

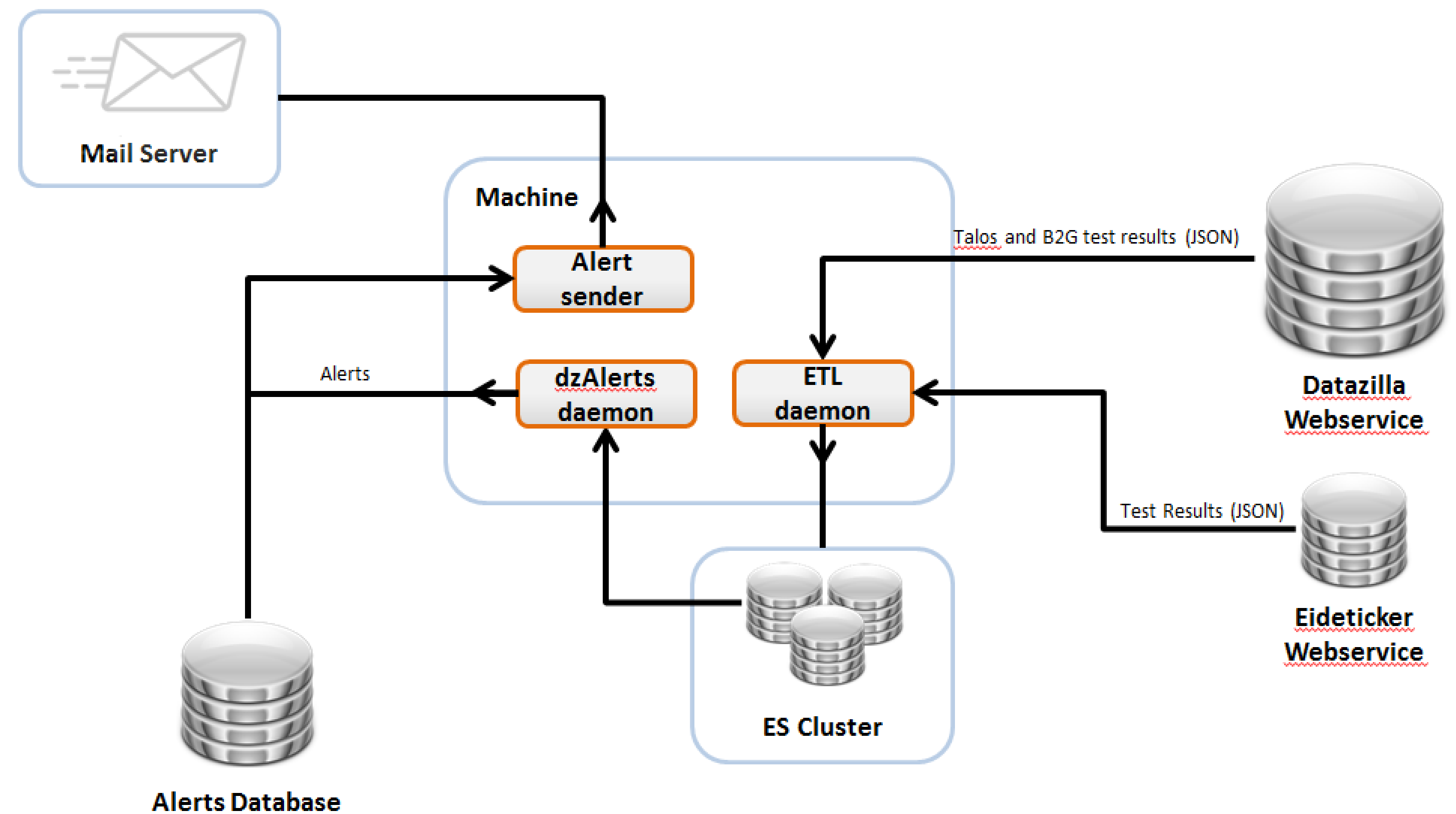
dzAlerts

provide high quality, and detailed alerts on performance regressions

<https://wiki.mozilla.org/Auto-tools/Projects/Alerts>

Architecture

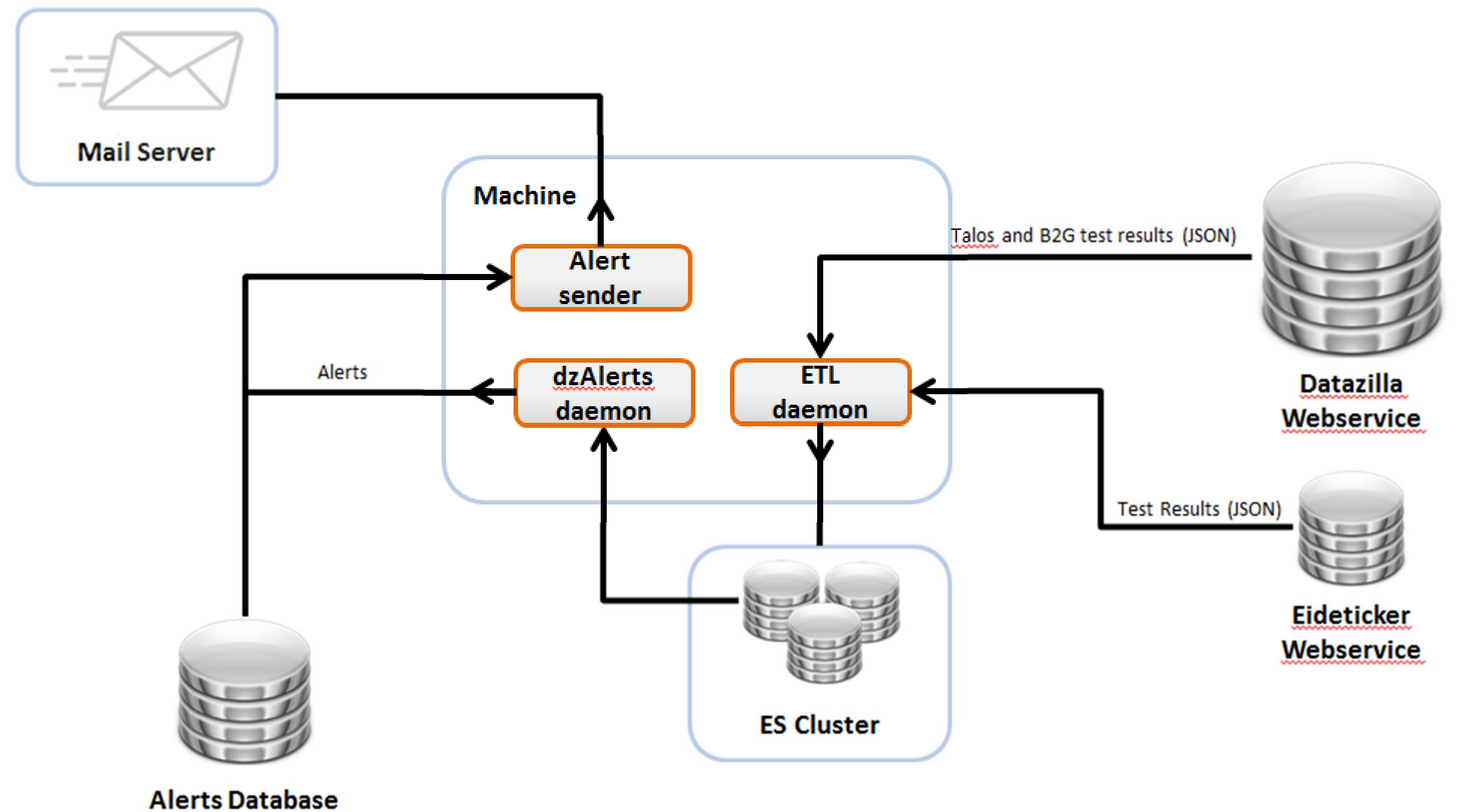
- ETL into ElasticSearch document store
- Analyze time series
- Send alerts



Note: Arrow heads indicate which side initiates connection, and logical direction of data flow.

Architecture

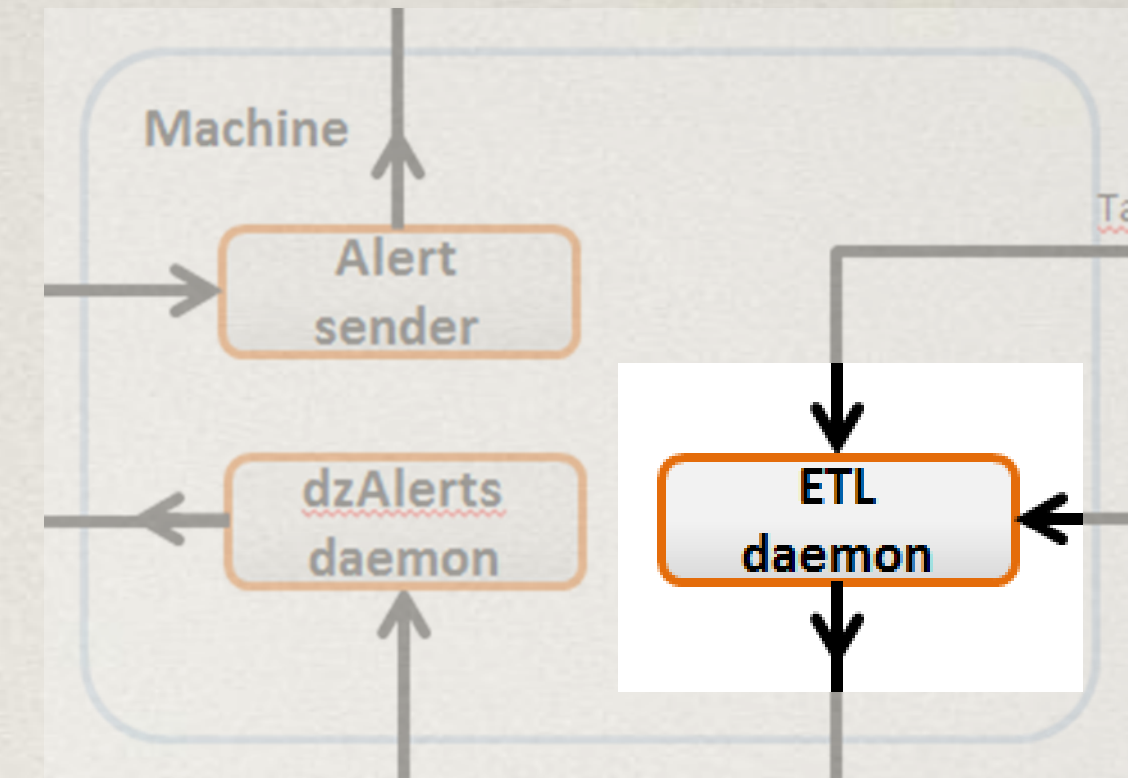
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Architecture

- ETL into Elasticsearch document store
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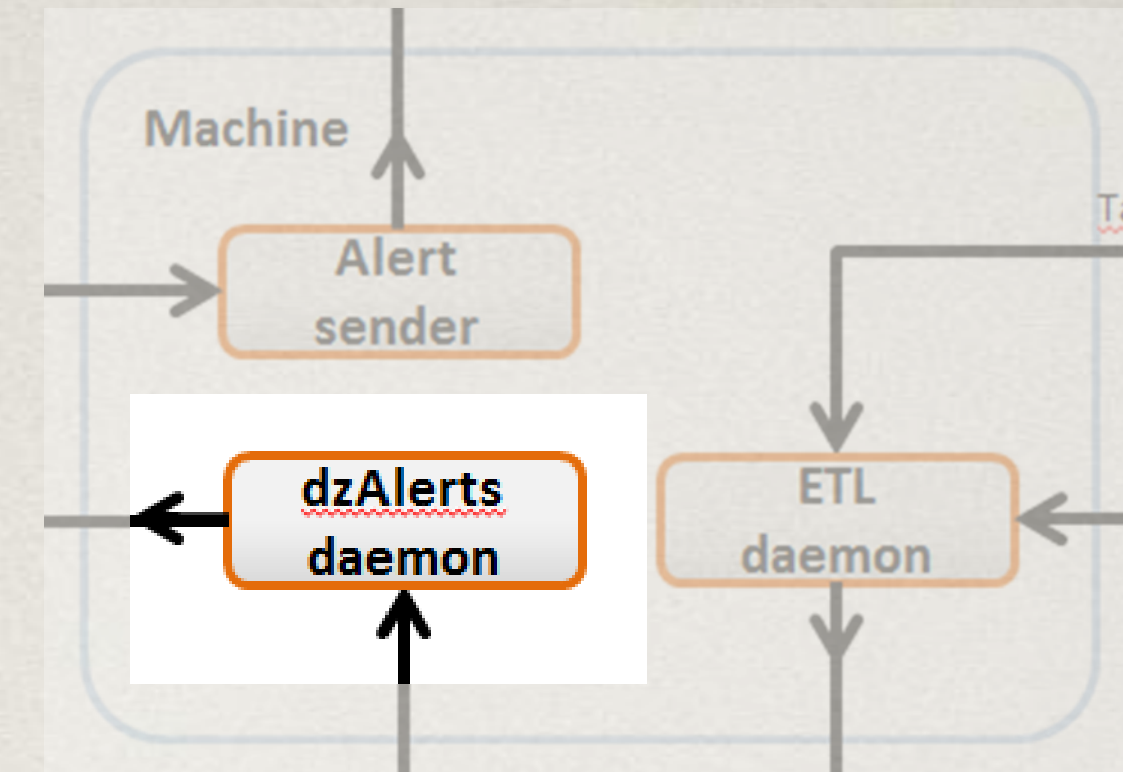
Extract ~40 test results per second from Datazilla (whole suites)

Transform test suite results into individual test results

Load into Elasticsearch

Architecture

- ETL into ElasticSearch document store
- Analyze time series
- Send alerts



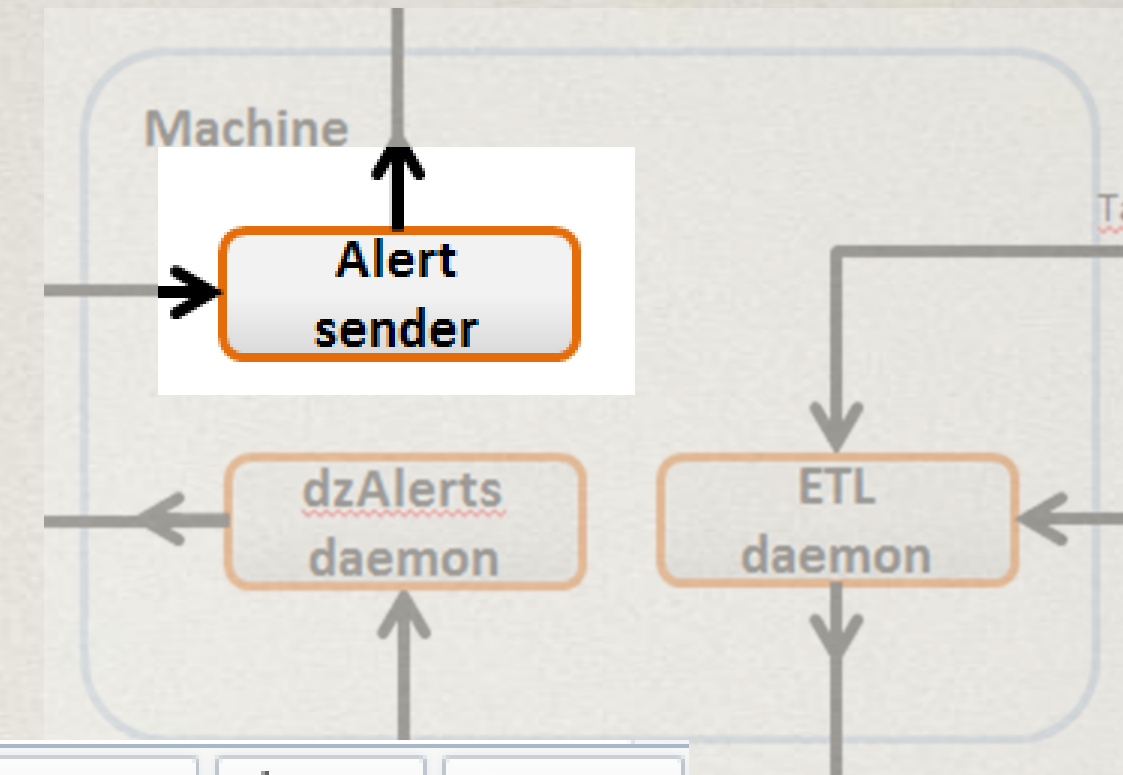
Daemon is run every 10min, and has significant startup/shutdown times:

- ~60 seconds to load (determine which tests to analyze)
- ~1.7 time series per second (~50 stats each, but does not matter)
- ~30 seconds to write alerts to database

Works out to about 10 test suites per minute

Architecture

- ETL into ElasticSearch document store
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From Me★

Subject [ALERT][Fx-Team] query.html.2 regressed by -24.0% in dromaeo_dom 6:03 PM

To Me★, Joel Maher★, Avi Halachmi★ Other Actions ▾

Performance Regression Alert

Score: 2.12142451807

[\[0685c59d2e94\]](#) [\[Previous\]](#) [\[TBPL\]](#)

1 exceptional events:

Branch	Platform	Suite	Test Name	Diff	Date/Time	Before	After	Diff
Firefox Fx-Team- Non-PGO	win (6.1.7601)	dromaeo_dom	query.html.2 Datazilla! charts! DIFF		2014-07-04 12:19:48	92920.0	70960.0	-22000.0

[Understanding this alert](#)

Mail

- Send alerts

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Reply

Reply All

Forward

Archive

Junk

Delete

6:03 PM

Other Actions ▾

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dzAlerts Mail

- Mercurial

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← Reply

↵ Reply All

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[Understanding this alert](#)

File Edit View History Bookmarks Tools Help

Talos Test Results fx-team: changeset 192392:...

https://hg.mozilla.org/integration/fx-team/rev/0685c59d2

fx-team - changeset - 192392:0685c59d2e94 Mercurial

[summary](#) | [shortlog](#) | [changelog](#) | [graph](#) | [tags](#) | [files](#) | [changeset](#) | [raw](#) | [bz2](#) | [zip](#) | [gz](#)

Bug 1034129 - Event listeners should be clustered together by type in the events pane, r=past

author Victor Porof <vporof@mozilla.com>
changeset 192392 0685c59d2e94
parent 192391 2f8e82391f85
child 192393 9c23683e70a2
pushlog: 0685c59d2e94

Bug 1034129 - Event listeners should be clustered together by type in the events pane, r=past

browser/devtools/debugger/debugger-controller.js file | annotate | diff | revisions
browser/devtools/debugger/test/browser_dbg_break-on-dom-03.js file | annotate | diff | revisions
browser/devtools/debugger/test/browser_dbg_break-on-dom-04.js file | annotate | diff | revisions
browser/devtools/debugger/test/browser_dbg_break-on-dom-05.js file | annotate | diff | revisions

1.1 --- a/browser/devtools/debugger/debugger-controller.js
1.2 +++ b/browser/devtools/debugger/debugger-controller.js
1.3 @@ -1706,16 +1706,20 @@ EventListeners.prototype = {
1.4 *
1.5 *
1.6 *
1.6 _getListeners: function(aCallback) {
1.7 gThreadClient.eventListeners(Task.async(function*(aResponse) {
1.8 if (aResponse.error) {
1.9 throw "Error getting event listeners: " + aResponse.message;
1.10 }
1.11 }));
1.12 }

Mail

- TBPL

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[0] Fx-Team - TBPL

https://tbpl.mozilla.org/?tree=Fx-Team&rev=0685c59d2e94

Help Tree Info Infrastructure Filters Timezone: local MVT 0 Unstarred

Tree: Try Mozilla-Aurora Fx-Team more OPEN. For any frontend Firefox/Firefox for Android related development.

Tree rules. Sheriff notes/current issues.

vporof@mozilla.com - Fri Jul 4 05:19:48 2014 PDT (compare:)

0685c59d2e94 Victor Porof - Bug 1034129 - Event listeners should

Linux Opt

B M (1 2 3 4 5 bc1 bc2 bc3 dt* oth)
M-e10s (1 2 3 4 5) R (C Cipc J R Ripc Ru)
Cpp Jit1 Jit2 Mn X T (T c d s tp)
B M (1 2 3 4 5 bc1 bc2 bc3 dt* oth)
M-e10s (1 2 3 4 5) R (C Cipc J R Ripc Ru)
Cpp Jit1 Jit2 Mn X T (T c d s tp)
B M (1 2 3 4 5 bc1 bc2 bc3 dt1* dt2 dt3
oth) R (C J R) Cpp Jit1 Jit2 Mn X
B Bn SM (Hf) V M (1 2 3 4 5 bc1 bc2 bc3
dt* oth) M-e10s (1 2 3 4 5) R (C J R) Cpp
Jit2 Jit1 Mn X T (T T T c d s tp)
B M (1 2 3 4 5 bc1 bc2 bc3 dt* oth)
M-e10s (1 2 3 4 5) R (C J R) Cpp Jit2 Jit1
Mn X T (T T T c d s tp)
Bn Bd M (1 2 3 4 5 bc1 bc2 bc3 dt* oth)

Linux PGO

Linux Debug

Linux x64 Opt

Linux x64 PGO

Linux x64 ASAN

Mail

- Datazilla

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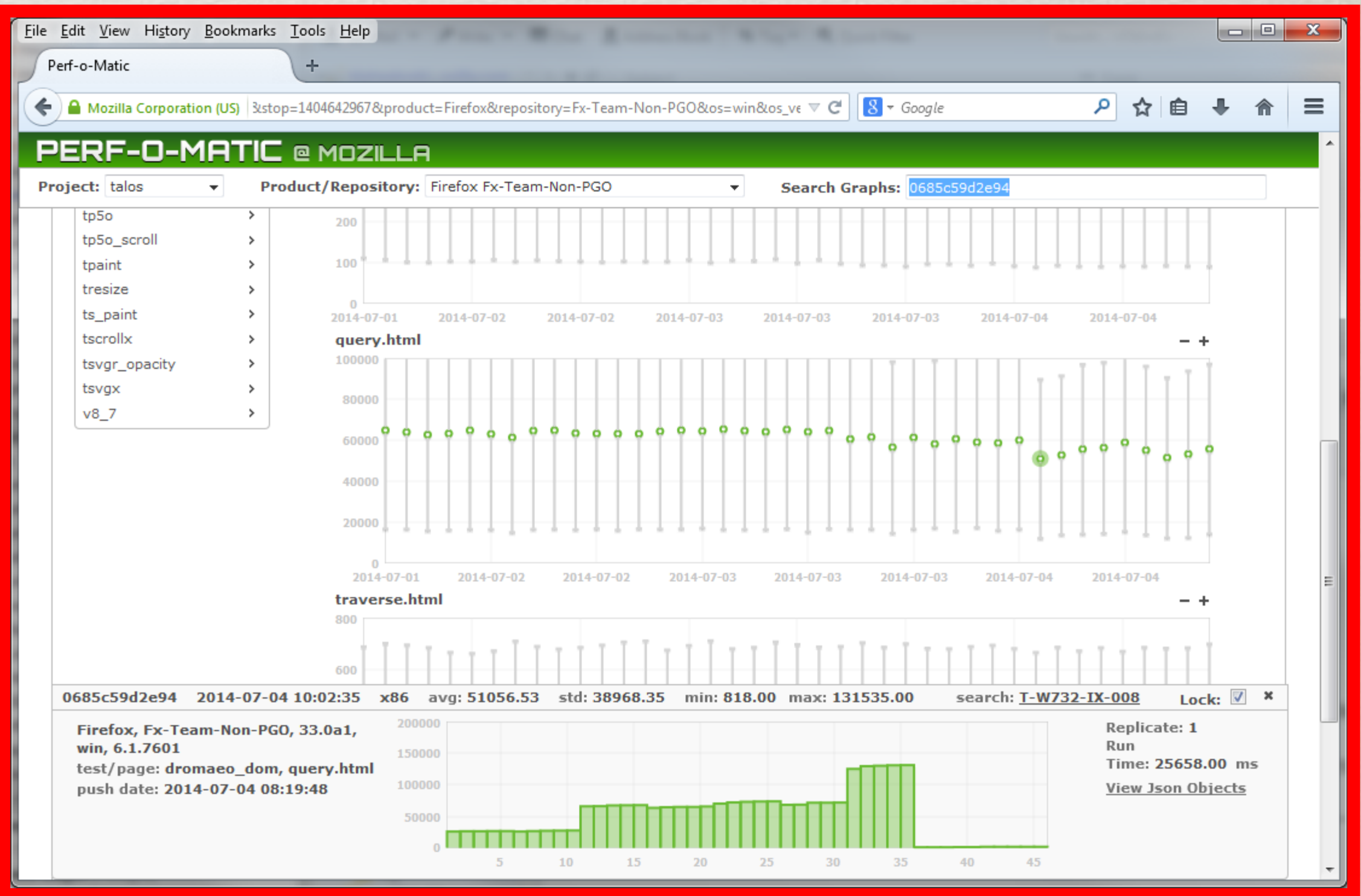
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[Understanding this alert](#)



Mail

- Simple Chart Tool

From Me

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To Me, Joel Maher, Avi Halachmi

Reply

Performance Regression Alert

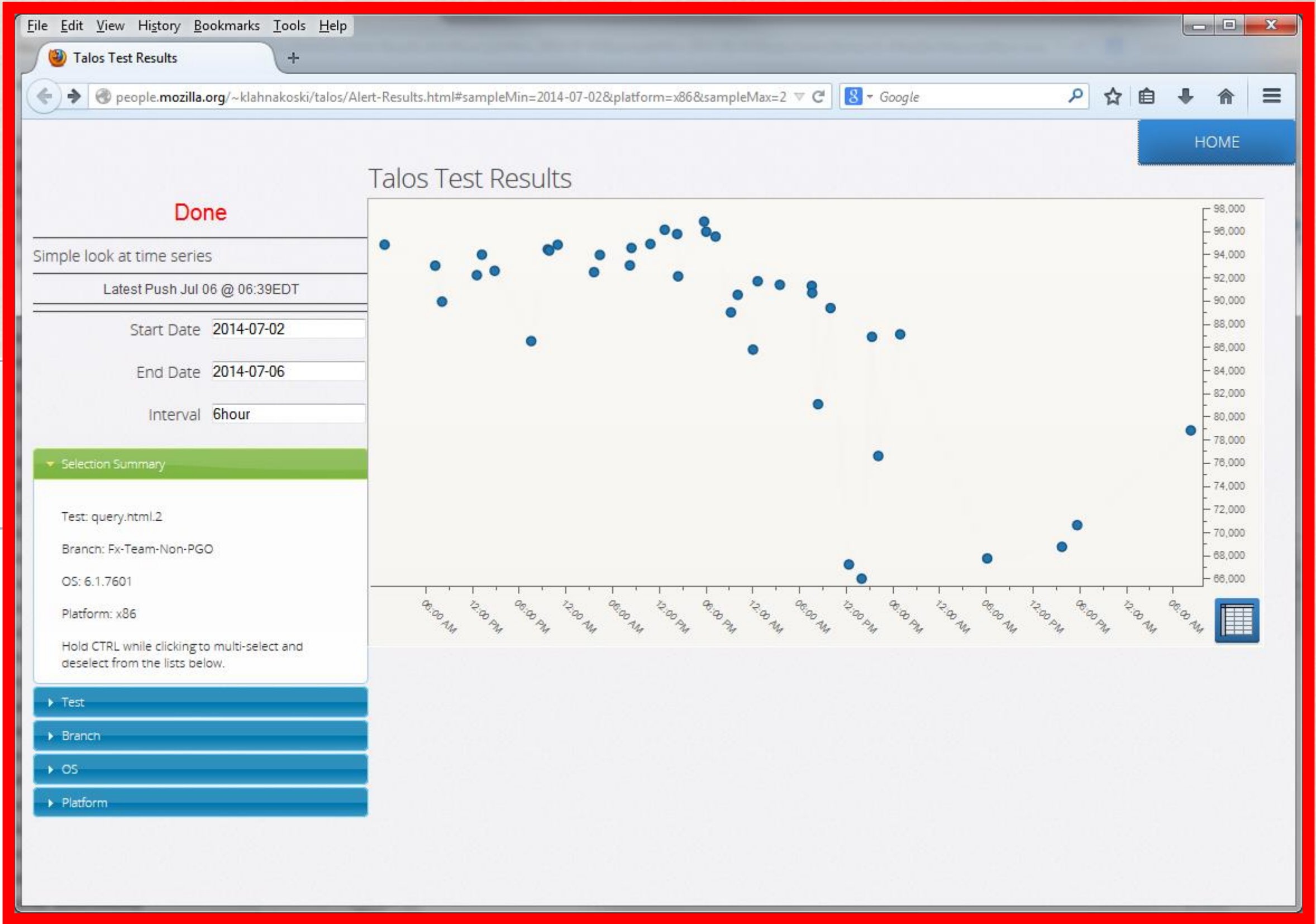
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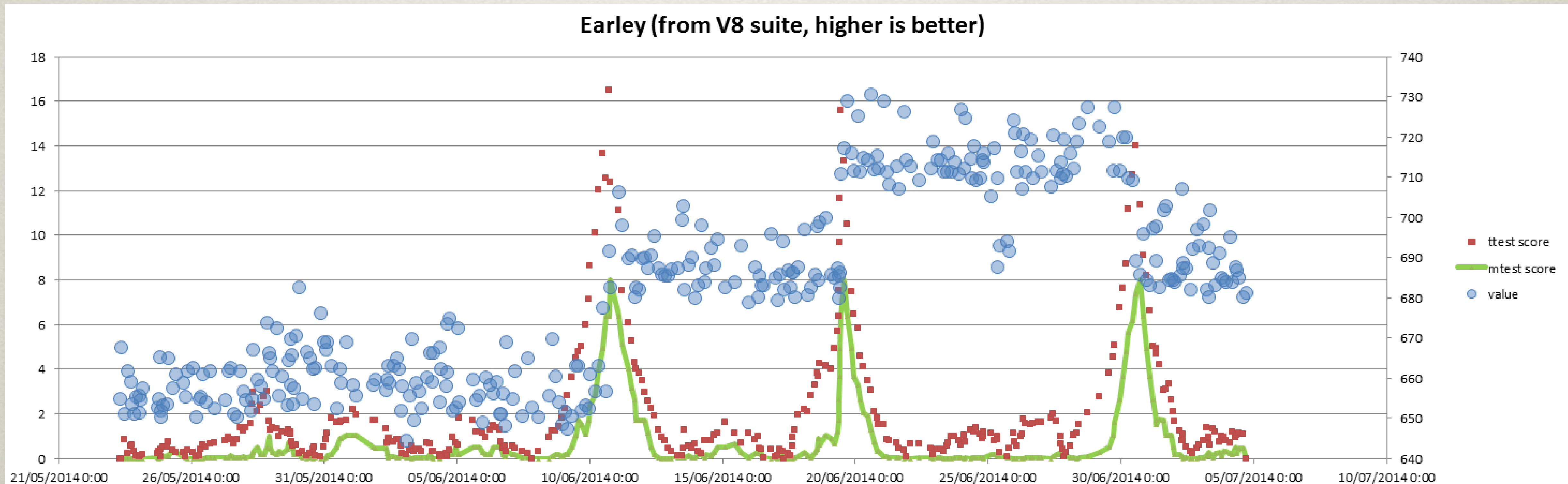


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Debugging

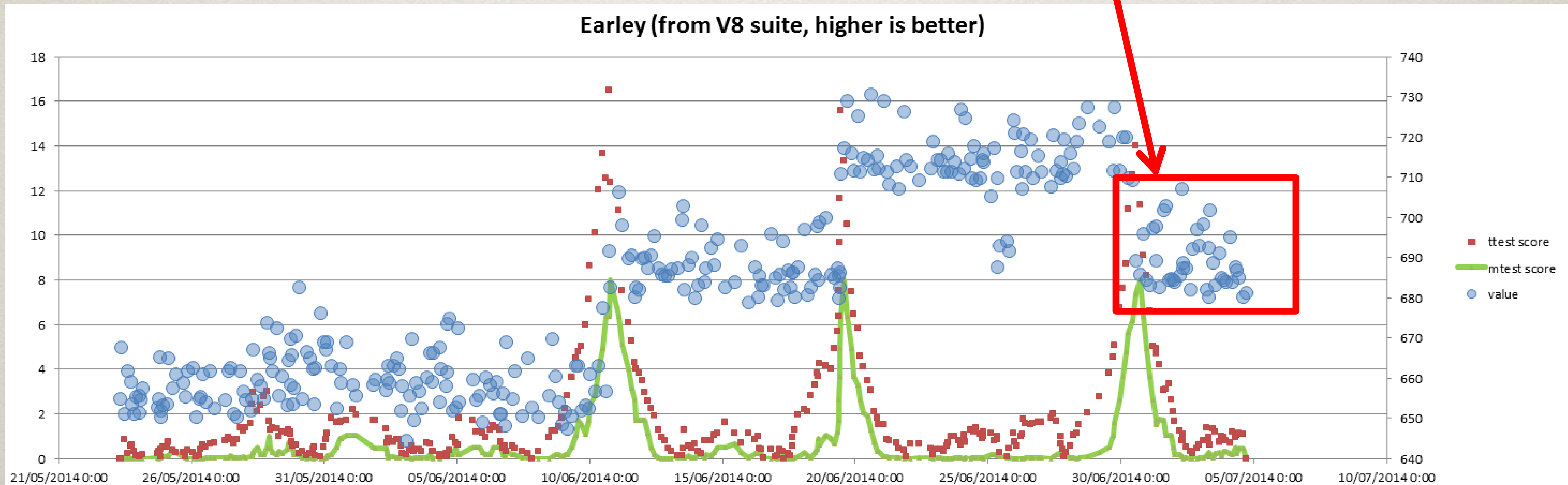
Debugging

- Always chart your data points
- Visualize algorithm's statistics to get a feel for what it sees
- Bugs are not usually in the math



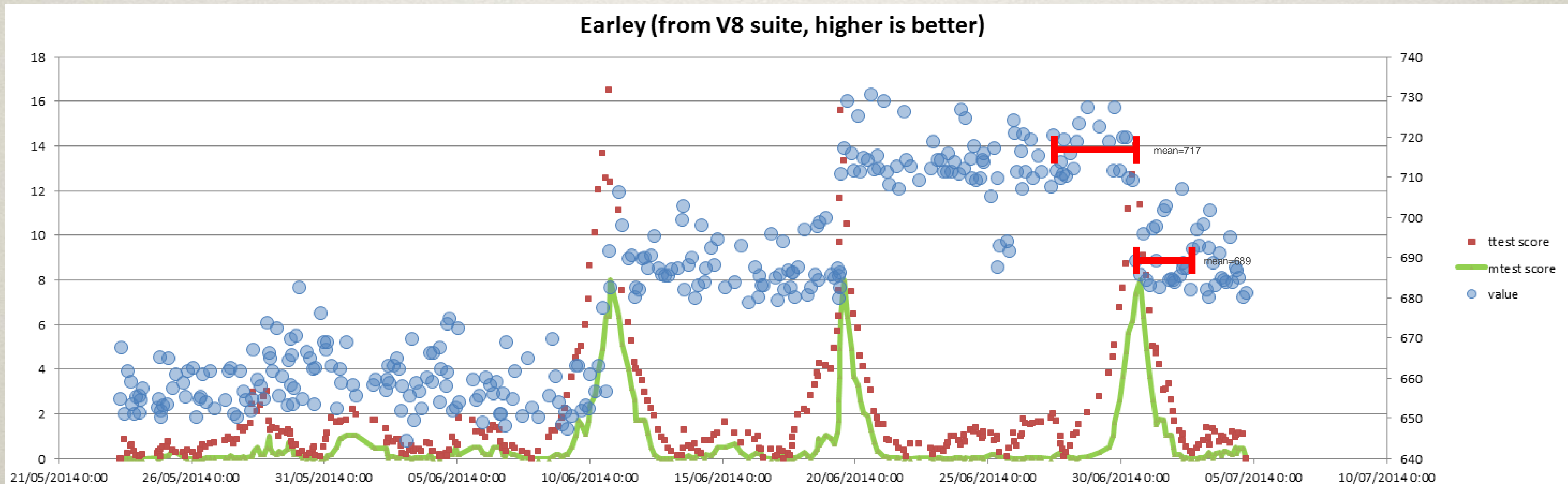
Debugging

Regression!? Where's my alert?



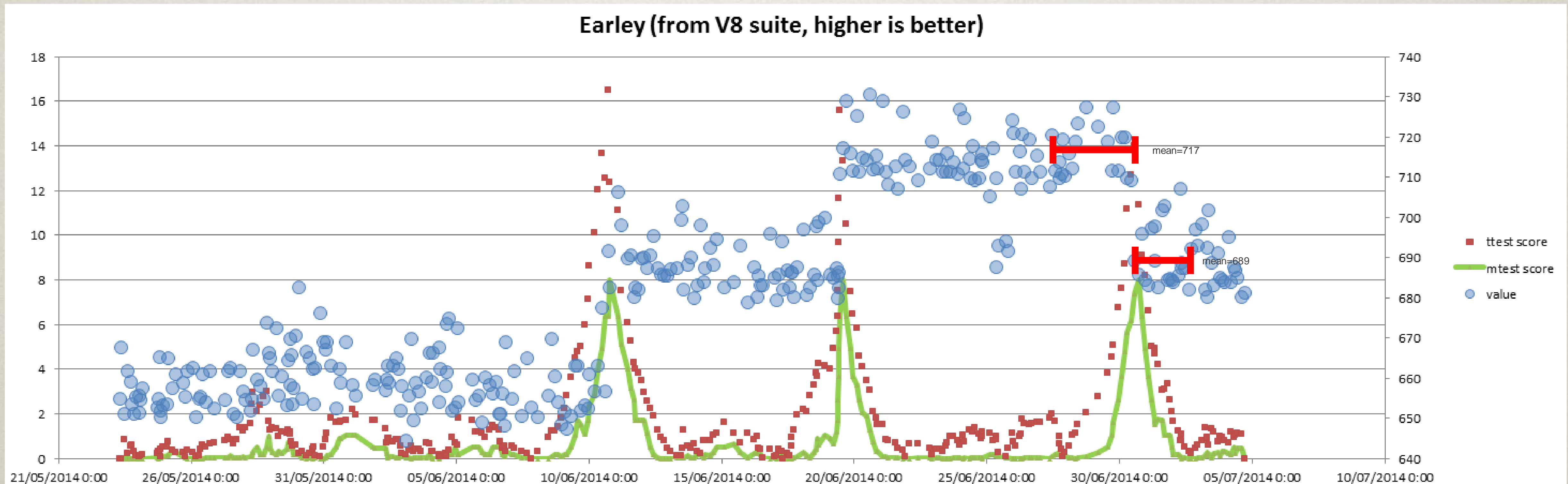
Debugging

Past mean 717
Future Mean 689
Difference 28 (3.9%)



Debugging

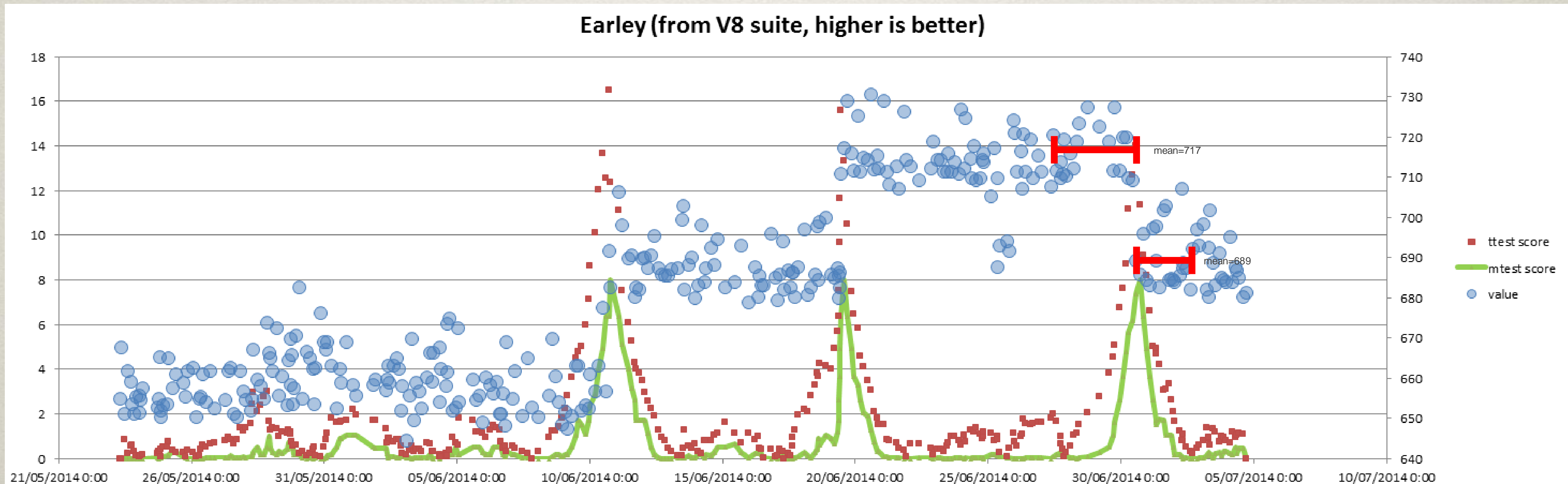
Past mean	717
Future Mean	689
Difference	28 (3.9%)
Threshold	36 (5.0%)



Debugging

Problems usually with

- Setting thresholds
- Dealing with settings
- Managing alert life cycle

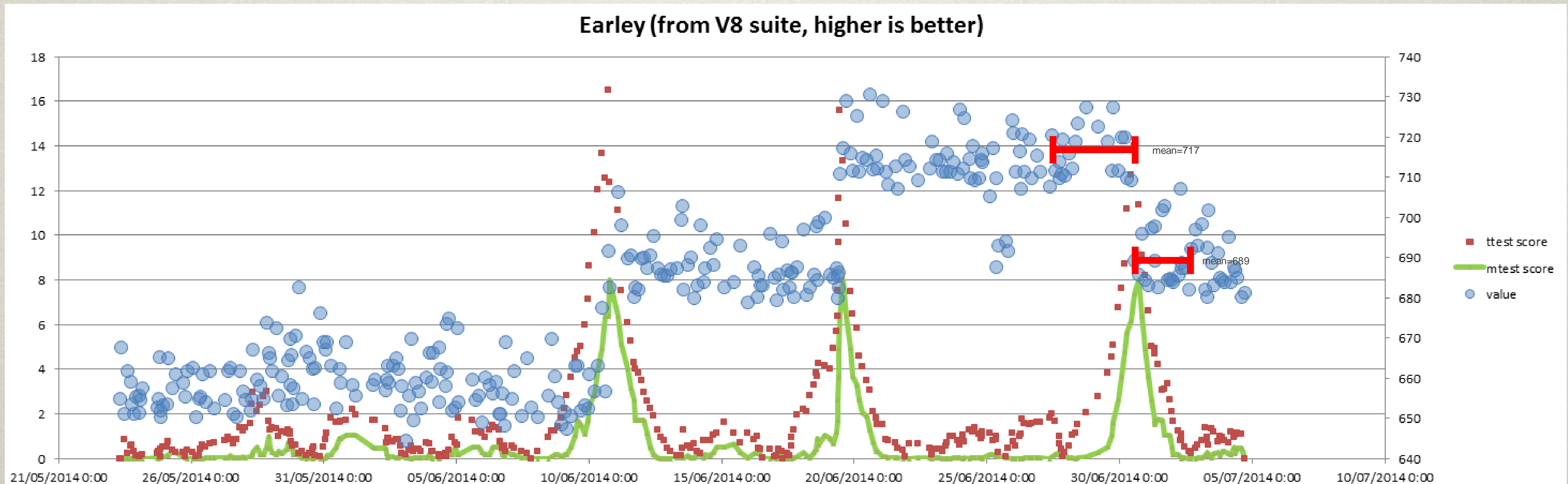


Debugging

Problems usually with

- Setting thresholds
- Dealing with settings
- Managing alert life cycle

} Programming is hard



Post Mortem

Talos is Big!

From May 20th to July 5th (47 days):

- 13,237,110 test results (8.4million/month)
- 147,832,161 individual tests (94million/month)

Many setbacks due to size and diversity:

- Loading was too slow → Go multithreaded
- JSON transformations too slow → Use PyPy
- SciPy calls too slow → Found pure python prequel to SciPy
- Database too slow → Use ElasticSearch

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