNAF_Disk

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rse: T1_IT_CNAF_Disk
source: static
used: 9.400 PB ←
updated_at: 2021-12-14 13:38:03

Qui va aggiunto il Buffer (riservato) circa 600TB

Tape test post mortem

T1_Tape → T1_Disk



CMS site	CMS Transfer Speed Fall	CMS Transfer Speed Spring
IN2P3	4.74(GB/s)	3.6(GB/s)
PIC	1.84(GB/s)	1.0(Oracle) 0.5(IBM)
KIT	2.34(GB/s)	1.2
FNAL	2.46(GB/s)	--
CNAF	1.07(GB/s)	--
JINR	1.56(GB/s)	--

T1_Disk → T1_Tape

CMS site	Average transfer rate
IN2P3	4.46 (GB/s)
KIT	4.31 (GB/s)
PIC	2.30 (GB/s)
CNAF	3.96 (GB/s)
JINR	877 (MB/s)

- RAL did not participate, still commissioning the new Tape system
- FNAL did not participate (huge backlog)
- Numbers higher than in Spring
- Higher than T0→T1_Tape rates

- But we were able to meet the target rates for Run-3!
- Sites learned/confirmed a lot about the technicalities of their system
- Clean-up of tape challenge data on the way



M100 e la physics Validation

E' iniziata l'attività di validazione della fisica generata su M100

Il gruppo di Physics Data And Monte Carlo Validation (PdmV) ha sottomesso il promo workflow

- Ancora non è sufficiente per avviare il processo di validazione.. Ma è il primo workflow sottomesso da CMS (e non da noi) su M100
 - Non è sufficiente perchè è stato usato il testbed e questo NON è abilitato a salvare i dati opportunamente per l'analisi postmortem.
- Sono partiti già con la sottomissione di un nuovo round di workflows con l'infrastruttura giusta