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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

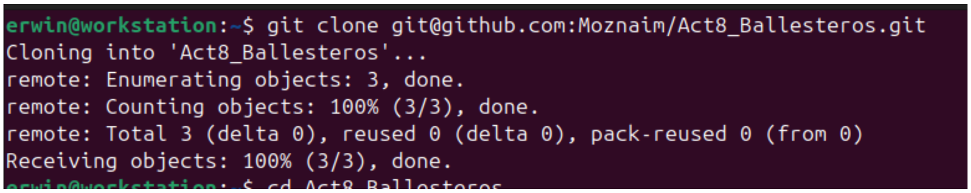
Availability monitoring is a type of monitoring tool that we use if the certain workload is up or reachable on our end. Site downtime can lead to loss of revenue, reputational damage and severe distress. Availability monitoring prevents adverse situations by checking the uptime of infrastructure components 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.

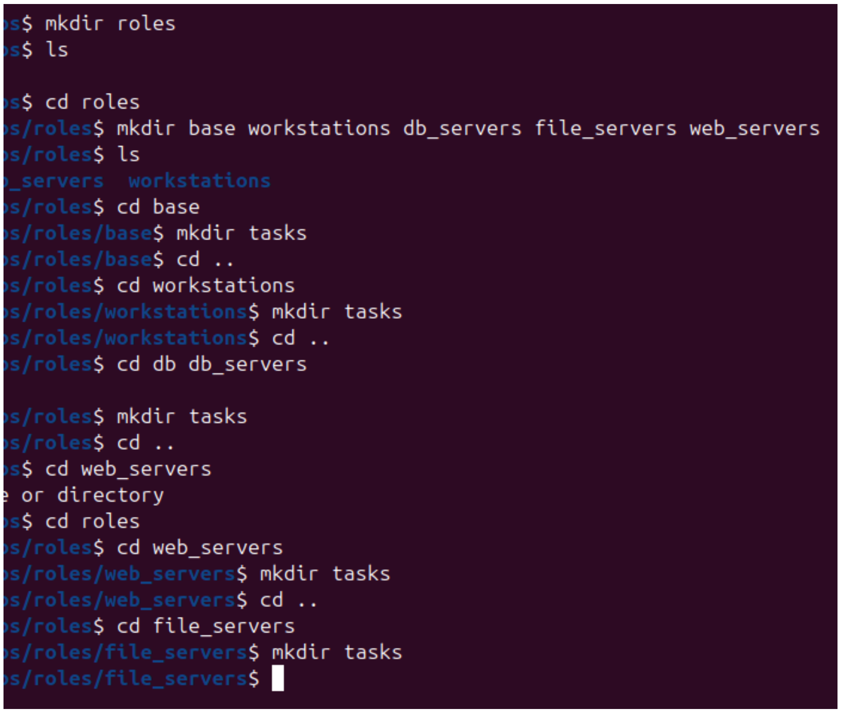
4. **Output** (screenshots and explanations)

1. Create the Github repo for the activity



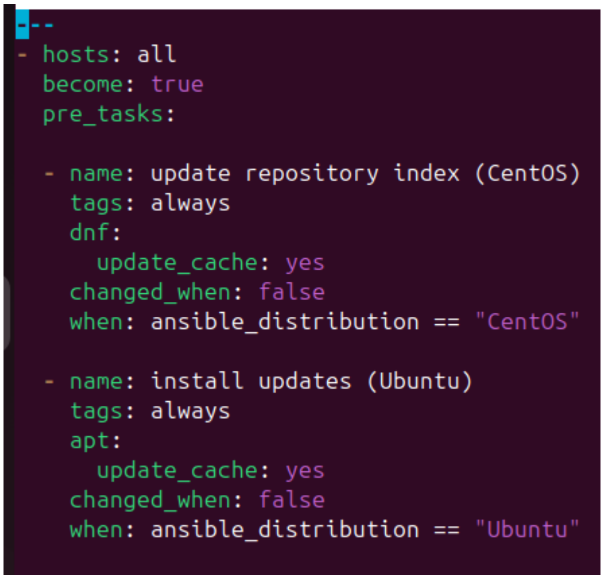
```
erwin@workstation:~$ git clone git@github.com:Moznaim/Act8_Ballesteros.git
Cloning into 'Act8_Ballesteros'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
erwin@workstation:~$ cd Act8_Ballesteros
```

2. Create the appropriate directories that are needed.



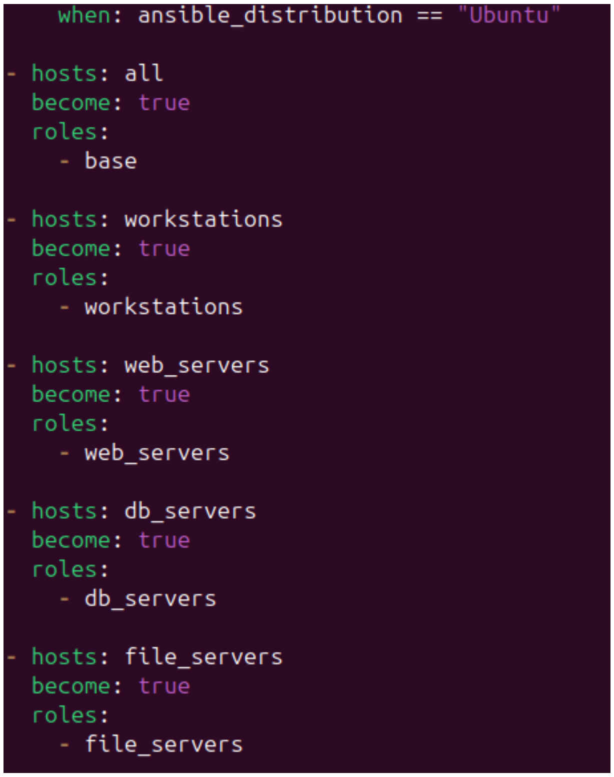
```
s$ mkdir roles
s$ ls

s$ cd roles
s/roles$ mkdir base workstations db_servers file_servers web_servers
s/roles$ ls
_servers  workstations
s/roles$ cd base
s/roles/base$ mkdir tasks
s/roles/base$ cd ..
s/roles$ cd workstations
s/roles/workstations$ mkdir tasks
s/roles/workstations$ cd ..
s/roles$ cd db db_servers

s/roles$ mkdir tasks
s/roles$ cd ..
s$ cd web_servers
e or directory
s$ cd roles
s/roles$ cd web_servers
s/roles/web_servers$ mkdir tasks
s/roles/web_servers$ cd ..
s/roles$ cd file_servers
s/roles/file_servers$ mkdir tasks
s/roles/file_servers$ 
```

3. Return to the main repo directory and create a file named site.yml with the following code below.



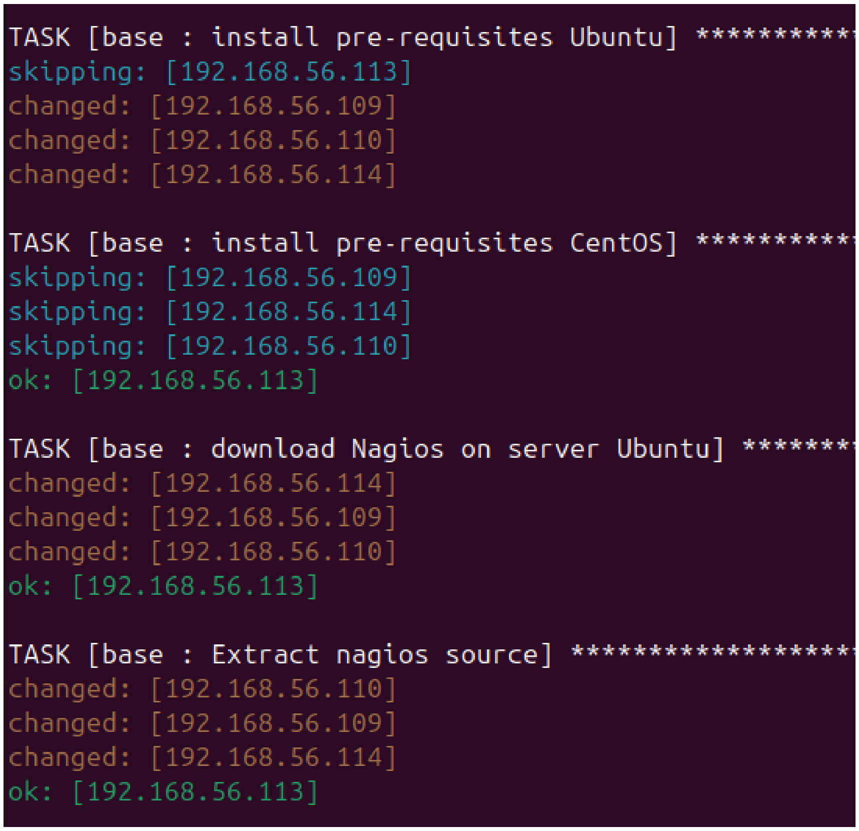
```
---
- hosts: all
  become: true
  pre_tasks:

  - 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"
```

.

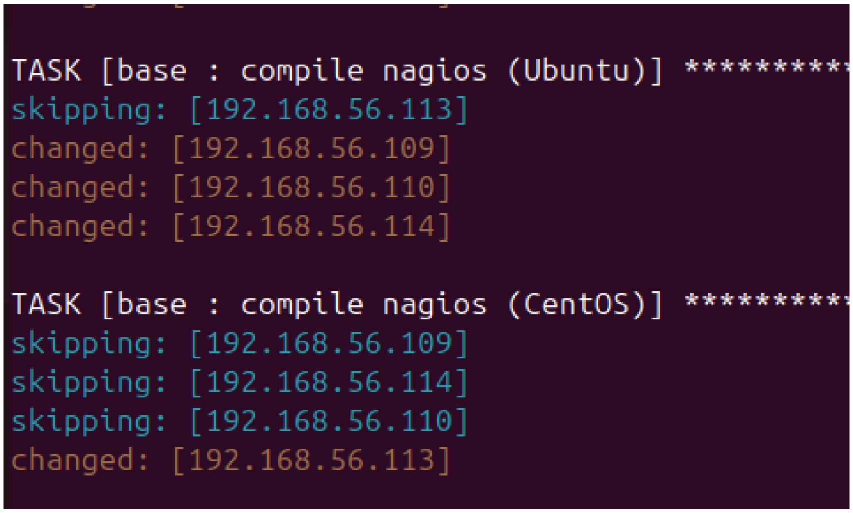


```
    when: ansible_distribution == "Ubuntu"

- hosts: all
  become: true
  roles:
    - base

- hosts: workstations
  become: true
  roles:
    - workstations

- hosts: web_servers
  become: true
  roles:
    - web_servers

- hosts: db_servers
  become: true
  roles:
    - db_servers

- hosts: file_servers
  become: true
  roles:
    - file_servers
```

4. The result should look like



```
TASK [base : install pre-requisites Ubuntu] **********
skipping: [192.168.56.113]
changed: [192.168.56.109]
changed: [192.168.56.110]
changed: [192.168.56.114]

TASK [base : install pre-requisites CentOS] **********
skipping: [192.168.56.109]
skipping: [192.168.56.114]
skipping: [192.168.56.110]
ok: [192.168.56.113]

TASK [base : download Nagios on server Ubuntu] *******
changed: [192.168.56.114]
changed: [192.168.56.109]
changed: [192.168.56.110]
ok: [192.168.56.113]

TASK [base : Extract nagios source] ******************
changed: [192.168.56.110]
changed: [192.168.56.109]
changed: [192.168.56.114]
ok: [192.168.56.113]
```



```
TASK [base : compile nagios (Ubuntu)] **********
skipping: [192.168.56.113]
changed: [192.168.56.109]
changed: [192.168.56.110]
changed: [192.168.56.114]

TASK [base : compile nagios (CentOS)] **********
skipping: [192.168.56.109]
skipping: [192.168.56.114]
skipping: [192.168.56.110]
changed: [192.168.56.113]
```

Reflections:

Answer the following:

1. What are the benefits of having an availability monitoring tool?
   The benefit of having an availability monitoring tool is that it allows us to check for the status and activity of the servers that we are managing. With a monitoring

tools it lessens the work for the system administrator by allowing us to check it on one tool instead of checking it manually for problems.

Conclusions:

For this activity we have learned on how to create an ansible playbook and how to install and manage the groups and users of the server in one. This activity allowed me to learned on what to do when trying to install a software on different servers by the use of an ansible playbook.

Github Link: https://github.com/Moznaim/Act8_Ballesteros