

HC Tests monitor progress report

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Input details

HammerCloud (HC) is a test framework is being used to test, commission, benchmark ATLAS Distributed Computing resources with realistic workloads. (more info [here](#))

The latest HC test of “**datalake_copy_jinr**” type is available in HC web page:
<http://hammercloud.cern.ch/hc/app/atlas/test/20172348/>

It provides an overview of tests results and different metric plots but they are not always representative in analytics point of view.

All information of HC tests progress and results are stored in PanDA DB therefore is available at BigPanDA monitor : https://bigpanda.cern.ch/jobs/?jobtype=test&display_limit=100

Developed Web Application

Available at: <https://v025.pnpi.nw.ru/tests/>

Certificate provided by CERN CA is needed for access

Technologies stack:

Backend:

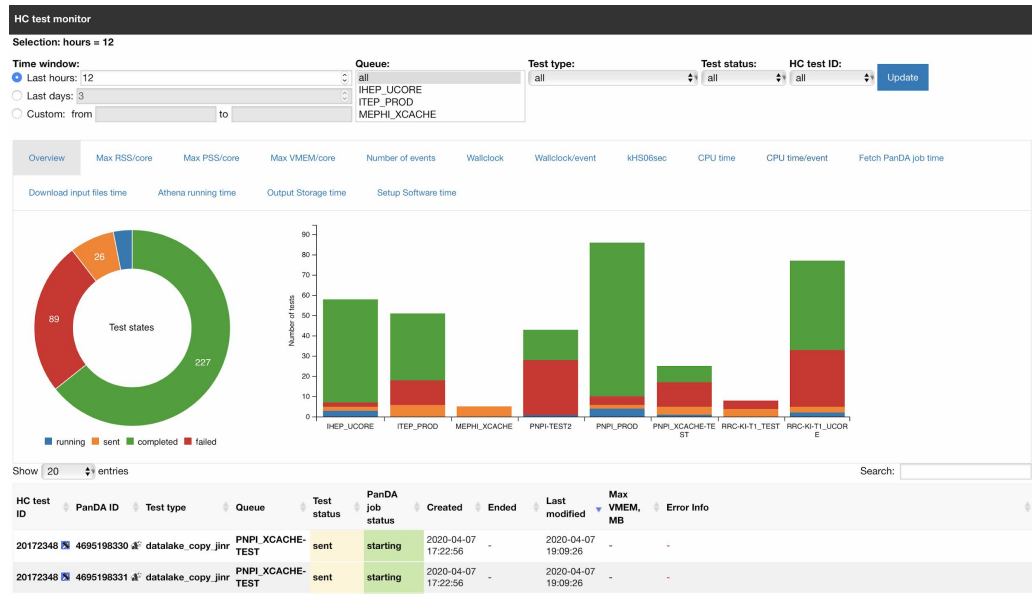
Django+uWSGI+NGINX+PostgreSQL+ES

Frontend:

ZURB Foundation+Angular+C3+DataTables

The special BigPanDA API was developed to provide needed tests data

Each 10 minutes a cron access the API to collect and store data to “dljobs-*” index in ElasticSearch instance at v025.pnpi.nw.ru (thanks to Aleksandr)



Interface explanation

<https://v025.pnpi.nw.ru/tests/>

HC test monitor

Selection: hours = 12

Time window:
 Last hours: 12
 Last days: 3
 Custom: from to

Queue:
all
IHEP_UCORE
ITEP_PROD
MEPHI_XCACHE

Test type:
all

- ✓ all
- alrb
- datalake_copy_jinr
- digi
- dl-local
- ft-dl-cern-directio
- mcore
- melt
- pft
- rctest
- test

Test status:
all

- ✓ all
- completed
- failed
- running
- sent

HC test ID: all

Update

select desired time window

select PanDA queues

select test type

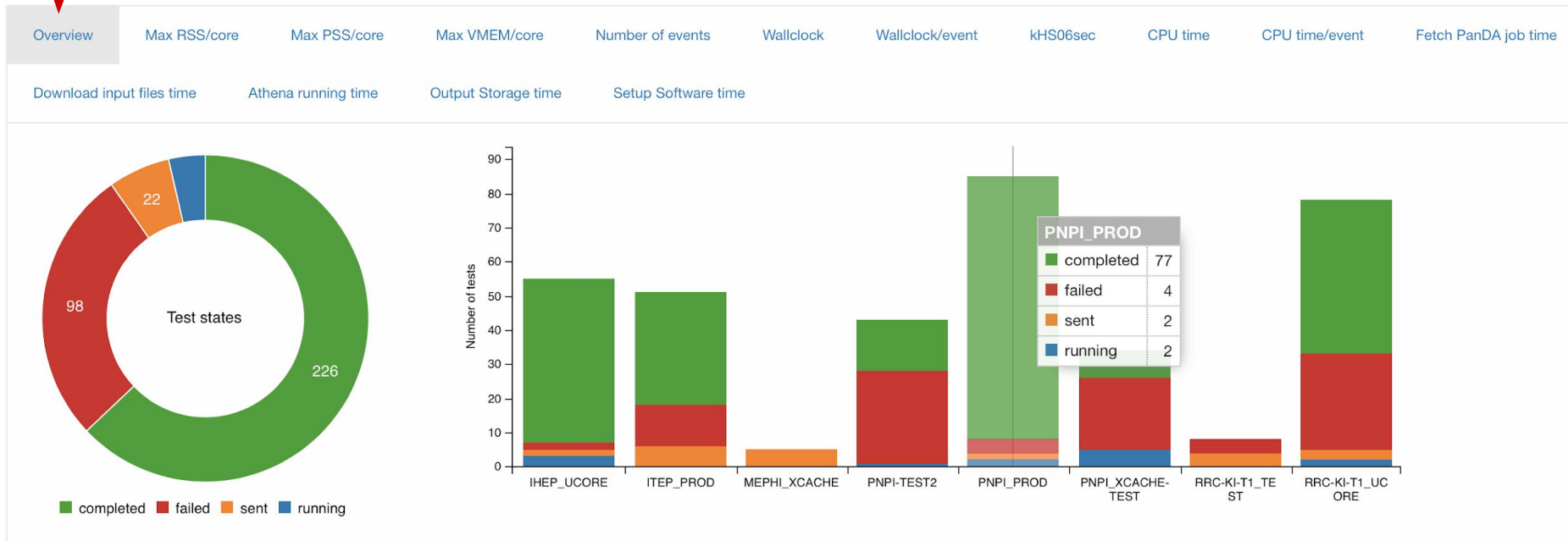
select test status

apply selection

Interface explanation

<https://v025.pnpi.nw.ru/tests/>

Overview tab



Interface explanation

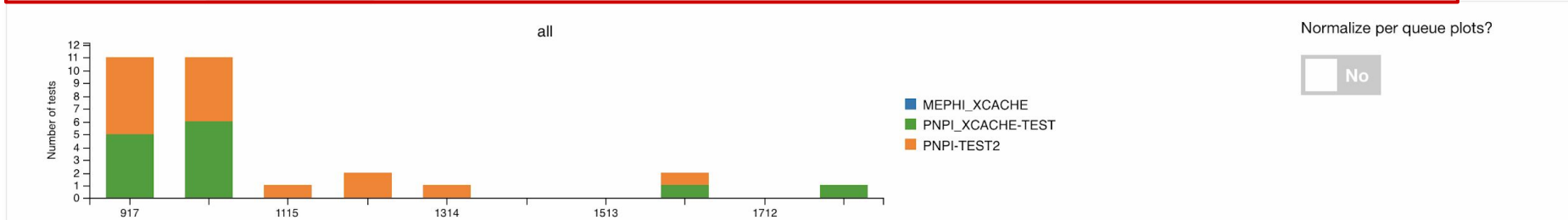
<https://v025.pnpi.nw.ru/tests/>

Different metric tabs

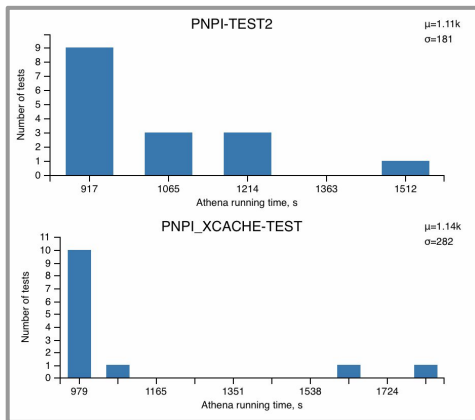


Overview Max RSS/core Max PSS/core Max VMEM/core Number of events Wallclock Wallclock/event kHS06sec CPU time CPU time/event Fetch PanDA job time

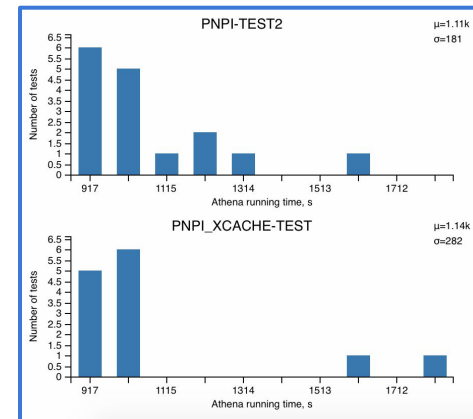
Download input files time Athena running time Output Storage time Setup Software time



Normalize per queue plots?

 No

Normalize per queue plots?

 Yes

Interface explanation

<https://v025.pnpi.nw.ru/tests/>

HC test ID	PanDA ID	Test type	Queue	Test status	PanDA job status	Created	Ended	Last modified	Max VMEM, MB	Error Info
20172279	4695278100	pft	PNPI_PROD	running	holding	2020-04-07 19:22:08	2020-04-07 19:38:30	2020-04-07 19:38:30	3713	-
20172279	4695241886	pft	RRC-KI-T1_UCORE	completed	finished	2020-04-07 18:32:58	2020-04-07 19:28:25	2020-04-07 19:33:18	2898	-
20172348	4695201989	datalake_copy_jinr	PNPI_XCACHE-TEST	completed	finished	2020-04-07 17:26:22	2020-04-07 19:28:12	2020-04-07 19:36:05	4388	-
20172348	4695198331	datalake_copy_jinr	PNPI_XCACHE-TEST	completed	finished	2020-04-07 17:22:56	2020-04-07 19:28:09	2020-04-07 19:33:59	4383	-
20172348	4695198330	datalake_copy_jinr	PNPI_XCACHE-TEST	completed	finished	2020-04-07 17:22:56	2020-04-07 19:28:04	2020-04-07 19:33:08	4556	-
20172348	4695177126	datalake_copy_jinr	PNPI_XCACHE-TEST	completed	finished	2020-04-07 17:00:30	2020-04-07 19:27:41	2020-04-07 19:33:42	4499	-
20172318	4695243975	pft	IHEP_UCORE	failed	failed	2020-04-07 18:36:28	2020-04-07 19:24:30	2020-04-07 19:29:58	3705	pilot, 1152: File transfer timed out during stage-out: hc_test:output.1.a42e8234-dfb1-48d6-80ff-ad8b452e26ac_60617.pool.root to RU-PROTVINO-IHEP_DATADISK, copy command timed out: TimeoutException: Timeout reached, timeout=314 seconds');]:failed to transfer files using copytools=[u'rucio']
20172279	4695260634	pft	IHEP_UCORE	completed	finished	2020-04-07 18:56:53	2020-04-07 19:22:17	2020-04-07 19:28:27	3711	-

link to HC test page

link to PanDA job page

error message from PanDA

Outcome & Plans

- The application was developed and deployed to v025.pnpi.nw.ru
- It covers basic requirements in monitoring tests results
- It contains interactive charts

Plans:

- ✓ Add possibility to switch between normalized and not normalized plots for metrics
- ✓ Add more filters and make them interactive (dropdown menu, check and/or radio buttons)
- ✓ Move to Elasticsearch as default data source for performance increasing