LABORATORIO

270 Y 271

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Objetivos // del laboratorio

- Aprender a usar algunas operaciones de bases de datos comunes y la statement SELECT.

- Aprender cómo usar la statement SELECT y una cláusula WHERE para filtrar los registros con una búsqueda condicional.
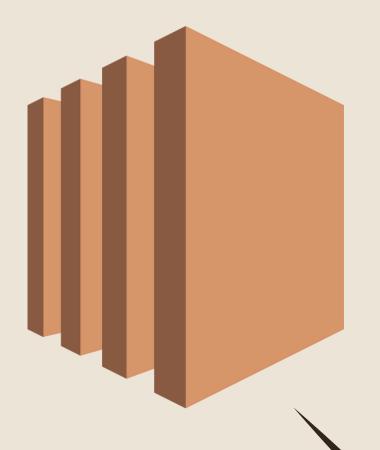
1: Conexión con la instancia EC2

- Esperaremos a que la instancia esté cargada y nos conectaremos a la misma utilizando SSH.

- En Windows: usando PuTTY,
- En Linux: usando el comando SSH.

Amazon EC2

Conexión con la instancia EC2

Connect to instance Info

Connect to your instance i-0816bb3e913644cd6 (Command Host) using any of these options

| EC2 Instance Connect | Session Manager | SSH client | EC2 serial console |

Session Manager usage:

- Connect to your instance without SSH keys, a bastion host, or opening any inbound ports.
- Sessions are secured using an AWS Key Management Service key.
- You can log session commands and details in an Amazon S3 bucket or CloudWatch Logs log group.
- Configure sessions on the Session Manager Preferences ⬈ page.

Cancel   **Connect**

Conexión con la base de datos

```
sh-4.2$ sudo su
[root@ip-10-1-11-155 bin]# cd /home/ec2-user/
[root@ip-10-1-11-155 ec2-user]# mysql -u root --password='re:St@rt!9'
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 14
Server version: 10.6.18-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]>
```

2: Consulte la base de datos world

- En esta tarea, consultará la base de datos world usando varias statement SELECT y funciones de la base de datos.

Tabla de ciudades

```
73.1 |   95023.00 |   88434.00 | Venezuela                                     | Federal Republic                     |    3539 | VE  |
| VGB  | Virgin Islands, British                   | North America | Caribbean                |    151.00 |     NULL |    21000 |
75.4 |     612.00 |     573.00 | British Virgin Islands                   | Dependent Territory of the UK        |     537 | VG  |
| VIR  | Virgin Islands, U.S.                      | North America | Caribbean                |    347.00 |     NULL |    93000 |
78.1 |       0.00 |       NULL | Virgin Islands of the United States      | US Territory                         |    4067 | VI  |
| VNM  | Vietnam                                   | Asia          | Southeast Asia           | 331689.00 |     1945 | 79832000 |
69.3 |   21929.00 |   22834.00 | Viët Nam                                 | Socialistic Republic                 |    3770 | VN  |
| VUT  | Vanuatu                                   | Oceania       | Melanesia                |  12189.00 |     1980 |   190000 |
60.6 |     261.00 |     246.00 | Vanuatu                                  | Republic                             |    3537 | VU  |
| WLF  | Wallis and Futuna                         | Oceania       | Polynesia                |    200.00 |     NULL |    15000 |
NULL |       0.00 |       NULL | Wallis-et-Futuna                         | Nonmetropolitan Territory of France  |    3536 | WF  |
| WSM  | Samoa                                     | Oceania       | Polynesia                |   2831.00 |     1962 |   180000 |
69.2 |     141.00 |     157.00 | Samoa                                    | Parlementary Monarchy                |    3169 | WS  |
| YEM  | Yemen                                     | Asia          | Middle East              | 527968.00 |     1918 | 18112000 |
59.8 |    6041.00 |    5729.00 | Al-Yaman                                 | Republic                             |    1780 | YE  |
| YUG  | Yugoslavia                                | Europe        | Southern Europe          | 102173.00 |     1918 | 10640000 |
72.4 |   17000.00 |       NULL | Jugoslavija                              | Federal Republic                     |    1792 | YU  |
| ZAF  | South Africa                              | Africa        | Southern Africa          | 1221037.00 |    1910 | 40377000 |
51.1 |  116729.00 |  129092.00 | South Africa                             | Republic                             |     716 | ZA  |
| ZMB  | Zambia                                    | Africa        | Eastern Africa           | 752618.00 |     1964 |  9169000 |
37.2 |    3377.00 |    3922.00 | Zambia                                   | Republic                             |    3162 | ZM  |
| ZWE  | Zimbabwe                                  | Africa        | Eastern Africa           | 390757.00 |     1980 | 11669000 |
37.8 |    5951.00 |    8670.00 | Zimbabwe                                 | Republic                             |    4068 | ZW  |
+------+---------------------------------------+---------------+--------------------------+-----------+----------+---------
-----+----------+-----------+------------------------------------------+------------------------------+---------+------+
239 rows in set (0.002 sec)

MariaDB [(none)]>
```

Conteo de tuplas

```
MariaDB [(none)]> SELECT COUNT(*) FROM world.country;
+----------+
| COUNT(*) |
+----------+
|      239 |
+----------+
1 row in set (0.002 sec)

MariaDB [(none)]>
```

Desafio del lab


```
MariaDB [(none)]> SELECT * FROM world.country WHERE population > 50000000 AND region = 'Southern Europe';
+------+-------+-----------+----------------+-------------+-----------+------------+----------------+------------+------------+-----------+--------------+---------+-------+
| Code | Name  | Continent | Region         | SurfaceArea | IndepYear | Population | LifeExpectancy | GNP        | GNPOld     | LocalName | Governme
ntForm | Capital | Code2 |
+------+-------+-----------+----------------+-------------+-----------+------------+----------------+------------+------------+-----------+--------------+---------+-------+
| ITA  | Italy | Europe    | Southern Europe |   301316.00 |      1861 |   57680000 |           79.0 | 1161755.00 | 1145372.00 | Italia    | Republic
       |    1464 | IT    |
+------+-------+-----------+----------------+-------------+-----------+------------+----------------+------------+------------+-----------+--------------+---------+-------+
1 row in set (0.000 sec)

MariaDB [(none)]>
```

Uso del LIKE

```
MariaDB [(none)]> SELECT sum(Population) from world.country WHERE Region LIKE "%Europe%";
+-----------------+
| sum(Population) |
+-----------------+
|       634947800 |
+-----------------+
1 row in set (0.001 sec)

MariaDB [(none)]>
```

Uso del AS

```
MariaDB [(none)]> SELECT sum(population) as "Europe Population Total" from world.country WHERE region LIKE "%Europe%";
+-------------------------+
| Europe Population Total |
+-------------------------+
|               634947800 |
+-------------------------+
1 row in set (0.000 sec)

MariaDB [(none)]>
```

Uso del LOWER

```
MariaDB [(none)]> SELECT Name, Capital, Region, SurfaceArea, Population from world.country WHERE LOWER(Region) LIKE "%central%";
+-------------------------------------+---------+------------------------+-------------+------------+
| Name                                | Capital | Region                 | SurfaceArea | Population |
+-------------------------------------+---------+------------------------+-------------+------------+
| Afghanistan                         |       1 | Southern and Central Asia |   652090.00 |   22720000 |
| Angola                              |      56 | Central Africa         |  1246700.00 |   12878000 |
| Bangladesh                          |     150 | Southern and Central Asia |   143998.00 |  129155000 |
| Belize                              |     185 | Central America        |    22696.00 |     241000 |
| Bhutan                              |     192 | Southern and Central Asia |    47000.00 |    2124000 |
| Central African Republic            |    1889 | Central Africa         |   622984.00 |    3615000 |
| Cameroon                            |    1804 | Central Africa         |   475442.00 |   15085000 |
| Congo, The Democratic Republic of the |    2298 | Central Africa         |  2344858.00 |   51654000 |
| Congo                               |    2296 | Central Africa         |   342000.00 |    2943000 |
| Costa Rica                          |     584 | Central America        |    51100.00 |    4023000 |
| Gabon                               |     902 | Central Africa         |   267668.00 |    1226000 |
| Equatorial Guinea                   |    2972 | Central Africa         |    28051.00 |     453000 |
| Guatemala                           |     922 | Central America        |   108889.00 |   11385000 |
| Honduras                            |     933 | Central America        |   112088.00 |    6485000 |
| India                               |    1109 | Southern and Central Asia |  3287263.00 | 1013662000 |
```

Desafio 2

```
MariaDB [(none)]> SELECT Region, SUM(SurfaceArea), SUM(Population) FROM world.country WHERE Region='North America';
+---------------+-----------------+-----------------+
| Region        | SUM(SurfaceArea) | SUM(Population) |
+---------------+-----------------+-----------------+
| North America |     21500515.00 |       309632000 |
+---------------+-----------------+-----------------+
1 row in set (0.000 sec)

MariaDB [(none)]>
```

Conclusiones

- Se realizaron con éxito los desafios
- Adquirí experiencia en el uso de operaciones básicas de SQL

¡Muchas gracias!

Hecho por: Ignacio Suárez

Realizado en: canva.com