M. Böhler[1], J. Elmsheuser[2], F. Hönig[2], F. Legger[2], V. Mancinelli[3], F. G. Sciacca[4],

[1]Albert-Ludwigs-University, Freiburg, [2]Ludwig-Maximilians University, Munich, [3]CERN, Geneva, [4]University Bern
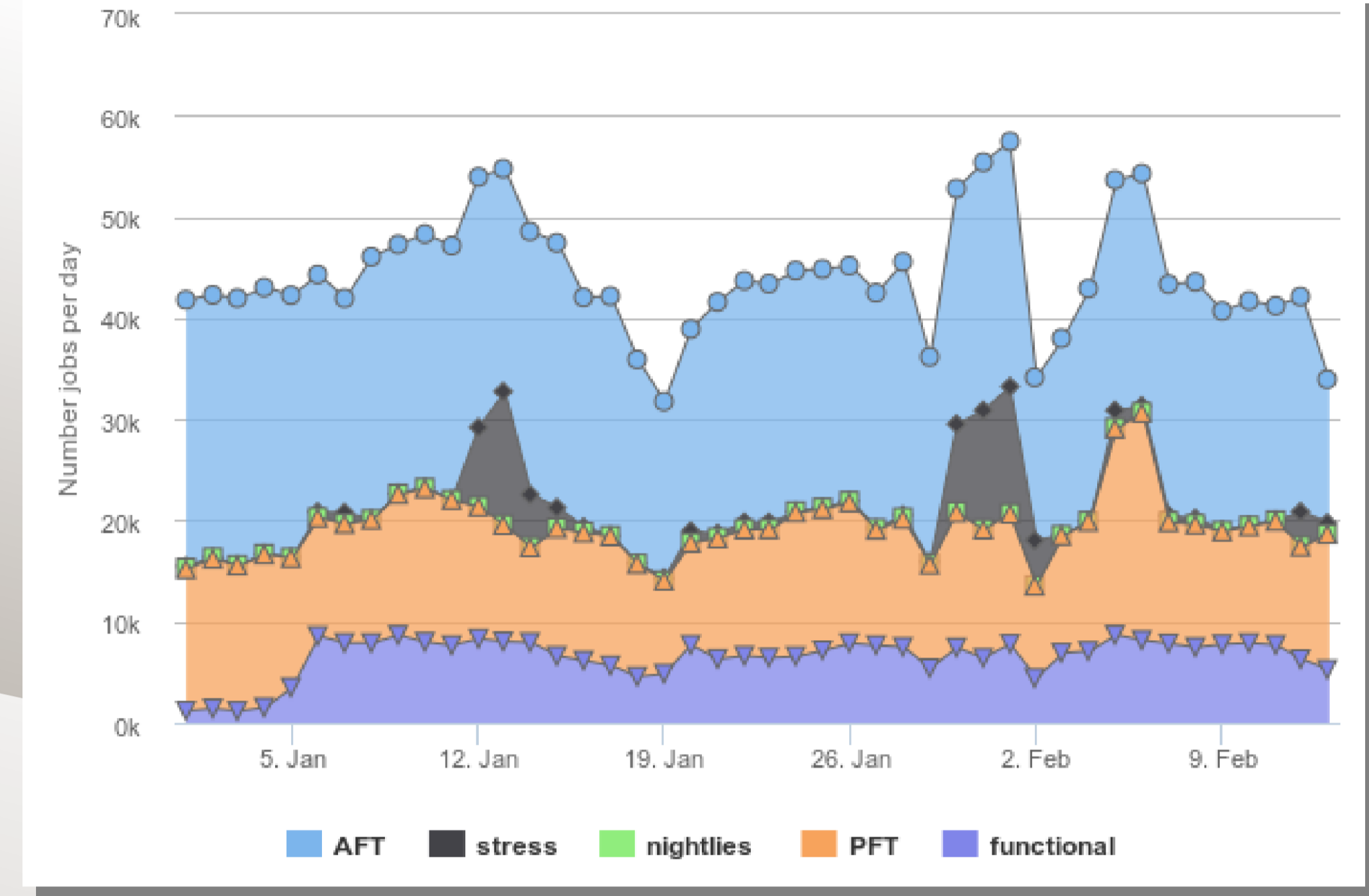
Improved ATLAS HammerCloud Monitoring for local Site Administration
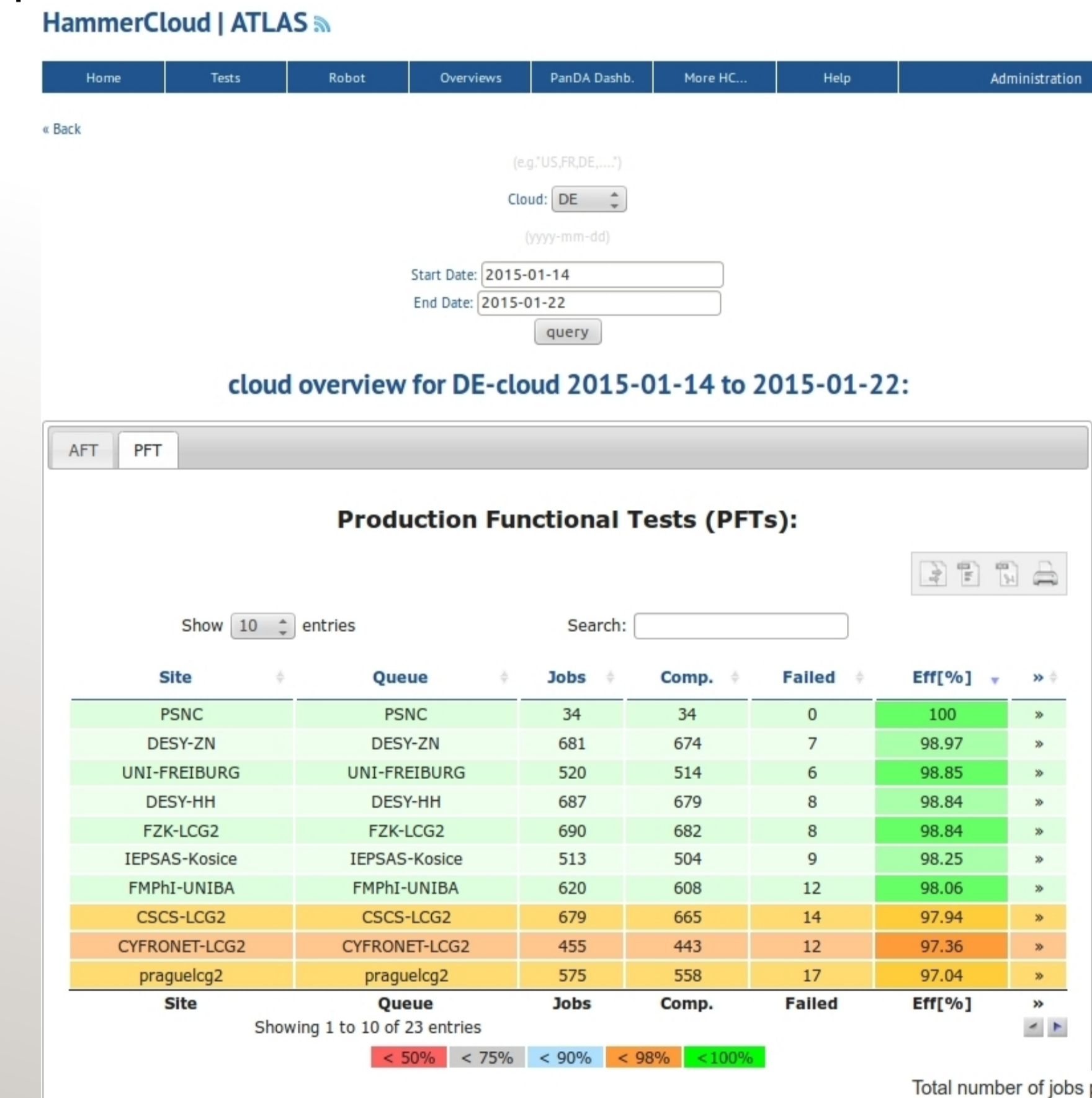
Total Running Tests

HammerCloud is the framework used to monitor the functionality of the ATLAS computing resources. It runs about 50k test jobs per day in more than 500 queues on ~150 sites all over the world.

▹ **AFT: A**nalysis **F**unctional **T**ests for site validation & blacklisting
▹ **PFT: P**roduction **F**unctional **T**ests for site validation & blacklisting
▹ **Functional tests:** further functional tests
▹ **Stress tests:** larger scale tests longer runtime and more events
▹ **Nightly tests:** run on development releases

Cloud Monitoring

Overview of AFT and PFT jobs used for site blacklisting. Table shows the site efficiency over a chosen time period. Additional chart gives an overview of how many test jobs were run on the individual sites per cloud
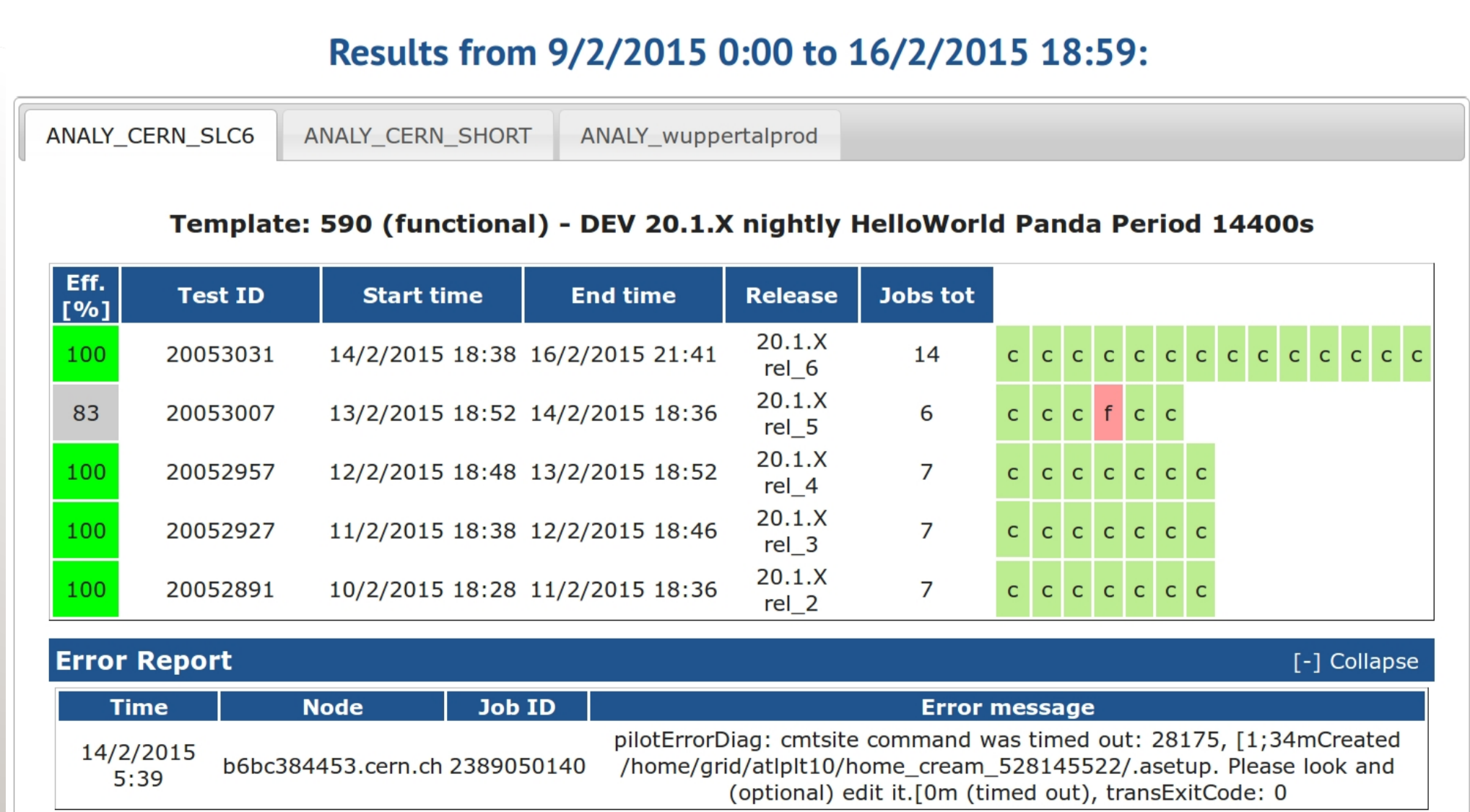

Explore the HC web-interface
http://hammercloud.cern.ch

▹ Click on **>>** to be forwarded to the corresponding site monitoring

▹ The total number of test jobs per queue and day illustrates if no jobs are running

Nightly tests Monitoring

Overview of all test jobs performed on nightly releases. The nightly releases are newly created ATLAS software releases. Using the HC infrastructure for testing these newly built software releases allows to validate them immediately in a production environment:

▹ Nightly tests are marked with traffic light colors → for shifters fast checks
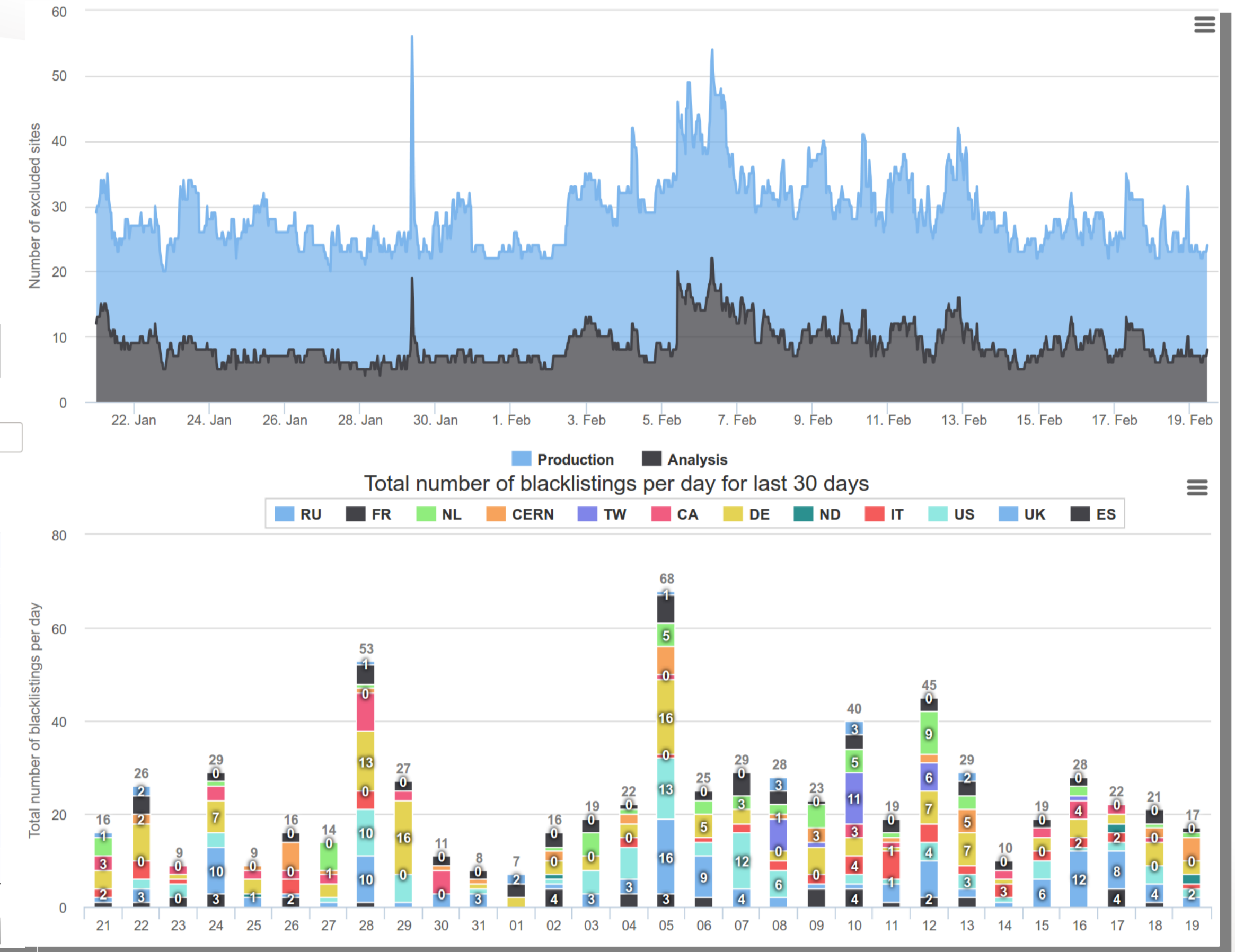▹ Table features are taken from site overview

Blacklisting Monitoring

Results from AFT/PFT blacklisting are monitored in detail:

▹ All blacklisted ATLAS queues world wide separated in Analysis and Production
▹ Every blacklisting event per day separated by cloud
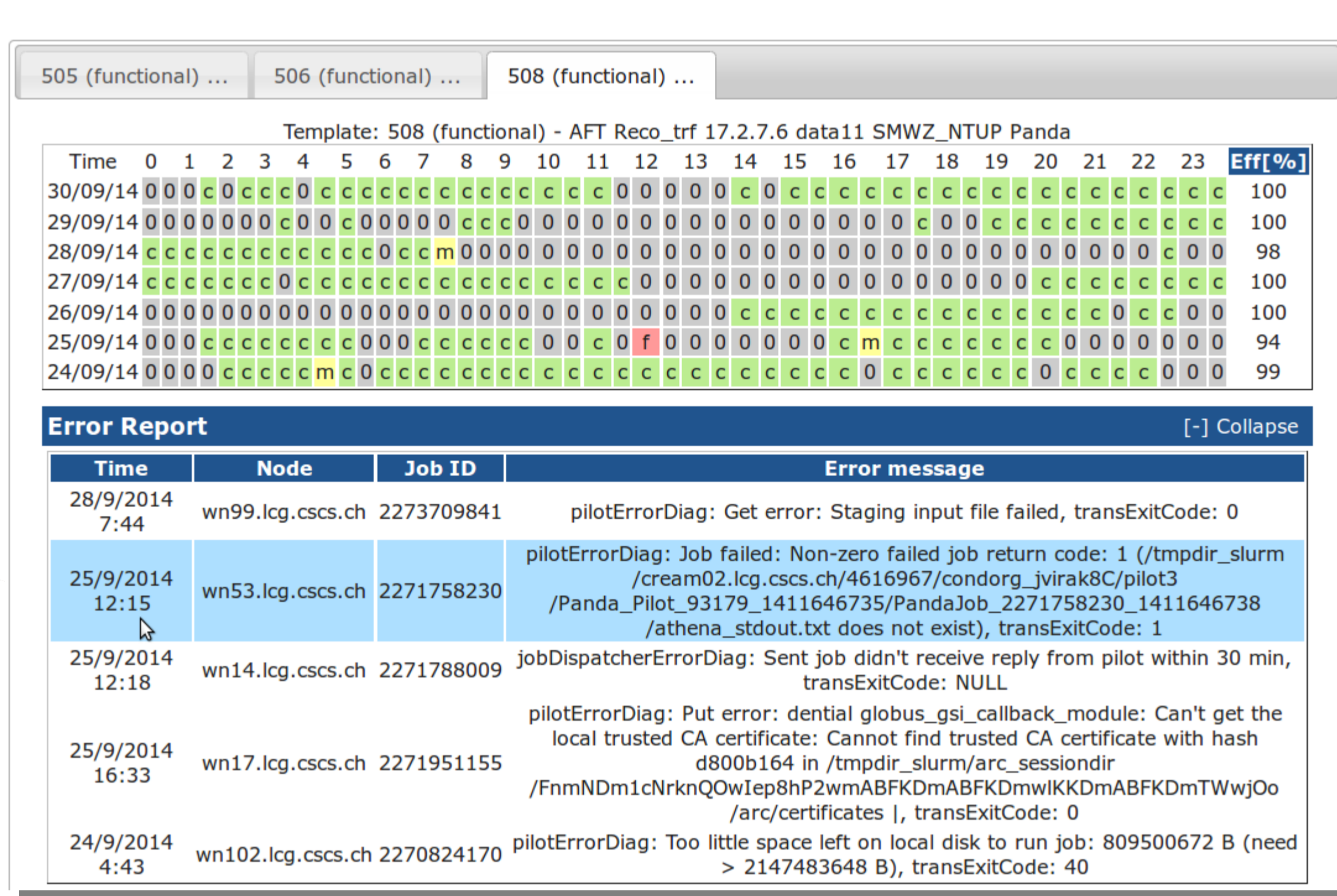▹ Top excluded site point to problematical sites

Top excluded sites in last 30 days

Show 10 entries   Search:

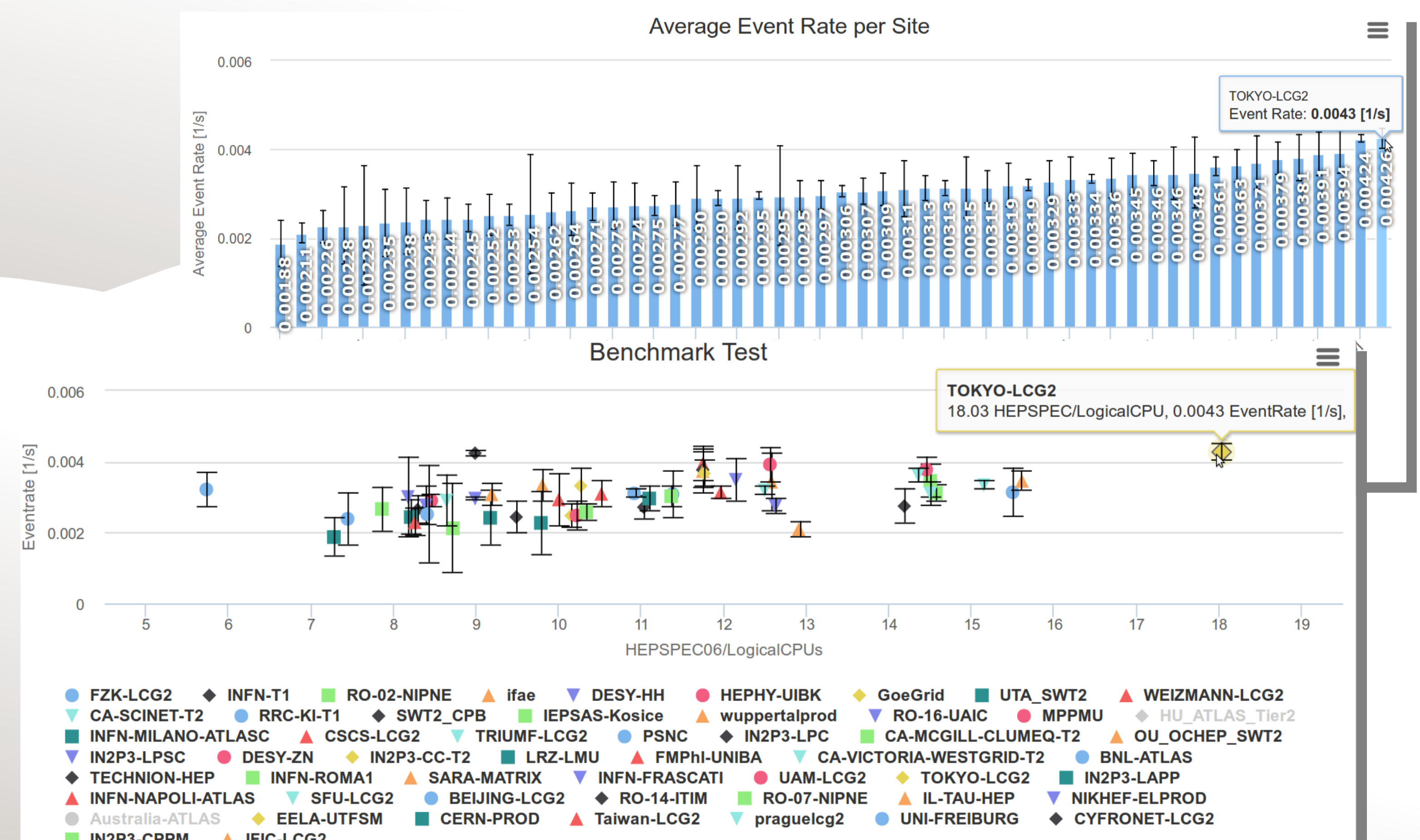| Cloud	Site	Exclusions
US	ANALY_C	25
US	ANALY_C	23
FR	ANALY_R	16
DE	ANALY_P	15
NL	ANALY_TR	14
DE	ANALY_G	14
IT	ANALY_I	13
UK	ANALY_S	13
DE	P	11
NL	ANALY_I	10
Cloud	Site	Exclusions

Showing 1 to 10 of 223 entries

Site Monitoring

Overview of all test jobs performed on one site:

▹ Tables per template show the completed (c), failed (f) and multiple final state (m) jobs per 30 min bin
▹ A detailed error report shows the exact time, node and error message per failed job
▹ Both the time bins and the error messages are linked to the BigPanda web pages

HammerCloud Benchmark Monitoring

▹ Dedicated benchmark test jobs (functional tests) sent to ~100 sites running over 10 events per job, up to 500 jobs in 24 hours
▹ Benchmark web page considers all tests of the last 30 days and compares:
  ▹ Averaged event rate over HEPSPEC06/logical CPUs per site (lower plot)
    ▹ Averaged event rate per site (upper plot)
      ▹ Averaged event rate per CPU type per site