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<b>Course/Section:</b> CPE212 CPE31S2	<b>Date Submitted:</b> 10/10/25
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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 separate 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

The screenshot shows a GitHub repository page for 'CPE\_MIDTERM\_VILLASENOR'. The repository is public and contains a single commit by 'hrvillasenor-ux' titled 'Initial commit'. The commit message is 'Initial commit'. The repository has 1 branch and 0 tags. The README file is present and contains the text 'CPE\_MIDTERM\_VILLASENOR'. The repository has 0 stars, 0 forks, and 0 watching. There are no releases published.

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 : install 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]

Select End of Line Sequence
```

## 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 the VS Code interface with the following details:

- File Explorer:** Shows files in the directory `CPE_MIDTERM_VILLASENOR`, including `ansible.cfg`, `config.yaml` (selected), `inventory.ini`, and `README.md`.
- Code Editor:** Displays the `config.yaml` file content:2 | - name: Install Logstash
3 | hosts: all
4 | become: true
5 | roles:
6 | - logstash
7 |
8 | - name: Install apache,php,httpd,mariadb
9 | hosts: all
10 | become: true
11 | roles:
12 | - apache
13 |
- Terminal:** Shows the command `HANS@LocalMachine:~/CPE_MIDTERM_VILLASENOR$ ansible-playbook --ask-become-pass config.yaml` and its output: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": "", "stdout\_lines": [], "stdout": ""}

TASK [logstats : Add Elastic APT repository key] \*\*\*\*\*
ok: [server1]

TASK [logstats : Add Elastic APT repository] \*\*\*\*\*
ok: [server1]

TASK [logstats : Install Logstash] \*\*\*\*\*
|
- Bottom Status Bar:** Shows the current file is `VILLASENOR (13 minutes ago)`, has 20 lines and 37 selected, and is in YAML mode.

## Nagios

The screenshot shows the VS Code interface with the following details:

- File Explorer:** Shows files in the directory `CPE_MIDTERM_VILLASENOR`, including `ansible.cfg`, `config.yaml` (selected), `inventory.ini`, and `README.md`.
- Code Editor:** Displays the `config.yaml` file content (same as above).
- Terminal:** Shows the command `HANS@LocalMachine:~/CPE_MIDTERM_VILLASENOR$ ansible-playbook --ask-become-pass config.yaml` and its output: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](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.