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Course/Section: CPE212-CPE31S2	Date Submitted:
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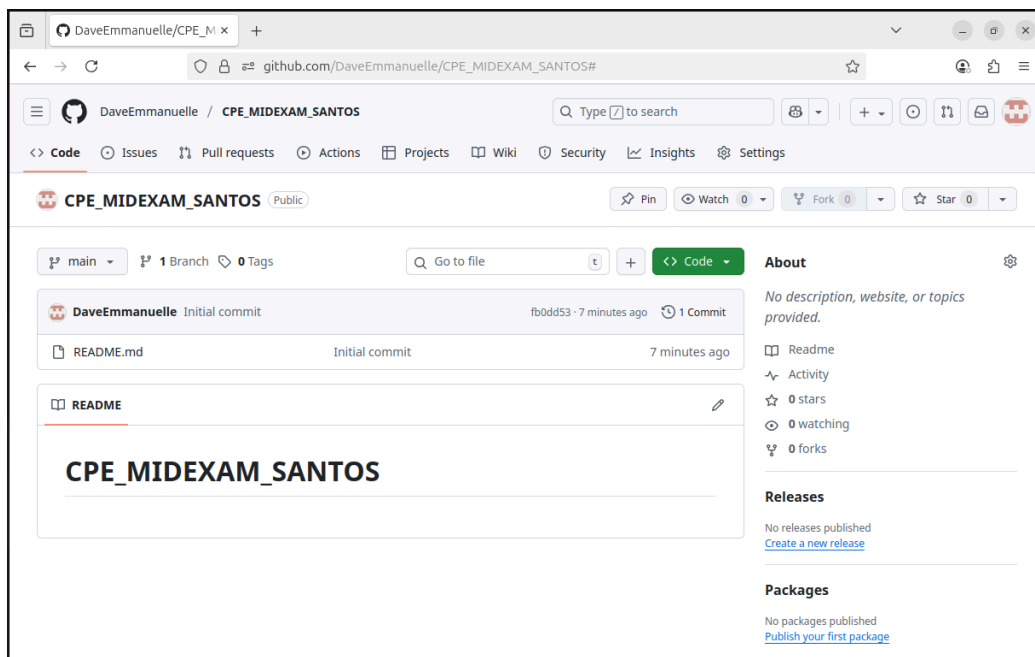
Midterm Skills Exam: Install, Configure, and Manage Log Monitoring tools

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:

```
vboxuser@workstation:~$ git clone git@github.com:DaveEmmanuelle/CPE_MIDEXAM_SANTOS.git
Cloning into 'CPE_MIDEXAM_SANTOS'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
vboxuser@workstation:~$
```

- 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

GNU nano 7.2

config.yaml

```
--
- hosts: all
  become: yes
  tasks:

    - name: install prereqs
      apt:
        name: apt-transport-https
        state: present
        when: ansible_distribution == "Ubuntu"

    - name: add elasticsearch GPG key
      apt_key:
        url: https://artifacts.elastic.co/GPG-KEY-elasticsearch
        when: ansible_distribution == "Ubuntu"
```

[Read 15 lines]

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^/ Go To Line

```
- name: install kibana
  apt:
    name: kibana
    state: present
    when: ansible_distribution == "Ubuntu"

- name: start and enable kibana
  service:
    name: kibana
    enabled: yes
    state: restarted
    when: ansible_distribution == "Ubuntu"

- name: Add Kibana repo key
  apt_key:
    url: https://artifacts.elastic.co/GPG-KEY-elasticsearch
    state: present
```

```
GNU nano 7.2                                site.yaml *
```

```
  enabled: yes
  state: restarted
when: ansible_distribution == "Ubuntu"

- name: Add Kibana repo key
  apt_key:
  url: https://artifacts.elastic.co/GPG-KEY-elasticsearch
  state: present

- name: install logstash
  apt:
    name: logstash
    state: present
  when: ansible_distribution == "Ubuntu"

- name: start and enable logstash
  service:
    name: logstash
    enabled: yes
    state: started
```

2.3. Install Grafana,Prometheus and Influxdb in seperate hosts
(Influxdb,Grafana,Prometheus)

2.4.

```
GNU nano 7.2                                playbook.yaml
```

```
---
- hosts: all
  become: true
  tasks:
    - name: install apache and PHP packages
      apt:
        name:
          - apache2
          - php
        state: present
        update_cache: yes
      when: ansible_distribution == "Ubuntu"

    - name: Intsall httpd and php packages
      dnf:
        name:
          - httpd
          - php
        update_cache: yes
      when: ansible_distribution == "CentOS"
```

[Read 34 lines]

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^_ Go To Line

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.

```

vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git add README.md
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git add .
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git add ansible.cfg
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git add config.yaml
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git add playbook.yaml
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git add site.yaml
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git commit -m "My EXam"
[main 516cf8a] My EXam
 5 files changed, 180 insertions(+)
 create mode 100644 ansible.cfg
 create mode 100644 config.yaml
 create mode 100644 inventory.yaml
 create mode 100644 playbook.yaml
 create mode 100644 site.yaml
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ git push origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 1.44 KiB | 1.44 MiB/s, done.
Total 7 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To github.com:DaveEmmanuelle/CPE_MIDEXAM_SANTOS.git
   fb0dd53..516cf8a  main -> main
vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$

```

6. vboxuser@workstation:~/CPE_MIDEXAM_SANTOS\$

3. Output (screenshots and explanations)

2.2 my explanation to this is to run all you will need a source for the url where all the readable file can install in all your server

```

GNU nano 7.2 config.yaml
--
- hosts: all
  become: yes
  tasks:

  - name: install prereqs
    apt:
      name: apt-transport-https
      state: present
    when: ansible_distribution == "Ubuntu"

  - name: add elasticsearch GPG key
    apt_key:
      url: https://artifacts.elastic.co/GPG-KEY-elasticsearch
    when: ansible_distribution == "Ubuntu"

```

[Read 15 lines]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^G Location
 ^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^_ Go To Line

```

TASK [install prereqs] *****
skipping: [192.168.56.104]
changed: [192.168.56.103]
changed: [192.168.56.102]
changed: [192.168.56.101]

TASK [add elasticsearch GPG key] *****
skipping: [192.168.56.104]
changed: [192.168.56.103]
changed: [192.168.56.102]
changed: [192.168.56.101]

PLAY RECAP *****
192.168.56.101      : ok=3    changed=2    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
192.168.56.102      : ok=3    changed=2    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
192.168.56.103      : ok=3    changed=2    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
192.168.56.104      : ok=1    changed=0    unreachable=0    failed=0    s
kipped=2    rescued=0    ignored=0

vboxuser@workstation:~/CPE_MIDEXAM_SANTOS$ sudo nano config.yaml

```

2.2 in my explanation each server should have a own install system you cannot install all package in ubuntu and centos with the same command it should be different run and separate in apache and maria db

```

GNU nano 7.2                                playbook.yaml
---
- hosts: all
  become: true
  tasks:
    - name: install apache and PHP packages
      apt:
        name:
          - apache2
          - php
        state: present
        update_cache: yes
        when: ansible_distribution == "Ubuntu"

    - name: Intsall httpd and php packages
      dnf:
        name:
          - httpd
          - php
        update_cache: yes
        when: ansible_distribution == "CentOS"
[ Read 34 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line

```

```
TASK [Gathering Facts] *****
ok: [192.168.56.102]
ok: [192.168.56.103]
ok: [192.168.56.101]
ok: [192.168.56.104]

TASK [install apache and PHP packages] *****
skipping: [192.168.56.104]
ok: [192.168.56.102]
ok: [192.168.56.101]
ok: [192.168.56.103]

TASK [Intsall httpd and php packages] *****
skipping: [192.168.56.102]
skipping: [192.168.56.103]
skipping: [192.168.56.101]
ok: [192.168.56.104]

TASK [install MariaDB server] *****
skipping: [192.168.56.102]
skipping: [192.168.56.103]
skipping: [192.168.56.101]
ok: [192.168.56.104]
```

GitHub link:

https://github.com/DaveEmmanuelle/CPE_MIDEXAM_SANTOS.git

Conclusions: (link your conclusion from the objective)

In conclusion of this exam i learned how it manipulate and install all in one example elastic search and lampstack it is easier to install rather than manual one by one installation