Name: Campo,Keneth	**Date Performed: October 18, 2024**
Course/Section: CPE212/CPE31S21	**Date Submitted:October 18, 2024**
Instructor: Engr. Robin Valenzuela	**Semester and SY: 2024-2025**

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.
    - **This is the proof of successful git cloned of repository.**

```
qkmcampo@Workstation:~$ git clone git@github.com:qkmcampo/Activity-8.git
Cloning into 'Activity-8'...
warning: You appear to have cloned an empty repository.
qkmcampo@Workstation:~$ ls
Activity-8   CPE212_campo  Documents         id_rsa      Pictures   Video
ansible      CPE212_Campo  Downloads         id_rsa.pub  Public
ansible.cfg  Desktop       examples.desktop  Music       Templates
```

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.)

- **I created a new inventory, anisible.cfg and a directory.**

```
 GNU nano 2.9.3                    ansible.cfg                         Modifi

[defaults]

inventory = inventory
host_key_checking = False

depreciation_warnings = False

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

```
 GNU nano 2.9.3                          inventory

[Ubuntu servers]
192.168.56.120
192.168.56.121
192.168.56.123

[CentOS_servers]
196.168.56.124
```

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)

```
 GNU nano 2.9.3                  activity.yml                  Modified

---
- hosts: all
  become: true
  tasks:


- name: Install dependencies
  package:
    name:
      - wget
    state: present
    update_cache: yes


- name:Create Nagios user and group
  ansible.builtin.user:
    name: nagcmd
    state: present

- name: Create Nagios Group
  ansible.builtin.user:
     name: nagcmd
     state: present
```

```
  GNU nano 2.9.3                    activity.yml                         Modified

- name: Add nagios user to nagcmd group
  ansible.builtin.user:
     name: nagios
     groups: nagcmd
     append: yes

- name: Ubuntu Install Nagios
  apt:
    name:
      - apache2
      - php
      - libapache2-mod-php
      - build-essential
      - libgd-dev
    state: present
    update_cache: yes

- name: Nagios Download
  ansible.builtin.gte_url:
    url: https://assests.nagios.com/downloads/nagioscore/releases/nagios-4.>
    dest: /tmp/nagios.tar.gz

- name: Nagios Extarct
```

```
  GNU nano 2.9.3                    activity.yml                         Modified

    name:
      - php
      - gcc
      - glibc-common
      - gd
      - gd-level
      - make
      - net-snmp
    state: present
    update_cache: yes

- name: Download Nagios
  ansible.builtin.get_url:
    url: https://assests.nagios.com/downloads/nagioscore/releases/nagios-4.>
    dest: /tmp/nagios.tar.gz

- name: Nagios Extract
  ansible.builtin..tar.gz
  src: /tmp/nagios.tar.
  dest: /tmp
  remote_src: yes
```

```
  GNU nano 2.9.3                    nagios.yml                         Modified

---
- hosts: all
  become: true
  pre_tasks:

  - name: update repository index (CentOS)
    tags: always
    dnf:
      update_cache: yes
    changed_when: false
    when: ansible_distribution == "CentOS"

  - name: install updates (Ubuntu)
    tags: always
    apt:
      update_cache: yes
    changed_when: false
    when: ansible_distribution == "Ubuntu"

- hosts: all
  become: true
  roles:
    - base
```

```
  GNU nano 2.9.3                    nagios.yml                         Modified

  - name: install updates (Ubuntu)
    tags: always
    apt:
      update_cache: yes
    changed_when: false
    when: ansible_distribution == "Ubuntu"

- hosts: all
  become: true
  roles:
    - base

- hosts: workstations
  become: true
  roles:
    - workstations
```

Reflections:

Answer the following:

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

- An availability monitoring tool guarantees better user experience, lowers downtime, and swiftly identifies problems to keep our systems operating properly. Having a solution like this also helps since it offers simple reporting, real-time warnings, and automated monitoring.

Conclusions:

- This task shows how to set up an automated Ansible playbook for Ubuntu and CentOS servers in order to install Nagios. By establishing the OS-specific packages and utilizing responsibilities, I wasn’t able to properly and efficiently manage the differences between the two systems. As a result, this project didn't work properly. It always says unreachable.