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

1. Objectives

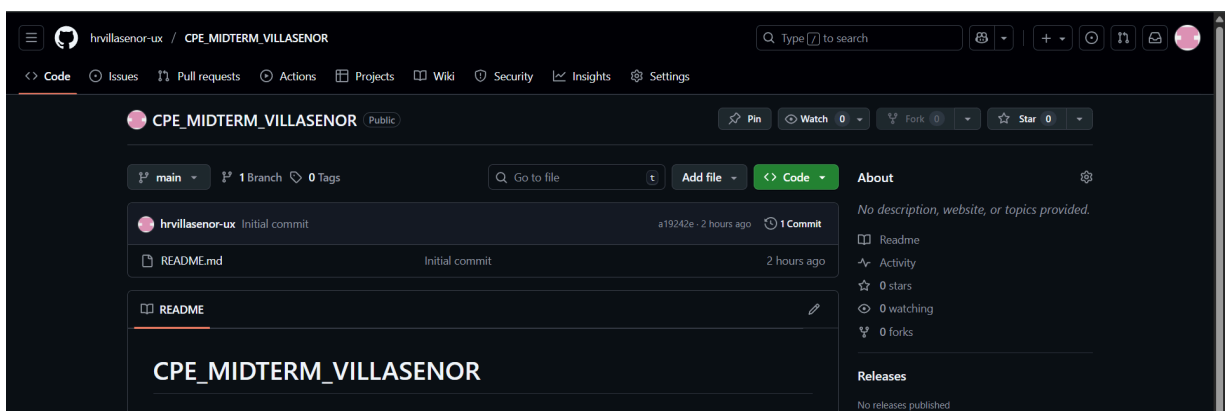
Create and design a workflow that installs, configure and manage enterprise availability, performance and log monitoring tools using Ansible as an Infrastructure as Code (IaC) tool.

2. Instructions

1. Create a repository in your GitHub account and label it CPE_MIDEXAM_SURNAME.
2. Clone the repository and do the following:
 - 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)

creating repository



Apache,Httpd,php,mariadb

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS python3 + - [ ] [ ] ... [ ] [ ] X
HANS@LocalMachine:~/CPE_MIDTERM_VILLASENOR$ ansible-playbook --ask-become-pass config.yaml
PLAY [Install apache,php,httpd,mariadb] *****

TASK [Gathering Facts] *****
ok: [server1]
ok: [server2]

TASK [apache : install apache and php] *****
skipping: [server2]
ok: [server1]

TASK [apache : yum] *****
skipping: [server1]
ok: [server2]

TASK [apache : installl mariadb CentOS] *****
skipping: [server1]
ok: [server2]

TASK [apache : install mariadb Ubuntu] *****
skipping: [server2]
ok: [server1]

TASK [apache : Restart] *****
changed: [server1]
changed: [server2]

PLAY [Install Nagios in Ubuntu] *****

TASK [Gathering Facts] *****
ok: [server1]
ok: [server2]
```

Kibana

```
TASK [kibana : Add GPG key for Elastic APT repository] *****
changed: [server1]

TASK [kibana : Add Kibana APT repository] *****
changed: [server1]

TASK [kibana : Install specific version of Kibana] *****
[ ]
```

Logstash

The screenshot shows a Visual Studio Code editor with a project named 'CPE_MIDTERM_VILLASENOR'. The Explorer sidebar on the left shows the project structure with files: roles, ansible.cfg, config.yaml, inventory.ini, and README.md. The main editor window displays the 'config.yaml' file with the following content:

```
1 - name: Install Logstash
2   hosts: all
3   become: true
4   roles:
5     - logstats
6
7
8 - name: Install apache,php,httpd,mariadb
9   hosts: all
10  become: true
11  roles:
12    - apache
13
```

The TERMINAL panel at the bottom shows the command `ansible-playbook --ask-become-pass config.yaml` being executed. The output shows the playbook running on two hosts, server1 and server2. The tasks shown are:

- PLAY [Install Logstash]
- TASK [Gathering Facts] (ok: [server1], ok: [server2])
- TASK [logstats : Install dependencies] (WARNING: Updating cache and auto-installing missing dependency: python3-apt. Fatal: [server2]: FAILED! => {'changed': false, 'cmd': 'apt-get update', 'msg': "[Errno 2] No such file or directory: b'apt-get'", 'rc': 2, 'stderr': '', 'stderr_lines': [], 'stdout': '', 'stdout_lines': []} ok: [server1])
- TASK [logstats : Add Elastic APT repository key] (ok: [server1])
- TASK [logstats : Add Elastic APT repository] (ok: [server1])
- TASK [logstats : Install Logstash] (Select Encoding)

Nagios

The screenshot shows the terminal output of the Ansible playbook execution for Nagios installation. The command `ansible-playbook --ask-become-pass config.yaml` is executed. The output shows the playbook running on two hosts, server1 and server2. The tasks shown are:

- PLAY [Install Nagios in Ubuntu]
- TASK [Gathering Facts] (ok: [server1], ok: [server2])
- TASK [nagios : Install required dependencies on Ubuntu] (skipping: [server2], ok: [server1])
- TASK [nagios : Download Nagios Core source code] (ok: [server1], ok: [server2])
- TASK [nagios : Extract Nagios source code] (ok: [server2], ok: [server1])
- TASK [nagios : Download Nagios Plugins] (ok: [server1], ok: [server2])

GitHub link:

https://github.com/hrvillasenor-ux/CPE_MIDTERM_VILLASENOR.git

Conclusions: (link your conclusion from the objective)

In doing this midterm exam you need to install all the need package and specific package to install all in elastic stack like elastic search,logstash,nagios, and kibana it all in the elastic stack but there specific package to install it in ubuntu and centOS. Because of that i didnt finish this exam due to that circumstances but atleast i ve done 3 but not the elastic search.