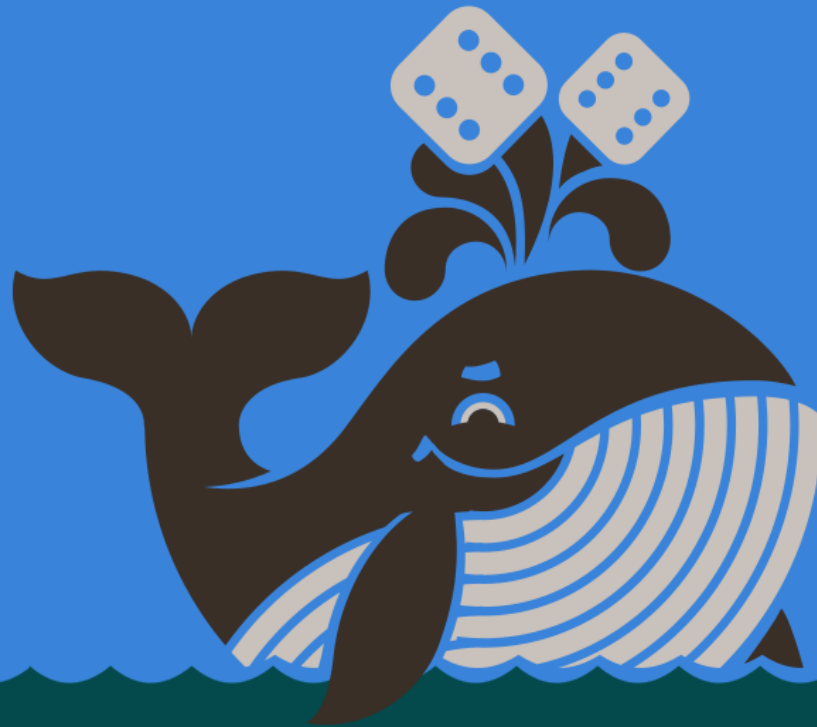


Современные тенденции сбора статистики



K12
ADS & GAMES

бесперебойная работа

**“БУТЫЛОЧНЫЕ
ГОРЛЫШКИ”**

бесперебойная работа

**“БУТЫЛОЧНЫЕ
ГОРЛЫШКИ”**

бесперебойная работа

планирование

**“бутылочные
горлышки”**

**реакция
пользователей**

бесперебойная работа

планирование

**“бутылочные
горлышки”**

**реакция
пользователей**

бесперебойная работа

бизнес логика

планирование

cacti - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://web/cacti/cacti-0.8.6/graph_view.php?action=tree&tree_id=1&leaf_id=10

console graphs settings

Graphs -> Tree Mode Logged in as admin (Logout)

- [-] Arlington, MA
- [-] Charlotte, NC
- [-] Charlottesville, VA
- [-] Columbus, GA
- [-] Dallas, TX
 - [-] Switches
 - Host: HOU-S2-SW3548-1
 - Host: HOU-S2-SW6509-2
 - Data Center Core
 - Host: HOU-A4-ATM-1
 - Host: HOU-A4-ATM-2
 - Host: HOU-A4-ATM-3
 - Host: HOU-A4-ATM-4
- [-] Dayton, OH
- [-] Detroit, MI
- [-] Harrisburg, PA
 - [-] Web Hosting Farm
 - Host: HAR-CUST-WWW0
 - Host: HAR-CUST-WWW1
 - Host: HAR-CUST-WWW2
 - Host: HAR-CUST-WWW3
 - Host: HAR-CUST-WWW4
 - Host: HAR-CUST-WWW5
- [-] Houston, TX
- [-] Miami, FL
 - [-] Public Peering
 - Host: MIA-R8-C7200-3
- [-] Phoenix, AZ
- [-] Salt Lake City, UT
- [-] San Diego, CA
- [-] San Francisco, CA
- [-] Santa Fe, NM
- [-] Syracuse, NY
- [-] Tampa, FL
- [-] Trenton, NJ

Tree: Dallas, TX -> **Host:** HOU-S2-SW6509-2

Data Query: SNMP - Interface Statistics

Port 1/1

HOU-S2-SW6509-2 - Traffic - 1/1

Inbound	Current: 3.84 M	Average: 7.85 M	Maximum: 12.83 M	Total In: 674.89 GB
Outbound	Current: 3.88 M	Average: 6.30 M	Maximum: 9.20 M	Total Out: 541.56 GB

HOU-S2-SW6509-2 - Unicast Packets - 1/1

Unicast Packets In	Current: 960.19 k	Average: 1.96 M	Maximum: 3.21 M
Unicast Packets Out	Current: 969.43 k	Average: 1.57 M	Maximum: 2.30 M

Port 1/2

HOU-S2-SW6509-2 - Traffic - 1/2

Inbound	Current: 20.64 k	Average: 52.36 k	Maximum: 239.71 k	Total In: 4.51 GB
Outbound	Current: 313.79 k	Average: 291.76 k	Maximum: 582.97 k	Total Out: 25.18 GB

HOU-S2-SW6509-2 - Unicast Packets - 1/2

Done

Zenoss: Devices

http://demo.zenoss.com/zport/dmd/itinfrastructure

Zenoss ENTERPRISE DASHBOARD EVENTS **INFRASTRUCTURE** REPORTS

Devices Networks Processes IP Services Windows Services Network Map Manufacturers Page Tips

Infrastructure **DETAILS**

9 231 27

Actions Commands

Device	IP Address	Device Class	Production State	Events
argus.zenoss.loc	10.175.211.20	/Server/Linux	Production	0
cent5-java-2.zenoss.loc	10.175.211.139	/Server/Linux	Production	0
colo2800.zenoss.loc	10.176.200.2	/Network/Cisco	Production	0
colo3560g.zenoss.loc	10.175.211.2	/Network/Cisco	Production	0
CRM APP Server	10.175.211.55	/Server/Linux	Production	1
CRM MYSQL DB	10.175.211.74	/Server/Linux	Production	1
Dev Resource Pool		/VMware/vSphereS...	Production	0
EC2Manager		/AWS/EC2	Production	0
demo.zenoss.com	204.12.105.214	/Server/Linux	Production	19
esx1.zenoss.loc		/VMware/vSphereS...	Production	0
esx10.zenoss.loc		/VMware/vSphereS...	Production	0
esx10.storage1		/VMware/vSphereS...	Production	0
esx12.zenoss.loc		/VMware/vSphereS...	Production	0
esx12.storage1		/VMware/vSphereS...	Production	0
esx13.zenoss.loc		/VMware/vSphereS...	Production	0
esx13.storage1		/VMware/vSphereS...	Production	0
esx14.zenoss.loc		/VMware/vSphereS...	Production	0
esx1store		/VMware/vSphereS...	Production	0
esx2.zenoss.loc		/VMware/vSphereS...	Production	0
esx3.storage1		/VMware/vSphereS...	Production	0

DEVICES (55)

- ✓ AWS (1)
- ! CiscoUCS (1)
- ✓ Discovered (0)
- ✓ HTTP (0)
- ✓ KVM (0)
- ⚙ Network (2)
- ✓ Ping (0)
- ✓ Power (0)
- ✓ Printer (0)
- ! Server (11)
- ⚠ Storage (2)
- ! VMware (38)
- ✓ Web (0)

GROUPS (2)

- ⚠ Gold Support (1)
- ⚙ Silver Support (1)

SYSTEMS (5)

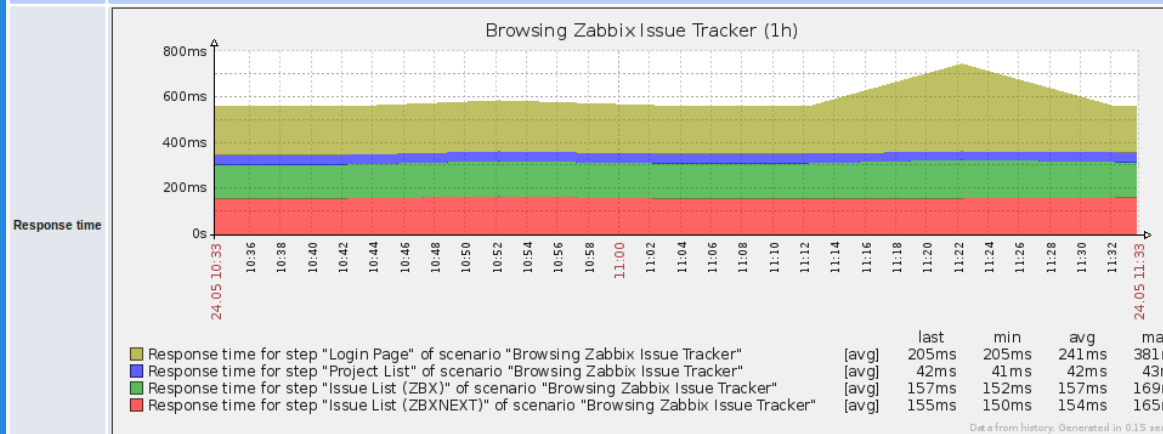
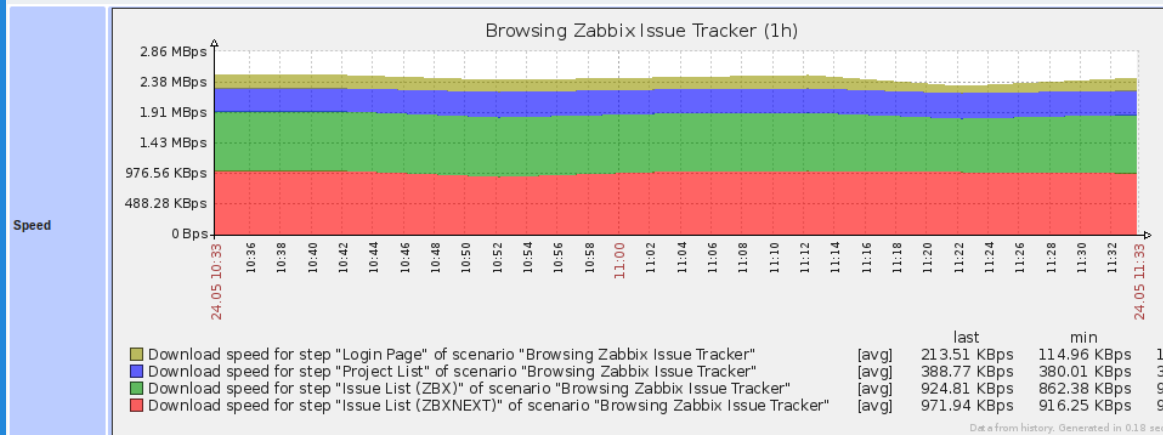
- ! Email (3)
- ⚠ Sam CRM system (2)

LOCATIONS (6)

- ⚠ Annapolis (2)
- ⚠ Austin (4)

Step	Speed	Response time	Response code	Status
Login Page	213.51 KBps	205ms	200	OK
Project List	388.77 KBps	42ms	200	OK
Issue List (ZBX)	924.81 KBps	157ms	200	OK
Issue List (ZBXNEXT)	971.94 KBps	155ms	200	OK
TOTAL		560ms		OK

Filter



Current Status

- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
- Service Groups
- Problems
- Notifications
- Event Log

Current Network Status

Last Updated: Fri Jan 15 12:13:56 EST 2010
Updated every 90 seconds
Nagios® Core™ 3.2.0 - www.nagios.org
Logged in as mwall

View History For all hosts
View Notifications For All Hosts
View Host Status Detail For All Hosts

Host Status Totals

Up	Down	Unreachable	Pending
19	3	0	9

All Problems All Types

3	31
---	----

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
180	0	4	13	0

All Problems All Types

17	197
----	-----

Service Status Details For All

Host	Service	Status	Last Check	Duration	
backup0	cpu	CRITICAL	2010-01-15 12:13:23	5d 22h 59m 23s	
	disks	CRITICAL	2010-01-15 12:09:05	5d 22h 58m 14s	
	load	CRITICAL	2010-01-15 12:09:48	5d 22h 59m 40s	
	mem	CRITICAL	2010-01-15 12:10:37	5d 22h 55m 57s	
	net	CRITICAL	2010-01-15 12:11:19	5d 22h 58m 57s	
	ntp	CRITICAL	2010-01-15 12:12:00	5d 22h 56m 18s	
	ping	CRITICAL	2010-01-15 12:12:44	5d 22h 59m 10s	
	proc	CRITICAL	2010-01-15 12:13:23	5d 22h 59m 32s	
	ssh	CRITICAL	2010-01-15 12:09:07	5d 22h 55m 39s	
	swap	CRITICAL	2010-01-15 12:09:51	5d 22h 59m 23s	
	ups-charge	UNKNOWN	2010-01-15 12:10:37	5d 22h 56m 31s	
	ups-load	UNKNOWN	2010-01-15 12:11:19	5d 22h 58m 40s	
	ups-temp	UNKNOWN	2010-01-15 12:12:00	5d 22h 57m 12s	
	ups-time	UNKNOWN	2010-01-15 12:12:50	5d 22h 59m 32s	
	uptime	CRITICAL	2010-01-15 12:13:29	5d 22h 55m 16s	
	users	CRITICAL	2010-01-15 12:09:08	5d 22h 55m 16s	
	backup1	cpu	OK	2010-01-15 12:09:51	9d 11h 48m 49s
		disks	OK	2010-01-15 12:10:37	9d 11h 44m 41s
		load	OK	2010-01-15 12:11:19	9d 10h 6m 22s
mem		OK	2010-01-15 12:12:08	9d 11h 48m 6s	
net		OK	2010-01-15 12:12:50	6d 10h 22m 20s	
ntp		OK	2010-01-15 12:13:29	9d 11h 40m 42s	
proc		OK	2010-01-15 12:09:08	9d 11h 37m 30s	
swap		OK	2010-01-15 12:09:51	9d 9h 44m 8s	
ups-charge		OK	2010-01-15 12:10:40	9d 9h 50m 14s	
ups-load	OK	2010-01-15 12:11:26	5d 23h 34m 53s		
ups-temp	OK	2010-01-15 12:12:08	8d 17h 29m 8s		
ups-time	OK	2010-01-15 12:12:50	9d 9h 52m 36s		

Reports

- Availability
- Trends
- Alerts
- Notifications
- Event Log

System

- Comments
- Downtime
- Process Info
- Performance Info
- Scheduling Queue
- Configuration

General

- Home
- Documentation

Nagiosgraph

Host: backup1 Service: load Update Graphs Show Controls

Daily

Data for host backup1, service load as of Fri Jan 15 12:12:28 2010

avg1min	Max: 1.86	Avg: 205.84m	Min: 0.00	Cur: 79.47m
avg5min	Max: 1.73	Avg: 204.00m	Min: 0.00	Cur: 47.37m
avg15min	Max: 1.49	Avg: 198.96m	Min: 0.00	Cur: 30.00m

Weekly

avg1min	Max: 1.85	Avg: 177.13m	Min: 0.00
avg5min	Max: 1.79	Avg: 175.30m	Min: 0.00
avg15min	Max: 1.54	Avg: 166.51m	Min: 0.00

Monthly

avg1min	Max: 1.01	Avg: 176.87m	Min: 0.00
avg5min	Max: 1.07	Avg: 174.00m	Min: 0.00
avg15min	Max: 0.87	Avg: 166.00m	Min: 0.00

Система сбора метрик (идеальная)



Система сбора метрик (идеальная)

unix-way



Система сбора метрик (идеальная)

unix-way
самообслуживаемой



Система сбора метрик (идеальная)

unix-way
самообслуживаемой
устойчивой



Система сбора метрик (идеальная)

unix-way
самообслуживаемой
устойчивой
автоматизированной



Система сбора метрик (идеальная)

unix-way
самообслуживаемой
устойчивой
автоматизированной
универсальной



Система сбора метрик (идеальная)

unix-way
самообслуживаемой
устойчивой
автоматизированной
универсальной
красивой





TR X88

18

15

GUIDED MICRO-PROJECTILES

HEETS HIGH-WAVEZ

HEETS HIGH-WAVEZ

HEETS HIGH-WAVEZ

HEETS HIGH-WAVEZ

DEA

collectd.org

Navigation

- Start page
- Features
- News
- Download
- FAQs
- Documentation
- Development
- Contact
- Related sites

Download

- collectd-5.4.1.tar.bz2
- collectd-5.4.1.tar.gz
- collectd-5.3.1.tar.bz2
- collectd-5.3.1.tar.gz
- collectd-4.10.9.tar.bz2
- collectd-4.10.9.tar.gz
- more ...

News

- 2014-01-26
Version 5.4.1 available.
- 2013-08-18
Version 5.4.0

collectd – The system statistics collection daemon

collectd is a [daemon](#) which collects system performance statistics periodically and provides mechanisms to store the values in a variety of ways, for example in [RRD files](#).

[Collectd for Windows](#)
<http://ssc-serv.com/>
High-resolution system metrics. Download free trial version!

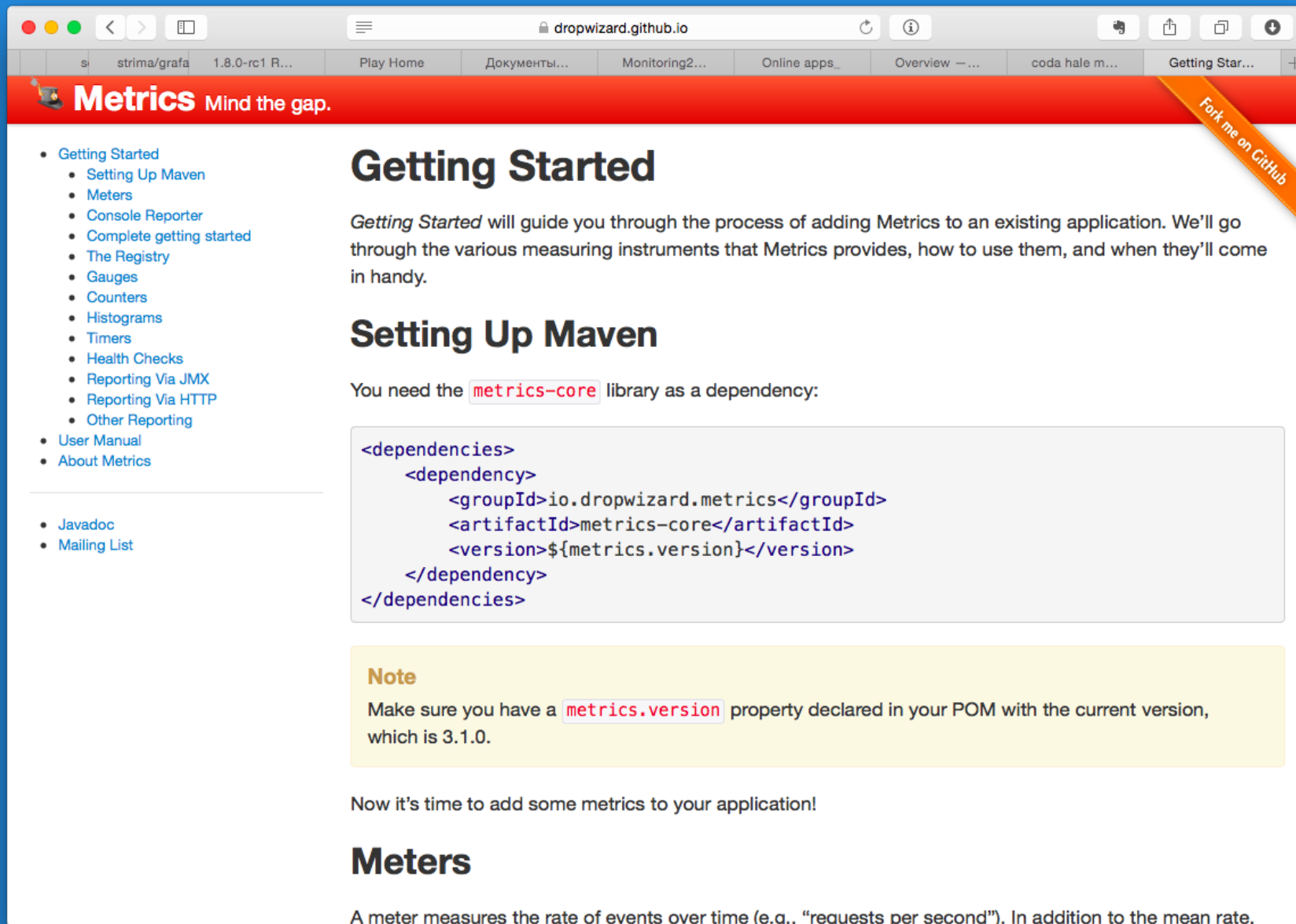
What does collectd do?

collectd gathers statistics about the system it is running on and stores this information. Those statistics can then be used to find current performance bottlenecks (i.e. *performance analysis*) and predict future system load (i.e. *capacity planning*). Or if you just want pretty graphs of your private server and are fed up with some homegrown solution you're at the right place, too ;).

Usually one graph says more than a thousand words, so here's a graph showing the [CPU utilization](#) of a system over the last 60 minutes:

State	Min	Avg	Max	Last
Idle	0.00	83.46	107.43	79.08
Nice	0.00	0.00	0.00	0.00
User	0.00	6.39	74.12	1.18
Wait-IO	0.09	11.04	38.99	20.28
System	0.00	2.09	27.92	0.22
SoftIRQ	0.00	0.30	1.22	0.41

CodaHale lib



The screenshot shows a web browser window with the URL `dropwizard.github.io`. The page title is "Metrics Mind the gap." and it features a navigation menu on the left with links like "Getting Started", "Setting Up Maven", "Meters", etc. The main content area is titled "Getting Started" and includes a sub-section "Setting Up Maven" with a code block for Maven dependencies and a "Note" box.

Metrics Mind the gap.

[Fork me on GitHub](#)

- Getting Started
 - Setting Up Maven
 - Meters
 - Console Reporter
 - Complete getting started
 - The Registry
 - Gauges
 - Counters
 - Histograms
 - Timers
 - Health Checks
 - Reporting Via JMX
 - Reporting Via HTTP
 - Other Reporting
- User Manual
- About Metrics

- Javadoc
- Mailing List

Getting Started

Getting Started will guide you through the process of adding Metrics to an existing application. We'll go through the various measuring instruments that Metrics provides, how to use them, and when they'll come in handy.

Setting Up Maven

You need the `metrics-core` library as a dependency:

```
<dependencies>
  <dependency>
    <groupId>io.dropwizard.metrics</groupId>
    <artifactId>metrics-core</artifactId>
    <version>${metrics.version}</version>
  </dependency>
</dependencies>
```

Note

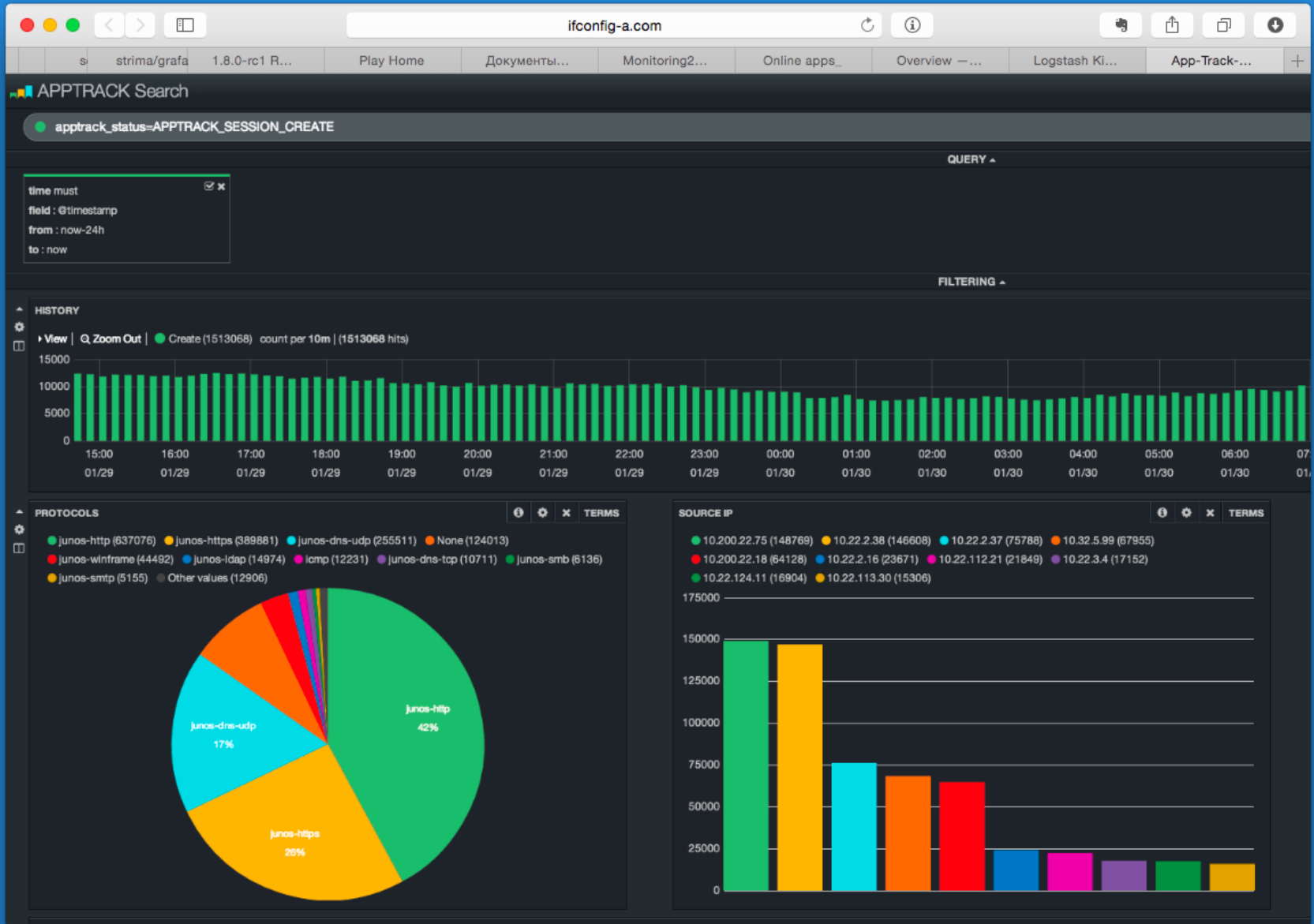
Make sure you have a `metrics.version` property declared in your POM with the current version, which is 3.1.0.

Now it's time to add some metrics to your application!

Meters

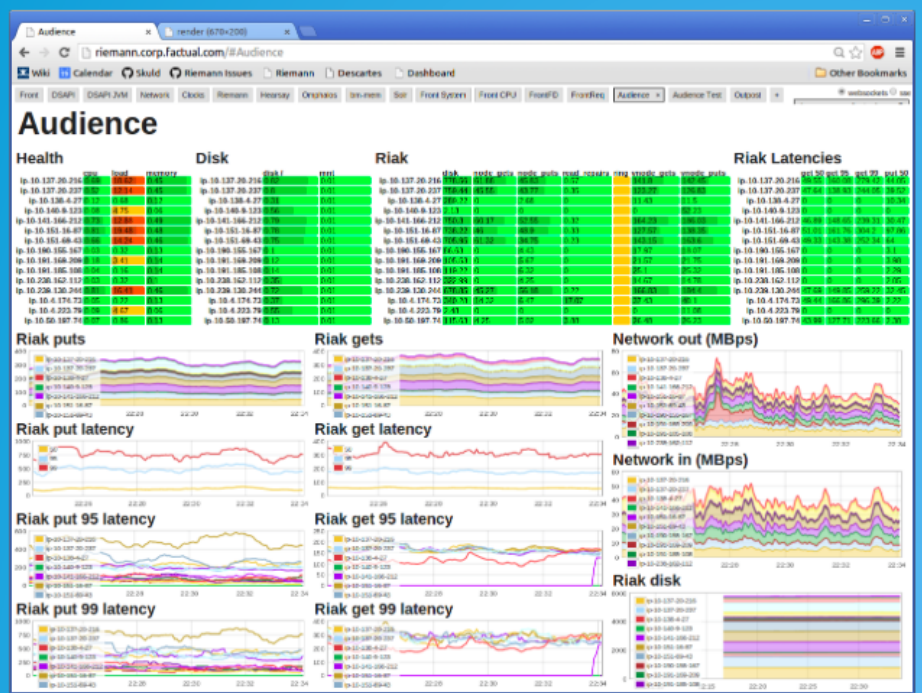
A meter measures the rate of events over time (e.g., "requests per second"). In addition to the mean rate,

Logstash+Kibana



Reimann

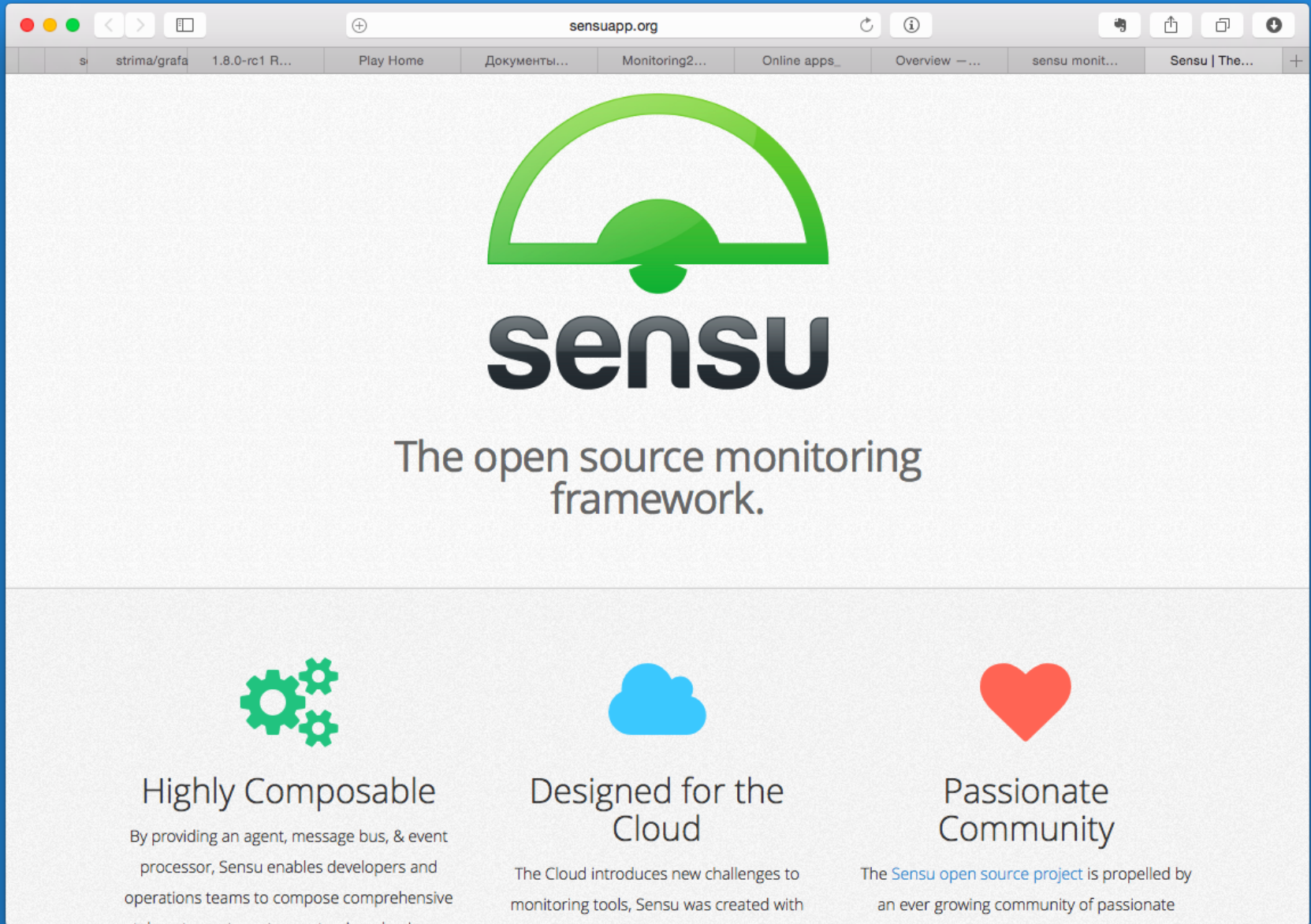
You're clear for launch.



```

0.41 0.42 0.67 0.01 0.78 0.17 0.51
0.49 0.42 0.67 0.01 0.78 0.13 0.53
0.43
0.14
0.23
49.21% user+nice+system
0.01
0.07
0.07
396 28770 /usr/lib/riak/erts-5.8.4/bin/beam.smp -K true -A 64
--root /usr/lib/riak -prognose riak --home /var/lib/riak --
boot /usr/lib/riak/releases/1.0.3/riak -embedded -config /etc/riak/
app.config -pa /usr/lib/riak/basho-patches -name riak@api5.tx -
setcookie riak-heart -- console
76.9 2047 [kipmi0]
20.6 2321 ruby bitcask_scanner/scanner.rb
4.4 27113 java -XX:+UseConcMarkSweepGC -XX:
+UseParNewGC -XX:CMSInitiatingOccupancyFraction=70 -
verbose:gc -server -cp bin:..lib/* -Xmx1G -
Dhazelcast.super.client=true indexer.indexer
http://10.60.40.68:8082/solr/ sidecar@127.0.0.1 riak
riak@10.40.12.12 10.60.40.70
2.9 18882 ruby /home/deploy/vodpod-api/bin/vodpod-api start -
p 8000
2.8 18886 ruby /home/deploy/vodpod-api/bin/vodpod-api start -
p 8001
1.4 2009 /jre/bin/java -Djava.compiler=NONE -cp /usr/
StorMan/RaidMan.jar
com.ibm.sysmgmt.raidmgr.agent.ManagementAgent
0.3 20921 /usr/bin/ruby /home/deploy/showyouweb/showyou.rb
-p 4567 -e production -s thin
0.2 31293 ruby riak_status/riak_status.rb
0.2 30263 ruby /home/jobs/justate/bin/health --host be1.tx
(at 00:42:58)
ok ok
Feed Unlike
fanout fanout insert insert done tries

```



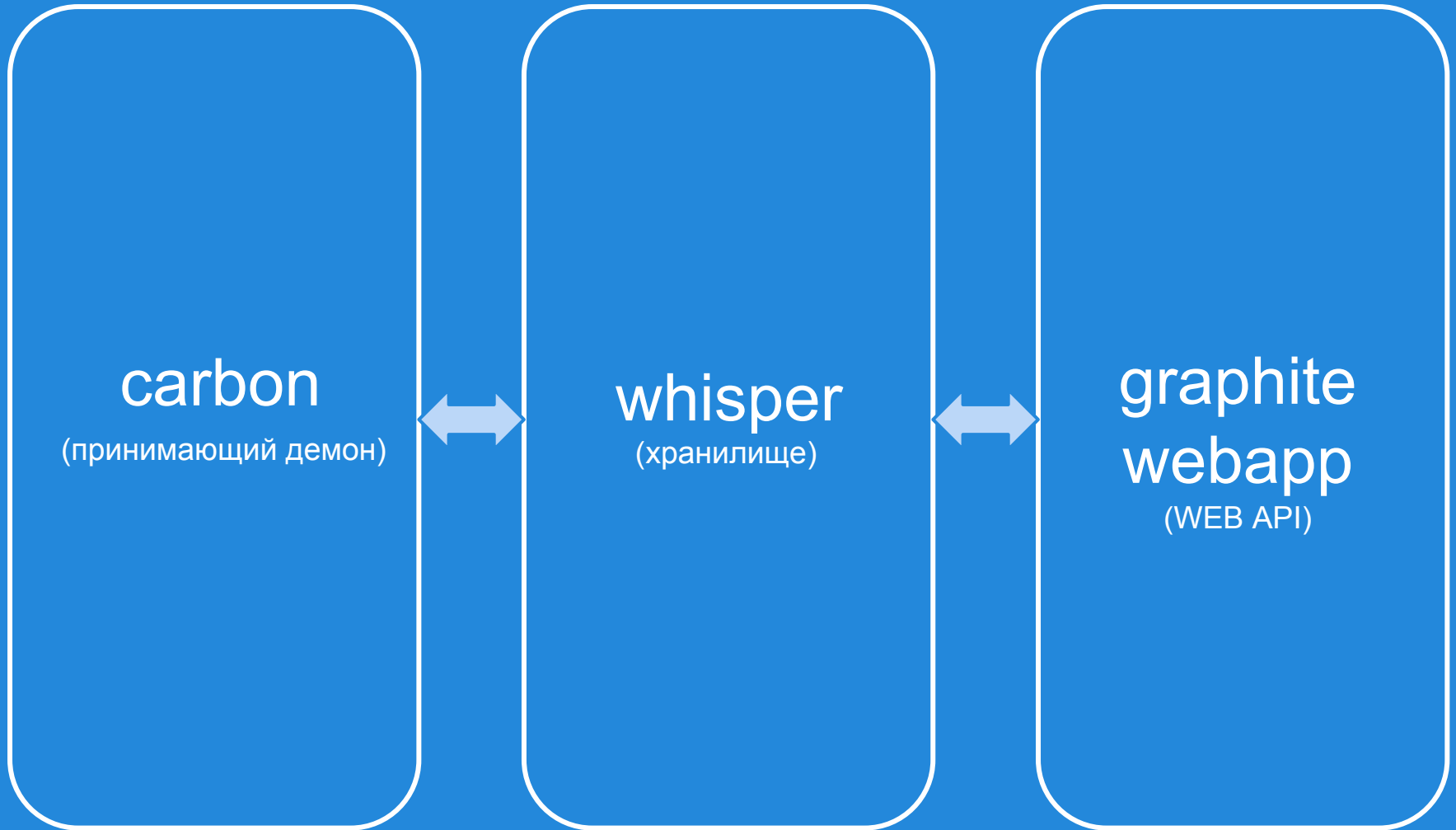
The screenshot shows a browser window with the URL `sensuapp.org`. The page features the Sensu logo, which consists of a green semi-circle above the word "sensu" in a bold, lowercase, sans-serif font. Below the logo, the text "The open source monitoring framework." is centered. The lower half of the page is divided into three columns, each with an icon and a heading:

- Highly Composable**: Represented by a green gear icon. The text below reads: "By providing an agent, message bus, & event processor, Sensu enables developers and operations teams to compose comprehensive telepresence systems to meet unique business".
- Designed for the Cloud**: Represented by a blue cloud icon. The text below reads: "The Cloud introduces new challenges to monitoring tools, Sensu was created with".
- Passionate Community**: Represented by a red heart icon. The text below reads: "The [Sensu open source project](#) is propelled by an ever growing community of passionate".

Graphite+Grafana



Graphite



Graphite

- Горизонтально масштабируется
- Каждая метрика хранится в отдельном файле
- Кэширование
- API возвращает данные из памяти и с диска
- Правильная обработка нерегулярных метрик
- Уплотнение записи

- гибкая система хранения метрик

```
[carbon]
pattern = ^carbon\.
retentions = 60:90d

[test]
pattern = \.cpu\[a-zA-Z0-9]+\$
retentions = 20s:10m,1m:30m

[default]
pattern = .*
retentions = 60s:1d,5m:7d,15m:30d,60m:395d
```

- API для отрисовки графиков

график загрузки одного сервера

<http://graphite/render?target=server.web1.load&height=800&width=600>

средняя загрузка всех веб серверов 12 часов назад

[http://graphite/render?target=averageSeries\(server.web*.load\)&from=-12hours](http://graphite/render?target=averageSeries(server.web*.load)&from=-12hours)

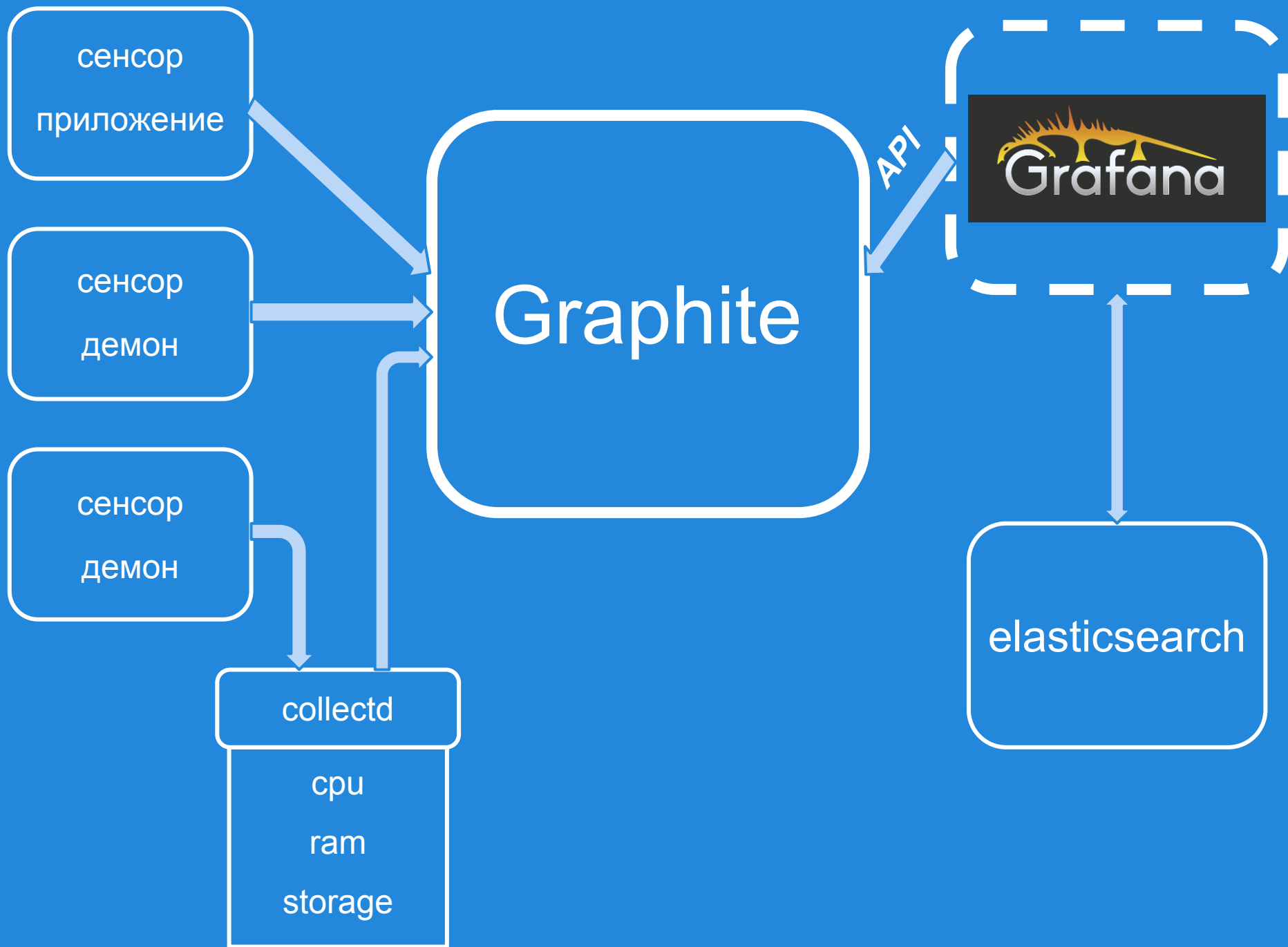
число пользователей в приложении в "сыром" формате обернутом в json

<http://graphite/render?target=app.numUsers&format=json>

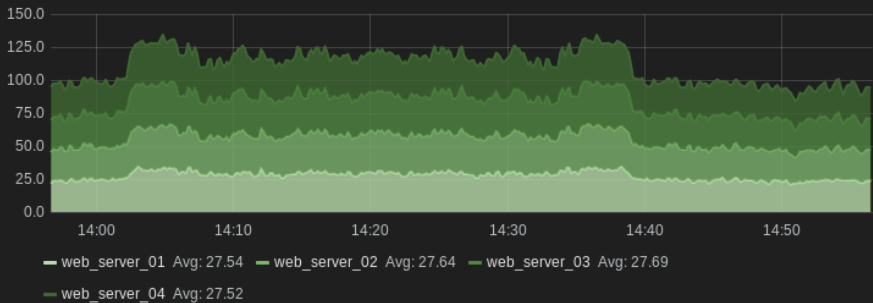
число новых пользователей за 1 минуту

[http://graphite/render?target=summarize\(derivative\(app.numUsers\),"1min"\)
&title=New_Users_Per_Minute](http://graphite/render?target=summarize(derivative(app.numUsers),)

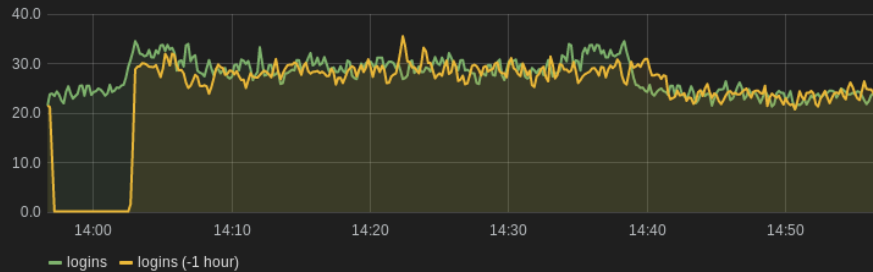




server requests



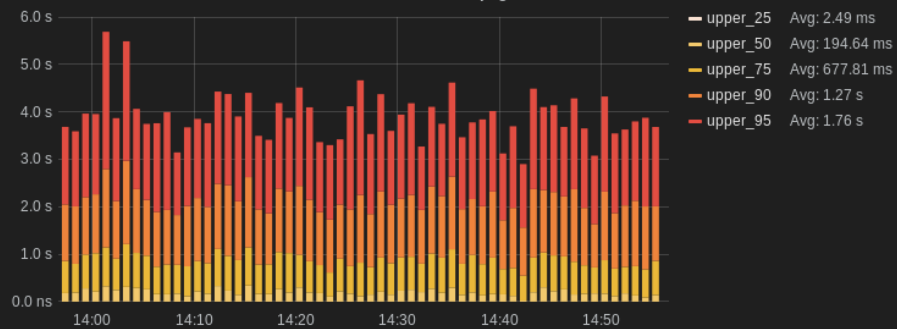
logins



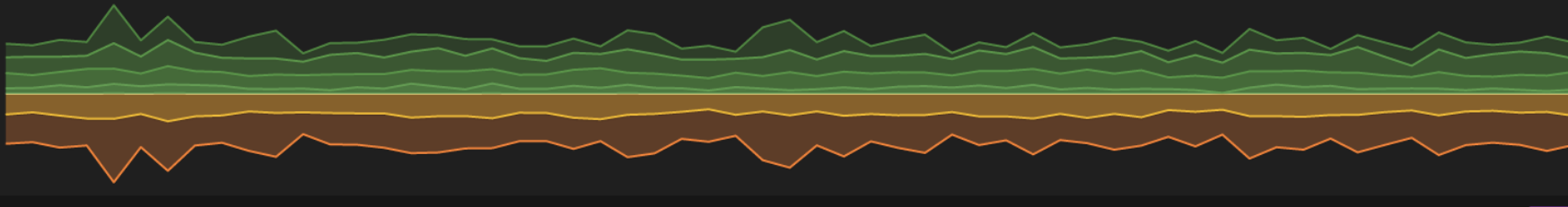
Memory / CPU



client side full page load



Negative





Graph

General

Metrics

Axes & Grid

Display Styles

A		apps	fakesite	*	counters	requests	count	scaleToSeconds(1)	movingAverage(2)	aliasByNode(2)	+
B		apps	backend	*	counters	requests	count	scaleToSeconds(1)	movingAverage(2)	aliasByNode(2)	+
C		statsd	*	timers	ads_timer	*	groupByNode(4, sum)	timeShift(1h)	+		

	cacheTimeout	60	
	shorter legend names	series as paramaters	stacking templating

Templated Graphs Nested

[Back to dashboard](#)

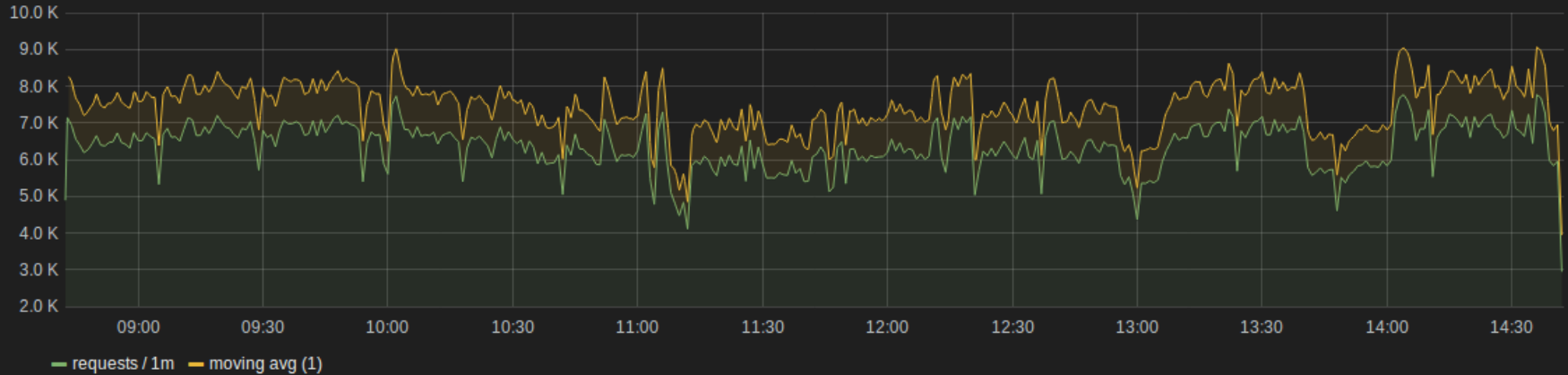
[Zoom Out](#)

6 hours ago to a few seconds ago ▾



VARIABLES \$app: fakesite \$server: All \$interval: 1m \$smoothing: 1

REQUESTS / 1m



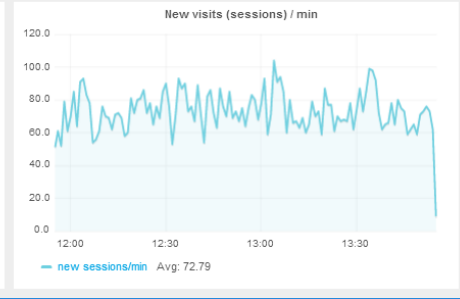
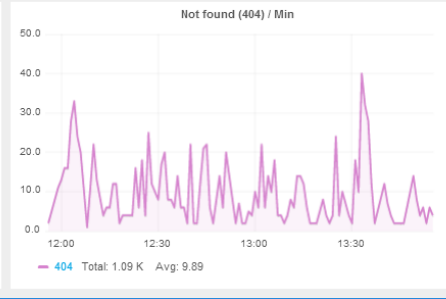
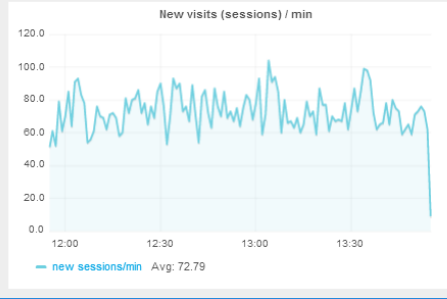
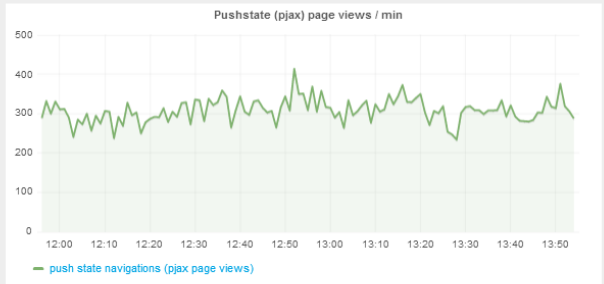
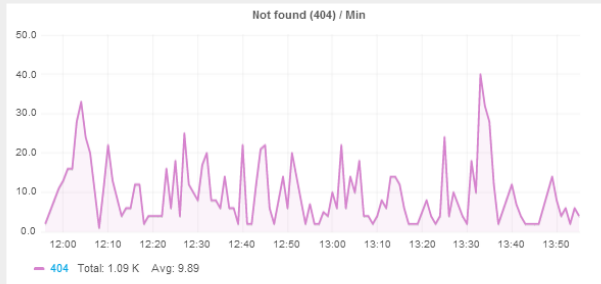
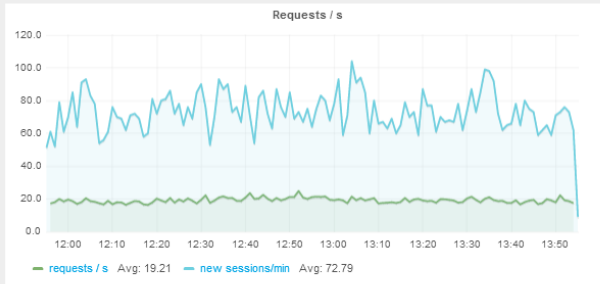
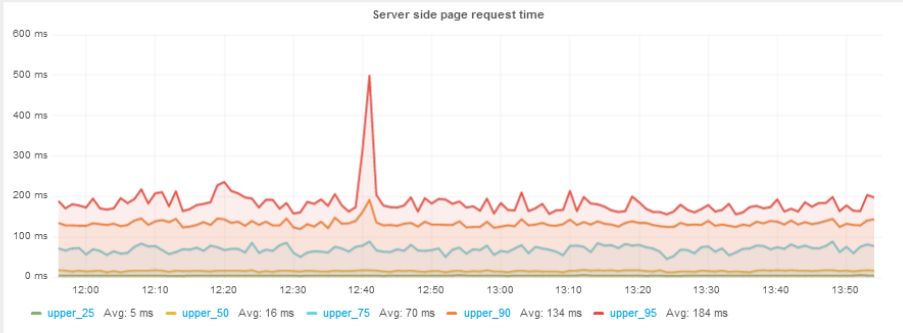
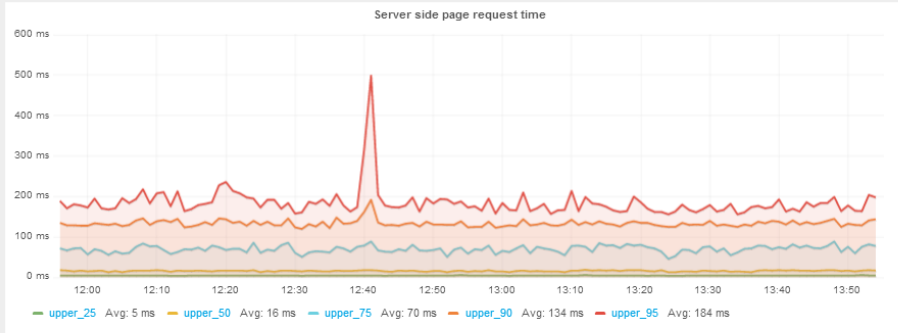
Graph General Metrics Axes & Grid Display Styles

A		apps	\$app	\$server	counters	requests	count	sumSeries()	summarize(\$interval, sum)	alias(requests / \$interval)	+			
B		apps	\$app	\$server	counters	requests	count	sumSeries()	movingAverage(\$smoothing)	alias(moving avg (\$smoothing))	+			

	cacheTimeout	60
--	--------------	----

	shorter legend names	series as paramaters	stacking	templating
--	----------------------	----------------------	----------	------------

graphite ▾ [Add query](#)





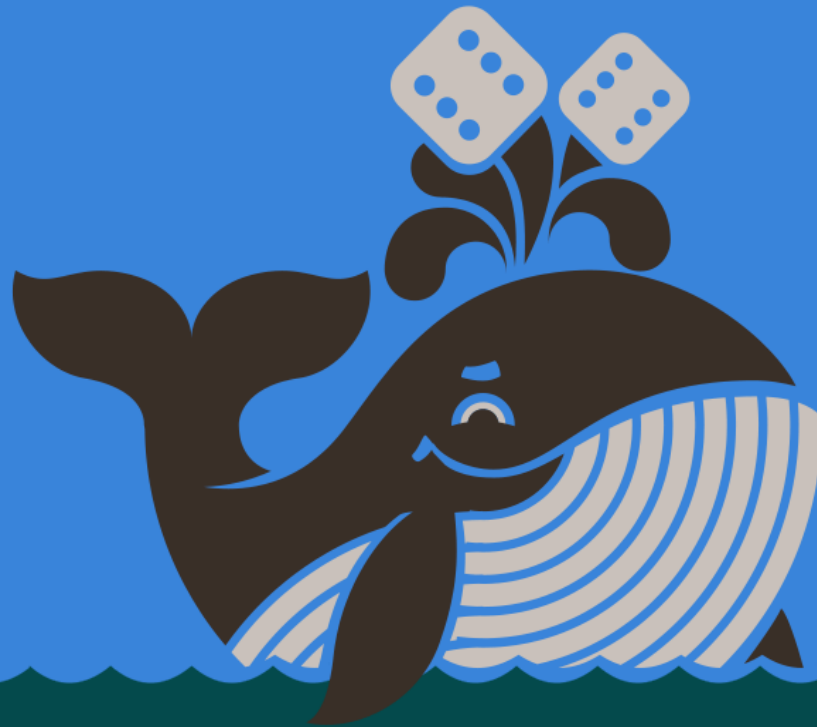
Docker Image for Graphite

<https://github.com/hopsoft/docker-graphite-statsd>

```
sudo docker run -d \  
  --name graphite \  
  -p 80:80 \  
  -p 2003:2003 \  
  -p 8125:8125/udp \  
  hopsoft/graphite-statsd
```

ССЫЛКИ

- CollectD <https://collectd.org>
- Reimann <http://riemann.io>
- Metrics <https://dropwizard.github.io/>
- Logstash <http://logstash.net>
- Kibana <http://www.elasticsearch.org/overview/kibana/>
- Sensu <http://sensuapp.org>
- Graphite <http://graphite.readthedocs.org>
- Grafana <http://grafana.org>
- **Блог <http://derz.co>**



K12
ADS & GAMES