JMeter 3.2 + InfluxDB + Grafana with Alert

Using

Docker Containers

# **Prerequisites:**

* Ubuntu Server 16.x (VM on Virtual Box)
* Docker installed on Ubuntu
* JMeter 3.2 installed on Ubuntu and on a Mac or Windows system (to edit JMeter test plan)
* Access to my GitHub repository (for sample JMeter test plan) - https://github.com/smarigowda/learnDocker

# **GitHub repository**

**git clone https://github.com/smarigowda/learnDocker.git**

# **InfluxDB docker container**

Create a directory named influxDBData

Change directory into influxDBData and run the following command

**cd influxData**

**docker run -d --name=influxdb -p 8083:8083 -p 8086:8086 -v $PWD:/var/lib/influxdb influxdb**

# **influxdb client**

Run another container for influxdb client

**docker run --rm --link=influxdb -it influxdb influx -host influxdb**

You should see a command prompt (of influxdb client)

Run the following command to create a database inside the container

**> create database jmeterInfluxDBContainer**

Ref:

<https://docs.influxdata.com/influxdb/v0.9/tools/shell/>

<https://docs.influxdata.com/influxdb/v0.9/introduction/getting_started/>

# **Oracle java8 jdk on Ubuntu**

JMeter 3.2 requires java 8. Find below the steps to install Java 8 jdk on Ubuntu.

sudo add-apt-repository ppa:webupd8team/java

sudo apt-get update

sudo apt-get install oracle-java8-installer

**santosh@ubuntu:~/SAN/learnDocker$** java -version

java version "1.8.0\_131"

Java(TM) SE Runtime Environment (build 1.8.0\_131-b11)

Java HotSpot(TM) 64-Bit Server VM (build 25.131-b11, mixed mode)

**santosh@ubuntu:~/SAN/learnDocker$**

# **Grafana docker container**

Run the following command to start a docker container running Grafana

docker run -d -i -p 3000:3000 grafana/grafana

Browse the following url, it should display the login screen of Grafana. Replace 10.189.133.50 with your virtual machine IP

<http://10.189.133.50:3000/>

Configure Grafana to use Influx DB

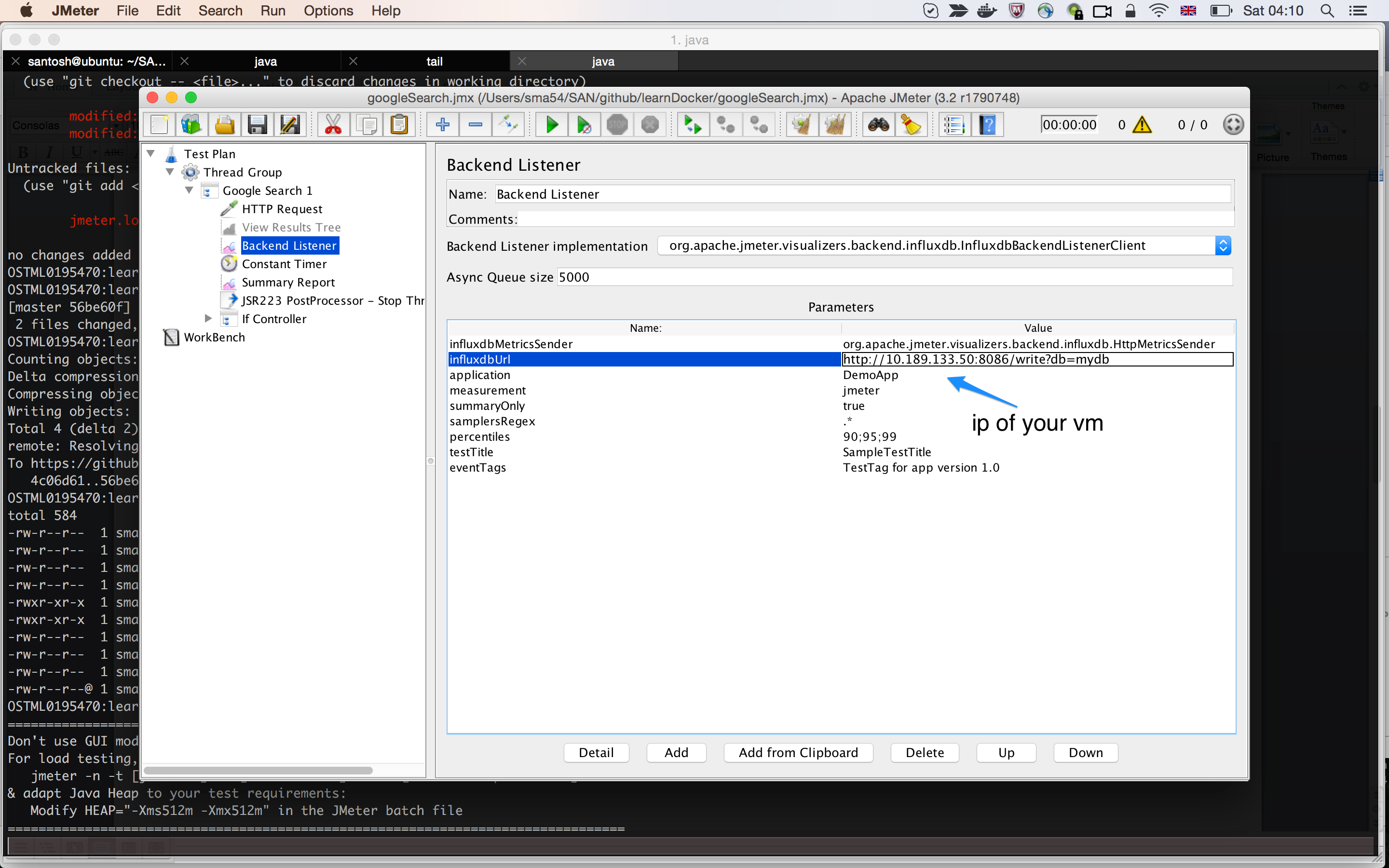
Login to Grafana using default user admin/admin

* click on Add Datasource
* Select Type as InfluxDB
* Set the url to <http://10.189.133.50:8086> (Replace 10.189.133.50 with your vm IP)
* Provide some Name (ex: jmeterInfluxDB)
* Influx DB Details: Fill in Database as jmeterInfluxDBContainer
* Click on Add
* Click on Save & Test
* You should see a message ‘Success Data source is Working’

# **Create JMeter Test Plan (Mac/ Windows)**

Refer the JMeter test plan googleSearch.jmx in my github repository

A screenshot of JMeter test plan is given below. Click on Backend Listener and (**1**) update the IP address of influxDB with your Virtual Machine IP (**2**) update the db name in the url to match the influxDB name

****

# **Run JMeter test**

Run the JMeter test plan in GUI mode on Windows/ Mac

jmeter-t googleSearch.jmx

**Or**

Run the JMeter test plan in non-GUI mode on Ubuntu server.

jmeter -n -t googleSearch.jmx &

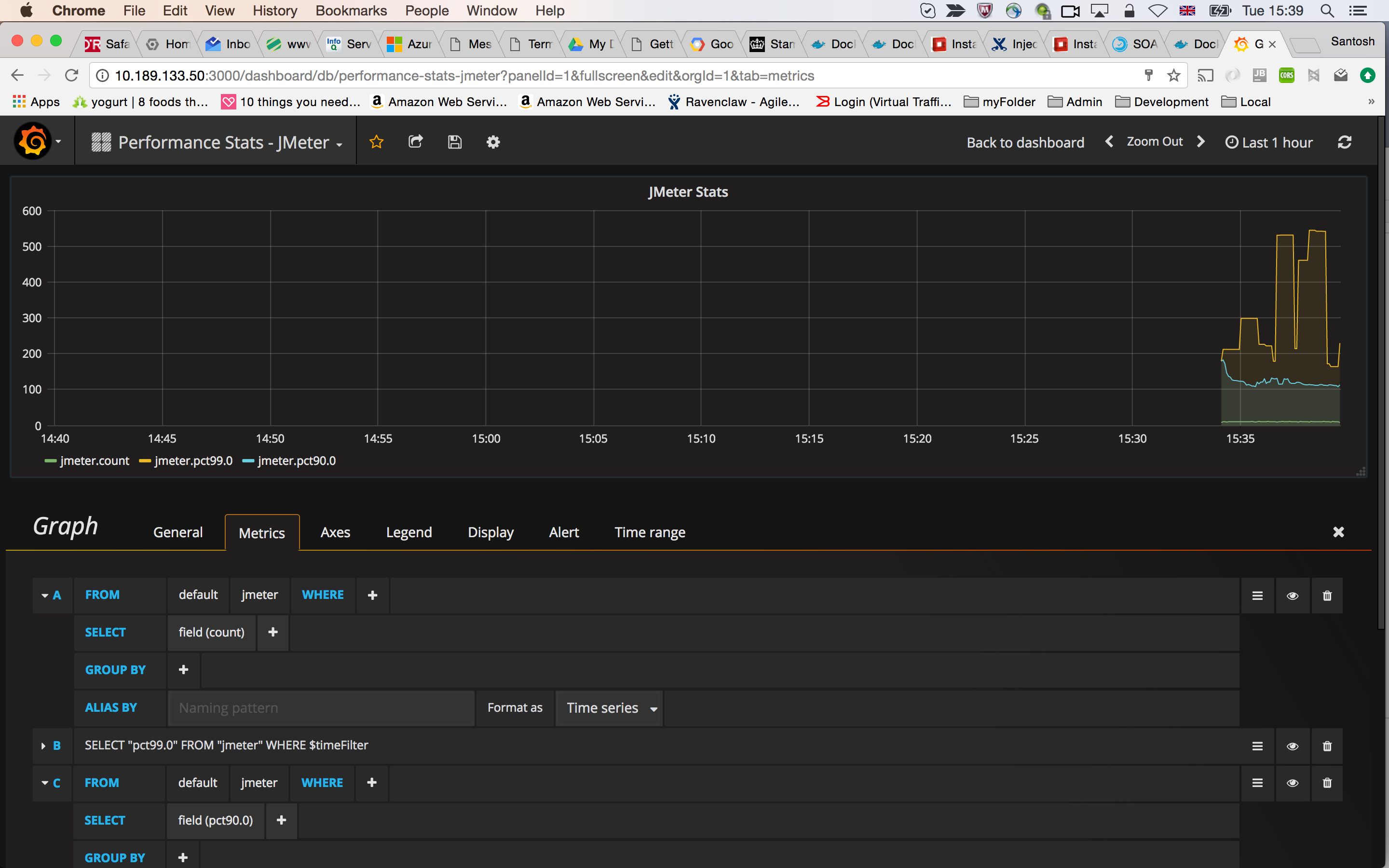
-n specifies JMeter is to run in non-GUI mode.

# **View stats in Grafana**

While the test is running, you can see the stats in Grafana and you can create graphs. Create a graph to plot 99th, 95th Percentiles, Count of transactions and check if they match with the JMeter report.

# **Grafana Dashboard for JMeter Statistics**

A sample Grafana dashboard for JMeter statistics is given below.

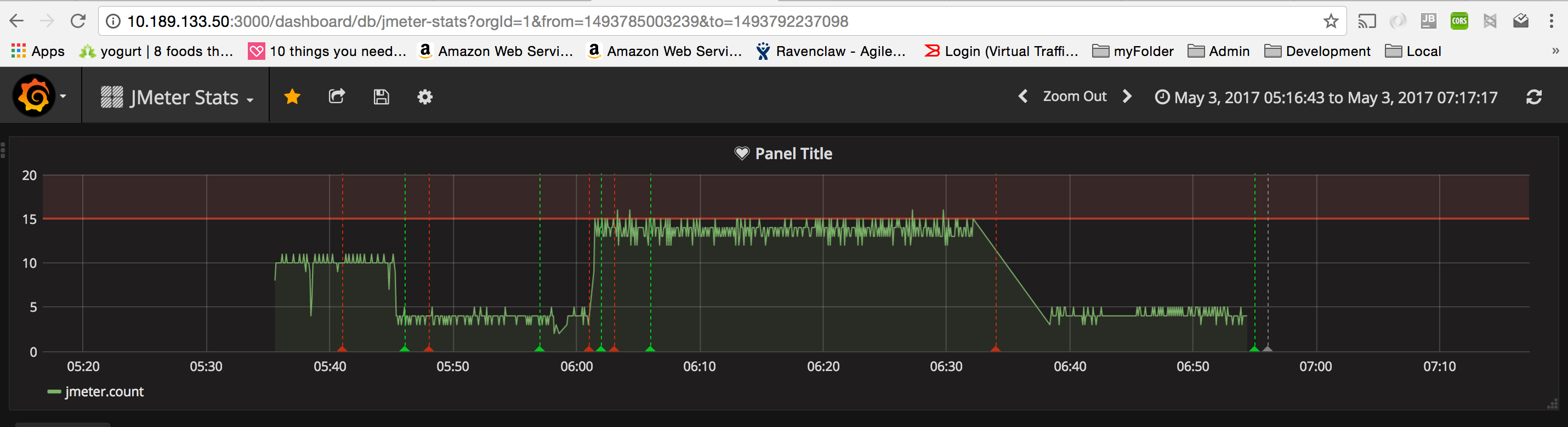


# **Alerts in Grafana**

"channel": "#lakitu-notifications"

Grafana sends notifications on state changes, so OK -> Alerting, Alerting -> OK, OK -> NoData, etc

<https://hooks.slack.com/services/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>



**Notes**

**# JMeter 3.2:**

santosh@ubuntu:~/SAN/learnDocker$ **which jmeter**

/home/santosh/SAN/Software/apache-jmeter-3.2/bin/jmeter

santosh@ubuntu:~/SAN/learnDocker$

**# Starting influx db container:**

santosh@ubuntu:~/SAN/influxData$ **docker ps**

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

12d066413667 influxdb "/entrypoint.sh in..." 38 seconds ago Up 37 seconds 0.0.0.0:8083->8083/tcp, 0.0.0.0:8086->8086/tcp romantic\_austin

santosh@ubuntu:~/SAN/influxData$

**# Influx Commandline**

santosh@ubuntu:~/SAN/influxData$ influx

Visit https://enterprise.influxdata.com to register for updates, InfluxDB server management, and monitoring.

Connected to http://localhost:8086 version 1.2.2

InfluxDB shell 0.10.0

>