# Perform a SQL Query

#### Introduction

In this lab, I had to retrieve information from a database using SQL queries, where I used MariaDB shell to run this.

## **Objectives**

- 1) Return information on employee devices
- 2) Examine login attempts
- 3) Sort the data returned from a query

#### Information on employee devices

As a security analyst I had to obtain information from all employee devices within the organization's database so my department could update them. For example, you can see devices being run on different operating systems.

```
MariaDB [organization]> SELECT *
   -> FROM machines;
device id
              | operating system | email client
                                                   | OS patch date | employee id |
a184b775c707 | OS 1
                                 | Email Client 1 | 2021-09-01
                                                                            1156 |
a192b174c940 | OS 2
                                 | Email Client 1 | 2021-06-01
                                                                            1052 |
a305b818c708 | OS 3
                                 | Email Client 2 | 2021-06-01
                                                                            1182
a317b635c465 | OS 1
                                  | Email Client 2 | 2021-03-01
                                                                            1130
                                   Email Client 2 |
a320b137c219
                                                     2021-03-01
                                                                            1000
a398b471c573
                os 3
                                   Email Client 2 |
                                                     2021-12-01
                                   Email Client 1 | 2021-03-01
                                                                            1078
a667b270c984 |
               os 1
a821b452c176
                                                     2021-12-01
                os 2
                                   Email Client 2 |
                                                                            1104
 a998b568c863
                                   Email Client
                                                                            1026
```

#### **Examining login attempts**

For this task I ran a query to see all tables related to login attempts, so I could see if there were any unusual activities such as attempts from outside the US, Mexico, or Canada.

```
MariaDB [organization]> SELECT * FROM log_in_attempts ORDER BY login_date, login_time;
event id | username | login date | login time | country | ip address
                                                                            success
                                                                                    0 1
      117 | bsand
                       2022-05-08 |
                                    00:19:11
                                                 TISA
                                                           192.168.197.187
           pwashing |
                       2022-05-08
                                    00:36:12
                                                 US
                                                           192.168.247.219
                       2022-05-08
                                                           192.168.119.173
          bisles
                                    01:30:17
                                                 US
                       2022-05-08 I
         | dkot
                                    02:00:39
                                                 USA
                                                           192.168.178.71
                                                                                   0
       80 | cjackson |
                       2022-05-08 | 02:18:10
                                                 CANADA
                                                           192.168.33.140
       43 | mcouliba |
                       2022-05-08 |
                                    02:35:34
                                                 CANADA
                                                           192.168.16.208
                       2022-05-08
                                                           192.168.33.70
      184
          | alevitsk |
                                    03:09:48
                                                 CAN
                       2022-05-08 | 04:56:30
                                                 CAN
                                                           192.168.209.130
      56 | acook
      47
           dkot
                       2022-05-08 |
                                    05:06:45
                                                 US
                                                           192.168.233.24
      189
           nmason
                       2022-05-08
                                    05:37:24
                                                 CANADA
                                                           192.168.168.117
          | yappiah
                       2022-05-08
                                    06:04:34
                                                 MEX
                                                           192.168.65.245
                       2022-05-08
                                   06:15:55
                                                 CANADA
                                                           192.168.135.6
      148
         daguino
                       2022-05-08 |
                                                 CANADA
                                                           192.168.7.187
      191
           cjackson
                                    06:46:07
```

### Sorting login attempts data

For this task I used the ORDER BY keyword to sort login dates and times in an ascending manner, so I could better analyze the data.

```
MariaDB [organization]> SELECT * FROM log_in_attempts ORDER BY login_date, login_time;
 event id | username | login date | login time | country | ip address
                                                                            success
     117 | bsand
                                                         | 192.168.197.187
                                                                                   0 1
                      2022-05-08 | 00:19:11
                                               I TISA
       92 | pwashing |
                       2022-05-08
                                    00:36:12
                                                 US
                                                           192.168.247.219
                       2022-05-08
                                                           192.168.119.173
          | bisles
                                    01:30:17
       4 | dkot
                      2022-05-08 | 02:00:39
                                                 USA
                                                           192.168.178.71
                                                                                   0
                      2022-05-08 | 02:18:10
                                                 CANADA
                                                           192.168.33.140
       80 | cjackson |
                                                 CANADA
                                                           192.168.16.208
       43
         | mcouliba |
                       2022-05-08
                                  02:35:34
                       2022-05-08
                                    03:09:48
                                                           192.168.33.70
     184 | alevitsk |
                                                 CAN
       56
                       2022-05-08
                                  | 04:56:30
                                                 CAN
                                                           192.168.209.130
         acook
                      2022-05-08 | 05:06:45
      47
                                                 US
                                                           192.168.233.24
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     189
           nmason
                      2022-05-08 I
                                    05:37:24
                                                 CANADA
                                                           192.168.168.117
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           yappiah
                       2022-05-08
                                    06:04:34
                                                 MEX
                                                           192.168.65.245
     148
                      2022-05-08 | 06:15:55
                                                 CANADA
                                                           192.168.135.6
         daguino
                                                                                   0 1
     191 | cjackson | 2022-05-08 | 06:46:07
                                                 CANADA
                                                         | 192.168.7.187
```