Hands-On	
Midterm Exam	
Course Code: CPE232	**Program: CPE**
Course Title: Managing Enterprise Services	**Date Performed:31/05/2022**
Section: CPE31S7	**Date Submitted: 04/06/2022**
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1. Objective(s):

Create and design a workflow that installs, configure and manage enterprise monitoring tools using Ansible as an Infrastructure as Code (IaC) tool.

2. Intended Learning Outcomes (ILOs):

The students should be able to:

1. Create and design workflows to install, configure and manage for availability monitoring tools using Ansible to document and execution.
2. Create and design workflows to install, configure and manage for performance monitoring tools using Ansible to document and execution.
3. Create and design workflows to install, configure and manage for log monitoring tools using Ansible to document and execution..

4. Resources:

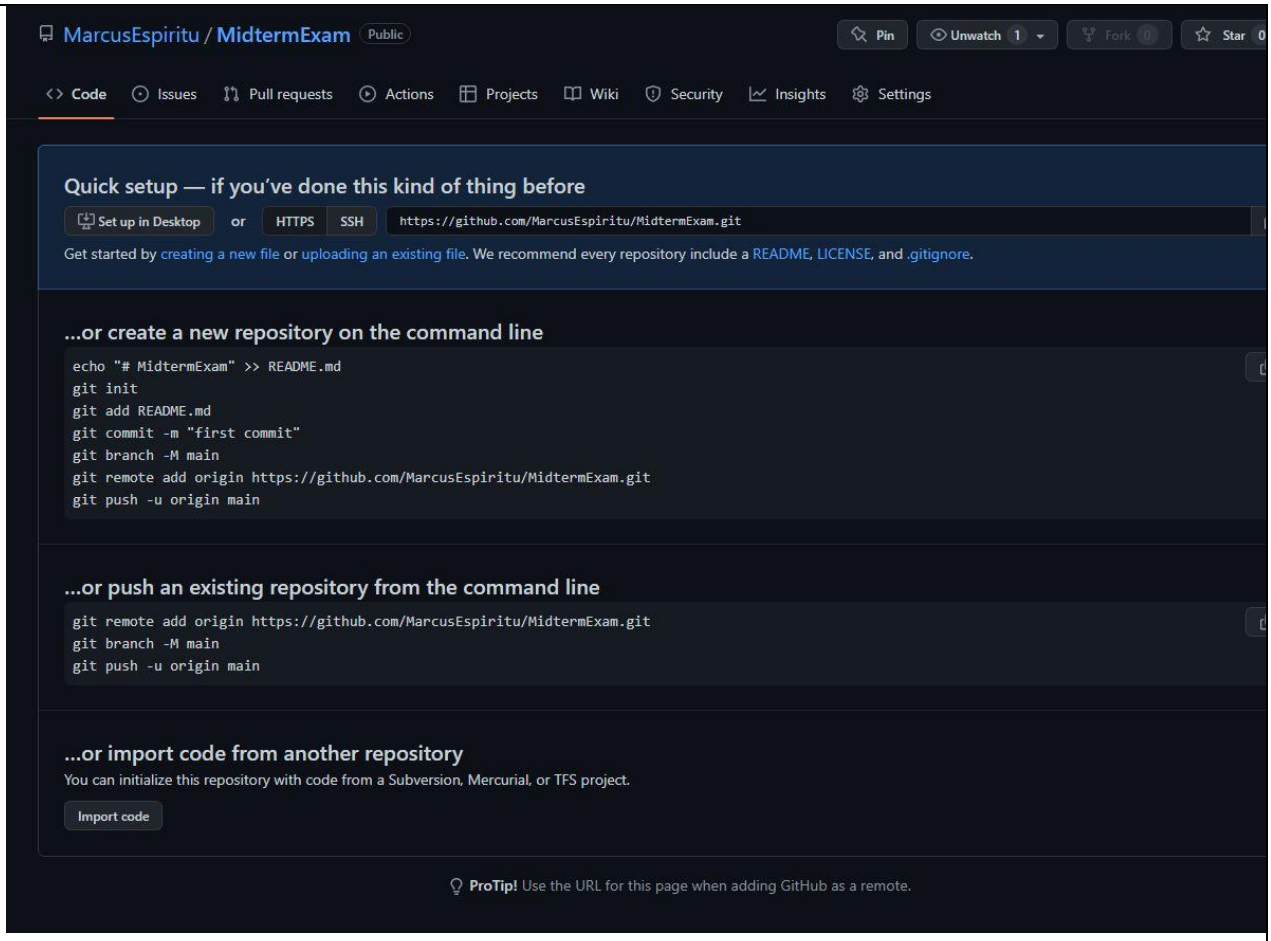
Oracle VirtualBox (Hypervisor)

1x Ubuntu VM with Git and Ansible installed

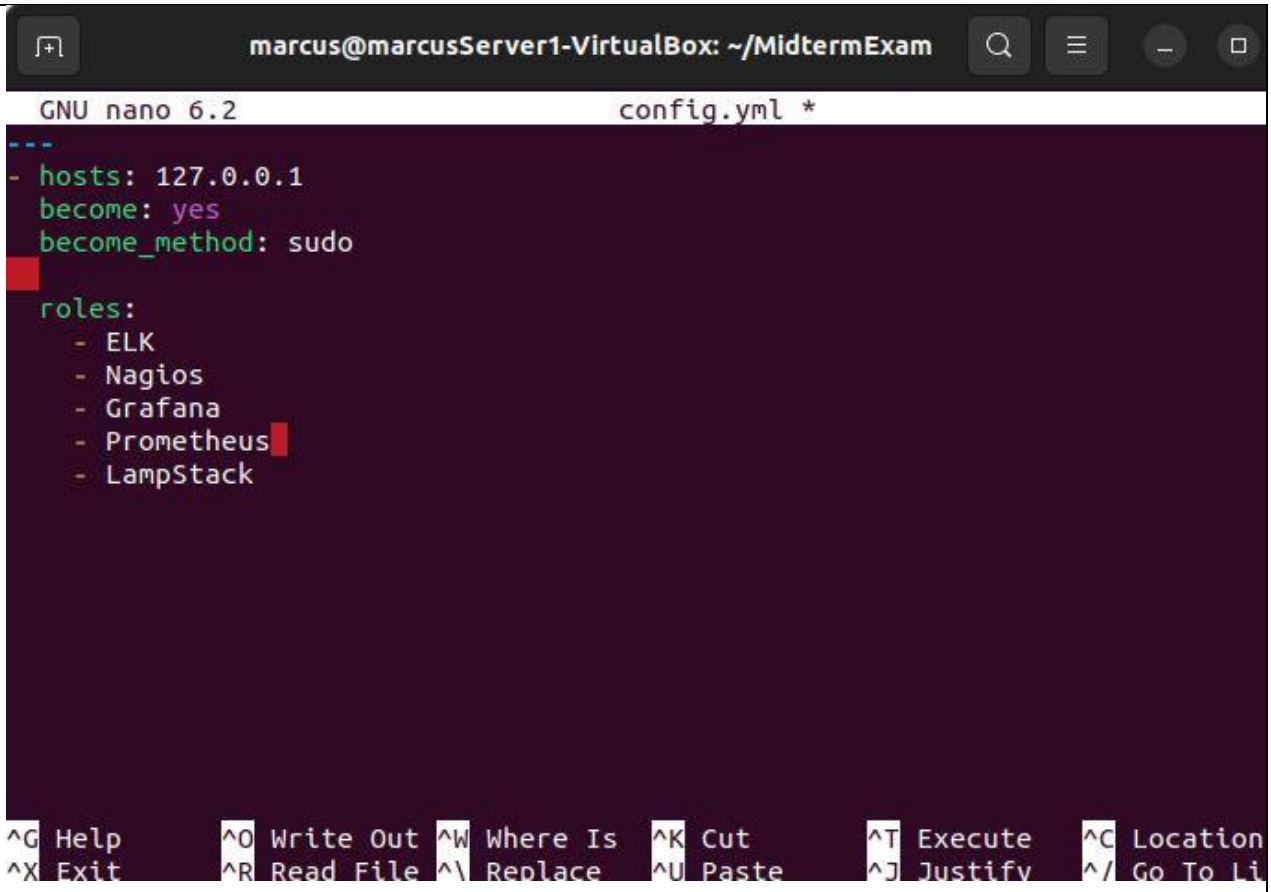
1x CentOS VM

5. Procedure:

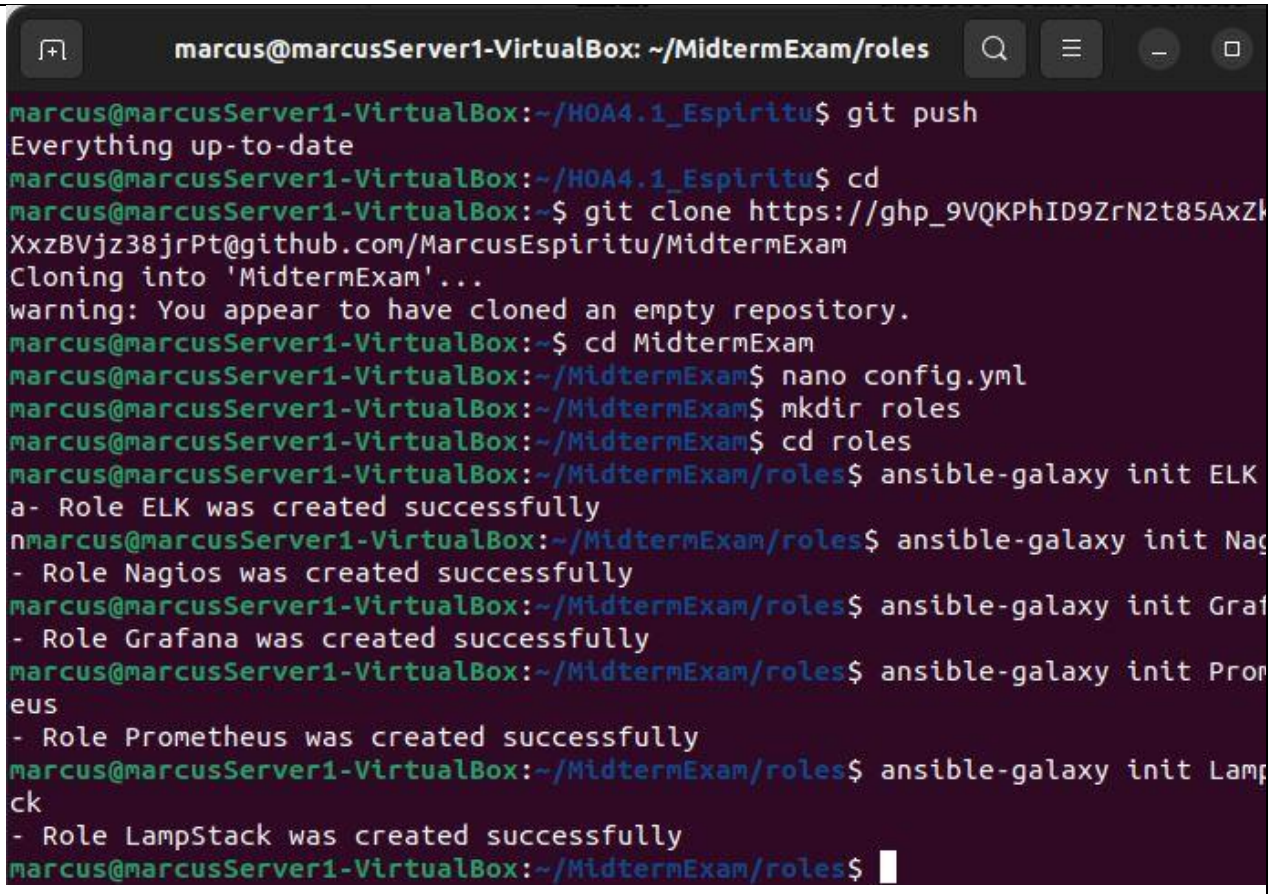
1. **Create a new repository and name it MidtermExam**



2. **Clone your new repository in your VM**



3. **Create an Ansible playbook that does the following with an input of a config.yaml file and arranged Inventory file:**

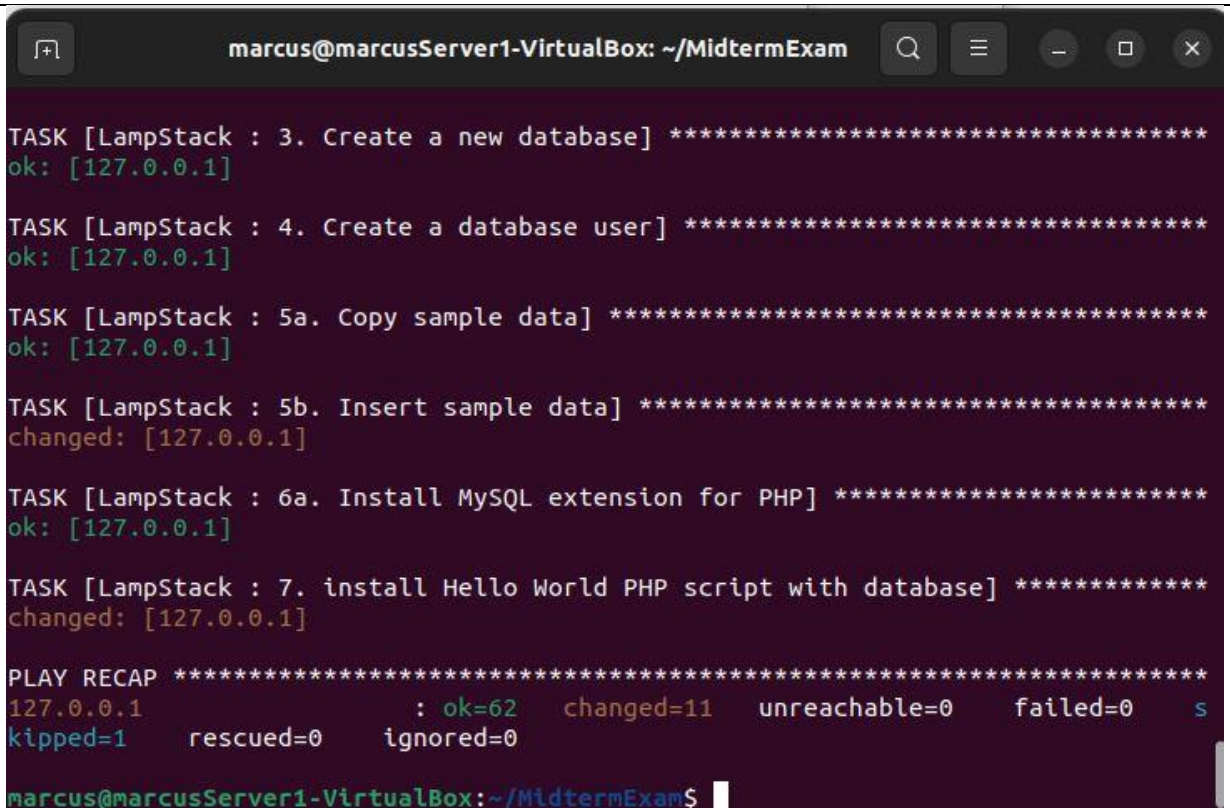


3.1 Install and configure Elastic Stack in separate hosts (Elastic Search, Kibana, Logstash)

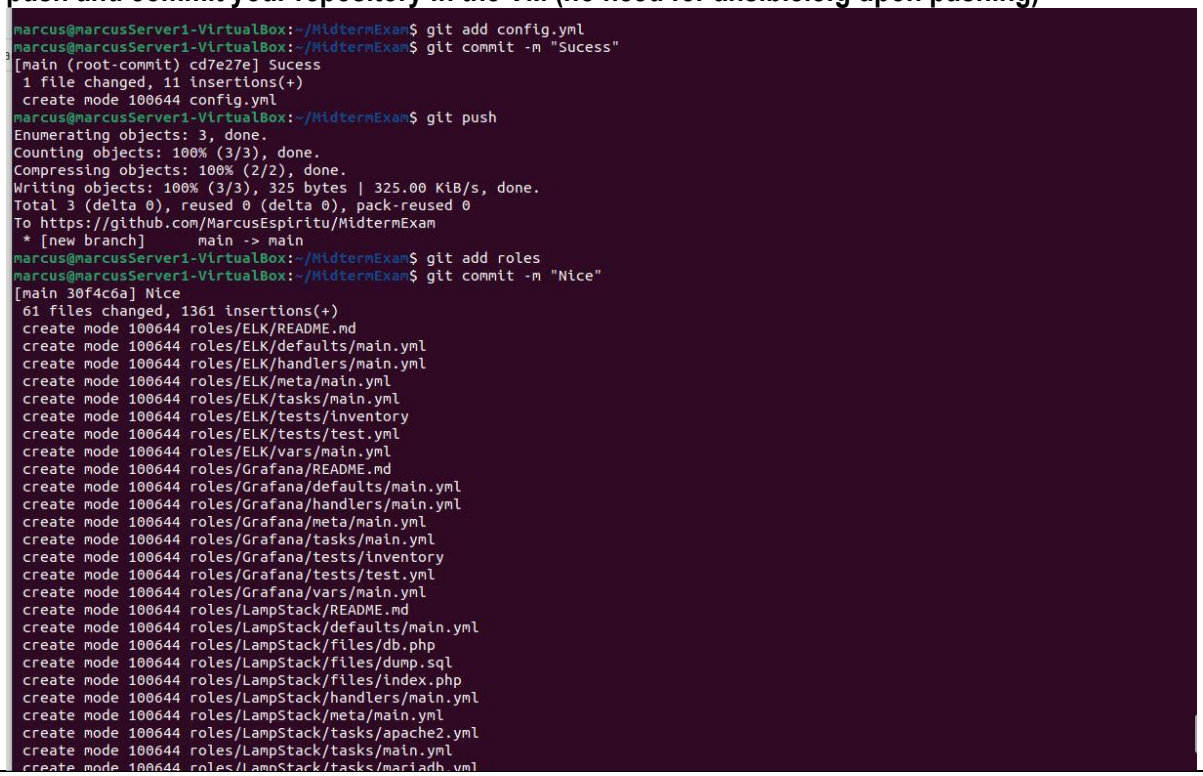
3.2 Install Nagios in one host

3.3 Install Grafana,Prometheus and Influxdb in seperate hosts (Influxdb,Grafana,Prometheus)

3.4 Install Lamp Stack in separate hosts (Httpd + Php,Mariadb)



4. **push and commit your repository in the VM (no need for ansible.cfg upon pushing)**



```
 create mode 100644 roles/Nagios/tasks/main.yml
 create mode 100644 roles/Nagios/tasks/nagios-ssl.yml
 create mode 100644 roles/Nagios/templates/000-default.j2
 create mode 100644 roles/Nagios/templates/commands.cfg.j2
 create mode 100644 roles/Nagios/templates/hostsgroups.cfg.j2
 create mode 100644 roles/Nagios/templates/services.cfg.j2
 create mode 100644 roles/Nagios/tests/inventory
 create mode 100644 roles/Nagios/tests/test.yml
 create mode 100644 roles/Nagios/vars/main.yml
 create mode 100644 roles/Nagios/vars/vars.yml
 create mode 100644 roles/Prometheus/README.md
 create mode 100644 roles/Prometheus/defaults/main.yml
 create mode 100644 roles/Prometheus/handlers/main.yml
 create mode 100644 roles/Prometheus/meta/main.yml
 create mode 100644 roles/Prometheus/prometheus.j2
 create mode 100644 roles/Prometheus/prometheus.yml.j2
 create mode 100644 roles/Prometheus/tasks/main.yml
 create mode 100644 roles/Prometheus/tests/inventory
 create mode 100644 roles/Prometheus/tests/test.yml
 create mode 100644 roles/Prometheus/vars/main.yml
marcus@marcusServer1-VirtualBox:~/MidtermExam$ git push
Enumerating objects: 87, done.
Counting objects: 100% (87/87), done.
Compressing objects: 100% (53/53), done.
Writing objects: 100% (86/86), 4.67 MiB | 1.55 MiB/s, done.
Total 86 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), done.
To https://github.com/MarcusEspiritu/MidtermExam
   cd7e27e..30f4c6a  main -> main
marcus@marcusServer1-VirtualBox:~/MidtermExam$ git add group_vars
marcus@marcusServer1-VirtualBox:~/MidtermExam$ git commit -m "Good"
[main 44dbcea] Good
 2 files changed, 72 insertions(+)
 create mode 100644 group_vars/all
 create mode 100644 group_vars/all~
marcus@marcusServer1-VirtualBox:~/MidtermExam$ git push
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 868 bytes | 868.00 KiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/MarcusEspiritu/MidtermExam
   30f4c6a..44dbcea  main -> main
marcus@marcusServer1-VirtualBox:~/MidtermExam$
```

5. **request a pull request from that branch in GitHub**
   https://github.com/MarcusEspiritu/MidtermExam/compare

6. **For your midterm exam to be counted, please paste your repository link as an answer in this exam.**
   https://github.com/MarcusEspiritu/MidtermExam

6. Supplementary Activity

N/A

8. Assessment (Rubric for Laboratory Performance):