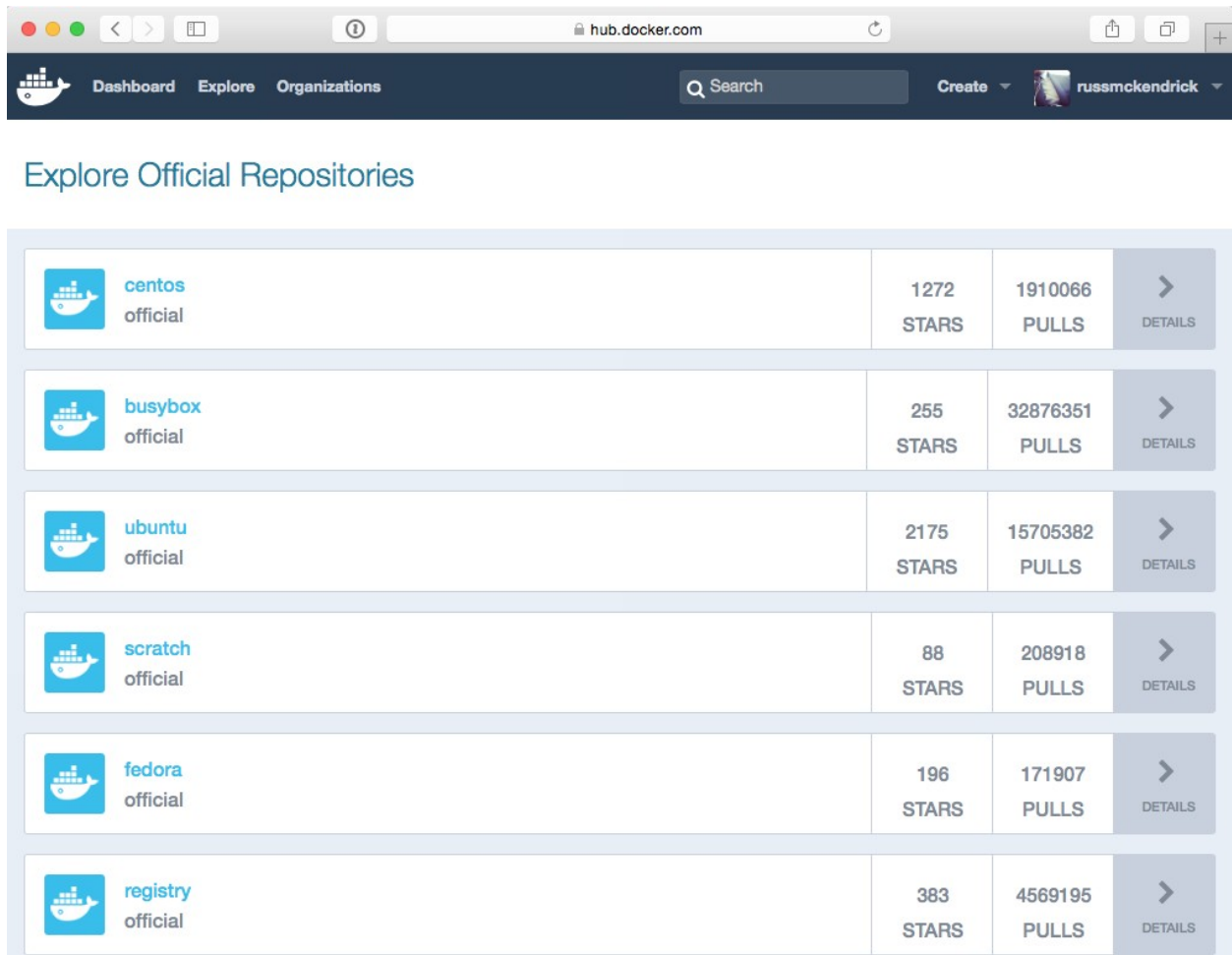


Chapter 1: Introduction to Docker Monitoring



The screenshot shows the Docker Hub website interface. At the top, there is a navigation bar with 'Dashboard', 'Explore', and 'Organizations' links. A search bar is present with the text 'Search'. The user profile 'russmckendrick' is visible in the top right. Below the navigation bar, the heading 'Explore Official Repositories' is displayed. The main content area features a table of official Docker repositories. Each row includes a Docker logo icon, the repository name and 'official' status, the number of stars, the number of pulls, and a 'DETAILS' link with a right-pointing arrow.

Repository Name	Stars	Pulls	Action
centos official	1272 STARS	1910066 PULLS	DETAILS
busybox official	255 STARS	32876351 PULLS	DETAILS
ubuntu official	2175 STARS	15705382 PULLS	DETAILS
scratch official	88 STARS	208918 PULLS	DETAILS
fedora official	196 STARS	171907 PULLS	DETAILS
registry official	383 STARS	4569195 PULLS	DETAILS

```
vagrant-centos — bash — 136x42
russ @ Russ-s-Mac in ~/Documents/Code/monitoring-docker/vagrant-centos
⚡ vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Importing base box 'russackendrick/centos71'...
==> default: Matching MAC address for NAT networking...
==> default: Checking if box 'russackendrick/centos71' is up to date...
==> default: Setting the name of the VM: vagrant-centos_default_1441228782820_56773
==> default: Clearing any previously set network interfaces...
==> default: Preparing network interfaces based on configuration...
default: Adapter 1: nat
default: Adapter 2: hostonly
==> default: Forwarding ports...
default: 22 => 2222 (adapter 1)
==> default: Running 'pre-boot' VM customizations...
==> default: Booting VM...
==> default: Waiting for machine to boot. This may take a few minutes...
default: SSH address: 127.0.0.1:2222
default: SSH username: vagrant
default: SSH auth method: private key
default: Warning: Connection timeout. Retrying...
default:
default: Vagrant insecure key detected. Vagrant will automatically replace
default: this with a newly generated keypair for better security.
default:
default: Inserting generated public key within guest...
default: Removing insecure key from the guest if it's present...
default: Key inserted! Disconnecting and reconnecting using new SSH key...
==> default: Machine booted and ready!
==> default: Checking for guest additions in VM...
==> default: Setting hostname...
==> default: Configuring and enabling network interfaces...
==> default: Mounting shared folders...
default: /monitoring_docker => /Users/russ/Documents/Code/monitoring-docker
==> default: Running provisioner: shell...
default: Running: inline script
==> default: => Installing docker-engine ...
==> default: => Configuring vagrant user ...
==> default: => Starting docker-engine ...
==> default: => Installing docker-compose ...
==> default: => Finished installation of Docker
russ @ Russ-s-Mac in ~/Documents/Code/monitoring-docker/vagrant-centos
⚡
```

```
vagrant@docker:~ — ssh — 136x13
⚡ vagrant ssh
[vagrant@docker ~]$ docker --version
Docker version 1.8.1, build d12ea79
[vagrant@docker ~]$ docker-compose --version
docker-compose version: 1.4.8
[vagrant@docker ~]$
```

```
vagrant@docker:~ — ssh — 136x24
[vagrant@docker ~]$ docker run hello-world

Hello from Docker.
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker Hub account:
https://hub.docker.com

For more examples and ideas, visit:
https://docs.docker.com/userguide/

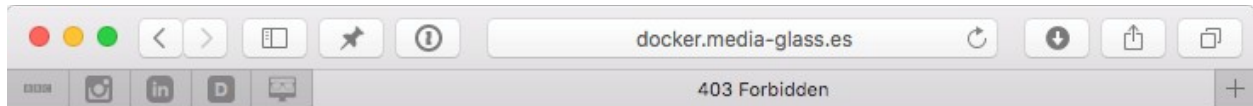
[vagrant@docker ~]$
```

```
vagrant@docker:~ — ssh — 136x40
[vagrant@docker ~]$ cat /etc/*release
CentOS Linux release 7.1.1503 (Core)
NAME="CentOS Linux"
VERSION="7 (Core)"
ID="centos"
ID_LIKE="rhel fedora"
VERSION_ID="7"
PRETTY_NAME="CentOS Linux 7 (Core)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:centos:centos:7"
HOME_URL="https://www.centos.org/"
BUG_REPORT_URL="https://bugs.centos.org/"

CENTOS_MANTISBT_PROJECT="CentOS-7"
CENTOS_MANTISBT_PROJECT_VERSION="7"
REDHAT_SUPPORT_PRODUCT="centos"
REDHAT_SUPPORT_PRODUCT_VERSION="7"

CentOS Linux release 7.1.1503 (Core)
CentOS Linux release 7.1.1503 (Core)
[vagrant@docker ~]$ docker run -it ubuntu bash
root@ca4a8397317e:/# cat /etc/*release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=14.04
DISTRIB_CODENAME=trusty
DISTRIB_DESCRIPTION="Ubuntu 14.04.3 LTS"
NAME="Ubuntu"
VERSION="14.04.3 LTS, Trusty Tahr"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 14.04.3 LTS"
VERSION_ID="14.04"
HOME_URL="http://www.ubuntu.com/"
SUPPORT_URL="http://help.ubuntu.com/"
BUG_REPORT_URL="http://bugs.launchpad.net/ubuntu/"
root@ca4a8397317e:/# exit
exit
[vagrant@docker ~]$ docker rm ca4a8397317e
ca4a8397317e
[vagrant@docker ~]$
```

```
root@dc806c481067: / — ssh · vagrant ssh — 181x29
[vagrant@docker ~]$ docker run -it ubuntu bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
c63fb41c2213: Pull complete
99fcaef76ef: Pull complete
5a4526e952f0: Pull complete
1d973211c498: Pull complete
Digest: sha256:8b1bffa54d8a58395bae61ec32f1a70fc02a939e4a7179e6227eb79e4c3c56f6
Status: Downloaded newer image for ubuntu:latest
root@dc806c481067:/# cat /etc/*release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=14.04
DISTRIB_CODENAME=trusty
DISTRIB_DESCRIPTION="Ubuntu 14.04.3 LTS"
NAME="Ubuntu"
VERSION="14.04.3 LTS, Trusty Tahr"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 14.04.3 LTS"
VERSION_ID="14.04"
HOME_URL="http://www.ubuntu.com/"
SUPPORT_URL="http://help.ubuntu.com/"
BUG_REPORT_URL="http://bugs.launchpad.net/ubuntu/"
root@dc806c481067:/#
```



403 Forbidden

nginx/1.8.0


```
vagrant-centos — bash — 136x21
[vagrant@docker ~]$ exit
logout
Connection to 127.0.0.1 closed.
russ @ Russs-iMac in ~/Documents/Code/monitoring-docker/vagrant-centos
⚡ vagrant halt
==> default: Attempting graceful shutdown of VM...
russ @ Russs-iMac in ~/Documents/Code/monitoring-docker/vagrant-centos
⚡ vagrant status
Current machine states:

default                poweroff (virtualbox)

The VM is powered off. To restart the VM, simply run `vagrant up`
russ @ Russs-iMac in ~/Documents/Code/monitoring-docker/vagrant-centos
⚡ vagrant destroy
default: Are you sure you want to destroy the 'default' VM? [y/N] y
==> default: Destroying VM and associated drives...
==> default: Running cleanup tasks for 'shell' provisioner...
russ @ Russs-iMac in ~/Documents/Code/monitoring-docker/vagrant-centos
⚡
```


Chapter 2: Using the Built-in Tools

192.168.33.10

PHP Version 5.6.11 

System	Linux 83d302e3ec73 3.10.0-229.7.2.el7.x86_64 #1 SMP Tue Jun 23 22:06:11 UTC 2015 x86_64
Build Date	Jul 10 2015 09:44:50
Server API	FPM/FastCGI
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc
Loaded Configuration File	/etc/php.ini
Scan this dir for additional .ini files	/etc/php.d
Additional .ini files parsed	/etc/php.d/10-opcache.ini, /etc/php.d/20-bz2.ini, /etc/php.d/20-calendar.ini, /etc/php.d/20-ctype.ini, /etc/php.d/20-curl.ini, /etc/php.d/20-dom.ini, /etc/php.d/20-exif.ini, /etc/php.d/20-fileinfo.ini, /etc/php.d/20-ftp.ini, /etc/php.d/20-gd.ini, /etc/php.d/20-gettext.ini, /etc/php.d/20-iconv.ini, /etc/php.d/20-mbstring.ini, /etc/php.d/20-mcrypt.ini, /etc/php.d/20-mysqlnd.ini, /etc/php.d/20-pdo.ini, /etc/php.d/20-phar.ini, /etc/php.d/20-posix.ini, /etc/php.d/20-openssl.ini, /etc/php.d/20-shmop.ini, /etc/php.d/20-simplexml.ini, /etc/php.d/20-snmp.ini, /etc/php.d/20-sockets.ini, /etc/php.d/20-sqlite3.ini, /etc/php.d/20-sysvmsg.ini, /etc/php.d/20-sysvsem.ini, /etc/php.d/20-sysvshm.ini, /etc/php.d/20-tokenizer.ini, /etc/php.d/20-xmli.ini, /etc/php.d/20-xmlwriter.ini, /etc/php.d/20-xsl.ini, /etc/php.d/20-zip.ini, /etc/php.d/30-mysql.ini, /etc/php.d/30-mysqli.ini, /etc/php.d/30-pdo_mysql.ini, /etc/php.d/30-pdo_sqlite.ini, /etc/php.d/30-wddx.ini, /etc/php.d/30-xmlreader.ini, /etc/php.d/30-xmlrpc.ini, /etc/php.d/40-json.ini
PHP API	20131106
PHP Extension	20131226
Zend Extension	220131226
Zend Extension Build	API220131226,NTS
PHP Extension Build	API20131226,NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	disabled
Zend Memory Manager	enabled
Zend Multibyte Support	provided by mbstring
IPv6 Support	enabled
DTrace Support	enabled
Registered PHP Streams	https, ftps, compress.zlib, php, file, glob, data, http, ftp, compress.bzip2, phar, zip
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, sslv3, sslv2, tls, tlsv1.0, tlsv1.1, tlsv1.2
Registered Stream Filters	zlib.*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.*, consumed, dechunk, bzip2.*, convert.iconv.*, mcrypt.*, mdecrypt.*

This program makes use of the Zend Scripting Language Engine:
Zend Engine v2.6.0, Copyright (c) 1998-2015 Zend Technologies
with Zend OPcache v7.0.6-dev, Copyright (c) 1999-2015, by Zend Technologies



```
[vagrant@centos7 01-basic]$ docker logs 01basic_load
This is ApacheBench, Version 2.3 <$Revision: 1430300 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
```

```
Benchmarking 01basic_web_1 (be patient)
```

```
Completed 1000 requests
Completed 2000 requests
Completed 3000 requests
Completed 4000 requests
Completed 5000 requests
Completed 6000 requests
Completed 7000 requests
Completed 8000 requests
Completed 9000 requests
Completed 10000 requests
Finished 10000 requests
```

```
Server Software:      nginx/1.0.0
Server Hostname:     01basic_web_1
Server Port:        80
```

```
Document Path:      /
Document Length:    90841 bytes
```

```
Concurrency Level:    5
Time taken for tests: 14.994 seconds
Complete requests:    10000
Failed requests:      9964
  (Connect: 0, Receive: 0, Length: 9964, Exceptions: 0)
Write errors:         0
Keep-Alive requests: 0
Total transferred:   910057704 bytes
HTML transferred:    908437704 bytes
Requests per second: 666.95 [#./sec] (mean)
Time per request:    7.497 [ms] (mean)
Time per request:    1.499 [ms] (mean, across all concurrent requests)
Transfer rate:       59274.09 [Kbytes/sec] received
```

```
Connection Times (ms)
```

	min	mean[+/-sd]	median	max
Connect:	0	0 0.1	0	2

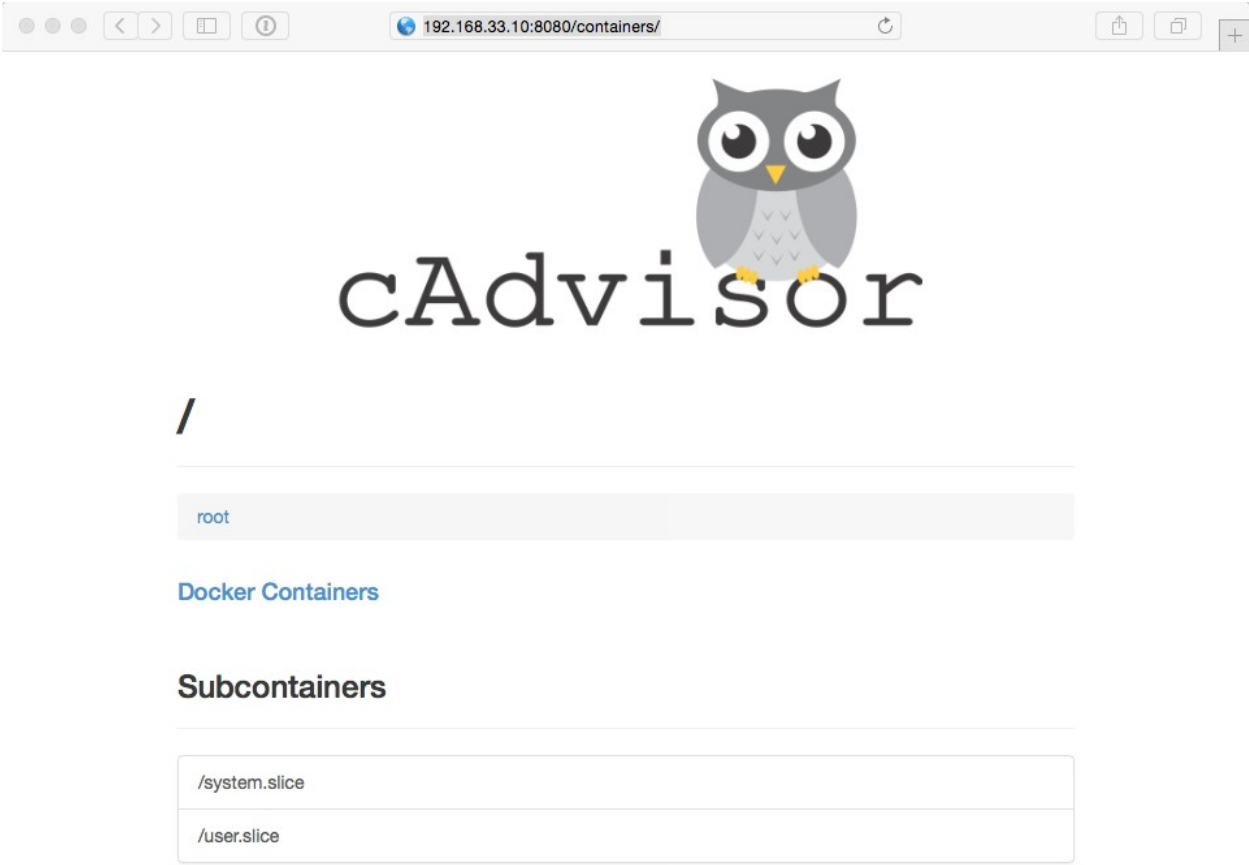
```
[vagrant@centos7 02-multiple]$ ps aux | grep nginx
root      4942  0.0  0.0  47512 1212 ?        Ss   19:33   0:00 nginx: master process nginx
vboxadd   4943  0.0  0.0  48048 1860 ?        S    19:33   0:00 nginx: worker process
root      5228  0.0  0.0  47512 1200 ?        Ss   19:37   0:00 nginx: master process nginx
vboxadd   5229  0.0  0.0  48048 1852 ?        S    19:37   0:00 nginx: worker process
root      5370  0.0  0.0  47512 1208 ?        Ss   19:37   0:00 nginx: master process nginx
vboxadd   5371  0.0  0.0  48048 1856 ?        S    19:37   0:00 nginx: worker process
root      5526  0.0  0.0  47512 1208 ?        Ss   19:37   0:00 nginx: master process nginx
vboxadd   5527  0.0  0.0  48048 1856 ?        S    19:37   0:00 nginx: worker process
root      5611  0.0  0.0  47512 1204 ?        Ss   19:37   0:00 nginx: master process nginx
vboxadd   5612  0.0  0.0  48048 1856 ?        S    19:37   0:00 nginx: worker process
root      6466  0.0  0.0  47512 1200 ?        Ss   19:44   0:00 nginx: master process nginx
vboxadd   6467  0.0  0.0  48048 1852 ?        S    19:44   0:00 nginx: worker process
root      6867  0.0  0.0  47512 1204 ?        Ss   19:44   0:00 nginx: master process nginx
vboxadd   6868  0.0  0.0  48048 1852 ?        S    19:44   0:00 nginx: worker process
root      6879  0.0  0.0  47512 1208 ?        Ss   19:44   0:00 nginx: master process nginx
vboxadd   6881  0.0  0.0  48048 1856 ?        S    19:44   0:00 nginx: worker process
root      6962  0.0  0.0  47512 1208 ?        Ss   19:44   0:00 nginx: master process nginx
vboxadd   6963  0.0  0.0  48048 1856 ?        S    19:44   0:00 nginx: worker process
root      6974  0.0  0.0  47512 1212 ?        Ss   19:44   0:00 nginx: master process nginx
vboxadd   6975  0.0  0.0  48048 1860 ?        S    19:44   0:00 nginx: worker process
root      7658  0.0  0.1  47508 3456 ?        S    19:47   0:00 nginx
root      7659  0.0  0.1  47508 3452 ?        S    19:47   0:00 nginx
root      7660  0.0  0.1  47508 3448 ?        S    19:47   0:00 nginx
root      7661  0.0  0.1  47508 3452 ?        S    19:47   0:00 nginx
root      7662  0.0  0.1  47508 3448 ?        S    19:47   0:00 nginx
root      7663  0.0  0.1  47508 3448 ?        S    19:47   0:00 nginx
vagrant   7665  0.0  0.0 112644  960 pts/0    R+   19:47   0:00 grep --color=auto nginx
```

```
[vagrant@centos7 02-multiple]$
```

```
vagrant@centos7:/monitoring_docker/Chapter01/02-multiple -- ssh -- 136x40
[vagrant@centos7 02-multiple]$ docker-compose ps
-----
Name                Command              State      Ports
-----
02multiple_web_1    /usr/local/bin/run  Up         0.0.0.0:32772->80/tcp
02multiple_web_2    /usr/local/bin/run  Up         0.0.0.0:32773->80/tcp
02multiple_web_3    /usr/local/bin/run  Up         0.0.0.0:32774->80/tcp
02multiple_web_4    /usr/local/bin/run  Up         0.0.0.0:32775->80/tcp
02multiple_web_5    /usr/local/bin/run  Up         0.0.0.0:32776->80/tcp
[vagrant@centos7 02-multiple]$ docker top 02multiple_web_3
-----
UID          PID          PPID         C           STIME       TTY         TIME
-----
CMD
root         6749         4412         0           19:44      ?           00:00:00
/usr/bin/python /usr/bin/supervisord -n
root         6877         6749         0           19:44      ?           00:00:00
php-fpm: master process (/etc/php-fpm.conf)
root         6879         6749         0           19:44      ?           00:00:00
nginx: master process nginx
vboxadd     6881         6879         0           19:44      ?           00:00:00
nginx: worker process
666         6900         6877         0           19:44      ?           00:00:00
php-fpm: pool www
666         6901         6877         0           19:44      ?           00:00:00
php-fpm: pool www
666         6902         6877         0           19:44      ?           00:00:00
php-fpm: pool www
666         6903         6877         0           19:44      ?           00:00:00
php-fpm: pool www
666         6904         6877         0           19:44      ?           00:00:00
php-fpm: pool www
root         6955         6749         0           19:44      ?           00:00:00
/usr/libexec/postfix/master -w
postfix     6959         6955         0           19:44      ?           00:00:00
pickup -l -t unix -u
postfix     6960         6955         0           19:44      ?           00:00:00
qmgr -l -t unix -u
root         8945         6749         0           19:54      ?           00:00:00
nginx
[vagrant@centos7 02-multiple]$
```

```
vagrant@centos7:/monitoring_docker/Chapter01/02-multiple -- ssh -- 136x40
[vagrant@centos7 02-multiple]$ docker exec -t -i 02multiple_web_3 bash
[root@31eb3b9c9217 /]# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.1  0.6 115252 12672 ?        Ss   18:44   0:00 /usr/bin/python /usr/bin/supervisord -n
root        16  0.0  1.3 377896 25244 ?        S    18:44   0:00 php-fpm: master process (/etc/php-fpm.conf)
root        18  0.0  0.0  47512  1208 ?        Ss   18:44   0:00 nginx: master process nginx
nginx       20  0.0  0.0  48048  1856 ?        S    18:44   0:00 nginx: worker process
webserv+   39  0.0  0.3 377896 6984 ?        S    18:44   0:00 php-fpm: pool www
webserv+   40  0.0  0.3 377896 6984 ?        S    18:44   0:00 php-fpm: pool www
webserv+   41  0.0  0.3 377896 6984 ?        S    18:44   0:00 php-fpm: pool www
webserv+   42  0.0  0.3 377896 6984 ?        S    18:44   0:00 php-fpm: pool www
webserv+   43  0.0  0.3 377896 6988 ?        S    18:44   0:00 php-fpm: pool www
root        94  0.0  0.1  91084  2084 ?        Ss   18:44   0:00 /usr/libexec/postfix/master -w
postfix    95  0.0  0.2  91188  3888 ?        S    18:44   0:00 pickup -l -t unix -u
postfix    96  0.0  0.2  91256  3912 ?        S    18:44   0:00 qmgr -l -t unix -u
root       359  0.2  0.1 13340  1880 ?        Ss   18:57   0:00 bash
root       377  0.0  0.0  21364  1376 ?        R+   18:58   0:00 ps aux
[root@31eb3b9c9217 /]# exit
exit
[vagrant@centos7 02-multiple]$
```

Chapter 3: Advanced Container Resource Analysis



The screenshot shows a web browser window with the URL `192.168.33.10:8080/containers/`. The page features the cAdvisor logo, which includes a stylized owl icon above the text "cAdvisor". Below the logo, there is a slash "/" indicating the current container path. A text box displays "root". Underneath, there are two sections: "Docker Containers" and "Subcontainers". The "Subcontainers" section contains a table with two entries: `/system.slice` and `/user.slice`.

Subcontainer
<code>/system.slice</code>
<code>/user.slice</code>



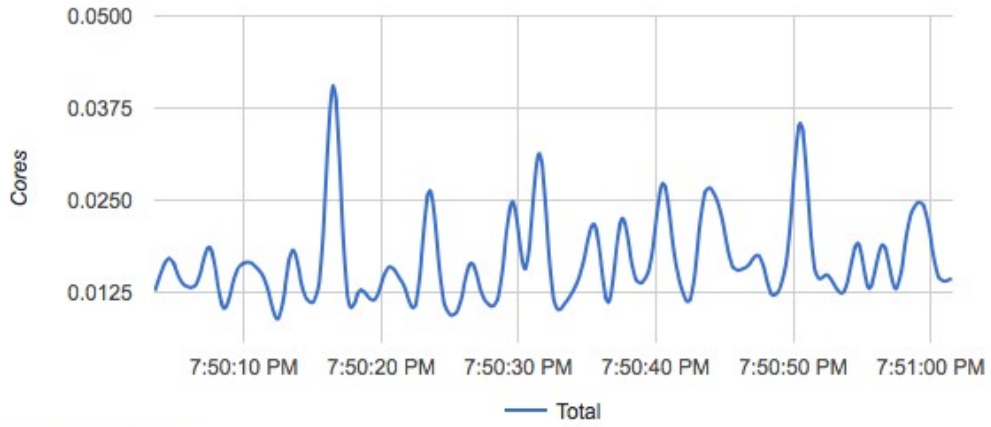
Processes

User	PID	PPID	Start Time	CPU % ▾	MEM %	RSS	Virtual Size	Status	Running T
root	4807	4411	19:42	1.20	1.30	25.38 KiB	359.63 KiB	Ss1	00:00
root	4424	2	19:41	0.50	0.00	0.00 B	0.00 B	S<	00:00
root	6	2	19:40	0.20	0.00	0.00 B	0.00 B	S	00:00
root	4411	1	19:41	0.20	1.50	27.52 KiB	654.76 KiB	Ss1	00:00
root	1	0	19:40	0.10	0.20	3.83 KiB	52.89 KiB	Ss	00:00
root	47	2	19:40	0.10	0.00	0.00 B	0.00 B	S	00:00
root	2	0	19:40	0.00	0.00	0.00 B	0.00 B	S	00:00
root	20	2	19:40	0.00	0.00	0.00 B	0.00 B	S<	00:00
root	21	2	19:40	0.00	0.00	0.00 B	0.00 B	S	00:00
root	22	2	19:40	0.00	0.00	0.00 B	0.00 B	S<	00:00
root	23	2	19:40	0.00	0.00	0.00 B	0.00 B	S<	00:00

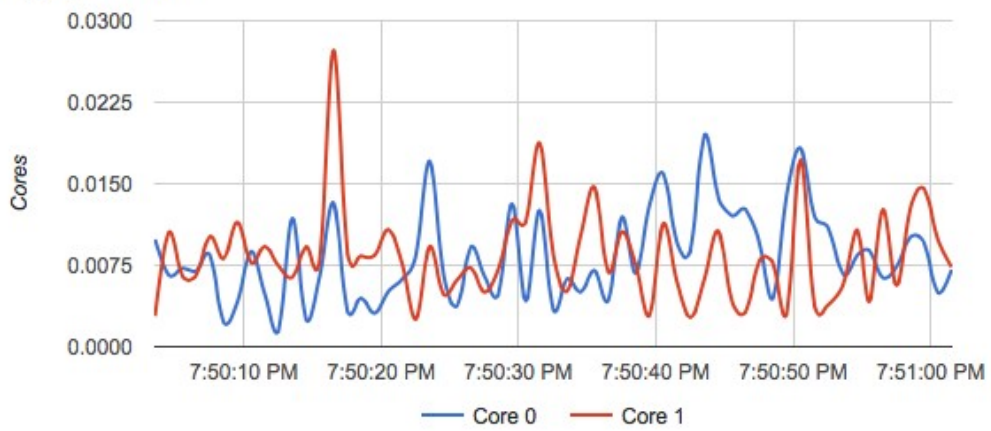
◀ ▶ 1 2 3 4

CPU

Total Usage

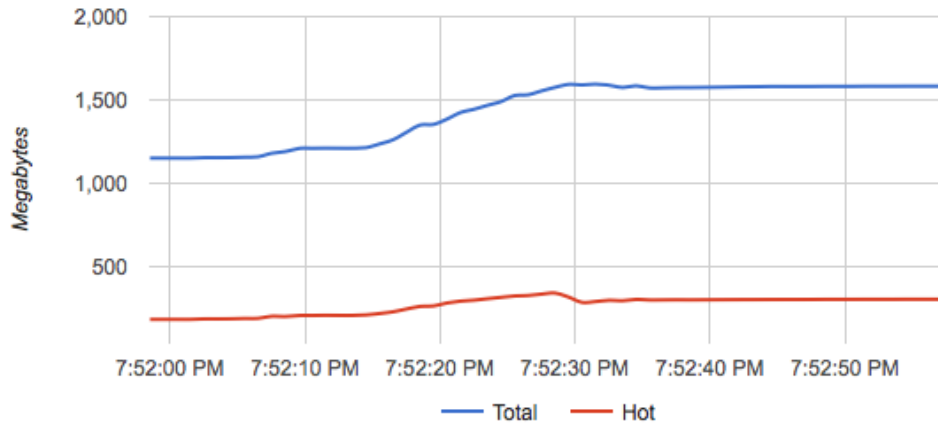


Usage per Core



Memory

Total Usage



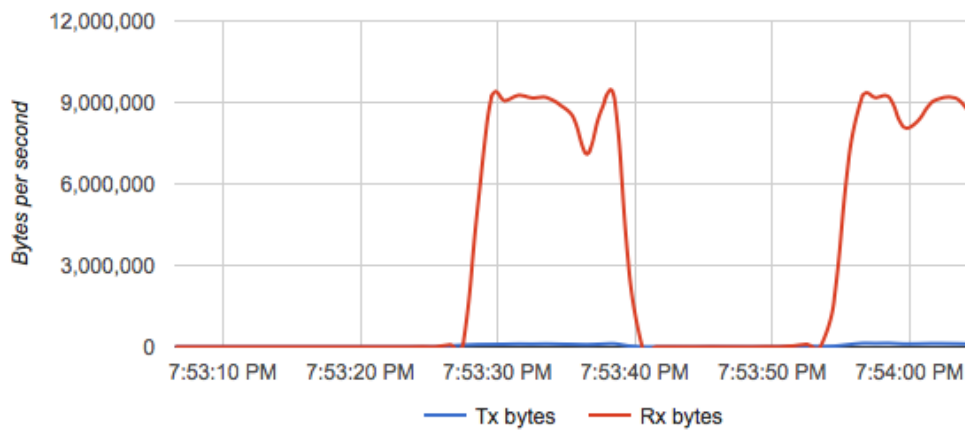
Usage Breakdown



Network

Interface: `enp0s3` ▾

Throughput



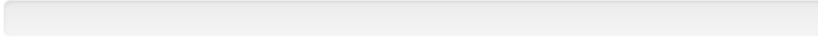
Filesystem

FS #1: /dev/sda1



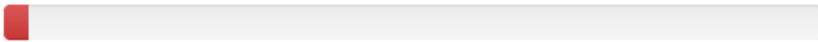
144.61 MB / 258.65 MB (55%)

FS #2: /dev/mapper/docker-8:3-164256-8aec2dd3d70c3548cbb14afc31ff4e62cc8a8d8f64ad0d6156f225df4bdd708f



83.18 MB / 105.55 GB (0%)

FS #3: /dev/sda3

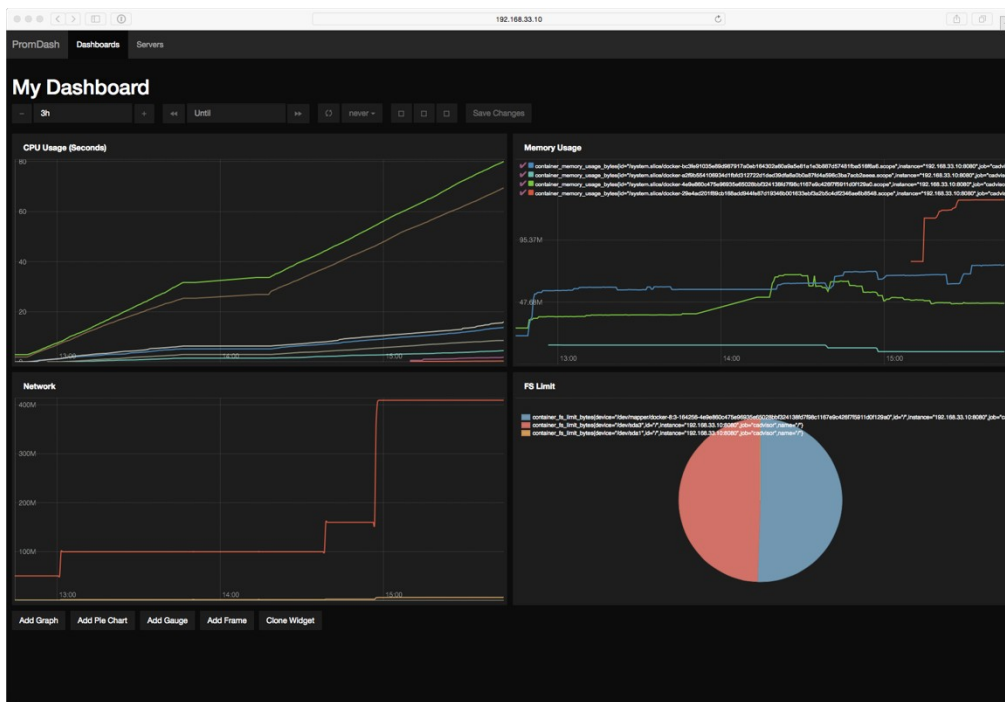
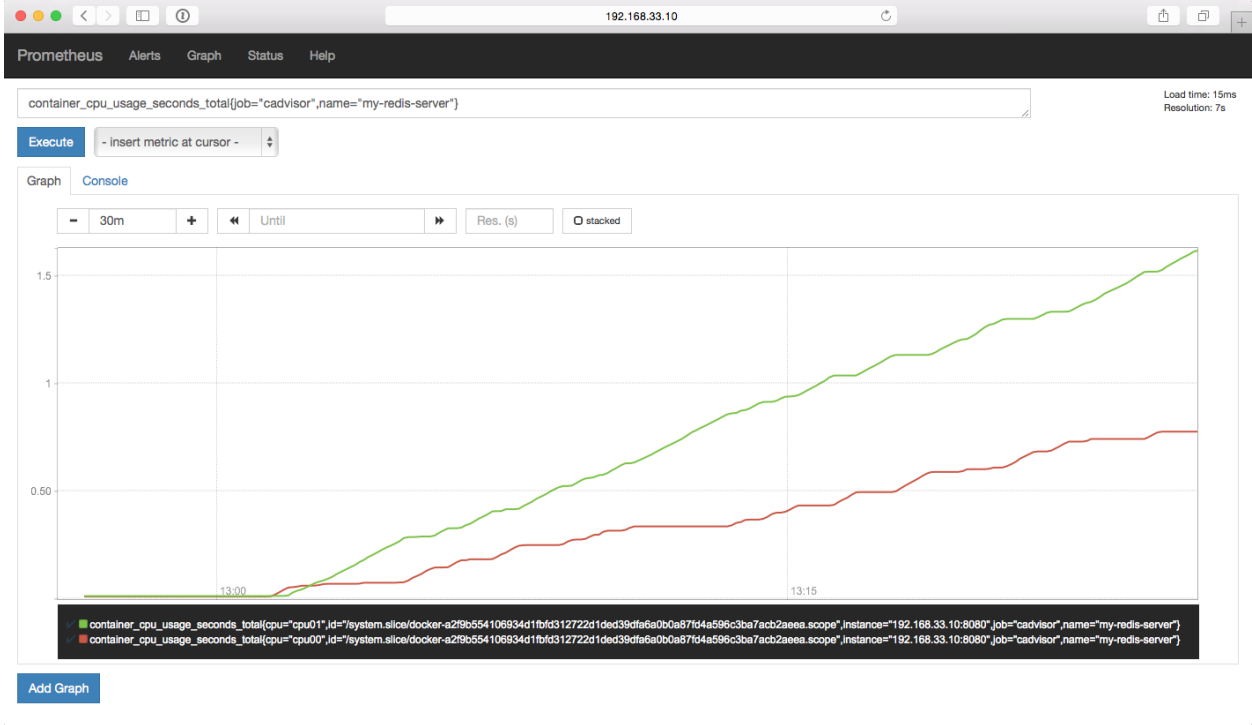


3.65 GB / 102.93 GB (3%)

```
192.168.33.10
# HELP container_cpu_system_seconds_total Cumulative system cpu time consumed in seconds.
# TYPE container_cpu_system_seconds_total counter
container_cpu_system_seconds_total{id="/",name="/"} 13.94
container_cpu_system_seconds_total{id="/system.slice",name="/system.slice"} 0.09
container_cpu_system_seconds_total{id="/system.slice/-.mount",name="/system.slice/-.mount"} 0
container_cpu_system_seconds_total{id="/system.slice/NetworkManager-dispatcher.service",name="/system.slice/NetworkManager-dispatcher.service"} 0
container_cpu_system_seconds_total{id="/system.slice/NetworkManager-wait-online.service",name="/system.slice/NetworkManager-wait-online.service"} 0
container_cpu_system_seconds_total{id="/system.slice/NetworkManager.service",name="/system.slice/NetworkManager.service"} 0
container_cpu_system_seconds_total{id="/system.slice/boot.mount",name="/system.slice/boot.mount"} 0
container_cpu_system_seconds_total{id="/system.slice/brandbot.service",name="/system.slice/brandbot.service"} 0
container_cpu_system_seconds_total{id="/system.slice/cpupower.service",name="/system.slice/cpupower.service"} 0
container_cpu_system_seconds_total{id="/system.slice/crond.service",name="/system.slice/crond.service"} 0
container_cpu_system_seconds_total{id="/system.slice/dbus.service",name="/system.slice/dbus.service"} 0
container_cpu_system_seconds_total{id="/system.slice/dbus.socket",name="/system.slice/dbus.socket"} 0
container_cpu_system_seconds_total{id="/system.slice/dev-disk-by\x2did-ata\x2dVBOX_HARDDISK_VB25363e5b\x2db6742bbf\x2dpart2.swap",name="/system.slice/dev-disk-by\x2did-ata\x2dVBOX_HARDDISK_VB25363e5b\x2db6742bbf\x2dpart2.swap"} 0
container_cpu_system_seconds_total{id="/system.slice/dev-disk-by\x2duuid-f9595940\x2d2813\x2d45a1\x2dae5e\x2dc60e7373c342.swap",name="/system.slice/dev-disk-by\x2duuid-f9595940\x2d2813\x2d45a1\x2dae5e\x2dc60e7373c342.swap"} 0
container_cpu_system_seconds_total{id="/system.slice/dev-sda2.swap",name="/system.slice/dev-sda2.swap"} 0
container_cpu_system_seconds_total{id="/system.slice/docker-4e9e860c475e96935e65028bbf324138fd7f98c1167e9c426f7f5911d0f129a0.scope",name="cadvisor"} 0.05
```

Targets

cadvisor				
Endpoint	State	Base Labels	Last Scrape	Error
http://192.168.33.10:8080/metrics	HEALTHY	none	4.625239876s ago	



Chapter 4: A Traditional Approach to Monitoring Containers

```
vagrant@docker:~ -- ssh -- 136x56
[vagrant@docker ~]$ docker logs zabbix
Nginx status page: allowed address set to 127.0.0.1.
PHP-FPM status page: allowed address set to 127.0.0.1.
[LOG 10:31:37] Preparing server configuration
[LOG 10:31:37] Config updated.
[LOG 10:31:37] Enabling Logging and pid management.
[LOG 10:31:38] Done
[LOG 10:31:38] Checking if Database exists or fresh install
ERROR 1049 (42000) at line 1: Unknown database 'zabbix'
[WARNING 10:31:38] Zabbix DB doesn't exists. Installing and importing default settings

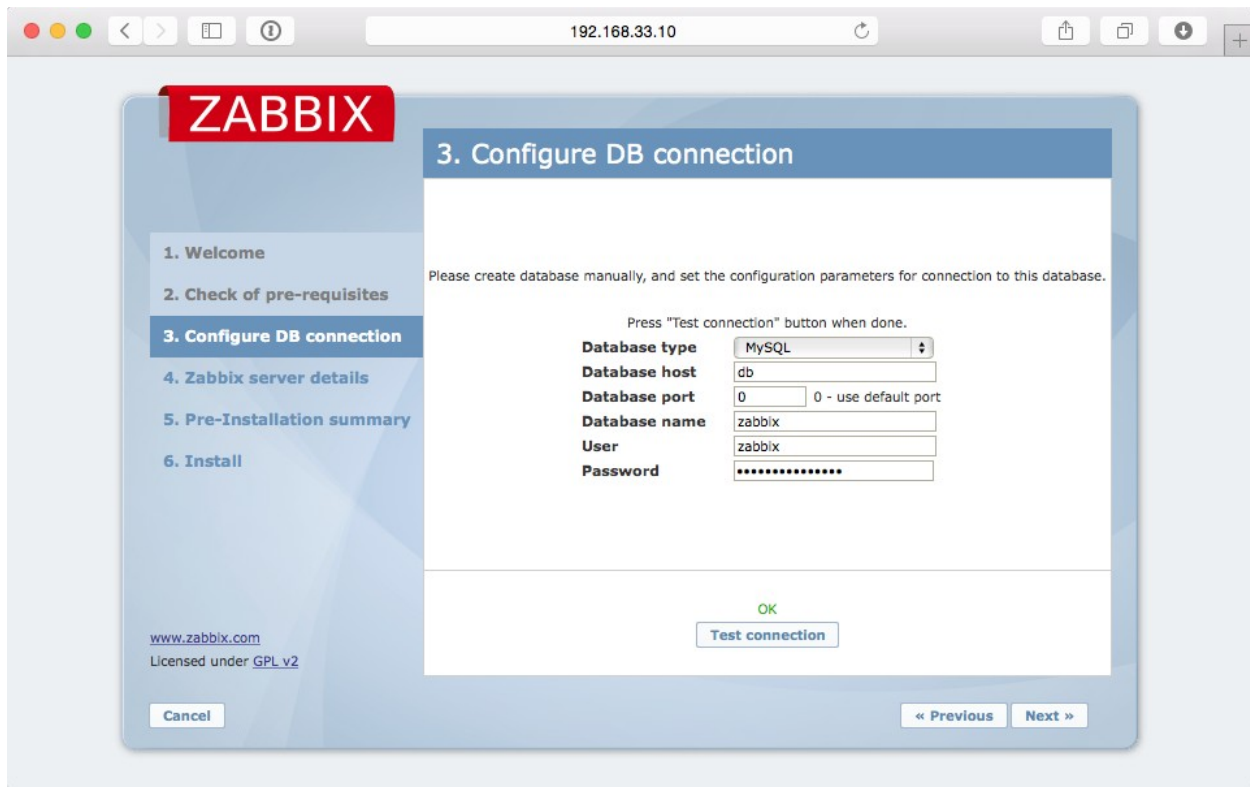
[LOG 10:31:38] Database and user created. Importing Default SQL

[LOG 10:31:45] Import Finished. Starting
2015-08-30 10:31:46,128 CRIT Supervisor running as root (no user in config file)
2015-08-30 10:31:46,128 WARN Included extra file "/etc/supervisor.d/php-fpm.conf" during parsing
2015-08-30 10:31:46,128 WARN Included extra file "/etc/supervisor.d/zabbix.conf" during parsing
2015-08-30 10:31:46,128 WARN Included extra file "/etc/supervisor.d/nginx.conf" during parsing
2015-08-30 10:31:46,141 INFO RPC interface 'supervisor' initialized
2015-08-30 10:31:46,141 INFO supervisord started with pid 96
2015-08-30 10:31:47,152 INFO spawned: 'nginx' with pid 99
2015-08-30 10:31:47,153 INFO spawned: 'nginx-reload' with pid 100
2015-08-30 10:31:47,154 INFO spawned: 'php-fpm' with pid 101
2015-08-30 10:31:47,156 INFO spawned: 'zabbix-agent' with pid 102
2015-08-30 10:31:47,157 INFO spawned: 'zabbix-server' with pid 103
2015-08-30 10:31:47,208 DEBG 'nginx' stderr output:
2015/08/30 10:31:47 [notice] 99#0: using the "epoll" event method
2015/08/30 10:31:47 [notice] 99#0: nginx/1.8.0
2015/08/30 10:31:47 [notice] 99#0: built by gcc 4.8.2 20140120 (Red Hat 4.8.2-16) (GCC)
2015/08/30 10:31:47 [notice] 99#0: OS: Linux 3.10.0-229.7.2.el7.x86_64
2015/08/30 10:31:47 [notice] 99#0: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2015/08/30 10:31:47 [notice] 99#0: start worker processes
2015/08/30 10:31:47 [notice] 99#0: start worker process 115
2015/08/30 10:31:47 [notice] 99#0: start worker process 116

2015-08-30 10:31:47,208 DEBG fd 18 closed, stopped monitoring <POutputDispatcher at 139910770631168 for <Subprocess at 139910773013824 w
ith name zabbix-agent in state STARTING> (stdout)>
2015-08-30 10:31:47,208 DEBG 'zabbix-agent' stderr output:
zabbix_agentd [102]: Running in foreground...

2015-08-30 10:31:47,208 DEBG fd 22 closed, stopped monitoring <POutputDispatcher at 139910770631312 for <Subprocess at 139910773013824 w
ith name zabbix-agent in state STARTING> (stderr)>
2015-08-30 10:31:47,361 DEBG fd 13 closed, stopped monitoring <POutputDispatcher at 139910770605952 for <Subprocess at 139910773013680 w
ith name php-fpm in state STARTING> (stdout)>
2015-08-30 10:31:47,362 DEBG 'php-fpm' stderr output:
[30-Aug-2015 10:31:47] WARNING: Nothing matches the include pattern '/data/conf/php-fpm-www-*.conf' from /etc/php-fpm.d/www.conf at line
18.

2015-08-30 10:31:47,362 DEBG fd 17 closed, stopped monitoring <POutputDispatcher at 139910770605664 for <Subprocess at 139910773013680 w
ith name php-fpm in state STARTING> (stderr)>
2015-08-30 10:31:48,363 INFO success: nginx entered RUNNING state, process has stayed up for > than 1 seconds (startsecs)
2015-08-30 10:31:48,363 INFO success: nginx-reload entered RUNNING state, process has stayed up for > than 1 seconds (startsecs)
2015-08-30 10:31:48,363 INFO success: php-fpm entered RUNNING state, process has stayed up for > than 1 seconds (startsecs)
2015-08-30 10:31:48,363 INFO success: zabbix-agent entered RUNNING state, process has stayed up for > than 1 seconds (startsecs)
2015-08-30 10:31:48,363 INFO success: zabbix-server entered RUNNING state, process has stayed up for > than 1 seconds (startsecs)
[vagrant@docker ~]$
```



```
vagrant@docker:~ -- ssh -- 136x40
Installed size: 1.1 M
Downloading packages:
warning: /var/cache/yum/x86_64/7/zabbix/packages/zabbix-2.4.6-1.el7.x86_64.rpm: Header V4 DSA/SHA1 Signature, key ID 79ea5ed4: NOKEYETA
Public key for zabbix-2.4.6-1.el7.x86_64.rpm is not installed
(1/2): zabbix-2.4.6-1.el7.x86_64.rpm | 160 kB 00:00:00
(2/2): zabbix-agent-2.4.6-1.el7.x86_64.rpm | 182 kB 00:00:00
-----
Total | 395 kB/s | 342 kB 00:00:00
Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-ZABBIX
Importing GPG key 0x79EA5ED4:
  Userid   : "Zabbix SIA <packager@zabbix.com>"
  Fingerprint: fbab d5fb 2025 5eca b22e e194 d13d 50e4 79ea 5ed4
  Package   : zabbix-release-2.4-1.el7.noarch (@/zabbix-release-2.4-1.el7.noarch)
  From      : /etc/pki/rpm-gpg/RPM-GPG-KEY-ZABBIX
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : zabbix-2.4.6-1.el7.x86_64                                1/2
  Installing : zabbix-agent-2.4.6-1.el7.x86_64                       2/2
  Verifying  : zabbix-agent-2.4.6-1.el7.x86_64                       1/2
  Verifying  : zabbix-2.4.6-1.el7.x86_64                             2/2

Installed:
  zabbix-agent.x86_64 0:2.4.6-1.el7

Dependency Installed:
  zabbix.x86_64 0:2.4.6-1.el7

Complete!
[vagrant@docker ~]$ cat /var/log/zabbix/zabbix_agentd.log
4689:20150830:140314.683 Starting Zabbix Agent [docker.media-glass.es]. Zabbix 2.4.6 (revision 54796).
4689:20150830:140314.683 using configuration file: /etc/zabbix/zabbix_agentd.conf
4689:20150830:140314.684 loaded modules: zabbix_module_docker.so
4689:20150830:140314.684 agent #0 started [main process]
4690:20150830:140314.685 agent #1 started [collector]
4691:20150830:140314.685 agent #2 started [listener #1]
4692:20150830:140314.685 agent #3 started [listener #2]
4693:20150830:140314.685 agent #4 started [listener #3]
[vagrant@docker ~]$
```

zabbix.media-glass.es

ZABBIX Help | Get support | Print | Profile | Logout

Monitoring | Inventory | Reports | Configuration | Administration localhost

Host groups | Templates | Hosts | Maintenance | Actions | Screens | Slide shows | Maps | Discovery | IT services Search

History: Dashboard » Configuration of templates » Configuration import » Configuration of hosts

CONFIGURATION OF HOSTS

Host | Templates | IPMI | Macros | Host inventory

Host name: docker.media-glass.es
 Visible name: Docker Host

Groups

In groups: Virtual machines

Other groups: Discovered hosts, Hypervisors, Linux servers, Templates, Zabbix servers

New group:

Agent interfaces

IP address	DNS name	Connect to	Port	Default
192.168.33.10		IP DNS	10050	<input checked="" type="radio"/> Remove

SNMP interfaces: [Add](#)

JMX interfaces: [Add](#)

IPMI interfaces: [Add](#)

Description:

Monitored by proxy: (no proxy)

Enabled:

[Add](#) [Cancel](#)

zabbix.media-glass.es

ZABBIX Help | Get support | Print | Profile | Logout

Monitoring | Inventory | Reports | Configuration | Administration localhost

Host groups | Templates | Hosts | Maintenance | Actions | Screens | Slide shows | Maps | Discovery | IT services Search

History: Dashboard » Configuration of templates » Configuration import » Configuration of hosts

CONFIGURATION OF HOSTS

Host | Templates | IPMI | Macros | Host inventory

Linked templates

Name	Action
Template App Docker	Unlink
Template OS Linux	Unlink

Link new templates

[Select](#)

[Add](#)

[Add](#) [Cancel](#)

zabbix.media-glass.es

ZABBIX

Help | Get support | Print | Profile | Logout

Monitoring | Inventory | Reports | Configuration | Administration

Dashboard | Overview | Web | Latest data | Triggers | Events | Graphs | Screens | Maps | Discovery | IT services

History: Configuration of hosts » Configuration of discovery rules » Latest data » Custom graphs » Latest data

LATEST DATA

Items

Hide filter

Host groups: Select

Hosts: Select

Application: Select

Name:

Show items without data:

Show details:

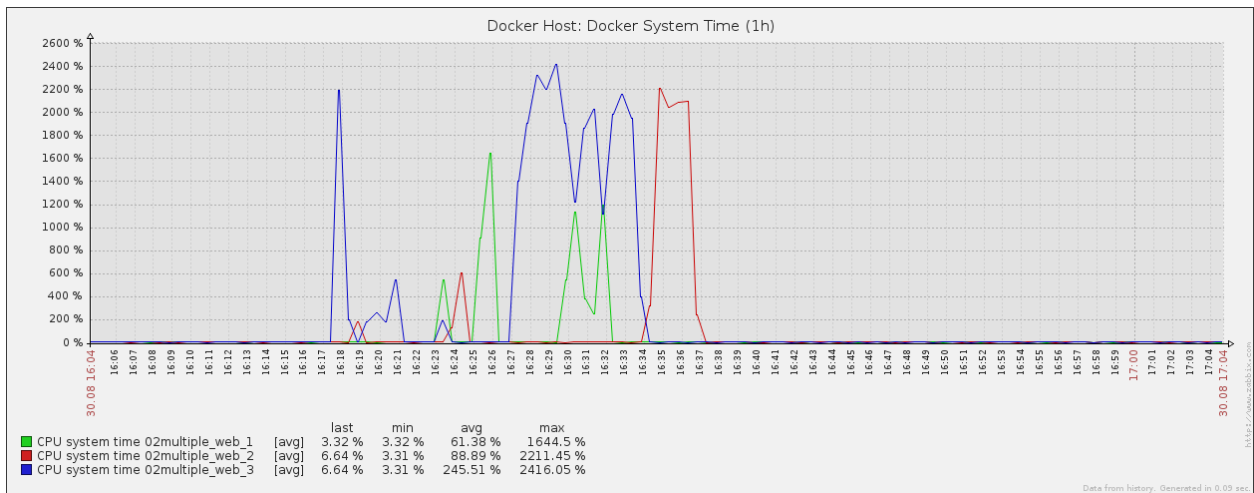
Filter Reset

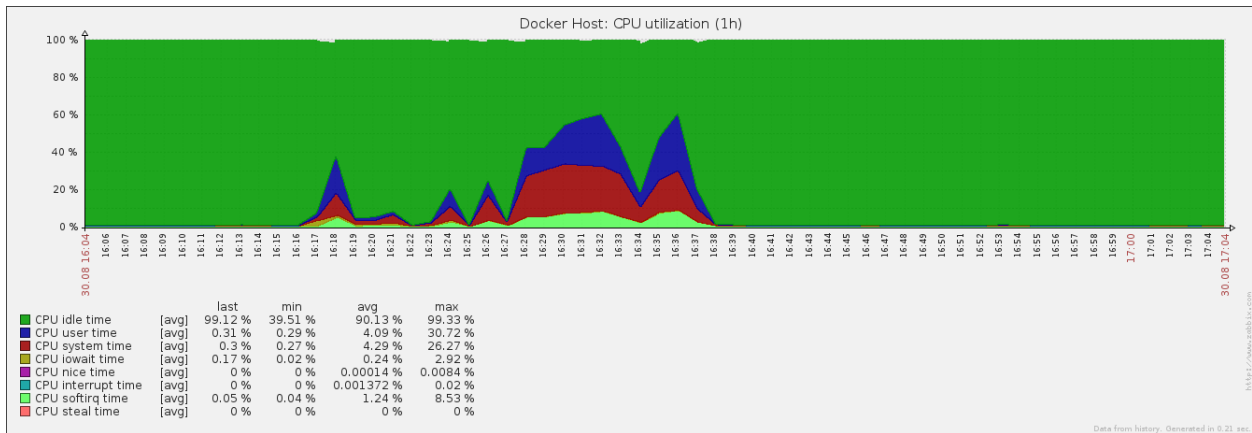
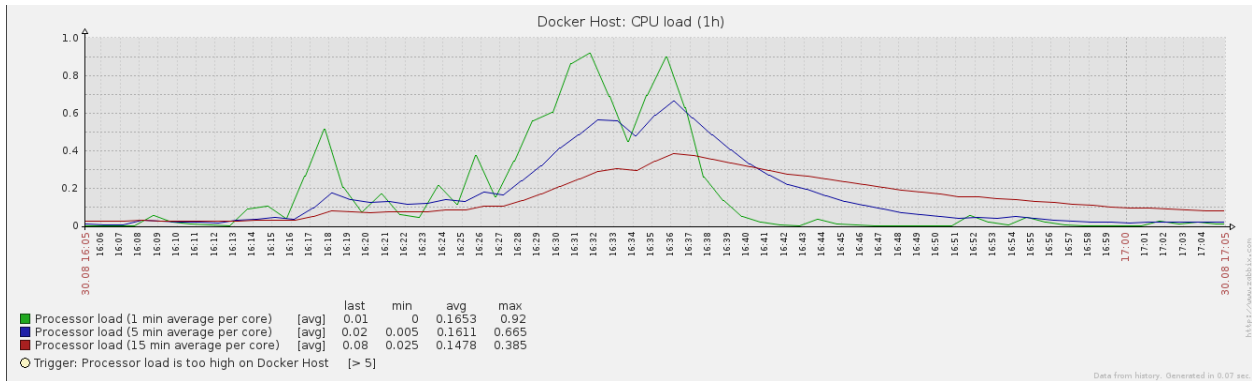
Name	Last check	Last value	Change
CPU (13 Items)			
Docker (18 Items)			
General (5 Items)			
Memory (5 Items)			
OS (8 Items)			
Performance (13 Items)			
Processes (2 Items)			
Security (2 Items)			
Zabbix agent (3 Items)			
<input type="checkbox"/> Agent ping	2015-08-30 16:06:19	Up (1)	- Graph
<input type="checkbox"/> Host name of zabbix_agentd running	-	-	- History
<input type="checkbox"/> Version of zabbix_agent(d) running	-	-	- History

Display stacked graph | Go (0)

Zabbix 2.4.6 Copyright 2001-2015 by Zabbix SIA

Connected as 'Admin'





zabbix.media-glass.es

ZABBIX

Help | Get support | Print | Profile | Logout

Monitoring | Inventory | Reports | Configuration | Administration
localhost

Dashboard | Overview | Web | Latest data | Triggers | Events | Graphs | Screens | Maps | Discovery | IT services
Search

History: Dashboard » Status of triggers » Latest events » Configuration of media types » Status of triggers

STATUS OF TRIGGERS [2015-08-30 17:43:01]

Triggers Group: Virtual machines | Host: all

Displaying 1 to 6 of 6 found

Show filter

<input type="checkbox"/>	Severity	Status	Info	Last change	Age	Acknowledged	Host	Name	Description
<input type="checkbox"/>	Disaster	PROBLEM		2015-08-30 17:39:54	3m 7s	Acknowledged (1)	Docker Host	Container Down	Add
<input type="checkbox"/>	Information	OK		2015-08-30 17:35:21	7m 40s	Acknowledged	Docker Host	Host name of zabbix_agentd was changed on Docker Host	Add
<input type="checkbox"/>	Information	OK		2015-08-30 17:35:20	7m 41s	Acknowledged	Docker Host	Version of zabbix_agent(d) was changed on Docker Host	Add
<input type="checkbox"/>	Information	OK		2015-08-30 17:35:02	7m 59s	Acknowledged	Docker Host	Host information was changed on Docker Host	Add
<input type="checkbox"/>	Information	OK		2015-08-30 17:35:01	8m	Acknowledged	Docker Host	Hostname was changed on Docker Host	Add
<input type="checkbox"/>	Warning	OK		2015-08-30 17:34:55	8m 6s	Acknowledged	Docker Host	/etc/passwd has been changed on Docker Host	Add

Bulk acknowledge | Go (0)

Zabbix 2.4.6 Copyright 2001-2015 by Zabbix SIA

Connected as 'Admin'

PROBLEM: Container Down — Inbox

zabbix@localhost.docker.dev Today 16:42

To: russ@mckendrick.io

PROBLEM: Container Down

Trigger: Container Down
Trigger status: PROBLEM
Trigger severity: Disaster
Trigger URL:

Item values:

1. Container 02multiple_web_1 is running (Docker Host:docker.up/02multiple_web_1): Down (0)
2. *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN*
3. *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN*

Original event ID: 149

Chapter 5: Querying with Sysdig

```
vagrant@docker:~ -- ssh -- 136x44
[vagrant@docker ~]$ curl -s https://s3.amazonaws.com/download.draios.com/stable/install-sysdig | sudo bash
* Detecting operating system
* Installing EPEL repository (for DKMS)
* Installing Draios public key
* Installing Draios repository
* Installing kernel headers
Delta RPMs disabled because /usr/bin/applydeltarpm not installed.
Warning: RPMDB altered outside of yum.
* Installing Sysdig
warning: /var/cache/yum/x86_64/7/epel/packages/dkms-2.2.0.3-30.git.7c3e7c5.e17.noarch.rpm: Header V3 RSA/SHA256 Signature, key ID 352c64e5: NOKEY
Public key for dkms-2.2.0.3-30.git.7c3e7c5.e17.noarch.rpm is not installed
Importing GPG key 0x352C64E5:
  Userid      : "Fedora EPEL (7) <epel@fedoraproject.org>"
  Fingerprint: 91e9 7d7c 4a5e 96f1 7f3e 888f 6a2f aea2 352c 64e5
  Package     : epel-release-7-5.noarch (installed)
  From        : /etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7

Creating symlink /var/lib/dkms/sysdig/0.1.104/source ->
                /usr/src/sysdig-0.1.104

DKMS: add completed.

Kernel preparation unnecessary for this kernel.  Skipping...

Building module:
  cleaning build area...
make KERNELRELEASE=3.10.0-229.7.2.el7.x86_64 -C /lib/modules/3.10.0-229.7.2.el7.x86_64/build M=/var/lib/dkms/sysdig/0.1.104/build...
  cleaning build area...

DKMS: build completed.

sysdig-probe:
Running module version sanity check.
- Original module
- No original module exists within this kernel
- Installation
- Installing to /lib/modules/3.10.0-229.7.2.el7.x86_64/extra/
Adding any weak-modules

depmod...

DKMS: install completed.
[vagrant@docker ~]$
```

```
vagrant@docker:~ -- ssh -- 136x13
[vagrant@docker ~]$
[vagrant@docker ~]$ sudo sysdig evt.type=chdir
8867 14:53:21.697963484 1 sshd (10824) > chdir
8868 14:53:21.697965885 1 sshd (10824) < chdir res=0 path=/
9238 14:53:21.700103157 0 sshd (10825) > chdir
9239 14:53:21.700105452 0 sshd (10825) < chdir res=0 path=/
14419 14:53:21.741002121 1 sshd (10827) > chdir
14420 14:53:21.741004159 1 sshd (10827) < chdir res=0 path=/home/vagrant
^[vagrant@docker ~]$ sudo sysdig -p"user:%user.name dir:%evt.arg.path" evt.type=chdir
user:vagrant dir://tmp
user:vagrant dir://monitoring_docker
[vagrant@docker ~]$
```

```
vagrant@docker:~ -- ssh -- 136x11
[vagrant@docker ~]$ sudo sysdig -w ~/monitoring-docker.scap
^[vagrant@docker ~]$ ls -lhat ~/monitoring-docker.scap
-rw-r--r-- 1 root root 2.0M Aug 31 15:00 /home/vagrant/monitoring-docker.scap
[vagrant@docker ~]$ sudo sysdig -r ~/monitoring-docker.scap -p"user:%user.name dir:%evt.arg.path" evt.type=chdir
user:root dir://
user:root dir://
user:vagrant dir://home/vagrant
user:vagrant dir://tmp
user:vagrant dir://monitoring_docker
[vagrant@docker ~]$
```

```

vagrant@docker:~ -- ssh -- 136x39
[vagrant@docker ~]$ sudo sysdig -r ~/monitoring-docker.scap -c lscntainers
container.type container.image container.name container.id
-----
docker tutum/haproxy wordpress_haproxy_1 2a379cc1d556
docker wordpress wordpress_wordpress 88069209d5eb
docker wordpress wordpress_wordpress 146b7188460a
docker mysql wordpress_mysql_1 f45bc2b70c0f
[vagrant@docker ~]$ sudo sysdig -r ~/monitoring-docker.scap -c topcontainers_cpu
CPU% container.name
-----
0.57% wordpress_wordpress1_1
0.37% host
0.29% wordpress_wordpress2_1
0.17% wordpress_mysql_1
0.09% wordpress_haproxy_1
[vagrant@docker ~]$ sudo sysdig -r ~/monitoring-docker.scap -c topprocs_cpu container.name contains wordpress
CPU% Process PID
-----
0.29% apache2 14526
0.29% apache2 14523
0.26% apache2 14561
0.17% mysqlld 14000
0.09% haproxy 14639
0.03% apache2 14147
0.00% apache2 14524
0.00% apache2 14645
0.00% apache2 14665
0.00% apache2 14662
[vagrant@docker ~]$ sudo sysdig -r ~/monitoring-docker.scap -c topcontainers_net
Bytes container.name
-----
144.54KB wordpress_mysql_1
104.08KB wordpress_wordpress1_1
60.78KB wordpress_wordpress2_1
41.69KB wordpress_haproxy_1
[vagrant@docker ~]$

```

```

vagrant@docker:~ -- ssh -- 136x28
Viewing: Processes For: whole machine
Source: Live System Filter: evt.type!=switch
PID CPU USER TH VIRT RES FILE NET Command
-----
14727 0.50 root 1 63K 11K 0 0.00 csysdig
14000 0.50 polkitd 23 845K 461K 0 0.00 mysqld
4414 0.00 root 22 1M 36K 256 0.00 /usr/bin/docker daemon -H fd://
14641 0.00 root 1 184K 20K 0 0.00 apache2 -DFOREGROUND
14647 0.00 root 1 53K 4K 0 0.00 sysdig -c lscntainers
13044 0.00 root 1 132K 5K 0 0.00 sshd: vagrant [priv]
14523 0.00 root 1 175K 11K 0 0.00 apache2 -DFOREGROUND
14525 0.00 root 1 184K 20K 0 0.00 apache2 -DFOREGROUND
14526 0.00 root 1 175K 11K 0 0.00 apache2 -DFOREGROUND
13047 0.00 vagrant 1 113K 2K 0 0.00 -bash
14562 0.00 root 1 188K 24K 0 0.00 apache2 -DFOREGROUND
14563 0.00 root 1 249K 12K 0 0.00 apache2 -DFOREGROUND
14147 0.00 root 1 174K 13K 0 0.00 apache2 -DFOREGROUND
1 0.00 root 1 53K 4K 0 0.00 /usr/lib/systemd/systemd --switched-root --system --deserialize 24
14564 0.00 root 1 184K 20K 0 0.00 apache2 -DFOREGROUND
14527 0.00 root 1 250K 14K 0 0.00 apache2 -DFOREGROUND
14662 0.00 root 1 175K 11K 0 0.00 apache2 -DFOREGROUND
14663 0.00 root 1 175K 11K 0 0.00 apache2 -DFOREGROUND
442 0.00 root 3 0 0 0 0.00 /usr/sbin/rsyslogd -n
14723 0.00 root 1 184K 20K 0 0.00 apache2 -DFOREGROUND
443 0.00 root 5 537K 16K 0 0.00 /usr/bin/python -Es /usr/sbin/tuned -l -P
14724 0.00 root 1 184K 20K 0 0.00 apache2 -DFOREGROUND
354 0.00 root 1 41K 2K 0 0.00 /usr/lib/systemd/systemd-udev
14639 0.00 root 1 29K 3K 0 0.00 /usr/sbin/haproxy -f /haproxy.cfg -db -q
F1Help F2Views F4Filter F5Echo F6Dig F7Legend CTRL+FSearch Pause 1/44(2.3%)

```

```

vagrant@docker:~ -- ssh -- 136x28
Viewing: Processes For: whole machine
Source: Live System Filter: evt.type!=switch
Select View Containers
Connections List all the containers running on this machine, and the resources that each of them uses.
Containers
Containers Errors Tips
Directories Select a container and click enter to drill down into it. At that point, you will be able to access several views that will show you the details of the selected container.
Errors
File Opens List
Files Columns
I/O by Type CPU: Amount of CPU used by the container.
New Connections PROCS: Number of processes currently running inside the container.
Page Faults THREADS: Number of threads currently running inside the container.
Processes VIRT: total virtual memory for the process (as kb).
Processes CPU RES: resident non-swapped memory for the process (as kb).
Processes Errors FILE: Total (input+output) file I/O bandwidth generated by the container, in bytes per second.
Processes FD Usage NET: Total (input+output) network bandwidth generated by the container, in bytes per second.
Server Ports IMAGE: Container image name.
Spy Syslog ID: Container ID. The format of this column depends on the containerization technology. For example, Docker ID are 12 characters hexadecimal digit strings.
Spy Users NAME: Name of the container.
System Calls
Threads
ID
containers
Filter
container.name != host
F1Help F2Views F4Filter F5Echo F6Dig F7Legend CTRL+FSearchp Pause 1/46(2.2%)

```

```

vagrant@docker:~ -- ssh -- 136x22
Viewing: Containers For: whole machine
Source: /home/vagrant/monitoring-docker.scap (29855 evts, 35.00s) Filter: container.name != host
CPU PROCS THREADS VIRT RES FILE NET IMAGE ID NAME
0.57 8 8 2M 148K 146K 2.97K wordpress 146b7188460a wordpress wordpress1_1
0.29 7 7 2M 136K 99K 1.74K wordpress 88069289d5eb wordpress wordpress2_1
0.17 1 20 845K 461K 226K 4.13K mysql f45bc2b70c0f wordpress_mysql_1
0.09 2 2 87K 18K 0 1.19K tutum/haproxy 2a379cc1d556 wordpress_haproxy_1
F1Help F2Views F4Filter F5Echo F6Dig F7Legend CTRL+FSearchp Pause 2/4(50.0%)

```

```

vagrant@docker:~ -- ssh -- 136x34
Viewing: I/O activity For: container.id="88069289d5eb" and proc.pid=14565
Source: /home/vagrant/monitoring-docker.scap (29855 evts, 35.00s) Filter: ((container.name != host) and container.id="88069289d5eb") and
----- Read 867B from 172.17.0.14:54703->172.17.0.13:80 (apache2)
GET / HTTP/1.1..Host: docker.media-glass.es..Accept: text/html,application/xhtml
----- Read 235B from /var/www/html/.htaccess (apache2)
# BEGIN WordPress.<IfModule mod_rewrite.c>.RewriteEngine On.RewriteBase /..Rewrit
----- Read 610B from /etc/hosts (apache2)
172.17.0.13.88069289d5eb.127.0.0.1.localhost.::1.localhost 1p6-localhost 1p6-loc
----- Read 4B from 172.17.0.13:42895->172.17.0.11:3306 (apache2)
J...
----- Read 74B from 172.17.0.13:42895->172.17.0.11:3306 (apache2)
.5.6.26.....:x31?((.....Hp)DxQkF)~$6.mysql_native_password.
----- Write 107B to 172.17.0.13:42895->172.17.0.11:3306 (apache2)
g.....root...d...8...G.....5...mysql_native_pass
----- Read 4B from 172.17.0.13:42895->172.17.0.11:3306 (apache2)
....
----- Read 7B from 172.17.0.13:42895->172.17.0.11:3306 (apache2)
F1Help F2View A5CTRL+FSearchp Pause BakBack c Clear CTRL+GGoTo 8/420(0.0%)

```

Chapter 6: Exploring Third Party Options

```
root@testing:~ -- ssh -- 181x48
[root@testing ~]# curl -fsS https://raw.githubusercontent.com/russmckendrick/monitoring-docker/master/chapter06/install_docker/install_docker.sh | bash
=> Installing docker-engine ...
=> Starting docker-engine ...
=> Installing docker-compose ...
=> Finished installation of Docker
[root@testing ~]# docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world

535020c3e8ad: Pull complete
af3d0544ed62: Pull complete
library/hello-world:latest: The image you are pulling has been verified. Important: image verification is a tech preview feature and should not be relied on to provide security.
Digest: sha256:02fee0c3220ba086531f606525eceb03f4feb54f62b207191b1c9209108dedd
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker Hub account:
https://hub.docker.com

For more examples and ideas, visit:
https://docs.docker.com/userguide/

[root@testing ~]#
```

```
root@server:~ -- ssh -- 133x40
[root@server ~]# curl -s https://s3.amazonaws.com/download.draios.com/stable/install-agent | sudo bash -s -- --access_key [REDACTED]
* Detecting operating system
* Installing Draios public key
* Installing Draios repository
* Installing kernel headers
* Installing Draios agent

Creating symlink /var/lib/dkms/sysdig/0.1.104/source ->
/usr/src/sysdig-0.1.104

DKMS: add completed.

Kernel preparation unnecessary for this kernel. Skipping...

Building module:
cleaning build area...
make KERNELRELEASE=3.10.0-229.11.1.el7.x86_64 -C /lib/modules/3.10.0-229.11.1.el7.x86_64/build M=/var/lib/dkms/sysdig/0.1.104/build...
cleaning build area...

DKMS: build completed.

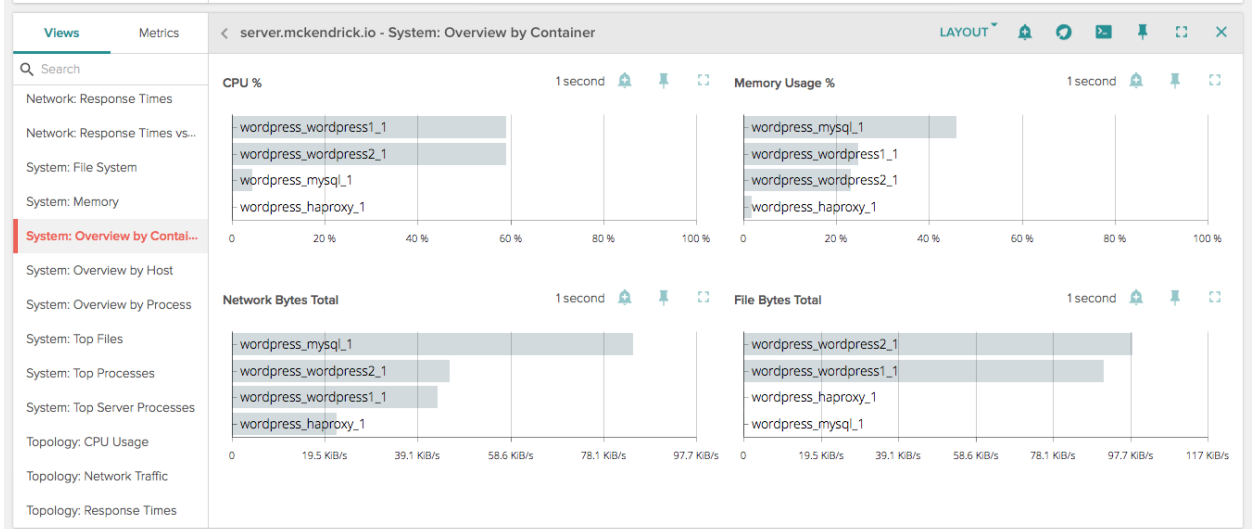
sysdig-probe:
Running module version sanity check.
- Original module
  - No original module exists within this kernel
- Installation
  - Installing to /lib/modules/3.10.0-229.11.1.el7.x86_64/extra/
Adding any weak-modules

depmod...

DKMS: install completed.
Starting dragent (via systemctl): [ OK ]
* Setting access key
Restarting dragent (via systemctl): [ OK ]
[root@server ~]#
```


Servers AWS Services < Overview Group by + 1 second Search

	Hostname ^	Instance Type	CPU %	Memory %	Network... KIB/s	Reqs In req/s	FS Disk... %	File By... KIB/s
Overview	server.mckendrick.io (4)	-	100.0	75.4	26.1	4.0	31.7	325.1
CPU/Memory	wordpress_hapr...	-	0	1.6	21.9	5.0	0	0
Requests Time Breakdown	wordpress_mysql...	-	4.1	45.8	84.1	105.0	0	0
Network	wordpress_word...	-	58.9	24.6	43.1	2.0	0	90.8
File I/O	wordpress_word...	-	58.9	23.0	45.6	2.0	0	98.0
Requests								
Forecast								



Servers AWS Services < Overview Group by + 5 minutes Search

Overview	Hostname	Instance Type	CPU %	Memory %	Network KIB/s	Reqs In req/s	FS Disk %	File By... KIB/s
CPU/Memory	server.mckendrick.io (4)	-	18.1	74.4	5.2	0	31.7	73.6
Requests Time Breakdown	wordpress_hapr...	-	0.1	1.6	2.2	1.0	0	0
Network	wordpress_mysql...	-	0.3	45.8	5.0	7.4	0	1.1
File I/O	wordpress_word...	-	0.6	24.1	0	0	0	1.3
Requests	wordpress_word...	-	6.2	23.0	5.0	0	0	14.5
Forecast								

Views Metrics < wordpress_mysql_1 (mysql) - App: MySQL/PostgreSQL LAYOUT

Search

- App: HTTP Top Requests
- App: JVM
- App: MongoDB
- App: MySQL/PostgreSQL**
- App: MySQL/PostgreSQL Top
- App: Nginx
- App: RabbitMQ
- App: Redis
- App: Tomcat
- Network: Connections Table
- Network: Overview
- Network: Response Times
- Network: Response Times vs...
- System: Container Overview
- System: Memory
- System: Overview by Process
- System: Top Processes
- System: Top Server Processes

Number of Requests 5 minutes

Average and Max Request Time 5 minutes

Top Queries by Number of Requests 5 minutes

```

SELECT option_value FROM wp_options WHERE option_name = 'widget_tag_cloud' L
SELECT option_value FROM wp_options WHERE option_name = 'widget_pages_LIMI
SELECT option_value FROM wp_options WHERE option_name = 'rewrite_rules' LIMI
SELECT SQL_CALC_FOUND_ROWS wp_posts.ID FROM wp_posts WHERE 1=1 AND w
SELECT wp_posts.* FROM wp_posts WHERE ID IN (1)
SELECT t.*, tr.object_id FROM wp_terms AS t INNER JOIN wp_term_taxonomy A
SELECT FOUND_ROWS()
SELECT option_value FROM wp_options WHERE option_name = 'current_theme' LIV
SELECT option_value FROM wp_options WHERE option_name = 'theme_mods_lwen

```

Slowest Tables 5 minutes

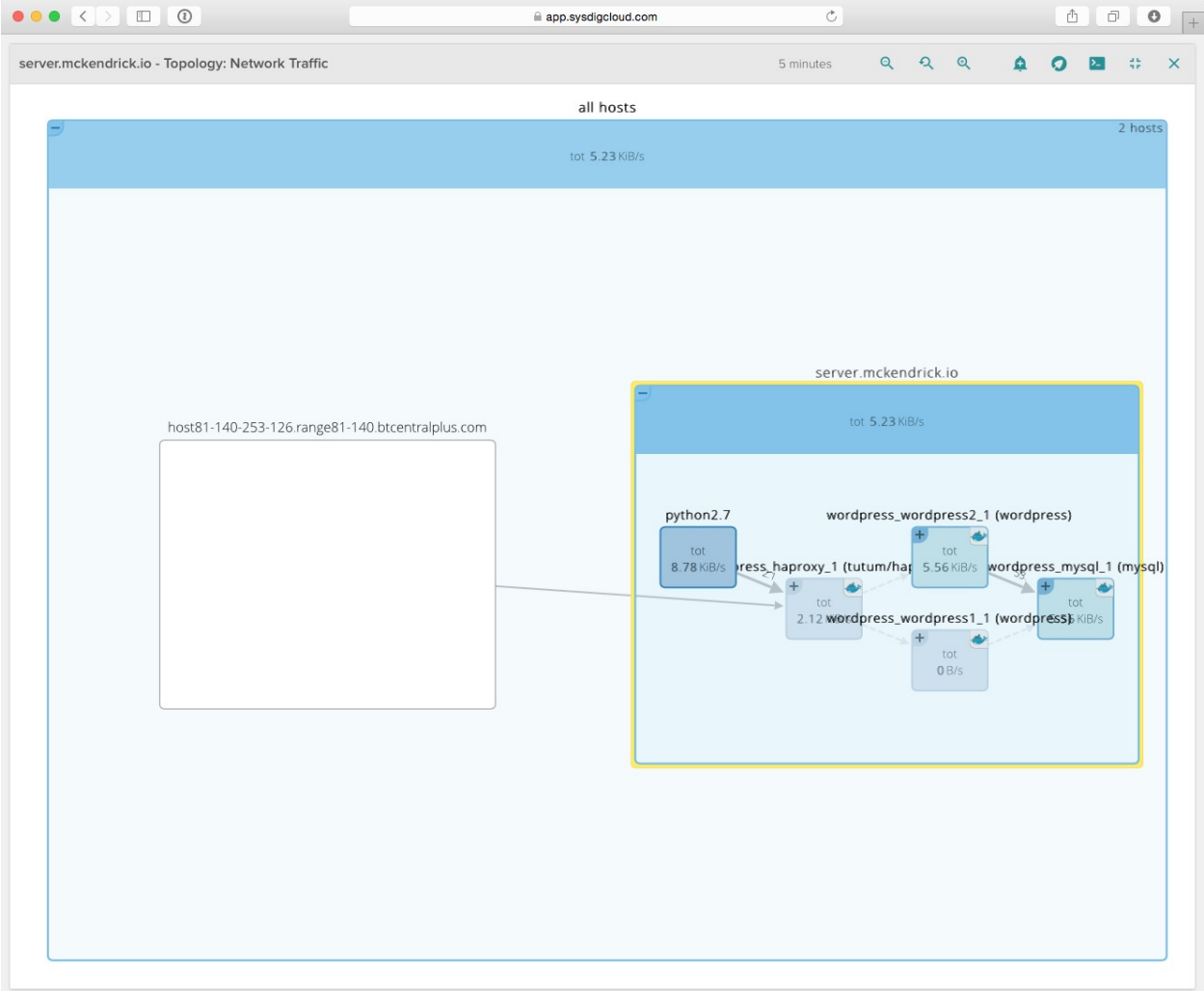
Slowest Queries 5 minutes

```

SELECT option_value FROM wp_options WHERE option_name = 'current_theme' LIV
SELECT * FROM wp_users WHERE ID = 11
UPDATE wp_options SET option_value = '142225874.6971149444580078125
SELECT option_value FROM wp_options WHERE option_name = 'rewrite_rules' LIMI
SHOW FULL COLUMNS FROM `wp_options`
SELECT option_name,option_value FROM wp_options WHERE autoload = 'yes'
SELECT t.*, tr.object_id FROM wp_terms AS t INNER JOIN wp_term_taxonomy A
SELECT option_value FROM wp_options WHERE option_name = 'widget_tag_cloud' L
SELECT option_value FROM wp_options WHERE option_name = 'WPBANC' LIMI 1
SELECT YEAR(post_date) AS `year`, MONTH(post_date) AS `month`, count(ID) as p

```

Top Tables by Number of Requests 5 minutes



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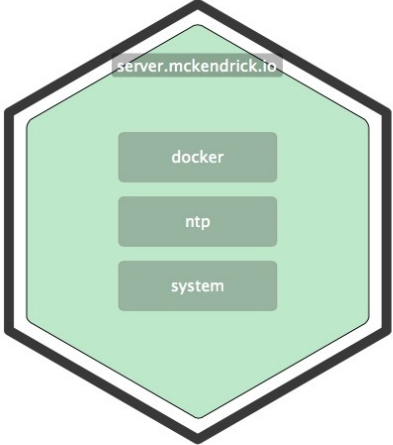
 Chef + Available	 Consul + Available	 Couchbase + Available	 CouchDB + Available
 Desk + Available	 Docker Docker is an open-source project that automates the deployment of applications inside software containers. + Install	 Dyn + Available	 elasticsearch. Elasticsearch + Available
 etcd + Available	 Microsoft Event Viewer + Available	 express.js Express + Available	 Fabric + Available
 Fastly + Available	 FlowDock + Available	 fluentd + Available	 Gearman + Available

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You are 40% done setting up. **Unleash the dog** You have 10 days left in your trial. **Upgrade**

Filter by Group hosts by tags Fill by: % CPU... avg Click or press for TV mode



server.mckendrick.io

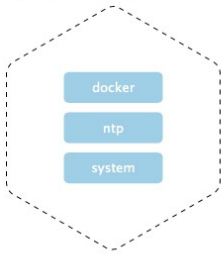
docker

ntp

system

server.mckendrick.io (dashboard) Mute host

Apps (click to see metrics)



docker

ntp

system

Agent
Datadog Agent: v5.5.0

System
GNU/Linux - 1 CPU - 46.101.5.164 - 0.97GB - 31.34GB

Tags
User Edit Tags

Metrics (as of 7 mins ago)
% CPU utilized 1 %

Updated 3 mins ago | Copyright Datadog, Inc. 2015 - Terms - Privacy Contact us!

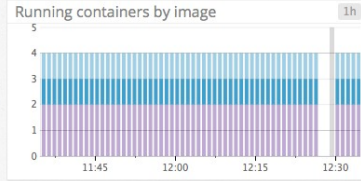
Docker

Containers

This dashboard requires the Datadog Agent 5.1 or above with "new_tag_names" option set to "true".

Running container: 5m
80%

Running container 5m
4
Stopped container 5m
1

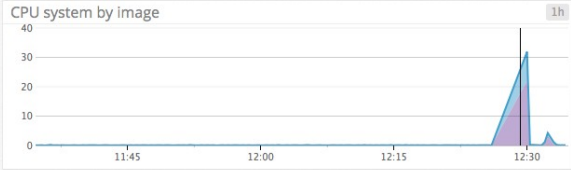
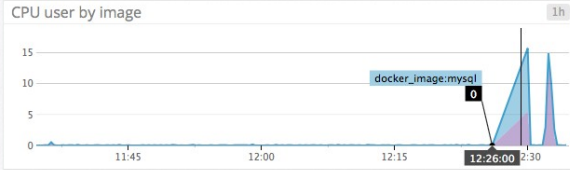
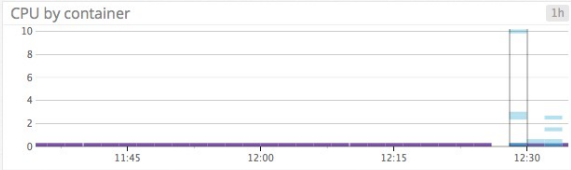


- tutum/haproxy 1 start, 1 create on server.mckendrick.io (5 mins ago)
- wordpress 2 start, 2 create on server.mckendrick.io (5 mins ago)
- mysql 1 start, 1 create on server.mckendrick.io (5 mins ago)
- mysql 1 destroy on server.mckendrick.io (7 mins ago)
- wordpress 1 destroy on server.mckendrick.io (7 mins ago)

CPU

Most CPU-intensive containers (1h)

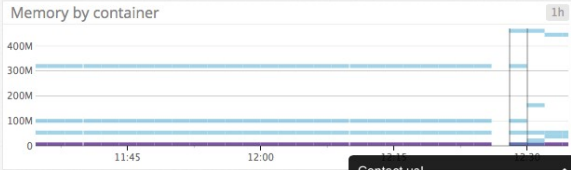
10.21	wordpress_mysql_1, wordpress_wordp
8.63	wordpress_haproxy_1/wordpress2, wo...
5.58	wordpress_haproxy_1/wordpress1, wo...
0.47	root_haproxy_1/root_wordpress2_1, r...
0.05	root_haproxy_1



Memory

Most RAM-intensive containers (1h)

470.64M	wordpress_mysql_1, wordpress_wo
327.08M	root_mysql_1, root_wordpress1_1/...
98.64M	root_haproxy_1/root_wordpress2_...
83.15M	wordpress_haproxy_1/wordpress2_...
60.12M	root_haproxy_1/root_wordpress1_...



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Search Events... Show 7d Sep 12, 4:00PM - Sep 19, 4:00PM

FROM: All, Datadog, Docker, Feed, Monitor Alert, My Apps, Users

PRIORITY: All, Normal, Low

STATUS: All, Error, Warning, Success, Info

11 events

19 matching events from Sep 12, 4:00PM - Sep 19, 4:00PM

Leave a status update... [Post](#)

Russ Mckendrick
[docker.cpu.user with docker_image:mysql](#)

Doing a BIG query in the database !!!
 1 min ago · [View](#) · [Add comment](#) · [Lower priority](#) · [Edit](#)

server.mckendrick.io's Datadog Agent has started #host:server.mckendrick.io
 See server.mckendrick.io's [dashboard](#)
 Updated 27 mins ago · Created 33 mins ago · [Add comment](#) · [Lower priority](#)
 2 events

tutum/haproxy 1 start, 1 create on server.mckendrick.io #host:server.mckendrick.io
 tutum/haproxy 1 start, 1 create on server.mckendrick.io

```
START 0ad04f1d6f1d wordpress_haproxy_1
CREATE 0ad04f1d6f1d wordpress_haproxy_1
```

Updated 1 hour ago · Created 1 hour ago · [Add comment](#) · [Lower priority](#)
 3 events

wordpress 2 start, 2 create on server.mckendrick.io #host:server.mckendrick.io
 wordpress 2 start, 2 create on server.mckendrick.io

```
START 2d15d4479d2a wordpress_haproxy_1/wordpress2
CREATE 2d15d4479d2a wordpress_haproxy_1/wordpress2
START 30c6eb6ecb41 wordpress_haproxy_1/wordpress1
CREATE 30c6eb6ecb41 wordpress_haproxy_1/wordpress1
```

Updated 1 hour ago · Created 1 hour ago · [Add comment](#) · [Lower priority](#)
 4 events

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New Relic. APM BROWSER SYNTHETICS MOBILE **SERVERS** PLUGINS INSIGHTS Alerts Beta Tools Help Russ Mckendrick - russm...

Servers Alerts

Filter servers Show labels [Add more](#)

Name	CPU	Disk IO	Memory	Fullest disk
server.mckendrick.io	3.67%	0.11%	73.3% 728 MB / 993 MB	0% 0 bytes free

1 Servers 1 - 1 of 1

Recent events

All [🔥](#) [🗑️](#) [⚠️](#) [📄](#) [🔍](#) [🔄](#)

In-Progress

SERVER.MCKENDRICK.IO
 Memory > 70%
 Non-critical problem 12:03

[Kiosk mode](#) [Permalink](#)

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New Relic APM BROWSER SYNTHETICS MOBILE **SERVICES** PLUGINS INSIGHTS Alerts Beta Tools Help Russ Mckendrick - russm...

Servers Alerts

SERVICES server.mckendrick.io TIME PICKER Last 30 minutes ending now

SERVICES

SERVER

Overview

Processes

Network

Disks

Docker

ALERTS

CPU usage

100 %

14:45 14:50 14:55 15:00 15:05 15:1

User IO Wait System

Physical memory

100 %

14:45 14:50 14:55 15:00 15:05 15:1

Swap Used

Disk I/O utilization

100 %

14:45 14:50 14:55 15:00 15:05 15:1

All vda1

Network I/O (Kb/s)

20

14:45 14:50 14:55 15:00 15:05 15:1

Transmitted Received

Load average

14:45 14:50 14:55 15:00 15:05 15:1

server.mckendrick.io

1 cores
993 MB RAM

Intel Xeon

CentOS Linux release 7.1.1503 (Core)

Linux 3.10.0-229.14.1.el7.x86_64
x86_64
New Relic agent 2.1.0.124

Apps

Response time Throughput Errors

This server isn't hosting any apps that report to New Relic

Processes

Process	User	Count	CPU	Memory
mysqld	polkitd	1	0.1%	453 MB
python	dd-agent	3	1.1%	72.3 MB
apache2	root	2	0.0%	25.3 MB
docker	root	1	1.7%	22.9 MB
firewalld	root	1	0.0%	18.8 MB

Show 19 more...

server.mckendrick.io CPU 3.5% Mem 72.7% Net 7.81 Kb/s Disk IO 0.1% server.mckendrick.io events

SERVERS
server.mckendrick.io

SERVER

- Overview
- Processes
- Network
- Disks
- Docker**

ALERTS >

TIME PICKER
Last 30 minutes ending now

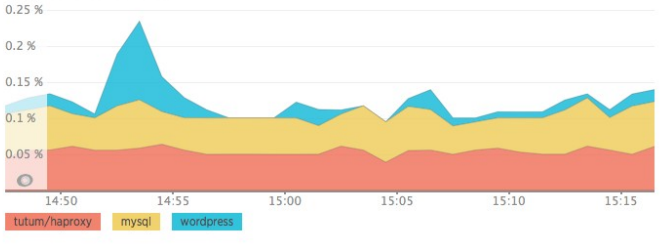
Docker Images

Sort By CPU

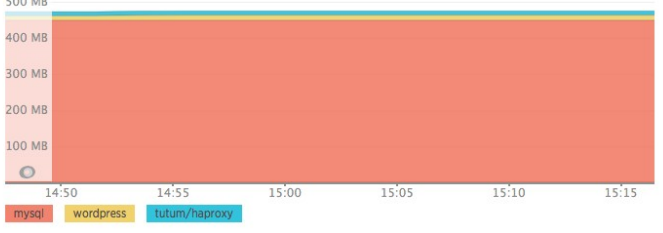
tutum/haproxy	0.05%
mysql	0.05%
wordpress	0.02%

View as table

Top 5 CPU consumers



Top 5 memory consumers



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New Relic APM BROWSER SYNTHETICS MOBILE **SERVICES** PLUGINS INSIGHTS Alerts Beta Tools Help Russ Mckendrick - russm...

Servers Alerts

SERVICES server.mckendrick.io TIME PICKER Last 30 minutes ending now

SERVER

- Overview
- Processes
- Network
- Disks
- Docker**
- ALERTS

Docker Images

Sort By CPU

tutum/haproxy	0.06%
mysql	0.05%
wordpress	0.01%

View as table

wordpress

0.0% CPU USAGE 13.9 MB MEMORY USAGE 2 CONTAINERS RUNNING

CPU

Memory

server.mckendrick.io CPU 4.5% Mem 74.1% Net 7.81 Kb/s Disk IO 0.2%

Chapter 7: Collecting Application Logs from within the Container

```
vagrant@docker:monitoring_docker/chapter05/wordpress — ssh · vagrant ssh — 181x36
[vagrant@docker ~]$ cd /monitoring_docker/chapter05/wordpress/
[vagrant@docker wordpress]$ docker-compose up -d
Creating wordpress_mysql_1...
Creating wordpress_wordpress1_1...
Creating wordpress_wordpress2_1...
Creating wordpress_haproxy_1...
[vagrant@docker wordpress]$ docker-compose ps
-----
Name                                Command                                State      Ports
-----
wordpress_haproxy_1                 python /haproxy/main.py                Up         1936/tcp, 443/tcp, 0.0.0.0:80->80/tcp
wordpress_mysql_1                   /entrypoint.sh mysqld                  Up         3306/tcp
wordpress_wordpress1_1               /entrypoint.sh apache2-for ...         Up         80/tcp
wordpress_wordpress2_1               /entrypoint.sh apache2-for ...         Up         80/tcp
[vagrant@docker wordpress]$ docker logs wordpress_wordpress1_1
WordPress not found in /var/www/html - copying now...
WARNING: /var/www/html is not empty - press Ctrl+C now if this is an error!
+ ls -A
index.html
+ sleep 10
Complete! WordPress has been successfully copied to /var/www/html
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.6. Set the 'ServerName' directive globally to suppress this message
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.6. Set the 'ServerName' directive globally to suppress this message
[Sat Oct 10 10:13:54.201635 2015] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.10 (Debian) PHP/5.6.14 configured -- resuming normal operations
[Sat Oct 10 10:13:54.201654 2015] [core:notice] [pid 1] AH00094: Command line: 'apache2 -D FOREGROUND'
[vagrant@docker wordpress]$
```

```
vagrant@docker:monitoring_docker/chapter05/wordpress — ssh · vagrant ssh — 174x33
[vagrant@docker wordpress]$ docker logs --tail="2" wordpress_wordpress1_1
172.17.0.8 - - [10/Oct/2015:11:51:11 +0000] "GET /wp-admin/js/user-profile.min.js?ver=4.3.1 HTTP/1.1" 200 2397 "http://192.168.33.10/wp-admin/install.php" "Mozilla/5.0 (Macin
tosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
172.17.0.8 - - [10/Oct/2015:11:51:11 +0000] "GET /wp-admin/images/wordpress-logo.svg?ver=20131107 HTTP/1.1" 304 136 "http://192.168.33.10/wp-admin/install.php" "Mozilla/5.0 (
Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
[vagrant@docker wordpress]$ docker logs --tail="2" --timestamps wordpress_wordpress1_1
2015-10-10T11:51:11.377214784Z 172.17.0.8 - - [10/Oct/2015:11:51:11 +0000] "GET /wp-admin/js/user-profile.min.js?ver=4.3.1 HTTP/1.1" 200 2397 "http://192.168.33.10/wp-admin/i
ninstall.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
2015-10-10T11:51:11.391426688Z 172.17.0.8 - - [10/Oct/2015:11:51:11 +0000] "GET /wp-admin/images/wordpress-logo.svg?ver=20131107 HTTP/1.1" 304 136 "http://192.168.33.10/wp-ad
min/install.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
[vagrant@docker wordpress]$ docker logs --since="5m00s" --timestamps wordpress_wordpress1_1
2015-10-10T12:30:09.559777855Z 172.17.0.8 - - [10/Oct/2015:12:30:09 +0000] "GET /wp-admin/install.php HTTP/1.1" 200 3308 "-" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) Ap
pleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
2015-10-10T12:30:09.623606063Z 172.17.0.8 - - [10/Oct/2015:12:30:09 +0000] "GET /wp-includes/css/dashicons.min.css?ver=4.3.1 HTTP/1.1" 200 28849 "http://192.168.33.10/wp-admi
n/install.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
2015-10-10T12:30:09.646354468Z 172.17.0.8 - - [10/Oct/2015:12:30:09 +0000] "GET /wp-includes/js/jquery/jquery-migrate.min.js?ver=1.2.1 HTTP/1.1" 200 3375 "http://192.168.33.1
0/wp-admin/install.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
2015-10-10T12:30:09.648337815Z 172.17.0.8 - - [10/Oct/2015:12:30:09 +0000] "GET /wp-includes/js/wp-util.min.js?ver=4.3.1 HTTP/1.1" 200 894 "http://192.168.33.10/wp-admin/inst
all.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
2015-10-10T12:30:10.027476539Z 172.17.0.8 - - [10/Oct/2015:12:30:09 +0000] "GET /wp-includes/js/zxcvbn.min.js HTTP/1.1" 200 330703 "http://192.168.33.10/wp-admin/install.php"
"Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
[vagrant@docker wordpress]$
```

```
vagrant@docker:/monitoring_docker/chapter07/elk — ssh • vagrant ssh — 122x24
[vagrant@docker elk]$ docker-compose ps

```

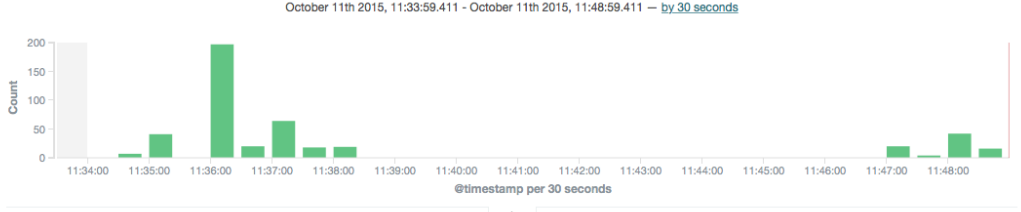
Name	Command	State	Ports
elk_elasticsearch_1	/docker-entrypoint.sh elas ...	Up	0.0.0.0:9200->9200/tcp, 9300/tcp
elk_kibana_1	/docker-entrypoint.sh /tmp ...	Up	0.0.0.0:8080->5601/tcp
elk_logspout_1	/bin/logspout	Up	8000/tcp
elk_logstash_1	/docker-entrypoint.sh logs ...	Up	0.0.0.0:5000->5000/tcp

```
[vagrant@docker elk]$
```

logstash*

448 hits

- Selected Fields
- ? _source
- Available Fields
- @timestamp
 - @version
 - _id
 - _index
 - _type
 - docker.hostname
 - docker.id
 - docker.image
 - docker.name
 - host
 - message



```

Time  _source
October 11th 2015, 11:48:58.854  message: {"name":"Kibana","hostname":"f4ef5bbe1c48","pid":7,"level":30,"req":{"method":"GET","url":"/","headers":{"host":"192.168.33.10:8080","accept-encoding":"gzip, deflate","accept":"text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8","user-agent":"Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"},"accept-language":"en-us","cache-control":"max-age=0","connection":"keep-alive"},"remoteAddress":"192.168.33.1","remotePort":62210},"res":{"sta
October 11th 2015, 11:48:44.730  message: 172.17.0.17 - - [11/Oct/2015:10:48:44 +0000] "GET /wp-admin/js/password-strength-meter.min.js?v=4.3.1 HTTP/1.1" 200 757 "http://192.168.33.10/wp-admin/install.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56" docker.name: /wordpress_wordpress1_1 docker.id: 738882e085360191101a5e9947de7f8379fb4b0cebe03fd13f53cf5258e16dbf docker.image: wordpress docker.hostname: 738882e08536 @version: 1 @timestamp: October 11th 2015, 11:
    
```

[Link to /logstash-2015.10.11/logs/AV8WhFgsZLEwjfXlc_n3](#)

Field	Value
@timestamp	October 11th 2015, 11:48:44.730
@version	1
_id	AV8WhFgsZLEwjfXlc_n3
_index	logstash-2015.10.11
_type	logs
docker.hostname	738882e08536
docker.id	738882e085360191101a5e9947de7f8379fb4b0cebe03fd13f53cf5258e16dbf
docker.image	wordpress
docker.name	/wordpress_wordpress1_1
host	172.17.0.12
message	172.17.0.17 - - [11/Oct/2015:10:48:44 +0000] "GET /wp-admin/js/password-strength-meter.min.js?v=4.3.1 HTTP/1.1" 200 757 "http://192.168.33.10/wp-admin/install.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"
message	172.17.0.17 - - [11/Oct/2015:10:48:44 +0000] "GET /wp-admin/images/spinner.gif HTTP/1.1" 304 137 "http://192.168.33.10/wp-admin/install.php" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11) AppleWebKit/601.1.56 (KHTML, like Gecko) Version/9.0 Safari/601.1.56"

```
root@server:~/docker-logentries — ssh server — 181x48
[root@server ~]# git clone https://github.com/logentries/docker-logentries.git
Cloning into 'docker-logentries'...
remote: Counting objects: 182, done.
remote: Total 182 (delta 0), reused 0 (delta 0), pack-reused 182
Receiving objects: 100% (182/182), 219.53 KiB | 381.00 KiB/s, done.
Resolving deltas: 100% (105/105), done.
[root@server ~]# cd docker-logentries
[root@server docker-logentries]# docker build -t docker-logentries .
Sending build context to Docker daemon 498.2 kB
Step 0 : FROM node:0.12-onbuild
0.12-onbuild: Pulling from library/node
843e2bed498: Pull complete
8c0bacfb375: Pull complete
8b45fe88b46b: Pull complete
29b348f4d568: Extracting [=====] 36.21 MB/42.34 MB
16b189cc8c6: Download complete
09b553853302: Download complete
7ad4d0983ded: Download complete
8f213c11713: Download complete
037f223f1a9: Download complete
a4b45afffe4a: Download complete
e710775d8328: Download complete
c017b6947c2d: Download complete
454a566508e9: Download complete
9455a1b0478d: Download complete
97872b9ea4b9: Download complete
3f0b01a1a88e: Download complete
[]
```

Log Sets / monitoring-docker / Docker Log

Search logs [Group By] [Calculate] [10/10/2015 09:05 - 10/10/2015 10:05] Find

Entries | Graphs | Tags & Alerts | Settings

15
10
5
0
9:05 9:10 9:15 9:20 9:25 9:30 9:35 9:40 9:45 9:50 9:55 10:00

All | 509 | Container created | 4 | Container died | 4 | Container killed | 46 | Container started | 8

```
10 Oct 2015 09:55:56.487 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:57.235 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:57.672 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:57.872 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:58.200 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:58.550 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:58.863 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:59.405 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:59.686 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:59.873 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:55:59.998 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:56:00.167 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:56:00.267 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:57:12.705 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:57:12.986 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:57:13.592 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:57:13.785 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:57:15.121 {"id": "7964bdf5032e4f37ed4014fd6c9e9e9613cb9670d79d0c0c8fe22024c3b05b48", "type": "kill", "image": "62eff9c180fce3a652b233277a0fc3a498db7e4f"}
10 Oct 2015 09:58:32.544 {"id": "da19064d3d3d4d1e207e551713bed92dcl3c515d05440a0b19799dd117fbf8", "type": "create", "image": "9726f738a97ab74feb22704dc6d0f64a409b95"}
10 Oct 2015 09:58:33.007 {"id": "da19064d3d3d4d1e207e551713bed92dcl3c515d05440a0b19799dd117fbf8", "type": "start", "image": "9726f738a97ab74feb22704dc6d0f64a409b95"}
10 Oct 2015 09:58:33.139 {"id": "da19064d3d3d4d1e207e551713bed92dcl3c515d05440a0b19799dd117fbf8", "type": "attach", "image": "9726f738a97ab74feb22704dc6d0f64a409b95"}
10 Oct 2015 09:58:33.359 {"v": 0, "id": "da19064d3d3d", "image": "mysql", "name": "wordpress_mysql_1", "line": "Running mysql_install_db", "host": "7964bdf5032e"}
10 Oct 2015 09:58:33.622 {"v": 0, "id": "da19064d3d3d", "image": "mysql", "name": "wordpress_mysql_1", "line": "2015-10-10 08:58:49 0 [Note] /usr/sbin/mysqld (mysqld"}
10 Oct 2015 09:58:33.622 {"v": 0, "id": "da19064d3d3d", "image": "mysql", "name": "wordpress_mysql_1", "line": "2015-10-10 08:58:49 0 [Note] /usr/sbin/mysqld (mysqld"}
10 Oct 2015 09:58:33.622 {"v": 0, "id": "da19064d3d3d", "image": "mysql", "name": "wordpress_mysql_1", "line": "2015-10-10 08:58:49 0 [Note] /usr/sbin/mysqld (mysqld"}
10 Oct 2015 09:58:33.622 {"v": 0, "id": "da19064d3d3d", "image": "mysql", "name": "wordpress_mysql_1", "line": "2015-10-10 08:58:49 0 [Note] /usr/sbin/mysqld (mysqld"}
28 DAYS left in trial
```

Chapter 8: What Are the Next Steps?

There is no image in this chapter.