



# Grid status

ALICE Offline week  
March 31, 2016

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v1.1

# VOMS-Admin saga



- ~1 year ago the obsolete VOMRS grid user registration service was replaced by VOMS-Admin
    - Not perfect, but actively maintained and developed
  - Various issues then popped up ~1 year later
    - Unexpected VO membership “expiration” warnings
      - Should be handled better in the latest version
    - AUP re-signing request flood causing load on VO admins
      - Will be randomized to some degree
    - Errors for users of the INFN CA
      - As the CA DN had changed, they needed to re-register
    - Errors for users with 2 or 3 (historic) records
      - A cleanup has been done
- Things should be smoother next year...

# Site evolution



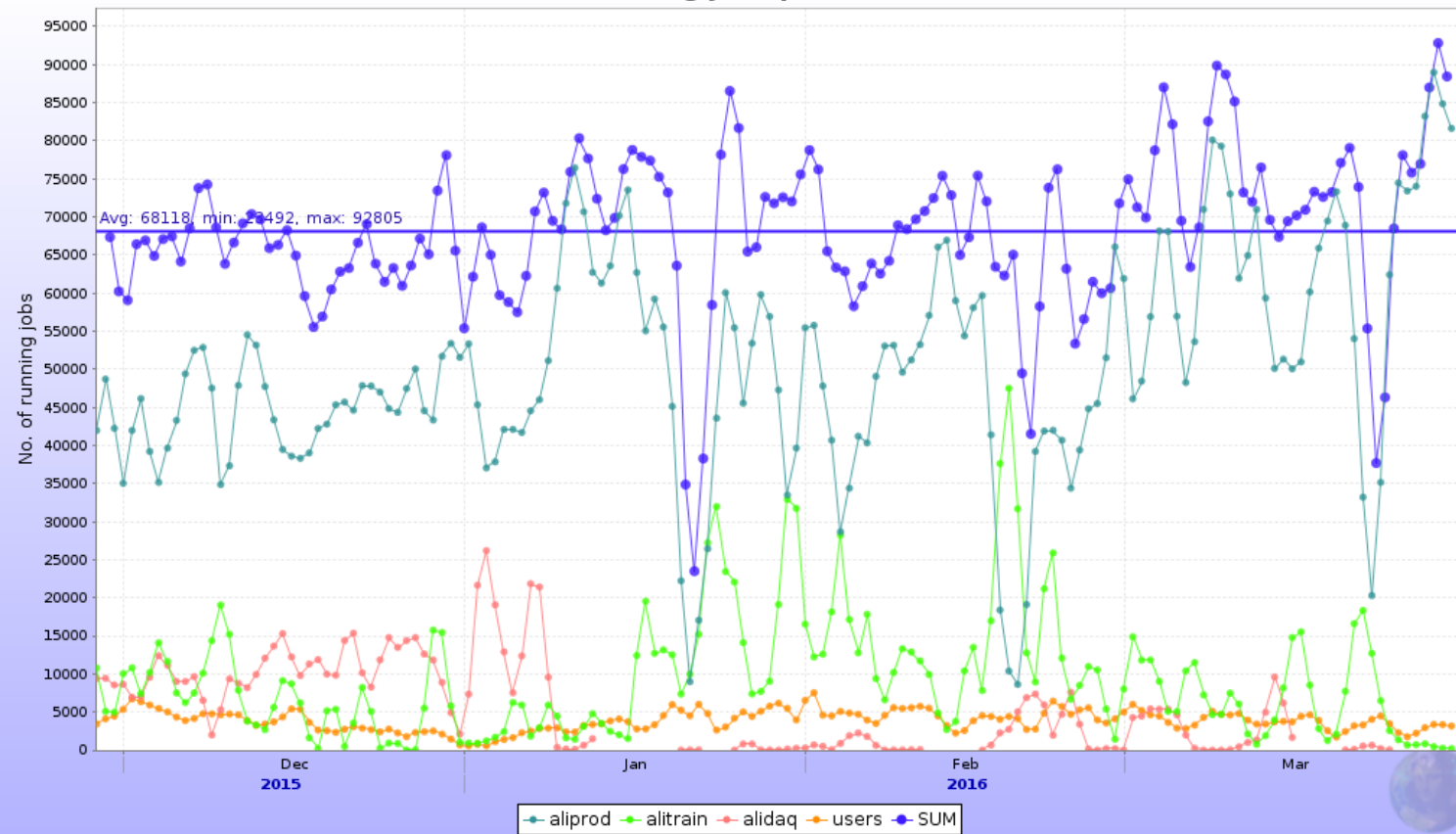
- **Growth** e.g. thanks to 2016 pledges
- Thanks & bye-bye to **CSC, Madrid, NECTEC**
- Welcome to **HIP, CBPF, Tsukuba** (soon)
- Welcome to the **HLT clusters**
  - Up to 8.5k (HLT) + 750 (HLTDEV) job slots
- Welcome to **CERN-SIRIUS**
  - Shared HTCondor cluster with 15k cores
- Welcome to **Altaria**
  - Virtual site in front of cloud deployments, see page 9
- New **VOBOXes** at **CNAF, FZK, KISTI**

# High activity

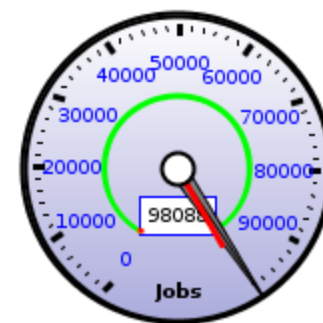


- 99372 concurrent jobs on March 10
- 99376 concurrent jobs on March 29

Running jobs per user



68k average  
Nov 27 – Mar 30



# CASTOR



- Mostly stable operation during and after the heavy ion run
  - A few incidents were quickly resolved
- Plans for this year were discussed with the storage group in CERN-IT
- The old extra HW was extended until ~mid April
- New HW will be added as of late April
- The resources seem sufficient
  - 2015 Pb-Pb and pp reco and reprocessing
  - 2016 data taking

# Grid storage



- EOS-ALICE was almost completely full
  - Led to service instabilities
  - And failures for users and jobs around the grid
  - Mitigated by the admins
  - Cured through cleanups
- About 2.5 PB were recovered on the grid thanks to ad-hoc cleanups
- Further cleanups are expected this spring
  - Pending agreement on data usage and retention policy changes

# Heavy ion reconstruction



- So far the reco jobs needed at most ~2.5 GB RSS thanks to very nice code enhancements
- The high-memory arrangements at CERN and the participating T1 sites were undone
  - Could be reinstated per site if needed
- Waiting for the big campaign to start...

# Middleware



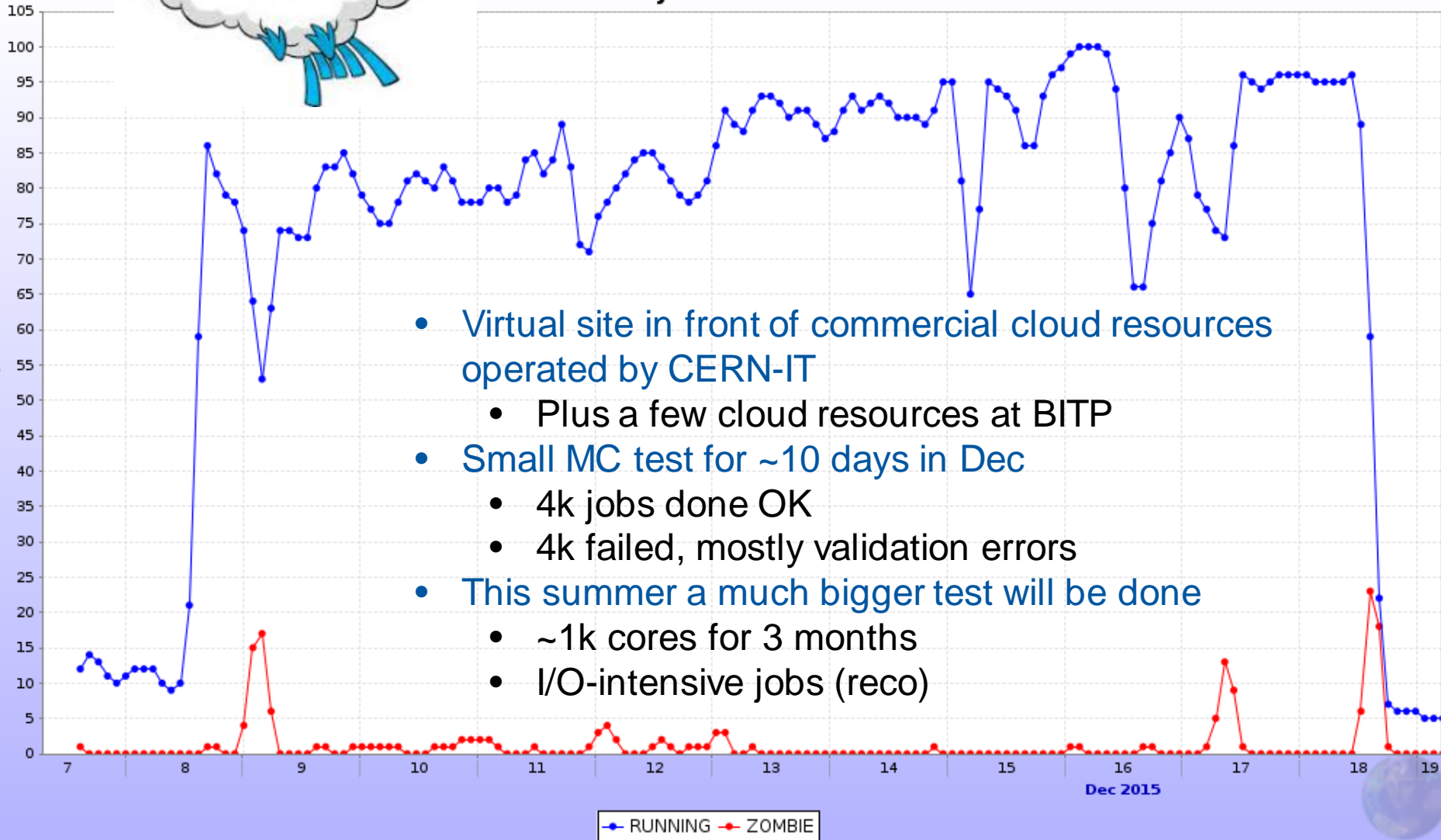
- **SL5** will be deprecated for MW this spring
  - EGI have set a deadline of April 30
  - Already there have been openssl compatibility issues
- **CentOS/EL7** will become more important
  - Some services already available
  - **SL6** remains the default
- **HTCondor batch system** remains on the rise
  - It comes with its own CE
    - AliEn can use it (currently still via a prototype)
    - SAM tests to be added this spring
  - The ARC CE remains an alternative





# Altaria

## Active jobs in Altaria



# SAM



- New Availability / Reliability profile based on selected **MonALISA** results remains not yet critical
  - [http://wlcg-sam-alice.cern.ch/templates/ember/#/plot?profile=ALICE\\_MON\\_CRITICAL](http://wlcg-sam-alice.cern.ch/templates/ember/#/plot?profile=ALICE_MON_CRITICAL)
- Its introduction was delayed because of issues with the Dashboard GUI that needed to be fixed
- We intend to give the new profile a try this spring
- Sites will first be alerted to compare old and new profile results
  - **SE test failures will reduce the A / R!**
- Test job submission to the HTCondor CE still to be added

# Xrootd reminder



- Sites should start planning upgrades to Xrootd  $\geq 4.1$ 
  - Stable and well supported
  - Required for IPv6 support
- T1 sites are particularly concerned
  - They receive raw data exported from T0
  - Latest CASTOR incompatible with old xrd3cp
    - Gateway hosts are being used as a temporary workaround
- Communication via LCG Task Force list as usual for expert advice
- SL6 hosts now can have xrootd for ALICE installed through rpms!
  - <http://linuxsoft.cern.ch/wlcg/>
  - Thanks to Adrian Sevcenco!

# Tips for sites – thanks!



- Possible **issues** on VOBOX, CE, WN
  - CVMFS problem, CE not ready for jobs, myproxy running low, myproxy type wrong, ...
  - Absence of “system” library
    - HEP\_OSlibs rpm helps avoid that
- Jobs may fail due to **SE problem**
- **Admins please check site issues page**
  - <http://alimonitor.cern.ch/siteinfo/issues.jsp>
- **Subscribe to relevant notifications**
  - <http://alimonitor.cern.ch/xml.jsp>