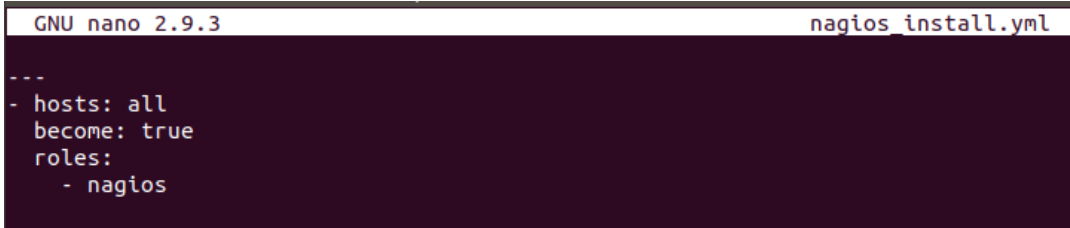


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<b>Course/Section: CPE31S6</b>	<b>Date Submitted: 10/12/2023</b>
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<b>Activity 8: Install, Configure, and Manage Availability Monitoring tools</b>	
<b>1. Objectives</b>	
Create and design a workflow that installs, configure and manage enterprise monitoring tools using Ansible as an Infrastructure as Code (IaC) tool.	
<b>2. Discussion</b>	
Availability monitoring is a type of monitoring tool that we use if the certain workload is up or reachable on our end. Site downtime can lead to loss of revenue, reputational damage and severe distress. Availability monitoring prevents adverse situations by checking the uptime of infrastructure components such as servers and apps and notifying the webmaster of problems before they impact on business.	
<b>3. Tasks</b>	
1. Create a playbook that installs Nagios in both Ubuntu and CentOS. Apply the concept of creating roles.	
 <pre> GNU nano 2.9.3                                     nagios_install.yml --- - hosts: all   become: true   roles:     - nagios </pre>	

```
GNU nano 2.9.3 install_nagios.yml

- name: Install Nagios Core
  apt:
    name: nagios3
    state: present
  when: ansible_distribution == "Ubuntu"

- name: Install Nagios Plugins
  apt:
    name: nagios-plugins
    state: present
  when: ansible_distribution == "Ubuntu"

- name: Install Nagios Core
  dnf:
    name: nagios
    state: present
  when: ansible_distribution == "CentOS"

- name: Install Nagios Plugins
  dnf:
    name: nagios-plugins-all
    state: present
  when: ansible_distribution == "CentOS"

GNU nano 2.9.3 main.yml

---
- name: Install Nagios
  include_tasks: install_nagios.yml
```

2. Describe how you did step 1. (Provide screenshots and explanations in your report. Make your report detailed such that it will look like a manual.)

```
GNU nano 2.9.3 inventory

192.168.56.102
ynollan@192.168.56.105
```

- The inventory contains the ip address of the servers.

```
GNU nano 2.9.3 ansible.cfg

[defaults]

inventory = inventory
host_key_checking = False

deprecation_warnings= False

remote_user = workstation
private_key_file = ~/.ssh/
```

- This contains the ansible file.

```
GNU nano 2.9.3 nagios_install.yml
---
- hosts: all
  become: true
  roles:
    - nagios
```

- In this section, nagios\_install.yml playbook is created and the hosts are all of the servers connected to the manage node.

```
GNU nano 2.9.3 install_nagios.yml
- name: Install Nagios Core
  apt:
    name: nagios3
    state: present
  when: ansible_distribution == "Ubuntu"

- name: Install Nagios Plugins
  apt:
    name: nagios-plugins
    state: present
  when: ansible_distribution == "Ubuntu"

- name: Install Nagios Core
  dnf:
    name: nagios
    state: present
  when: ansible_distribution == "CentOS"

- name: Install Nagios Plugins
  dnf:
    name: nagios-plugins-all
    state: present
  when: ansible_distribution == "CentOS"
```

- This contains what the playbook will be doing to the server.

```
GNU nano 2.9.3 main.yml
---
- name: Install Nagios
  include_tasks: install_nagios.yml
```

- This is the role of the nagios.

3. Show an output of the installed Nagios for both Ubuntu and CentOS.

```

workstation@workstation:~/hoa8$ ansible-playbook --ask-become-pass nagios_install.yml
BECOME password:

PLAY [all] *****

TASK [Gathering Facts] *****
ok: [192.168.56.102]
ok: [ynollan@192.168.56.105]

TASK [nagios : Install Nagios] *****
included: /home/workstation/hoa8/roles/nagios/tasks/install_nagios.yml for 192.168.56.102, ynollan@192.168.56.105

TASK [nagios : Install Nagios Core] *****
skipping: [ynollan@192.168.56.105]
ok: [192.168.56.102]

TASK [nagios : Install Nagios Plugins] *****
skipping: [ynollan@192.168.56.105]
ok: [192.168.56.102]

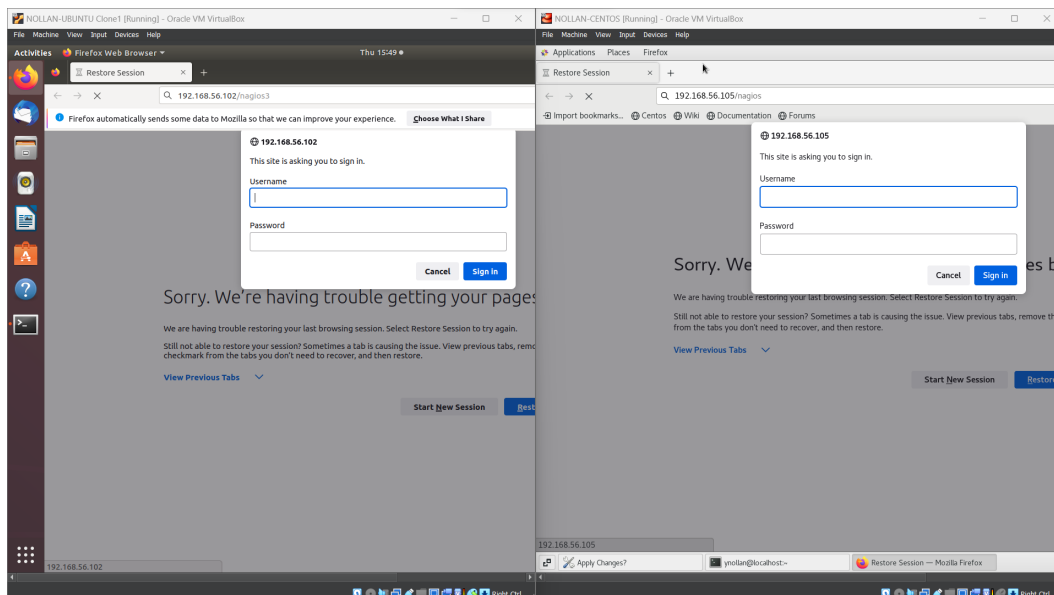
TASK [nagios : Install Nagios Core] *****
skipping: [192.168.56.102]
changed: [ynollan@192.168.56.105]

TASK [nagios : Install Nagios Plugins] *****
skipping: [192.168.56.102]
changed: [ynollan@192.168.56.105]

PLAY RECAP *****
192.168.56.102      : ok=4    changed=0    unreachable=0    failed=0    skipped=2    rescued=0    ignored=0
ynollan@192.168.56.105 : ok=4    changed=2    unreachable=0    failed=0    skipped=2    rescued=0    ignored=0

```

- This is the output of the playbook.



- this is to verify that the playbook is working properly.

4. Make sure to create a new repository in GitHub for this activity.

<https://github.com/yorehh/hoa8>

#### 4. Output (screenshots and explanations)

**Reflections:**

Answer the following:

1. What are the benefits of having an availability monitoring tool?

- An availability monitoring tool offers proactive system issue detection, providing early issue detection and prompt problem resolution. As a result, the user experience is improved, downtime costs are decreased, data-driven decisions are made, performance is maximized, and service levels and requirements are complied with. In the end, it increases customer pleasure and loyalty while facilitating preventive maintenance and cost-efficiency.

**Conclusions:**

- In this activity, I have gained more knowledge on how to properly use and create playbooks in a manage node and control nodes. I was also able to create and design a workflow that installs, configure and manage enterprise monitoring tools using ansible as an Infrastructure as Code or IaC in short.