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| <b>Course/Section: CPE 212 - CPE31S4</b>  | <b>Date Submitted: Oct. 10, 2025</b>           |
| <b>Instructor: Engr. Robin Valenzuela</b>   | <b>Semester and SY: 1st Sem,<br/>2025-2026</b> |
| <b>Midterm Skills Exam: Install, Configure, and Manage Log Monitoring tools</b>   |  |
| <b>1. Objectives</b>  |  |
| 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.   |  |
| <b>2. Instructions</b>  |  |
| <ol style="list-style-type: none"> <li>1. Create a repository in your GitHub account and label it CPE_MIDEXAM_SURNAME.</li> <li>2. Clone the repository and do the following: <ol style="list-style-type: none"> <li>2.1. Create an Ansible playbook that does the following with an input of a config.yaml file and arranged Inventory file:</li> <li>2.2. Install and configure Elastic Stack in separate hosts (Elastic Search, Kibana, Logstash) • Install Nagios in one host</li> <li>2.3. Install Grafana,Prometheus and Influxdb in seperate hosts (Influxdb,Grafana,Prometheus)</li> <li>2.4. Install Lamp Stack in separate hosts (Httpd + Php,Mariadb)</li> </ol> </li> <li>3. Document all your tasks using this document. Provide proofs of all the ansible playbooks codes and successful installations.</li> <li>4. Document the push and commit from the local repository to GitHub.</li> <li>5. Finally, paste also the link of your GitHub repository in the documentation.</li> </ol> |  |
| <b>3. Output</b> (screenshots and explanations)   |  |
| 1.  |  |

**CPE\_MIDTERM\_ATIAN**

Public

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main



Go to file



&lt;&gt; Code

**zhriosk** Initial commit

c3eeac9 · 32 minutes ago



README.md

Initial commit

32 minutes ago

**README**[github.com/zhriosk/CPE\\_MIDTERM\\_ATIAN/pulls](https://github.com/zhriosk/CPE_MIDTERM_ATIAN/pulls)

```
atian@ATIAN-Workstation:~$ git clone git@github.com:zhriosk/CPE_MIDTERM_ATIAN.git
Cloning into 'CPE_MIDTERM_ATIAN'...
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.
atian@ATIAN-Workstation:~$ ls
ATIAN_PrelimExam  Desktop      id_rsa       id_rsa.pub   Pictures      Templates
CPE212           Documents    id_rsa       MIDTERM_EXAM Public         Videos
CPE_MIDTERM_ATIAN Downloads    id_rsa.pub   Music         snap
atian@ATIAN-Workstation:~$ cd CPE_MIDTERM_EXAM
bash: cd: CPE_MIDTERM_EXAM: No such file or directory
atian@ATIAN-Workstation:~$ cd CPE_MIDTERM_ATIAN
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ ls
README.md
```

```
atian@ATIAN-Workstation: ~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks
CPE_MIDTERM_ATIAN Downloads id-rsa.pub Music snap
atian@ATIAN-Workstation:~$ cd CPE_MIDTERM_ATIAN
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ ls
+ inventory.ini Php,Mariadb} roles
ansible.cfg new.yml README.md site.yml
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ cd role
bash: cd: role: No such file or directory
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ cd roles
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ ls
{Httpd Httpd+Php Mariadb
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ cd tasks
bash: cd: tasks: No such file or directory
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ ls
{Httpd Httpd+Php Mariadb
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ cd Httpd+Php
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php$ ls
tasks
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php$ cd tasks
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks$ ls
main.yml
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks$ sudo nano mai
n.yml
[sudo] password for atian:
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks$
```

```
EXPLORER
CPE_MID...
+
Php,Mariadb}
roles
{Httpd
Httpd+Php/tasks
main.yml U
Mariadb/tasks
main.yml U
ansible.cfg U
inventory.ini U
new.yml U
README.md
site.yml U

roles > Httpd+Php > tasks > main.yml
1 - name: Install Httpd and Php for Ubuntu
2 apt:
3   name:
4     - apache2
5     - libapache2-mod-php
6   state: latest
7   when: ansible_distribution=="Ubuntu"
8
9 - name: Install Httpd and Php for CentOS
10 yum:
11   name:
12     - httpd
13     - php
14   state: latest
15   when: ansible_distribution=="CentOS"
16
```

```
atian@ATIAN-Workstation: ~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks  Q  -  +  -  x
GNU nano 7.2 main.yml *
- name: Install Httpd and Php for Ubuntu
  apt:
    name:
      - apache2
      - libapache2-mod-php
    state: latest
  when: ansible_distribution == "Ubuntu"

- name: Install Httpd and Php for CentOS
  yum:
    name:
      - httpd
      - php
    state: latest
  when: ansible_distribution=="CentOS"
```

```
EXPLORER  ...  A new.yml U  A main.yml .../Httpd+Php/... U  A main.yml .../Mariadb/... U x
CPE_MID...  [+  [-  [U  [B
> +
> Php,Mariadb}  ●
v roles  ●
> {Httpd
v Httpd+Php/tasks  ●
  A main.yml  U
  v Mariadb/tasks  ●
    A main.yml  U
  ● ansible.cfg  U
  ≡ inventory.ini  U
  A new.yml  U
  ⓘ README.md
  A site.yml  U
roles > Mariadb > tasks > A main.yml
1  - name: install mariadb package (CentOS)
2  yum:
3    name: mariadb-server
4    state: latest
5    when: ansible_distribution=="CentOS"
6
7  - name: Install mariadbDB on Ubuntu
8  apt:
9    name: mariadb-server
10   state: latest
11   when: ansible_distribution=="Ubuntu"
12
13 - name: mariadbDB restart/enable
14 service:
15   name: mariadb-server
16   state: restarted
17   enabled: true
18   become: true
19
```

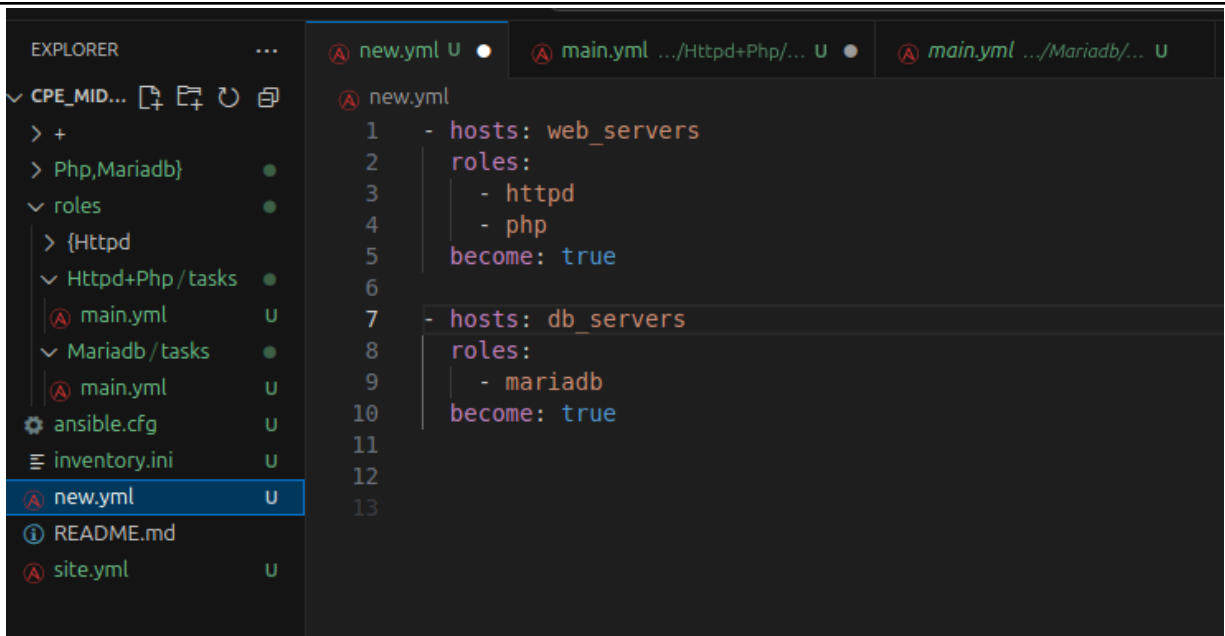
```
atian@ATIAN-Workstation: ~/CPE_MIDTERM_ATIAN/roles/Mariadb/tasks
GNU nano 7.2 main.yml
- name: install mariadb package (CentOS)
  yum:
    name: mariadb-server
    state: latest
  when: ansible_distribution=="CentOS"

- name: Install mariabDB on Ubuntu
  apt:
    name: mariadb-server
    state: latest
  when: ansible_distribution=="Ubuntu"

- name: mariabDB restart/enable
  service:
    name: mariadb-server
    state: restarted
    enabled: true
  become: true
```

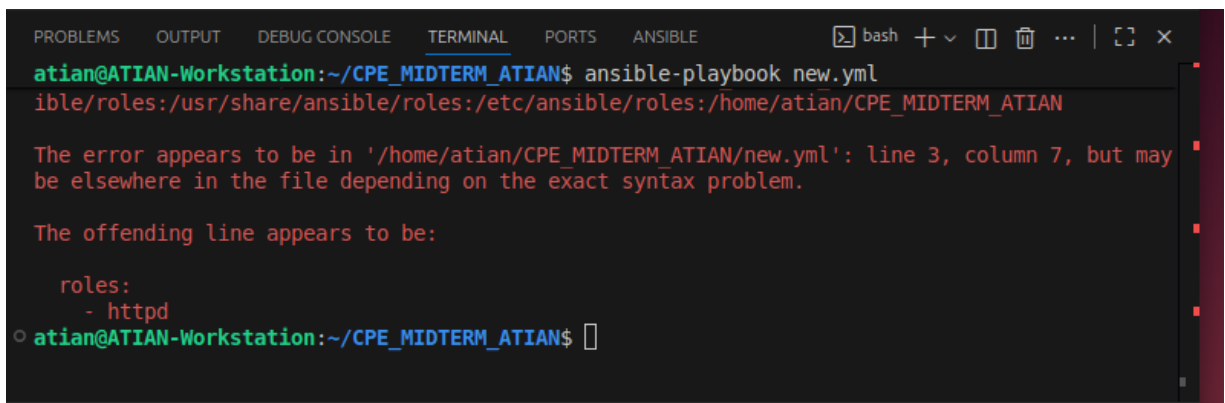
```
atian@ATIAN-Workstation: ~/CPE_MIDTERM_ATIAN
GNU nano 7.2 new.yml
- hosts: web_servers
  roles:
    - httpd
    - php
  become: true

- hosts: db_servers
  roles:
    - php
    - httpd
    - mariadb
  become: true
```



The screenshot shows the VS Code interface. The Explorer sidebar on the left displays a project structure with folders like 'CPE\_MID...', 'roles', and 'tasks'. The 'new.yml' file is selected and open in the editor. The editor shows the following content:

```
1 - hosts: web_servers
2   roles:
3     - httpd
4     - php
5   become: true
6
7 - hosts: db_servers
8   roles:
9     - mariadb
10  become: true
11
12
13
```



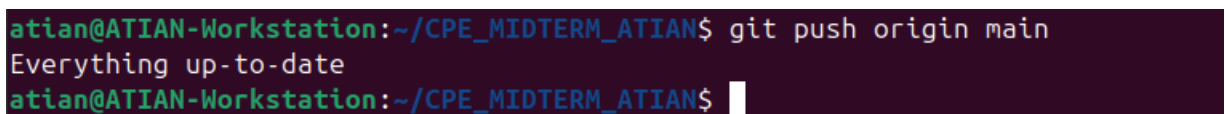
The screenshot shows a terminal window with the following output:

```
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ ansible-playbook new.yml
ible/roles:/usr/share/ansible/roles:/etc/ansible/roles:/home/atian/CPE_MIDTERM_ATIAN

The error appears to be in '/home/atian/CPE_MIDTERM_ATIAN/new.yml': line 3, column 7, but may
be elsewhere in the file depending on the exact syntax problem.

The offending line appears to be:

    roles:
    - httpd
○ atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$
```



The screenshot shows a terminal window with the following output:

```
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ git push origin main
Everything up-to-date
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$
```

### GitHub link:

[https://github.com/zhriosk/CPE\\_MIDTERM\\_ATIAN](https://github.com/zhriosk/CPE_MIDTERM_ATIAN)

**Conclusions:** (link your conclusion from the objective)

**By doing this midterm, I was able to create and design a workflow to install packages but wasn't able to finish it due to an offending line.**