

CMS CSCS HPC report

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January 27, 2017

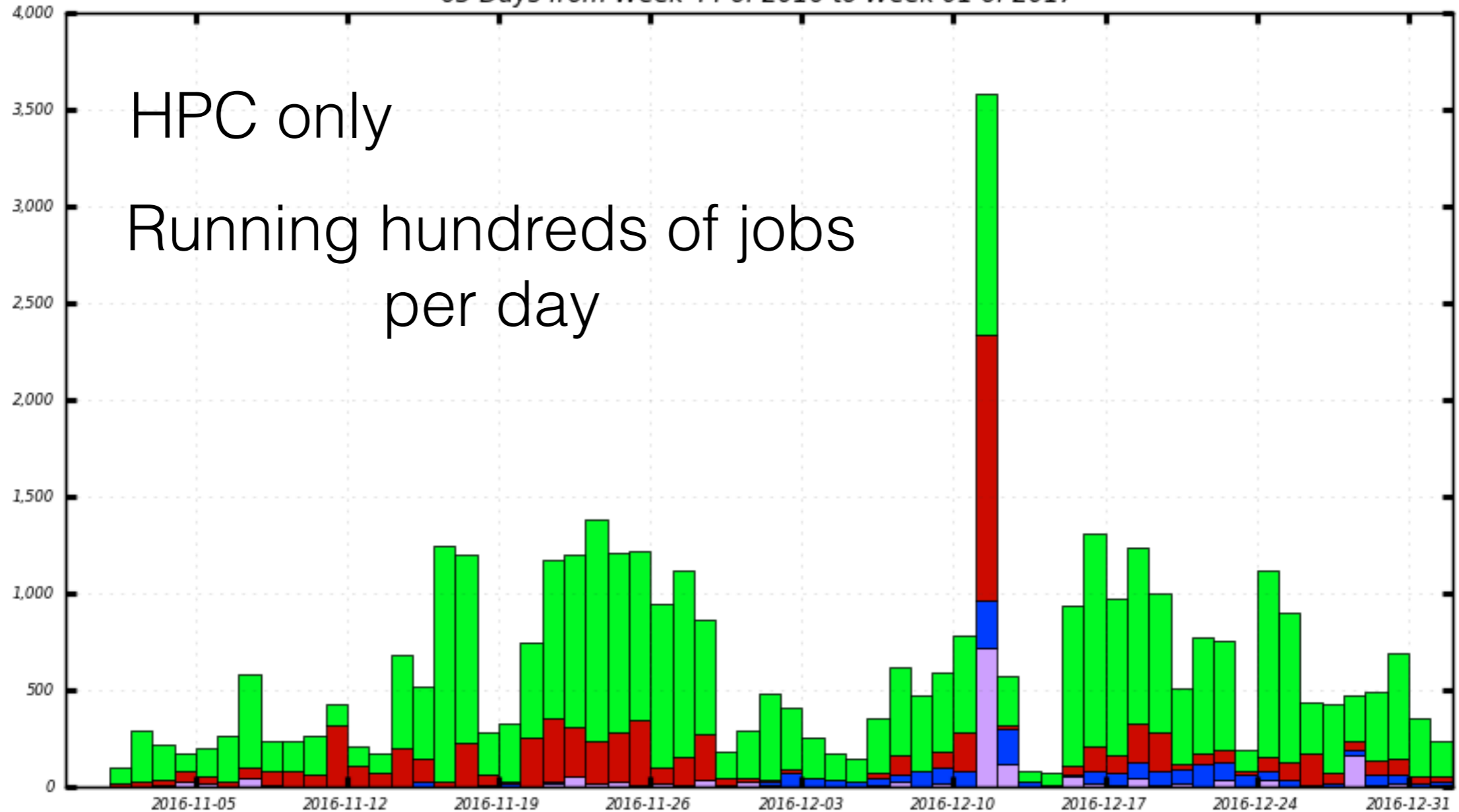
Overview

- Crucial to split sites: T2_CH_CSCS **completely** from _HPC in terms of accounting, submission
 - due to the way the historical dashboard works on site not CE level
- Showing results from Nov 2016 onwards when system came online from both CMS and CSCS side
- Real test happened in Nov-Dec 2016, running normal CMS prod & analysis jobs simultaneously

Jobs by number



Number of Successful, Failed and/or Aborted Jobs
63 Days from Week 44 of 2016 to Week 01 of 2017



■ Number of Successful Jobs
■ Number of Cancelled Jobs

■ Number of Failed and/or Aborted Jobs

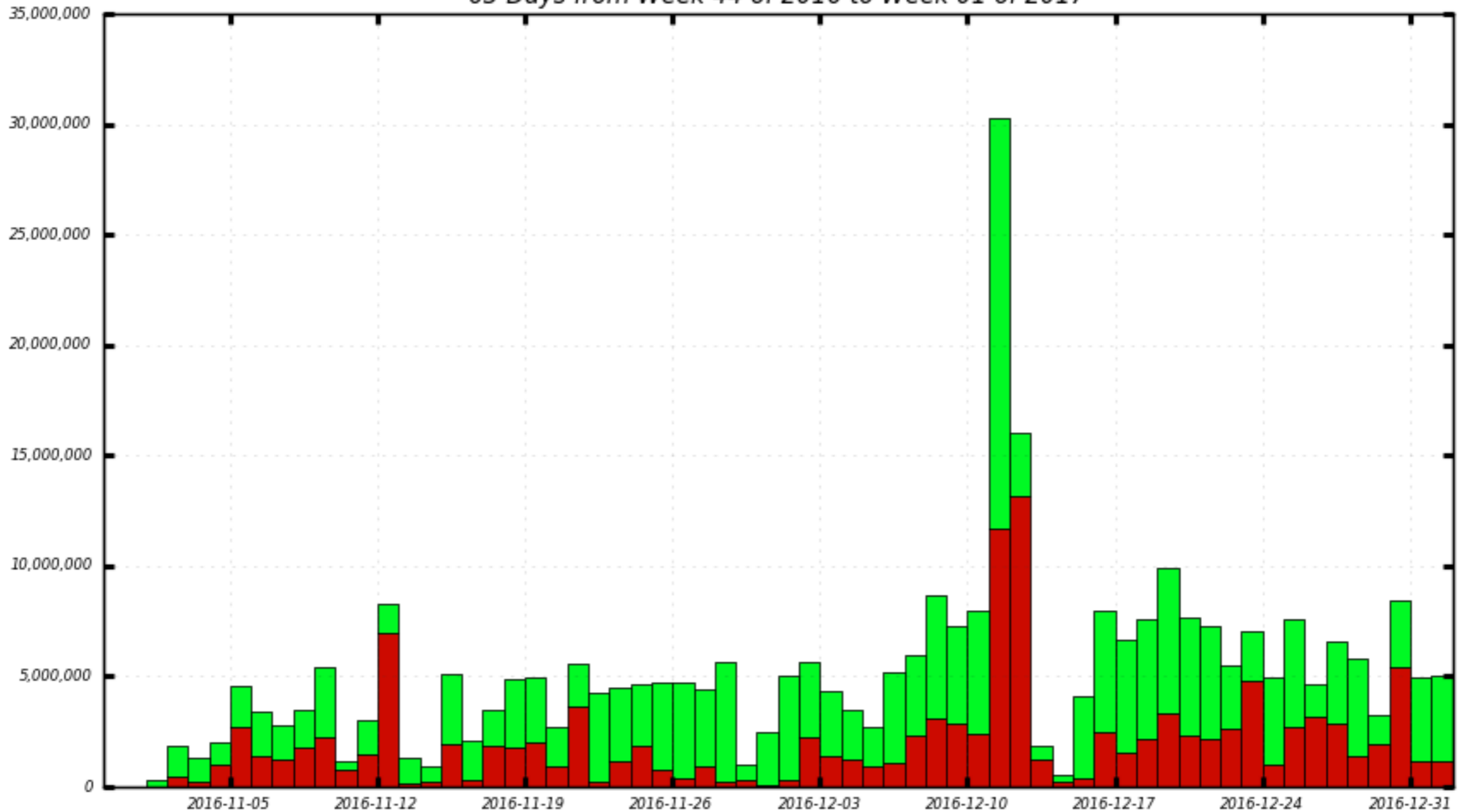
■ Number of Unknown-Status Jobs

Maximum: 3,584 , Minimum: 0.00 , Average: 614.70 , Current: 238.00

Jobs by wallclock



WallClock Consumption for Successful, Failed and/or Aborted Jobs
63 Days from Week 44 of 2016 to Week 01 of 2017



WallClock Consumption of Successful Jobs

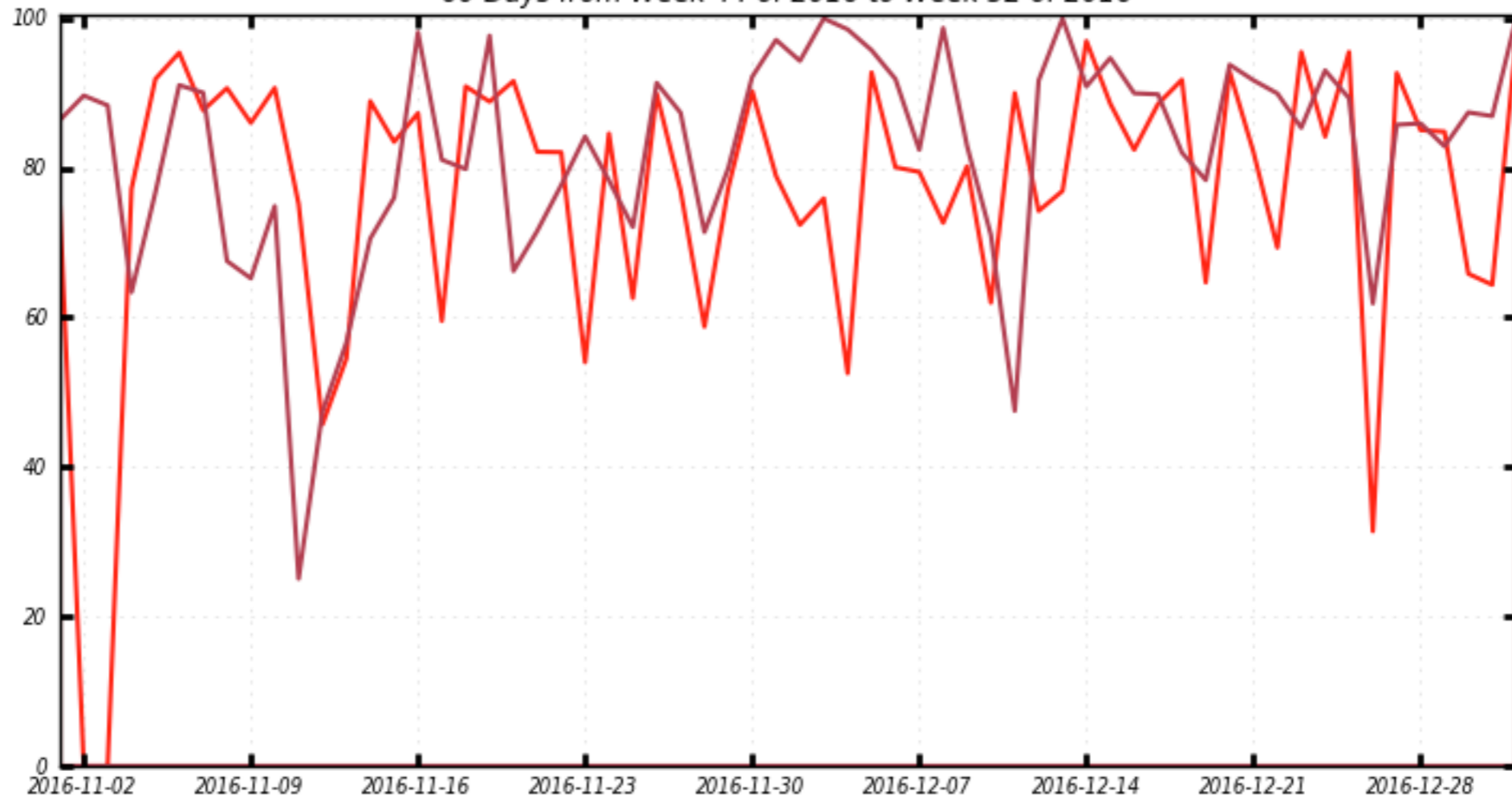
WallClock Consumption of Failed and/or Aborted Jobs

Maximum: 30,271,499 , Minimum: 0.00 , Average: 5,074,204 , Current: 5,011,802

Job efficiency



Efficiency over time based on success/all accomplished jobs
60 Days from Week 44 of 2016 to Week 52 of 2016



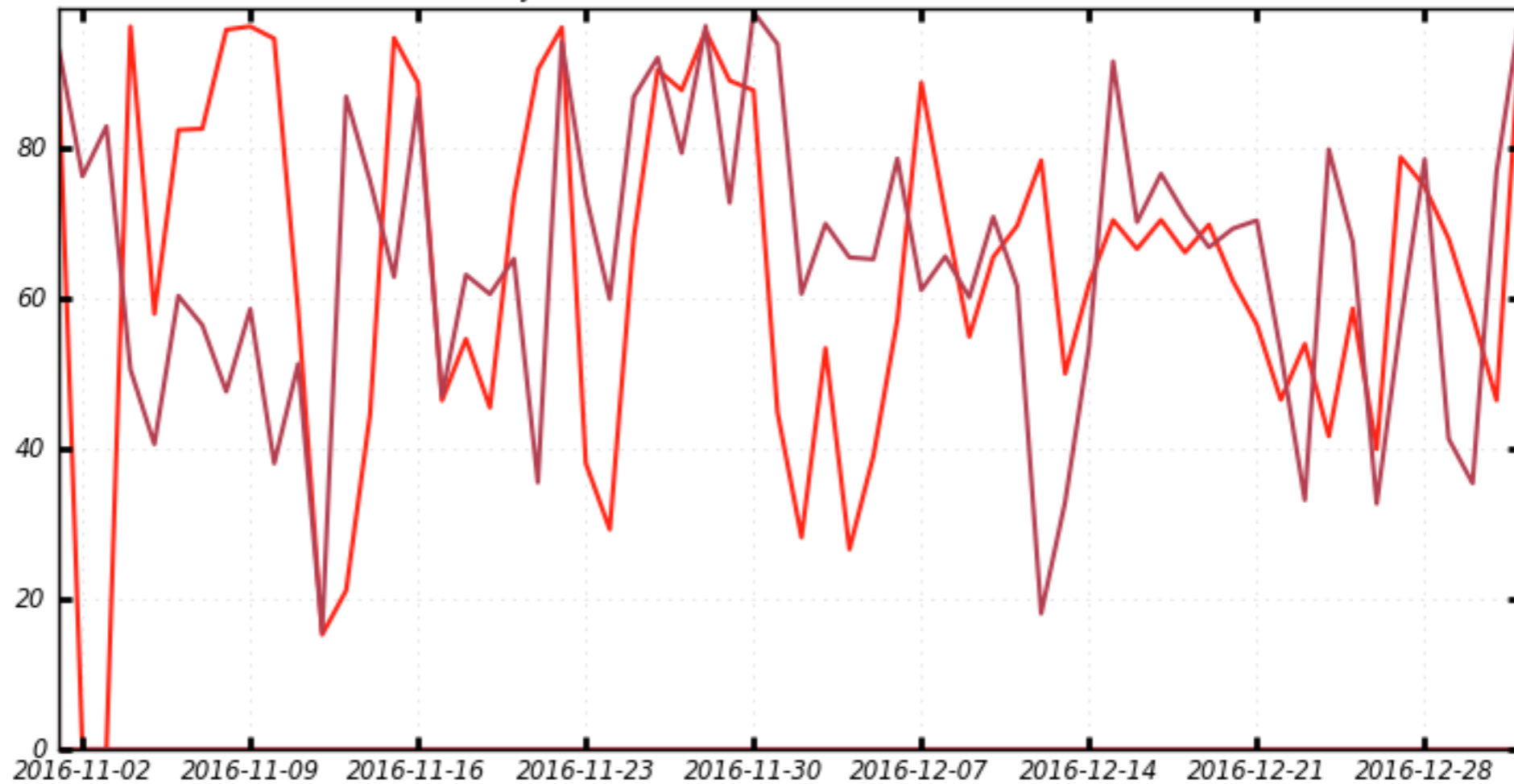
■ T2_CH_CSCS_HPC (82.14) ■ T2_CH_CSCS (76.48)

Total: 151.32 , Average Rate: 0.00 /s

Wallclock efficiency



WallClock Efficiency over time based on success/all accomplished jobs
60 Days from Week 44 of 2016 to Week 52 of 2016



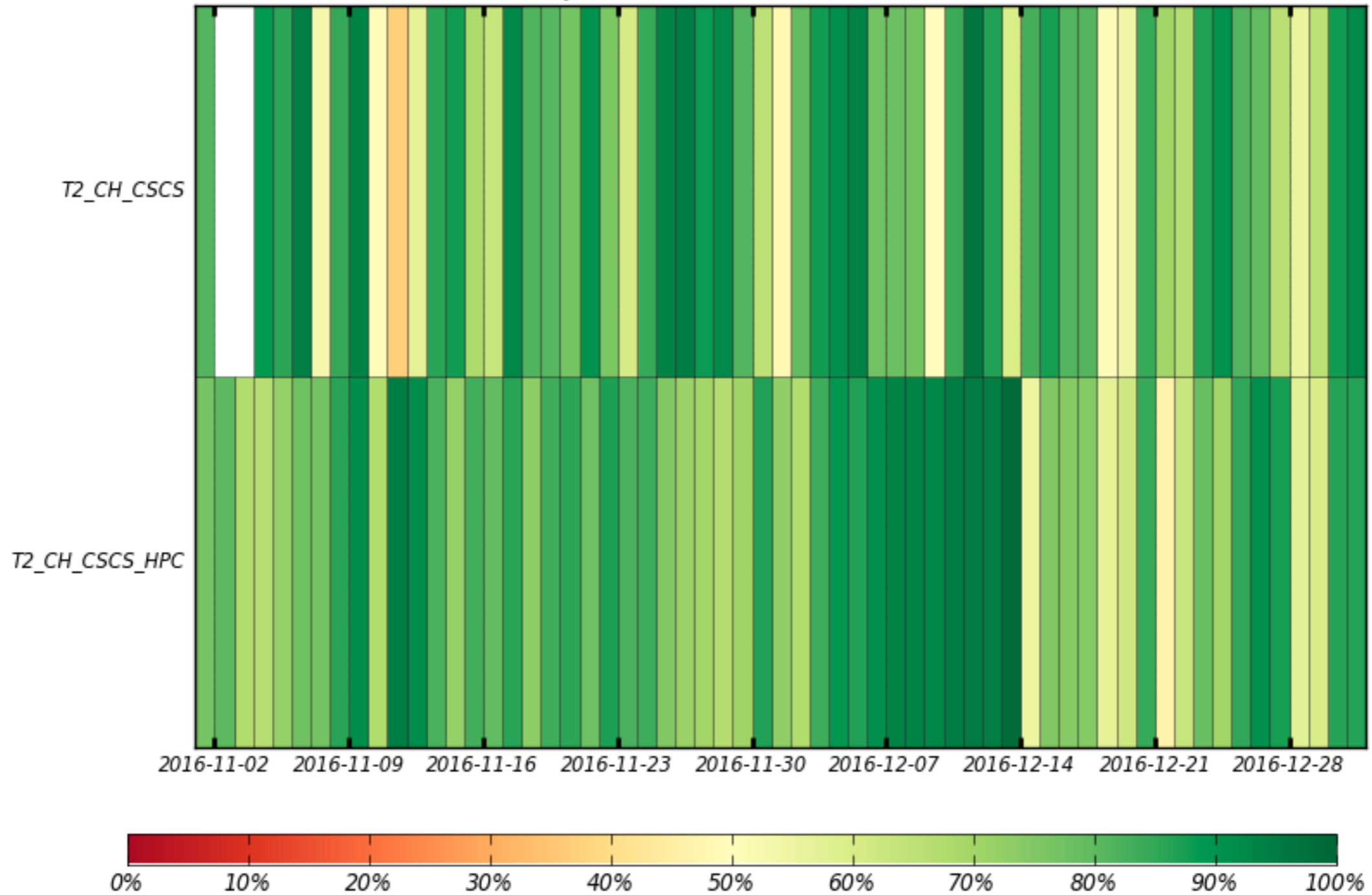
■ T2_CH_CSCS_HPC (64.54) ■ T2_CH_CSCS (62.78)

Total: 123.30 , Average Rate: 0.00 /s

CPU efficiency (good)



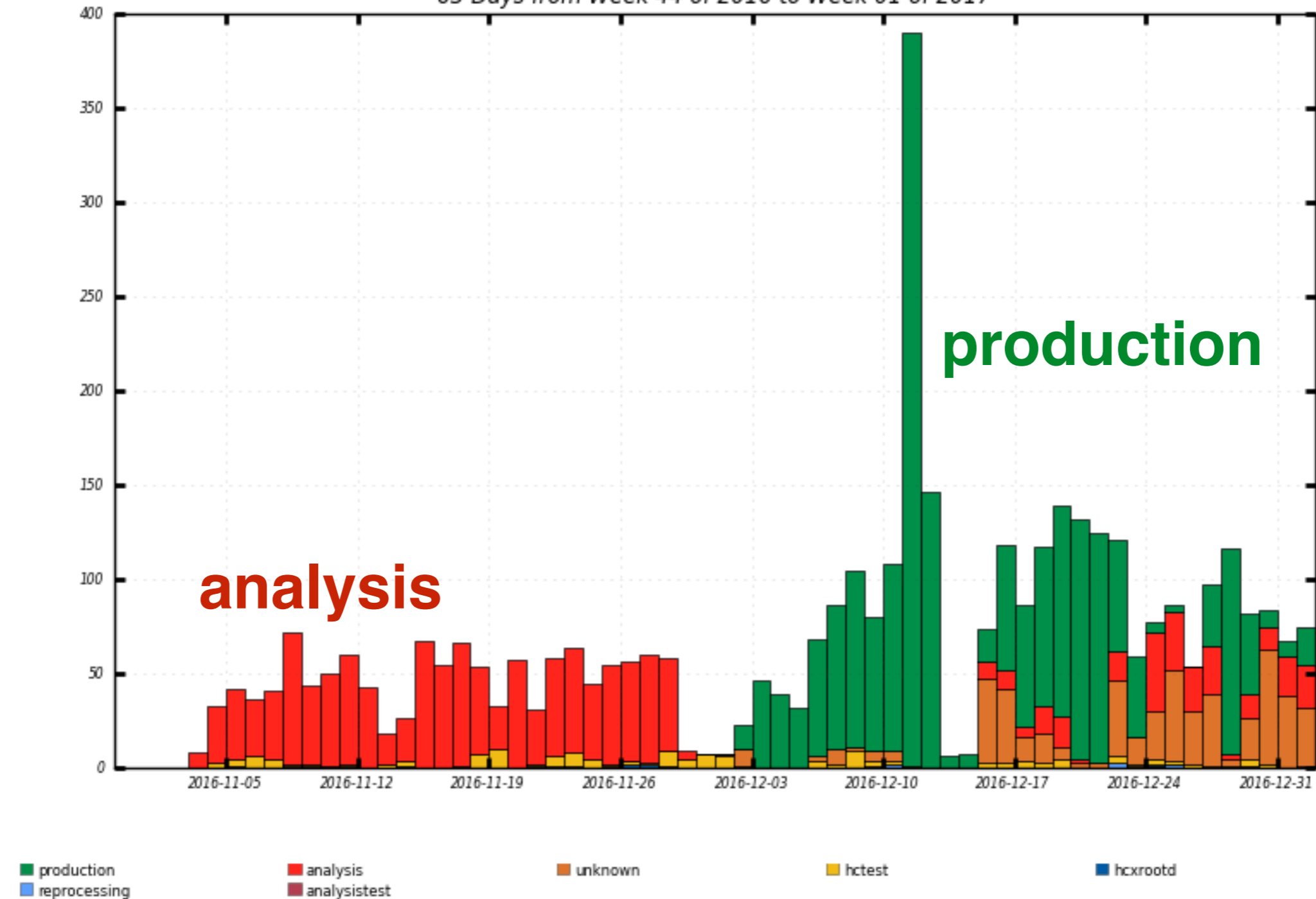
Efficiency Good Jobs
60 Days from Week 44 of 2016 to Week 52 of 2016



Jobs by type



Running Jobs by Activities
63 Days from Week 44 of 2016 to Week 01 of 2017

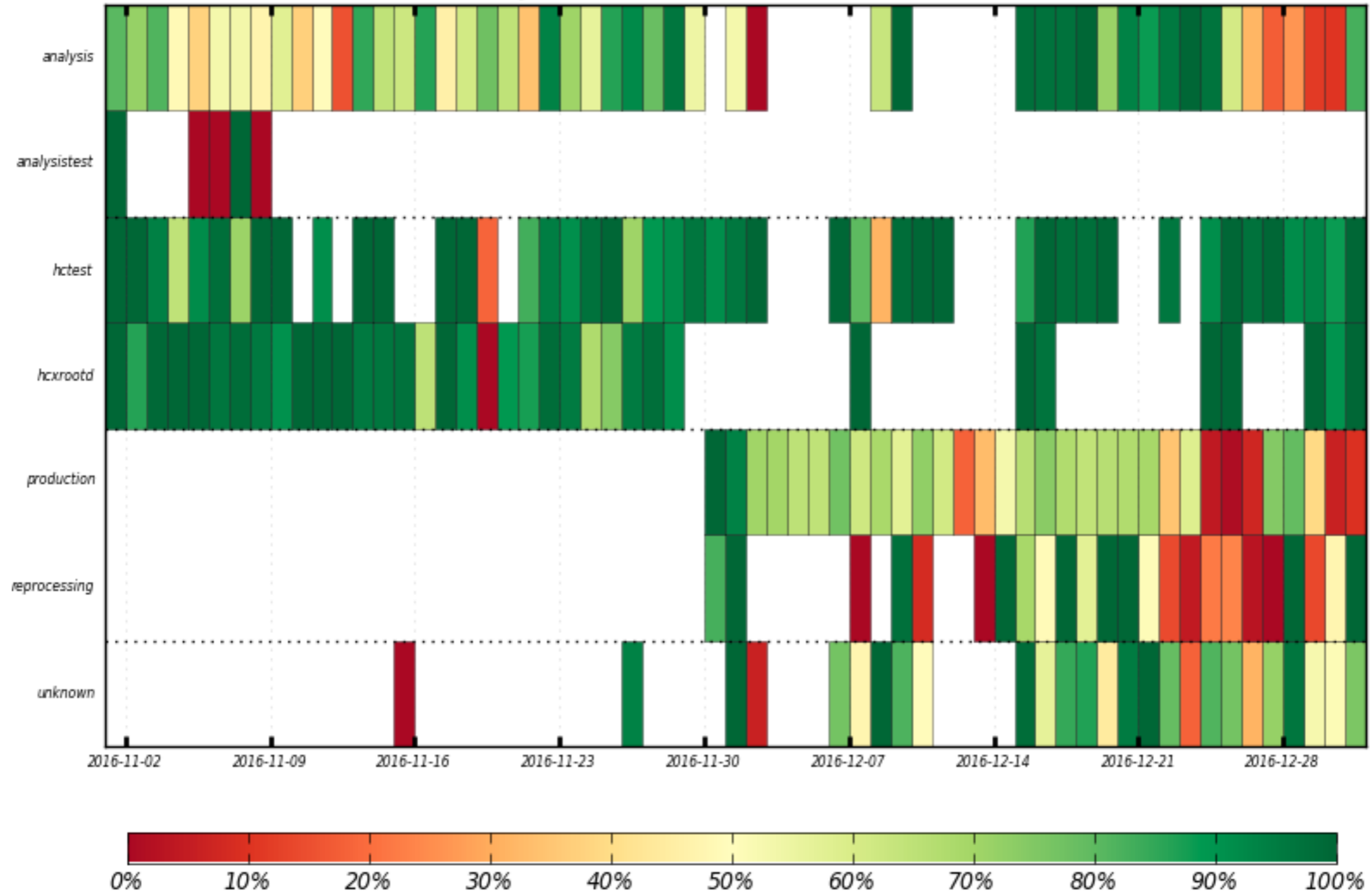


Maximum: 390.00 , Minimum: 0.06 , Average: 64.06 , Current: 75.00

Job success/fail efficiency



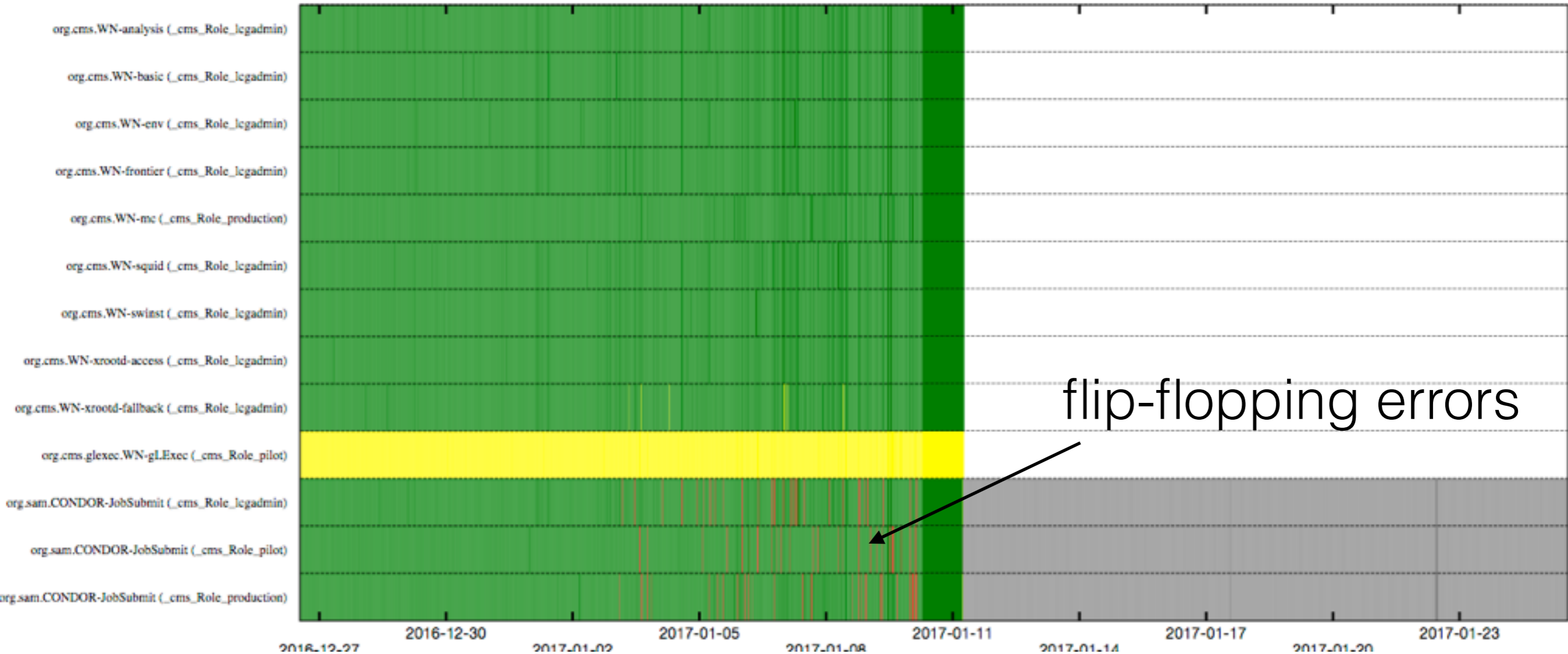
WallClock Efficiency based on success/all accomplished jobs
60 Days from Week 44 of 2016 to Week 52 of 2016



SAM @ HPC

Test history arcbrisi.cscs.ch using CMS_CRITICAL_FULL

720 hours from 2016-12-26 14:00 to 2017-01-25 14:30

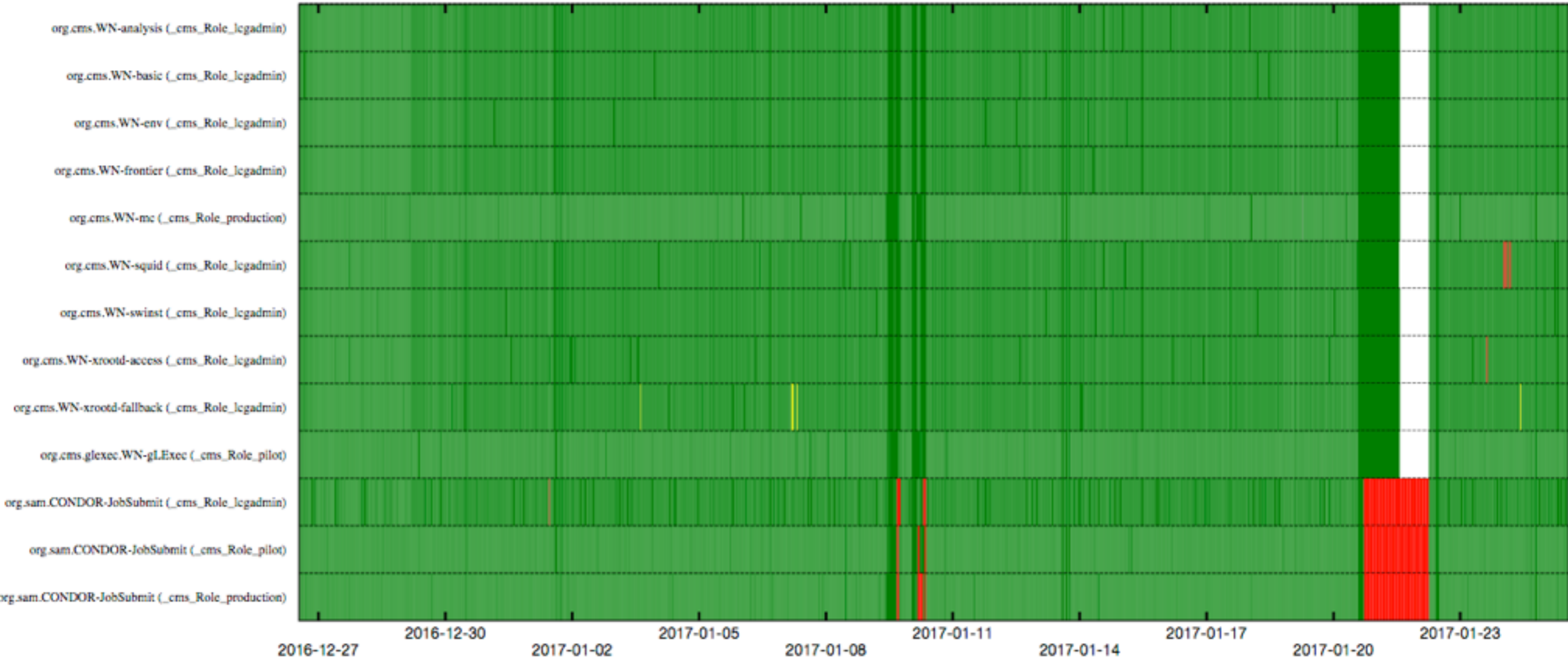


- Occasional instability (test failures) at HPC, can affect system availability from CMS side

SAM @ Phoenix

Test history arc01.lcg.cscs.ch using CMS_CRITICAL_FULL

720 hours from 2016-12-26 14:00 to 2017-01-25 14:30



Summary

- Needed to decouple from Phoenix due to WLCG architecture
- Occasional SAM instabilities (lots of e-mail warnings), but system mostly able to run jobs stably
- glExec required in the foreseeable future, but currently SAM in warning state
- capable of running any ordinary CMS jobs in a standard way, both production and analysis
- CPU efficiency and job failure rate similar to Phoenix