

BlackFlag R1 – Service Monitoring



AT&T Developer Ecosystem

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Date: 9/8/2011

Version 1



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Background



1. Current effort originally started by Foundry team during Beta (Michael Fairchild, some limited scripts)
2. During ramp-up to R1 launch the Dev Ecosystem team significantly expanded test scripts. Effort occurred as there was a need to have a sense of service level stability and performance so team could ascertain if issues encountered as they authored sample applications so be attributed to system issues verse their coding defect or system level defect
3. The tool also provided sense that real measureable improvements were occurring as the Factories and AT&T Architecture team worked to increase system availability and performance
4. Browser Mob is utilized by many companies.
5. We are utilizing the basic features set at a cost of \$99/month





Currently testing Production Integration Test Environments

BrowserMob | Monitoring Dashboard - Microsoft Internet Explorer provided by AT&T

File Edit View Favorites Tools Help

https://browsermob.com/monitoring/dashboard

Enter the Event

1 BlackFlag Release 2.0 - Wiki...

COU

ATT CM

Agile1

10 dev sites

onet

techrunch

Arch Gov.

AS

AT&T Insider

AT&T Media Mail

AT&T Sec Policy & Req

ATOM

AtonPub

Yahoo! Search

Page

Safety

Tools

BrowserMob

a Neustar service

Load Testing

Manage tests

Monitoring

Manage jobs

Free Tools

Instant-tests & more

Support

Home

Logout

Dashboard

Schedule

Notifications

Reports

Upgrade

Monitoring

Last 24 hours

Name	Checks	Errors	Response	Freq	Location
monitor_foundation	N/A	N/A	N/A	10 mins	SF Bay Area, CA
redmine	N/A	N/A	N/A	15 mins	multiple
Redmine Sampler	N/A	N/A	N/A	2 hours	multiple

CHAT NOW

R1 Test DC R1 Test DC	10	9	2.70 secs	360 mins	SF Bay Area, CA	Edit	Delete
R1 Test TL R1 Test TL	10	9	2.08 secs	360 mins	SF Bay Area, CA	Edit	Delete
R1 Test SMS R1 Test SMS	10	9	2.01 secs	360 mins	SF Bay Area, CA	Edit	Delete
R1 Test MMS R1 Test MMS	12	12	2.76 secs	360 mins	SF Bay Area, CA	Edit	Delete
R1 Test WAP R1 Test WAP	12	12	1.87 secs	360 mins	SF Bay Area, CA	Edit	Delete
R1 Integration TL R1 Integration TL	12	12	4.87 secs	360 mins	SF Bay Area, CA	Edit	Delete
R1 Production TL R1 Production TL	12	12	1.57 secs	360 mins	SF Bay Area, CA	Edit	Delete
R1 Production WAP R1 Production WAP	141	0	13.3 secs	10 mins	SF Bay Area, CA	Edit	Delete
	426	426	3.43 secs	10 mins	SF Bay Area, CA	Edit	Delete
	374	351	1.62 secs	10 mins	SF Bay Area, CA	Edit	Delete

New Monitoring Job

Monitoring » View Job

Dashboard Schedule Notifications Reports

2+ months of history
Note - things are
more available

R1 Production SMS

Frequency: 360 mins Location(s): SF Bay Area, CA

Friday, June 10, 2011 9:12:45 PM — Thursday, September 08, 2011 9:12:45 PM

3 months

☒ SF Bay Area, CA ☐ Errors



Monitoring » View Job

Dashboard Schedule Notifications Reports

Checking on nature of the error

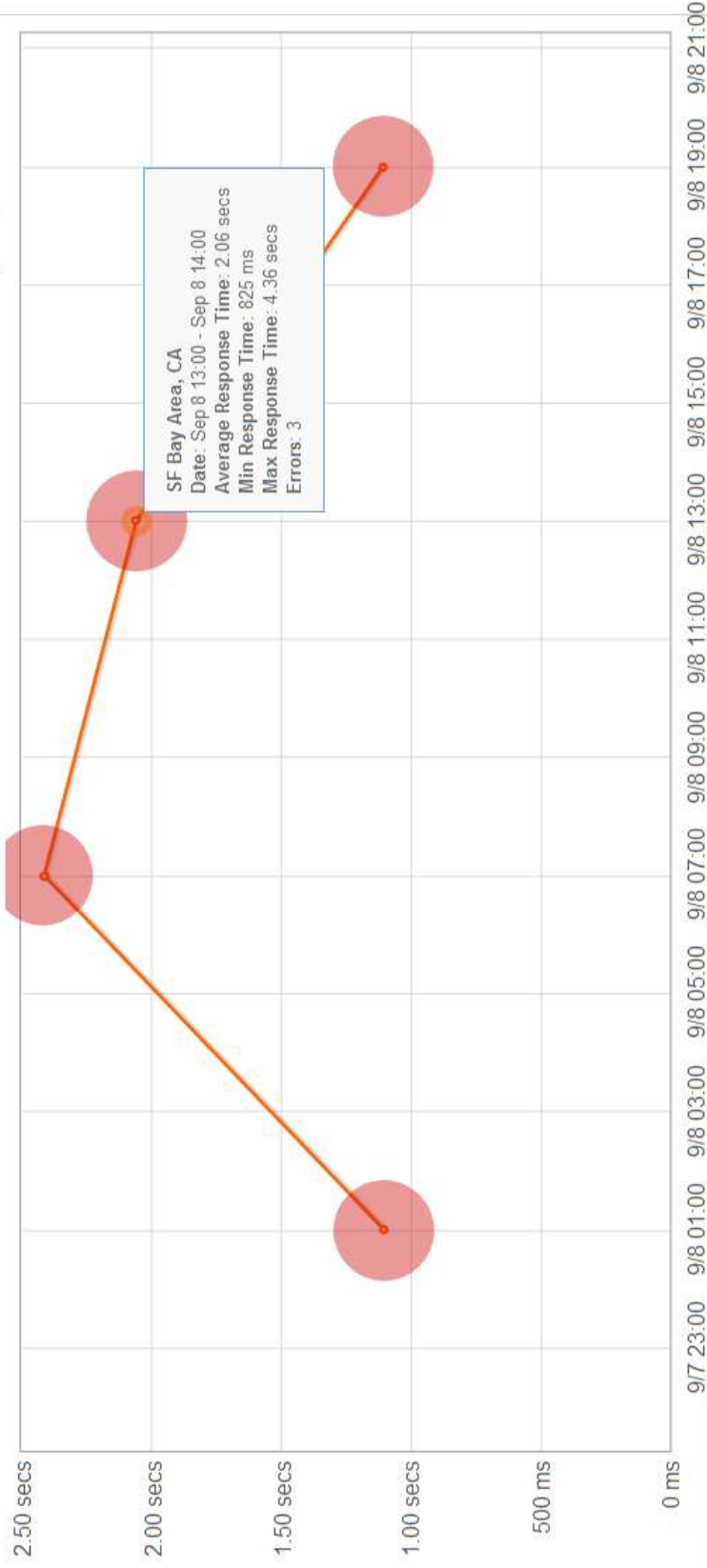
R1 Production SMS

Frequency: 360 mins Location(s): SF Bay Area, CA

Wednesday, September 07, 2011 9:15:30 PM — Thursday, September 08, 2011 9:15:30 PM

<< 1 day >>

☒ SF Bay Area, CA ☐ Errors



Monitoring » View Job » Transaction

Dashboard Schedule Notifications Reports

Checking on specifics of the error

R1 Production MMS

Date: Sep 7, 2011 12:41:35 PM Response Time: 38.2 secs

Total Bytes: 0 B Location: SF Bay Area, CA (IP: 50.18.90.156)

Error Message: (line 31) Verification failed, verifyTextPresent("MMS Message ID") is false. [View raw headers]



Click to enlarge

Network Performance

Filename	Step 1	Status	Host	Bytes
GET http://code-api-att.com:8080/status/?sendMms1=tr	-998 null	1 requests	code-api-att.com	0 B
				19.0 secs



File Edit View Favorites Tools Help

https://browsermob-prod-monitoring-us-west-1.s3.amazonaws.com/2011-09-07/20573ff3f9da9ec2764e9c2764e9cbe99f30e669a934e119-41-35.261/047ccfeabbb44e209d90e8feb6340cdf-f-1
Favorites ConfRM AFrog COU G ATT CM Agile1 10 dev sites cnet techcrunch Arch Gov. AS AT&T Insider AT&T Media Mail AT&T Sec Policy & Req ATOM AtomPub ATT Facilities
https://browsermob-prod-monitoring-us-west-1.s3.a... Internet 125%

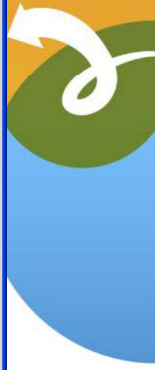
Check the HTTP request/response associated with error

```
http://code-api-att.com:8080/status/?getExtCode1=true
Error: java.net.SocketTimeoutException: Read timed out
Response time: 18994 ms (TTFB 0 ms)
DNS: 198.171.172.186 (21 ms)
Connect: 83 ms
Receive: 18890 ms

GET /status/?getExtCode1=true HTTP/1.1
Host: code-api-att.com:8080
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.0; en-US; rv:1.9.2.16; BrowserMob RBU) Gecko/20110319 Firefox/3.6.16 (.NET CLR 3.5.30729)
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
keep-alive: 115
Proxy-Connection: keep-alive
accountId: 20573
Connection: Keep-Alive
```

```
-----
http://code-api-att.com:8080/status/?sendMms1=true&address1=425-802-8620
Error: java.net.SocketTimeoutException: Read timed out
Response time: 18992 ms (TTFB 0 ms)
DNS: 198.171.172.186 (0 ms)
Connect: 91 ms
Receive: 18901 ms
```

```
GET /status/?sendMms1=true&address1=425-802-8620 HTTP/1.1
Host: code-api-att.com:8080
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.0; en-US; rv:1.9.2.16; BrowserMob RBU) Gecko/20110319 Firefox/3.6.16 (.NET CLR 3.5.30729)
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
keep-alive: 115
Proxy-Connection: keep-alive
accountId: 20573
Connection: Keep-Alive
-----
```





Monitoring » View Job

Dashboard Schedule Notifications Reports

The monthly view

R1 Production MMS

Frequency: 360 mins Location(s): SF Bay Area, CA

CHAT NOW

Tuesday, August 09, 2011 5:20:36 PM — Thursday, September 08, 2011 5:20:36 PM

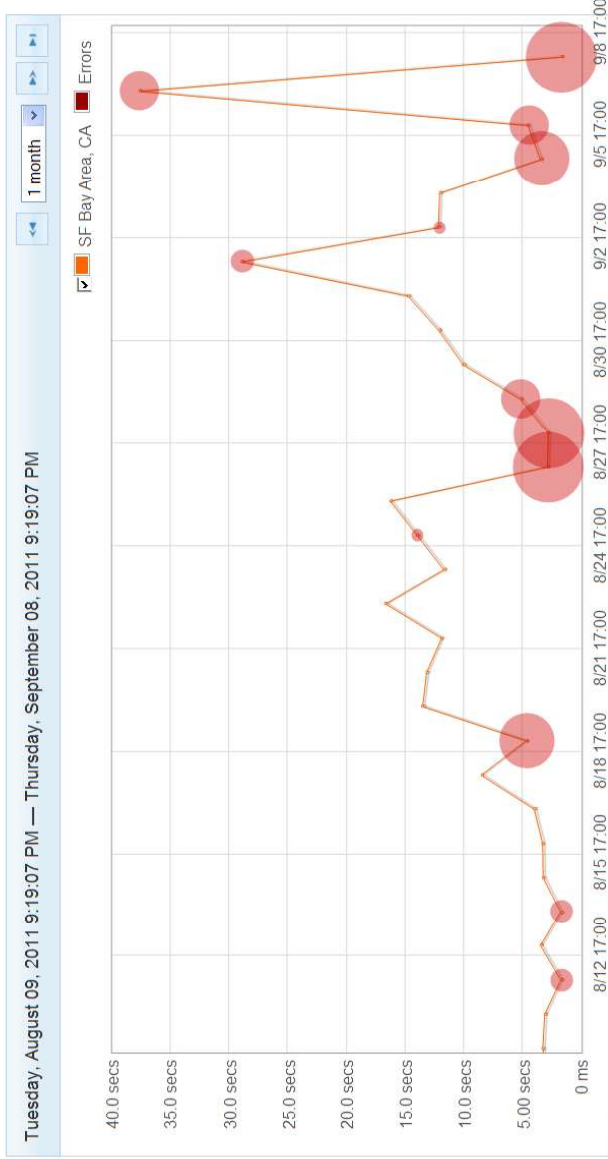
1 month
SF Bay Area, CA
Errors



CHAT NOW

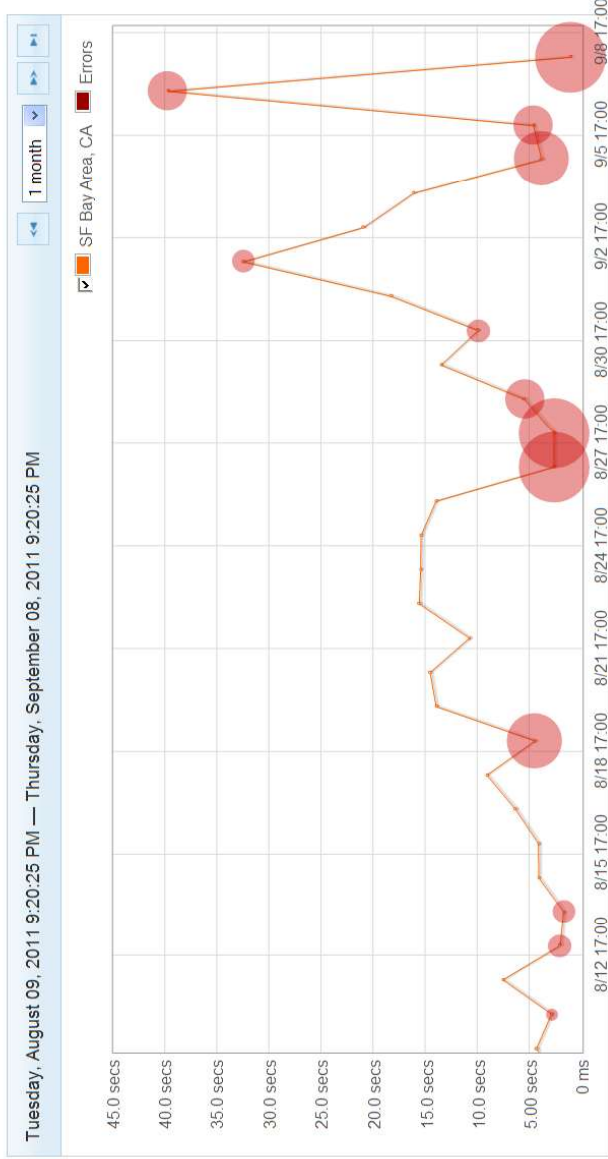
R1 Production SMS

Frequency: 360 mins Location(s): SF Bay Area, CA



R1 Production MMS

Frequency: 360 mins Location(s): SF Bay Area, CA



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Checks across services enable identification of a system thing or incident specific to a service



Monitoring » View Job

Dashboard Schedule Notifications Reports

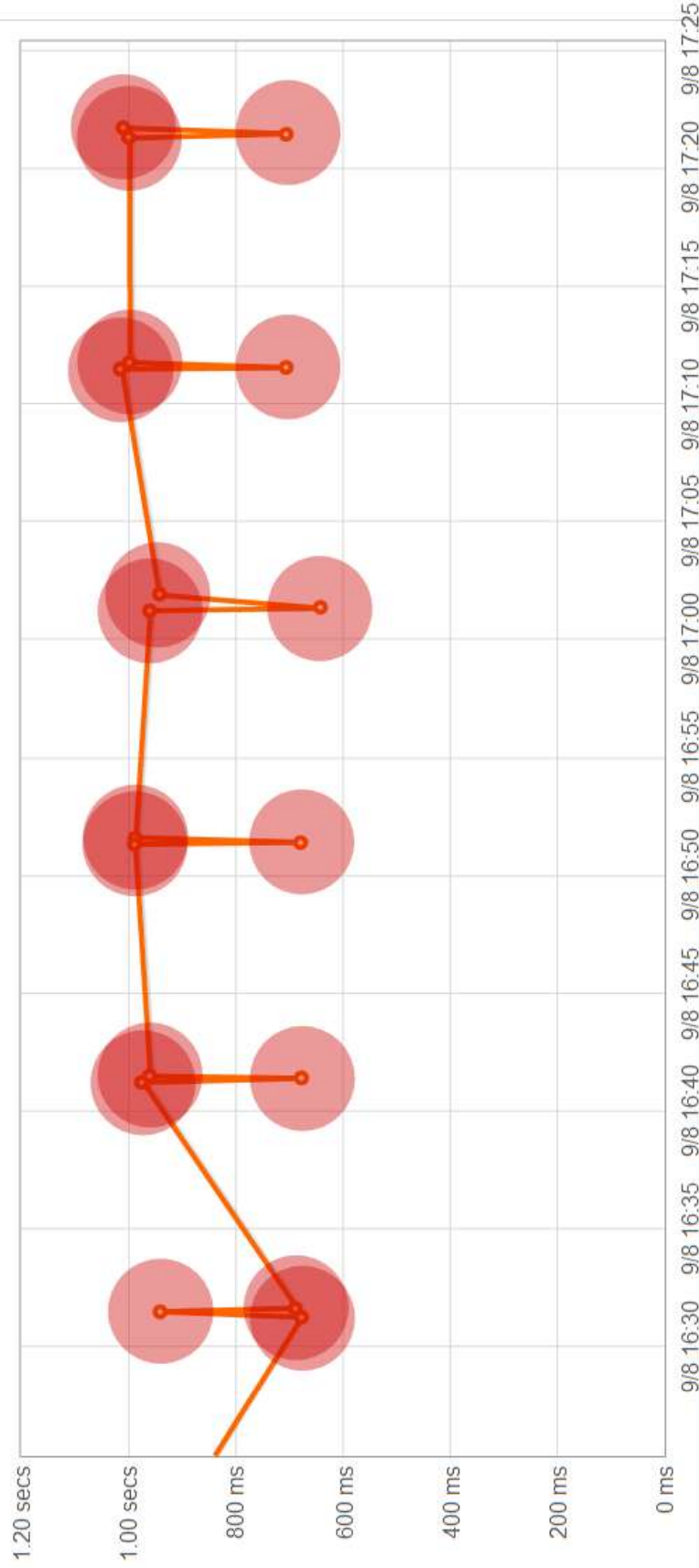
R1 Production Oauth

Frequency: 10 mins Location(s): SF Bay Area, CA

Thursday, September 08, 2011 4:25:23 PM — Thursday, September 08, 2011 5:25:23 PM

1 hour

☒ SF Bay Area, CA ☐ Errors



Patterns easily visible - possibility indicating design/configuration issue

CHAT NOW

CHAT NOW

The following is your script, written in JavaScript, that can be used within BrowserMob for load and performance testing. For a full reference of the commands you can execute, consult the BrowserMob API and documentation.

IMPORTANT: This script is used by one or more monitoring jobs. Changing it will disable those jobs and you will have to activate them again once the script has been validated.

Script Name

R1 Production SMS

Script (written in JavaScript)

```
1 var selenium = browserMob.openBrowser();
2 var c = browserMob.getActiveHttpClient();
3 c.blacklistRequests("http(s)?://www\\.google-analytics\\.com/.*", 200);
4 c.blacklistRequests("http://.*\\.quantserve.com/.*", 200);
5 c.blacklistRequests("http://www\\.quantcast.com/.*", 200);
6 c.blacklistRequests("http://c\\.compete\\.com/.*", 200);
7 c.blacklistRequests("http(s)?://s?b\\.scorecardsearch\\.com/.*", 200);
8 c.blacklistRequests("http://s\\.stats\\.wordpress\\.com/.*", 200);
9 c.blacklistRequests("http://partner\\.googleadservices\\.com/.*", 200);
10 c.blacklistRequests("http://ad\\.adtegrity\\.net/.*", 200);
11 c.blacklistRequests("http://ad\\.doubleclick\\.net/.*", 200);
12 c.blacklistRequests("http(s)?://connect\\.facebook\\.net/.*", 200);
13 c.blacklistRequests("http://platform\\.twitter\\.com/.*", 200);
14 c.blacklistRequests("http://.*\\.addthis\\.com/.*", 200);
15 c.blacklistRequests("http://widgets\\.digg\\.com/.*", 200);
16 c.blacklistRequests("http://www\\.google\\.com/buzz/.*", 200);
17 var timeout = 60000;
18 selenium.setTimeout(timeout);
19 var tx = browserMob.beginTransaction();
20 selenium.open("http://code-api-att.com:8080/status?getExtCode1=true");
21 var step = browserMob.beginStep("Step 1");
22 selenium.open("http://code-api-att.com:8080/status?sendSms1=true&address1=425-802-8620");
23 selenium.verifyTextPresent("SMS Message ID");
24 browserMob.endStep();
25 browserMob.endTransaction();
```

Script ID: c79e642f02a1478491fc29538bfde5b7

☐ **Bypass validation:** I have confirmed that this script works using the local validation service. If this script breaks during a load test, I promise not to blame BrowserMob.

Save Script

Switch to Basic Editor

Flexible scripting possible
but our current stuff pretty
simple at this point

Monitoring » Edit Job

[Upgrade](#)[Reports](#)[Notifications](#)[Schedule](#)[Dashboard](#)

Job Name

R1 Production SMS

Frequency

6 Hours

Script

R1 Production SMS
(RBU)

Geographic Locations

Tokyo
SF Bay Area, CA
New York City
Singapore

Notification Preference

Kristis Auders

No alerts please

Fairchild

Kristis Auders

120 out of 889 available

[Save and Activate](#)[Save but don't Activate](#)

Monthly Page-views:

Please fill in all required fields in the form to the left to calculate the monthly page views. This job: ...
page views per month
Account balance: 888 available

Alert Notification when Checks Fail:

To help prevent extraneous alerts due to intermittent or localized problems, you will now receive an email notification when monitoring checks fail after a third error check. We will report the 1st and 2nd failures in your charts, but will help reduce the number of alerts to your inbox. However, because these are still checks to the site and the 2nd separate from normally scheduled monitoring, they additional checks. Alternatively, you can still select and email alerts will not be sent to you.

Monitoring » Notifications » Edit

Step 1: Basic Info

Name

Kristis Auders

Step 2: Contacts

Name

Kristis Auders

Email

kristis.auders@sentaca

[Add](#)[Remove](#)[Save](#)[Cancel](#)

Most are run from one location and not real frequently, notification are possible but not utilized at the moment



BrowserMob | Free and Open Source Tools - Microsoft Internet Explorer, provided by AT&T

https://browsermob.com/tools

File Edit View Favorites Tools Help

Enter the Event

BlackFlag Release 2.0 - Wiki - ...

BrowserMob | Free and O...

10 dev sites

Agile1

ATT CM

COU

AFrog

ConFRM

AT&T Insider

AT&T Media Mail

AT&T Sec Policy & Req

ATOM

AtomPub

Yahool Search

Page

Safety

Tools

Free instant test

Top Site Performance Benchmarks

Track up-to-date performance benchmarks for top websites, separated by category and rated by site load time. How does your site stack up?

[Benchmarks overview](#)

BrowserMob Tools

Local Script Validation Service

Download a stand-alone java application to validate your BrowserMob scripts on your localhost. This feature is great for advanced users with complex scripts and accounts with multiple developers working simultaneously (only available for registered users).

[More info](#) • [Download](#)

Scripting API

API used to create advanced monitoring and load test scripts for use on BrowserMob. JavaScript based and built around Selenium, you won't find an easier or more powerful automation API anywhere.

[Documentation](#)

Web Services API (Beta)

Access your load testing and monitoring data programmatically via the web, using HTTP and JSON.

[Documentation](#)

UltraTools

The ultimate resource for Domain and DNS health. More than 70 domain tests. Over 30 domain tools. All completely free.

[UltraTools.com](#)

projects as often as we can.

Here you will find the projects we are currently involved with. Hopefully we can help you keep the internet awesome.

Solution offers more scripting power we just kept it simple expecting this was only a stop gap...

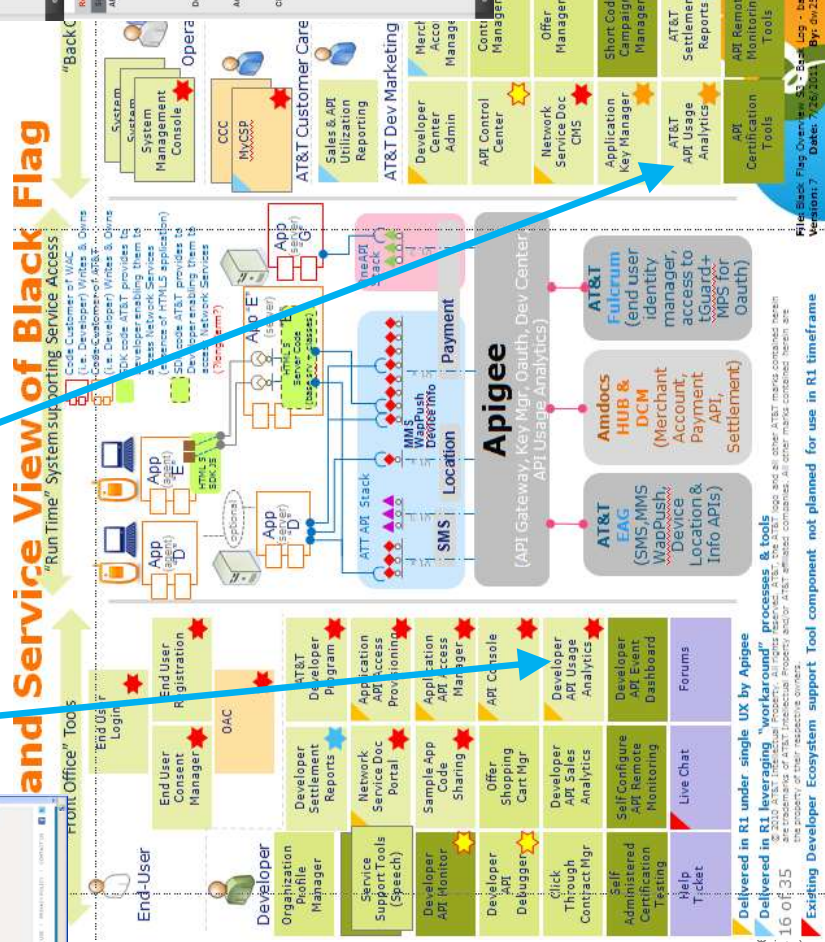
perhaps given current R1 plan and lack of resources for R2 perhaps we should beef things up....

Internet

125%

13

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[illegible]

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Next Steps ?



1. Plan to keep live during R1 given lack of such monitoring elsewhere in operations plan
2. Create more thoughtful KPIs for determining:
 - > Errors (i.e. actually check error type returned)
 - > SLA (i.e. tune #errors/timeframe & latency per biz expectations)
3. Share and correlate this with R1 Operations Team
4. Leverage notifications – perhaps add R1 Opts team to distro
5. Beef up scripting to support sensible KPIs (e.g. provide MMS payload in send; perform send and delivery receipt; perform payment and then refund)
6. Upgrade the monthly plan to afford more frequent testing
7. Determine if a team other than CTO-DES would take over ownership of this effort for R2, CTO-DES would still be key stakeholder and have access to data, but another team would take over script writing, cost, syncing KPIs with Opts