JMeter 3.2 + InfluxDB + Grafana

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

# **Clone GitHub repository**

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

# **Run InfluxDB docker container**

Create a directory named influxDBData

Change directory into influxDBData and run the following command

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

# **Install influxdb-client on Ubuntu**

sudo apt-get update

sudo apt-get install influxdb-client

Using influx cli create a database named jmeterInfluxDB

$ influx -execute 'SHOW DATABASES'

$ influx

> show databases

> create database jmeterInfluxDB

> show databases

> exit

References:

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

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

# **Install Oracle java8 (jdk) on Ubuntu**

JMeter 3.2 requires java 8. Find below the steps to install Java 8 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$**

# **Run 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

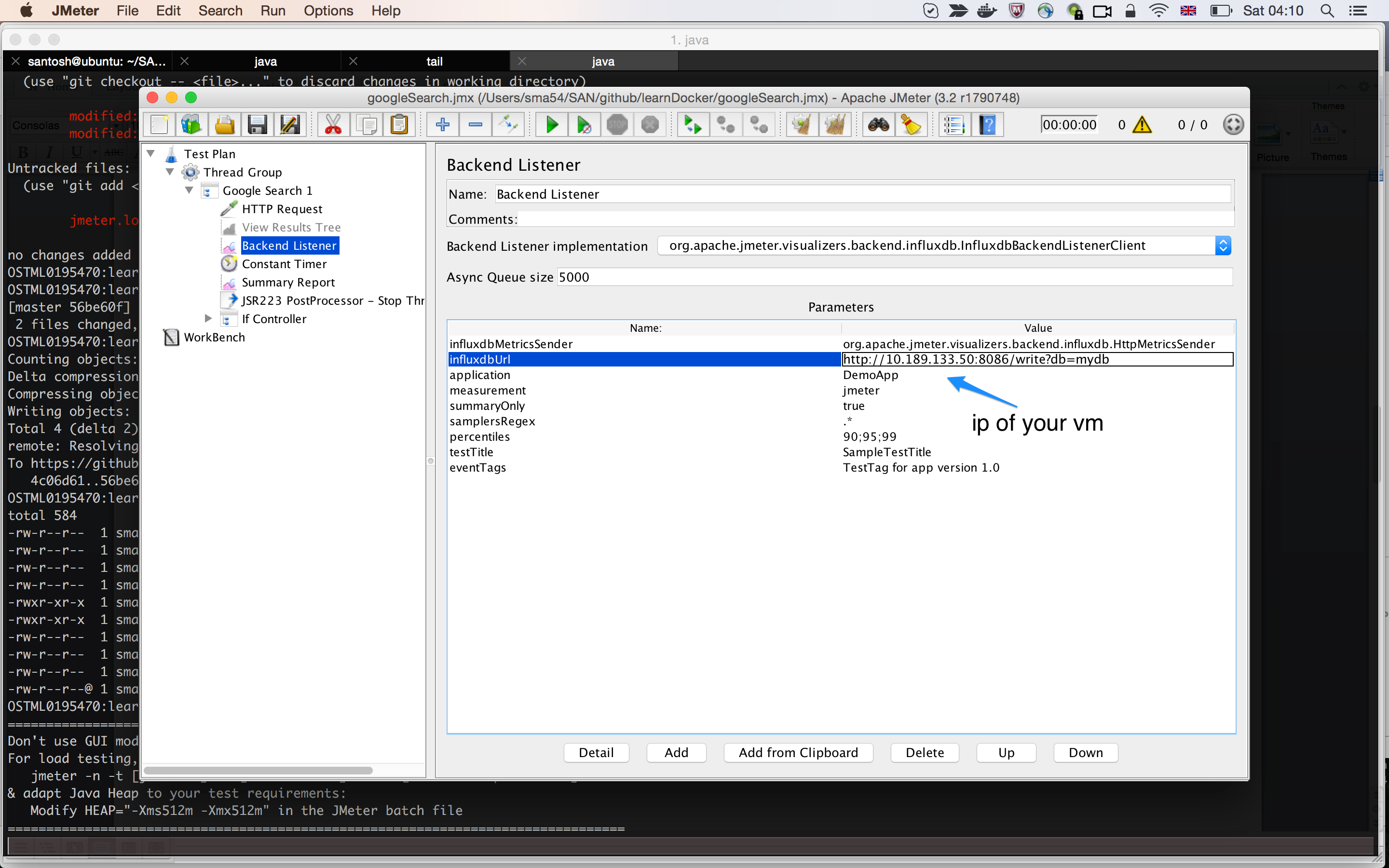
Login to Grafana using default user admin/admin

* 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 virtual machine IP)
* Provide some Name (ex: dbForJMeter)

# **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

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# **Run JMeter test**

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.

# **Alerts in Grafana**

**Detail**

**# 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

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