# **DUNE** signoff

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#### Introduction

- Computing effort not yet mature (still)
  - Computing model not yet finalised
  - → Metrics and plots not yet readily available
    - Still understanding / rationalising different sources
  - → Running off shared instances
    - Job submission and monitoring
    - FIFE, UCSD glide-submission, ...
- Computing consortium working on improving the situation
- Running much fewer jobs than expected
  - → Known issue (still)
- RAL overall running quite well for DUNE
  - Many thanks!

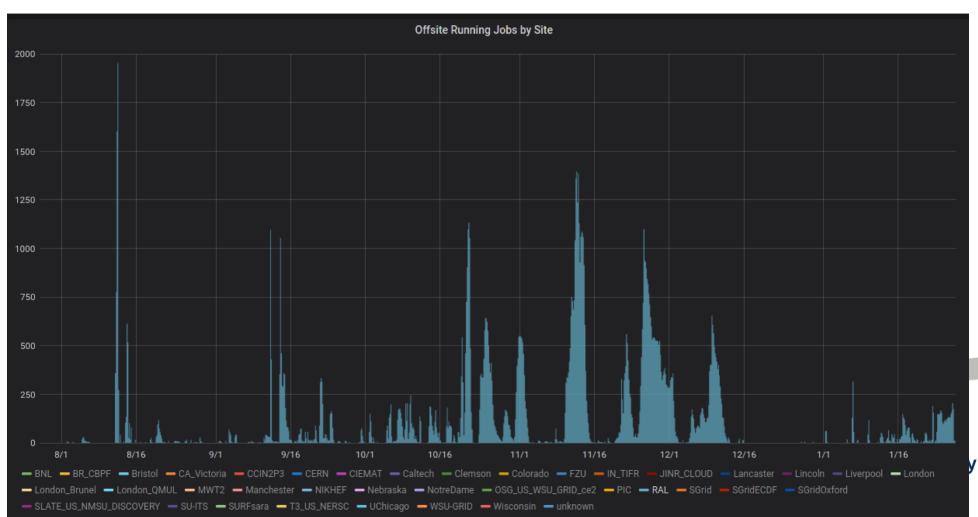


## **DUNE** jobs summary

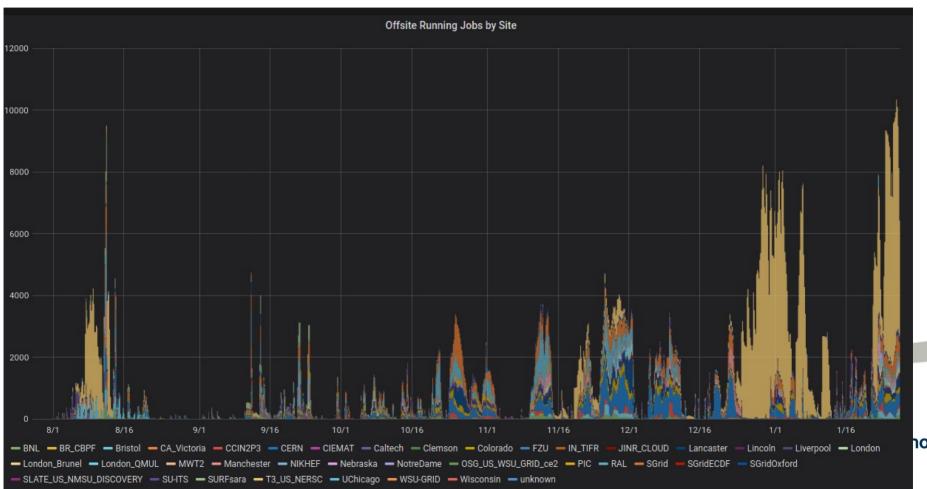
- Most jobs are multi-core
  - → 8-core jobs at RAL
  - → Lots of TensorFlow usage
- Software not yet mature enough to run all needed simulations
  - → Still too bloated to run on the grid
  - → Some effort from DUNE in moving users to "off site" (non-Fermilab)
- Too little computing manpower
  - Spread too thin to worry about smaller details
  - Ongoing work
- glide-in WMS probably not yet properly tuned for RAL
  - → A few attempts have been made
  - Not clear what is the issue.



### CPU used at RAL: FIFEMon



### CPU used at all sites: FIFEMon



nology

#### CPU used from Elaps Trime. Nu cher of Joce sors (hours) by Re- Cure and forth Uniting Elapsed time \* Number of Processors (hours) = = IN2P3-CC --- RAL-LCG2 - UKI-LT2-Brunel - UKI-LT2-IC-HEF - UKI-LT2-OMUL Elapsed time \* Number of Pr - - praguelcg2 pic (5.91%) Other (5 22%) **RAL Tier-1** CIEMAT-LCG2 (3.01%) IN2P3-CC (4.85%)

RALLEGO (16 25%)



LIKILSOLITHIGRIDLRALPP (29 54%

UKO-SOUTHGRID-OX-HEP (3.30%)

UKI-SOUTHGRID-BRIS-HEP (5.53%)

TIKE NORTHORIO MANUHED 13 8194

UKI-NORTHGRID-LIV-HEP (6.65%)

LIKENORTHGRIDLI ANCS, HEP (7.82%)

## Storage used at RAL

From DUNE rucio

(1.19) -bash-4.2\$ rucio list-rse-usage RAL

USAGE:

----
used: 955.584 TB

rse: RAL\_ECHO

updated\_at: 2021-01-26 23:23:11

free: 44.416 TB

source: storage

total: 1.000 PB

rse\_id: 74b1c7c3d91f4afd9df68e76b6b79

Mostly stable over many months

Note : Allocation 1PB

