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SYSTEM STATUS DASHBOARD

Used Python3.8 to populate the influxDB database named **system**, psutil library for get the system informations.

The sample code can be shown here:

```
from datetime import date, datetime
from time import sleep
from influxdb import InfluxDBClient
import psutil
client = InfluxDBClient()
client.create_database('system')
client.switch_database('system')
def get_points():
    points = [
        {
            "measurement": "cpu",
            "tags": {
                "machine": 'bullst'
            },
            "time": datetime.utcnow().isoformat('T')+'Z',
            "fields": {
                 "cpu_load":psutil.cpu_percent()
            }
        },
            "measurement": "ram",
            "tags": {
                 "machine": 'bullst'
            "time": datetime.utcnow().isoformat('T')+'Z',
            "fields": {
                 "ram_usage":psutil.virtual_memory().percent
            }
        }
    return points
while True:
    client.write_points(get_points())
    client.write_points(get_points())
    sleep(1)
```

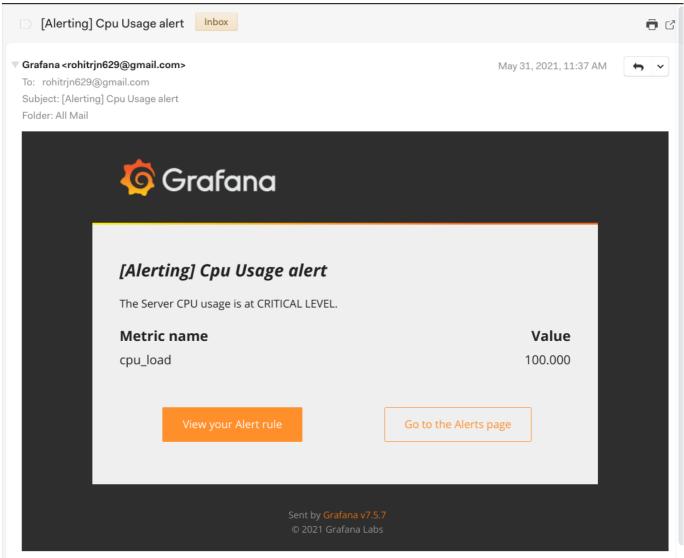
The Python code will create two measurements named *cpu*, *ram*. Also, it keeps updating the status of cpu, ram(usage in %) every 1s.

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The sample snapshot of grafana dashboard is here:



The grafana-server will create alerts on the basis of RAM/CPU usage. If RAM/CPU % usage crosses 80 then it'll send a alert through mail. A snapshot of **cpu-alert** is shown here:



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How to run

Step1: Run grafana-server:

sudo service grafana-server start

Step2: Run influxDB server:

```
sudo service influxdb start
```

The above steps for *ubuntu21.04* for windows/docker follow **grafana-docs**.

Save the python code in filename *populate.py*

On the terminal run:

```
python3 populate.py
```

Visit to the (https://localhost:3000) to see the dashboard, you have to import the json file from system.json.

To get an alert

--get an cpu alert

On the terminal run the following command(It'll lead to cpu usage of 100%):

```
stress --cpu 8 --timeout 20
```

--get an ram usage alert

On the terminal run the following command(It'll lead to ram usage of 3gb):

```
stress --vm 1 --vm-bytes 3G --vm-keep -t 20s
```

Change the 3G to other value depending on your system to reach 80% usage.