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Course/Section: CPE232S6	Date Submitted: 11/06/2023
Instructor: Dr. Jonathan Taylor	Semester and SY: 1st sem 2023-2024
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	
<ol style="list-style-type: none"> 1. Create a repository in your GitHub account and label it CPE_MIDEXAM_SURNAME. 2. Clone the repository and do the following: <ol style="list-style-type: none"> 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)	
<p>Step 1. Go to github.com and login your account, make a new repository for this activity (CPE_MIDEXAM_SUZUKI).</p>	

The screenshot shows a GitHub repository page for 'CPE_MIDEXAM_SUZUKI'. The repository is public and was created by RioMariee. It contains one commit from RioMariee, which is the initial commit. The README.md file is present and contains the text 'CPE_MIDEXAM_SUZUKI'. The repository has 1 star, 1 watch, and 0 forks. There are no releases published.

Code | **Issues** | **Pull requests** | **Actions** | **Projects** | **Wiki** | **Security** | **Insights**

CPE_MIDEXAM_SUZUKI (Public)

Code | **Pin** | **Unwatch** | **Fork** | **Star**

main | **Go to file** | **Add file** | **About**

Branches | **Tags**

RioMariee Initial commit now 1

README.md Initial commit now

README.md

CPE_MIDEXAM_SUZUKI

No description, website, or topics provided.

Readme | Activity | 0 stars | 1 watching | 0 forks

Releases

No releases published | Create a new release

Right Ctrl

Step 2. After making the repository, clone your github repository and copy the ssh repository link and paste it in the ubuntu terminal with the code “Git clone (paste your link here)” .

RioMariee / suzuki_midterm

Code Issues Pull requests Actions Projects Wiki Security Insights ...

suzuki_midterm Public

main · Go to file · Add file · Code · Pin · Unwatch 1 · Fork 0 · Star 0

Branches Tags

RioMariee Initial commit · README.md

README.md

suzuki_midterm

Local Codespaces

Clone

HTTPS SSH GitHub CLI

git@github.com:RioMariee/suzuki_midterm.g

Use a password-protected SSH key.

Download ZIP

Code 55% faster with AI pair programming.

Start my free trial · Don't show again

About

No description, website, or topics provided.

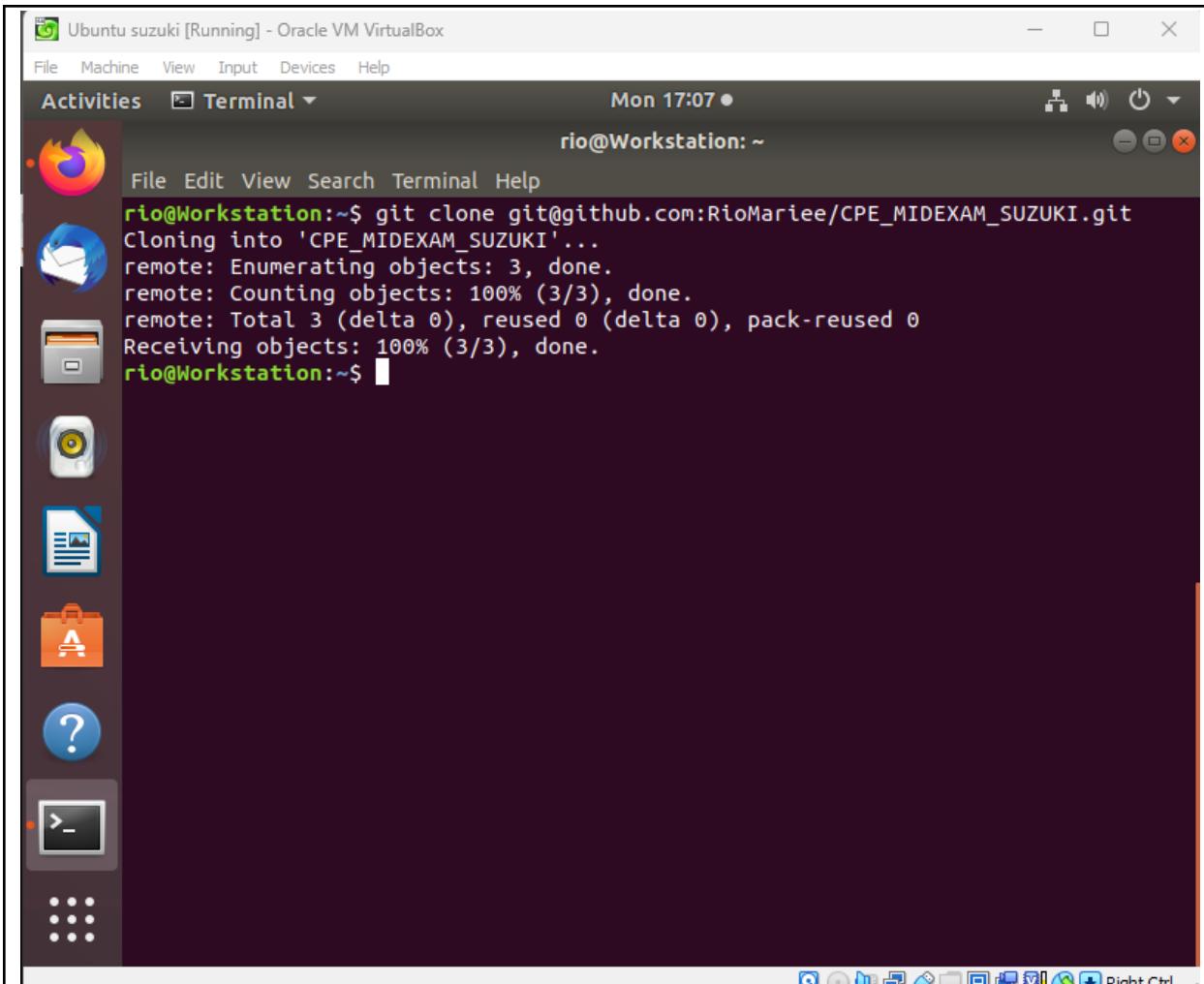
Readme · Activity · 0 stars · 1 watching · 0 forks

Releases

No releases published · Create a new release

Right Ctrl

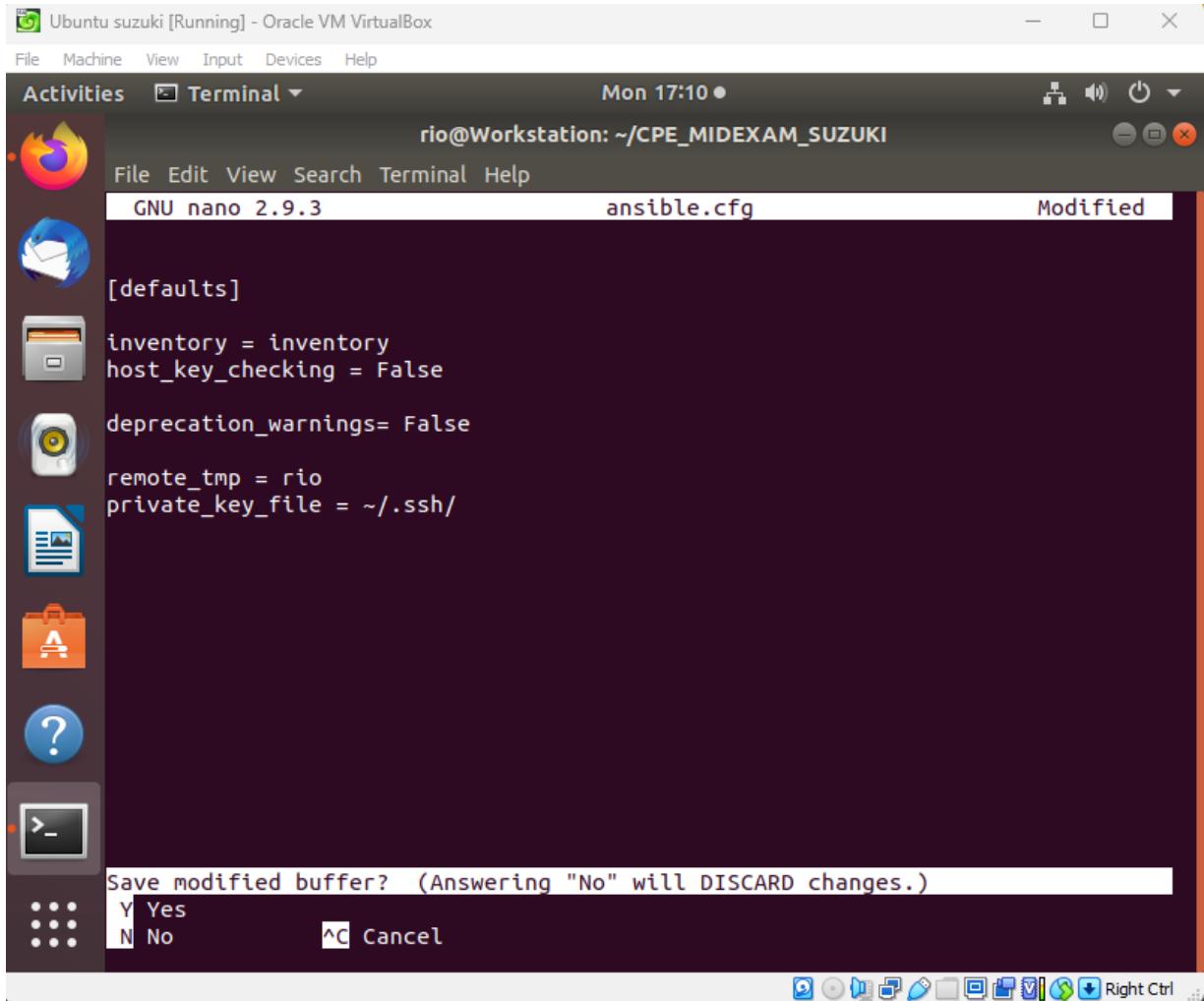
This screenshot shows a GitHub repository page for 'suzuki_midterm'. The repository is public and contains one commit from 'RioMariee' with the message 'Initial commit'. A README.md file is present. A modal window is open over the page, providing cloning options via HTTPS, SSH, or GitHub CLI. The SSH option is selected. The GitHub CLI option includes a note about using a password-protected SSH key. Below the cloning options, there's a promotional message for AI pair programming with a 'Start my free trial' button and a 'Don't show again' link. To the right of the modal, the repository's 'About' section is visible, showing no description, website, or topics provided. It also lists the repository's activity, star count (0), watching count (1), and fork count (0). The 'Releases' section indicates no releases have been published, with a link to 'Create a new release'. At the bottom right, there's a set of small icons representing various GitHub features like issues, pull requests, and projects. The overall interface follows GitHub's clean, modern design with a white background and light gray accents.



Step 3. Check if the repository has been cloned in the ubuntu and change directory to suzuki_midterm (the name of your repository), using the command “ls”.

```
rio@Workstation:~$ ls
'{'
ansible.cfg      files   'id_rsa\'          suzuki_midterm
config.yaml      hoa10   id_rsa.pub        Suzuki_PrelimExam
CPE232_suzuki   HOA6   'id_rsa\.pub'       Templates
CPE_MIDEXAM_SUZUKI  hoa7   inventory        token
Desktop          hoa7.1  Music             Videos
Documents         HOA8   Pictures          Workstation
Downloads         hoa9   playbook.yaml
examples.desktop  hoa9.1  Public
                   id_rsa  site.yml
rio@Workstation:~$
```

Step 4. After checking we will now create an ansible.cfg and copy the contents of it in the new directory (CPE_MIDEXAM_SUZUKI), using the command “sudo nano ansible.cfg” and don't forget to save your work.



```
[defaults]
inventory = inventory
host_key_checking = False
deprecation_warnings= False
remote_tmp = rio
private_key_file = ~/.ssh/
```

Save modified buffer? (Answering "No" will DISCARD changes.)

Y Yes ^C Cancel

Step 5. After creating the ansible.cfg we will now create the inventory for CPE_MIDEXAM_SUZUKI, using the command “sudo nano inventory”. In here we will put and categorize the ip addresses we will need and use ad we will double check the ip addresses to make sure using the command “ip ad”.

The screenshot shows a Linux desktop environment with a terminal window open. The terminal title is "Terminal" and the command line shows "rio@Workstation: ~/CPE_MIDEXAM_SUZUKI". The file being edited is "inventory". The content of the file is:

```
[nagios_centos]
192.168.56.105

[elk_centos]
192.168.56.105

[elk_ubuntu]
192.168.56.102

[igp_centos]
192.168.56.105

[igp_ubuntu]
192.168.56.102

[ls_centos]
192.168.56.105

[ls_ubuntu]
192.168.56.102
```

The terminal window includes a menu bar with File, Edit, View, Search, Terminal, Help, and a toolbar with icons for Get Help, Write Out, Where Is, Cut Text, Replace, Uncut Text, Justify, To Spell, Exit, Read File, and Right Ctrl.

Step 6. After creating the inventory we will now create the config.yml in our managed node (Ubuntu_suzuki). We just use the same command in the HOA8 and just redo the other codes if it doesn't work, and don't forget to save your work.

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:29 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

File Edit View Search Terminal Help

GNU nano 2.9.3 config.yml Modified

```
---
```

```
- hosts: all
  become: true
  pre_tasks:
    - name: Installing dnf and epel-release
      yum:
        name:
          - epel-release
          - dnf
        when: ansible_distribution == "CentOS"
    - name: Update and upgrade remote CentOS server
      dnf:
        update_cache: yes
        name: "*"
        state: latest
        when: ansible_distribution == "CentOS"
    - name: Installing installations dependencies
      apt:
        name:
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell

Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:29 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

File Edit View Search Terminal Help

GNU nano 2.9.3 config.yml Modified

```
- name: Update and upgrade remote CentOS server
dnf:
  update_cache: yes
  name: "*"
  state: latest
when: ansible_distribution == "CentOS"

- name: Installing installations dependencies
apt:
  name:
    - wget
  state: latest
when: ansible_distribution == "Ubuntu"

- name: Dpkg fixing in Ubuntu Servers
shell: |
  dpkg --configure -a
when: ansible_distribution == "Ubuntu"

- hosts: elk_cent
tags: elk_cent, elk_both
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:29 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

File Edit View Search Terminal Help

GNU nano 2.9.3 config.yml Modified

```
state: latest
when: ansible_distribution == "Ubuntu"

- name: Dpkg fixing in Ubuntu Servers
  shell: |
    dpkg --configure -a
  when: ansible_distribution == "Ubuntu"

- hosts: elk_cent
  tags: elk_cent, elk_both
  become: true
  roles:
    - elk_cent

- hosts: elk_ubuntu
  tags: elk_ubuntu, elk_both
  become: true
  roles:
    - elk_ubuntu

- hosts: nagios_cent
  tags: nagios_cent
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:29 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

File Edit View Search Terminal Help

GNU nano 2.9.3 config.yml Modified

```
roles:
  - elk_cent

- hosts: elk_ubuntu
  tags: elk_ubuntu, elk_both
  become: true
  roles:
    - elk_ubuntu

- hosts: nagios_cent
  tags: nagios_cent
  become: true
  roles:
    - nagios_cent

- hosts: igp_cent
  tags: igp_cent, igp_both
  become: true
  roles:
    - igp_cent

- hosts: igp_ubuntu
  tags: igp_ubuntu, igp_both
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:30 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

File Edit View Search Terminal Help

GNU nano 2.9.3 config.yml Modified

```
roles:
  - nagios_cent

- hosts: igp_cent
  tags: igp_cent, igp_both
  become: true
  roles:
    - igp_cent

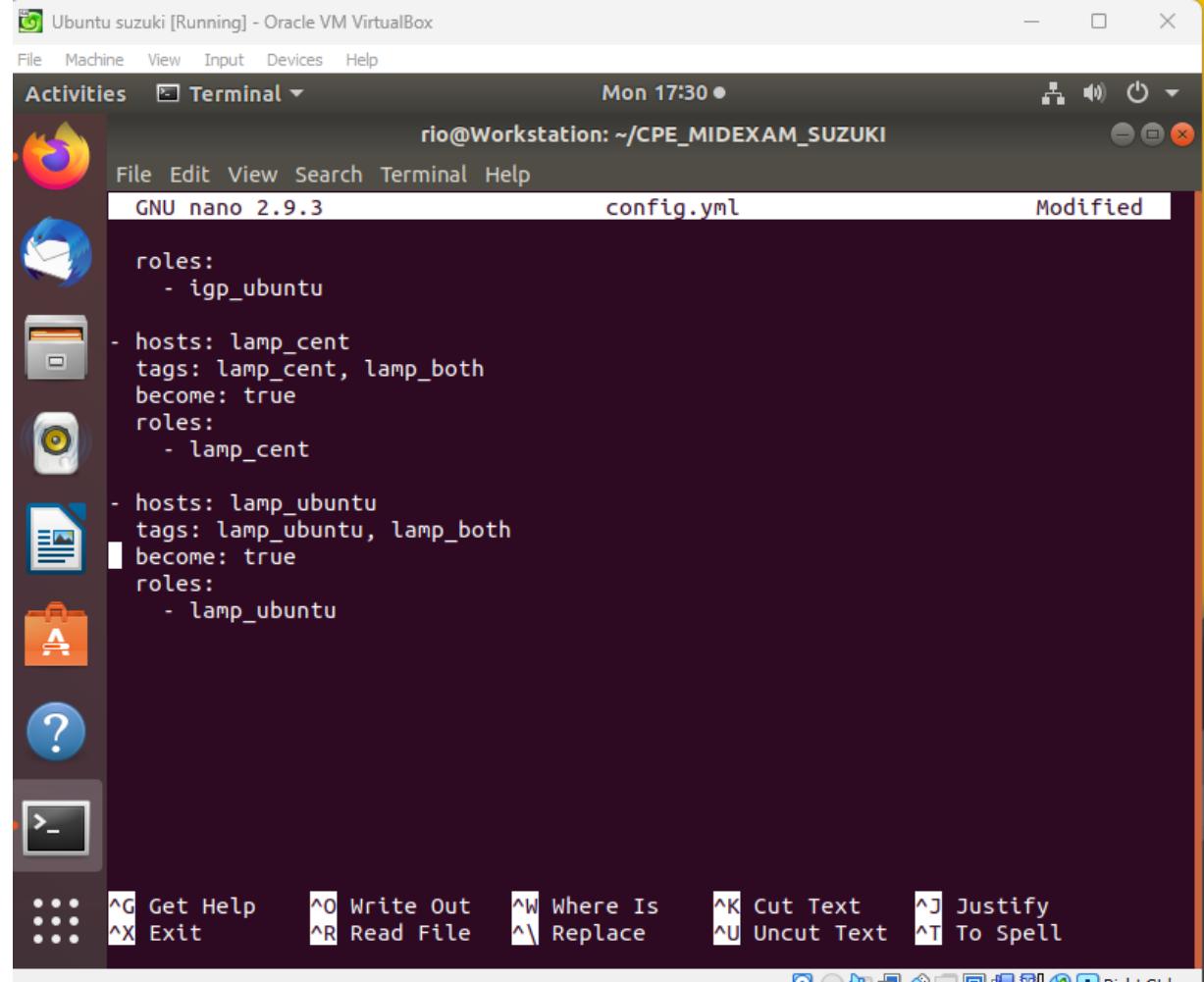
- hosts: igp_ubuntu
  tags: igp_ubuntu, igp_both
  become: true
  roles:
    - igp_ubuntu

- hosts: lamp_cent
  tags: lamp_cent, lamp_both
  become: true
  roles:
    - lamp_cent

- hosts: lamp_ubuntu
  tags: lamp_ubuntu, lamp_both
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Right Ctrl



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Terminal" and the command line shows "rio@Workstation: ~/CPE_MIDEXAM_SUZUKI". The terminal content displays a YML configuration file named "config.yml" which defines roles and hosts for a LAMP stack. The configuration includes roles like "igp_ubuntu", "lamp_cent", and "lamp_ubuntu" across different hosts. The terminal interface includes a menu bar with File, Edit, View, Search, Terminal, Help, and a toolbar with various icons.

```
roles:
  - igp_ubuntu

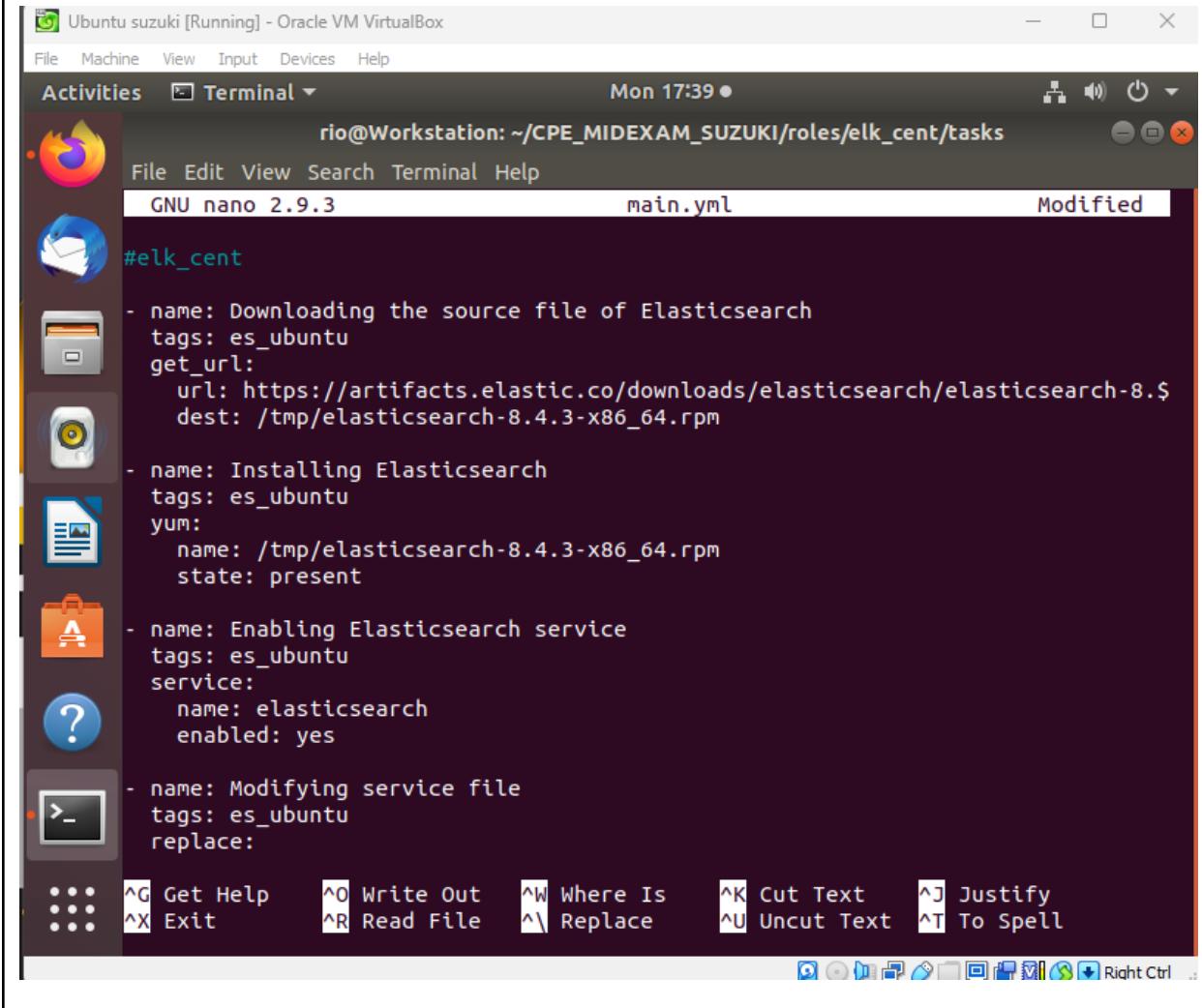
- hosts: lamp_cent
  tags: lamp_cent, lamp_both
  become: true
  roles:
    - lamp_cent

- hosts: lamp_ubuntu
  tags: lamp_ubuntu, lamp_both
  become: true
  roles:
    - lamp_ubuntu
```

Step 7. We will now make the directory “roles” for this and make the sub directory for it using the command “mkdir” and “cd” for changing the directory we just make to make another directory under them. To exit the directory you are currently in use the command “cd ..” to exit.

```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI$ mkdir roles
rio@Workstation:~/CPE_MIDEXAM_SUZUKI$ cd roles
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ mkdir elk_cent
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ cd elk_cent
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_cent$ mkdir tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_cent$ cd tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks$ sudo nano main.yml
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks$
```

Step 8. After creating the directory roles and the directories under the roles we will put the commands for the main.yml of every directory we made under roles.



The screenshot shows a terminal window titled "Terminal" running on an Ubuntu system. The window title bar includes "Ubuntu suzuki [Running] - Oracle VM VirtualBox", "Activities", "Terminal", "Mon 17:39 ●", and "rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks". The terminal window displays the following YAML configuration:

```
File Edit View Search Terminal Help
GNU nano 2.9.3          main.yml          Modified
#elk_cent
- name: Downloading the source file of Elasticsearch
  tags: es_ubuntu
  get_url:
    url: https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-8.$
    dest: /tmp/elasticsearch-8.4.3-x86_64.rpm

- name: Installing Elasticsearch
  tags: es_ubuntu
  yum:
    name: /tmp/elasticsearch-8.4.3-x86_64.rpm
    state: present

- name: Enabling Elasticsearch service
  tags: es_ubuntu
  service:
    name: elasticsearch
    enabled: yes

- name: Modifying service file
  tags: es_ubuntu
  replace:
```

The terminal window also shows a docked panel on the left with various icons for applications like a browser, file manager, terminal, and help. The bottom of the terminal window has a menu bar with options like "Get Help", "Write Out", "Where Is", "Cut Text", "Justify", "Exit", "Read File", "Replace", "Uncut Text", "To Spell", and "Right Ctrl".

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:40 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
state: present

- name: Enabling Elasticsearch service
  tags: es_ubuntu
  service:
    name: elasticsearch
    enabled: yes

- name: Modifying service file
  tags: es_ubuntu
  replace:
    path: /usr/lib/systemd/system/elasticsearch.service
    regexp: "TimeoutStartSec=75"
    replace: "TimeoutStartSec=300"

- name: Opening port for elastic search
  tags: es_ubuntu
  shell: |
    sudo firewall-cmd --permanent --zone=public --add-port=9200/tcp
    sleep 10
    sudo firewall-cmd --reload

- name: Enabling elastic search service
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:40 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
regexp: "TimeoutStartSec=75"
replace: "TimeoutStartSec=300"

- name: Opening port for elastic search
  tags: es_ubuntu
  shell: |
    sudo firewall-cmd --permanent --zone=public --add-port=9200/tcp
    sleep 10
    sudo firewall-cmd --reload

- name: Enabling elastic search service
  tags: es_ubuntu
  shell: |
    systemctl enable elasticsearch.service
    sleep 10
    systemctl start elasticsearch.service
  ignore_errors: yes

#logstash

- name: Downloading and installing public signing key
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:40 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
shell: |
    systemctl enable elasticsearch.service
    sleep 10
    systemctl start elasticsearch.service
    ignore_errors: yes

#logstash

- name: Downloading and installing public signing key
  tags: logstash_ubuntu
  rpm_key:
    state: present
    key: https://artifacts.elastic.co/GPG-KEY-elasticsearch

- name: Creating a repo file for Logstash
  tags: logstash_ubuntu
  copy:
    src: logstash.repo
    dest: /etc/yum.repos.d/logstash.repo
    owner: root
    group: root
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:40 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
rpm_key:
  state: present
  key: https://artifacts.elastic.co/GPG-KEY-elasticsearch

- name: Creating a repo file for Logstash
  tags: logstash_ubuntu
  copy:
    src: logstash.repo
    dest: /etc/yum.repos.d/logstash.repo
    owner: root
    group: root
    mode: 0777

- name: Updating repo
  tags: logstash_ubuntu
  dnf:
    update_cache: yes

- name: Installing Logstash and its dependencies
  tags: logstash_ubuntu
  dnf:
    name:
      - logstash
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:40 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Updating repo
  tags: logstash_ubuntu
  dnf:
    update_cache: yes

- name: Installing Logstash and its dependencies
  tags: logstash_ubuntu
  dnf:
    name:
      - logstash
    state: latest

- name: Opening port for Logstash
  tags: logstash_ubuntu, elk_install
  shell:
    |
    sudo firewall-cmd --permanent --zone=public --add-port=9600/tcp
    sleep 10
    sudo firewall-cmd --reload

- name: Making sure that logstash is stared and enabled
  tags: logstash_ubuntu, service, logstash_service, elk_service
  service:
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:41 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Opening port for Logstash
  tags: logstash_ubuntu, elk_install
  shell: |
    sudo firewall-cmd --permanent --zone=public --add-port=9600/tcp
    sleep 10
    sudo firewall-cmd --reload

- name: Making sure that logstash is stared and enabled
  tags: logstash_ubuntu, service, logstash_service, elk_service
  service:
    name: logstash
    state: restarted
    enabled: true

# KIBANA

- name: Downloading and installing public signing key
  tags: kibana_ubuntu, kibana_install, elk_install
  rpm_key:
    state: present
    key: https://artifacts.elastic.co/GPG-KEY-elasticsearch
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell

Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:41 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
state: restarted
enabled: true

# KIBANA

- name: Downloading and installing public signing key
  tags: kibana_ubuntu, kibana_install, elk_install
  rpm_key:
    state: present
    key: https://artifacts.elastic.co/GPG-KEY-elasticsearch

- name: Adding Kibana to the RPM repository
  tags: kibana_ubuntu, kibana_install, elk_install
  copy:
    src: kibana.repo
    dest: /etc/yum.repos.d/kibana.repo
    owner: root
    group: root
    mode: 777

- name: Updating the repository once again
  tags: kibana_ubuntu, kibana_install, elk_install
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:41 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

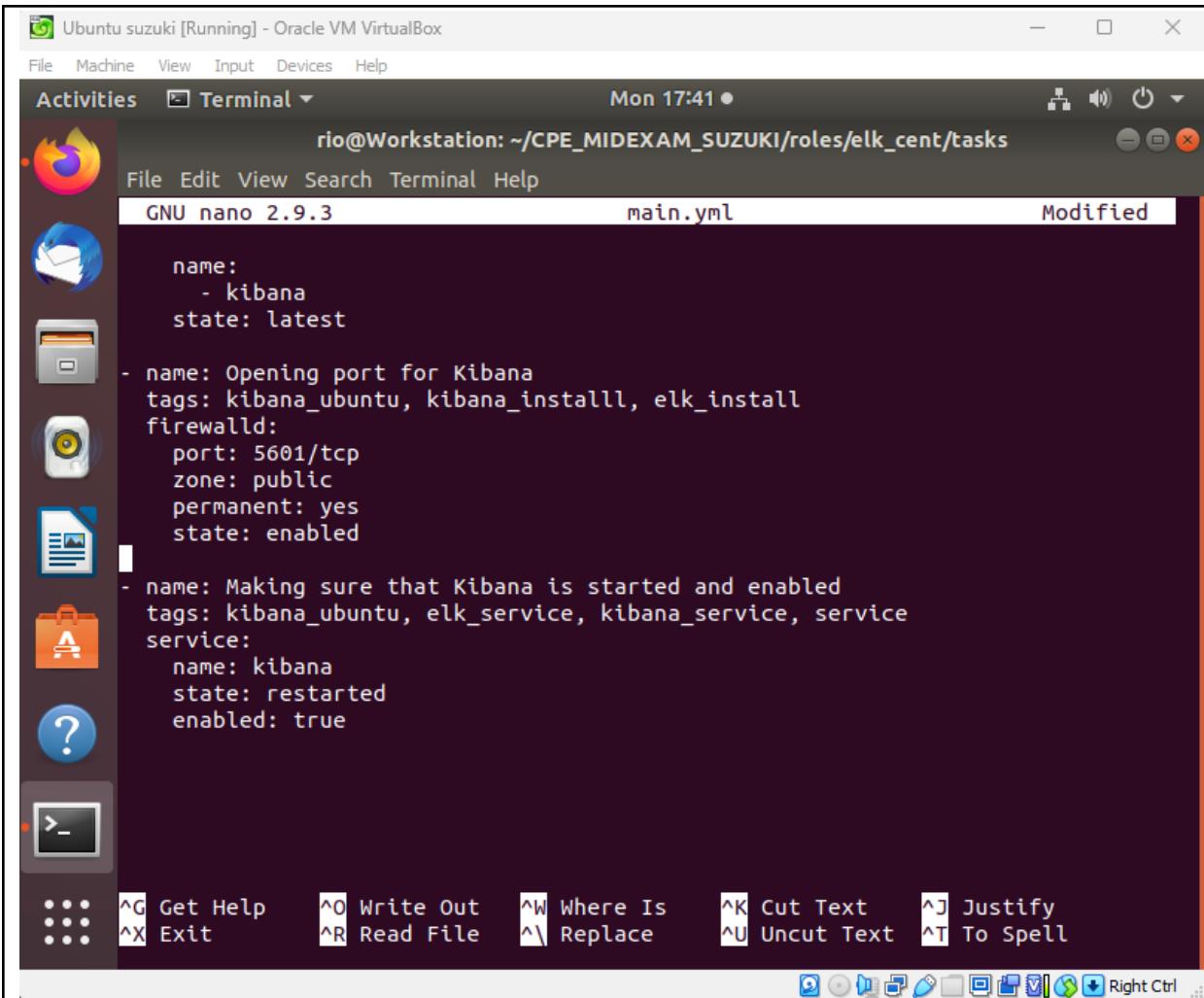
```
- name: Adding Kibana to the RPM repository
  tags: kibana_ubuntu, kibana_install, elk_install
  copy:
    src: kibana.repo
    dest: /etc/yum.repos.d/kibana.repo
    owner: root
    group: root
    mode: 777

- name: Updating the repository once again
  tags: kibana_ubuntu, kibana_install, elk_install
  yum:
    name:
      - kibana
    state: latest

- name: Opening port for Kibana
  tags: kibana_ubuntu, kibana_installl, elk_install
  firewalld:
    port: 5601/tcp
    zone: public
    permanent: yes
    state: enabled
```

Get Help Write Out Where Is Cut Text Justify
Show Applications Read File Replace Uncut Text To Spell

Cancel Minimize Maximize Close



```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_cent/tasks$ nano main.yml
GNU nano 2.9.3                         main.yml                         Modified
name:
  - kibana
state: latest

- name: Opening port for Kibana
  tags: kibana_ubuntu, kibana_install, elk_install
  firewalld:
    port: 5601/tcp
    zone: public
    permanent: yes
    state: enabled

- name: Making sure that Kibana is started and enabled
  tags: kibana_ubuntu, elk_service, kibana_service, service
  service:
    name: kibana
    state: restarted
    enabled: true

^G Get Help   ^O Write Out   ^W Where Is   ^K Cut Text   ^J Justify
^X Exit      ^R Read File   ^Y Replace   ^U Uncut Text  ^T To Spell
```

Step 9. After creating the main.yml in the elk_cent we will now create the directory for the elk_ubuntu.

```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ cd ..
rio@Workstation:~/CPE_MIDEXAM_SUZUKI$ cd roles
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ mkdir elk_ubuntu
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ cd elk_ubuntu
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu$ mkdir tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu$ cd tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu/tasks$ sudo nano main.yml
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu/tasks$
```

Step 10. After creating the directory roles and the directories under the elk_ubuntu we will put the commands for the main.yml of every directory we made under roles.

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:47 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Installing dependencies
  apt:
    name:
      - apt-transport-https
      - openjdk-8-jdk
    state: latest

- name: Downloading in the Logstash package
  tags: logstash_ubuntu
  get_url:
    url: https://artifacts.elastic.co/downloads/logstash/logstash-8.4.3-amd64.$
    dest: /tmp/logstash-8.4.3-amd64.deb

- name: Installing package
  tags: logstash_ubuntu
  apt:
    deb: /tmp/logstash-8.4.3-amd64.deb

- name: Reloading the daemon
  tags: logstash_ubuntu
  command: /bin/systemctl daemon-reload
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:48 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
dest: /tmp/logstash-8.4.3-amd64.deb

- name: Installing package
  tags: logstash_ubuntu
  apt:
    deb: /tmp/logstash-8.4.3-amd64.deb

- name: Reloading the daemon
  tags: logstash_ubuntu
  command: /bin/systemctl daemon-reload

- name: Starting and enabling the service
  tags: logstash_ubuntu
  service:
    name: logstash
    state: restarted
    enabled: true

- name: Downloading in the Kibana package
  get_url:
    url: https://artifacts.elastic.co/downloads/kibana/kibana-8.4.3-amd64.deb
    dest: /tmp/kibana-8.4.3-amd64.deb
```

Get Help Write Out Where Is Cut Text Justify
Show Applications Read File Replace Uncut Text To Spell

Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:48 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
tags: logstash_ubuntu
service:
  name: logstash
  state: restarted
  enabled: true

- name: Downloading the Kibana package
  get_url:
    url: https://artifacts.elastic.co/downloads/kibana/kibana-8.4.3-amd64.deb
    dest: /tmp/kibana-8.4.3-amd64.deb

- name: Installing Kibana
  apt:
    deb: /tmp/kibana-8.4.3-amd64.deb

- name: Reloading the daemon
  command: /bin/systemctl daemon-reload

- name: Making sure that Kibana service is started and enabled
  service:
    name: kibana
    state: restarted
    enabled: true
```

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Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:48 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu/tasks

GNU nano 2.9.3 main.yml Modified

```
apt:
  deb: /tmp/kibana-8.4.3-amd64.deb

- name: Reloading the daemon
  command: /bin/systemctl daemon-reload

- name: Making sure that Kibana service is started and enabled
  service:
    name: kibana
    state: restarted
    enabled: true

- name: Downloading the elastic search package
  get_url:
    url: https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-8.8.0-x86_64.rpm
    dest: /tmp/elasticsearch-8.4.3-amd64.deb

- name: Installing package
  apt:
    deb: /tmp/elasticsearch-8.4.3-amd64.deb

- name: Enabling elastic search service
  tags: es_ubuntu
```

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Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:48 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Downloading in the elastic search package
  get_url:
    url: https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-8.4.3-amd64.deb
    dest: /tmp/elasticsearch-8.4.3-amd64.deb

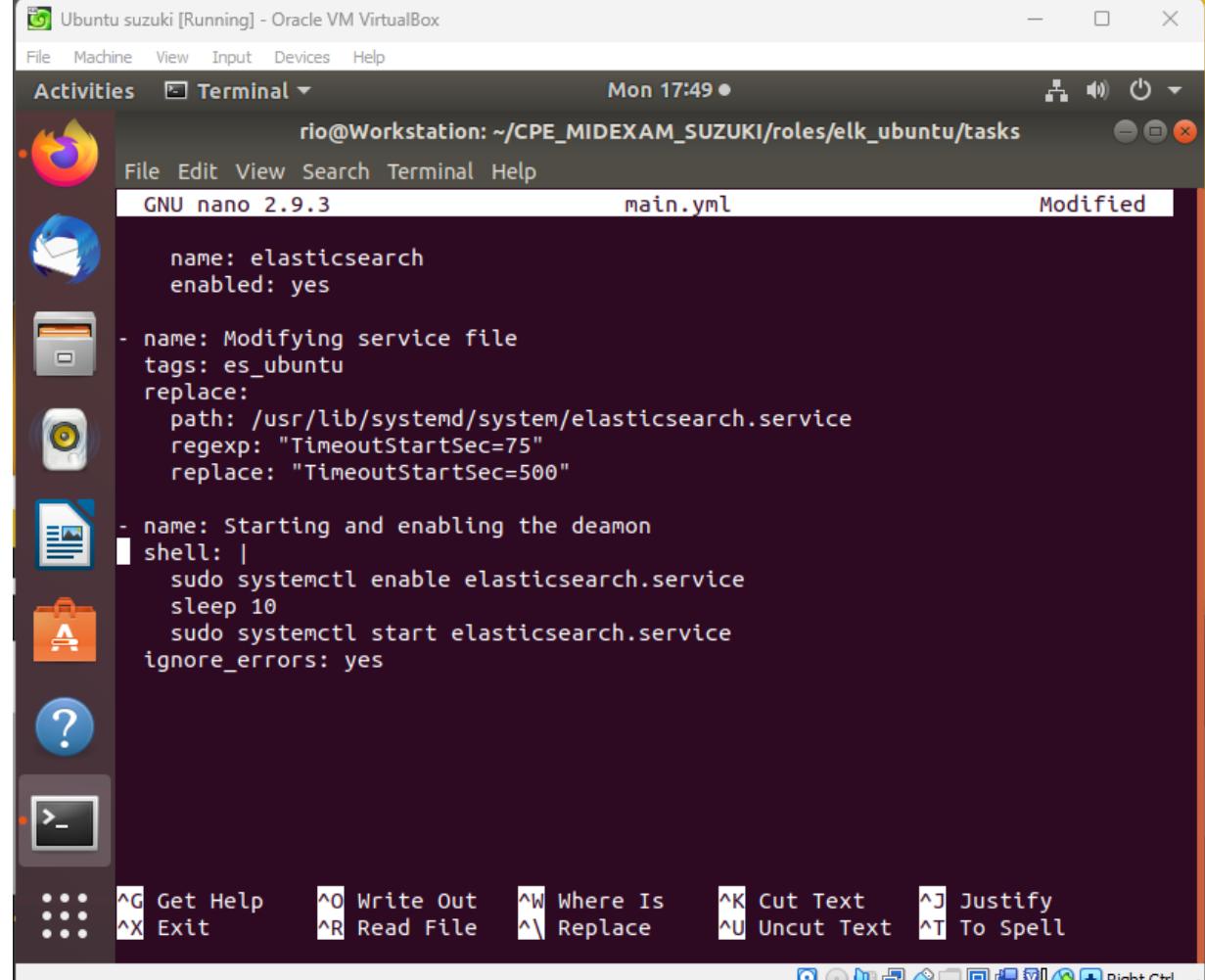
- name: Installing package
  apt:
    deb: /tmp/elasticsearch-8.4.3-amd64.deb

- name: Enabling elastic search service
  tags: es_ubuntu
  service:
    name: elasticsearch
    enabled: yes

- name: Modifying service file
  tags: es_ubuntu
  replace:
    path: /usr/lib/systemd/system/elasticsearch.service
    regexp: "TimeoutStartSec=75"
    replace: "TimeoutStartSec=500"

- name: Starting and enabling the deamon
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl



```
name: elasticsearch
enabled: yes

- name: Modifying service file
  tags: es_ubuntu
  replace:
    path: /usr/lib/systemd/system/elasticsearch.service
    regexp: "TimeoutStartSec=75"
    replace: "TimeoutStartSec=500"

- name: Starting and enabling the deamon
  shell: |
    sudo systemctl enable elasticsearch.service
    sleep 10
    sudo systemctl start elasticsearch.service
  ignore_errors: yes
```

Step 11. After creating the needed and sub directory under elk_ubuntu. We will now create the igp_cent directory with the same structure in the first 2 main directory.

```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/elk_ubuntu$ cd ..
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ mkdir igp_cent
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ cd igp_cent
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_cent$ mkdir tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_cent$ cd tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks$ sudo nano main.yml
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks$ cd ..
```

Step 12. After creating the directory roles and the directories under the igp_cent we will put the commands for the main.yml of every directory we made under igp_cent main.yml.

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:54 ●

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Copying the Influxdb repository file
  unarchive:
    src: https://dl.influxdata.com/influxdb/releases/influxdb2-2.4.0-linux-amd64.rpm
    dest: /tmp/
    remote_src: yes
    mode: 0777
    owner: root
    group: root

- name: Adding the executables to the PATH
  shell:
    cd /tmp/influxdb2*
    sudo cp influxdb2-2.4.0-linux-amd64/influxd /usr/local/bin/

- name: Downloading Grafana package
  get_url:
    url: https://dl.grafana.com/enterprise/release/grafana-enterprise-9.2.2-1.x86_64.rpm
    dest: /tmp/grafana-enterprise-9.2.2-1.x86_64.rpm

- name: Installing Grafana
  yum:
    name: /tmp/grafana-enterprise-9.2.2-1.x86_64.rpm
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:54 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
cd /tmp/influxdb2*
sudo cp influxdb2-2.4.0-linux-amd64/influxd /usr/local/bin/

- name: Downloading Grafana package
  get_url:
    url: https://dl.grafana.com/enterprise/release/grafana-enterprise-9.2.2-1.$
    dest: /tmp/grafana-enterprise-9.2.2-1.x86_64.rpm

- name: Installing Grafana
  yum:
    name: /tmp/grafana-enterprise-9.2.2-1.x86_64.rpm

- name: Enabling Grafana service
  service:
    name: grafana-server
    enabled: yes

- name: Modifying service file
  tags: es_ubuntu
  replace:
    path: /usr/lib/systemd/system/grafana-server.service
    regexp: "TimeoutStartSec=75"
    replace: "TimeoutStartSec=500"

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell
```

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:55 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/lgp_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Enabling Grafana service
  service:
    name: grafana-server
    enabled: yes

- name: Modifying service file
  tags: es_ubuntu
  replace:
    path: /usr/lib/systemd/system/grafana-server.service
    regexp: "TimeoutStartSec=75"
    replace: "TimeoutStartSec=500"

- name: Making sure that Grafana service is started and enabled
  service:
    name: grafana-server
    enabled: true
    state: started

- name: Creating a directory for Prometheus package
  tags: directory
  file:
    path: ~/prometheus
    state: directory
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:55 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

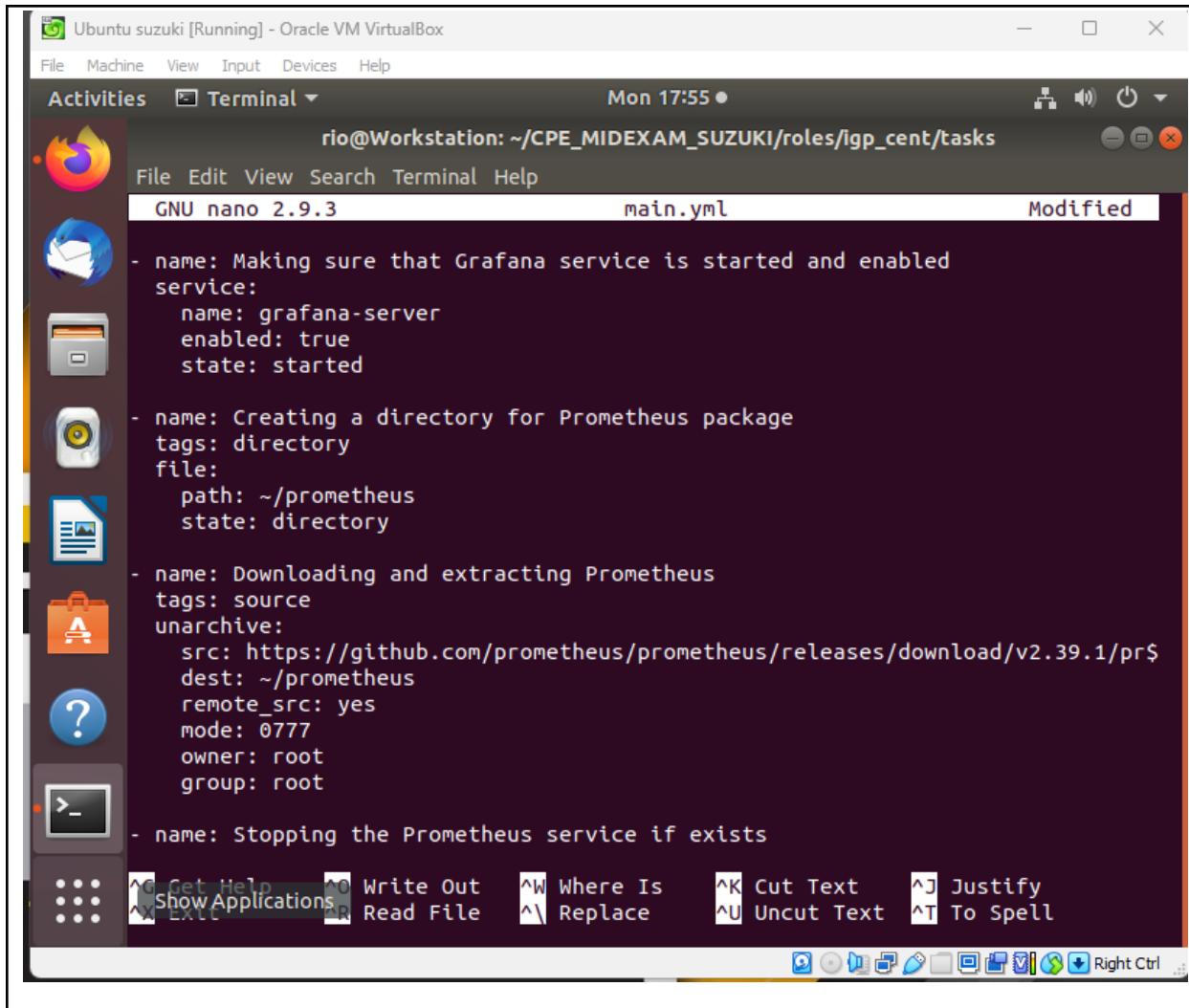
```
- name: Making sure that Grafana service is started and enabled
  service:
    name: grafana-server
    enabled: true
    state: started

- name: Creating a directory for Prometheus package
  tags: directory
  file:
    path: ~/prometheus
    state: directory

- name: Downloading and extracting Prometheus
  tags: source
  unarchive:
    src: https://github.com/prometheus/prometheus/releases/download/v2.39.1/pr
    dest: ~/prometheus
    remote_src: yes
    mode: 0777
    owner: root
    group: root

- name: Stopping the Prometheus service if exists
```

Get Help Write Out Where Is Cut Text Justify
Show Applications Read File Replace Uncut Text To Spell
Right Ctrl



Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 17:55 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

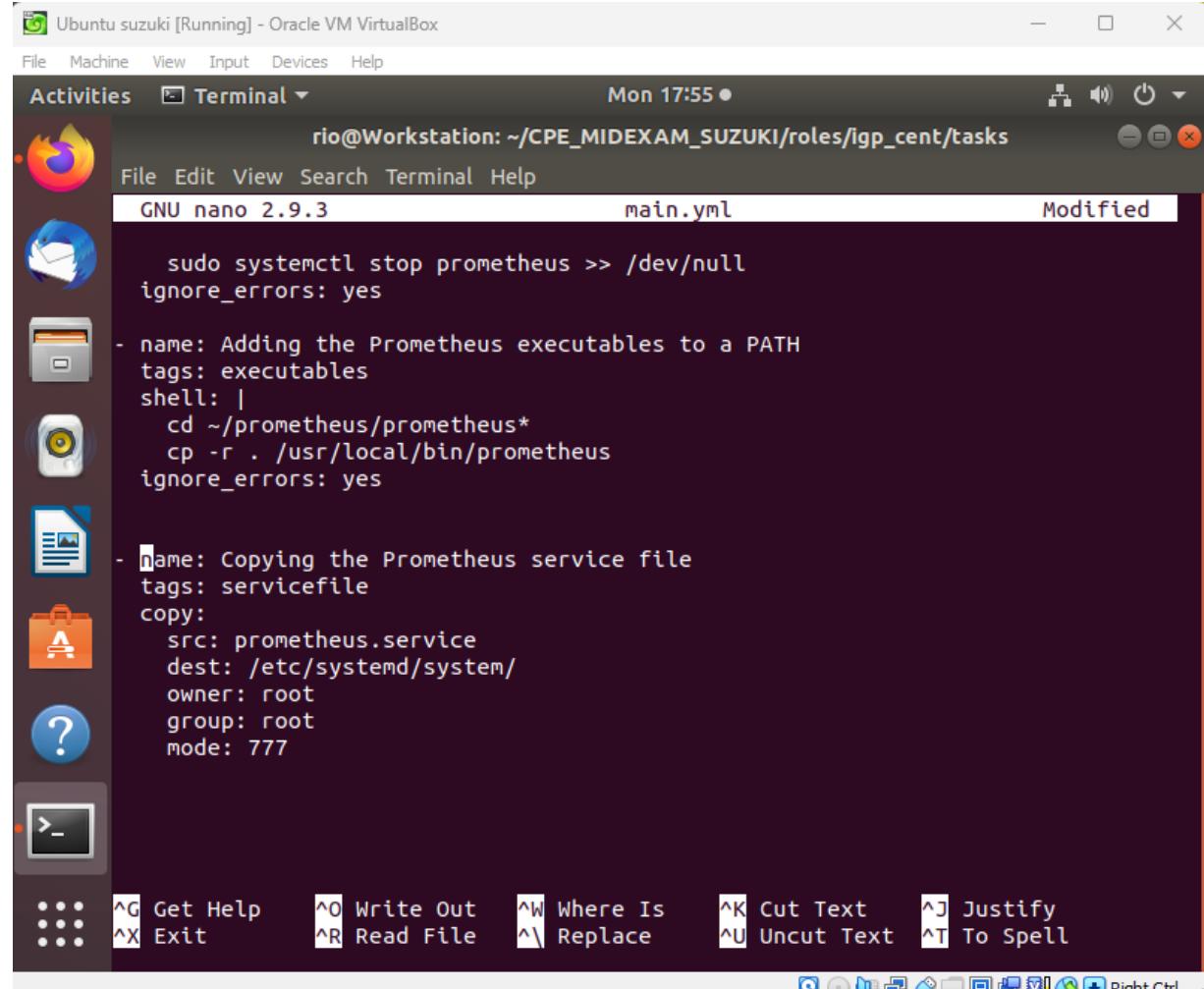
```
- name: Downloading and extracting Prometheus
  tags: source
  unarchive:
    src: https://github.com/prometheus/prometheus/releases/download/v2.39.1/pr
    dest: ~/prometheus
    remote_src: yes
    mode: 0777
    owner: root
    group: root

- name: Stopping the Prometheus service if exists
  shell:
    sudo systemctl stop prometheus >> /dev/null
  ignore_errors: yes

- name: Adding the Prometheus executables to a PATH
  tags: executables
  shell:
    cd ~/prometheus/prometheus*
    cp -r . /usr/local/bin/prometheus
  ignore_errors: yes
```

Get Help Write Out Where Is Cut Text Justify
Show Applications Read File Replace Uncut Text To Spell

Right Ctrl



```
rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks$ sudo systemctl stop prometheus >> /dev/null
ignore_errors: yes

- name: Adding the Prometheus executables to a PATH
  tags: executables
  shell: |
    cd ~/prometheus/prometheus*
    cp -r . /usr/local/bin/prometheus
  ignore_errors: yes

- name: Copying the Prometheus service file
  tags: servicefile
  copy:
    src: prometheus.service
    dest: /etc/systemd/system/
    owner: root
    group: root
    mode: 777
```

Step 13. We will now create the igp_ubuntu directory.

```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks$ sudo nano main.yml
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_cent/tasks$ cd ..
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_cent$ cd ..
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ mkdir igp_ubuntu
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ cd igp_ubuntu
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_ubuntu$ mkdir tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_ubuntu$ cd tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/igp_ubuntu/tasks$ sudo nano main.yml
```

Step 14. After creating the directory roles and the directories under the igp_ubuntu we will put the commands for the main.yml of every directory we made under igp_ubuntu's main.yml.

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:01 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Installing dependencies
  apt:
    name:
      - apt-transport-https
      - software-properties-common
      - wget
    state: latest

- name: Adding Influxdb in the repository
  shell: |
    wget -q https://repos.influxdata.com/influxdb.key
    sleep 5
    echo '23a1c8836f0afc5ed24e0486339d7cc8f6790b83886c4c96995b88a061c5bb5d' | sed -i '$ s/^/deb [signed-by=/etc/apt/trusted.gpg.d/influxdb.gpg] https://repos.influxdata.com/influxdb/ '
    sleep 5
    echo 'deb [signed-by=/etc/apt/trusted.gpg.d/influxdb.gpg] https://repos.influxdata.com/influxdb/ ' | sudo tee /etc/apt/sources.list.d/influxdb.list

- name: Installing Influxdb
  apt:
    name:
      - influxdb

- name: Making sure that the Influxd is enabled and started
  service:
```

Get Help Write Out Where Is Cut Text Justify
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Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:01 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
echo '23a1c8836f0afc5ed24e0486339d7cc8f6790b83886c4c96995b88a061c5bb5d' inf$  
sleep 5  
echo 'deb [signed-by=/etc/apt/trusted.gpg.d/influxdb.gpg] https://repos.in$  
  
- name: Installing Influxdb  
apt:  
  name:  
    - influxdb  
  
- name: Making sure that the Influxd is enabled and started  
service:  
  name: influxdb  
  state: started  
  enabled: true  
  
- name: Adding Grafana Repo  
shell: |  
  sudo wget -q -O /usr/share/keyrings/grafana.key https://packages.grafana.c$  
  
- name: Updating the repo and installing grafana  
apt:  
  name:  
    - grafana
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:01 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
state: started
enabled: true

- name: Adding Grafana Repo
  shell: |
    sudo wget -q -O /usr/share/keyrings/grafana.key https://packages.grafana.c$

- name: Updating the repo and installing grafana
  apt:
    name:
      - grafana

- name: Reloading the daemon
  shell: |
    sudo systemctl daemon-reload

- name: Making sure that the Grafana server is started and enabled
  service:
    name: grafana-server
    state: restarted
    enabled: true

- name: Creating a directory (where the downloaded files will be stored)
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:01 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/lgp_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Reloading the daemon
  shell: |
    sudo systemctl daemon-reload

- name: Making sure that the Grafana server is started and enabled
  service:
    name: grafana-server
    state: restarted
    enabled: true

- name: Creating a directory (where the downloaded files will be stored)
  tags: directory
  file:
    path: ~/prometheus
    state: directory

- name: Downloading and extracting Prometheus
  tags: source
  unarchive:
    src: https://github.com/prometheus/prometheus/releases/download/v2.39.1/pr
    dest: ~/prometheus
    remote_src: yes
    mode: 0777
```

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Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:01 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/lgp_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

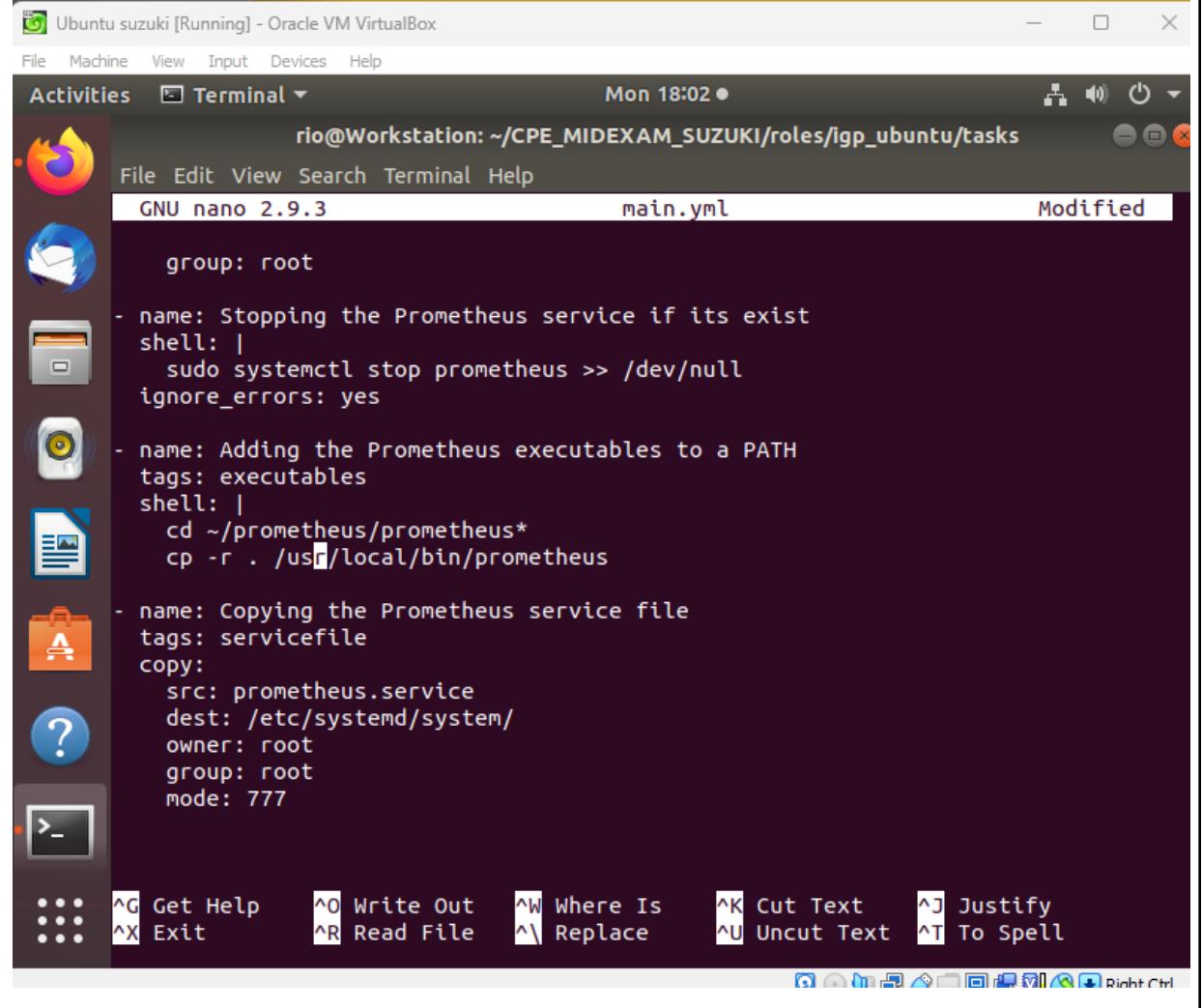
```
file:
  path: ~/prometheus
  state: directory

- name: Downloading and extracting Prometheus
  tags: source
  unarchive:
    src: https://github.com/prometheus/prometheus/releases/download/v2.39.1/pr
    dest: ~/prometheus
    remote_src: yes
    mode: 0777
    owner: root
    group: root

- name: Stopping the Prometheus service if its exist
  shell: |
    sudo systemctl stop prometheus >> /dev/null
  ignore_errors: yes

- name: Adding the Prometheus executables to a PATH
  tags: executables
  shell: |
    cd ~/prometheus/prometheus*
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell



Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:02 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/igp_ubuntu/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
group: root
- name: Stopping the Prometheus service if its exist
  shell: |
    sudo systemctl stop prometheus >> /dev/null
  ignore_errors: yes
- name: Adding the Prometheus executables to a PATH
  tags: executables
  shell: |
    cd ~/prometheus/prometheus*
    cp -r . /usr/local/bin/prometheus
- name: Copying the Prometheus service file
  tags: servicefile
  copy:
    src: prometheus.service
    dest: /etc/systemd/system/
    owner: root
    group: root
    mode: 777
```

Get Help Write Out Where Is Cut Text Justify
Exit Read File Replace Uncut Text To Spell

Step 15. After the igp_cent we will now create the lamp_cent. This is for the dependencies of lampstocks.

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:04 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/lamp_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Installing Lamp Stack dependencies
  dnf:
    name:
      - httpd
      - mariadb-server
      - mariadb
      - php
      - php-mysql
    state: latest

- name: Opening needed ports for Lamp Stack
  shell: |
    sudo firewall-cmd --permanent --zone=public --add-service=http
    sudo firewall-cmd --permanent --zone=public --add-service=https
    sudo firewall-cmd --reload

- name: Starting Apache service
  service:
    name: httpd
    state: started
    enabled: true

- name: Starting Mariadb services
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Right Ctrl

The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Terminal" and the command line shows the user is in the directory "/CPE_MIDEXAM_SUZUKI/roles/lamp_cent/tasks". The terminal window contains the following content:

```
sudo firewall-cmd --permanent --zone=public --add-service=http
sudo firewall-cmd --permanent --zone=public --add-service=https
sudo firewall-cmd --reload

- name: Starting Apache service
  service:
    name: httpd
    state: started
    enabled: true

- name: Starting Mariadb services
  service:
    name: mariadb
    state: started
    enabled: true
```

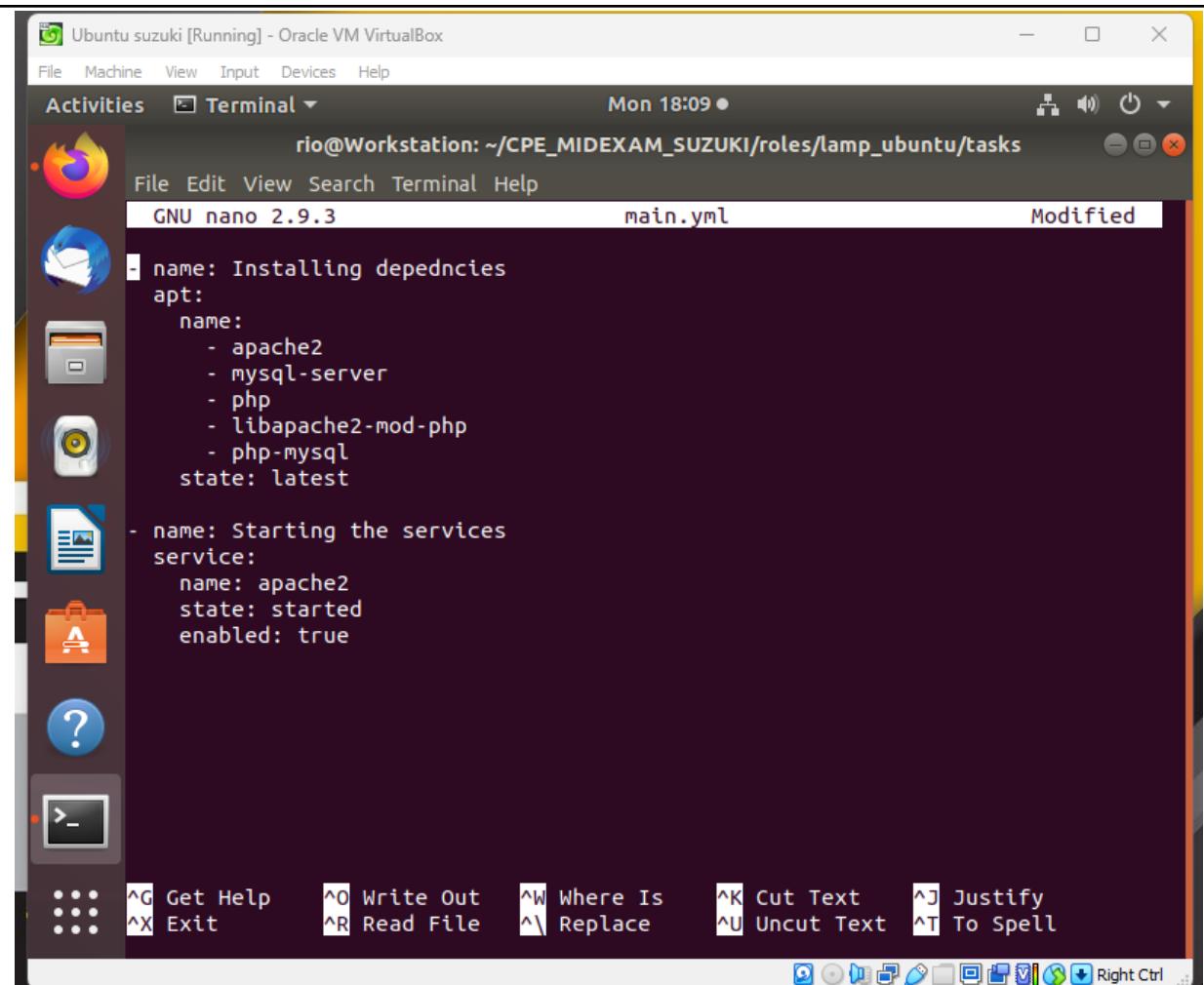
The terminal window has a dark theme and includes standard nano editor key bindings at the bottom:

- Get Help (Alt+G)
- Exit (Alt+X)
- Write Out (Alt+O)
- Read File (Alt+R)
- Where Is (Alt+W)
- Replace (Alt+R)
- Cut Text (Alt+K)
- Uncut Text (Alt+U)
- Justify (Alt+J)
- To Spell (Alt+T)

Step 16. After creating the directory for lamp_cent, we will now create the directory for lamp_ubuntu.

```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ mkdir lamp_ubuntu
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ cd lamp_ubuntu
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/lamp_ubuntu$ sudo nano main.yml
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/lamp_ubuntu$ mkdir tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/lamp_ubuntu$ cd tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/lamp_ubuntu/tasks$ sudo nano main.y
l
```

Step 17. After doing the lamp_cents directories and sub directories we will now create the lamp_ubuntu's directories and sub directory with its main.yml contents



```
rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/lamp_ubuntu/tasks
File Edit View Search Terminal Help
GNU nano 2.9.3          main.yml          Modified
- name: Installing dependencies
  apt:
    name:
      - apache2
      - mysql-server
      - php
      - libapache2-mod-php
      - php-mysql
    state: latest

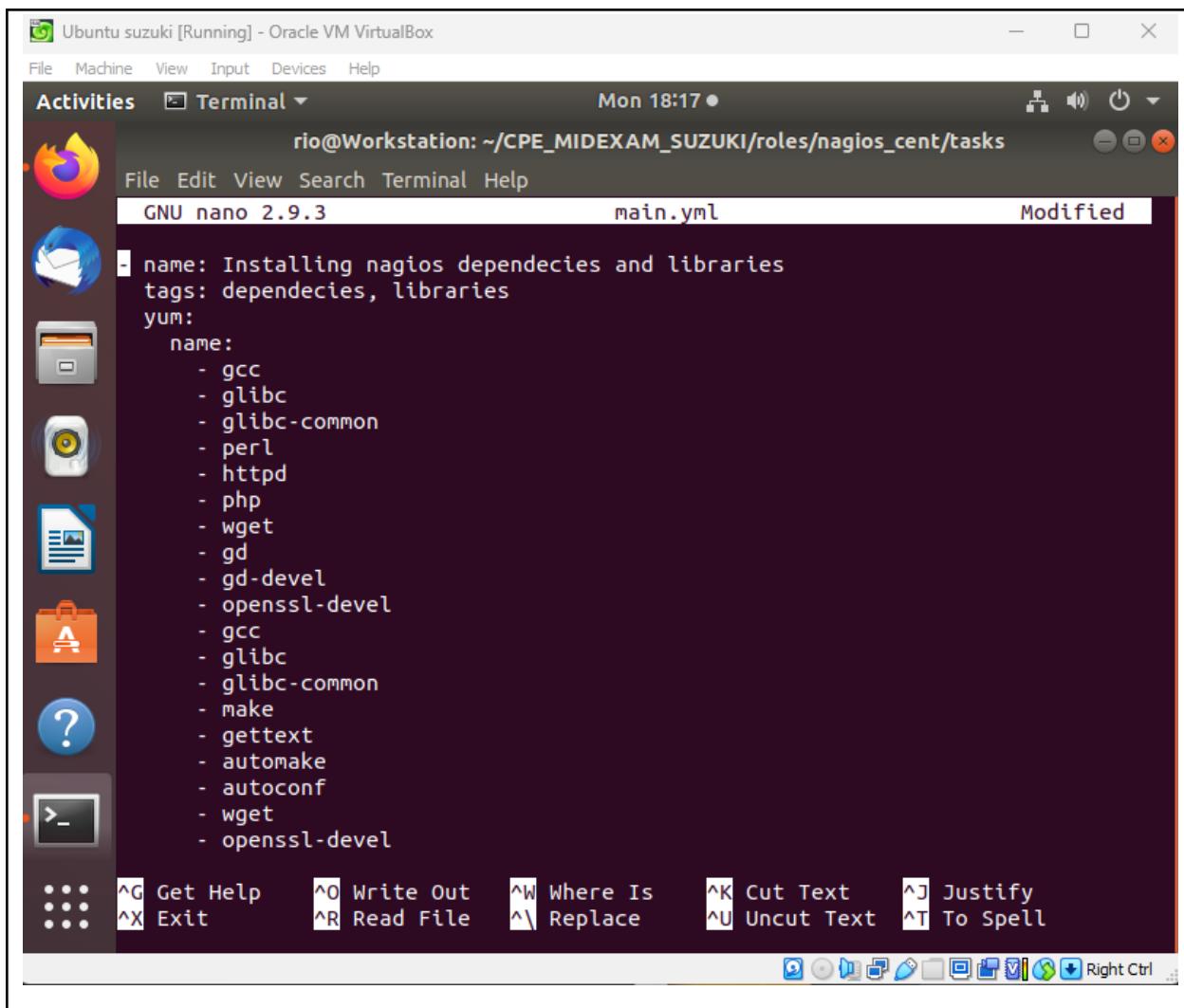
- name: Starting the services
  service:
    name: apache2
    state: started
    enabled: true

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit      ^R Read File ^A Replace ^U Uncut Text ^T To Spell
^L           Right Ctrl
```

Step 18. After creating the directory for lamp_ubuntu, we will now create the directory for nagios_cent.

```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ mkdir nagios_cent
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles$ cd nagios_cent
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent$ mkdir tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent$ cd tasks
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent/tasks$ sudo nano main.yml
rio@Workstation:~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent/tasks$
```

Step 19. After creating the directory roles and the directories under the nagios_cent, we will put the commands for the main.yml of every directory we made under nagios_cent's main.yml.



Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:17 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- gd-devel
- openssl-devel
- gcc
- glibc
- glibc-common
- make
- gettext
- automake
- autoconf
- wget
- openssl-devel
- net-snmp
- net-snmp-utils
- python2-pip
state: latest

- name: Install passlib python package
  pip:
    name: passlib

- name: Creating a directory (where the downloaded files will be stored)
  file:
    path: ~/nagios
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:17 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- net-snmp-utils
- python2-pip
state: latest

- name: Install passlib python package
pip:
  name: passlib

- name: Creating a directory (where the downloaded files will be stored)
file:
  path: ~/nagios
  state: directory

- name: Downloading and extracting Nagios
unarchive:
  src: https://github.com/NagiosEnterprises/nagioscore/archive/nagios-4.4.6.$
  dest: ~/nagios
  remote_src: yes
  mode: 0777
  owner: root
  group: root

- name: Compiling, installing, and adding users and groups in nagios
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:17 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
- name: Downloading and extracting Nagios
  unarchive:
    src: https://github.com/NagiosEnterprises/nagioscore/archive/nagios-4.4.6.$
    dest: ~/nagios
    remote_src: yes
    mode: 0777
    owner: root
    group: root

- name: Compiling, installing, and adding users and groups in nagios
  shell: |
    cd ~/nagios/nagioscore-**
    ./configure
    make all
    make install-groups-users
    usermod -a -G nagios apache
    make install
    make install-daemoninit
    make install-commandmode
    make install-config
    make install-webconf
- name: Downloading and extracting Nagios plugins
```

Get Help Write Out Where Is Cut Text Justify
 Exit Read File Replace Uncut Text To Spell

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:18 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

```
cd ~/nagios/nagioscore-**  
.configure  
make all  
make install-groups-users  
usermod -a -G nagios apache  
make install  
make install-daemoninit  
make install-commandmode  
make install-config  
make install-webconf  
- name: Downloading and extracting Nagios plugins  
  unarchive:  
    src: https://github.com/nagios-plugins/nagios-plugins/archive/release-2.3.$  
    dest: ~/nagios  
    remote_src: yes  
    mode: 0777  
    owner: root  
    group: root  
  
- name: Compiling and installing plugins  
  shell: |  
    cd ~/nagios/nagios-plugins*  
    ./tools/setup
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

Right Ctrl

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 18:18 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI/roles/nagios_cent/tasks

File Edit View Search Terminal Help

GNU nano 2.9.3 main.yml Modified

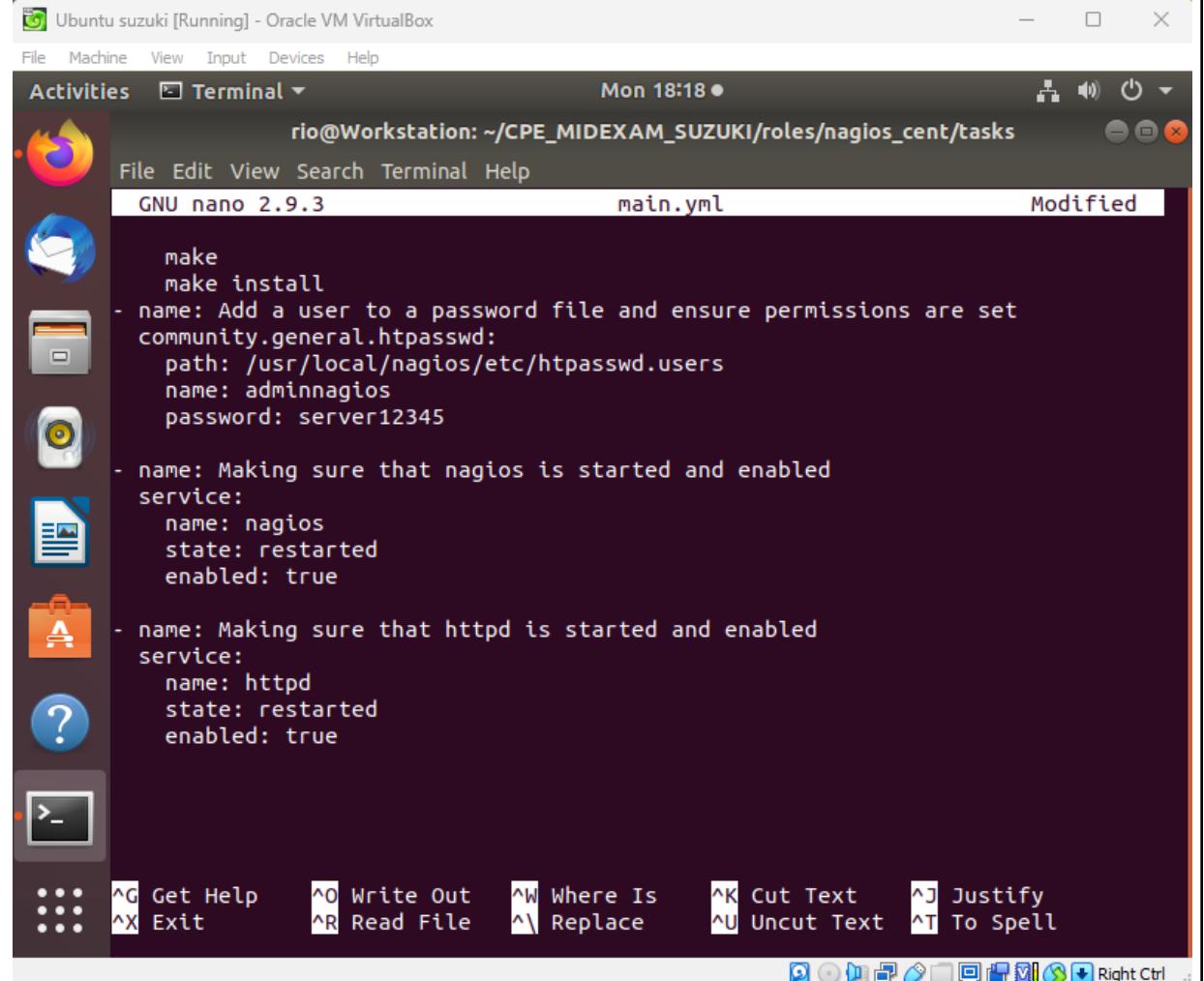
```
src: https://github.com/nagios-plugins/nagios-plugins/archive/release-2.3.$
dest: ~/nagios
remote_src: yes
mode: 0777
owner: root
group: root

- name: Compiling and installing plugins
  shell: |
    cd ~/nagios/nagios-plugins*
    ./tools/setup
    ./configure
    make
    make install
- name: Add a user to a password file and ensure permissions are set
  community.general.htpasswd:
    path: /usr/local/nagios/etc/htpasswd.users
    name: adminnagios
    password: server12345

- name: Making sure that nagios is started and enabled
  service:
    name: nagios
```

Get Help Write Out Where Is Cut Text Justify
 Exit Read File Replace Uncut Text To Spell

Right Ctrl



The screenshot shows a terminal window titled "Ubuntu suzuki [Running] - Oracle VM VirtualBox". The terminal is displaying a file named "main.yml" which contains Ansible playbooks. The content of the file is as follows:

```
make
make install
- name: Add a user to a password file and ensure permissions are set
  community.general.htpasswd:
    path: /usr/local/nagios/etc/htpasswd.users
    name: adminnagios
    password: server12345

- name: Making sure that nagios is started and enabled
  service:
    name: nagios
    state: restarted
    enabled: true

- name: Making sure that httpd is started and enabled
  service:
    name: httpd
    state: restarted
    enabled: true
```

The terminal window also shows various icons in the sidebar, including Firefox, Mail, Terminal, and others. The bottom of the window has a toolbar with various keyboard shortcuts for text operations.

Step 20. After creating the directory roles and the directories under the `nagios_cent`, we will now run the command “`ansible-playbook –ask-become-pass nagios.yml`” To see if the code we did in every main of every directory is working.

Process:

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 19:22 ●

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

```
rio@Workstation:~/CPE_MIDEXAM_SUZUKI$ cd ..  
rio@Workstation:~/CPE_MIDEXAM_SUZUKI$ ansible-playbook --ask-become-pass config.yml  
BECOME password:  
  
PLAY [all] *****  
*  
  
TASK [Gathering Facts] *****  
*  
ok: [192.168.56.102]  
ok: [192.168.56.105]  
  
TASK [Installing dnf and epel-release] *****  
*  
skipping: [192.168.56.102]  
ok: [192.168.56.105]  
  
TASK [Update and upgrade remote CentOS server] *****  
*  
skipping: [192.168.56.102]  
ok: [192.168.56.105]  
  
TASK [Installing installations dependencies] *****  
*  
skipping: [192.168.56.105]  
ok: [192.168.56.102]  
  
TASK [Doko fixing in Ubuntu Servers] *****
```

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 19:23 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

```
TASK [Dpkg fixing in Ubuntu Servers] ****
*
skipping: [192.168.56.105]
changed: [192.168.56.102]
[WARNING]: Could not match supplied host pattern, ignoring: elk_cent

PLAY [elk_cent] ****
*
skipping: no hosts matched

PLAY [elk_ubuntu] ****
*
TASK [Gathering Facts] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Installing dependencies] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Downloading in the Logstash package] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Installing package] ****
*
ok: [192.168.56.102]
```

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 19:23 ●

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

```
* ok: [192.168.56.102]
TASK [elk_ubuntu : Reloading the daemon] ****
*
changed: [192.168.56.102]

TASK [elk_ubuntu : Starting and enabling the service] ****
*
changed: [192.168.56.102]

TASK [elk_ubuntu : Downloading in the Kibana package] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Installing Kibana] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Reloading the daemon] ****
*
changed: [192.168.56.102]

TASK [elk_ubuntu : Making sure that Kibana service is started and enabled] ****
*
changed: [192.168.56.102]

TASK [elk_ubuntu : Downloading in the elastic search package] ****
*
```

Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 19:23 ●

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

```
TASK [elk_ubuntu : Downloading in the elastic search package] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Installing package] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Enabling elastic search service] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Modifying service file] ****
*
ok: [192.168.56.102]

TASK [elk_ubuntu : Starting and enabling the deamon] ****
*
changed: [192.168.56.102]
[WARNING]: Could not match supplied host pattern, ignoring: nagios_cent

PLAY [nagios_cent] ****
*
skipping: no hosts matched
[WARNING]: Could not match supplied host pattern, ignoring: igrp_cent

PLAY [igrp_cent] ****
*
skipping: no hosts matched
```

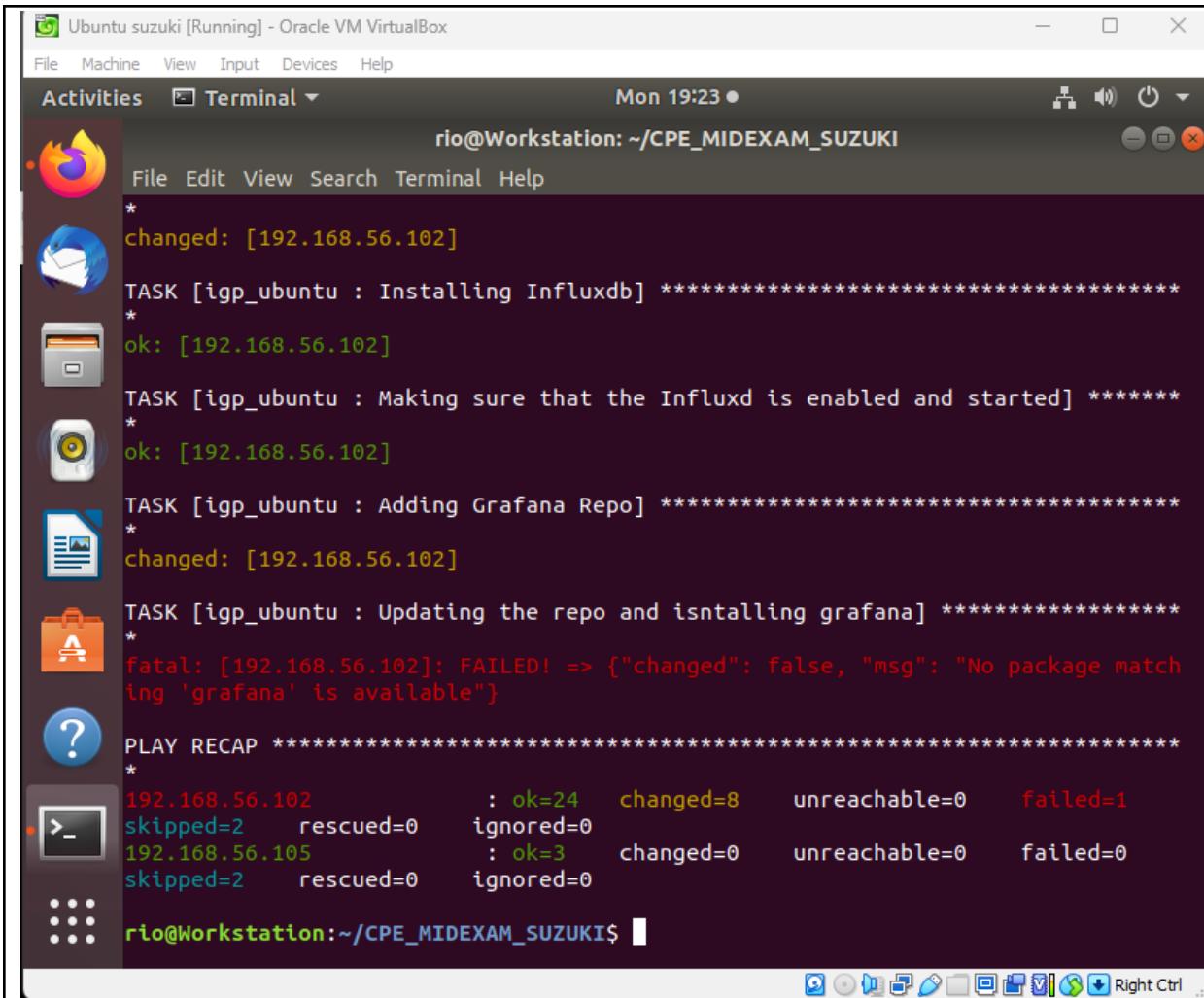
Ubuntu suzuki [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Mon 19:23 •

rio@Workstation: ~/CPE_MIDEXAM_SUZUKI

```
* skipping: no hosts matched
PLAY [igp_ubuntu] ****
*
TASK [Gathering Facts] ****
*
ok: [192.168.56.102]
TASK [igp_ubuntu : Installing dependencies] ****
*
ok: [192.168.56.102]
TASK [igp_ubuntu : Adding Influxdb in the repository] ****
*
changed: [192.168.56.102]
TASK [igp_ubuntu : Installing Influxdb] ****
*
ok: [192.168.56.102]
TASK [igp_ubuntu : Making sure that the Influxd is enabled and started] ****
*
ok: [192.168.56.102]
TASK [igp_ubuntu : Adding Grafana Repo] ****
*
changed: [192.168.56.102]
```



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Terminal" and the prompt is "rio@Workstation: ~/CPE_MIDEXAM_SUZUKI". The terminal displays the output of an Ansible playbook run. The output shows tasks being executed on hosts [192.168.56.102] and [192.168.56.105]. Tasks include installing Influxdb, making sure Influxd is enabled and started, adding Grafana Repo, and updating the repo and installing grafana. One task fails with the message "fatal: [192.168.56.102]: FAILED! => {"changed": false, "msg": "No package matching 'grafana' is available"}". The PLAY RECAP summary shows the results for each host.

```
changed: [192.168.56.102]
TASK [igp_ubuntu : Installing Influxdb] *****
ok: [192.168.56.102]
TASK [igp_ubuntu : Making sure that the Influxd is enabled and started] *****
ok: [192.168.56.102]
TASK [igp_ubuntu : Adding Grafana Repo] *****
changed: [192.168.56.102]
TASK [igp_ubuntu : Updating the repo and isntalling grafana] *****
fatal: [192.168.56.102]: FAILED! => {"changed": false, "msg": "No package matching 'grafana' is available"}
PLAY RECAP *****
192.168.56.102      : ok=24    changed=8    unreachable=0    failed=1
skipped=2  rescued=0  ignored=0
192.168.56.105      : ok=3     changed=0    unreachable=0    failed=0
skipped=2  rescued=0  ignored=0
rio@Workstation:~/CPE_MIDEXAM_SUZUKI$
```

Step 21. After running the command and we can see that the codes we have does not have any error we can now issue the command “tree” to see the whole structure of the

Step 22. After everything run we will now check for the output of each one with the command “ ”

OUTPUT:

Kibana:

Elasticsearch:

Logstash:

nagios:

Influxdb:

Grafana:

Prometheus:

Step 23. After getting the output we will now git add.and git commit and git push our repository in the workstation.

GitHub link: https://github.com/RioMariee/CPE_MIDEXAM_SUZUKI.git

Conclusions: (link your conclusion from the objective)

I've discovered from taking this exam that creating trustworthy, consistent IT Operations: Automation is essential for reduced downtime and improved return on investment. Using automation, your team can ensure compliance, install and decommission infrastructure components in minutes as opposed to hours or days, and establish and manage desired configuration states across several systems. The extensive Automation Platform platform can assist you in validating change requests, managing system installations and upgrades, and creating goal baselines for systems through the use of easily understood Ansible playbooks.