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Course/Section: CPE31S4	**Date Submitted: 8/11/24**
Instructor: Engr. Robin Valenzuela	**Semester and SY: 1st sem 24-25**

Midterm Skills Exam: Install, Configure, and Manage Log Monitoring tools

1. Objectives

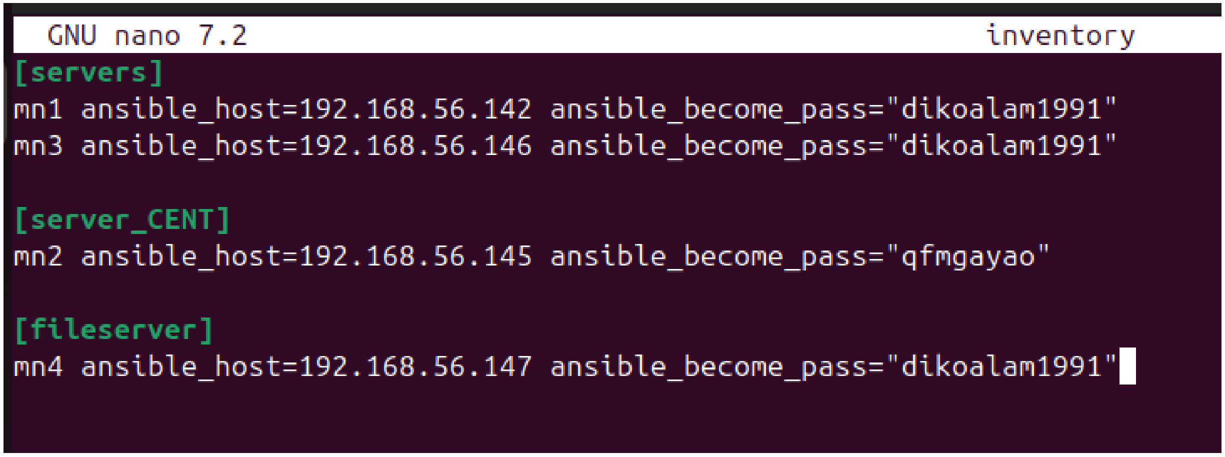
Create and design a workflow that installs, configure and manage enterprise availability, performance and log monitoring tools using Ansible as an Infrastructure as Code (IaC) tool.

2. Instructions

1. Create a repository in your GitHub account and label it CPE_MIDEXAM_SURNAME.
2. Clone the repository and do the following:
   2.1. Create an Ansible playbook that does the following with an input of a config.yaml file and arranged Inventory file:
   2.2. Install and configure Elastic Stack in separate hosts (Elastic Search, Kibana, Logstash) • Install Nagios in one host
   2.3. Install Grafana,Prometheus and Influxdb in seperate hosts (Influxdb,Grafana,Prometheus)
   2.4. Install Lamp Stack in separate hosts (Httpd + Php,Mariadb)
3. Document all your tasks using this document. Provide proofs of all the ansible playbooks codes and successful installations.
4. Document the push and commit from the local repository to GitHub.
5. Finally, paste also the link of your GitHub repository in the documentation.

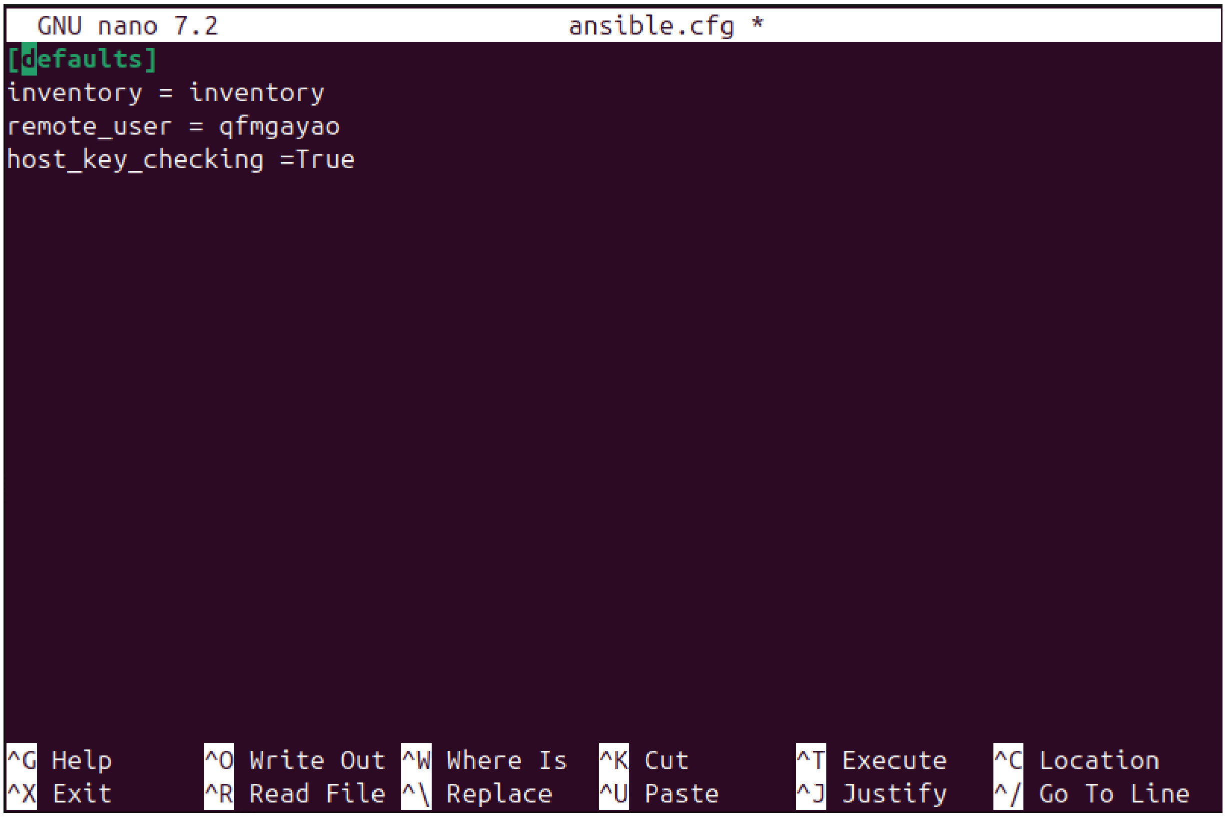
3. Output (screenshots and explanations)

First I created my inventory which contains all my ip addresses that would be used to push out to all servers by using playbook.



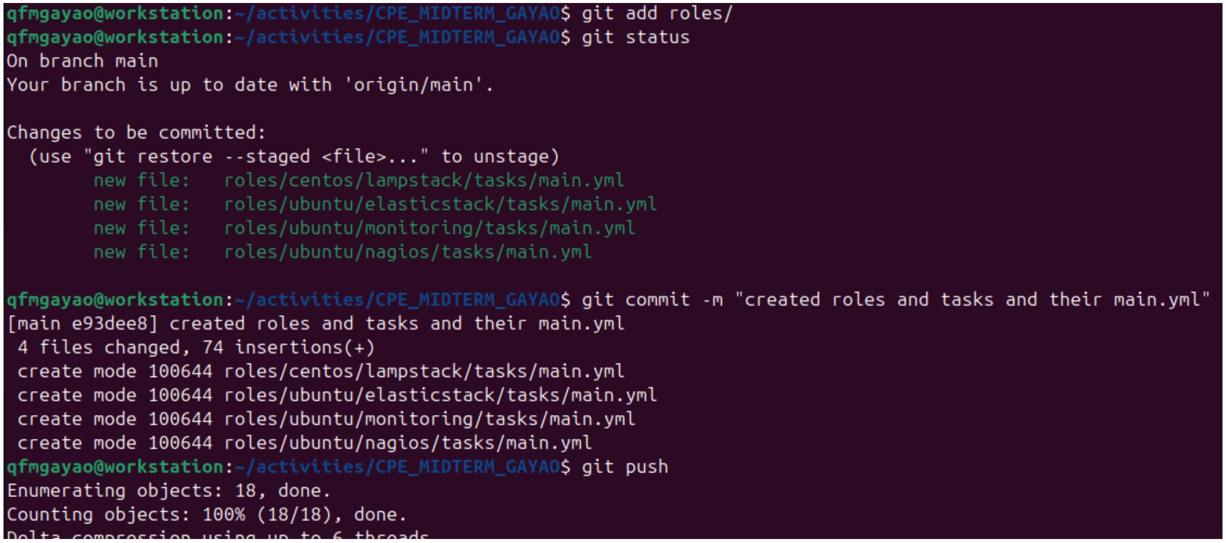
```
[servers]
mn1 ansible_host=192.168.56.142 ansible_become_pass="dikoalam1991"
mn3 ansible_host=192.168.56.146 ansible_become_pass="dikoalam1991"

[server_CENT]
mn2 ansible_host=192.168.56.145 ansible_become_pass="qfmgayao"

[fileserver]
mn4 ansible_host=192.168.56.147 ansible_become_pass="dikoalam1991"
```

next I created a ansible config file for my defaults



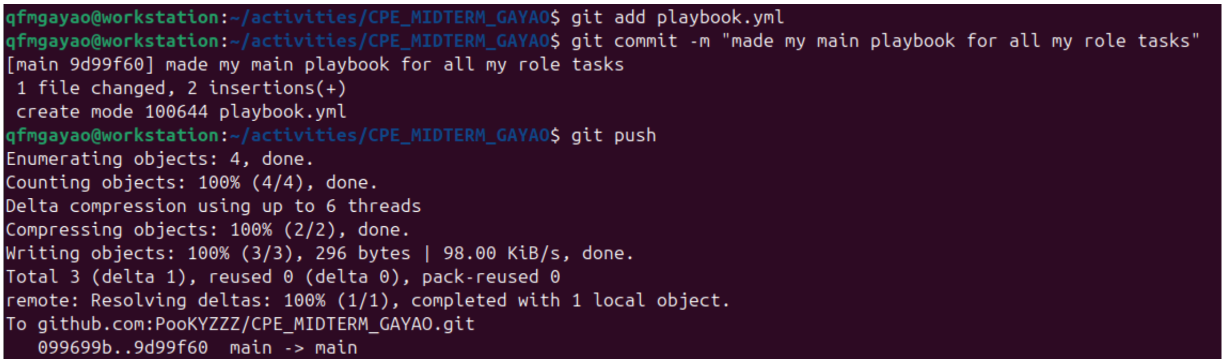
```
[defaults]
inventory = inventory
remote_user = qfmgayao
host_key_checking =True
```

I made roles which make the code simple to read and each role folder specific for 1 server



```
qfmgayao@workstation:~/activities/CPE_MIDTERM_GAYAO$ git add roles/
qfmgayao@workstation:~/activities/CPE_MIDTERM_GAYAO$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   roles/centos/lampstack/tasks/main.yml
        new file:   roles/ubuntu/elasticstack/tasks/main.yml
        new file:   roles/ubuntu/monitoring/tasks/main.yml
        new file:   roles/ubuntu/nagios/tasks/main.yml

qfmgayao@workstation:~/activities/CPE_MIDTERM_GAYAO$ git commit -m "created roles and tasks and their main.yml"
[main e93dee8] created roles and tasks and their main.yml
 4 files changed, 74 insertions(+)
 create mode 100644 roles/centos/lampstack/tasks/main.yml
 create mode 100644 roles/ubuntu/elasticstack/tasks/main.yml
 create mode 100644 roles/ubuntu/monitoring/tasks/main.yml
 create mode 100644 roles/ubuntu/nagios/tasks/main.yml
qfmgayao@workstation:~/activities/CPE_MIDTERM_GAYAO$ git push
Enumerating objects: 18, done.
Counting objects: 100% (18/18), done.
Delta compression using up to 6 threads
```

I made my main playbook which will run all the role folders



```
qfmgayao@workstation:~/activities/CPE_MIDTERM_GAYAO$ git add playbook.yml
qfmgayao@workstation:~/activities/CPE_MIDTERM_GAYAO$ git commit -m "made my main playbook for all my role tasks"
[main 9d99f60] made my main playbook for all my role tasks
 1 file changed, 2 insertions(+)
 create mode 100644 playbook.yml
qfmgayao@workstation:~/activities/CPE_MIDTERM_GAYAO$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 6 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 296 bytes | 98.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:PooKYZZZ/CPE_MIDTERM_GAYAO.git
   099699b..9d99f60  main -> main
```

GitHub link:

https://github.com/PooKYZZZ/CPE_MIDTERM_GAYAO

Conclusions: (link your conclusion from the objective)