

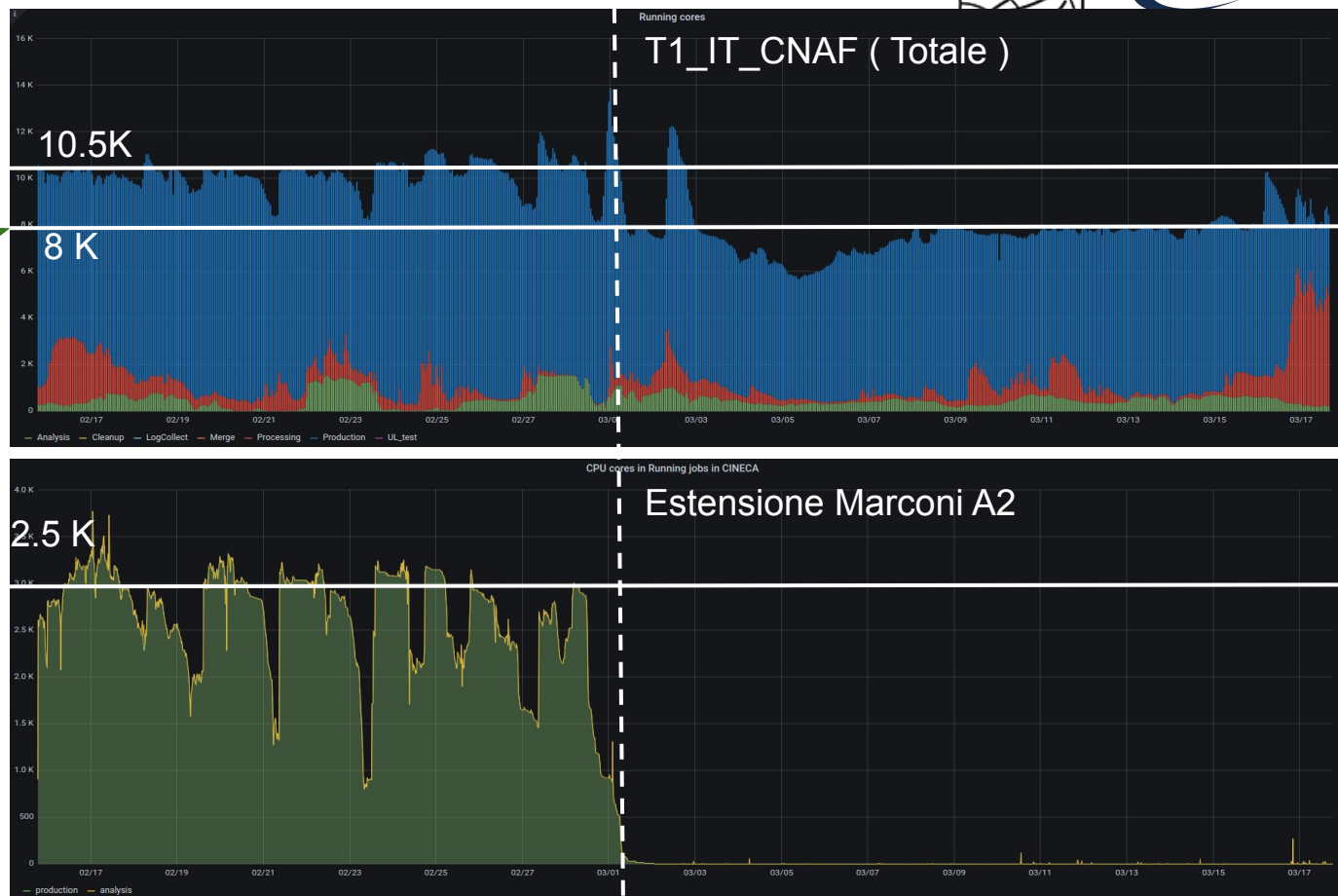
# CMS - CdG T1

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19.03.2021

# Running Cores Ultimo mese

Grant  
CINECA  
concluso a  
fine Febbraio.



# CNAF / CINECA\_HPC & ESCAPE & CMS

## Supporting high-energy physics in big data management challenges

The Compact Muon Solenoid (CMS) experiment was the chosen one to become the first success story of this "promising combination". CMS is a high-energy physics experiment, part of the Large Hadron Collider (LHC) at CERN, in Switzerland. CMS is designed to see a wide range of particles and phenomena produced in high-energy collisions in the LHC. Like a cylindrical onion, different layers of detector stop and measure the different particles, and use this key data to build up a picture of events at the heart of the collision.

For this ESCAPE experiment, several analysis workflows have been submitted on the CMS distributed computing infrastructure and have reached nodes on the CINECA Marconi A2 HPC system (Marconi is classified in Top500 list among the most powerful supercomputer, rank 19 in the November 2019 list), which is made available thanks to the collaboration between INFN (National Institute for Nuclear Physics) and CINECA (the most powerful supercomputing centre for scientific research and the PRACE node in Italy).

Usually, the processing nodes at CINECA are not able to access data from the ESCAPE "data-lake" pilot. The ESCAPE DIOS pilot has enabled the connection between the ESCAPE data and systems at CINECA.

Press Release: [here](#)

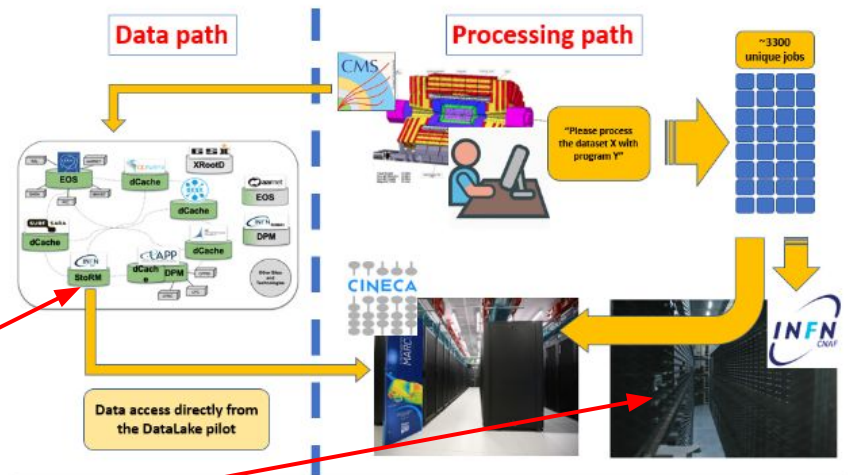


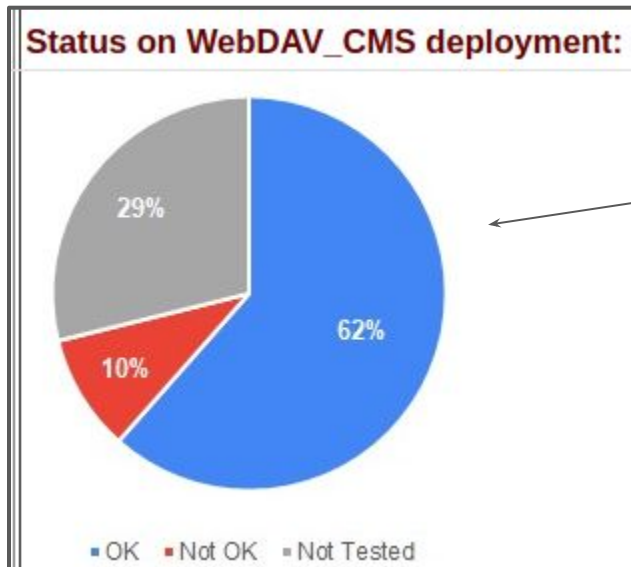
Figure 1 The schematic data and processing flows.

**CNAF**

The processing has been executed using a real CMS input dataset, ingested by the ESCAPE DIOS pilot system at CNAF, thus proving the capabilities of the ESCAPE model and tools to enable large scale data intensive computing tasks. With the jobs dispatched to both INFN and CINECA, the task was 100% successful.



# WebDAV : stato @CMS



Percentuale di siti con un endpoint WebDAV

Inizio Maggio : Tutti i siti testati

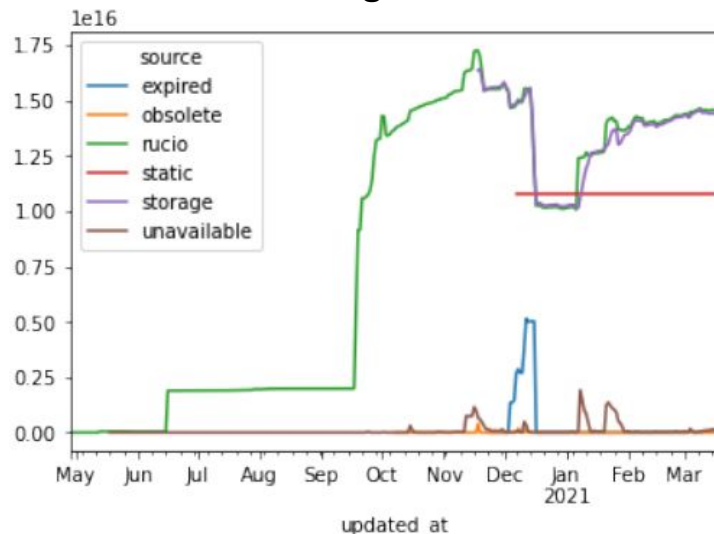
Entro fine Maggio campagna di test TPC

Potremo/Dovremo iniziare a discutere la migrazione dei server gridFTP @CNAF

# Storage monitoring nell'era di RUCIO

Dopo il passaggio da PhedEx --> RUCIO, il monitoring dello storage è in fase di riorganizzazione a piu' livelli

## Monitoring di un RSE



- ❖ rucio=internal accounting
- ❖ static="high-watermark" closest to quota
- ❖ storage=site storage reporting
  - Only for CERN for now
- ❖ expired=dynamic volume (no rule)
- ❖ obsolete=should be deleted immediately
- ❖ unavailable=pending transfer to site

Questo si potrà applicare a tutti i siti, vanno installati dei client

# Token...

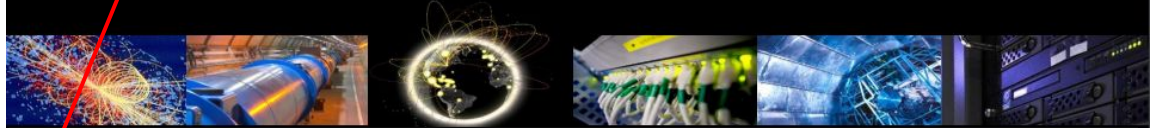
In corso di definizione la schedule per la migrazione a Token ( in WLCG )

- Ma se ne inizia a parlare anche dentro CMS
- Presentazione sullo stato di IAM all' O&C Weekly meeting

## IAM for CMS status

Andrea Ceccanti, Hannah Short

March 17th 2021



## Input from CMS

IAM for CMS can be considered a stable endpoint available for testing

- integration and migration to token-based auth in CMS services
- the VO registration and onboarding flow
- the VO administration UI

Feedback is welcome and appreciated :)