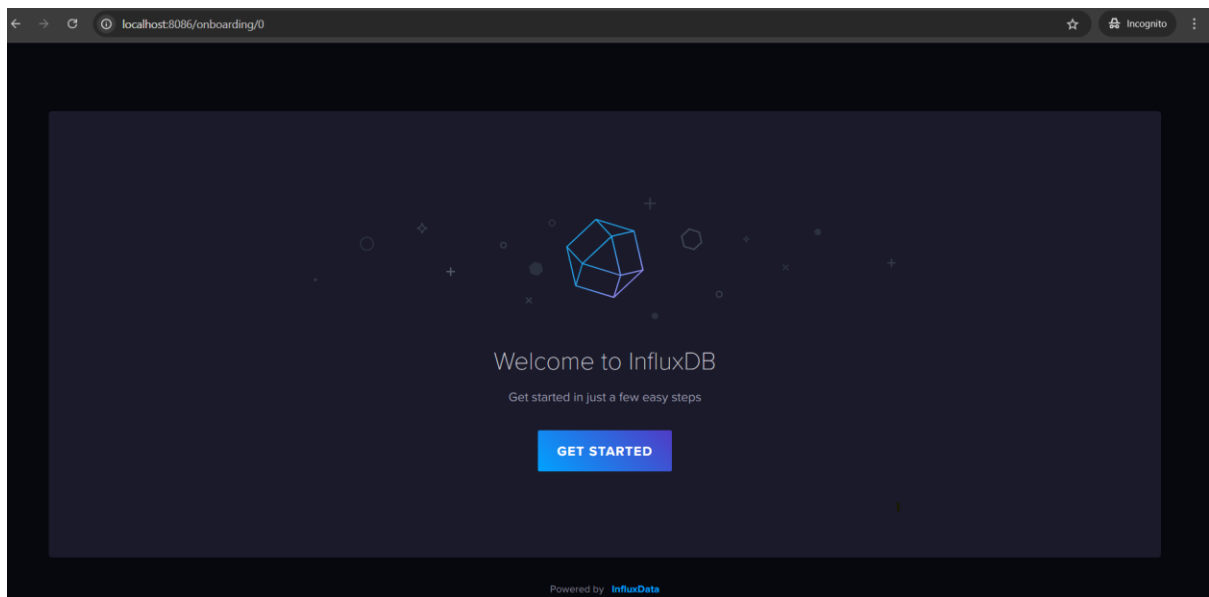


JMeter Integration with InfluxDB(v2) and Grafana for real time performance monitoring

JMeter write the realtime test results into Influx database using backend listener and Grafana will read the data from influxdb and display it on it's dashboard.

Setup InfluxDB

- 1) Download and install InfluxDB <https://docs.influxdata.com/influxdb/v2/install/?t=Windows>
- 2) Extract the downloaded file
- 3) Open Powershell and enter command "influxd.exe"
- 4) Influx.exe is a server that we have to open it while working, do not close it must recommend.
- 5) Open url <http://localhost:8086/> and click on get started, influx running on port 8086 by default



- 6) Enter all required details and make sure should be correct and remembered it.

Username: provide any suitable username to login to influxdb

Password: provide any suitable password to login

Initial Organization Name: this field will serve as a workspace name for different users to work on the same.

Initial Bucket Name: Bucket is same as database in general, provide a suitable db name in this field

The screenshot shows the 'Setup Initial User' page in a web browser at localhost:8086/onboarding/1. The page has a progress bar at the top with 'Welcome', 'Initial User Setup', and 'Complete'. The main heading is 'Setup Initial User' with a subtext: 'You will be able to create additional Users, Buckets and Organizations later'. The form contains the following fields:

- Username:** admin
- Password:** (masked with dots)
- Confirm Password:** (masked with dots)
- Initial Organization Name:** jmeter
- Initial Bucket Name:** jmeter

A blue 'CONTINUE' button is located at the bottom right of the form.

Organization name kept is jmeter

Bucket name kept is "jmeter", bucket means database name where all data will be store

Note: You can keep any name as per your choice but keep remember

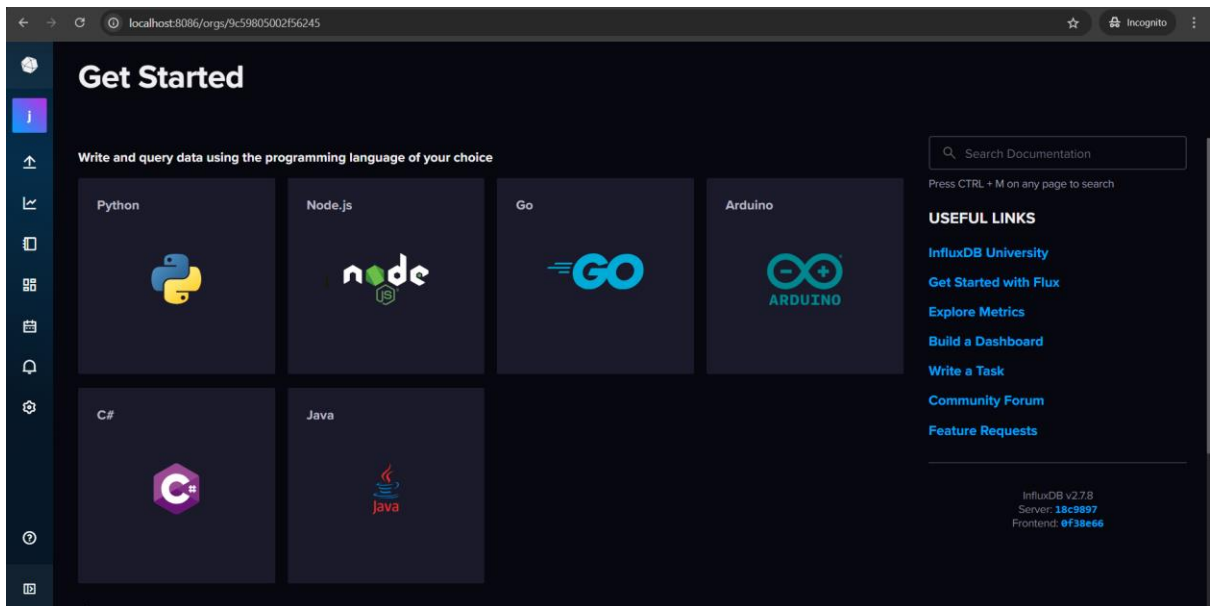
- 7) Click on submit button
- 8) After submit you get API token and make sure copy the API Token now, you would not able to see it again! API token is highlighted

The screenshot shows the 'Complete' page in a web browser at localhost:8086/onboarding/2. The progress bar at the top shows 'Welcome', 'Initial User Setup', and 'Complete'. A green notification banner at the top right says 'Initial user details have been successfully set'. A warning box states: 'make sure to copy your operator API token now. This token enables superuser privileges like creating users, orgs, etc. You won't be able to see it again!'. Below this, the API token is displayed: `rEa9vDrNMTvHnIoTUPaZmZRZbS-SnJRZKvuL_K-Gd1OoBMjdndzyLFMUXDc4gRRSajsg8oH32FtmbQctSvRzw==`. A 'COPY TO CLIPBOARD' button is next to the token. Below the token, it says 'Your InfluxDB has 1 organization, 1 user, and 1 bucket.' and 'Let's start collecting data!'. There are three buttons: 'QUICK START', 'ADVANCED', and 'CONFIGURE LATER'. Below each button is a description:

- QUICK START:** Timing is everything! This will set up local metric collection and allow you to explore the features of InfluxDB quickly.
- ADVANCED:** Whoa looks like you're an expert! This allows you to set up Telegraf, scrapers, and much more.
- CONFIGURE LATER:** I've got this... Jump into InfluxDB and set up data collection when you're ready.

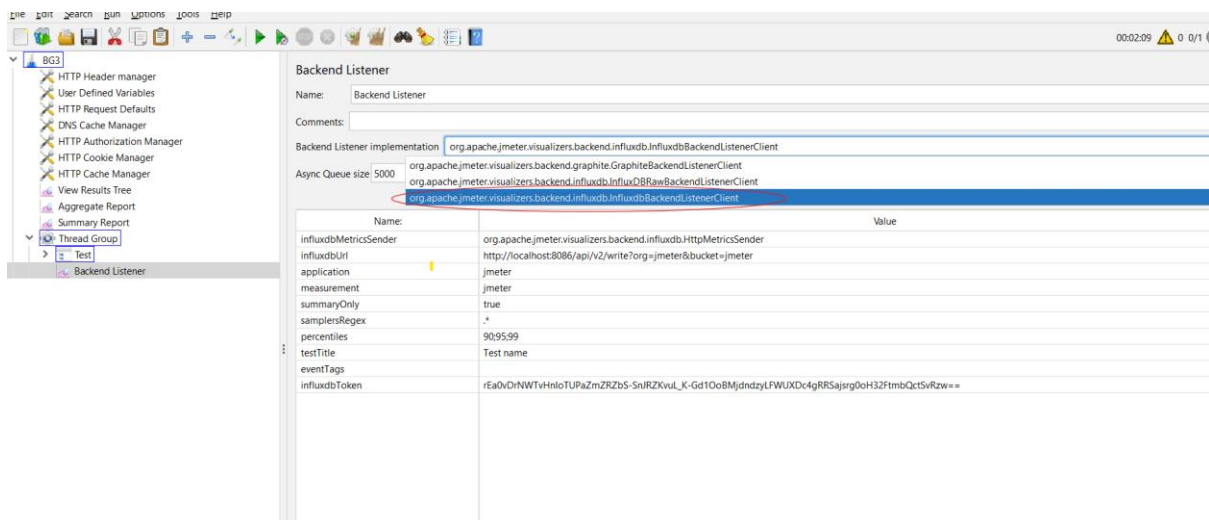
- 9) Click on Quick Start

- 10) Now, Influx DB Setup is ready , we have to configure with jmeter



Setup (Backend Listener) in JMeter

- 11) Now we have to work on JMeter, our JMX script should be ready without any failure error
- 12) In JMeter, we have to use backend Listener under Listener
Add a new backend listener to the thread group. Right Click on a Thread Group -> Add -> Listener -> Backend Listener
- 13) In the Backend Listener Implementation dropdown select **org.apache.jmeter.visualizers.backend.influxdb.InfluxdbBackendListenerClient**



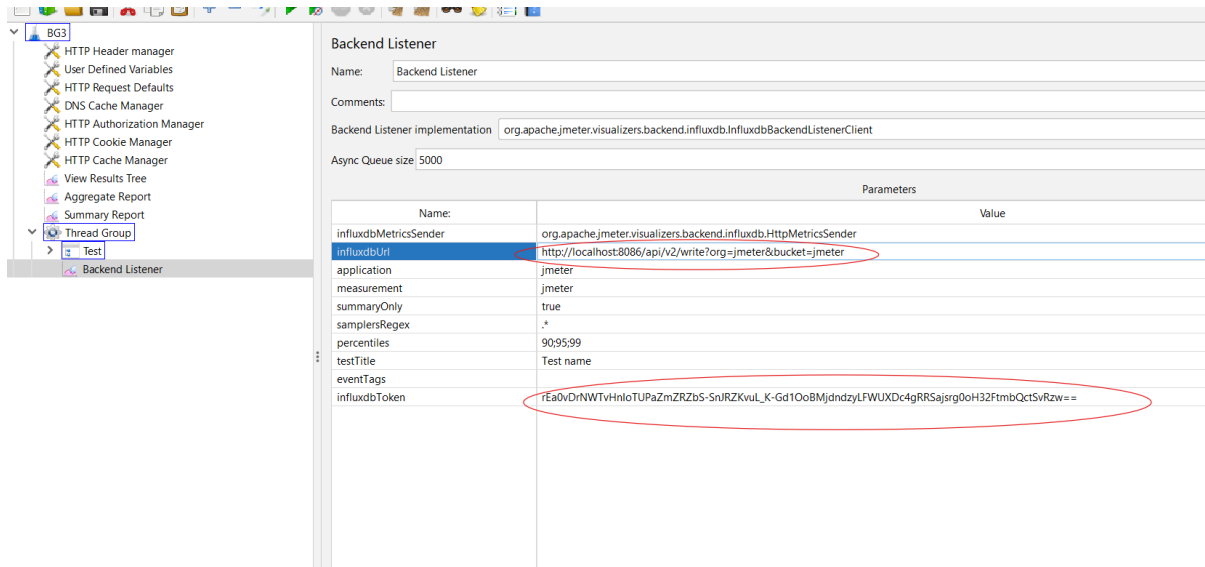
- 14) Enter influxdbUrl and influxdbToken, make sure it's should be correct, we got influx db details and token at the time of creating setup earlier. Now we have to put it same as in backend listener in JMeter

15) org name is "jmeter" & bucket name also is "jmeter"

influxdbUrl = <http://localhost:8086/api/v2/write?org=jmeter&bucket=jmeter>

influxdbToken = rEa0vDrNWTvHnIoTUPaZmZRZbS-SnJRZKvuL_K-Gd1OoBMjdndzyLFWUXDc4gRRSajsg0oH32FtmbQctSvRzw==

we have to make sure that orgination name, bucket name and token should be correct



16) Jmeter work is done now, at the time of execution of script, jmeter push all data to influxdb and then influx db capture all data in database and then we have to integrate influx db to Grafana, Grafana use to visualize the data in the form of charts and graphs.

JMeter write the real-time test results into Influx database using backend listener and Grafana will read the data from InfluxDB and display it on its dashboard.

Download and Setup Grafana

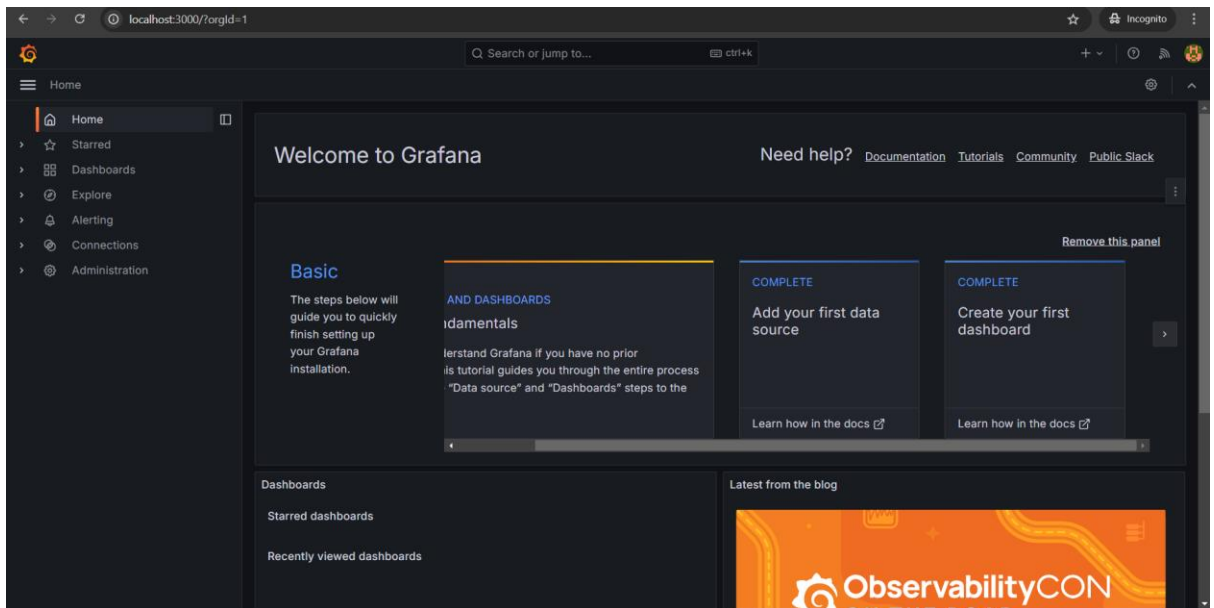
17) Download and install Grafana

<https://grafana.com/grafana/download?edition=oss&platform=windows>

18) Extract downloaded Grafana Zip file

19) **Start Grafana**

To start Grafana navigate to /bin directory and run **grafana-server.exe**. It should look something like this:

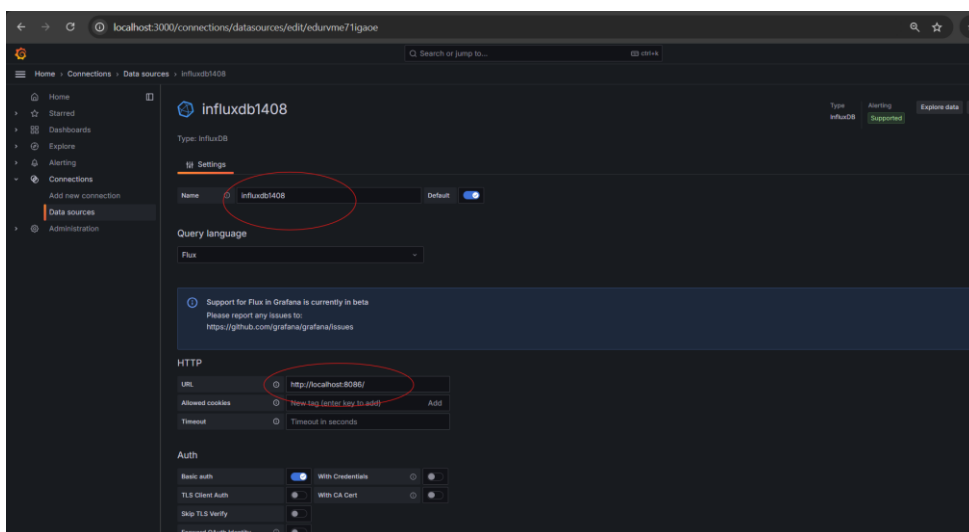


22) Click on Add Data Source and then click on influxdb

Add Data Source

The first thing we need to do is create a data source to pull data from our InfluxDB.

- Click *Add Data Source* and choose InfluxDB as the data source type.
- Enter Name of Grafana data source name
- Select Query Language as **FLUX**
- Specify the url: <http://localhost:8086>
- Enter User and Password under basic auth details
- Enter all details under InfluxDB Details
- Enter Organization name
- Enter Token
- Enter Default Bucket
- Configure minInterval time as 5s. You can also configure other settings for authentication.
- Click *Save & Test* hopefully you should see the Data source is working.



localhost:3000/connections/datasources/edit/edurvme71igaoe

Home > Connections > Data sources > influxdb1408

URL: http://localhost:8086/

Allowed cookies: New tag (enter key to add) Add

Timeout: Timeout in seconds

Auth

Basic auth: ☒ With Credentials: ☐

TLS Client Auth: ☐ With CA Cert: ☐

Skip TLS Verify: ☐

Forward OAuth Identity: ☐

Basic Auth Details

User: admin

Password:

Custom HTTP Headers

+ Add header

InfluxDB Details

Organization: jmeter

Token:

Default Bucket: jmeter

Min time interval: 5s

Max series: 1000

Delete Save & test

localhost:3000/connections/datasources/edit/edurvme71igaoe

Home > Connections > Data sources > influxdb1408

Basic auth: ☒ With Credentials: ☐

TLS Client Auth: ☐ With CA Cert: ☐

Skip TLS Verify: ☐

Forward OAuth Identity: ☐

Basic Auth Details

User: admin

Password: configured Reset

Custom HTTP Headers

+ Add header

InfluxDB Details

Organization: jmeter

Token: configured Reset

Default Bucket: jmeter

Min time interval: 5s

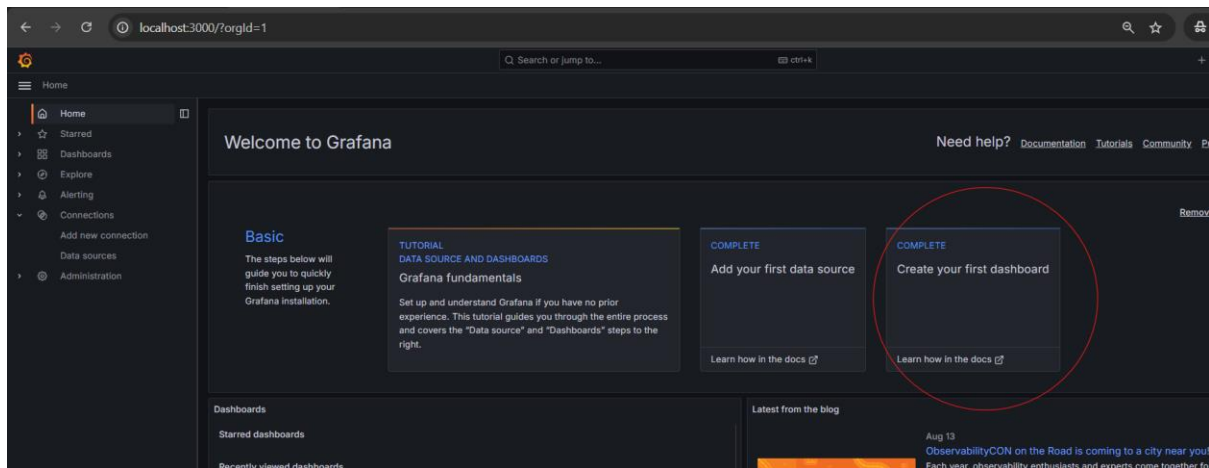
Max series: 1000

✓ datasource is working. 3 buckets found

Next, you can start to visualize data by building a dashboard, or by querying data in the Explore view.

Delete Save & test

23) Click on create your first Dashboard



24) Instead of creating a fresh Dashboard in Grafana, we will use existing dashboard template (this is just a sample template, we can use any template



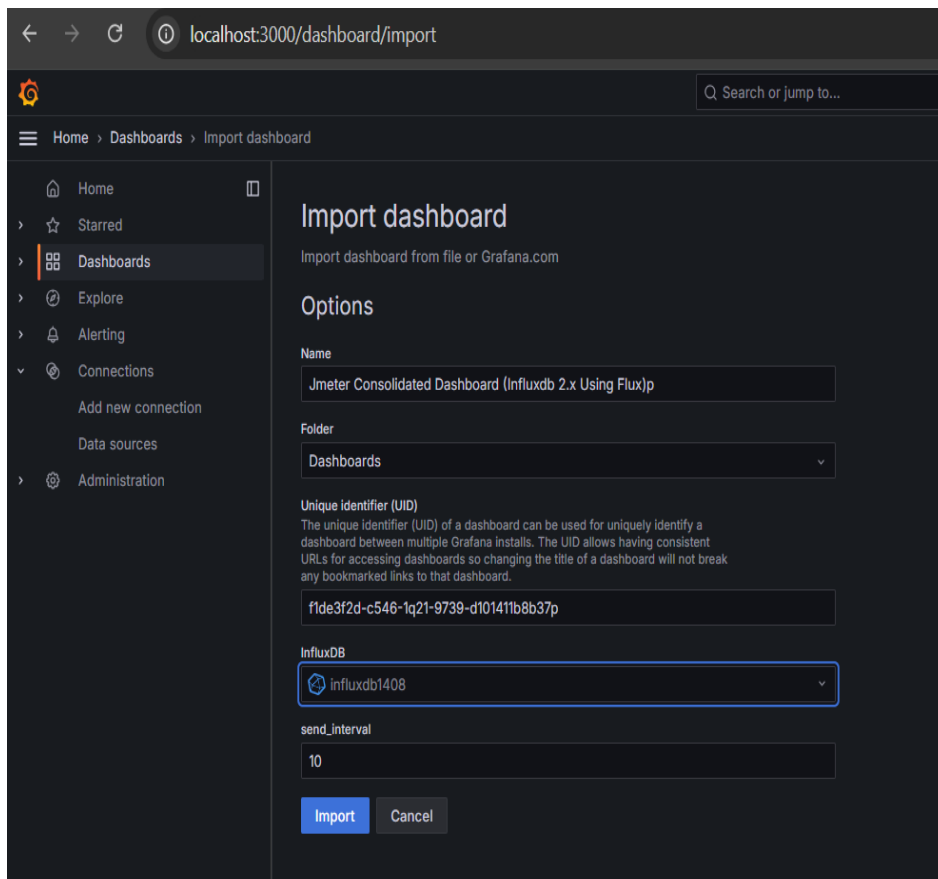
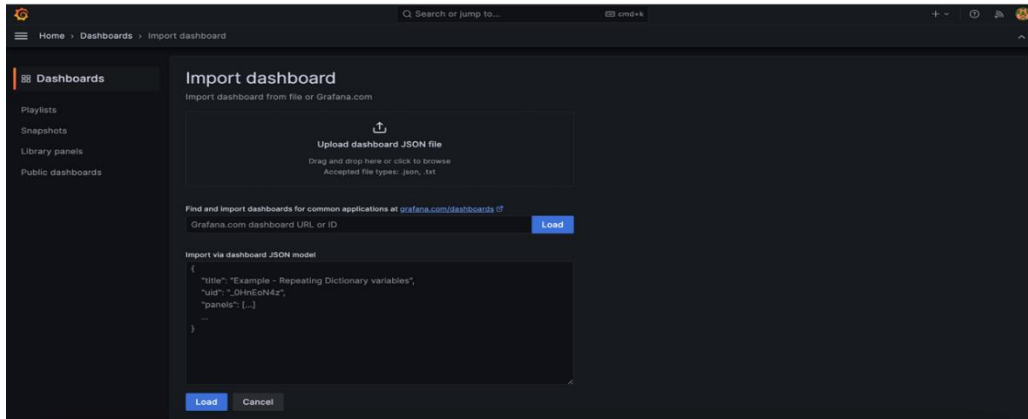
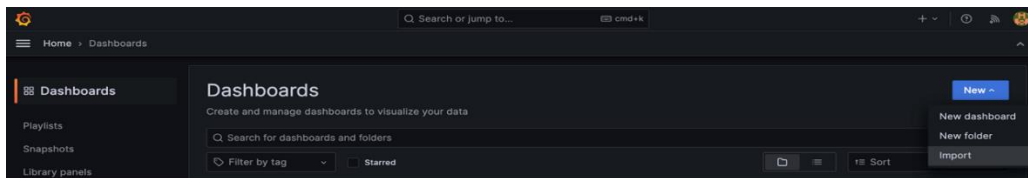
19950_rev4.json

as per the requirement

Or

you can download Jmeter Grafana dashboard using flux from below Grafana website <https://grafana.com/grafana/dashboards/19950-jmeter-consolidated-dashboard-influxdb-2-x-using-flux/>

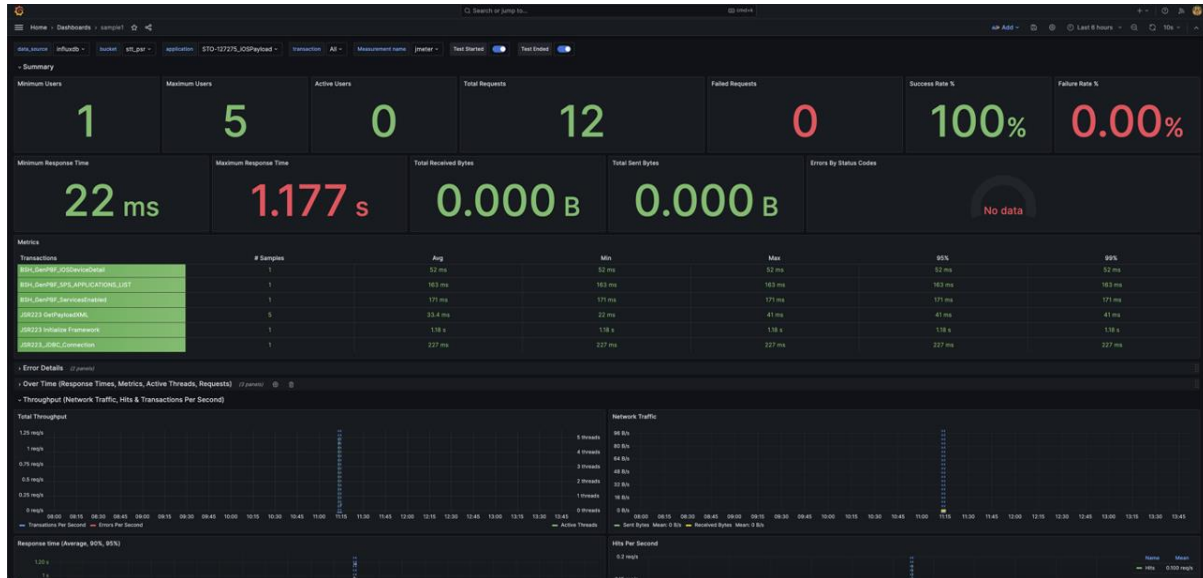
25) In Grafana, click on the "+" icon in top left corner and select *Import Dashboard* and click *import*. On the import dashboard screen please configure with following values



- **Name** — specify the dashboard name
- **Folder** — Grafana allows you to organize dashboards into folders.
- **Unique identifier** — provide an unique value to this field
- **InfluxDB** — select the name of the datasource we selected for it, in this case it is 'influxdb1408'

- **send_interval** — this should match the JMeter property backend_influxdb.send_interval which default value is 5 seconds.

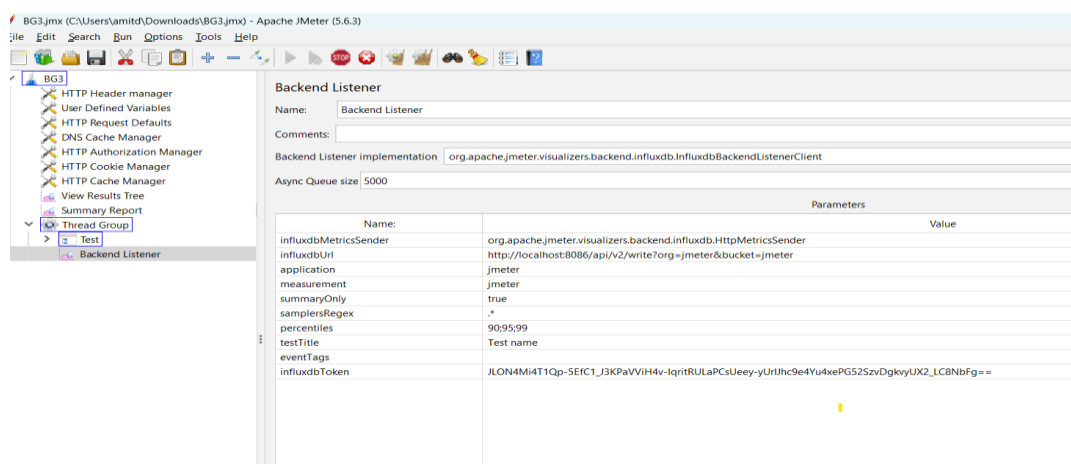
The sample Dashboard will look like as follows:

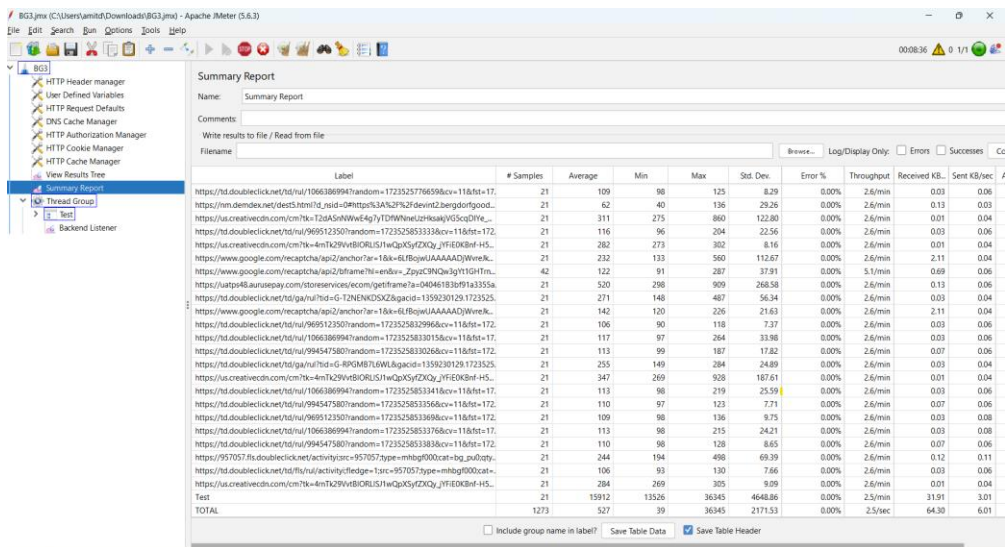


We are done with our Grafana setup. Now it's time to run the actual JMeter test and monitor results in Grafana.

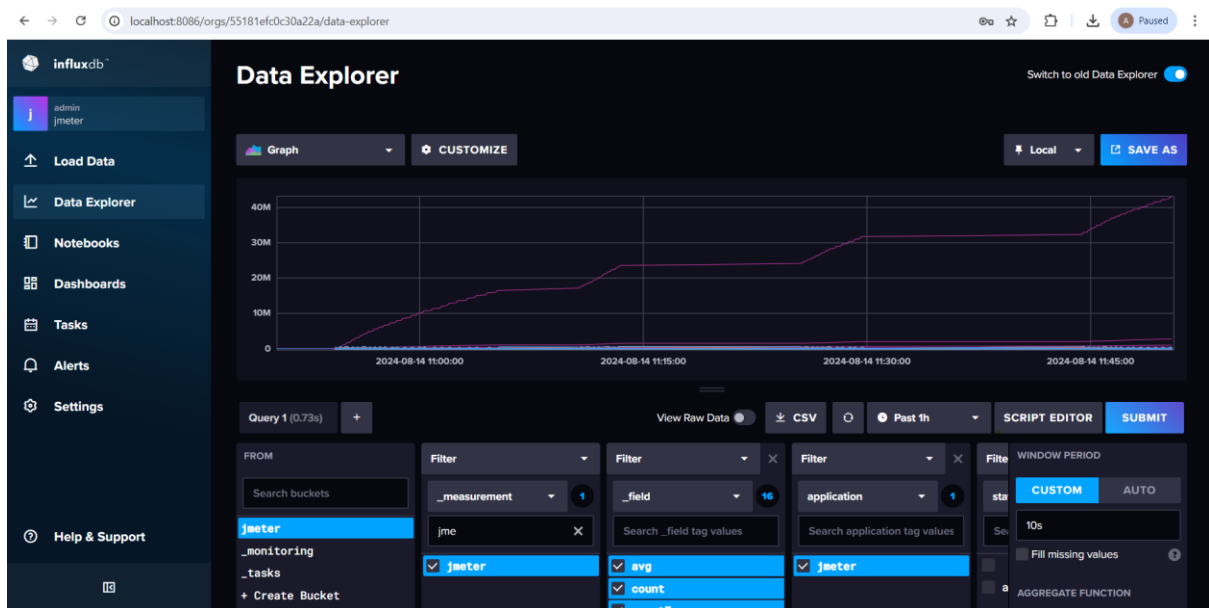
This completes our integration setup for Jmeter with InfluxDB and Grafana to view real time metrics results.

Running Jmeter Test





InfluxDB



Grafana Result

