



# DB2 Log Extraction

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## 1 Introduction

This document provides brief information about the query log extraction from different DB2 versions.

DB2 Versions:

- DB2 Database (Linux) V11.5
- DB2 for z/OS (Mainframe based) V11.5

## 2 Log Extraction in DB2 Database (Linux)

DB2 Database does not contain any SQL trace (SQL history) table. Administrator must create event monitor to capture the SQL trace for all queries.

### CREATE EVENT MONITOR

Following steps allows administrator to create event monitor:

# Login in to DB2 server from Putty.

#### 1. connect to db

db2 connect to tpcds

#### 2. Create event monitor- make sure you've got write permissions to stated folder

db2 "CREATE EVENT MONITOR stmon FOR STATEMENTS WRITE TO FILE '/tmp'"

#### 3. Turn on event monitor

db2 SET EVENT MONITOR stmon STATE = 1

#### 4. Translate event monitor into readable file

db2evmon -path /tmp > /tmp/query\_log.log

#### 5. Validate generated file

vi /tmp/query\_log.log

#### 6. Turn off event monitor

db2 SET EVENT MONITOR stmon STATE 0

#### 7. Delete event monitor

db2 DROP EVENT MONITOR stmon

Export the generated readable file to local or any shared location.

Sample event log file.



db2\_query.log

## 3 Log Extraction in DB2 for z/OS

DB2 for z/OS contains a SQL trace table called SYSIBM.SYSQUERY.

Following is the sample query to extract required information:

```
select      'idwwm' || '~' ||
            tb1.CLIENT_APPLNAME || '~' ||
            tb2.APPLICATION_ID || '~' ||
            tb1.CLIENT_USERID || '~' ||
            tb1.BINDTIME || '~' ||
            '' || '~' ||
            tb2.TOTAL_CPU_TIME || '~' ||
            tb2.QUERY_COST_ESTIMATE || '~' ||
            tb2.DIRECT_READS + tb2.DIRECT_WRITES || '~' ||
            '' || '~' ||
            '' || '~' ||
            tb1.QUERYID || '~' ||
            '' || '~' ||
            '' || '~' ||
            tb2.elapsed_time_sec || '~' ||
            tb1.SCHEMA || '~' ||
            tb1.QUERYNO || '~' ||
            '' || '~' ||
            tb1.SOURCE || '~' ||
            '' || '~' ||
            tb1.STMTTEXT

from
    SYSIBM.SYSQUERY tb1
join sysibmadm.mon_current_sql tb2
on (trim(tb1.STMTTEXT) = trim(tb2.stmt_text))
```

Note that, this query is not tested on DB2 for z/OS as we don't have mainframe based DB2. This Query will be enhanced further to add more fields.

### 3.1 Total I/O Usage by Days

Save the results of this query in a CSV file:

```
select tb1.BINDTIME,
sum(tb2.DIRECT_READS + tb2.DIRECT_WRITES) AS TOTALIOREADS
from
    SYSIBM.SYSQUERY tb1
join sysibmadm.mon_current_sql tb2
on (trim(tb1.STMTTEXT) = trim(tb2.stmt_text))
WHERE tb1.BINDTIME BETWEEN '2017/01/01' AND '2017/05/29'
group by tb1.BINDTIME;
```

Replace '2017/01/01' AND '2017/05/29' with actual export assessment start and end date.

### 3.2 Database Object Count

Save its results in a CSV file.

```
select
```

```
DBNAME as databasename,  
TYPE as tablekind,  
count(name)  
from SYSIBM.SYSTABLES  
group by DBNAME,TYPE order by DBNAME;
```

### 3.3 Database Volume

This SQL will collect databases with volume equal or above 10GB. Save its results in a CSV file.

```
select a.TABNAME ,  
       a.CARD*(sum(b.AVGCOLLEN)+10)/1024/1024/1024 as Tablesize_in_GB  
from  
     syscat.tables as a, syscat.columns as b  
where  
     a.TABNAME = b.TABNAME  
group BY a.TABNAME, a.CARD  
ORDER BY 2 DESC;
```

### 3.4 Databases and Users

This query provides the total number of databases and users. Save its results in a CSV file.

```
select type,count(*) from SYSIBM.SYSDATABASE group by type
```