

CARA MENJALANKAN PROGRAM

SISTEM MONITORING ANOMALI DATA

A. Menjalankan *Service Apache Nifi*

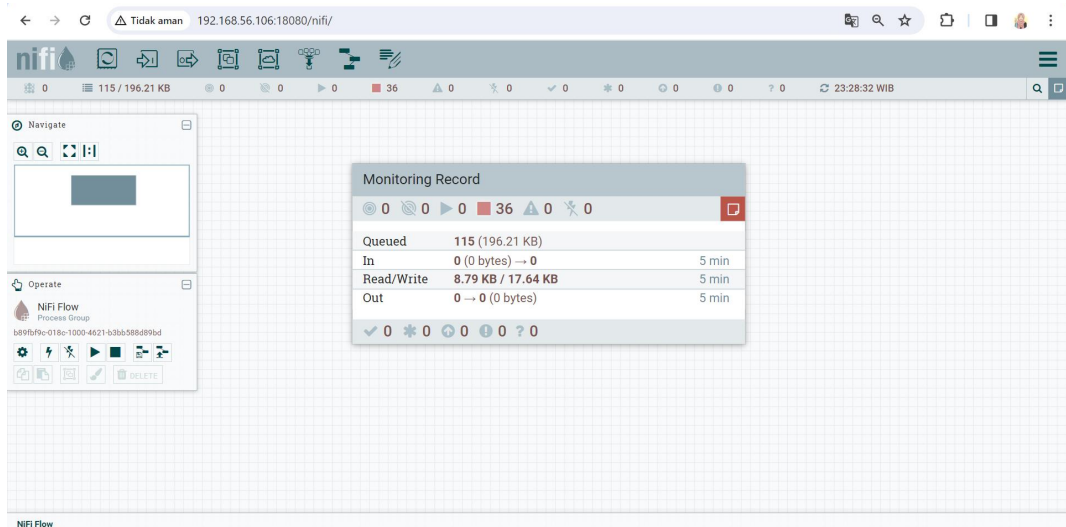
Untuk menjalankan service *Apache Nifi* dapat dilakukan dengan menjalankan perintah berikut, pada direktori *Apache Nifi* berada.

```
sudo ./bin/nifi.sh start
bihigh@server:~/nifi-1.22.0$ sudo ./bin/nifi.sh start
[sudo] password for bihigh:
Java home: /usr/lib/jvm/java-1.11.0-openjdk-amd64
NiFi home: /home/bihigh/nifi-1.22.0
Bootstrap Config File: /home/bihigh/nifi-1.22.0/conf/bootstrap.conf
bihigh@server:~/nifi-1.22.0$
```

Selanjutnya, untuk melakukan pengecekan apakah service *Apache Nifi* telah berjalan dapat dengan menjalankan perintah berikut.

```
sudo ./bin/nifi.sh status
bihigh@server:~/nifi-1.22.0$ sudo ./bin/nifi.sh status
Java home: /usr/lib/jvm/java-1.11.0-openjdk-amd64
NiFi home: /home/bihigh/nifi-1.22.0
Bootstrap Config File: /home/bihigh/nifi-1.22.0/conf/bootstrap.conf
2024-02-22 23:23:55,507 INFO [main] org.apache.nifi.bootstrap.Command Apache NiFi is currently running, listening to Bootstrap on port 41165, PID=1140
bihigh@server:~/nifi-1.22.0$
```

Terlihat pada gambar diatas bahwa *Apache NiFi* telah berjalan. Kemudian, *Apache Nifi* dapat diakses pada URL <http://192.168.56.106:18080/nifi/>, dengan tampilan sebagai berikut.



Sedangkan untuk melakukan stop pada service Apache Nifi dapat dilakukan dengan menjalankan perintah berikut.

```
sudo ./bin/nifi.sh stop
```

```
bihigh@server:~/nifi-1.22.0$ sudo ./bin/nifi.sh stop
Java home: /usr/lib/jvm/java-1.11.0-openjdk-amd64
NiFi home: /home/bihigh/nifi-1.22.0
Bootstrap Config File: /home/bihigh/nifi-1.22.0/conf/bootstrap.conf
2024-02-22 23:43:03,510 INFO [main] org.apache.nifi.bootstrap.Command Apache NiFi has accepted the Shutdown Command and is shutting down now
2024-02-22 23:43:03,608 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [1140] shutdown in progress...
2024-02-22 23:43:05,619 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [1140] shutdown in progress...
2024-02-22 23:43:07,626 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [1140] shutdown completed
bihigh@server:~/nifi-1.22.0$
```

B. Menjalankan Service Grafana Monitoring Dashboard

Sistem monitoring ini menggunakan perangkat lunak *Grafana* sebagai platform visualisasi data. Grafana monitoring dashboard dapat dijalankan dengan perintah sebagai berikut.

```
sudo systemctl start grafana-server
```

```
bihigh@server:~/nifi-1.22.0$ sudo systemctl start grafana-server
bihigh@server:~/nifi-1.22.0$
```

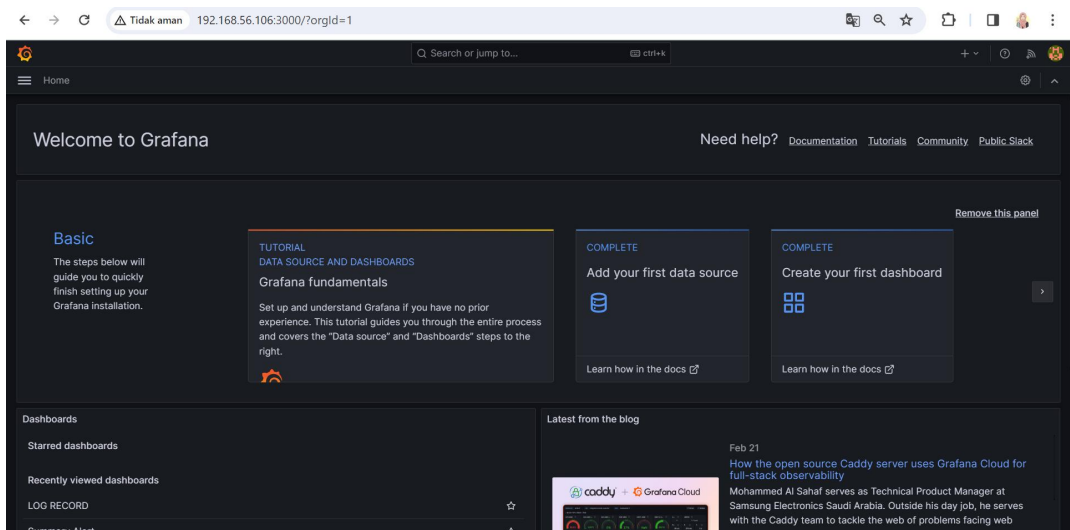
Untuk melakukan pengecekan status Grafana dapat dilakukan dengan menjalankan perintah berikut.

```
sudo systemctl status grafana-server
```

```
bihigh@server:~/nifi-1.22.0$ sudo systemctl start grafana-server
bihigh@server:~/nifi-1.22.0$ sudo systemctl status grafana-server
● grafana-server.service - Grafana instance
   Loaded: loaded (/lib/systemd/system/grafana-server.service; disabled; vendor preset: enabled)
   Active: active (running) since Thu 2024-02-22 23:33:07 WIB; 4min 46s ago
     Docs: http://docs.grafana.org
    Main PID: 17681 (grafana)
      Tasks: 12 (limit: 1013)
     Memory: 138.0M
        CPU: 7.717s
    CGroup: /system.slice/grafana-server.service
           └─17681 /usr/share/grafana/bin/grafana server --config=/etc/grafana/grafana.ini --pidfile=/run/grafana/grafana-server.pid --pa

Feb 22 23:33:17 server grafana[17681]: logger=sqlstore.transactions t=2024-02-22T23:33:17.185669132+07:00 level=info msg="Database locked, s
Feb 22 23:33:17 server grafana[17681]: logger=ngalert.state.manager t=2024-02-22T23:33:17.227122617+07:00 level=info msg="State cache has be
Feb 22 23:33:17 server grafana[17681]: logger=ngalert.multiorg.alertmanager t=2024-02-22T23:33:17.228864317+07:00 level=info msg="Starting N
Feb 22 23:33:17 server grafana[17681]: logger=ngalert.scheduler t=2024-02-22T23:33:17.22754741+07:00 level=info msg="Starting scheduler" tid
Feb 22 23:33:17 server grafana[17681]: logger=ticker t=2024-02-22T23:33:17.243973068+07:00 level=info msg="starting first tick=2024-02-22T23
Feb 22 23:33:17 server grafana[17681]: logger=sqlstore.transactions t=2024-02-22T23:33:17.249660889+07:00 level=info msg="Database locked, s
Feb 22 23:33:17 server grafana[17681]: logger=grafana.update.checker t=2024-02-22T23:33:17.787166207+07:00 level=info msg="Update check succ
Feb 22 23:33:17 server grafana[17681]: logger=plugins.update.checker t=2024-02-22T23:33:17.817512614+07:00 level=info msg="Update check succ
Feb 22 23:34:14 server grafana[17681]: logger=infra.usagstats t=2024-02-22T23:34:14.13199656+07:00 level=info msg="Usage stats are ready to
Feb 22 23:35:03 server grafana[17681]: logger=ngalert.sender.router rule_uid=d6f931fe-5b5e-4134-acd6-ded115e621c9 org_id=1 t=2024-02-22T23:3
lines 1-21/21 (END)
```

Ketika status Grafana telah aktif, selanjutnya Grafana dapat diakses melalui URL <http://192.168.56.106:3000/?orgId=1>, dengan tampilan sebagai berikut.



Sedangkan untuk melakukan stop pada service Grafana dapat dilakukan dengan menjalankan perintah berikut.

```
sudo systemctl stop grafana-server
```

```
bihigh@server:~/nifi-1.22.0$ sudo systemctl stop grafana-server
bihigh@server:~/nifi-1.22.0$ sudo systemctl status grafana-server
○ grafana-server.service - Grafana instance
   Loaded: loaded (/lib/systemd/system/grafana-server.service; disabled; vendor preset: enabled)
   Active: inactive (dead)
     Docs: http://docs.grafana.org

Feb 22 23:38:45 server grafana[17681]: logger=context userId=1 orgId=1 uname=admin t=2024-02-22T23:38:45.594186569+07:00 level=
Feb 22 23:38:49 server grafana[17681]: logger=context userId=1 orgId=1 uname=admin t=2024-02-22T23:38:49.872134314+07:00 level=
Feb 22 23:40:01 server grafana[17681]: logger=ngalert.sender.router rule_uid=d6f931fe-5b5e-4134-acd6-ded115e621c9 org_id=1 t=2
Feb 22 23:40:58 server systemd[1]: Stopping Grafana instance...
Feb 22 23:40:58 server grafana[17681]: logger=server t=2024-02-22T23:40:58.379049296+07:00 level=info msg="Shutdown started" r
Feb 22 23:40:58 server grafana[17681]: logger=tracing t=2024-02-22T23:40:58.393327766+07:00 level=info msg="Closing tracing"
Feb 22 23:40:58 server grafana[17681]: logger=ticker t=2024-02-22T23:40:58.394696967+07:00 level=info msg="stopped last_tick=20
Feb 22 23:40:58 server systemd[1]: grafana-server.service: Deactivated successfully.
Feb 22 23:40:58 server systemd[1]: Stopped Grafana instance.
Feb 22 23:40:58 server systemd[1]: grafana-server.service: Consumed 8.233s CPU time.
lines 1-15/15 (END)
```

C. Menjalankan Service HDFS Hadoop

Data yang telah melalui metode *Extract, Transform, Load* pada *Apache Nifi*, selanjutnya disimpan kedalam *HDFS* sebagai media penyimpanan apabila data tersebut masih dibutuhkan. Sebelum *Apache Nifi* melakukan *Load*, *service* dari *HDFS* harus dijalankan dengan perintah berikut.

```
hadoop/sbin/start-all.sh
```

```
bihigh@server:~$ hadoop/sbin/start-all.sh
WARNING: Attempting to start all Apache Hadoop daemons as bihigh in 10 seconds.
WARNING: This is not a recommended production deployment configuration.
WARNING: Use CTRL-C to abort.
Starting namenodes on [192.168.56.106]
Starting datanodes
Starting secondary namenodes [server]
Starting resourcemanager
Starting nodemanagers
bihigh@server:~$
```

Untuk melakukan *stop* pada *service HDFS* dapat dilakukan dengan perintah sebagai berikut.

```
hadoop/sbin/stop-all.sh
```

```
bihigh@server:~$ hadoop/sbin/stop-all.sh
WARNING: Stopping all Apache Hadoop daemons as bihigh in 10 seconds.
WARNING: Use CTRL-C to abort.
Stopping namenodes on [192.168.56.106]
Stopping datanodes
Stopping secondary namenodes [server]
Stopping nodemanagers
Stopping resourcemanager
bihigh@server:~$
```

D. Menjalankan Generator Data

Generator data yang dibangun pada sistem monitoring ini tersedia didalam tiga buah *source*. Berikut merupakan cara menjalankan dan mengakses masing masing generator data tersebut.

1. *UDP Record*

Script generator data *UDP* dibangun dengan memanfaatkan bahasa pemrograman *python*. Untuk menjalankan generator data ini dapat dilakukan dengan perintah berikut.

```
python3 script/generateRevenueNew.py
```

```
bihigh@server:~$ python3 script/generateRevenueNew.py
UDP target IP: 127.0.0.1
UDP target port: 15259
2024-02-25T22:55:00 invoice_id="XX-400-400" branch="A" city="Yangon" cust_type="Member" gender="Female" product_line="Health and beauty" total_revenue="956.06" date="2024-02-25" payment_method="Ewallet" hourid="22" minuteid="55"
2024-02-25T22:55:00 invoice_id="II-398-398" branch="C" city="Naypyitaw" cust_type="Normal" gender="Female" product_line="Electronic accessories" total_revenue="738.46" date="2024-02-25" payment_method="Cash" hourid="22" minuteid="55"
2024-02-25T22:56:00 invoice_id="FF-314-314" branch="B" city="Mandalay" cust_type="Member" gender="Female" product_line="Food and beverages" total_revenue="116.08" date="2024-02-25" payment_method="Credit card" hourid="22" minuteid="56"
2024-02-25T22:56:00 invoice_id="FF-324-324" branch="A" city="Yangon" cust_type="Member" gender="Female" product_line="Health and beauty" total_revenue="500.00" date="2024-02-25" payment_method="Cash" hourid="22" minuteid="56"
2024-02-25T22:56:00 invoice_id="YY-347-347" branch="C" city="Naypyitaw" cust_type="Normal" gender="Female" product_line="Electronic accessories" total_revenue="725.71" date="2024-02-25" payment_method="Cash" hourid="22" minuteid="56"
2024-02-25T22:56:00 invoice_id="MM-224-224" branch="C" city="Naypyitaw" cust_type="Normal" gender="Male" product_line="Electronic accessories" total_revenue="0.00" date="2024-02-25" payment_method="Cash" hourid="22" minuteid="56"
2024-02-25T22:57:00 invoice_id="SS-125-125" branch="B" city="Cosmo" cust_type="Normal" gender="Male" product_line="Stationary" total_revenue="0.00" date="2024-02-25" payment_method="Credit card" hourid="22" minuteid="57"
2024-02-25T22:57:00 invoice_id="FF-341-341" branch="A" city="Yangon" cust_type="Member" gender="Female" product_line="Health and beauty" total_revenue="919.02" date="2024-02-25" payment_method="Ewallet" hourid="22" minuteid="57"
2024-02-25T22:57:00 invoice_id="BB-496-496" branch="C" city="Naypyitaw" cust_type="Normal" gender="Female" product_line="Electronic accessories" total_revenue="780.58" date="2024-02-25" payment_method="Cash" hourid="22" minuteid="57"
2024-02-25T22:57:00 invoice_id="MM-111-111" branch="B" city="Mandalay" cust_type="Member" gender="Female" product_line="Food and beverages" total_revenue="411.89" date="2024-02-25" payment_method="Credit card" hourid="22" minuteid="57"
```

2. Flat File

Generator data *flat file* juga dibangun dengan memanfaatkan bahasa pemrograman *python*. Untuk membuat sampel data flat file dengan *generator* ini dapat dilakukan dengan menjalankan perintah sebagai berikut.

```
python3 script/generateText.py
```

```
bihigh@server:~$ python3 script/generateText.py
bihigh@server:~$ ls -al data | tail -n 10
-rw-rw-r-- 1 bihigh bihigh 372 Feb 18 05:25 Record_20240218052501.txt
-rw-rw-r-- 1 bihigh bihigh 4633 Feb 18 10:10 Record_20240218101001.txt
-rw-rw-r-- 1 bihigh bihigh 5143 Feb 18 10:15 Record_20240218101502.txt
-rw-rw-r-- 1 bihigh bihigh 2958 Feb 18 10:20 Record_20240218102001.txt
-rw-rw-r-- 1 bihigh bihigh 4425 Feb 18 10:25 Record_20240218102501.txt
-rw-rw-r-- 1 bihigh bihigh 1570 Feb 18 10:30 Record_20240218103001.txt
-rw-rw-r-- 1 bihigh bihigh 617 Feb 18 10:41 Record_20240218104131_Null.txt
-rw-rw-r-- 1 bihigh bihigh 6863 Feb 25 22:58 Record_20240225225850.txt
-rw-rw-r-- 1 bihigh bihigh 75 Feb 25 22:59 Record_20240225225922.txt
-rw-rw-r-- 1 bihigh bihigh 2110 Feb 25 23:00 Record_20240225230021.txt
bihigh@server:~$
```

3. HTTP Response

Sampel data HTTP pada sistem monitoring ini dibangun dengan memanfaatkan framework Codeigniter sehingga dapat diakses dengan URL berikut.

```
http://192.168.56.106/ci3 rest/generateData
```

```
GET http://192.168.56.106/ci3_rest/generateData

Params Authorization Headers (8) Body Pre-request Script Tests Settings

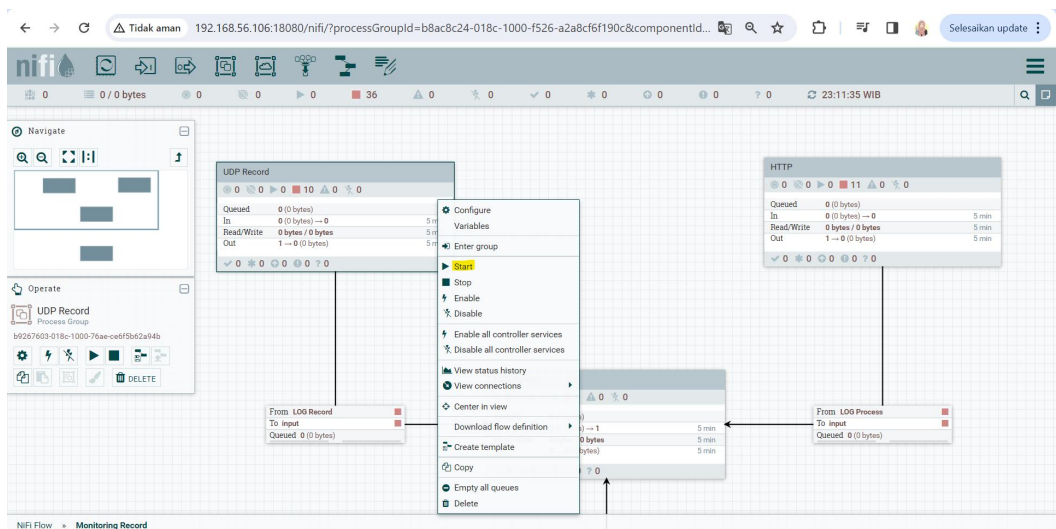
Body Cookies (1) Headers (10) Test Results Status: 200 OK Time: 1655 ms

Pretty Raw Preview Visualize JSON

1 [
2
3   "invoice_id": "6p7hw0m3",
4   "city": "Naypyitaw",
5   "cust_type": "Credit Card",
6   "gender": "Female",
7   "product_line": "Meat and Chicken",
8   "total_revenue": "646.00",
9   "dates": "2024-02-25",
10  "hourid": "23",
11  "minuteid": "02"
12 ]
13 ]
```

E. Menjalankan Proses Group Apache NiFi

Proses grup dalam Apache Nifi dapat dilakukan dengan klik kanan pada proses grup kemudian pilih start seperti gambar berikut.



Begitupun untuk melakukan stop pada proses grup Apache Nifi, bisa klik kanan dan pilih option stop.

F. Akses data ke HDFS

Hasil pengolahan data yang telah dilakukan pada Apache Nifi, salah satunya disimpan kedalam HDFS file. Data ini dapat diakses dengan perintah

yang mirip dengan perintah kerja direktori linux dengan tambahan perintah `hadoop fs -[command]`, contohnya sebagai berikut.

1. Listing direktori

```
hadoop fs -ls /record/udp_record/2024-02-15
```

```
bihigh@server:~$ hadoop fs -ls /record/udp_record/2024-02-15
Found 10 items
-rw-r--r-- 1 root supergroup 1049 2024-02-15 10:16 /record/udp_record/2024-02-15/0058ba49-819b-4adb-91a0-ale2a736107c
-rw-r--r-- 1 root supergroup 1034 2024-02-15 10:16 /record/udp_record/2024-02-15/4207e46e-17e0-4249-989f-13b4d3dd07e
-rw-r--r-- 1 root supergroup 1039 2024-02-15 10:16 /record/udp_record/2024-02-15/7ad3d561-ea0c-445d-89f4-fe3d863d9ddd
-rw-r--r-- 1 root supergroup 2091 2024-02-15 10:24 /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15.csv
-rw-r--r-- 1 root supergroup 324 2024-02-15 10:30 /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_102954.csv
-rw-r--r-- 1 root supergroup 10441 2024-02-15 10:47 /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_104753.csv
-rw-r--r-- 1 root supergroup 10433 2024-02-15 11:13 /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_111307.csv
-rw-r--r-- 1 root supergroup 10464 2024-02-15 12:39 /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_123933.csv
-rw-r--r-- 1 root supergroup 10437 2024-02-15 13:04 /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_130449.csv
-rw-r--r-- 1 root supergroup 10454 2024-02-15 13:30 /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_133005.csv
```

2. Membaca file

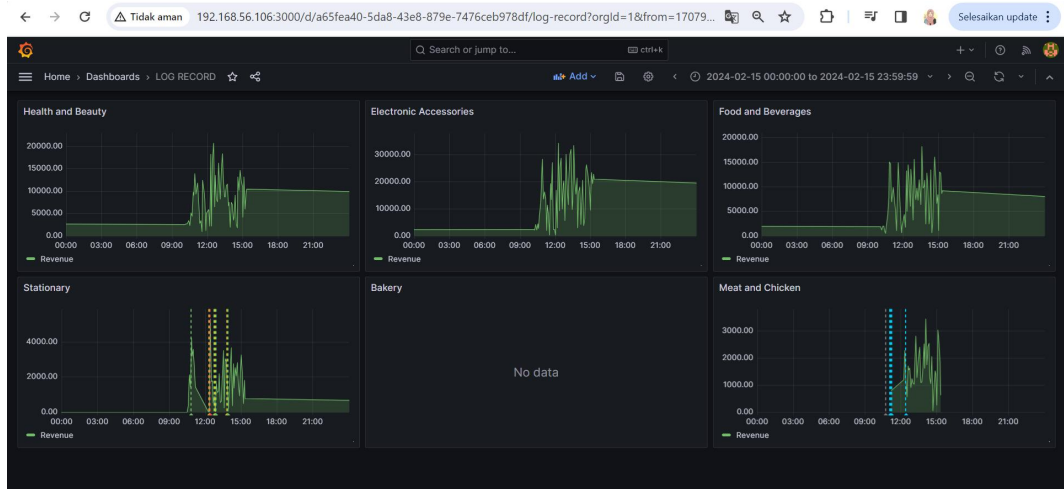
```
hadoop fs -cat
/record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_133005.csv
```

```
bihigh@server:~$ hadoop fs -cat /record/udp_record/2024-02-15/UDP_RECORD_2024-02-15_133005.csv
2024-02-15T13:05:00,WW-157-157,C,Naypyitaw,Normal,Female,Electronic accessories,5.77,2024-02-15,Cash,13,05
2024-02-15T13:05:00,MM-440-440,B,Mandalay,Member,Female,Food and beverages,990.92,2024-02-15,Credit card,13,05
2024-02-15T13:05:00,VV-327-327,A,Yangon,Member,Female,Health and beauty,500.0,2024-02-15,Cash,13,05
2024-02-15T13:05:00,NN-132-132,C,Naypyitaw,Normal,Female,Electronic accessories,8.13,2024-02-15,Cash,13,05
2024-02-15T13:06:00,PP-458-458,C,Naypyitaw,Normal,Male,Electronic accessories,0.0,2024-02-15,Cash,13,06
2024-02-15T13:06:00,HH-154-154,D,Cosmo,Normal,Male,Stationary,0.0,2024-02-15,Credit card,13,06
2024-02-15T13:06:00,BB-244-244,A,Yangon,Member,Female,Health and beauty,284.23,2024-02-15,Ewallet,13,06
2024-02-15T13:06:00,MM-226-226,C,Naypyitaw,Normal,Female,Electronic accessories,969.21,2024-02-15,Cash,13,06
2024-02-15T13:07:00,II-153-153,B,Mandalay,Member,Female,Food and beverages,17.33,2024-02-15,Credit card,13,07
2024-02-15T13:07:00,XX-443-443,A,Yangon,Member,Female,Health and beauty,500.0,2024-02-15,Cash,13,07
2024-02-15T13:07:00,XX-472-472,C,Naypyitaw,Normal,Female,Electronic accessories,519.06,2024-02-15,Cash,13,07
2024-02-15T13:07:00,EE-400-400,C,Naypyitaw,Normal,Male,Electronic accessories,0.0,2024-02-15,Cash,13,07
2024-02-15T13:08:00,RR-235-235,D,Cosmo,Normal,Male,Stationary,0.0,2024-02-15,Credit card,13,08
2024-02-15T13:08:00,YY-307-307,A,Yangon,Member,Female,Health and beauty,938.29,2024-02-15,Ewallet,13,08
2024-02-15T13:08:00,GG-389-389,C,Naypyitaw,Normal,Female,Electronic accessories,551.83,2024-02-15,Cash,13,08
2024-02-15T13:08:00,JJ-418-418,B,Mandalay,Member,Female,Food and beverages,12.73,2024-02-15,Credit card,13,08
2024-02-15T13:09:00,DD-288-288,A,Yangon,Member,Female,Health and beauty,500.0,2024-02-15,Cash,13,09
2024-02-15T13:09:00,FF-320-320,C,Naypyitaw,Normal,Female,Electronic accessories,27.8,2024-02-15,Cash,13,09
2024-02-15T13:09:00,PP-493-493,C,Naypyitaw,Normal,Male,Electronic accessories,0.0,2024-02-15,Cash,13,09
2024-02-15T13:09:00,TT-383-383,D,Cosmo,Normal,Male,Stationary,0.0,2024-02-15,Credit card,13,09
2024-02-15T13:10:00,PP-374-374,A,Yangon,Member,Female,Health and beauty,846.15,2024-02-15,Ewallet,13,10
2024-02-15T13:10:00,TT-129-129,C,Naypyitaw,Normal,Female,Electronic accessories,973.35,2024-02-15,Cash,13,10
2024-02-15T13:10:00,MM-416-416,B,Mandalay,Member,Female,Food and beverages,730.63,2024-02-15,Credit card,13,10
2024-02-15T13:10:00,VV-236-236,A,Yangon,Member,Female,Health and beauty,500.0,2024-02-15,Cash,13,10
2024-02-15T13:11:00,BB-455-455,C,Naypyitaw,Normal,Female,Electronic accessories,272.48,2024-02-15,Cash,13,11
2024-02-15T13:11:00,YY-500-500,C,Naypyitaw,Normal,Male,Electronic accessories,0.0,2024-02-15,Cash,13,11
2024-02-15T13:11:00,LL-166-166,D,Cosmo,Normal,Male,Stationary,0.0,2024-02-15,Credit card,13,11
```

G. Akses Dashboard Log Record

Dashboard Log Record yang digunakan sebagai dashboard monitoring, dapat diakses pada URL berikut.

```
http://192.168.56.106:3000/d/a65fea40-5da8-43e8-879e-7476
ceb978df/log-record?orgId=1
```



H. Akses Dashboard Summary Alert

Dashboard summary alert digunakan sebagai dashboard summary alert apa yang pernah terjadi, serta data apa yang sedang mengalami anomali.

Dashboard summary alert dapat diakses pada URL berikut.

<http://192.168.56.106:3000/d/a7154876-6773-4b4a-a0bc-89627015da3f/summary-alert?orgId=1>

The Summary Alert dashboard shows a table of alert instances for the Bakery category. The table has the following columns: Time, Product Line, City, Total Revenue, and Status. The status for all instances is 'NOT OK'.

Time	Product Line	City	Total Revenue	Status
2024-02-18 10:40:00	Stationary	Cosmo	0	NOT OK
2024-02-18 10:40:00	Stationary	Mandalay	0	NOT OK
2024-02-18 10:40:00	Stationary	Naypyitaw	0	NOT OK
2024-02-15 15:20:00	Stationary	Mandalay	0	NOT OK
2024-02-15 15:20:00	Stationary	Naypyitaw	0	NOT OK
2024-02-15 15:15:00	Stationary	Mandalay	0	NOT OK
2024-02-15 15:10:00	Stationary	Mandalay	0	NOT OK
2024-02-15 15:10:00	Stationary	Naypyitaw	0	NOT OK
2024-02-15 15:05:00	Stationary	Yangon	0	NOT OK
2024-02-15 14:50:00	Stationary	Mandalay	0	NOT OK
2024-02-15 14:50:00	Stationary	Yangon	0	NOT OK

I. Akses Database MySQL

MySQL yang digunakan untuk menyimpan data visualisasi pada dashboard monitoring, dapat diakses dengan perintah berikut.


```
mysql -u bihigh -p
```

```
bihigh@server:~$ mysql -u bihigh -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use bihighdb
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

```
Database changed
mysql> SELECT * FROM LOG_RECORD LIMIT 20;
```

dates	city	product_line	total_revenue	hourid	minuteid
2023-12-30	Naypyitaw	Electronic accessories	347.25	14	10
2023-12-30	Mandalay	Food and beverages	193.79	14	15
2023-12-30	Yangon	Health and beauty	500	14	15
2023-12-30	Mandalay	Food and beverages	677.83	14	55
2023-12-30	Yangon	Health and beauty	500	14	55
2023-12-30	Mandalay	Food and beverages	599.51	15	00
2023-12-30	Yangon	Health and beauty	357.11	15	00
2023-12-30	Naypyitaw	Electronic accessories	1125.02	14	55
2023-12-30	Cosmo	Stationary	0	15	00
2023-12-30	Naypyitaw	Electronic accessories	78.28	15	00
2023-12-30	Naypyitaw	Electronic accessories	0	15	00
2023-12-30	Cosmo	Stationary	0	15	05
2023-12-30	Cosmo	Stationary	0	15	05
2023-12-30	Yangon	Health and beauty	914.04	15	10
2023-12-30	Cosmo	Stationary	0	15	05
2023-12-30	Yangon	Health and beauty	500	15	10