

MySQL on Server

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Why MySQL

- Free and popular
- Support most programming language
- Easy to understand

Installation and Management

- Download and install

```
yum install mysql mysql-server  
service mysqld start
```

- Default access account: root
 - User account could be created and granted different privileges

Demo (1)

- Log in
- Use database
- Show tables
- Show fields

```
SHOW  
  FIELDS  
FROM  
  '1000_page_2016-01';
```

Demo (2)

- Get size of a table

```
SELECT
    table_name AS 'Table',
    ROUND(((data_length + index_length) / 1024 / 1024 / 1024), 2)
    AS 'Size in GB'
FROM information_schema.TABLES
WHERE table_schema = "1000_page_us_user_like_post" AND
    table_name = "1000_page_2016-01";
```

Import User Like Page Data by Month (1)

- 1 Import library "dbConnect"
- 2 Connect to MySQL

```
con = dbConnect(MySQL(),  
  user = "root",  
  password = "*****",  
  dbname = "1000_page_us_user_like_post",  
  host = "localhost")
```

- 3 Create a table schema for month data

```
dbGetQuery(con, paste("create table",  
  year_month,  
  "(user_id varchar(20),  
  post_id varchar(41),  
  post_created_date_CT date);"))
```

Import User Like Page Data by Month (2)

- 4 Read daily data into R to remove duplicate and save it as another file
- 5 Expand the month data table by "load data infile"

```
dbGetQuery(con, paste("load data local infile",  
                      like_date_table,  
                      "ignore into table",  
                      year_month,  
                      "fields terminated by ','  
                      lines terminated by '\\n'  
                      ignore 1 lines ;"))
```

Extract Weekly Data

- 1 Selecting the date range
 - Union needed if you need data from two tables
- 2 Group your data by `user_id`, `page_id`
- 3 Turn it into `user_like_page` data by “Group_Concat”
 - Be aware of `group_concat_max_len`