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Course/Section:CPE212-CPE31S2	Date Submitted: 16/10/2024
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Activity 8: Install, Configure, and Manage Availability Monitoring tools

1. Objectives

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

2. Discussion

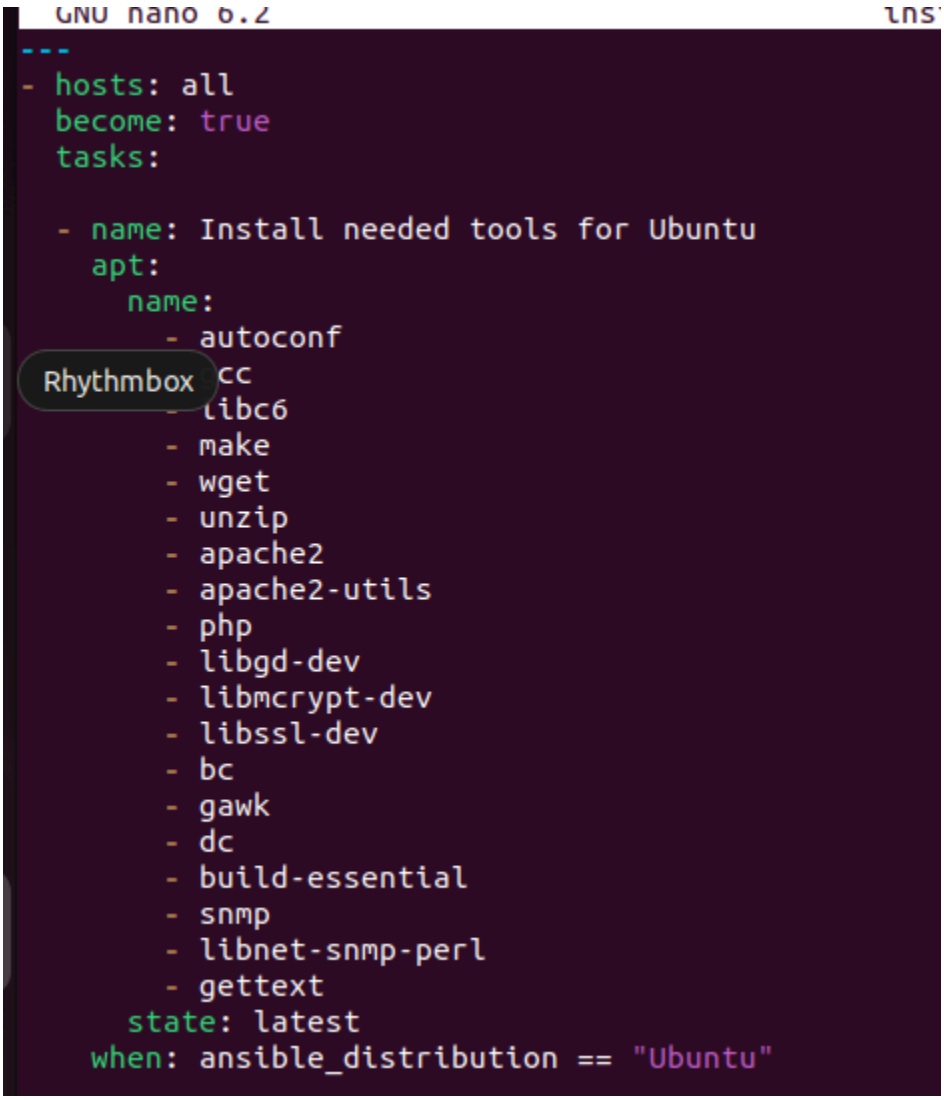
Availability monitoring is a type of monitoring tool that we use if the certain workload is up or reachable on our end. Site downtime can lead to loss of revenue, reputational damage and severe distress. Availability monitoring prevents adverse situations by checking the uptime of infrastructure components such as servers and apps and notifying the webmaster of problems before they impact on business.

3. Tasks

1. Create a playbook that installs Nagios in both Ubuntu and CentOS. Apply the concept of creating roles.
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.)
3. Show an output of the installed Nagios for both Ubuntu and CentOS.
4. Make sure to create a new repository in GitHub for this activity.

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

1.



- These are all the required packages to be installed.

2.

```
- name: Downloading Nagios files for installation
  unarchive:
    src: https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.tar.gz
    dest: /tmp
    remote_src: yes

- name: Create Nagios user
  user:
    name: nagios
    shell: /bin/bash
    createhome: yes

- name: Create Nagios group
  group:
    name: nagcmd

- name: Add Nagios user to group
  user:
    name: nagios
    groups: nagcmd
    append: yes

- name: Add Ubuntu Apache to the group
  user:
    name: "www-data"
    groups: nagcmd
    append: yes
  when: ansible_distribution == "Ubuntu"

- name: Add CentOS Apache to the group
```

```
- name: Installing Nagios
  shell: |
    cd /tmp/nagios-4.4.6
    ./configure --with-nagios-group=nagios --with-command-group=nagcmd
    make all
    make install
    make install-commandmode
    make install-init
    make install-config

- name: Installing Nagios in Ubuntu Apache
  copy:
    src: /tmp/nagios-4.4.6/sample-config/httpd.conf
    dest: /etc/apache2/sites-available/nagios.conf
    mode: '0644'
    remote_src: yes
  when: ansible_distribution == "Ubuntu"

- name: Install Nagios plugins in Ubuntu
  apt:
    name: nagios-plugins
    state: latest
  when: ansible_distribution == "Ubuntu"

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

- Installed the Nagios and the plugins for each Ubuntu and CentOS VMs

```
- name: Enable and Start services in Ubuntu
  systemd:
    name: "{{item}}"
    enabled: yes
    state: restarted
  loop:
    - nagios
    - apache2
  when: ansible_distribution == "Ubuntu"

- name: Enable and Start services in CentOS
  systemd:
    name: "{{item}}"
    enabled: yes
    state: restarted
  loop:
    - nagios
    - httpd
  when: ansible_distribution == "CentOS"
```

Terminal

- Restarting both apache and nagios in able for it to work.

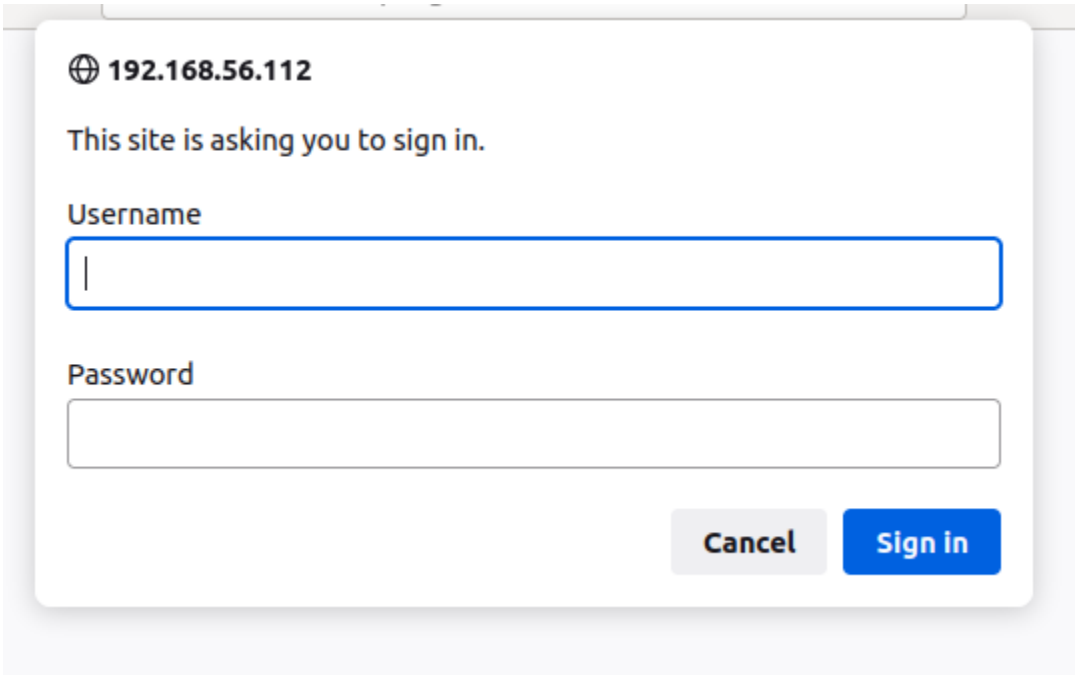
3.

```
TASK [Installing Nagios] ***********
changed: [server1]
changed: [server3]
changed: [server2]
changed: [centos]
```

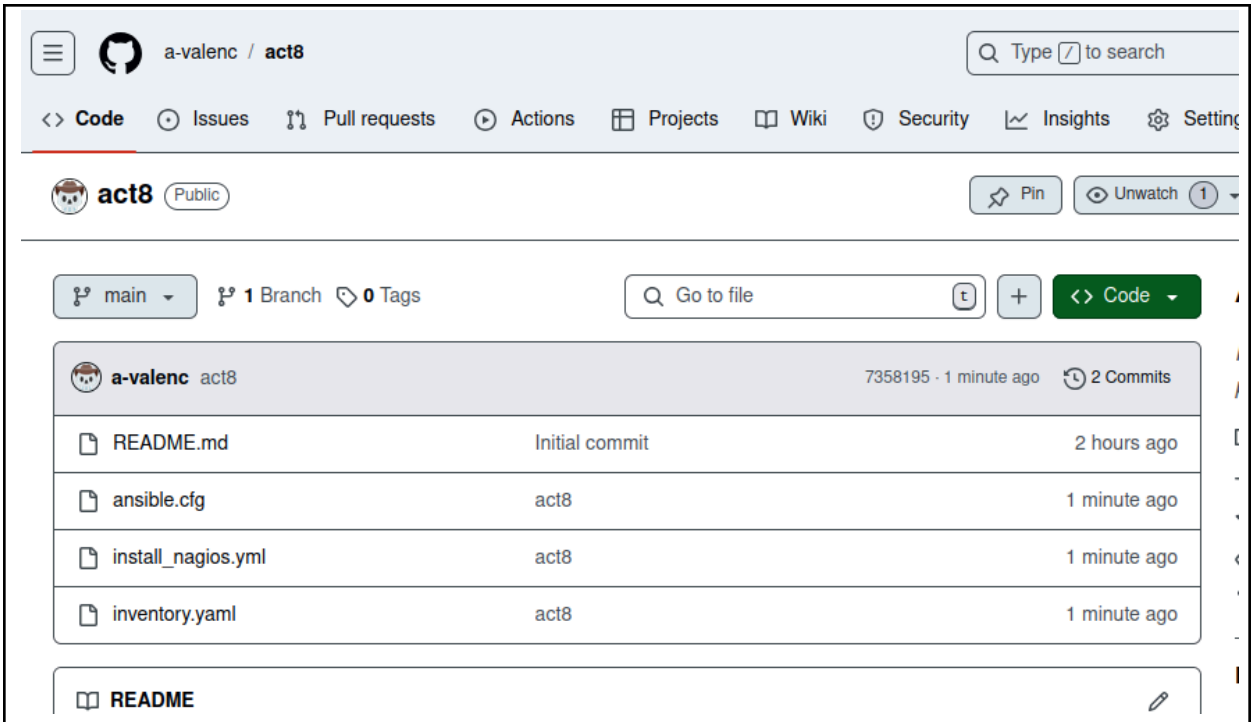
```
avalencia@server1:~$ systemctl status nagios
● nagios.service - Nagios Core 4.4.6
   Loaded: loaded (/lib/systemd/system/nagios.service; enabled; vendor preset:
   Active: active (running) since Wed 2024-10-16 09:44:13 +08; 20min ago
     Docs: https://www.nagios.org/documentation
 Main PID: 27519 (nagios)
    Tasks: 6 (limit: 2318)
   CGroup: /system.slice/nagios.service
           ├─27519 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios
           ├─27520 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/
           ├─27521 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/
           ├─27522 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/
           ├─27523 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/
           └─27555 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios

[1]+  Stopped                 systemctl status nagios
```

```
[avalencia@localhost ~]$ systemctl status nagios
● nagios.service - Nagios Core 4.4.6
     Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: d>
     Active: active (running) since Wed 2024-10-16 10:09:41 PST; 32s ago
       Docs: https://www.nagios.org/documentation
    Process: 82718 ExecStartPre=/usr/local/nagios/bin/nagios -v /usr/local/nagi>
    Process: 82719 ExecStart=/usr/local/nagios/bin/nagios -d /usr/local/nagios/>
   Main PID: 82720 (nagios)
      Tasks: 6 (limit: 10949)
     Memory: 2.7M
        CPU: 24ms
     CGroup: /system.slice/nagios.service
             ├─82720 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagi>
             ├─82721 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/va>
             ├─82722 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/va>
             ├─82723 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/va>
             ├─82724 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/va>
             └─82729 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagi>
```



4. https://github.com/a-valenc/act8



Reflections:

Answer the following:

1. What are the benefits of having an availability monitoring tool?
   - It is easier to see the problems that is occurring or may occurring in real-time. Troubleshooting it immediately is also one of the benefits of having a monitoring tool.

Conclusions:

- **Having Nagios installed in a system server is one of the best course of action since it offers a system monitoring where you are able to intercept errors and problems easily. It conducts periodical checks to see if there are problems in the systems. It is one of the best for system administration apps for a whole system since it is flexible and fairly user-friendly**