



Stato del calcolo dell'esperimento ALICE

Mario Sitta – Univ. Piemonte Orientale & INFN Torino
Rosario Turrisi – INFN Padova

Organizzazione

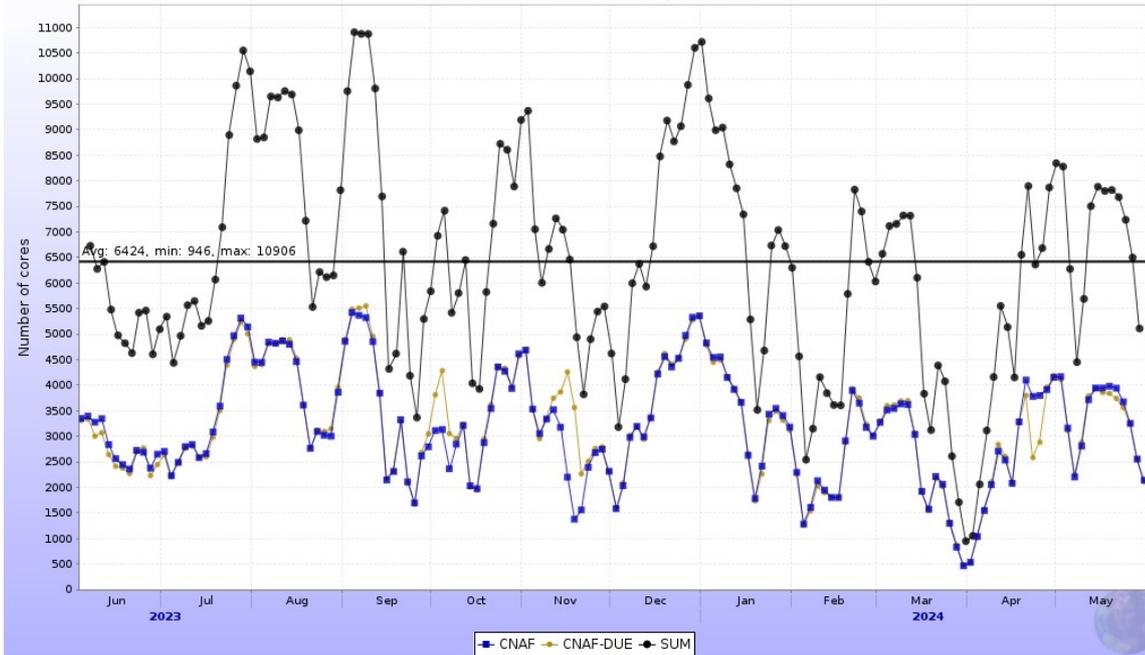
- Responsabile Nazionale del Calcolo
 - Mario Sitta
- Deputy RNC nel Computing Board e Coordinatore TIER-2
 - Rosario Turrisi
- Referente TIER-1
 - Francesco Noferini

Organizzazione

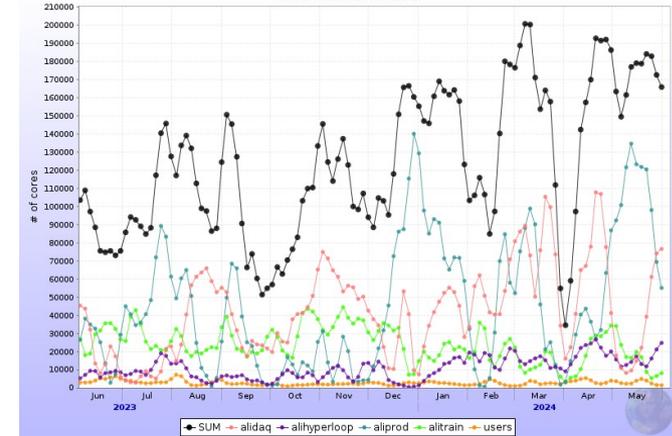
- Meeting periodici (via Zoom)
 - ogni ~ 3 mesi
- Workshop annuale
 - ultimi: 2023 Bologna, 2022 Trieste, 2021 Frascati
- Meeting mensile Comitato di Gestione del Tier-1 CNAF
- Resource Computing Board durante le ALICE week

Uso delle risorse al Tier-1

Total allocated cores per site



CPU Cores in use



Uso delle risorse al Tier-1

Wallclock Work in HEPSP06 Days

Search:

Wallclock Work in HEPSP06 Days	Jun 2023	Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Total
Total ALICE	2,717,084	3,154,440	4,903,643	4,818,892	4,559,236	3,491,828	3,653,681	3,334,520	2,564,281	2,376,990	2,400,064	5,360,845	43,335,504
Total TOTAL	2,717,084	3,154,440	4,903,643	4,818,892	4,559,236	3,491,828	3,653,681	3,334,520	2,564,281	2,376,990	2,400,064	5,360,845	43,335,504
MoU pledge*	3,088,800	3,191,760	3,191,760	3,088,800	3,191,760	3,088,800	3,191,760	3,191,760	2,985,840	3,191,760	3,780,000	3,906,000	39,088,800

118.7 kHS06 used / 107.1 kHS06 pledged = 110.8%



Uso delle risorse al Tier-1

Disk Space - TBytes

Search:

Disk Space - TBytes	↑↓	May 2024	↑↓	Total	↑↓	% MoU	↑↓
ALICE allocated		10,837		10,837			
ALICE used		9,197		9,197			
Total allocated		10,837		10,837		76%	
Total used		9,197		9,197		64%	
installed capacity		0		0			
MoU pledge		14,300		14,300			

Disco:

Allocato = 10.8 PB

Pledged (2024) = 14.3 PB

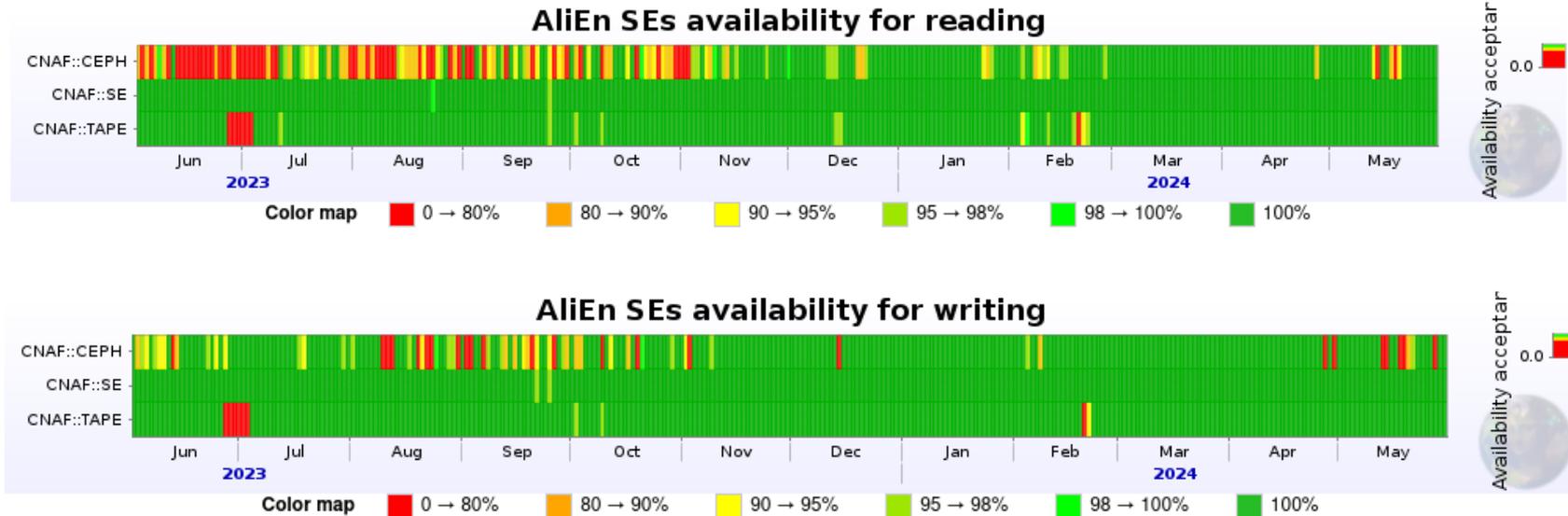
All / Pledg = 75.5 %

Tape Space - TBytes

Search:

Tape Space - TBytes	↑↓	May 2024	↑↓	Total	↑↓	% MoU	↑↓
ALICE		16,706		16,706			
Total		16,706		16,706		50%	
installed capacity		0		0			
MoU pledge		33,170		33,170			

Uso delle risorse al Tier-1



Data Challenge 2024

- Per ALICE:
 - verifica della capacità di sostenere il traffico dati end-to-end
 - target 25% di HL-LHC (minimo 130 GB/s)
 - totale 34 PB di run PbPb 2023

Data Challenge 2024

Centre	Target rate GB/s	Average achieved GB/s
CNAF	0.8	0.98 (+20%)
IN2P3	0.4	0.6 (+40%)
KISTI	0.2	0.25 (+22%)
GridKA	0.6	1.12 (+90%)
NDGF	0.3	0.35 (+15%)
NL-T1	0.1	0.25 (+150%)
RAL	0.1	0.58 (+500%)
<i>CERN</i>	<i>10</i>	<i>14.2 (+40%)</i>

Share INFN 2025

- Basato su M&O-A al 01/09/2023
 - esclusa Russia, incluso JINR (8 M&O-A)

	2024	2025
Tier-1 Tape	31%	37%
Tier-1 e Tier-2 Disco + CPU	20%	22%

Richieste 2025

ALICE		2023			2024		2025			
		C-RSG recomm.	Pledged	Used	C-RSG recomm.	Pledged	Request	2025 req. / 2024 C-RSG	C-RSG recomm.	
CPU	Tier-0	541	541	660	600	600	680	113%	680	22%
	Tier-1	572	506	446	630	540	690	110%	690	
	Tier-2	592	567	555	650	641	730	112%	730	
	HLT	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	Total	1705	1614	1661	1880	1781	2100	112%	2100	
	<i>Others</i>			222						
Disk	Tier-0	58.5	58.5	51.6	67.5	67.5	78.0	116%	78.0	22%
	Tier-1	63.5	57.6	50.2	71.5	61.9	79.0	110%	79.0	
	Tier-2	57.5	60.4	47.3	66.5	69.8	77.0	116%	77.0	
	Total	179.5	176.5	149.1	205.5	199.2	234.0	114%	234.0	
Tape	Tier-0	131.0	131.0	115.0	181.0	181.0	220.0	122%	220.0	37%
	Tier-1	82.0	87.7	42.5	107.0	102.4	123.0	115%	123.0	
	Total	213.0	218.7	157.5	288.0	283.4	343.0	119%	343.0	

Table 5 ALICE resource requests for 2025 and C-RSG recommendations. For reference, the 2023 utilization and 2024 pledged resources are also given.

Tier-1

DA SOTTOPORRE A REFEREE!

	Pledge 2024	Installato 2024	Richieste 2025	Delta	
CPU (HS23)	126000	126000	151800	25800	20%
Disco (TB)	14300	14300	17400	3100	21%
Tape (TB)	33170	33170	45510	12340	37%

Appena possibile, ci servirebbero informazioni sulle dismissioni al CNAF