

# The SQA Approach on the Mozilla Project

## How Firefox gets Tested



Take back the web

## Areas to cover

- Background
- Ensuring quality goes in
- Automated testing
- Community testers
- Community bug triage and clarification
- QA team testing
- Areas Monitored by the QA Team



Take back the web

# Background

- What do we test
  - Firefox
  - Thunderbird
  - Mozilla web sites
  - Partner builds
  - Interactive marketing programs
- Interesting challenges
  - Wild wild west
  - Very literal engineers
  - Interconnected systems – animated flavacon

# Ensuring Quality Goes In

- Tests must accompany product code
- Reviewers and Super Reviewers ensure tests are included with the product code
- Unit testing – over 50,000 tests run every “hourly” build cycle
- Test failures close the tree

Bug List: (1 of 79) [First](#) [Last](#) [Prev](#) [Next](#) [Show last search results](#)**Bug 413891 - RSS discovery doesn't handle the general XML types case well** ([edit](#))**Status:** ASSIGNED**Severity:** normal **Keywords:** testcase**Whiteboard:** [has patch] [needs review sayrer]**URL:** http://bonsai.mozilla.org/cvsblame.cgi?file=/mozilla/br**Product:** Firefox **Component:** RSS Discovery and Preview **Version:** Trunk **Hardware:** All **OS:** All **Assigned To:** [Ehsan Akhgari \[:ehsan\]](#)**QA Contact:** [rss.preview@firefox.bugs](#) ([edit](#))**Priority:** -- **Target Milestone:** Firefox 3 beta4 **Depends on:** ([edit](#))**Blocks:** ([edit](#))[Show dependency tree](#) - [Show dependency graph](#)**Reported:** 2008-01-24 11:41 PDT by [Ehsan Akhgari \[:ehsan\]](#)**Modified:** 2008-03-17 11:34:08 PDT ([View Bug Activity](#))**Votes:** 0 ([vote](#))**Add CC:** **CC:**  
ehsan.akhgari@gmail.com  
phlringnalda@gmail.com  
sayrer@gmail.com☐ Remove selected CCs**Flags:**blocking1.8.0.15 wanted1.8.0.x blocking1.8.1.14 blocking1.8.1.15 wanted1.8.1.x wanted1.9.0.x blocking-firefox3 wanted-firefox3 in-litmus ehsan.akhgari: in-testsuite **Attachments****Test case** (390 bytes, text/html)  
[2008-01-24 11:41 PDT, Ehsan Akhgari \[:ehsan\]](#)

no flags

[Details](#)**Patch (v1)** (11.12 KB, patch)  
[2008-01-24 12:19 PDT, Ehsan Akhgari \[:ehsan\]](#)

ehsan.akhgari: review? (sayrer)

[Details](#) | [Diff](#)[Add an attachment](#) (proposed patch, testcase, etc.)[View All](#)

## Toggle Overview

### Checkin rules

Do not check in when the tree is broken (**red** or **orange**).

#### WHEN OPEN...

Patches with **approval1.9+** may land. Fixes for bugs marked **blocking1.9+** or **blocking-firefox3+** may land as long as they do not modify strings. See [tree status](#) for full details.

#### WHEN CLOSED:

the tree is closed in order to fix bustage, tag releases, etc. The sheriff (see list at right) must approve all checkins.

Please make sure your changes **compile** and pass the **automated tests** before checking in. This means you! Do not check in until you have appropriate [reviews](#).

Your checkin *comment* should include the bug#, a clear explanation of the fix, and reviewers.

All checkins must not break [SeaMonkey](#) or [Thunderbird](#) on the tier 1 platforms.

Please be mindful of the other tinderboxes:

#### Mozilla-10n, 4/8 16:41

MacOSX Darwin 8.8.4  
bm-xserve12 Depend  
Tb-Trunk-10n

MacOSX Darwin 8.8.4  
bm-xserve12 Depend  
Fx-Trunk-10n

MacOSX Darwin 8.7.0  
cb-xserve03 Clobber  
Sh-Trunk-10n

#### Firefox-Ports, 4/8 16:41

SunOS/sparc 5.11 huohu  
Depend trunk

SunOS/i386 5.11 leinia  
Depend trunk

#### SeaMonkey is open, 4/8 16:51

MacOSX Darwin 8.7.2  
cb-xserve02 Depend  
Universal Nightly

Linux nye Depend bloat

Linux cb-sea-linux-tbox  
Depend Nightly

WINNT 5.2

#### SeaMonkey-Ports is open, 4/8 16:55

SunOS/i386 5.11 nba

# tinderbox

tree: Firefox (2008-04-08 16:55 PDT)

Sheriff: see schedule, default is #developers

Open to blockers and patches with approval1.9+ only (see [tree rules](#) for details)

Always observe the **check-in rules** listed in left-hand sidebar and on the [tree status](#) page!

- See [Care And Feeding Of The Tinderbox](#) for common problems and what to do about them.
- qm-centos5-01 orange with mochitest "FAIL" at test\_HTMLBodyElement08.html, [bug 427878](#)
- bm-xserve11 is getting spurious asserts and going orange, see [bug 412545](#).
- qm-xserve01 and qm-centos5-01 intermittently fail because of [bug 425987](#)
- Please note that qm-win2k3-01 is the **only Windows unit test machine**, so if it is orange or red, you **should NOT** check in.
- Please record times and details of tree closures on the [Tree Closures](#) page.

The tree is **OPEN**

Build Time	Guilty	Linux fx-linux-tbox Dep Nightly	Linux fxdbug- linux-tbox Dep	Linux qm-centos5-01 dep unit test %	Linux talos trunk fast qm-plinux-fast01	Linux talos trunk nochrome qm-mini- ubuntu03	Linux talos trunk qm-mini- ubuntu01	Linux talos trunk qm-mini- ubuntu02
Click time to see changes since then	Click name to see what they did							
<a href="#">2008/04/08 16:54:48</a>								
16:54:44								
16:53:30			<a href="#">L/</a>					
16:53:04								
16:53:00								
16:52:03								
16:51:45								
16:51:16								
16:50:02								
16:50:01								
16:49:02								
16:46:01			<a href="#">L</a> <a href="#">C</a> <a href="#">2:14.29MB</a> <a href="#">m2:2.412MB</a>	<a href="#">REL:08</a> <a href="#">Lk:1.16MB</a> <a href="#">MH:22.7MB</a> <a href="#">A:610K</a>				
16:46:00								
16:45:58								
16:43:00								
16:42:00								
16:41:48								
16:40:51								
16:40:00								
16:39:50								
16:39:06					<a href="#">L/</a> <a href="#">C</a>			
16:38:06							<a href="#">L/</a> <a href="#">C</a>	

### Sheriff Schedule

Today Tuesday, April 8

**Tuesday, April 8**

Joe Drew (JOEDREW!) (joe)

**Wednesday, April 9**

Justin Dolske (dolske)

**Thursday, April 10**

Robert Sayre (sayrer)

Events shown in time zone: Pacific



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branch, tinderbox client, real consumer hardware.

**fxdbug-linux-tbox, bm-xserve11, fxdbug-win32-tb** Leak tests on a debug compile. Builds continuously, tinderbox client, VM. Assertions are fatal (and thus cause orange).

**unit test** Builds source then runs test suites. Build only after checkin, buildbot, VM, *QA administered (robcee)*.

**talos** next-gen performance testing framework, testing hourly builds, run by QA (robcee, bhearsum, coop)

## Help

[1.8 Branch tinderbox](#)

[1.8.0 Branch tinderbox](#)

See [Bonsai](#) for checkin details

[Txu/Ts/Tp perf](#), [Lk/BI Docs](#),

[Talos Graphs & Perf](#)

[Regression Policy](#)

[Talos machine graphs](#)

[Hacking Mozilla](#)

[Install tbox status icon](#) or

[Sidebar panel](#)

[Roadmap](#)

15:56:58

15:56:03

15:55:09

15:55:01

15:53:00

15:52:05

15:52:00

15:50:04

15:50:03

15:50:02

15:50:01

15:50:00

15:49:55

15:49:03

15:49:02

15:48:03

15:47:53

15:47:04

15:46:53

15:46:04

15:46:03

15:46:00

15:45:10

15:45:01

15:44:03

15:43:00

15:42:13

15:42:02

15:42:00

15:41:58

15:40:00

15:37:04

15:37:03

15:36:01

15:35:03

15:35:01

15:35:00

15:34:01

LI

L C  
2:14.29MB  
m2:2.412MB

LI

LI

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LI C

Details:  
[taspider](#)  
[tdhtml](#)  
[twinopen](#)  
[ts](#)  
[tp](#)  
[tp RSS](#)

L C  
[taspider](#): 322.68  
[tdhtml](#): 943.06  
[twinopen](#): 236.42  
[ts](#): 1366.26  
[tp](#): 193.50  
[tp RSS](#): 70685193.31

Details:  
[taspider](#)  
[tdhtml](#)  
[twinopen](#)  
[ts](#)  
[tp](#)  
[tp RSS](#)

L C  
[twinopen](#): 250.37  
[taspider](#): 364.64  
[ts](#): 1400.05  
[tp](#): 626.28  
[tp RSS](#): 129905033.35  
[tsvg](#): 5285.32  
[tsfx](#): 2.25

L C  
[twinopen](#): 246.37  
[taspider](#): 363.58  
[ts](#): 1402.68  
[tp](#): 624.50  
[tp RSS](#): 131114633.30  
[tsvg](#): 5297.36  
[tsfx](#): 2.50  
[tdhtml](#): 952.29

Details:  
[twinopen](#)  
[taspider](#)  
[ts](#)  
[tp](#)  
[tp RSS](#)  
[tsvg](#)  
[tsfx](#)  
[tdhtml](#)



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14:36:00					<u>ts</u> <u>tp</u> <u>tp RSS</u>	
14:35:03						
14:34:05						
14:33:07						
14:33:00	dholbert		<u>L</u> <u>RLk: 0B</u> <u>Lk: 1.16MB</u> <u>MB: 22.6MB</u> <u>A: 592K</u>			
14:31:37						<u>L C</u> <u>twinopen: 245.63</u> <u>tspider: 360.14</u> <u>ts: 1391.95</u> <u>tp: 623.86</u> <u>tp RSS: 131214729.93</u>
14:31:00						
14:30:48						
14:30:01					<u>L</u> <u>tspider: 332.36</u> <u>tdhtml: 944.68</u> <u>twinopen: 235.11</u> <u>ts: 1336.21</u> <u>tp: 188.15</u> <u>tp RSS: 70780170.52</u>	
14:29:31						
14:27:32						
14:27:00						
14:26:02						<u>tsvg: 5291.95</u> <u>tgfx: 2.50</u> <u>tdhtml: 948.03</u>
14:23:00		<u>L</u> <u>Z: 14.29MB</u> <u>m2: 2.412MB</u>				
14:22:01						
14:22:00						<u>Details:</u> <u>twinopen</u> <u>tspider</u> <u>ts</u> <u>tp</u> <u>tp RSS</u> <u>tsvg</u> <u>tgfx</u> <u>tdhtml</u>
14:21:42						
14:21:17						
14:21:02			<u>L C</u> <u>RLk: 0B</u> <u>Lk: 1.16MB</u> <u>MB: 22.6MB</u> <u>A: 592K</u>			
14:21:00						
14:20:01						
14:19:17						
14:19:00						
14:13:00						
14:11:14					<u>L C</u> <u>tspider: 334.28</u> <u>tdhtml: 946.65</u> <u>twinopen: 242.05</u> <u>ts: 1376.74</u> <u>tp: 192.25</u> <u>tp RSS: 70511954.24</u>	
14:11:09						
14:11:00						
14:09:02		<u>L C</u> <u>Z: 14.29MB</u> <u>Zdiff: -144</u> <u>(+448/-592)</u> <u>m2: 2.412MB</u>				
14:09:00			<u>L- C</u> TUnit 521/0 reftest 1845/0/72 crashtest 626/0/0 mochitest FAIL chrome 525/1/1 browser 390/0/3			<u>L C</u> <u>twinopen: 246.79</u> <u>tspider: 365.60</u> <u>ts: 1431.00</u> <u>tp: 625.49</u> <u>tp RSS: 129926183.83</u> <u>tsvg: 5284.05</u>
14:07:40						
14:07:02					<u>Details:</u> <u>tspider</u> <u>tdhtml</u> <u>twinopen</u> <u>ts</u> <u>tp</u> <u>tp RSS</u>	
14:04:07						
14:03:00						
14:02:59			<u>L C</u> <u>RLk: 0B</u>			
14:02:16						





# Build Log (Brief)

Linux qm-centos5-01 dep unit test on 2008/04/08 12:23:33

[Show Full Log](#)

[Return to the Build Page](#)

[Add a Comment to the Log](#)

1207682613, Linux qm-centos5-01 dep unit test

## Build Error Summary

\*\*\* 28 ERROR FAIL | Error thrown during test: Script error. | got 0, expected 1 | chrome://mochikit/content/chrome/content/xul/content/test/test\_bug398289.html

## Build Error Log

*Skipping 70646 Lines...*

Process killed. Took 2 seconds to die.

started: Tue Apr 8 13:12:07 2008

finished: Tue Apr 8 13:29:48 2008

TinderboxPrint: mochitest<br/>50785/0/1117

/builds/slave/trunk\_centos5/mozilla/objdir/\_tests/testing/mochitest/../../../../dist/bin/xpcshell -v 170 -f /builds/slave/trunk\_centos5/mozilla/objdir/\_tests/testing

\*\*\* 0 INFO SimpleTest START

\*\*\* 1 INFO Running chrome://mochikit/content/chrome/browser/components/sessionstore/test/chrome/test\_bug350525.xul...

\*\*\* 2 INFO PASS | Able to reference the sessionstore component?

\*\*\* 3 INFO PASS | Able to reference the sessionstore service?

\*\*\* 4 INFO PASS | getClosedTabCount returns zero or more?

\*\*\* 5 INFO TODO | After closing a tab, getClosedTabCount has been incremented? 0 > 0 |

\*\*\* 6 INFO PASS | undoCloseTab throws?

\*\*\* 7 INFO PASS | Able to set a window value?

\*\*\* 8 INFO PASS | Stored window value matches original?

\*\*\* 9 INFO PASS | Delete window value?

\*\*\* 10 INFO PASS | Fetching deleted window value fails?

\*\*\* 11 INFO PASS | Able to store a tab value?

\*\*\* 12 INFO PASS | Stored tab value match original?

\*\*\* 13 INFO PASS | Able to delete a tab value?

\*\*\* 14 INFO PASS | Unable to retrieve deleted tab value?

\*\*\* 16 INFO Running chrome://mochikit/content/chrome/browser/components/sessionstore/test/chrome/test\_bug393716.xul...

\*\*\* 17 INFO PASS | Able to get the tab's state?

\*\*\* 18 INFO PASS | Got a valid state object?

\*\*\* 19 INFO PASS | Got the expected state object (test URL)?

\*\*\* 20 INFO PASS | Got the expected state object (test manually set tab value)?

\*\*\* 21 INFO PASS | Correctly restored the tab's state?

\*\*\* 22 INFO PASS | Correctly duplicated the tab's state?

\*\*\* 24 INFO Running chrome://mochikit/content/chrome/content/base/test/chrome/test\_bug421622.xul...

\*\*\* 25 INFO PASS | Referer header received by server does not match what was set

\*\*\* 27 INFO Running chrome://mochikit/content/chrome/content/xul/content/test/test\_bug398289.html...

\*\*\* 28 ERROR FAIL | Error thrown during test: Script error. | got 0, expected 1 | chrome://mochikit/content/chrome/content/xul/content/test/test\_bug398289.html

\*\*\* 30 INFO Running chrome://mochikit/content/chrome/docshell/test/chrome/test\_bug364461.xul...

\*\*\* 31 INFO PASS | Unexpected event pagehide

\*\*\* 32 INFO PASS | Invalid event received

\*\*\* 33 INFO PASS | Invalid persisted state

\*\*\* 34 INFO PASS | Unexpected event load

\*\*\* 35 INFO PASS | Invalid event received



Take back the web

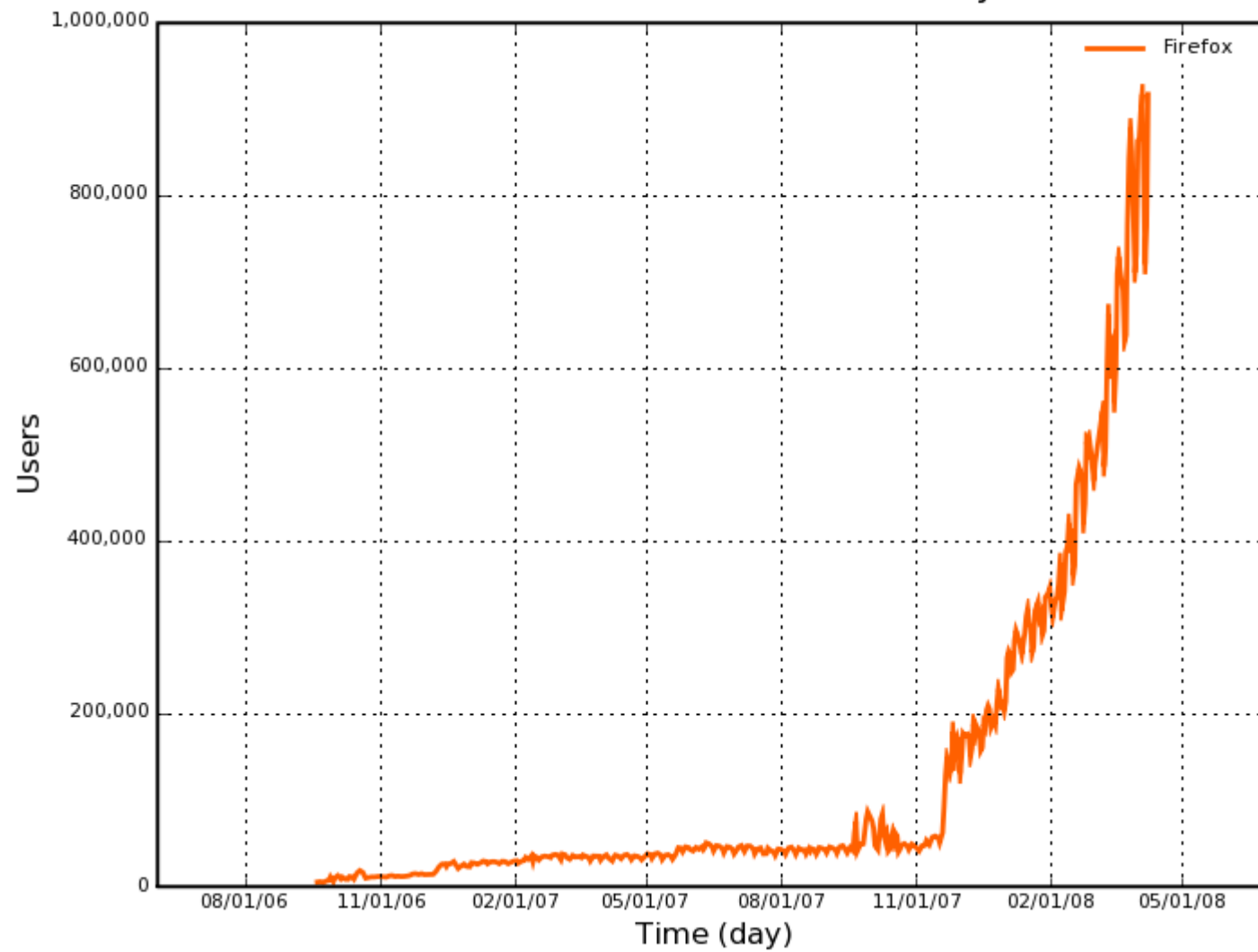
# Automated Testing

- Execution engine: BuildBot
- OS test frameworks: mochitest, reftest, xpcshell, talos, various spiders, fuzzers, load generators.
- Commercial tools: Eggplant, Selenium.

# Community Testers

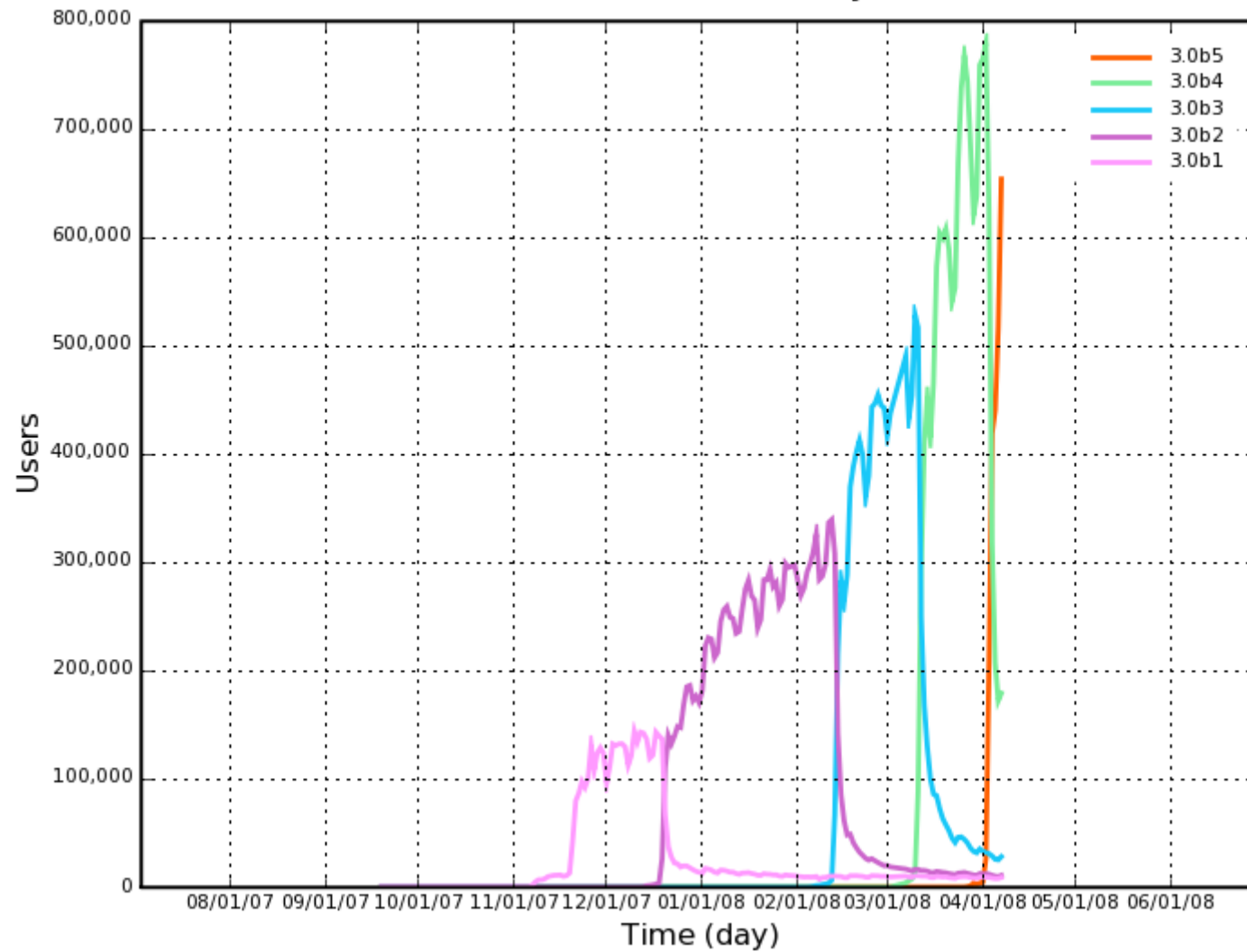
- Ave of 20,000 nightly testers (49,586 yesterday!) – very nebulous but have consistently flushed out critical regressions
- One click update for nightly testers
- 1600 self-identified beta testers
- (17 QA team members)
- QA Companion Extension

### Firefox 3.0 Active Users Per Day

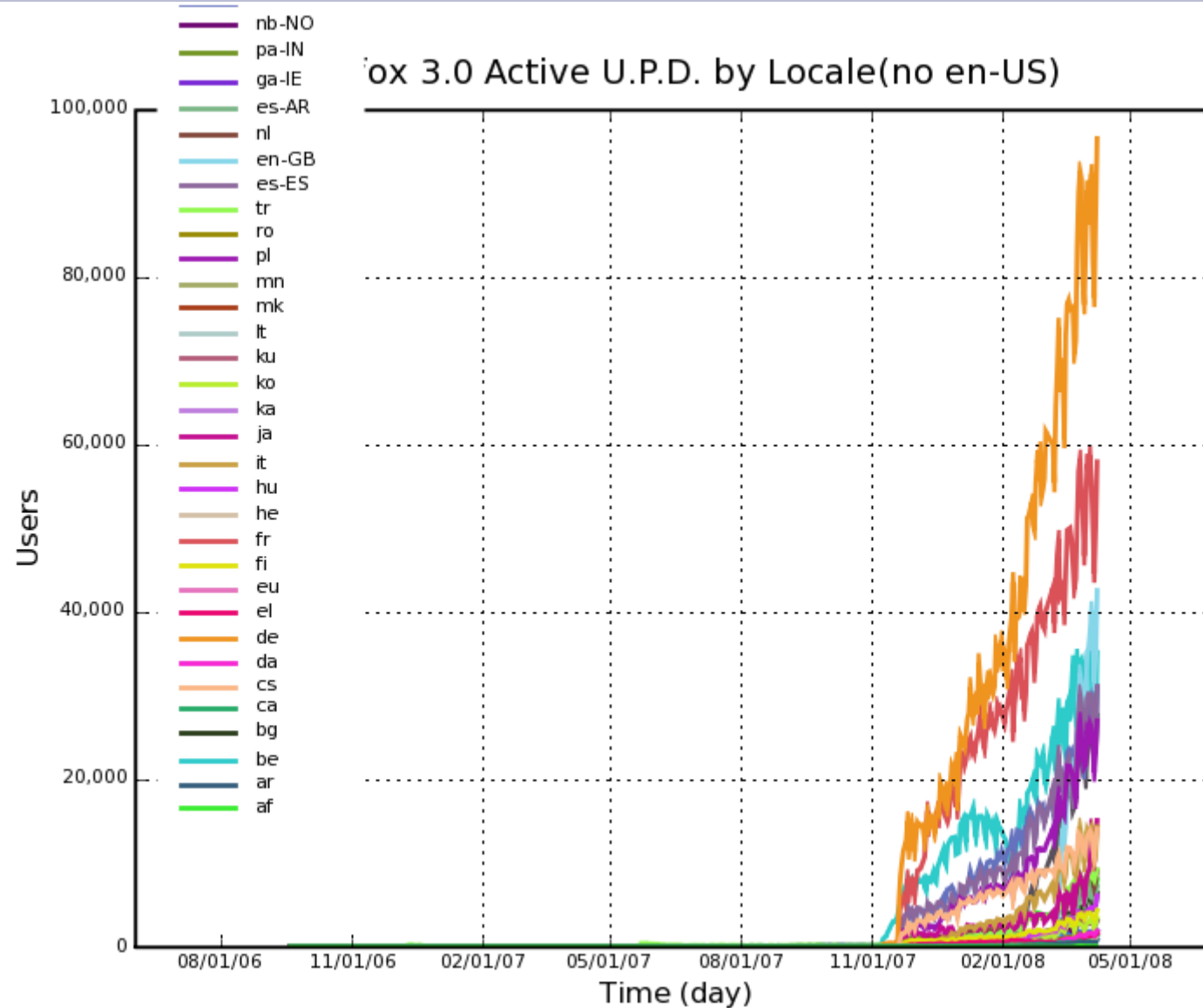


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Firefox 3.0 Active U.P.D. by Version




Take back the web



Mozilla QA Companion

 Litmus Bugzilla Chat Settings Help



### How you can help!

- [Triage Bugs in Bugzilla](#)
- [Run Tests with Litmus](#)
- [Provide Feedback with Hendrix](#)
- [Report Broken Websites](#)
- [Write Testcases](#)
- [Work on other QA Projects](#)

### Upcoming events

[Bugday, Tuesday 04/08](#) – Join us to triage unconfirmed Firefox Bookmarks/Places Bugs !

[Thunderbird Bugday, Thursday 04/10](#) – Join us to triage Thunderbird bug reports!

[Thunderbird Bugday, Thursday 04/03](#) – Join us to help improve Thunderbird bug reports!

[April 11th, 2008 Test Day: Top Crashes, Wanted Bugs, Feedback, and you!](#)

### Recent forum topics

- [Getting to know the Mozilla QA Community! – The Results](#)
- [Firefox 3 Beta Testing](#)
- [Got Vista? Help us test Vista SP1 when it is deployed](#)
- [Why Mozilla doesnt support Asian Language "Telugu" ?](#)
- [Getting to know the Mozilla QA Community!](#)

### The latest from QMO

Start: 2008-04-10 00:00  
End: 2008-04-11 04:00  
Timezone: Etc/GMT-7

Hello Thunderbird Enthusiasts.

Thunderbird bug days are now **every Thursday**. Session 3 has been changed to better cover evening hours.

**\*Join us for a rousing session of bug triage on Thursday, April 10\***  
(Extends into April 11 for Asia)

Assistance and advice is provided by experienced staffers in #bugday



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# Community Bug Triage and Clarification

- Very consistent feedback about important features
- What the community does:
  - Prioritize
  - Confirm/Reproduce
  - Regression range
  - Steps to Reproduce (STR)
  - Exact platform(s) and versions

# QA Team Testing

- We focus on:
  - Maintenance releases – hard to get interest and quick turn-around from community
  - Bug fix verification
  - Feature testing
  - System testing
  - Update testing
  - Locale testing
  - Top SPEFT testing (Sites, Plug-ins, Extensions, Financial sites, Themes)
  - Automation

#### Free - Browse By

- ▶ Global Top 500
- Country Top 100
- Language Top 100
- Categories
- Movers & Shakers

#### Premium - Download

- Top 100,000 Sites
- Customize Your List

#### Popular Countries

- ▶ Global
- United States
- Russia
- China
- United Kingdom

#### Sell Ad Space on Your Site!

AdBrite is the Internet's ad marketplace. Take control of your ad space today and make money.










[Get Started Now](#)

Get a custom tee with your stats!



## Top Sites

Browse the most popular sites on the web. [Learn more.](#)

-  **Yahoo!**  
Personalized content and search options. Chatrooms, free e-mail, clubs, and pager.  
[www.yahoo.com](http://www.yahoo.com)  
[Site info for yahoo.com](#) ⓘ
  -  **YouTube**  
YouTube is a way to get your videos to the people who matter to you. Upload, tag and share your videos worldwide!  
[www.youtube.com](http://www.youtube.com)  
[Site info for youtube.com](#) ⓘ
  -  **Windows Live**  
Search engine from Microsoft.  
[www.live.com](http://www.live.com)  
[Site info for live.com](#) ⓘ
  -  **Google**  
Enables users to search the Web, Usenet, and images. Features include PageRank, caching and translation of results, and an option to find similar pages. The company's focus is developing search technology.  
[www.google.com](http://www.google.com)  
[Site info for google.com](#) ⓘ
  -  **Myspace**  
Social Networking Site.  
[www.myspace.com](http://www.myspace.com)  
[Site info for myspace.com](#) ⓘ
-  **Interested in popular sites on the web?**  
[Buy a List of 10,000 or 100,000!](#)
-  **Facebook**  
A social utility that connects people, to keep up with friends, upload photos, share links and videos.  
[www.facebook.com](http://www.facebook.com)  
[Site info for facebook.com](#) ⓘ



Take back the web

# Areas Monitored by QA team

- IRC – community interaction
- Bug Metrics
- Reporter - broken web sites
- Hendrix – user feedback
- Mozillazine – independent support forum
- News groups
- Soon Sumo – automated support/feedback

qa (irc.mozilla.org)

Style Emoticons Customize Encoding

Search Messages

Search

Welcome to the Mozilla QA Community IRC Channel

**mozqa**  
20 members

**qa**  
59 members

**l10n**  
30 members 1658

**staffmeeting**  
17 members

**accessibility**  
13 members 797

**granparadiso**  
87 members

**interns**  
23 members 4

**l10n-drivers**  
7 members 31

**tchung:** morgamic: whats the list of conrings i need to change 3:04pm

**tchung:** is there a testdoc handy someplace 3:04pm

**morgamic:** no testdoc, just would have to load a page with java in it 3:05pm

**morgamic:** pfs.datasource.url = [http://morgamic.khan.mozilla.org/amo-reskin/site/services/pfs.php?mimetype=%PLUGIN\\_MIMETYPE%&appID=%APP\\_ID%&appVersion=%APP\\_VERSION%&clientOS=%CLIENT\\_OS%&chromeLocale=%CHROME\\_LOCALE%](http://morgamic.khan.mozilla.org/amo-reskin/site/services/pfs.php?mimetype=%PLUGIN_MIMETYPE%&appID=%APP_ID%&appVersion=%APP_VERSION%&clientOS=%CLIENT_OS%&chromeLocale=%CHROME_LOCALE%) 3:05pm

**davida** left the chat room. (Quit: davida) 3:05pm

**morgamic:** you can change it in about:config 3:05pm

**stephend** is now known as **stephend|afk.** 3:05pm

**tchung:** morgamic: easy enough. that's the only config value i need to set? 3:06pm

**morgamic:** yea 3:06pm

**JasnaPaka** left the chat room. (Quit: ChatZilla 0.9.81 [Firefox 3.0pre/2008040805]) 3:07pm

**tchung:** morgamic: eh, is this windows vista only, or platform doesnt matter 3:08pm

**abillings** joined the chat room. 3:09pm

**abillings** was promoted to operator by **killer.** 3:09pm

**morgamic:** vista only 3:09pm

**tchung:** k 3:09pm

**JEEB** joined the chat room. 3:11pm

**whimboo:** morgamic: no pfs version? 3:11pm

**morgamic:** what do you mean like reqVersion? 3:11pm

**morgamic:** there isn't a reqVersion since everything just passed in GET 3:12pm

**whimboo:** sorry, i meant: is this a new pfs version? 3:13pm

**morgamic:** join [#tacostand](#) 3:13pm

**morgamic:** err damn 3:13pm

**morgamic:** whimboo: no, nothing monumental we just added support for installerHash and installerLocation 3:13pm

**whimboo:** ah, so the flash installer will work then? 3:13pm

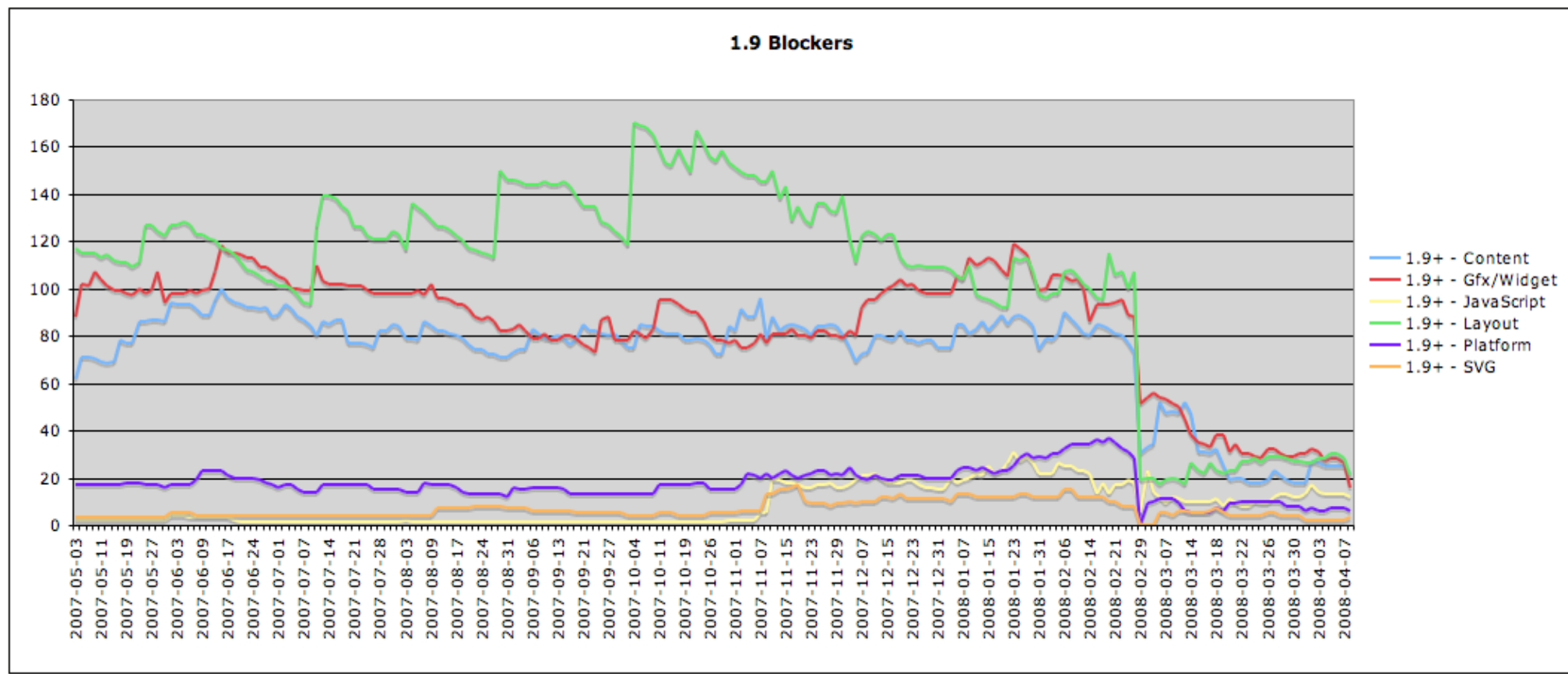
**coop** is now known as **coop\_away.** 3:18pm

**word** joined the chat room. 3:21pm



Take back the web

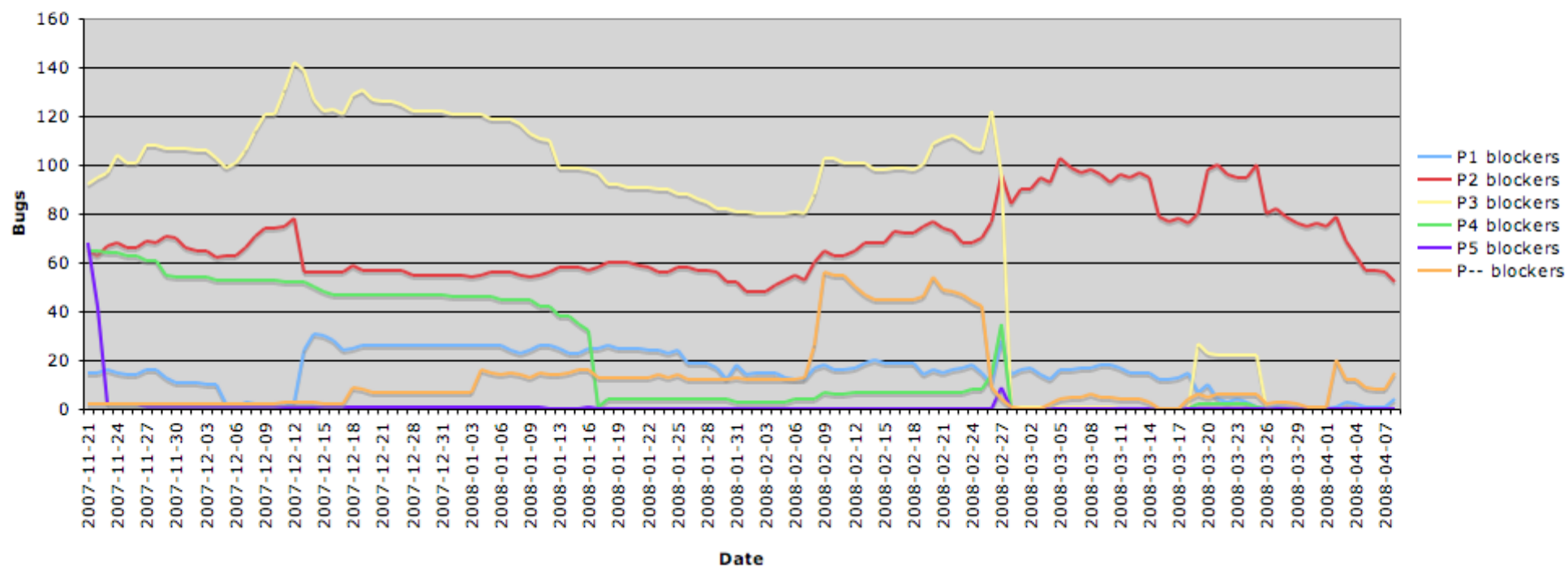
## Gecko Blockers by area [\[edit\]](#)



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## Firefox Application blockers by priority [\[edit\]](#)

Firefox Application Blocker Bug by Priority



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# References

- Bug Tracking System
  - <https://bugzilla.mozilla.org/index.cgi>
- Tinderbox Build Status
  - <http://tinderbox.mozilla.org/showbuilds.cgi?tree=Mozilla1.9>
- Bug Charts
  - [http://wiki.mozilla.org/Firefox:3.0\\_Bug\\_Charts#Gecko\\_blockers\\_by\\_priority](http://wiki.mozilla.org/Firefox:3.0_Bug_Charts#Gecko_blockers_by_priority)
- QA Community Portal
  - <http://quality.mozilla.org/>
- QA Companion Extension
  - <https://addons.mozilla.org/en-US/firefox/addon/5428>
- FFX 3Beta 5 Test Plan
  - [http://wiki.mozilla.org/Releases/Firefox\\_3.0b5](http://wiki.mozilla.org/Releases/Firefox_3.0b5)

# The End!



Take back the web