

# DB2 Monitoring

## Prerequisites

- InfluxDB (the host is the same as Grafana)
- Separated Linux host
  - Install and running telegraf
  - Install DB2 Client
  - Implement custom scripts

## InfluxDB

?? database

```
> create database db2_mon with duration 180d
> create user mon with password 'thisispassword'
> grant read on db2_mon to mon
```

“ mon ?????? Grafana ? datasource ???

## Telegraf

??????? telegraf-db2.conf

```
telegraf --input-filter exec --output-filter influxdb config > /etc/telegraf/telegraf-db2.conf
```

?????

```
[agent]
...
...
logfile = "/var/log/telegraf/telegraf-db2.log"

# Configuration for sending metrics to InfluxDB
[[outputs.influxdb]]
```

```
urls = ["http://10.10.2.209:8086"]
```

```
database = "db2_mon"
```

```
timeout = "0s"
```

```
username = "admin"
```

```
password = "Thispassword"
```

```
[[inputs.exec]]
```

```
interval = "300s"
```

```
## Commands array
```

```
#commands = [
```

```
# "/tmp/test.sh",
```

```
# "/usr/bin/mycollector --foo=bar",
```

```
# "/tmp/collect_*.sh"
```

```
#]
```

```
commands = ["sudo -u db2mon sh -c '/home/db2mon/bin/collect_db2.v2.sh -d dcdb -a b_dcdb -u dbuser -p dbpass'"]
```

```
## Timeout for each command to complete.
```

```
timeout = "5s"
```

```
## measurement name suffix (for separating different commands)
```

```
#name_suffix = "_mycollector"
```

```
## Data format to consume.
```

```
## Each data format has its own unique set of configuration options, read
```

```
## more about them here:
```

```
## https://github.com/influxdata/telegraf/blob/master/docs/DATA\_FORMATS\_INPUT.md
```

```
data_format = "influx"
```

```
[[inputs.exec]]
```

```
interval = "1h"
```

```
commands = ["sudo -u db2mon sh -c '/home/db2mon/bin/collect_db2x1h.sh -d dcdb -a b_dcdb -u dbuser -p dbpass'"]
```

```
timeout = "5s"
```

```
data_format = "influx"
```

```
### CENTDB
```

```
[[inputs.exec]]
```

```
interval = "300s"
```

```

    commands = ["sudo -u db2mon sh -c '/home/db2mon/bin/collect_db2.v2.sh -d centdb -a b_centdb -u dbuser -p dbpass'"]
    timeout = "5s"
    data_format = "influx"

```

?????????? telegraf-db2.service

**“ NOTE:** ?? telegraf ???????????????????????? Output ??????????? telegraf  
???

```
cp /usr/lib/systemd/system/telegraf.service /etc/systemd/system/telegraf-db2.service
```

?????

```
// [ ] [ ] [ ] [ ]  
ExecStart=/usr/bin/telegraf -config /etc/telegraf/telegraf-db2.conf $TELEGRAF_OPTS
```

```
ExecStart=/usr/bin/telegraf -config /etc/telegraf/telegraf-db2.conf $TELEGRAF_OPTS
```

???????????? telegraf-db2??????????

```
systemctl list-unit-files --type service
systemctl daemon-reload
```

```
systemctl daemon-reload
```

## DB2 Metrics

## Bufferpool

```
-- DATA_HIT_RATIO_PERCENT: Data hit ratio, that is, the percentage of time that the database manager did not
need to load a page from disk to service a data page request.

-- INDEX_HIT_RATIO_PERCENT: Index hit ratio, that is, the percentage of time that the database manager did not
need to load a page from disk to service an index data page request.

select BP_NAME, DATA_HIT_RATIO_PERCENT, INDEX_HIT_RATIO_PERCENT
from sysibmadm.MON_BP_UTILIZATION
where BP_NAME not like 'IBMSYS%' and BP_NAME<>'IBMDEFAULTBP'
```

-- INDEX\_HIT\_RATIO\_PERCENT: Index hit ratio, that is, the percentage of time that the database manager did not need to load a page from disk to service an index data page request.

```
select BP_NAME, DATA_HIT_RATIO_PERCENT, INDEX_HIT_RATIO_PERCENT
from sysibmadm.MON_BP_UTILIZATION
where BP_NAME not like 'IBMSYS%' and BP_NAME <> 'IBMDEFAULTBP'
```

### Logs (active log & archive log)

```
-- LOG_UTILIZATION_PERCENT: Percent utilization of total log space. (active logs)
-- TOTAL_LOG_USED_KB: The total amount of active log space currently used in the database
-- TOTAL_LOG_AVAILABLE_KB: The amount of active log space in the database that is not being used by
```

-- TOTAL LOG USED KB: The total amount of active log space currently used in the database

-- TOTAL LOG AVAILABLE KB: The amount of active log space in the database that is not being used by


uncommitted transactions.

```
select DB_NAME, LOG_UTILIZATION_PERCENT, TOTAL_LOG_USED_KB, TOTAL_LOG_AVAILABLE_KB
from sysibmadm.log_utilization
```

## Connections

```
-- APPLS_CUR_CONS: Indicates the number of applications that are currently connected to the database.
-- LOCKS_WAITING: Indicates the number of agents waiting on a lock.
-- NUM_INDOUBT_TRANS: The number of outstanding indoubt transactions in the database.
select DB_NAME,APPLS_CUR_CONS,LOCKS_WAITING,NUM_INDOUBT_TRANS from sysibmadm.snapdb
```

## Transactions

```
-- 
-- COMMIT_SQL_STMTS: The total number of SQL COMMIT statements that have been attempted.
-- ROLLBACK_SQL_STMTS: The total number of SQL ROLLBACK statements that have been attempted.
select COMMIT_SQL_STMTS, ROLLBACK_SQL_STMTS from sysibmadm.snapdb
```

## Custom scripts

## Learning

### Archive Log Monitor

- [Generating Log Archive Activity Histograms](#)

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