Nalongsone Danddank Student ID : 14958950 StarID: jf3893pd

Email: [nalongsone.danddank@my.metrostate.edu](mailto:nalongsone.danddank@my.metrostate.edu)\

**ICS 432 - 01 — Distributed and Cloud Computing Fall 2021**

**Assignment #2 :** Load Balancing and Auto Scaling

Exercise 1: Implementing a scalable AWS infrastructure to host a web site.

**Homework report screen-shot #1:**

**Homework report screen-shot #2:**

**Homework report screen-shot #3:**

**Homework report screen-shot #4:**

**Homework report screen-shot #5:**

**Homework report screen-shot #6:**

**Homework report screen-shot #7:**

**Homework report screen-shot #8:**

**Homework report screen-shot #9:**

**Homework report screen-shot #10:**

**Homework report screen-shot #11:**

**Homework report screen-shot #12:**

**Homework report screen-shot #13:**

**Homework report screen-shot #14:**

**Homework report screen-shot #15:**

**Homework report screen-shot #16:**

**Homework report screen-shot #17:**

**Homework report screen-shot #18:**

**Summarize your learning:**

I have learned to create and launch a EC2 instance of virtual machine in AWS by web page and terminal command line SSH, and learned how to deploy a web server to run in AWS in the Linux which I have created, then install a nginx web server software on the EC2 instance. Then, modified the security setting of the instance to allow public access for other people can access the website that I created. Finally, I have to stop the EC2 instance to terminate the cost for my account bill.

The most important thing is I have familiar with AWS EC2 instance virtual machine that is every significant concept of current technology and most popular use to deploy our modern website and other applications these day.

I think the most challenge me about working with AWS EC2 instance is working on the stable connection of internet to keep connect from my computer to a remote machine, AWS. And I have to familiar with the environment system, Linux, command line and system file of Linux, that is every challenge for me in the beginning.

Exercise 2: Implementing a scalable GCP infrastructure to host a web site.

**Homework report screen-shot #19:**

**Homework report screen-shot #20:**

**Homework report screen-shot #21:**

**Homework report screen-shot #22:**

**Homework report screen-shot #23:**

**Homework report screen-shot #24:**

**Homework report screen-shot #25:**

**Homework report screen-shot #26:**

**Homework report screen-shot #27:**

**Homework report screen-shot #28:**

**Homework report screen-shot #29:**

**Summarize your learning:**

I have learned to create and launch a VM instance on GCP by web page and terminal command line SSH on the web page command line interface, and learned how to set up My SQL server on the virtual machine of Linux which I have created, then fill tables with a data set about movie reviews. After that, write SQL queries to analyze a movie-rating data set. Finally, I have to stop the VM instance to terminate the cost for my account bill.

The most important thing is I have familiar with VM instance GCP virtual machine that is every significant concept of current technology and most popular use to analyze big data and other like machine learning and data analyze for data science.

I think the most challenge me about working with GCP’s VM instance is working on the stable connection of internet to keep connect from my computer to a remote machine on GCP. And I have to write SQL queries with the environment system, Linux, command line and under system file of Linux, that is every challenge for me in the beginning.

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| **Purpose** | **AWS** | **GCP** |
| **Running compute resources on the cloud** | **Compute -> Amazon EC2** | **Compute -> Compute Engine**  **-> VM instances** |