Lab #10: System Monitoring
CSC432 – Computer Information and Security
Franklin Nuth
5 April 2019

Abstract

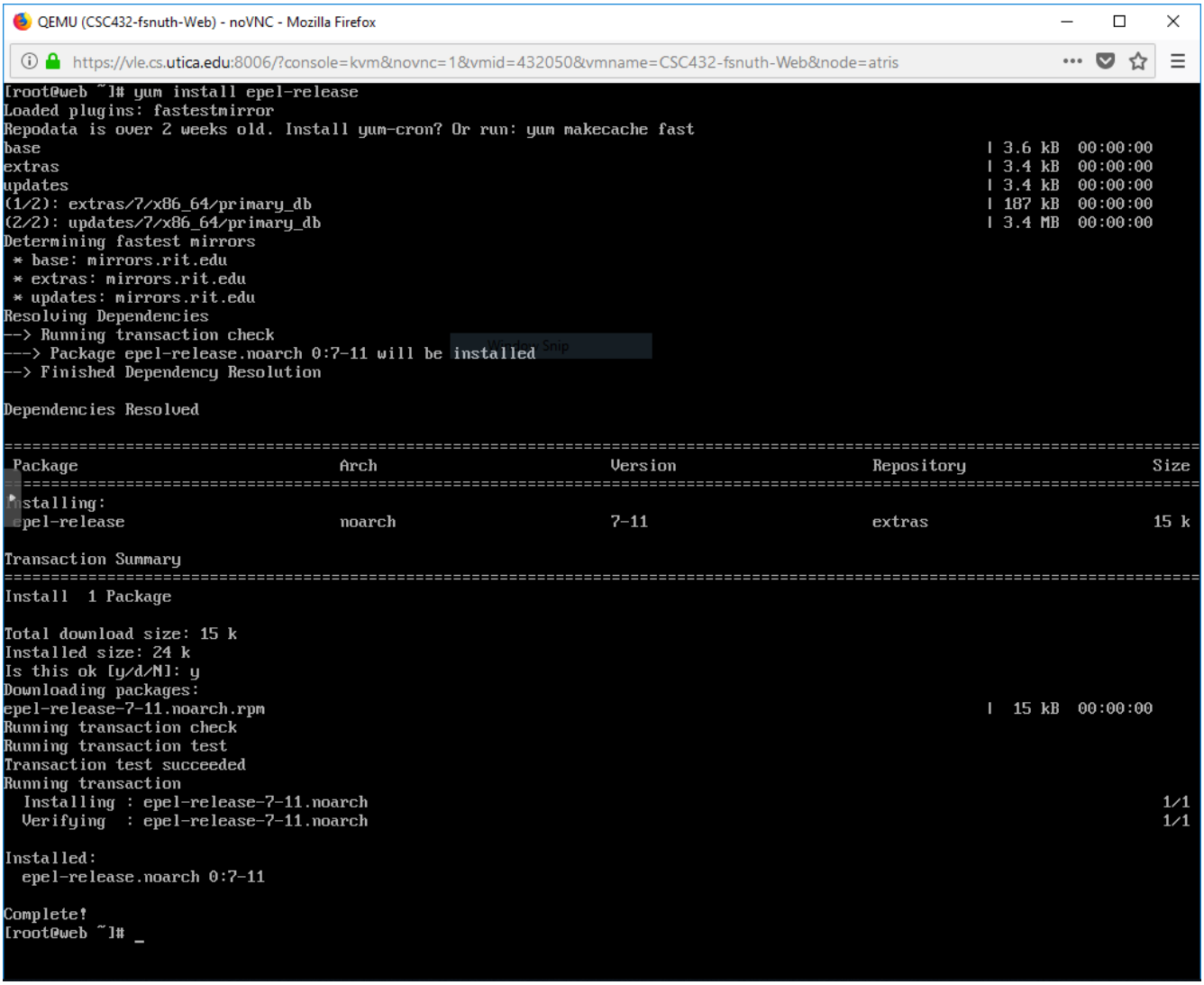
In this lab, I will be working on setting up system monitoring software on my web server. I will Cacti, a system monitoring software for Cent OS 7 that will allow me to see information about the devices on my network. I will configure the MySQL databases and configuration files for the Cacti installation so it can work for me when I enter my web server from my Kali machine.

Introduction

Even on fully secure networks, system monitoring is an important aspect that most admins must acknowledge and utilize to maintain a high standard of security. System monitoring can be used to observe the amount of resources being used on any device on a network, from processing power to hard drive capacity. It will be easier to upgrade and replace devices when they are not running. Because information given to the Cacti software is detailed and real-time, admins have no excuse to delay on making fixes for both present and future attacks. I will be installing Cacti and observing how it will help me as an administrator of my virtual network.

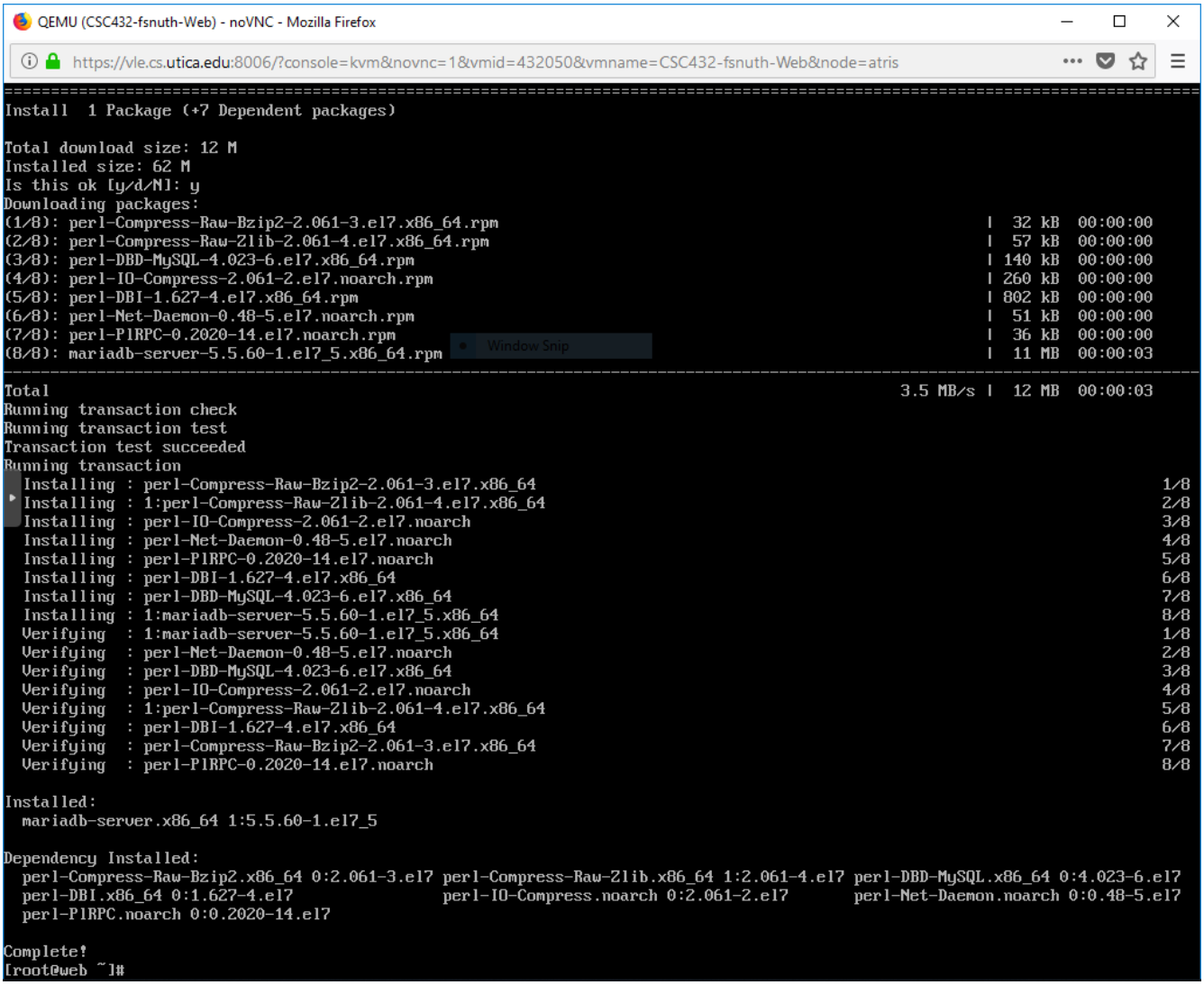
Processes & Screenshots

There a number of things I needed to do before installing Cacti. First of all, I need to clean out the standard yum repository with “yum install epel-release” on my web server.

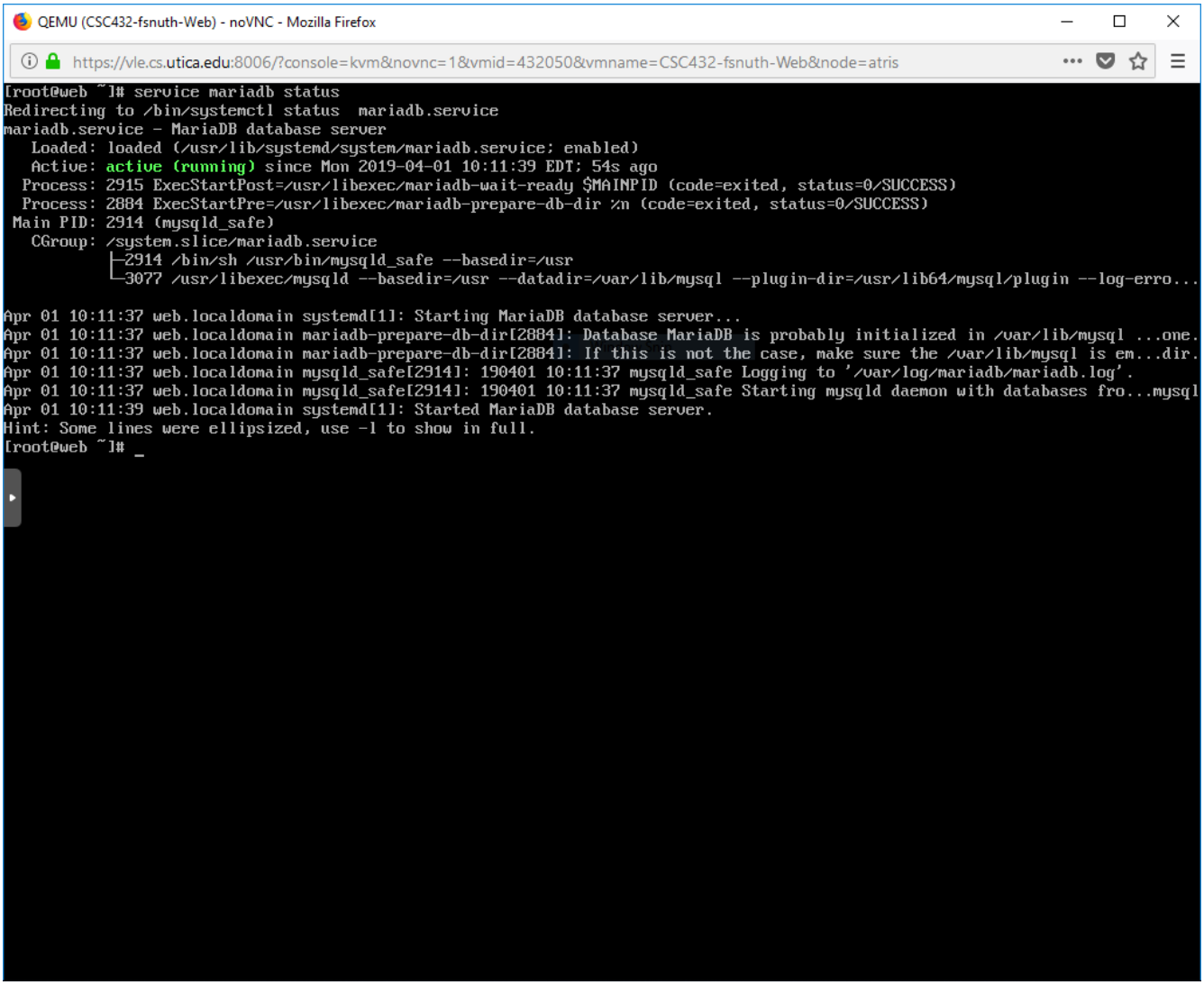


(The result of typing "yum install epel-release" on my web server. Everything is now ready for installing Cacti.)

After cleaning out the repositories, we now install Cacti with "yum install mariadb cacti".

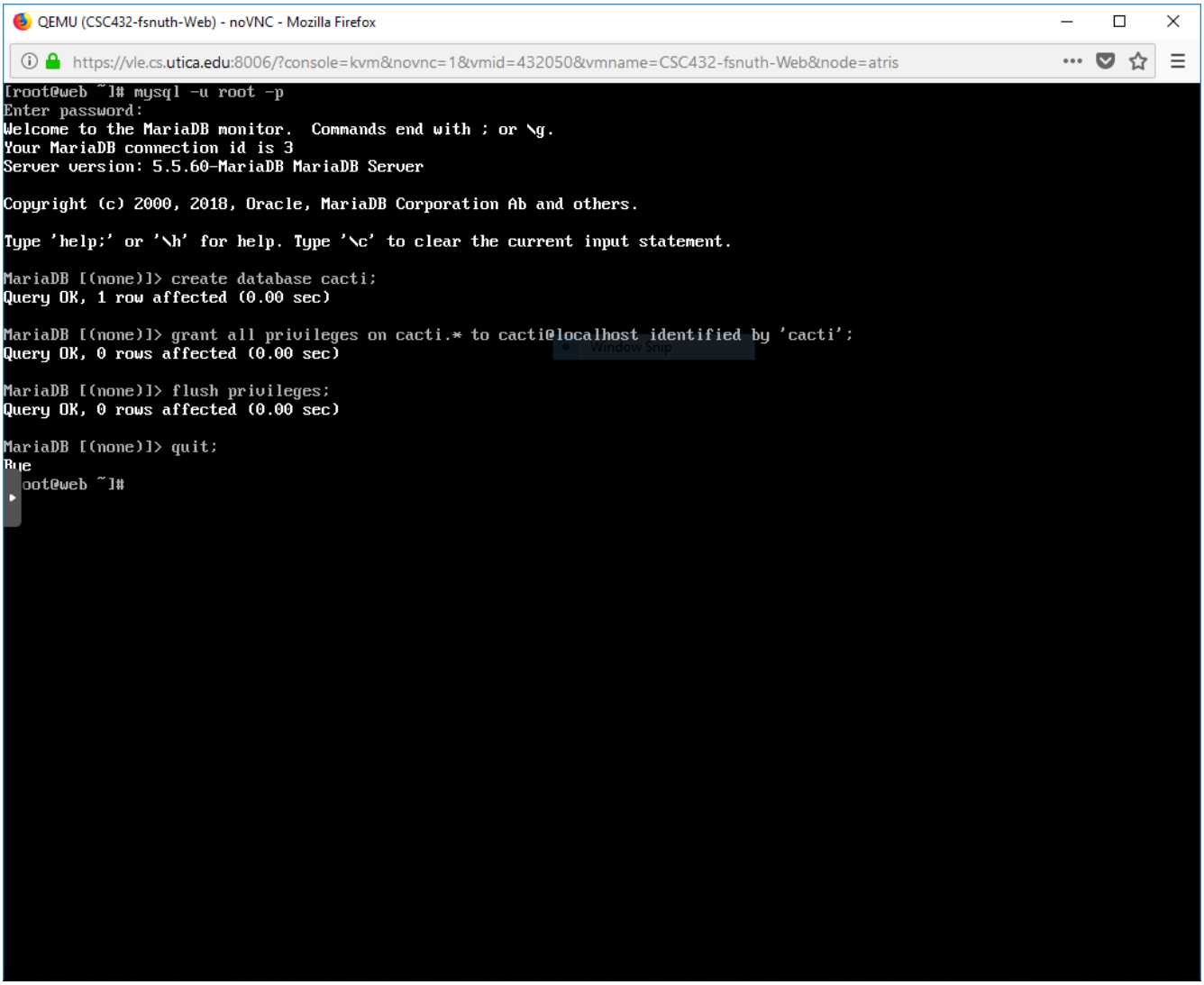


(Installing everything needed to run Cacti with "yum install mariadb-server cacti". We will be working very closely with MySQL very soon.)

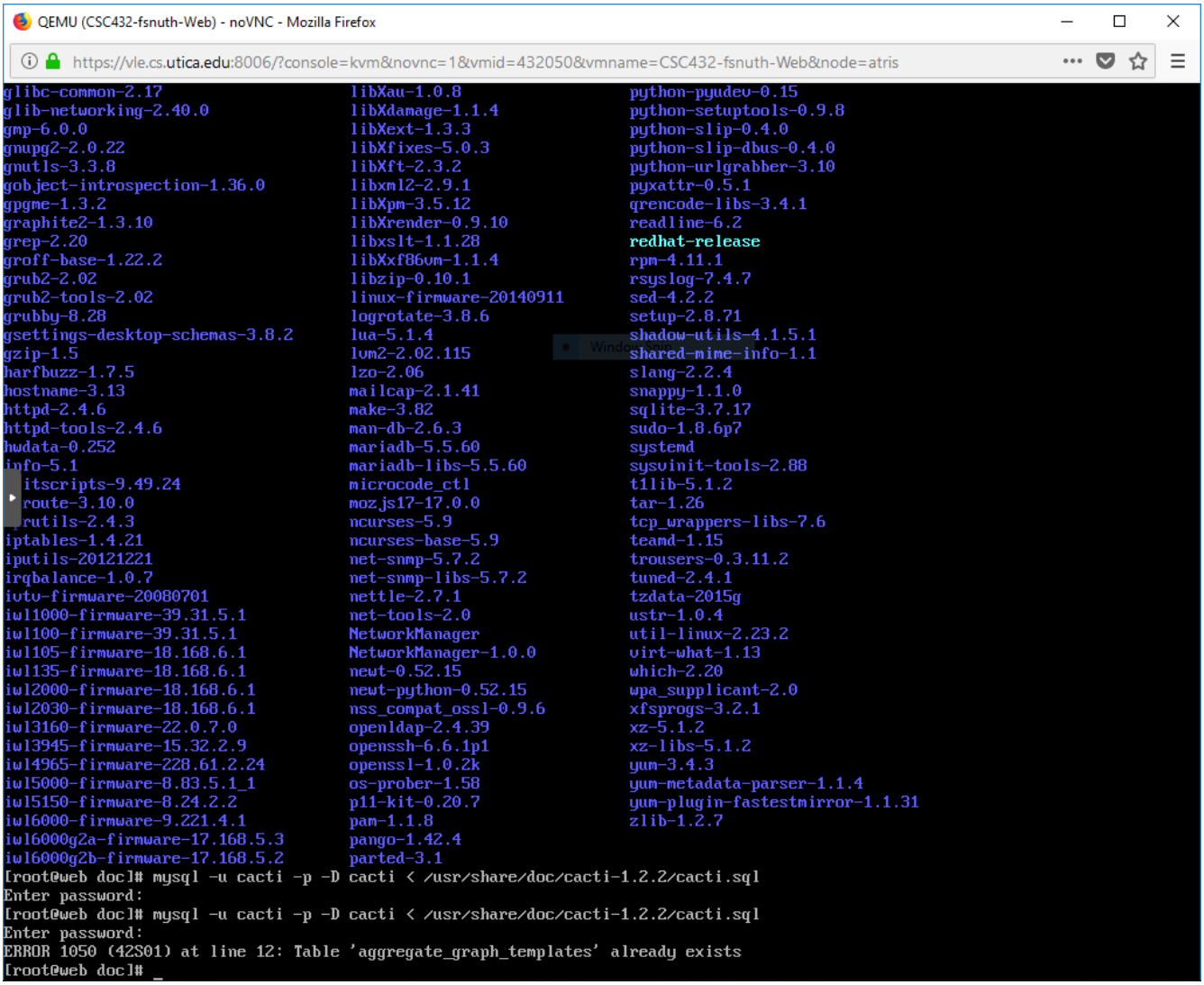


(Double checking with "service mariadb status" to make sure that my MariaDB is running.)

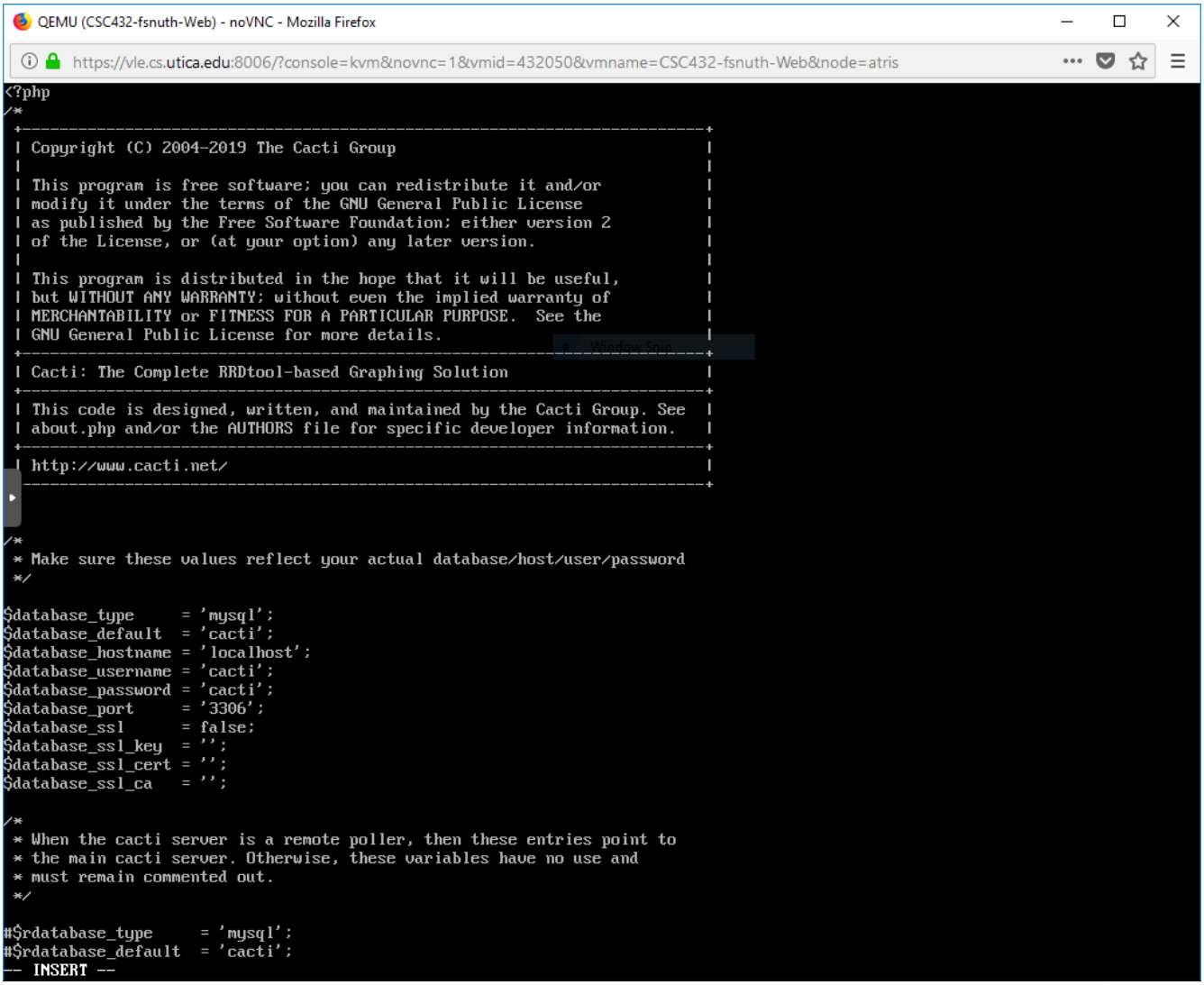
After that, we use "mysql -u root -p" to access the database server. Because I do not have a password, I just have to enter and I'm in.



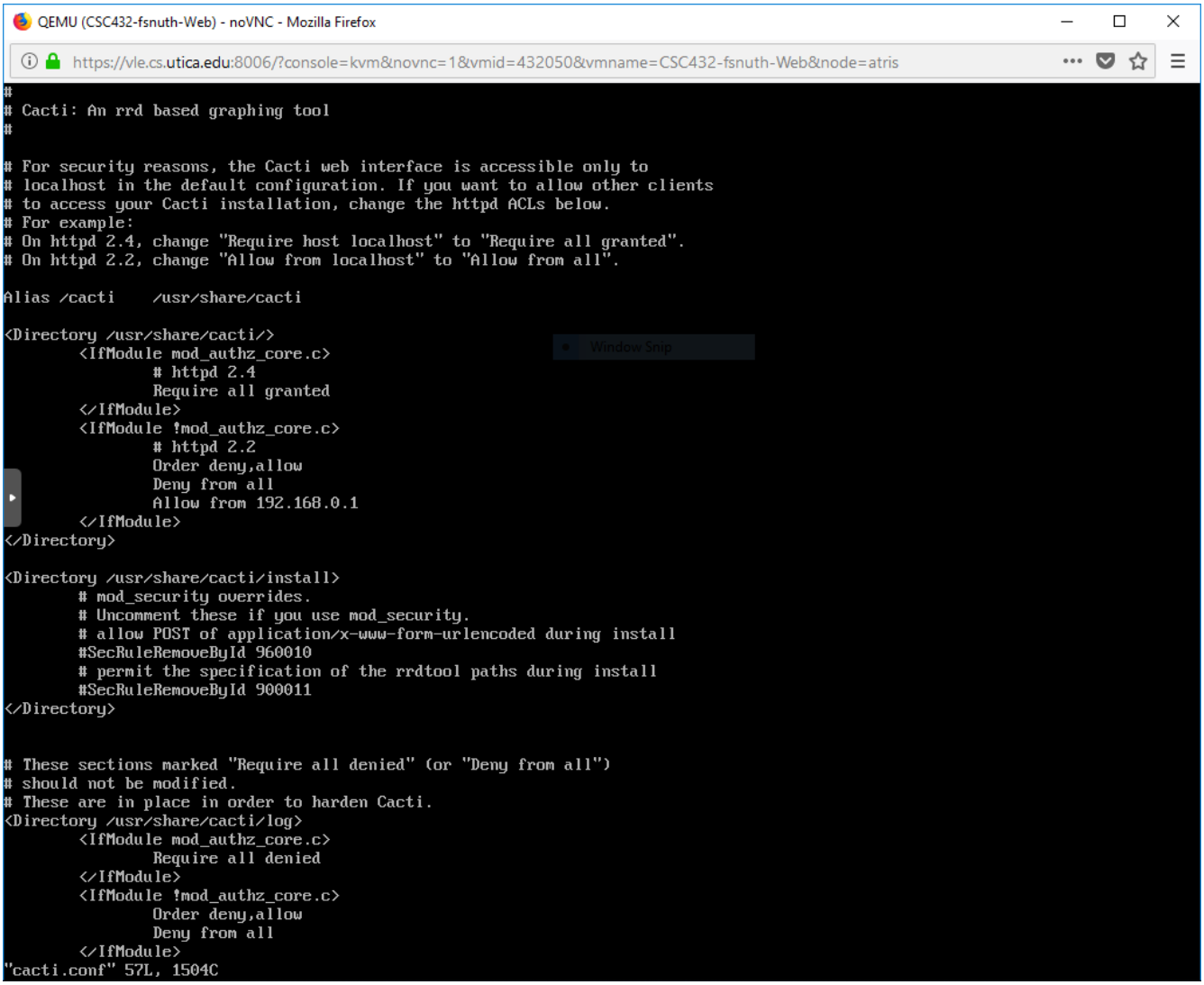
(Making it into the MariaDB server. This is where I can do MySQL commands for my database.)



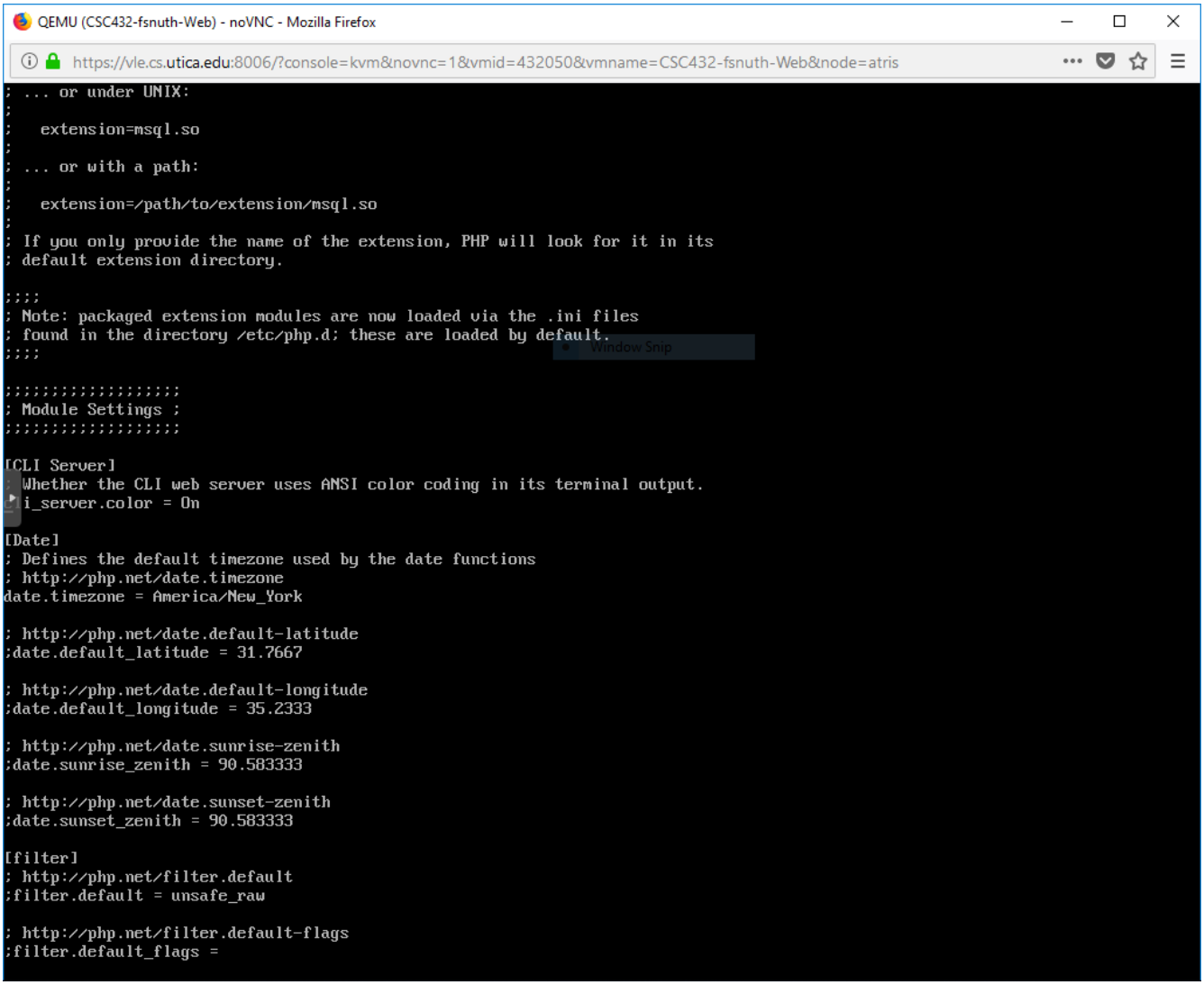
(Afterwards, we initialize the SQL database with the source file by typing in "mysql -u cacti -p -D cacti < /usr/share/doc/cacti-1.2.2/cacti.sql".)



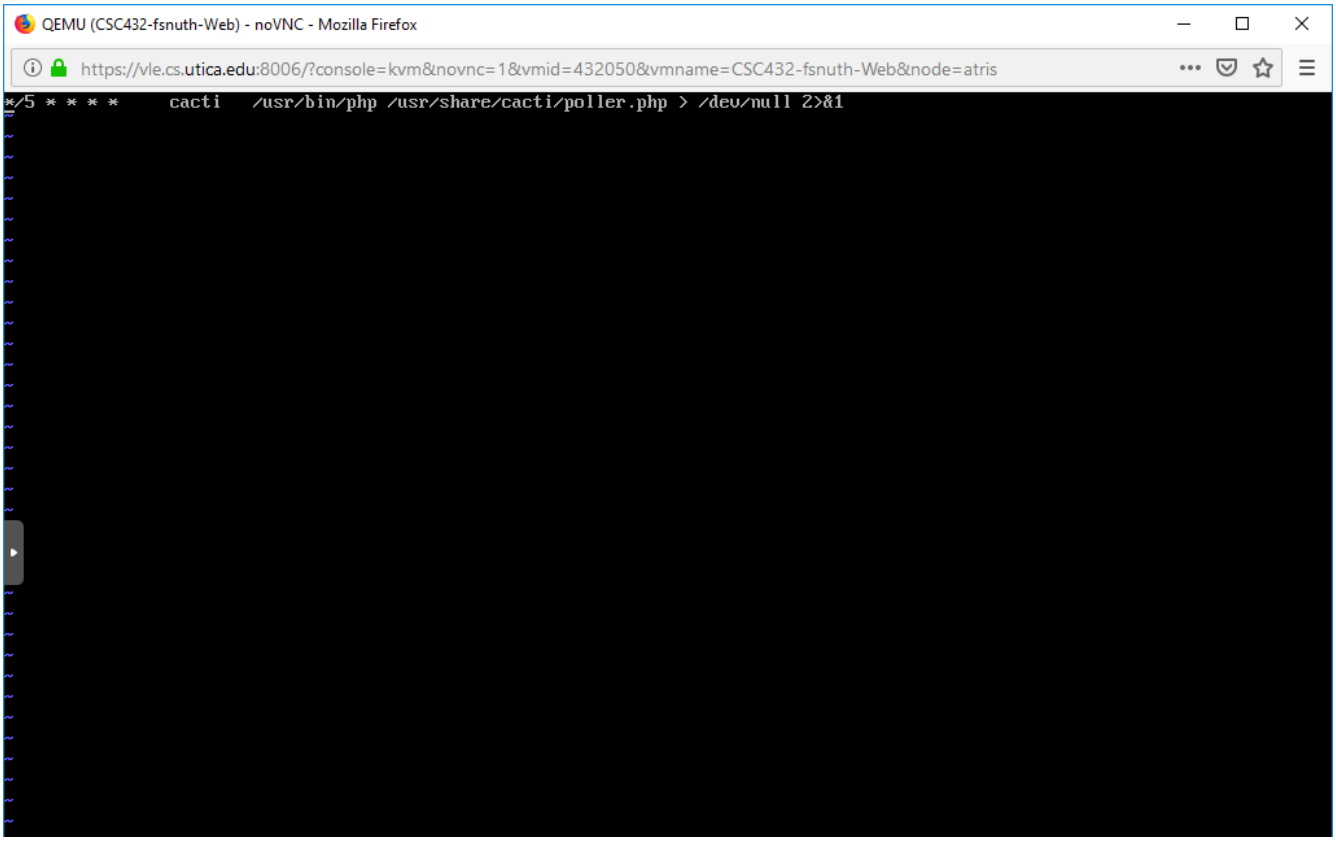
(Configuring my database information to work in the "db.php" file.)



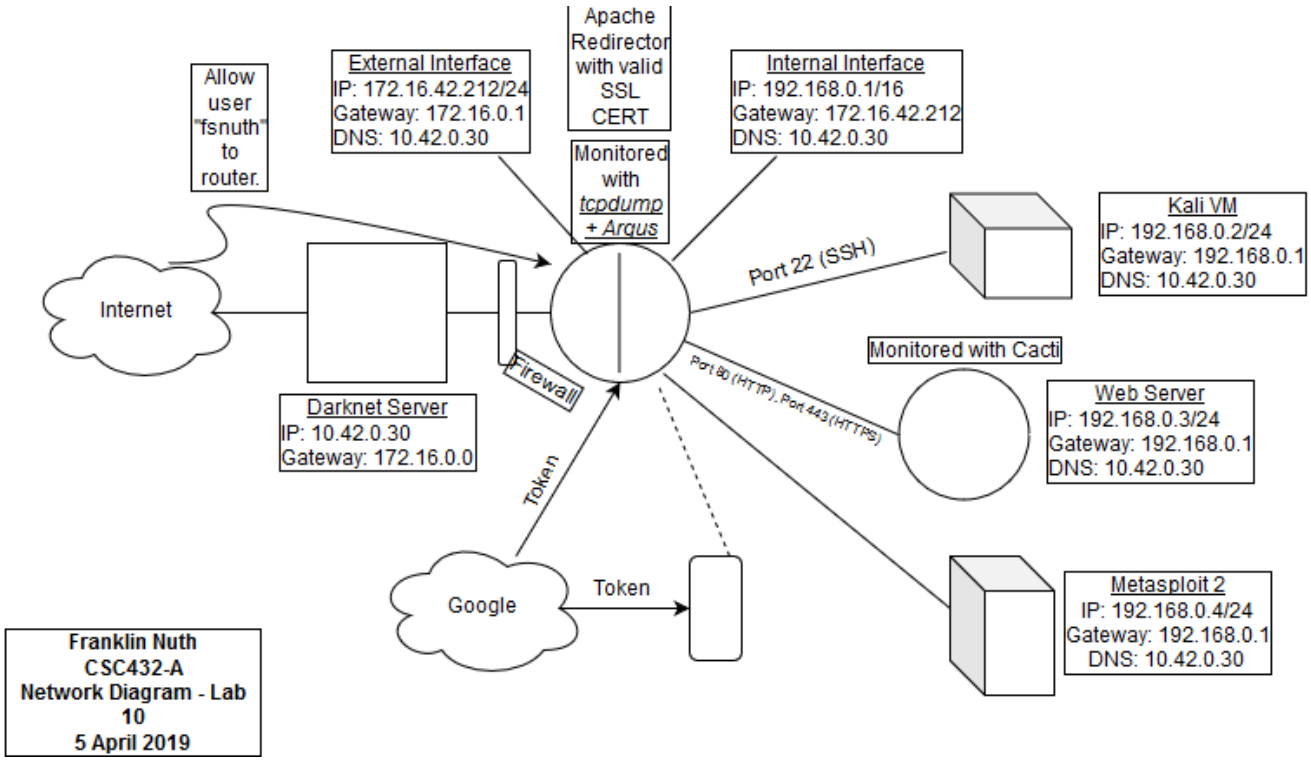
(The configuration of my "cacti.conf" file. We configure the httpd service here so that cacti works properly.)



(Changing the time zone to "America/New_York". This will let the service know my time zone and adjust to me accordingly.)



(Uncommenting the line so that the user named "cacti" will have access to the resources on the web server.)



Issues & Resolutions

The first issues that I ran into was getting denied from my own Cacti server. I think this might be a problem in either the configuration of my files, my MySQL queries, the absence of some packages, or just a bug in my Apache software. I'll get back to this part when I resolved the issue.

Conclusion

In this lab, I have attempted to install Cacti on my web server. I have used MySQL to do queries in the database to try and allow the user named 'cacti' access to the web server. I was not successful in installing Cacti, but I have learned a great deal about installing monitoring software and MySQL.

References

Dominguez, Alberto. 5 April 2019. *The importance of having a good monitoring system.* Retrieved from: https://blog.pandorafms.org/why-you-need-a-monitoring-system/

The Apache Software Foundation. 1 January 2019. *Upgrading to 2.4 from 2.2.* Retrieved from: https://httpd.apache.org/docs/2.4/upgrading.html