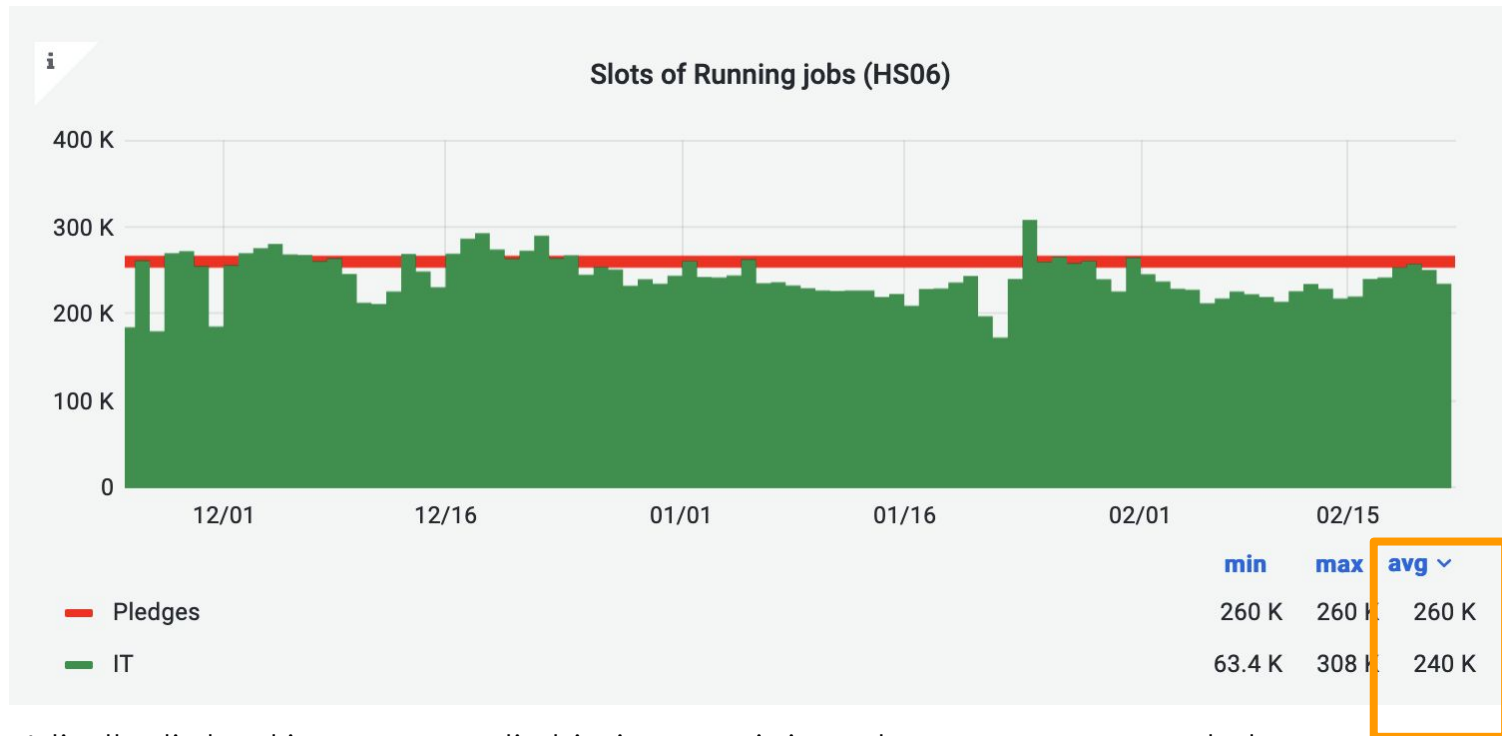

Meeting ATLAS-IT calcolo : introduzione

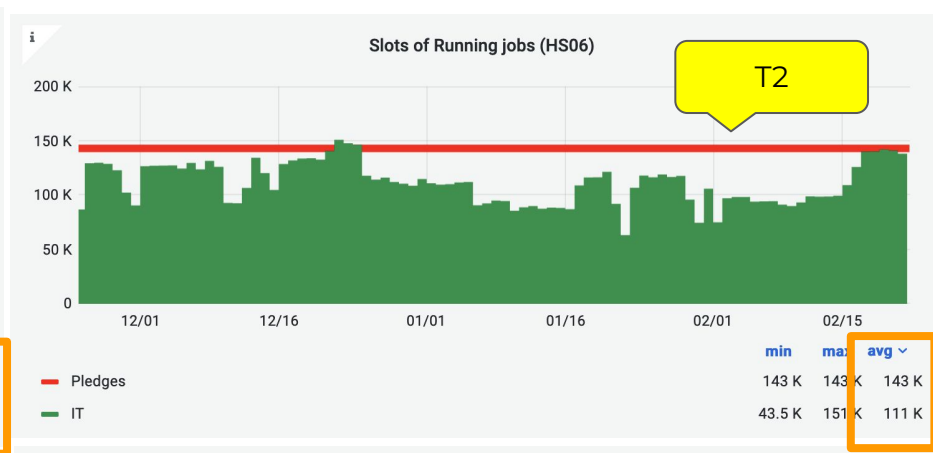
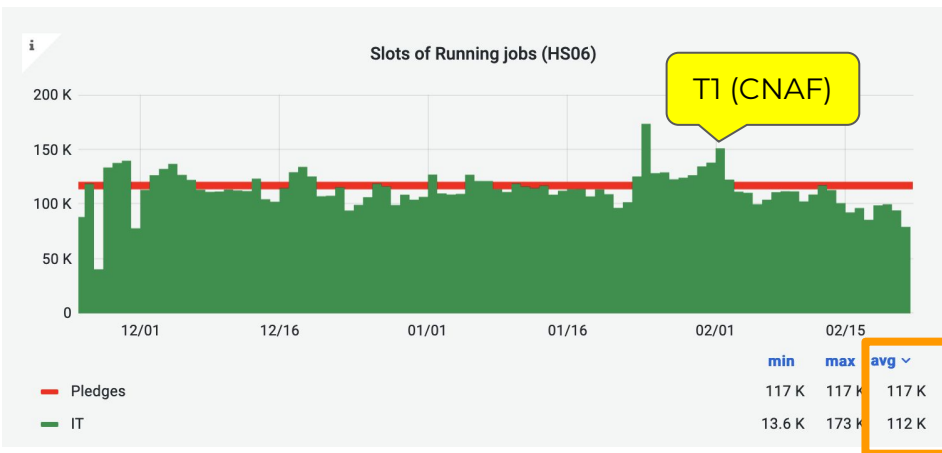
(L. Carminati, L. Rinaldi)

Performance cloud (CPU) (ultimi tre mesi)

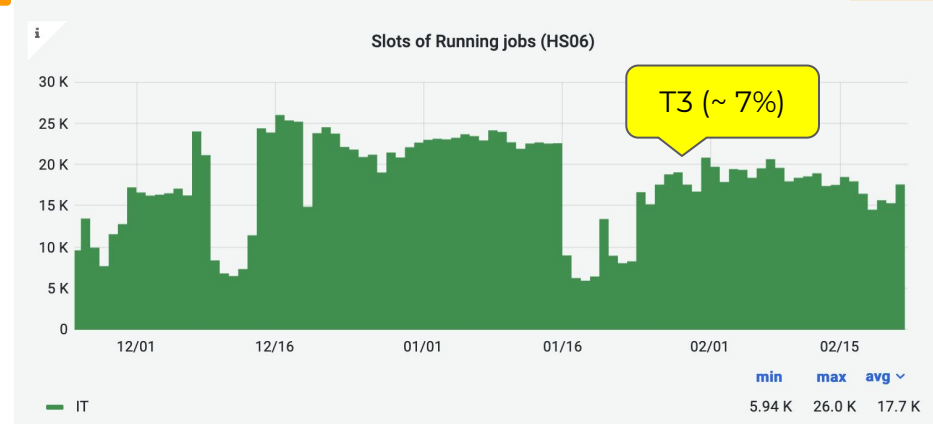


- ❑ A livello di cloud integrato negli ultimi tre mesi siamo leggermente sotto pledge

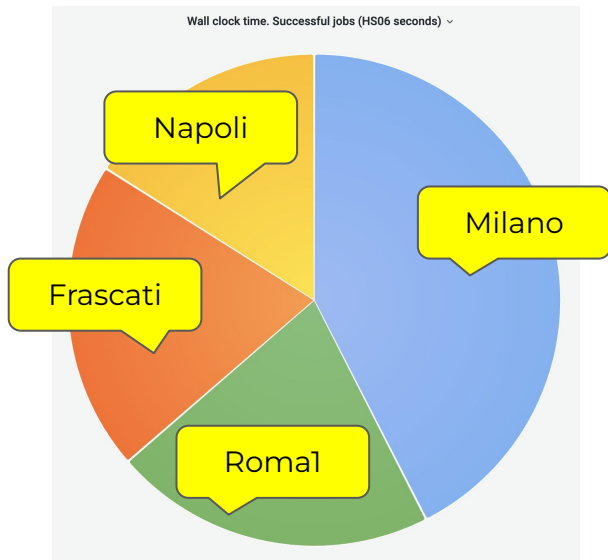
Performance cloud (CPU) (ultimi tre mesi)



- ❑ CNAF stabile e molto vicino al pledge
- ❑ Contributo dei T2 in sofferenza
- ❑ Contributo circa stabile dei T3 : ~ 18k HS06 (~7% del pledge)



Performance T2 (CPU) (ultimi tre mesi)

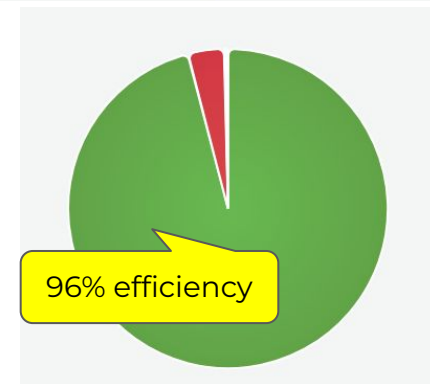
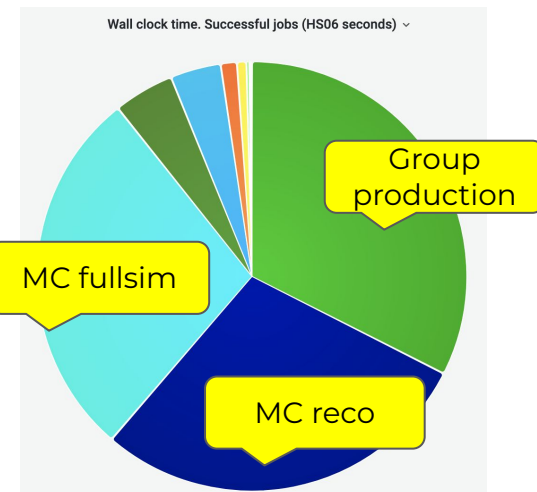


- ❑ Ottima performance di Milano (43% contributo T2)
- ❑ Problemi infrastrutturali noti a Napoli e Frascati, risolti ?

Performance cloud (CPU) (ultimi tre mesi)



- ❑ Contributo di Milano stabile negli ultimi tre mesi, raggiunto un plateau a > 4000 job slots
- ❑ Girano tutti i principali workflows (non piu' limitazioni)
- ❑ Efficienza molto elevata



Situazione e disco e TAPE

	Disco occupato (PB) (dati gennaio 2023)	Disco allocato (PB) (dati gennaio 2023)
Frascati	1.75	2.02
Milano	1.68	1.98
Napoli	3.88	4.26
Roma	1.52	1.72
tot.	8.83	9.98

Non ancora validati dai siti ! Ricordarsi di validare i dati in CRIC

- Pledge 2022 : 9.94 PB
- Pledge 2023 : 11.76 PB

	Disco occupato (PB) (dati gennaio 2023)	Disco allocato (PB) (dati gennaio 2023)	Tape (PB) (dati gennaio 2023)
CNAF	8.94	11.4	25.7

- Pledge 2022 (disco): 10.44 PB
- Pledge 2023 (disco): 12.24 PB
- Pledge 2022 (tape): 24.48 PB
- Pledge 2023 (tape): 31.7 PB

- ❑ Nuove risorse :
 - ❑ Storage:
 - ❑ Gara comune disco 2021 : aggiornamenti ?
 - ❑ CPU :
 - ❑ Acquisti 2022 via ICSC in corso
- ❑ Studio del passaggio a DCache : ci sono aggiornamenti ?
- ❑ Utilizzo risorse cloud per analisi : sottomesso progetto (Caterina)
- ❑ Utilizzo risorse HPC Italiane per ATLAS: Leonardo e Marconi100
 - ❑ Utilizzo Marconi100 per analisi (Lorenzo)
- ❑ Sito di documentazione ATLAS Italia computing
- ❑ Caterina ha vinto uno dei software development grants (PHYSLITE in the Analysis Model Group)
- ❑ Doodle per slot meeting mensile nel secondo semestre
- ❑ Proposta workshop annuale a Genova (novembre ?)

Highlights from S&C week

- ❑ Extremely good performance of our distributed computing infrastructure
 - ❑ WLCG sites keeping on delivering over the pledge (40%)
 - ❑ HPC and Cloud heavily contributing (70%) Storage : healthy cache-to-persistent ratio
 - ❑ Tape in Tier-1s fully exploited (some Tier 1s provided extra capacity a bit early)

	avg ▾
GRID	5.13 Mil
Pledges	3.59 Mil
hpc	2.18 Mil
cloud	480 K
hpc_special	287 K
cloud_special	192 K

- ❑ As we expressed yesterday, we are a bit concerned about the level of enthusiasm for the HL-LHC demonstrators. list of projects in this [document](#) many interesting developments
- ❑ We would be delighted to have more AQPs from your institutes!
- ❑ After carefully evaluating the different options with both internal and external stakeholders, CERN IT has approved a change in the recommendations for Linux Operating Systems. Moving forward, **we will be recommending and supporting AlmaLinux 8/9 and Red Hat Enterprise Linux 8/9**
- ❑ A new CPU benchmark based on experiment workloads will be ready in 2023 : sites do not have to re-benchmark existing systems : we are optimistic that HEPscore23 will be able to run on both x86 and ARM processors (the adoption of ARM to satisfy some of the pledge *could* be possible by 2025)
- ❑ Power consumption worries : see eg [this](#) or [this](#). (“to exploit low-cost, carbon-free power, we need to flip the paradigm. Rather than having the grid adapt to the data center, we need to have the data center adapt to the grid .. The data center must “dance with the grid.”)

Assegnazioni 2023

solo acquisto CPU, no disco

ATLAS	CPU crescita (HS06)	CPU dism. (HS06)	DISK crescita (TB-N)	DISK dism. (TB-N)	CPU (HS06)	DISK (TB-N)	CPU (k€)	DISK (k€)	Server (k€)	Totale (k€)
Frascati	3000	16866	0	0	19866	0	298,0	0,0	20,9	318,8
Milano	3000	8426	0	0	11426	0	171,4	0,0	12,0	183,4
Napoli	3000	0	0	0	3000	0	45,0	0,0	3,2	48,2
Roma1	3000	14521	0	0	17521	0	262,8	0,0	18,4	281,2
Totale	12000	39813	0	0	51813	0	777,2	0,0	54,4	831,6