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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

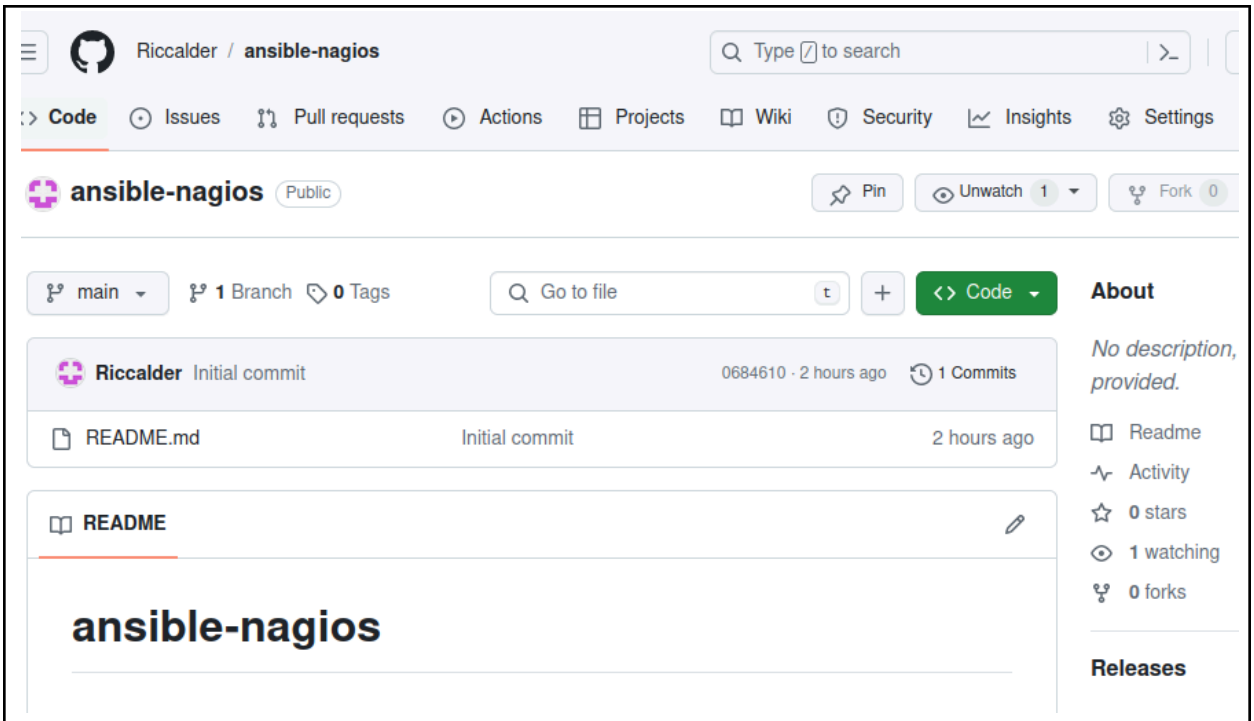
1. Create a playbook that installs Nagios in both Ubuntu and CentOS. Apply the concept of creating roles. =report. Make your report detailed such that it will look like a manual.)
2. Show an output of the installed Nagios for both Ubuntu and CentOS.
3. Make sure to create a new repository in GitHub for this activity.

4. Output (screenshots and explanations)

A.) First I configure my user name and email from github using these commands.

```
calderon@workstation:~$ git config --global user.name"riccalder"
calderon@workstation:~$ git config --global user.name"qrbcalderon@tip.edu.ph"
calderon@workstation:~$ git config --list
user.name=Riccalder
user.email=qrbcalderon@tip.edu.ph
```

B.) I opened my github and create new repository name ansible-nagios



C.) I created a folder calderon-Act-8

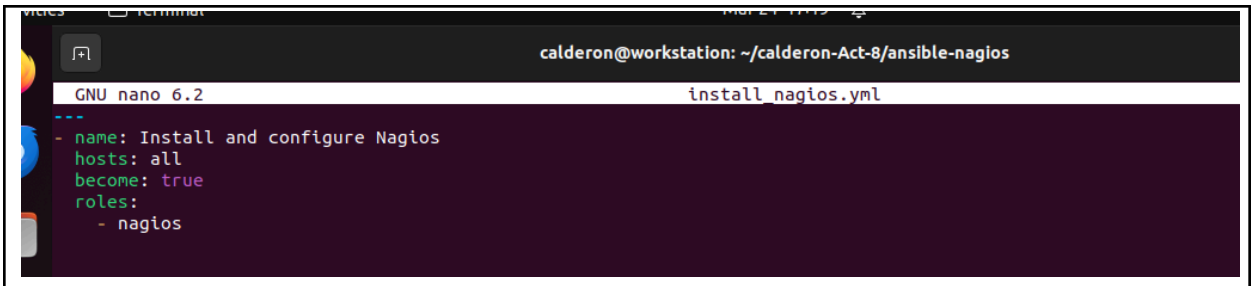
```
calderon@workstation:~$ cd calderon-Act-8
calderon@workstation:~/calderon-Act-8$
```

D.) To get clone from github, i copy the code from the github.

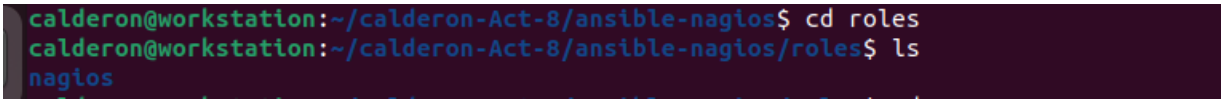
```
calderon@workstation:~/calderon-Act-8$ git clone git@github.com:Riccalder/ansible-nagios.git
Cloning into 'ansible-nagios'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
calderon@workstation:~/calderon-Act-8$ ls
ansible-nagios
calderon@workstation:~/calderon-Act-8$ cd ansible-nagios
calderon@workstation:~/calderon-Act-8/ansible-nagios$ ls
README.md
```

E.) I created the ansible playbook file install_nagios.yml

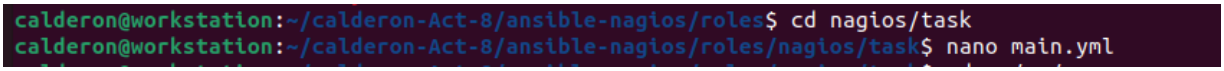
```
calderon@workstation:~/calderon-Act-8/ansible-nagios$ touch install_nagios.yml
calderon@workstation:~/calderon-Act-8/ansible-nagios$ sudo nano install_nagios.yml
[sudo] password for calderon:
```

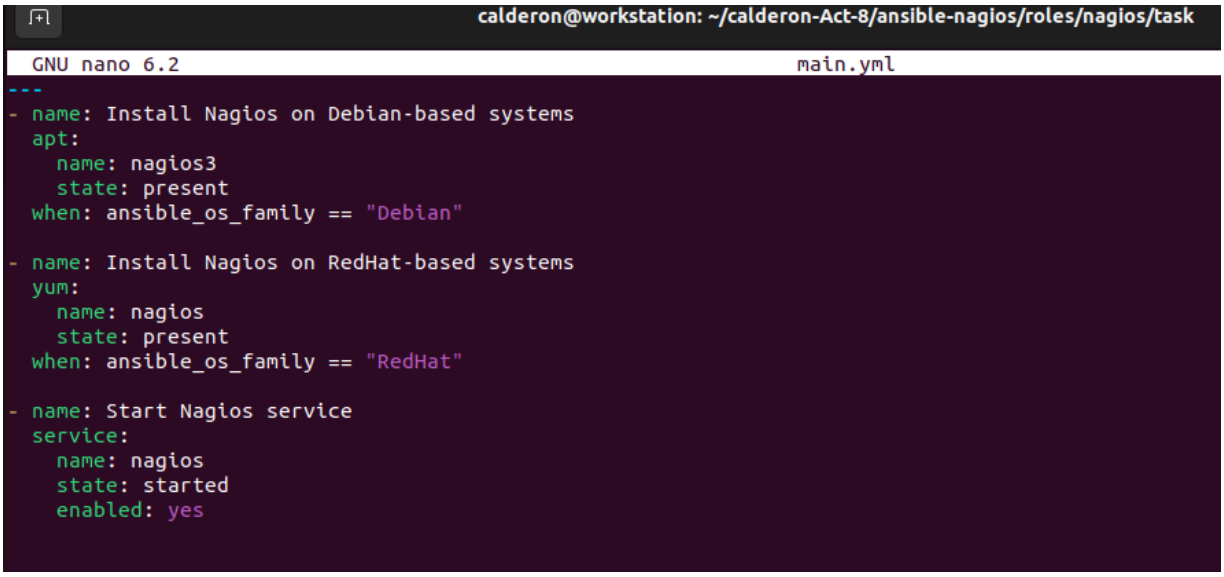


F.) **Create the roles directory and initialize a new Ansible role named nagios.**



G.) Edit the tasks/main.yml file inside the roles/nagios directory to install Nagios and add the following tasks to the main.yml` file





H.) Created an inventory file (hosts) with the IP addresses of your target nodes

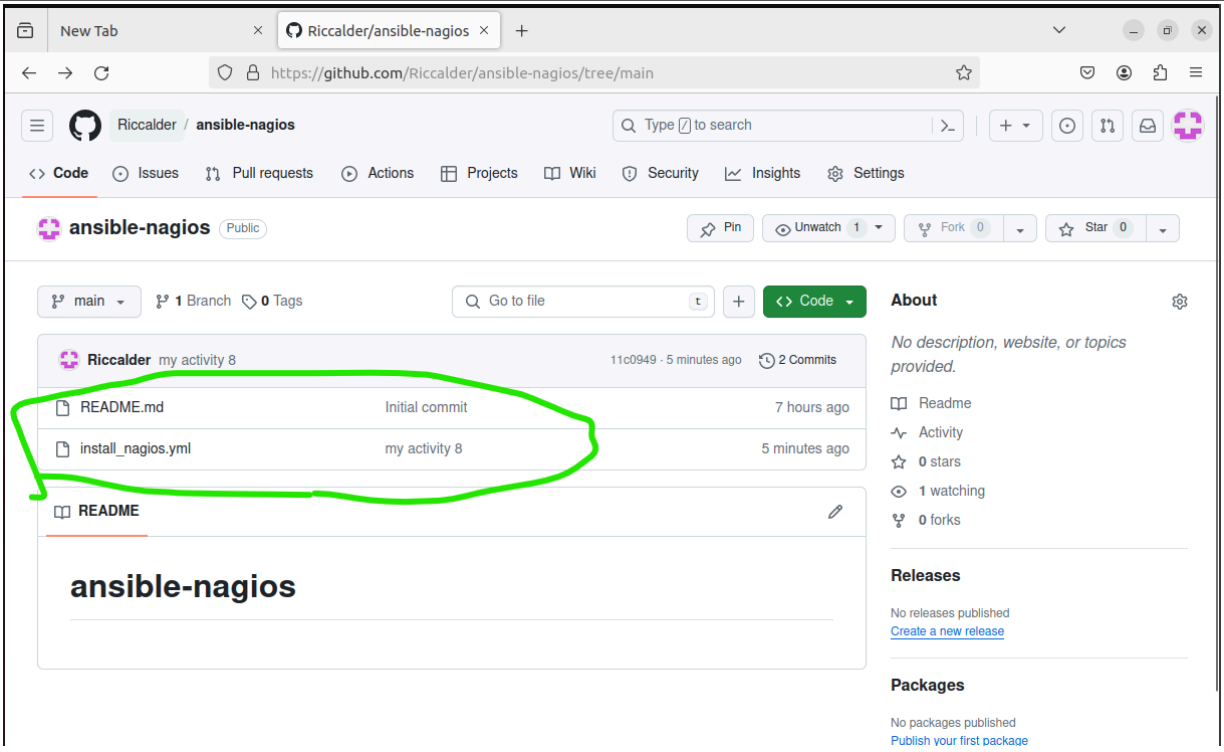
```
calderon@workstation: ~/calderon-Act-8/ansible-nagios
 GNU nano 6.2                                                hosts

[all]
ubuntu_node ansible_host=192.168.1.100
centos_node ansible_host=192.168.1.101
```

I.) I run the Ansible playbook against the target nodes using this command ansible-playbook -i hosts install_nagios.yml

```
calderon@workstation:~/calderon-Act-8/ansible-nagios$ ansible-playbook -i hosts install_nagios.yml

PLAY [Install and configure Nagios] ********************************************************************************

TASK [Gathering Facts] *********************************************************************************************
fatal: [centos_node]: UNREACHABLE! => {"changed": false, "msg": "Failed to connect to the host via ssh: ssh: connect to host 192.168
.1.101 port 22: Connection timed out", "unreachable": true}
fatal: [ubuntu_node]: UNREACHABLE! => {"changed": false, "msg": "Failed to connect to the host via ssh: ssh: connect to host 192.168
.1.100 port 22: Connection timed out", "unreachable": true}

PLAY RECAP *********************************************************************************************************
centos_node                : ok=0    changed=0    unreachable=1    failed=0    skipped=0    rescued=0    ignored=0
ubuntu_node                : ok=0    changed=0    unreachable=1    failed=0    skipped=0    rescued=0    ignored=0
```

J.) i git commit and push my changes to master or main branch

```
calderon@workstation:~/calderon-Act-8/ansible-nagios$ git commit -m "my activity
 8"
[main 11c0949] my activity 8
 1 file changed, 6 insertions(+)
 create mode 100644 install_nagios.yml
calderon@workstation:~/calderon-Act-8/ansible-nagios$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 364 bytes | 364.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:Riccalder/ansible-nagios.git
   0684610..11c0949  main -> main
calderon@workstation:~/calderon-Act-8/ansible-nagios$
```



Reflections:

Answer the following:

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

The benefits of an availability monitoring tool include improved uptime, proactive issue resolution, better performance, enhanced security, and increased efficiency. It helps organizations to quickly identify and resolve issues, optimize performance, prevent threats and breaches, and free up resources.

Conclusions:

In this activity, we created an Ansible playbook that installed Nagios, a popular availability monitoring tool, in both Ubuntu and CentOS systems. By defining variables, creating roles, and configuring Nagios files, we installed and tested Nagios successfully. By using Ansible for installation and configuration, we improved efficiency, reduced errors, and increased system performance.