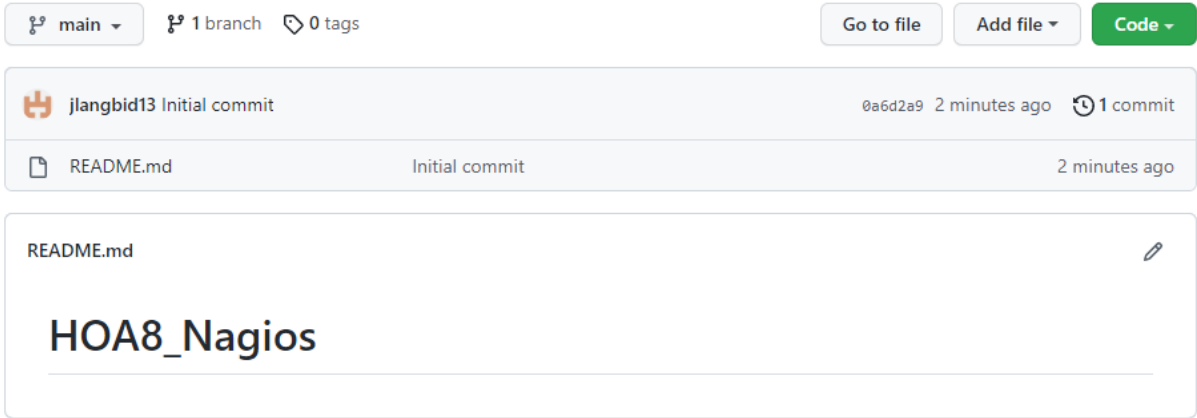


Name: Jefferson Langbid	Date Performed:
Course/Section: CPE232-CPE31S23	Date Submitted:
Instructor: Dr. Taylor	Semester and SY:
Activity 8: Install, Configure, and Manage Availability Monitoring tools	
1. Objectives	
Create and design a workflow that installs, configure and manage enterprise monitoring 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	
<ol style="list-style-type: none"> 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)	
 <p>The screenshot displays a GitHub repository interface. At the top, it shows the repository name 'HOA8_Nagios' by user 'jlangbid13'. Below this, a commit history table lists an 'Initial commit' of 'README.md' made '2 minutes ago'. The main content area shows the 'README.md' file with the title 'HOA8_Nagios'.</p>	
Create a new repository for the activity.	

```
jefferson@LocalMachine-VirtualBox: ~  
jefferson@LocalMachine-VirtualBox:~$ git clone git@github.com:jangbid13/HOA8_Nagios.git  
Cloning into 'HOA8_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.
```

Clone the repository to the local machine.

```
jefferson@  
GNU nano 6.2  
[remote_servers]  
192.168.56.106  
192.168.56.110
```

Create the inventory file

```
jefferson@LocalMachine-VirtualBox: ~/HOA8_Nagios  
GNU nano 6.2 ansible.cfg *  
[defaults]  
  
inventory = inventory  
Host_key_checking = False  
  
Depracation_warnings = False  
  
Remote_users = jefferson  
Private_key_file= ~/.ssh/
```

Create the ansible.cfg file to configure the remote users.

```
jefferson@LocalMachine-VirtualBox: ~/HOA8_Nagios
GNU nano 6.2 site.yml *
-
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"
```

Create the site.yml for the pre_tasks.

```
jefferson@LocalMachine-VirtualBox: ~/HOA8_Nagios/roles
README.md
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ sudo nano inventory
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ sudo nano ansible.cfg
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ cd
jefferson@LocalMachine-VirtualBox:~$ cd Langbid_Nagios
jefferson@LocalMachine-VirtualBox:~/Langbid_Nagios$ sudo nano site.yml
jefferson@LocalMachine-VirtualBox:~/Langbid_Nagios$ cd
jefferson@LocalMachine-VirtualBox:~$ cd HOA8_Nagios
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ sudo nano site.yml
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ ls
ansible.cfg  inventory  README.md  site.yml
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ mkdir roles
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ cd roles
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles$ mkdir Install
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles$ cd Install
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles/Install$ mkdir tasks
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles/Install$ cd tasks
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles/Install/tasks$ sudo nano
main.yml
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles/Install/tasks$ cd ..
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles/Install$ cd ..
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios/roles$ tree
├── Install
│   └── tasks
│       └── main.yml
2 directories, 1 file
```

Create new directory for the roles and a new directory such as Install and tasks to input the main.yml in the tasks directory.

```
jefferson@LocalMachine-VirtualBox: ~/HOA8_Nagios/roles...  
GNU nano 6.2 main.yml  
- name: install nagios in Ubuntu  
  apt:  
    name:  
      - nagios4  
    state: latest  
    update_cache: yes  
  when: ansible_distribution == "Ubuntu"  
  
- name: install nagios in CentOS  
  dnf:  
    name:  
      - nagios  
    state: latest  
    update_cache: yes  
  when: ansible_distribution == "CentOS"
```

Input in the main.yml the command that will install nagios in both Ubuntu and CentOS.

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

The command inside the site.yml to run the roles

```

jefferson@LocalMachine-VirtualBox: ~/HOA8_Nagios
jefferson@LocalMachine-VirtualBox:~/HOA8_Nagios$ ansible-playbook --ask-become-pass site.yml
BECOME password:

PLAY [all] *****

TASK [Gathering Facts] *****
ok: [192.168.56.110]
ok: [192.168.56.106]

TASK [update repository index (CentOS)] *****
skipping: [192.168.56.106]
ok: [192.168.56.110]

TASK [install updates (Ubuntu)] *****
skipping: [192.168.56.110]
ok: [192.168.56.106]

PLAY [all] *****

TASK [Gathering Facts] *****
ok: [192.168.56.110]
ok: [192.168.56.106]

TASK [Install : install nagios in Ubuntu] *****
skipping: [192.168.56.110]
changed: [192.168.56.106]

TASK [Install : install nagios in CentOS] *****
skipping: [192.168.56.106]
ok: [192.168.56.110]

PLAY RECAP *****
192.168.56.106      : ok=4    changed=1    unreachable=0    failed=0    skipped=2    rescued=0
                   ignored=0
192.168.56.110     : ok=4    changed=0    unreachable=0    failed=0    skipped=2    rescued=0

```

It ran successfully and installed the nagios in both Ubuntu and CentOS.

```
jefferson@Server1-VirtualBox:~$ nagios4 --version
```

Nagios Core 4.4.6

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Last Modified: 2020-04-28

License: GPL

Website: <https://www.nagios.org>

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The screenshot shows a web browser window with the address bar displaying "192.168.56.106/nagios4/". The page features the Nagios Core logo at the top center, followed by the text "Nagios® Core™" and "Version 4.4.6" with the date "April 28, 2020". On the left side, there is a navigation menu with sections: "General" (Home, Documentation), "Current Status" (Tactical Overview, Map (Legacy), Hosts, Services, Host Groups, Service Groups, Problems), and "Reports" (Availability, Trends (Legacy)). The "Problems" section is expanded, showing "Services (Unhandled)", "Hosts (Unhandled)", and "Network Outages". A "Quick Search:" input field is located below the menu. At the bottom, there is a copyright notice for 2010-2020 Nagios Core Development Team and Community Contributors, and a "MONITORED BY Nagios" logo.

Installed in the Ubuntu server

```
[jefferson@localhost ~]$ nagios --version
```

Nagios Core 4.4.6

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Last Modified: 2020-04-28

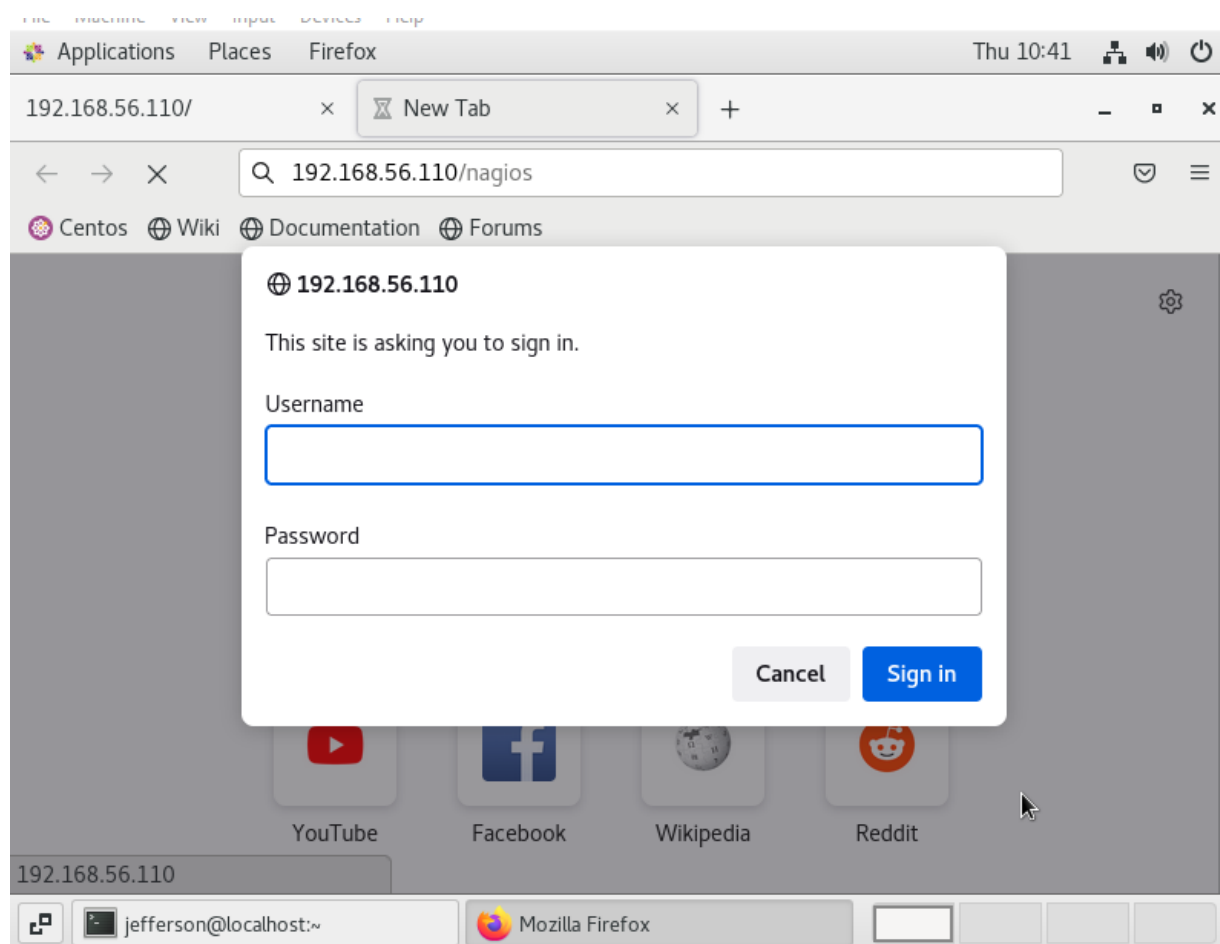
License: GPL

Website: <https://www.nagios.org>

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Installed in the CentOS server

main
1 branch
0 tags
Go to file
Add file
Code

jlangbid13 HOA8
517284a 19 seconds ago
2 commits

roles/Install/tasks	HOA8	19 seconds ago
README.md	Initial commit	1 hour ago
ansible.cfg	HOA8	19 seconds ago
inventory	HOA8	19 seconds ago
site.yml	HOA8	19 seconds ago

Commit it in the github

[jlangbid13/HOA8_Nagios \(github.com\)](https://github.com/jlangbid13/HOA8_Nagios)

Reflections:

Answer the following:

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

The benefits of having an availability monitoring tool is for better work outcomes because you can monitor what everybody is doing and check if it is good or correct and the monitoring personnel can guide the person to improve the performance and for the better work outcomes.

Conclusions:

All in all, I created a new directory for the activity and cloned it in my local machine. I created the file which is the ansible.cfg and inventory to configure the remote user to connect with the ansible. After creating the file I created a new file for the ansible playbook which is the site.yml and input the commands. After creating the file I created the roles directory and tasks to input the main.yml file for the command that will install the nagios in both Ubuntu and CentOS. After that I run the site.yml playbook to run and it successfully ran and installed the nagios in both Ubuntu and CentOS.