MSDS 7346 Cloud Computing Mini Project 1 – AWS

Name:

This is a mini project for MSDS 7346, Cloud Computing. For this assignment, turn in a single pdf file containing all of your answers. The file should be named ¡yourLastName¿MiniProject-Number.pdf. For example, the file name for my mini project 1 would be 'RafiqiMiniProject-Number.pdf'.

Collaboration is expected and encouraged; however, each student must hand in their own homework assignment. To the greatest extent possible, answers should not be copied but, instead, should be written in your own words. Copying answers from anywhere is plagiarism, this includes copying text directly from the textbook. Do not copy answers. Always use your own words and your own code. Directly under each question list all persons with whom you collaborated and list all resources used in arriving at your answer. Resources include but are not limited to the textbook used for this course, papers read on the topic, and Google search results. Don't forget to place your name on the first page of the pdf document.

AWS

Question 1 :

The objective of this lab is to gain familiarity with AWS (public cloud provider). In this course, we will primarily use AWS, but at times will work with other public providers to be able to compare and contrast.

If you do not already have AWS subscription, please sign up as a student. AWS provides you access to certain resources for free. Please be advised, NOT all of the services are free and it is your responsibility to ensure that you launch free resources and terminate them as soon as you are finished. Each instance in AWS states ”free tier enabled.” If you choose any other one, it could cost you money.

Once you are signed up to AWS, you will configure and launch an instance in EC2 instance. You can choose operating system of your choice. I usually work with Linux, but that does not mean you need to use that. Once an instance is launched, you need to connect to that instance from your local machine (laptop) using the secure shell.

At this time you should have an instance up and running in AWS, and you should be able to login from your laptop using SSH (putty), etc.

The next step is to download and install the MySQL Community Server database program on the EC2 instance. MySQL Community Server is a free download from https://www.mysql.com. Download and install MySQL Workbench on your local machine. Most of you should already have this from your previous course. MySQL Workbench is a visualization application for accessing MySQL databases.

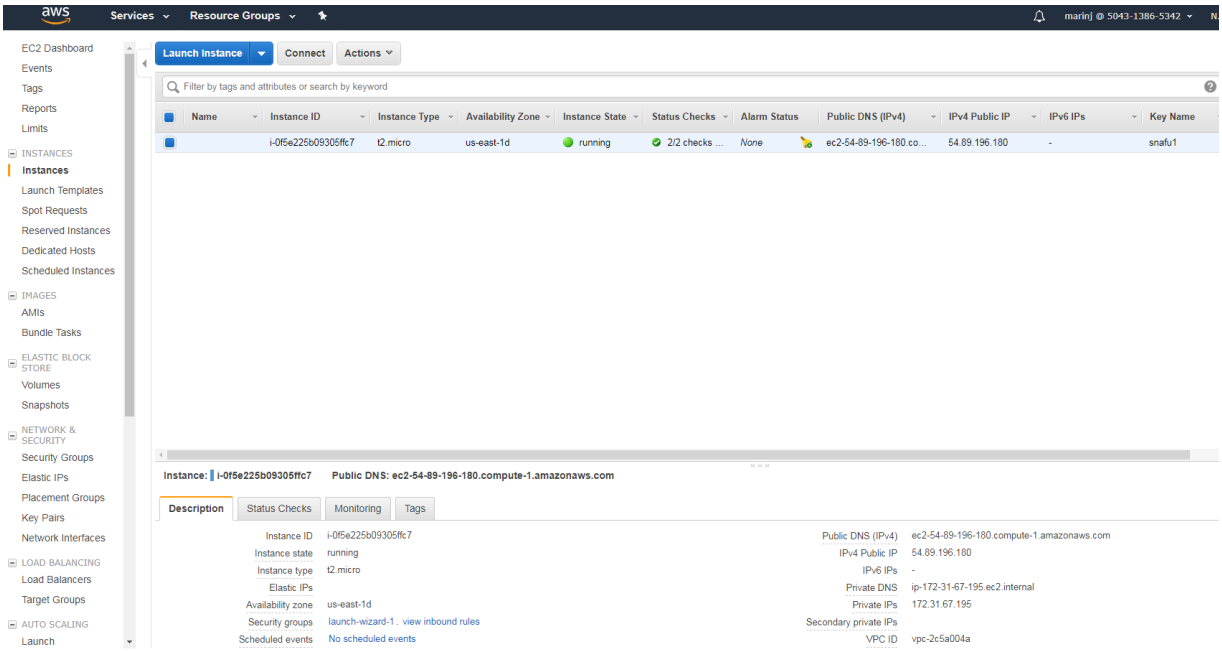
Once you have installed MySQL, be sure to set the password for your user account on the MySQL database. And, be sure to give your account the privileges needed to create and modify databases. The MySQL reference manual, available from https://www.mysql.com, provides in-depth instructions on how to install and configure your MySQL software.

Once you have installed and configured MySQL, select the MySQL database by executing the “USE MySQL” command. Then, run the query “SELECT User, Host FROM mysql.user;” from the command line.

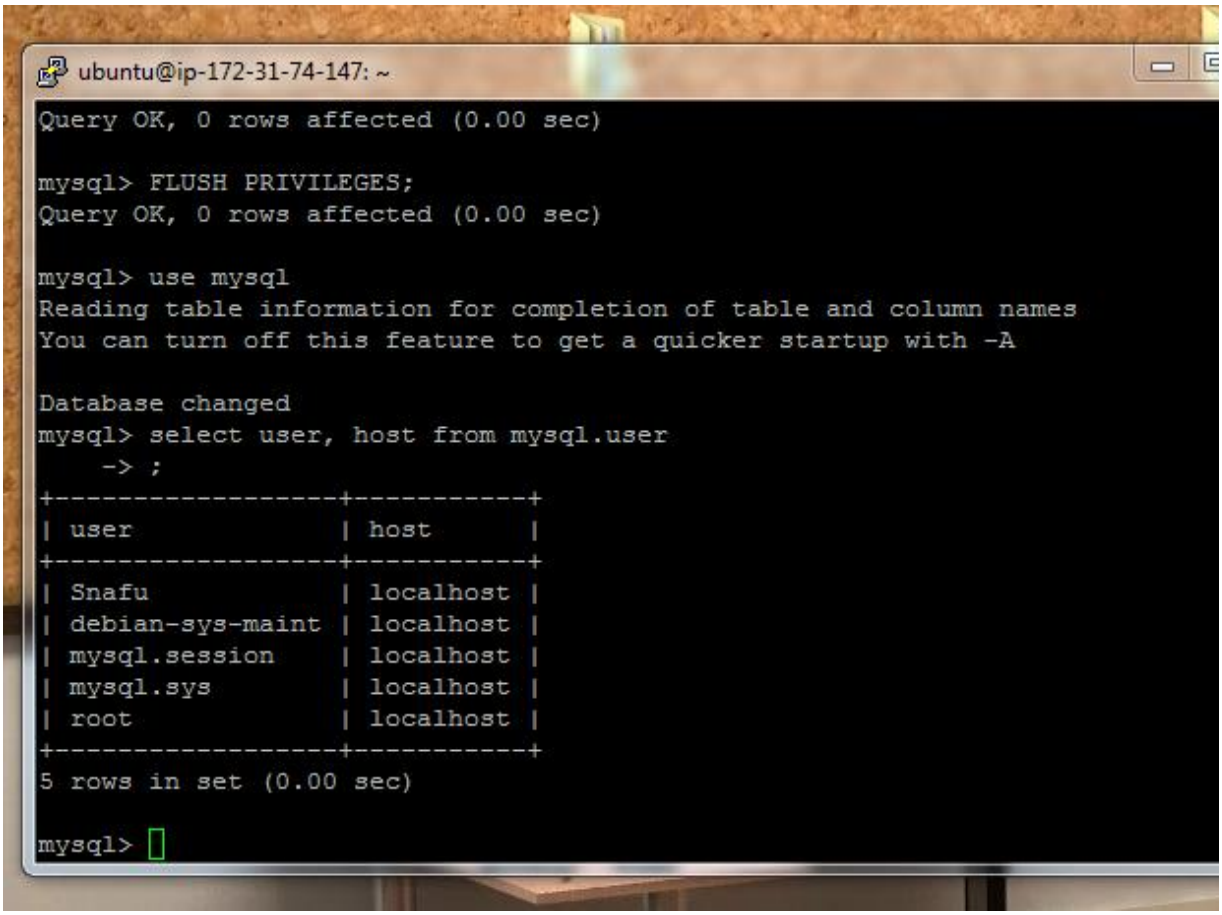
Capture the resulting output as a screen capture or grab and turn in the resulting pdf showing both the query and the results.

This configuration is similar to what we did in the database class except that you are running MySQL on AWS instance. The next step of this lab is to create an AWS RDS instance of MySQL and connect using the MySQL workbench on your local machine.

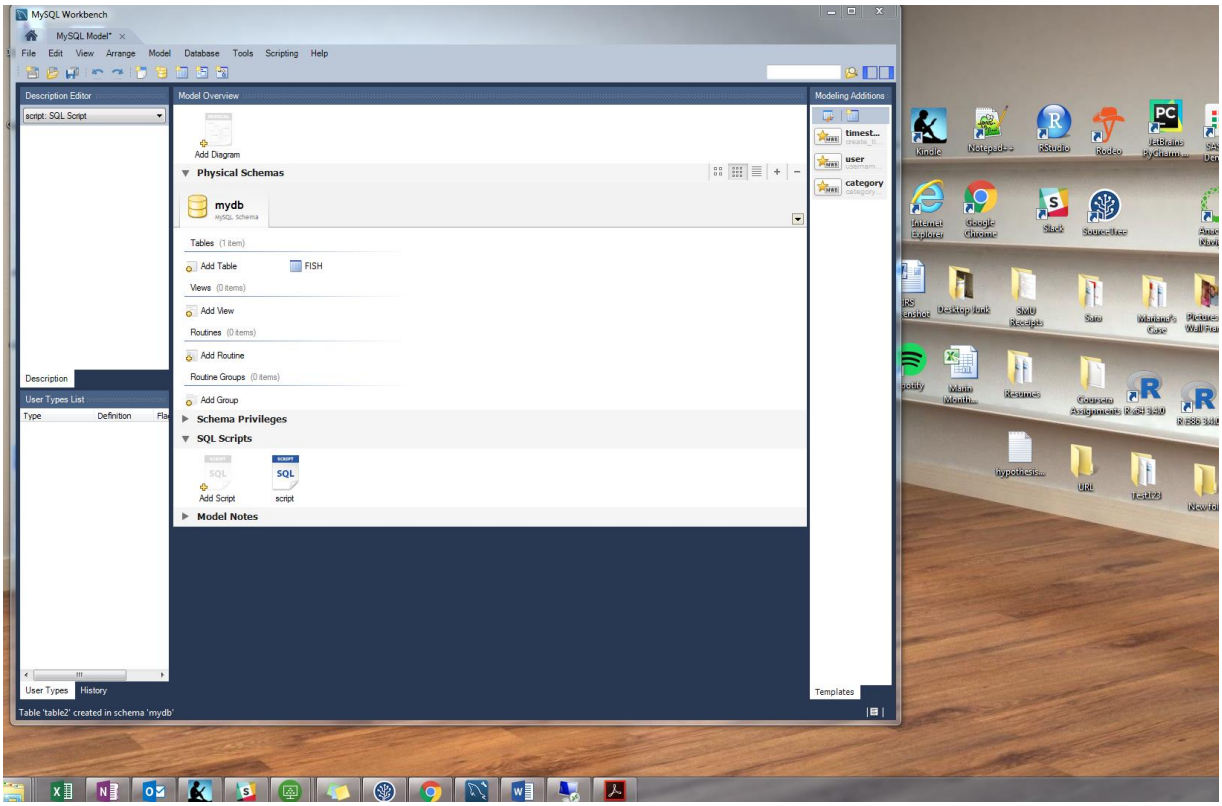
1) Create an instance on EC2



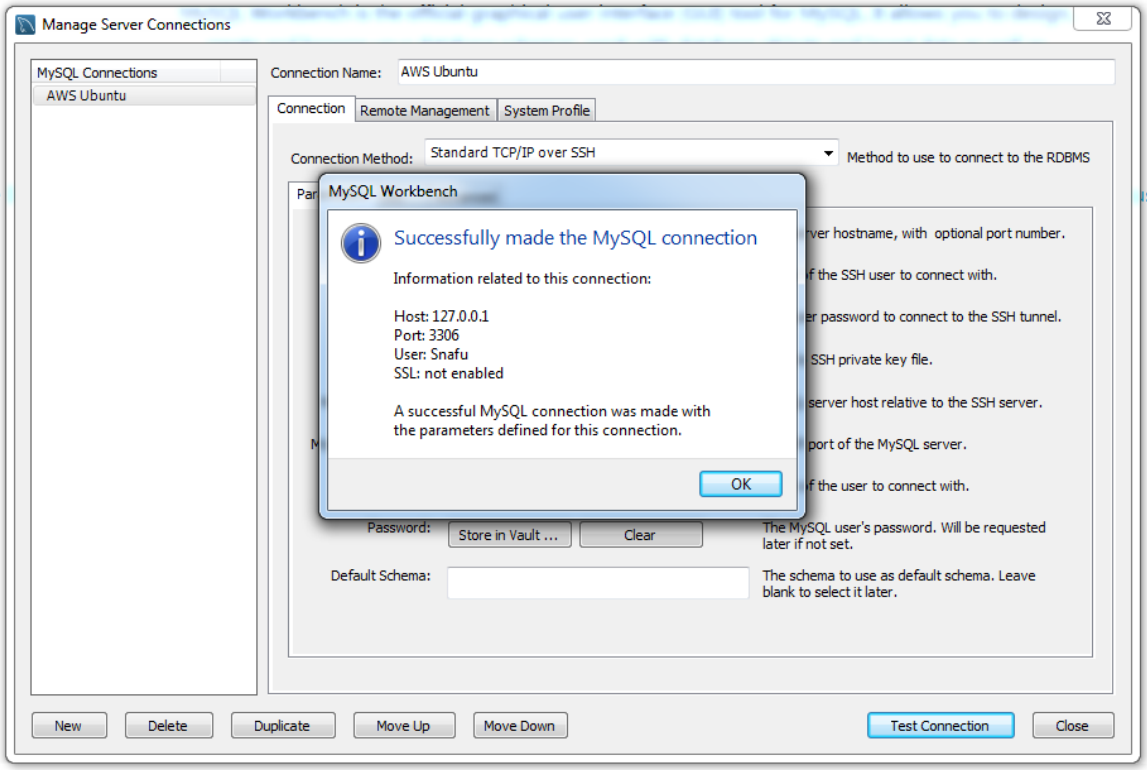
2) Download and install MySQL on EC2

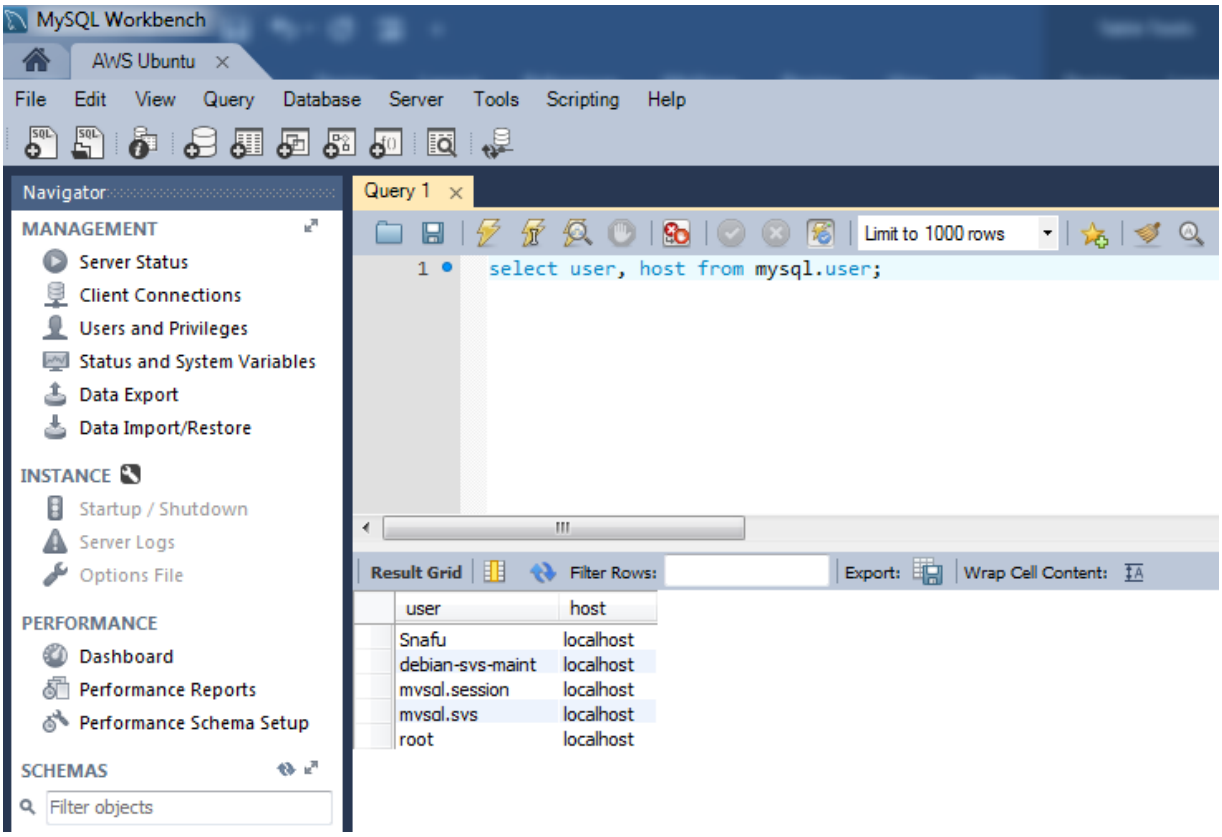


3) Download (if you don't already have) MySQL Workbench on your local machine

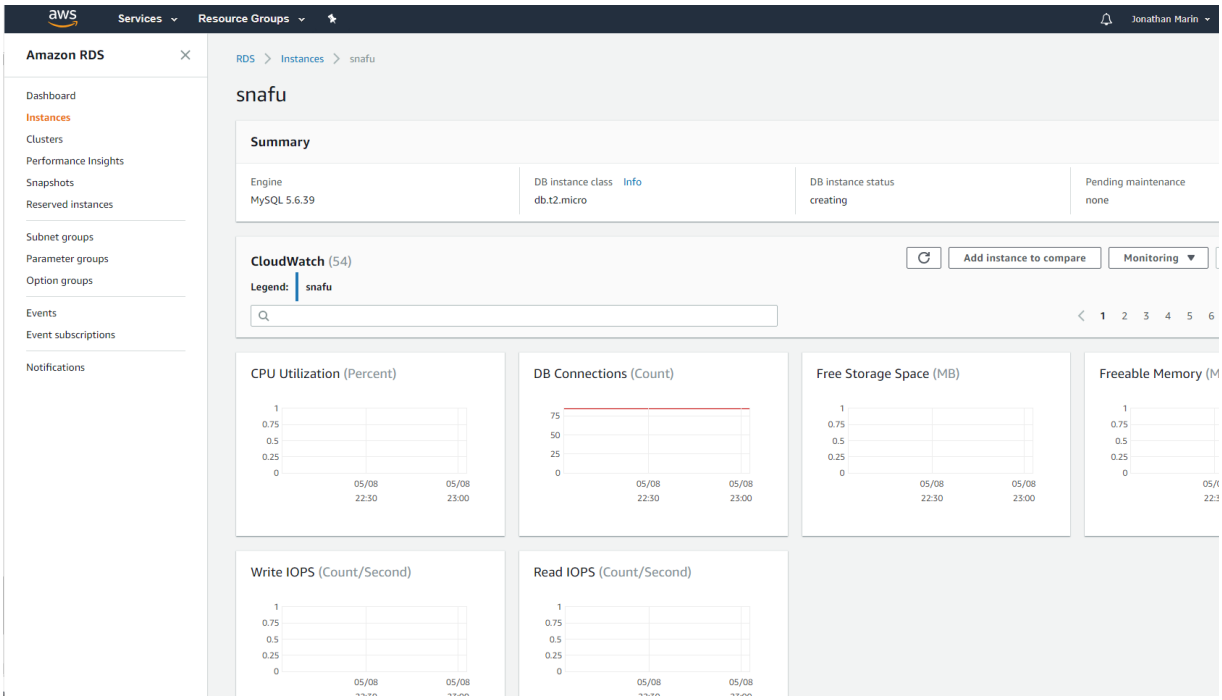


4) Connect MySQL Workbench to EC2 instance (you will need to create keys)

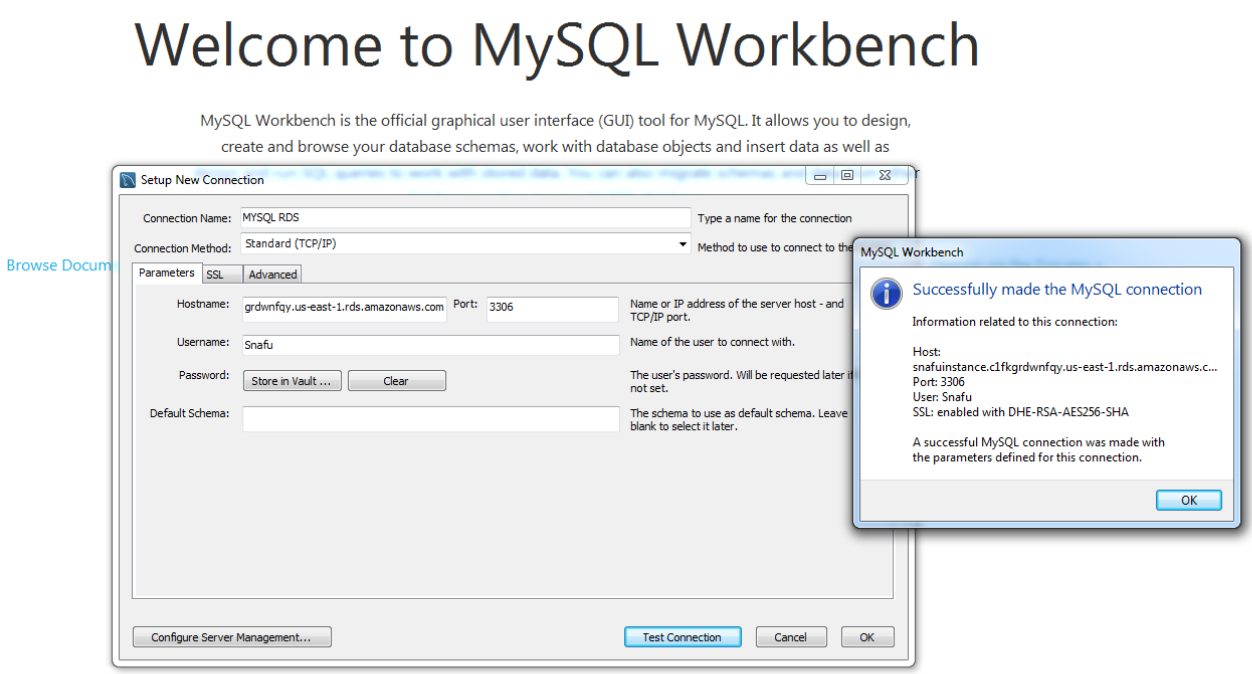




5) Create MySQL instance on RDS



6) Connect your local MySQL Workbench to MySQL on RDS



Submission: Submit different screen shots to show completion of each steps

NOTE: As stated earlier, please make sure to only use free resources on AWS and NEVER FORGET to terminate your instances. Everything that you get from your subscription is NOT FREE.

Collaborators:

Resources:

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_GettingStarted.CreatingConnecting.MySQL.html
https://mariolurig.com/coding/connect-remotely-mysql-database-amazon-ec2-server/