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Course/Section: CPE31S1	Date Submitted: 01/05/2024
Instructor: Dr. Jonathan Taylar	Semester and SY: 2nd Sem

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

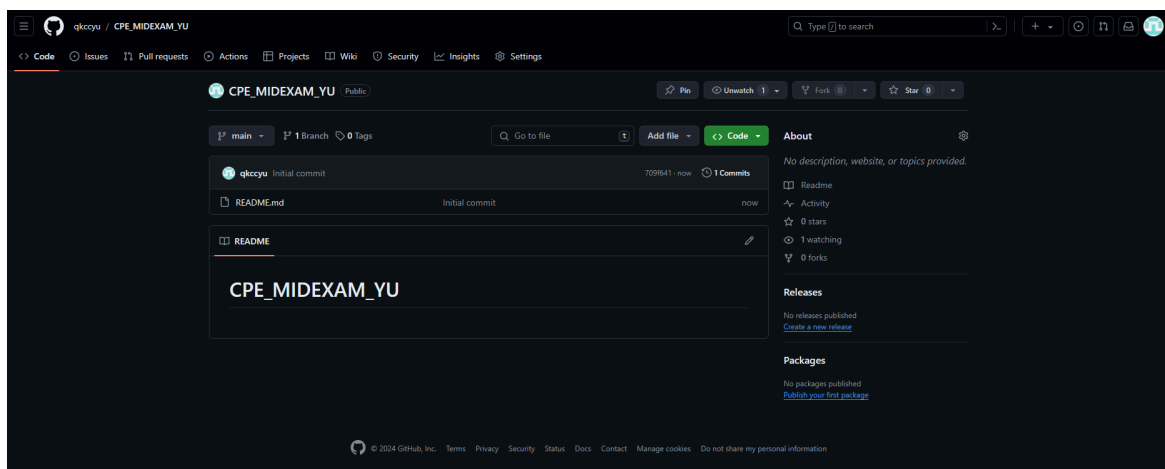
1. Objectives

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)



```
cherwinyu@Yu:~$ git clone https://github.com/qkccyu/CPE_MIDEXAM_YU.git
Cloning into 'CPE_MIDEXAM_YU'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
cherwinyu@Yu:~$
```

- config.yml

```
cherwinyu@Yu: ~/CPE_MIDEXAM_YU
File Edit View Search Terminal Help
GNU nano 2.9.3 config.yaml

required packages:
- nginx
- apache2
- mysql
- httpd
- mariadb

config_files:
- src: /path/to/source/nginx.conf
  dest: /etc/nginx/nginx.conf
- src: /path/to/source/apache2.conf
  dest: /etc/apache2/apache2.conf
- src: /path/to/source/mysql.cnf
  dest: /etc/mysql/mysql.cnf
- src: /path/to/source/httpd.conf
  dest: /etc/httpd/httpd.conf
- src: /path/to/source/mariadb.cnf
  dest: /etc/my.cnf
```

- Inventory.yml

```
cherwinyu@Yu: ~/CPE_MIDEXAM_YU
File Edit View Search Terminal Help
GNU nano 2.9.3 inventory.yml

ubuntu_servers:
  hosts:
    ubuntu_server1:
      ansible_host: 10.0.2.15

centos_servers:
  hosts:
    centos_server1:
      ansible_host: 192.168.122.1
```

```
---
- name: Install Grafana, Prometheus,
  and Influxdb
  hosts:
  influxdb_servers:grafana_servers:promet
  heus_servers
  become: yes
  vars_files:
    - config.yaml

  tasks:
    - name: Install required packages
      for Grafana
      package:
        name:
        "{{ grafana_required_packages }}"
```

cherwinyu@Yu: ~/CPE_MIDEXAM_YU

File Edit View Search Terminal Help

GNU nano 2.9.3

config.yaml

```
    become: yes

    - name: Install required packages
for Prometheus
    package:
      name:
        "{{ prometheus_required_packages }}"
      state: present
      when: ansible_os_family ==
'RedHat'
      become: yes

    - name: Install required_packages
for InfluxDB
    package:
      name:
        "{{ influxdb_required_packages }}"
      state: present
      when: ansible_os_family ==
'Debian'
      become: yes

---
```

cherwinyu@Yu: ~/CPE_MIDEXAM_YU

File Edit View Search Terminal Help

GNU nano 2.9.3

inventory.yml

```
ubuntu_servers:
  hosts:
    ubuntu_server1:
      ansible_host: 10.0.2.15

centos_servers:
  hosts:
    centos_server1:
      ansible_host: 192.168.122.1

influxdb_servers:
  hosts:
    influxdb_server:
<10.0.2.15>

grafana_servers:
  hosts:
    grafana_server:
      ansible_host: <10.0.2.15>

prometheus_servers:
  hosts:
    prometheus_server:
```

[Read 26 lines]

```
cherwinyu@Yu: ~/CPE_MIDEXAM_YU
File Edit View Search Terminal Help
GNU nano 2.9.3 inventory.yml

    influxdb_server:
<10.0.2.15>

grafana_servers:
  hosts:
    grafana_server:
      ansible_host: <10.0.2.15>

prometheus_servers:
  hosts:
    prometheus_server:
      ansible_host:
<10.02.15>
```

- CentOS

yu@linux01:~/CPE_MIDEXAM_YU

File Edit View Search Terminal Help

GNU nano 2.3.1

File: config.yaml

```
- name: Install required packages
for InfluxDB
  package:
    name:
"{{ influxdb_required_packages }}"
    state: present
    when: ansible_os_family ==
'RedHat'
    become: yes

---
grafana_required_packages:
- grafana

prometheus_required_packages:
- prometheus

influxdb_required_packages:
- influxdb
```

yu@linux01:~/CPE_MIDEXAM_YU

File Edit View Search Terminal Help

GNU nano 2.3.1

File: inventory.yml

```
influxdb_servers:
  hosts:
    influxdb_server:
      ansible_host:
<192.168.122.1>

grafana_servers:
  hosts:
    grafana_server:
      ansible_host: <192.168.122.1>

prometheus_servers:
  hosts:
    prometheus_server:
      ansible_host:
<192.168.122.1>
```

- **Repository**



GitHub link: [qkccyu/CPE_MIDEXAM_YU \(github.com\)](https://github.com/qkccyu/CPE_MIDEXAM_YU)

Conclusions:

In this Midterm exam our tasks is to create a ansible playbook that will input config files and install the following software are the Influxdb,Grafana,Prometheus. But somehow I did not managed to perform the task because of my lack of knowledge, however I did my very best effort to perform this task even though it did not show the results. Soon in the final term I can passed the finals exam with the help of my mistakes, learnings, and knowledge, and also with the help of my classmates.

