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Course/Section:	**Date Submitted: October 20, 2022**
Instructor: Engr. Taylar	**Semester and SY: 1st sem - SY 2022-2023**

Activity 8: Install, Configure, and Manage Availability Monitoring tools

1. Objectives

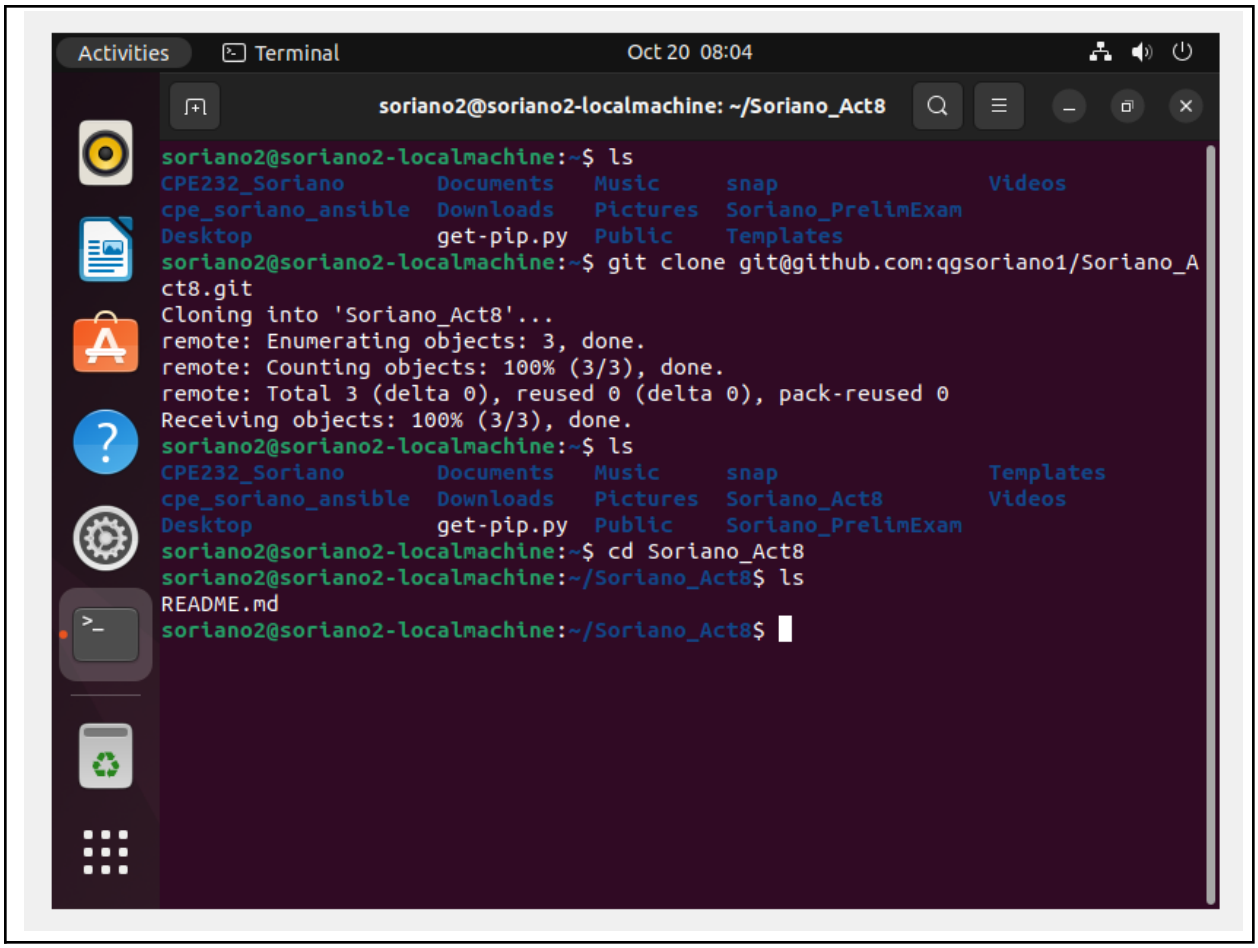
Create and design a workflow that installs, configure and manage enterprise monitoring tools using Ansible as an Infrastructure as Code (IaC) tool.

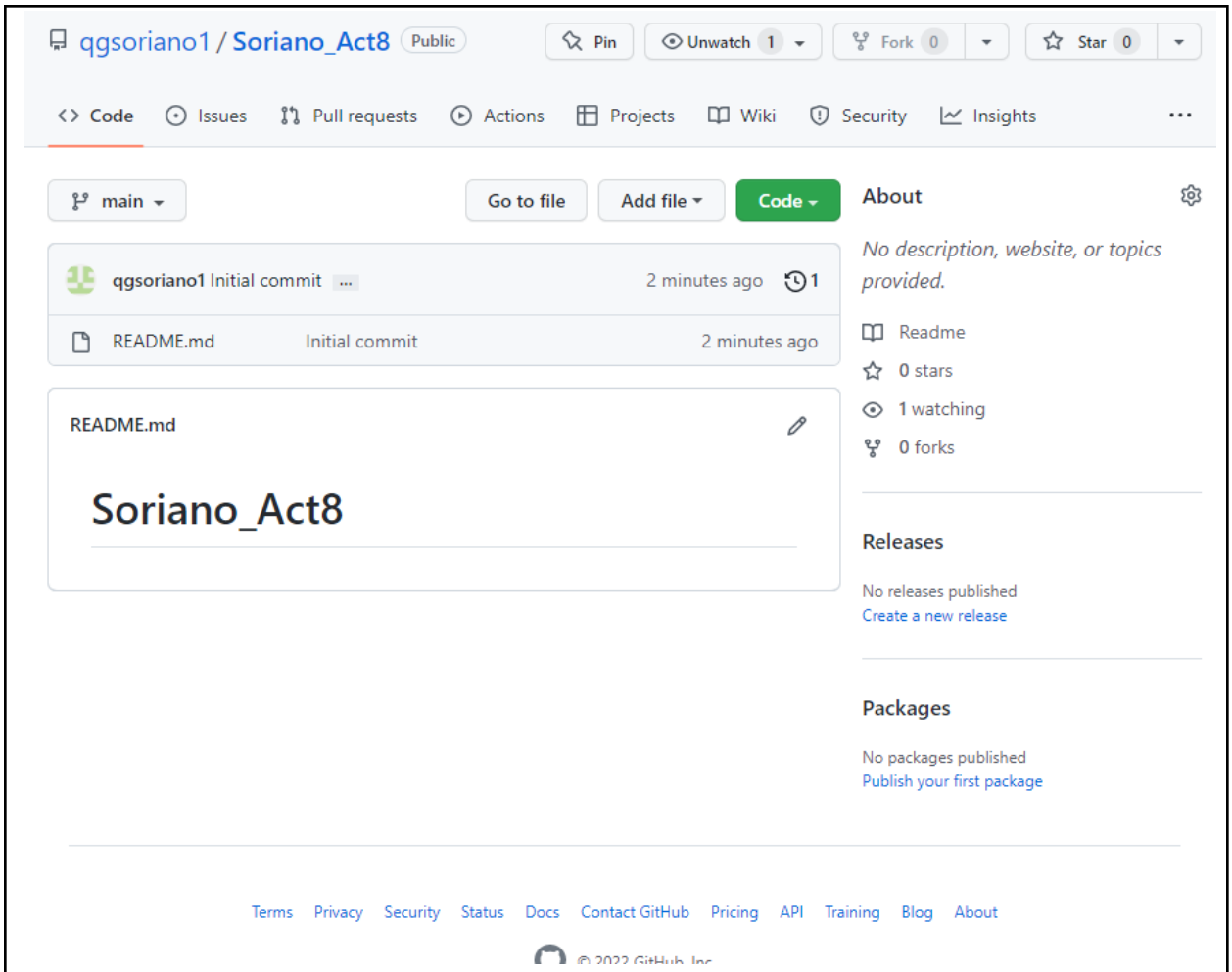
2. Discussion

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

REQUIREMENT: Create a separate repository for this activity.
SCREENSHOT:

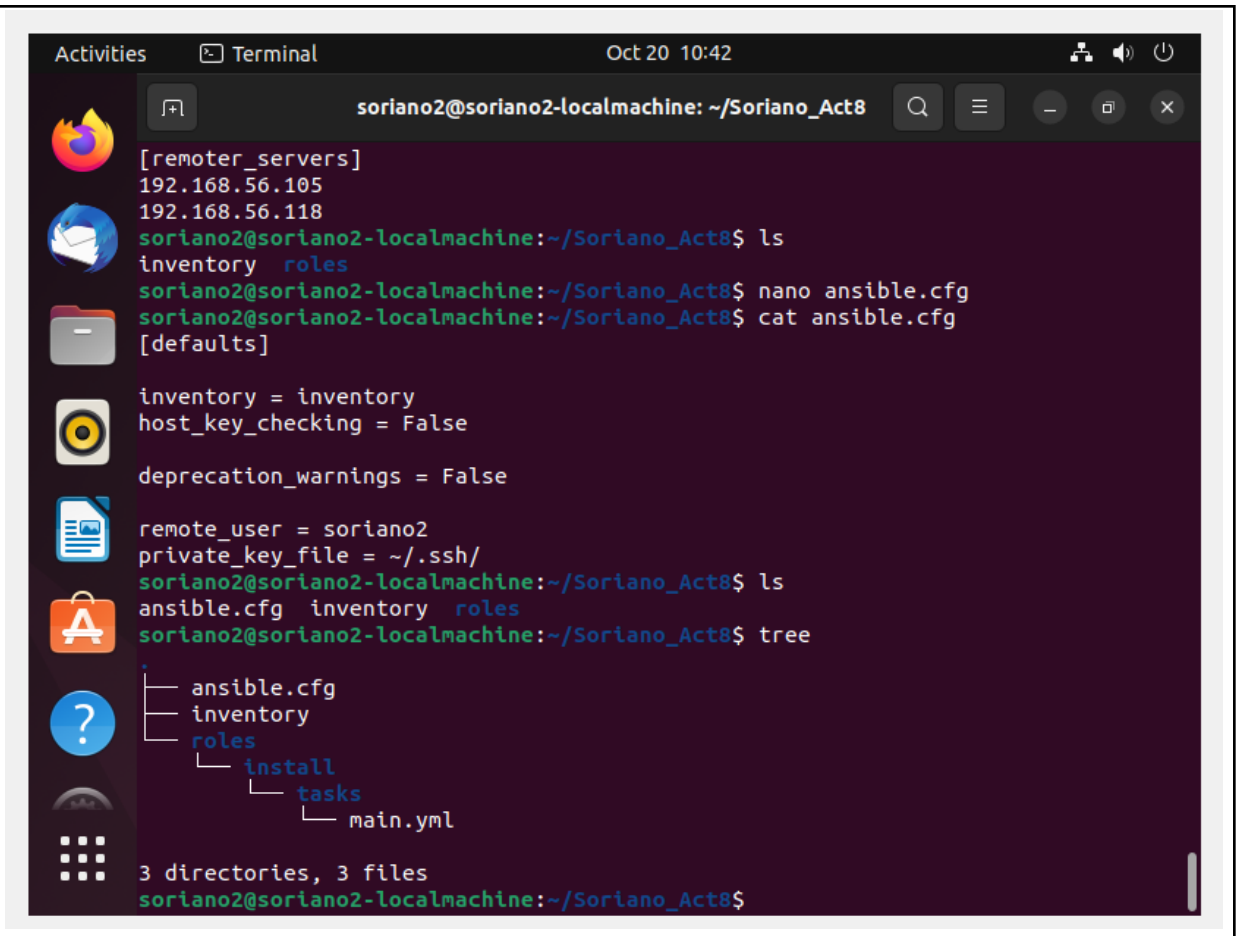

Activities
Terminal
Oct 20 08:04
soriano2@soriano2-localmachine: ~/Soriano_Act8
soriano2@soriano2-localmachine:~$ ls
CPE232_Soriano Documents Music snap Videos
cpe_soriano_ansible Downloads Pictures Soriano_PrelimExam
Desktop get-pip.py Public Templates
soriano2@soriano2-localmachine:~$ git clone git@github.com:qgsoriano1/Soriano_Act8.git
Cloning into 'Soriano_Act8'...
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.
soriano2@soriano2-localmachine:~$ ls
CPE232_Soriano Documents Music snap Templates
cpe_soriano_ansible Downloads Pictures Soriano_Act8 Videos
Desktop get-pip.py Public Soriano_PrelimExam
soriano2@soriano2-localmachine:~$ cd Soriano_Act8
soriano2@soriano2-localmachine:~/Soriano_Act8$ ls
README.md
soriano2@soriano2-localmachine:~/Soriano_Act8$



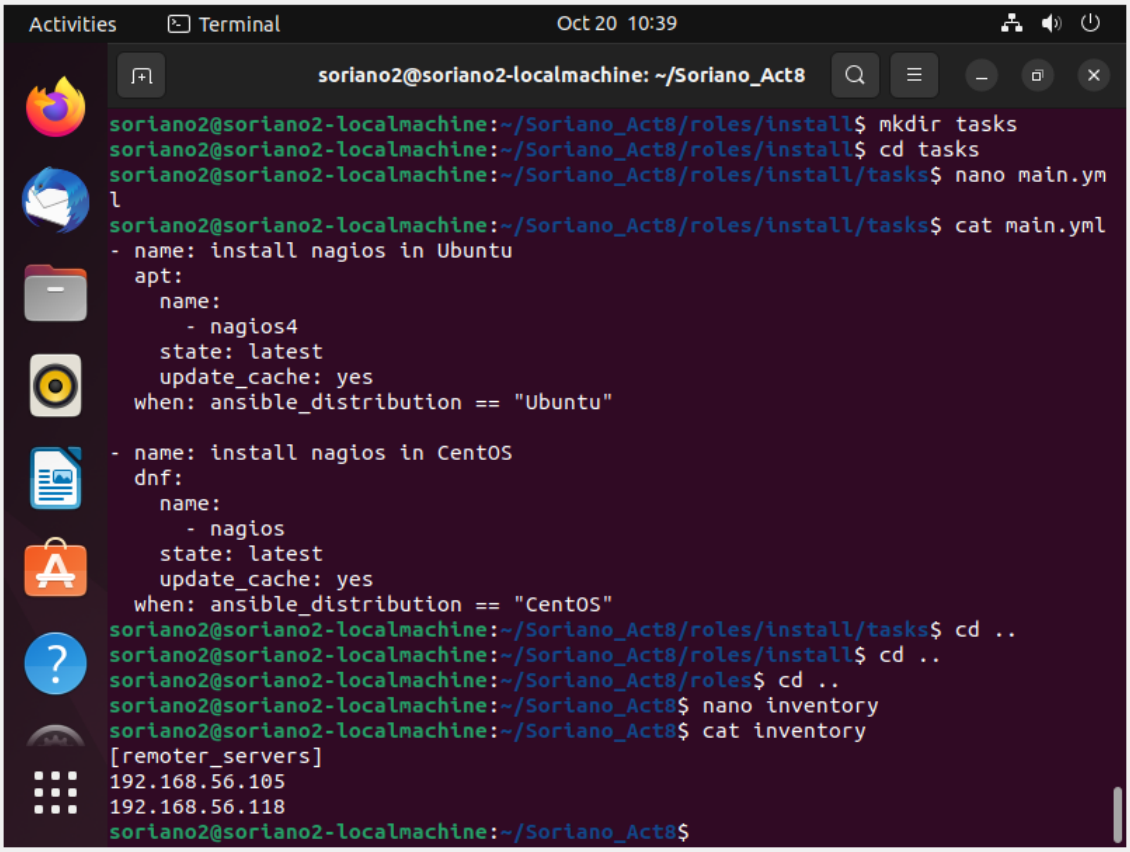
- **This shows the successful creation and git cloning of a new repository for this activity. The repository is named Soriano_Act8.**

1. Create a playbook that installs Nagios in both Ubuntu and CentOS. Apply the concept of creating roles.

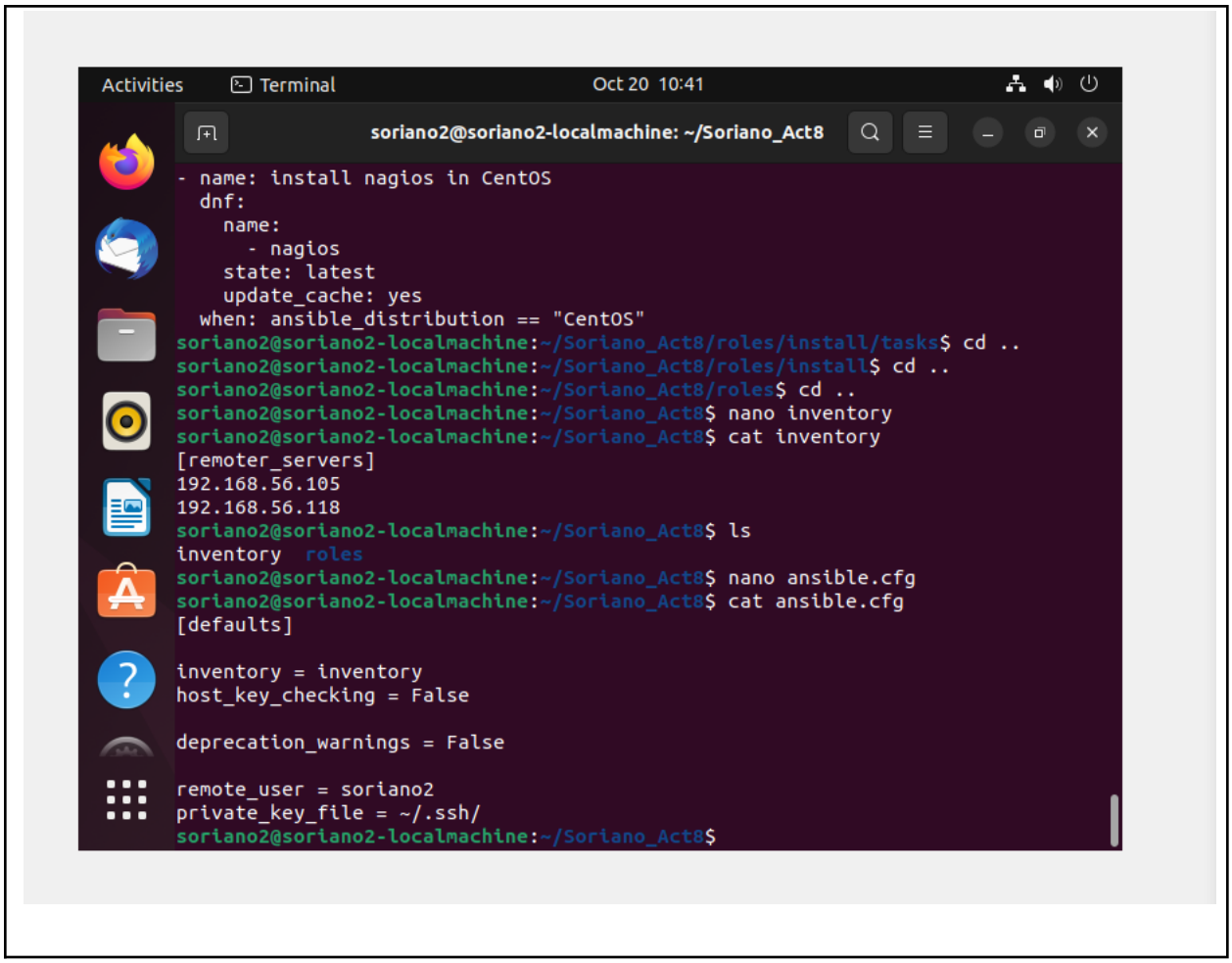
SCREENSHOTS:

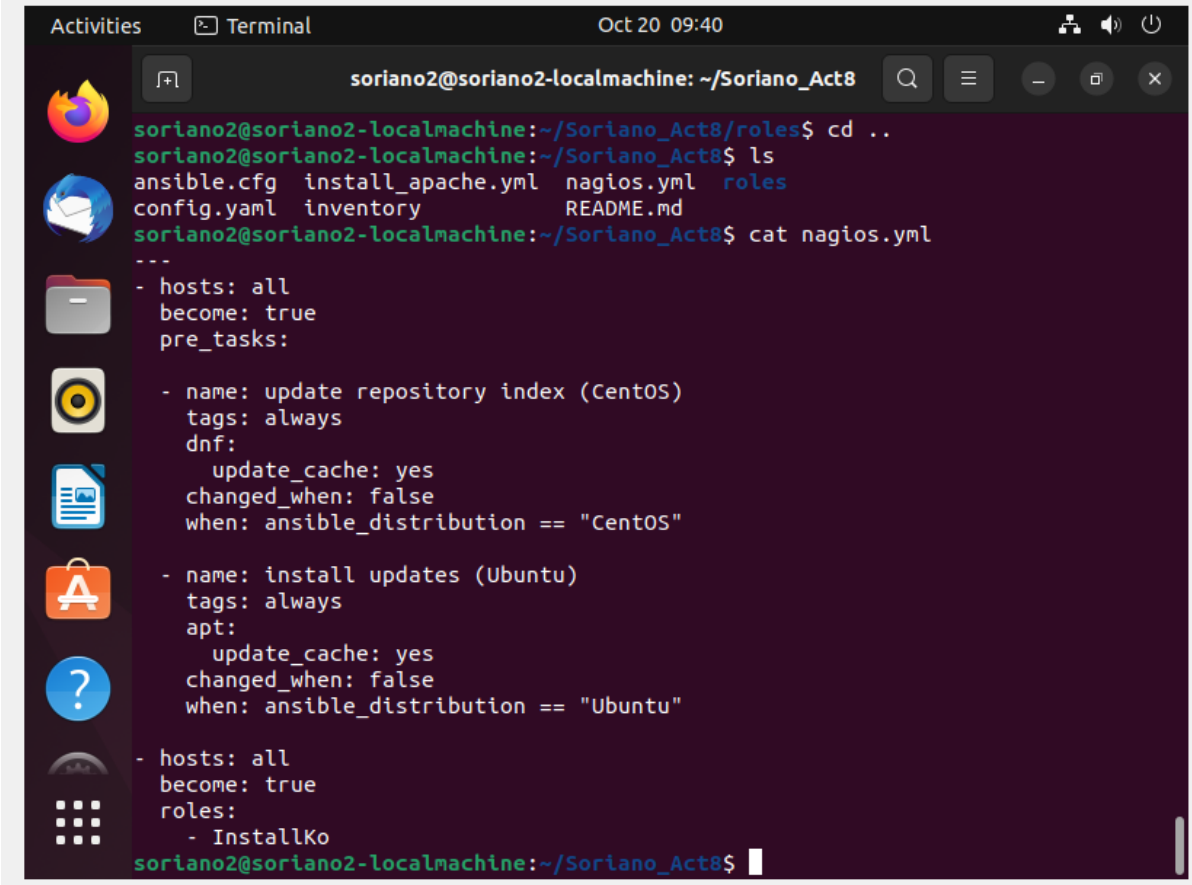


- **This shows the tree path directories of the main folder named Soriano_Act8. The inventory is edited to the ip addresses of the corresponding machines used. Which is one ubuntu and one centos.**

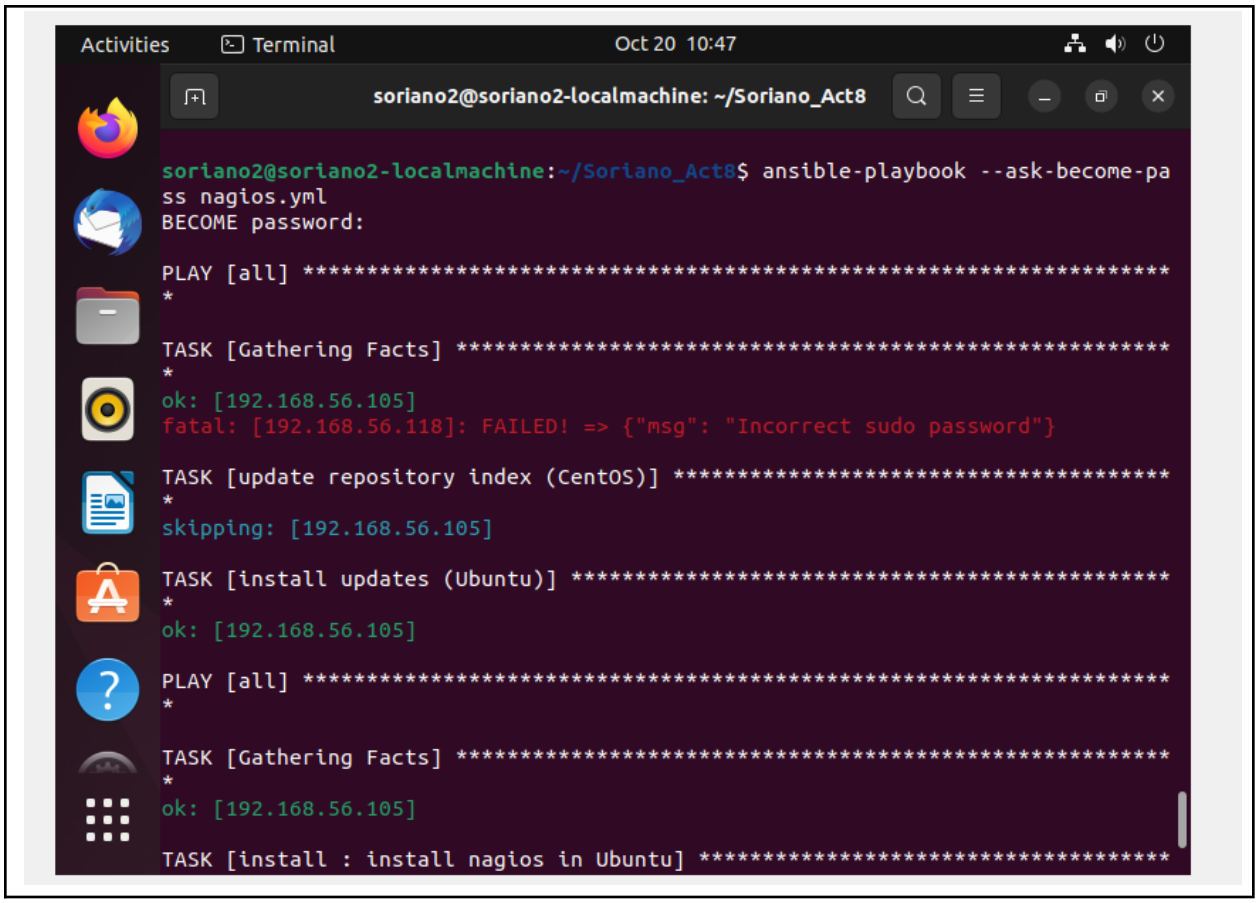

Activities
Terminal
Oct 20 10:39
soriano2@soriano2-localmachine: ~/Soriano_Act8
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install$ mkdir tasks
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install$ cd tasks
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install/tasks$ nano main.yml
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install/tasks$ cat 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"
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install/tasks$ cd ..
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install$ cd ..
soriano2@soriano2-localmachine:~/Soriano_Act8/roles$ cd ..
soriano2@soriano2-localmachine:~/Soriano_Act8$ nano inventory
soriano2@soriano2-localmachine:~/Soriano_Act8$ cat inventory
[remoter_servers]
192.168.56.105
192.168.56.118
soriano2@soriano2-localmachine:~/Soriano_Act8$

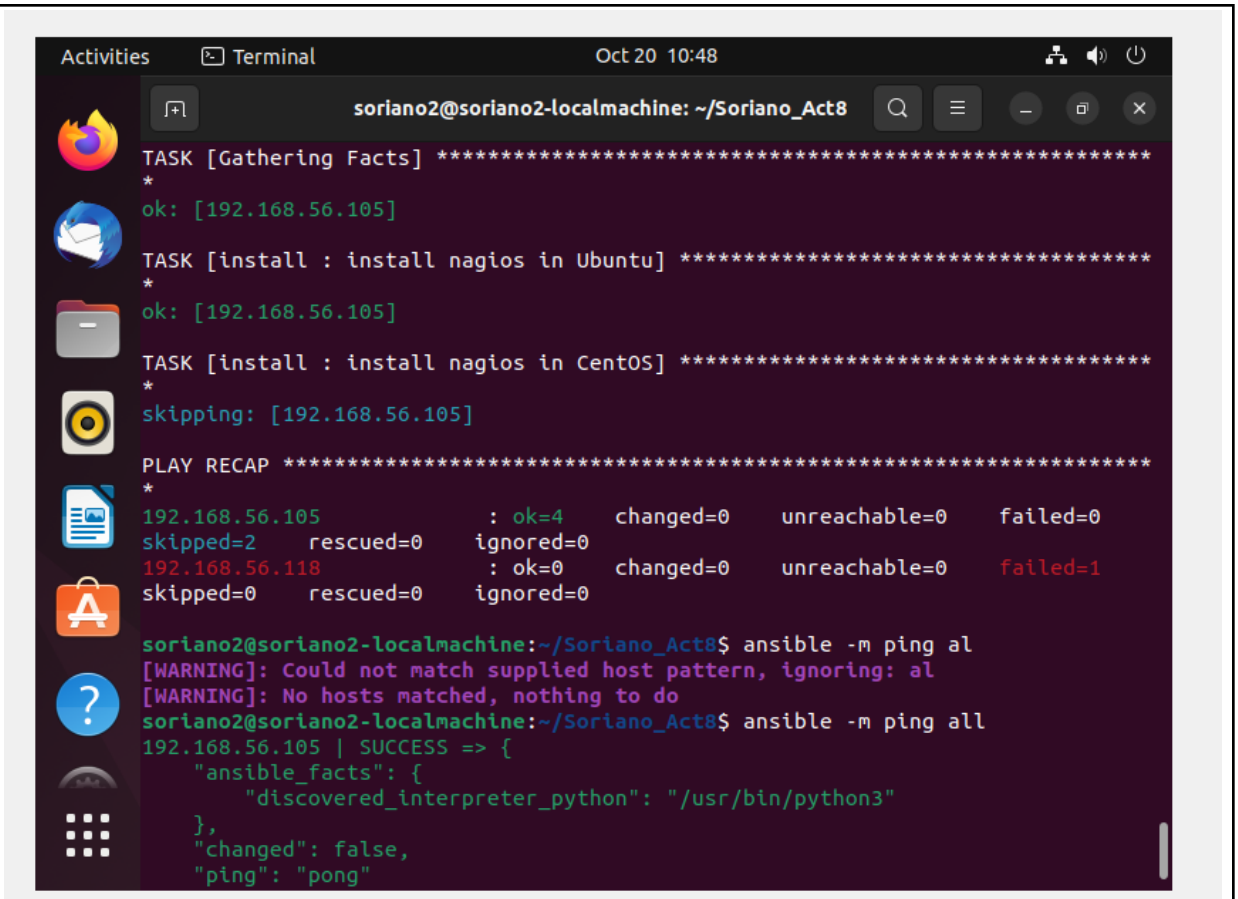
-


Activities
Terminal
Oct 20 10:41
soriano2@soriano2-localmachine: ~/Soriano_Act8
- name: install nagios in CentOS
dnf:
name:
- nagios
state: latest
update_cache: yes
when: ansible_distribution == "CentOS"
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install/tasks$ cd ..
soriano2@soriano2-localmachine:~/Soriano_Act8/roles/install$ cd ..
soriano2@soriano2-localmachine:~/Soriano_Act8/roles$ cd ..
soriano2@soriano2-localmachine:~/Soriano_Act8$ nano inventory
soriano2@soriano2-localmachine:~/Soriano_Act8$ cat inventory
[remoter_servers]
192.168.56.105
192.168.56.118
soriano2@soriano2-localmachine:~/Soriano_Act8$ ls
inventory roles
soriano2@soriano2-localmachine:~/Soriano_Act8$ nano ansible.cfg
soriano2@soriano2-localmachine:~/Soriano_Act8$ cat ansible.cfg
[defaults]
inventory = inventory
host_key_checking = False
deprecation_warnings = False
remote_user = soriano2
private_key_file = ~/.ssh/
soriano2@soriano2-localmachine:~/Soriano_Act8$

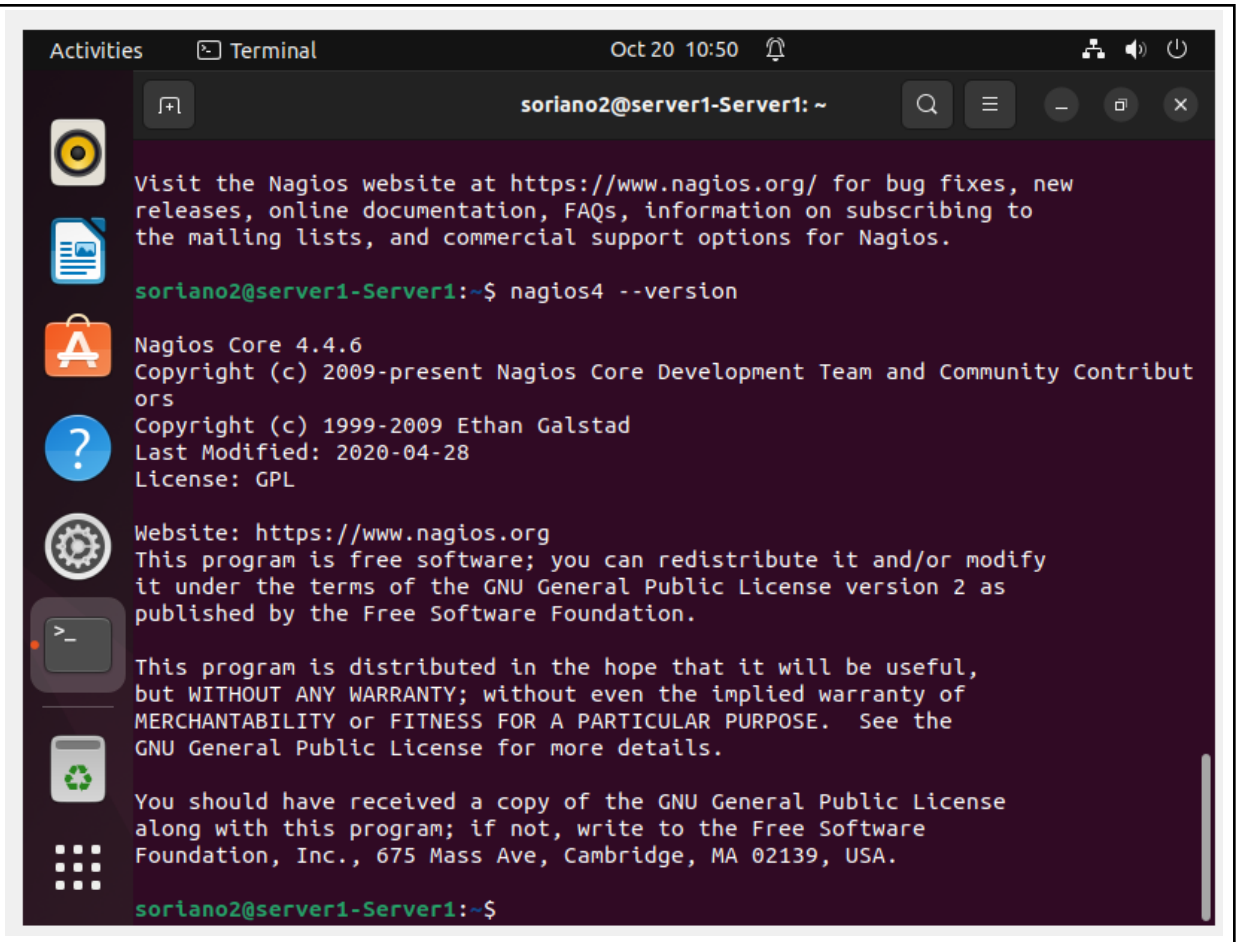


- **These images show the proof of how the directory Soriano_Act8 is made.**

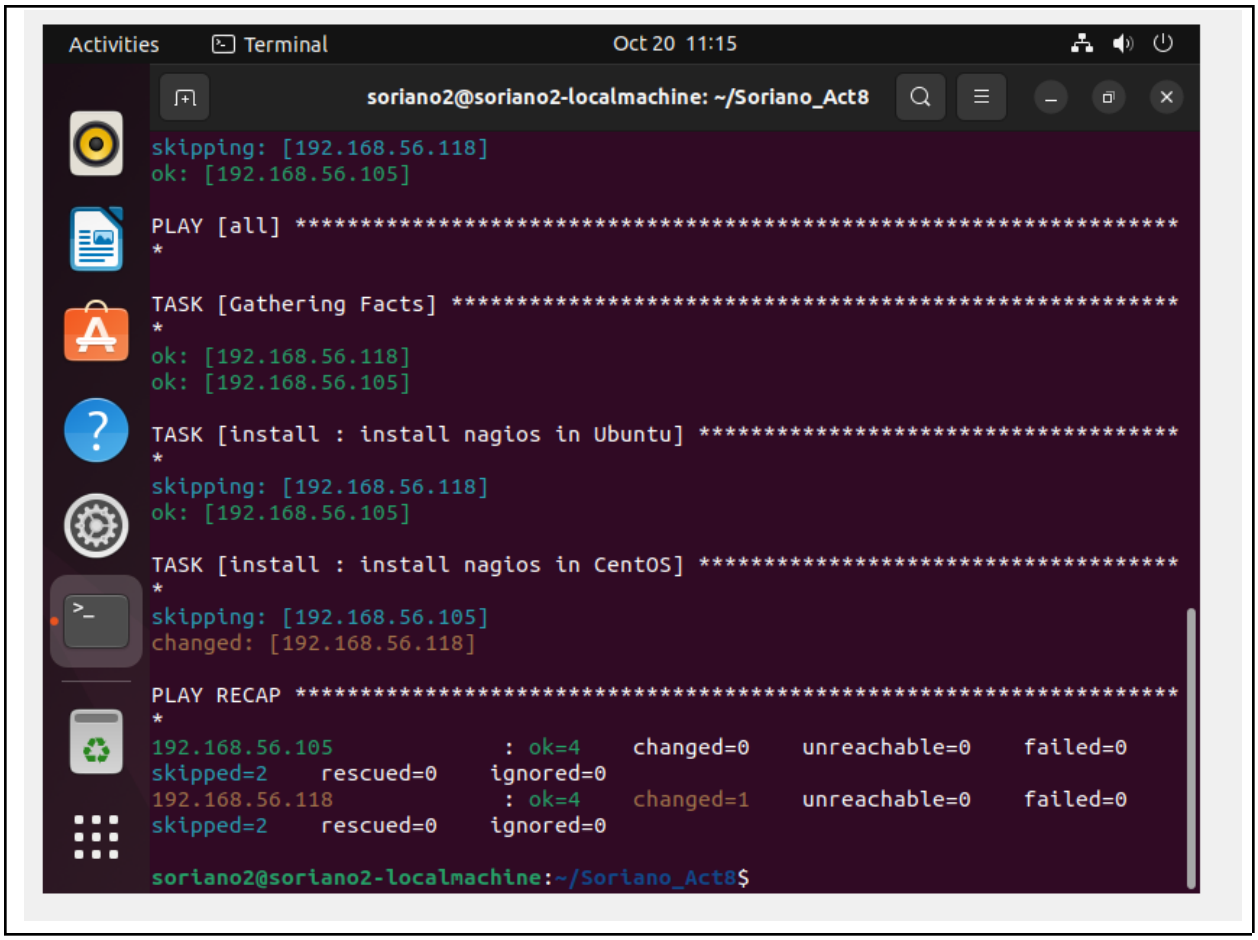

Activities
Terminal
Oct 20 10:47
soriano2@soriano2-localmachine: ~/Soriano_Act8
soriano2@soriano2-localmachine:~/Soriano_Act8$ ansible-playbook --ask-become-pass nagios.yml
BECOME password:
PLAY [all] ***
TASK [Gathering Facts] ***
ok: [192.168.56.105]
fatal: [192.168.56.118]: FAILED! => {"msg": "Incorrect sudo password"}
TASK [update repository index (CentOS)] **
skipping: [192.168.56.105]
TASK [install updates (Ubuntu)] **
ok: [192.168.56.105]
PLAY [all] ***
TASK [Gathering Facts] ***
ok: [192.168.56.105]
TASK [install : install nagios in Ubuntu] **

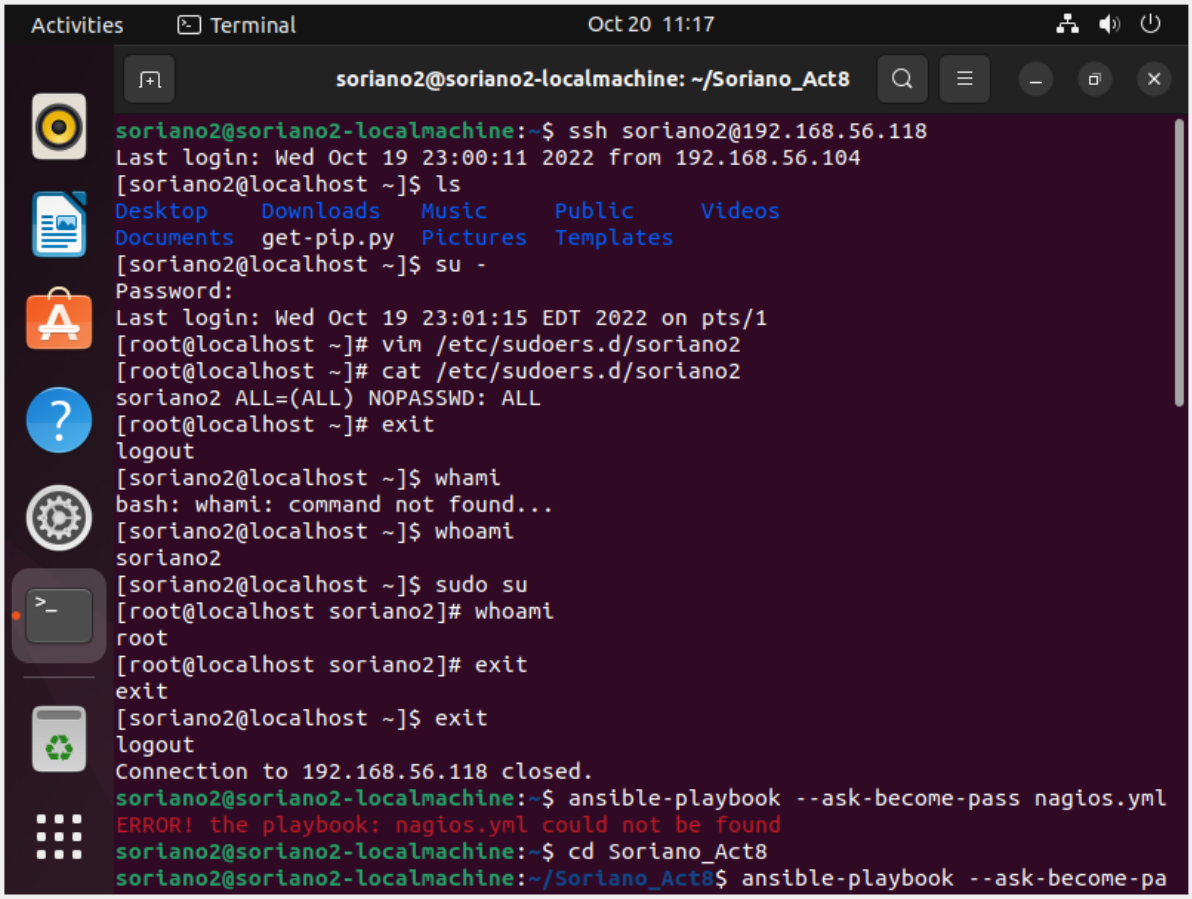


- **This shows that when running the playbook for the side of ubuntu, there is one error enco**

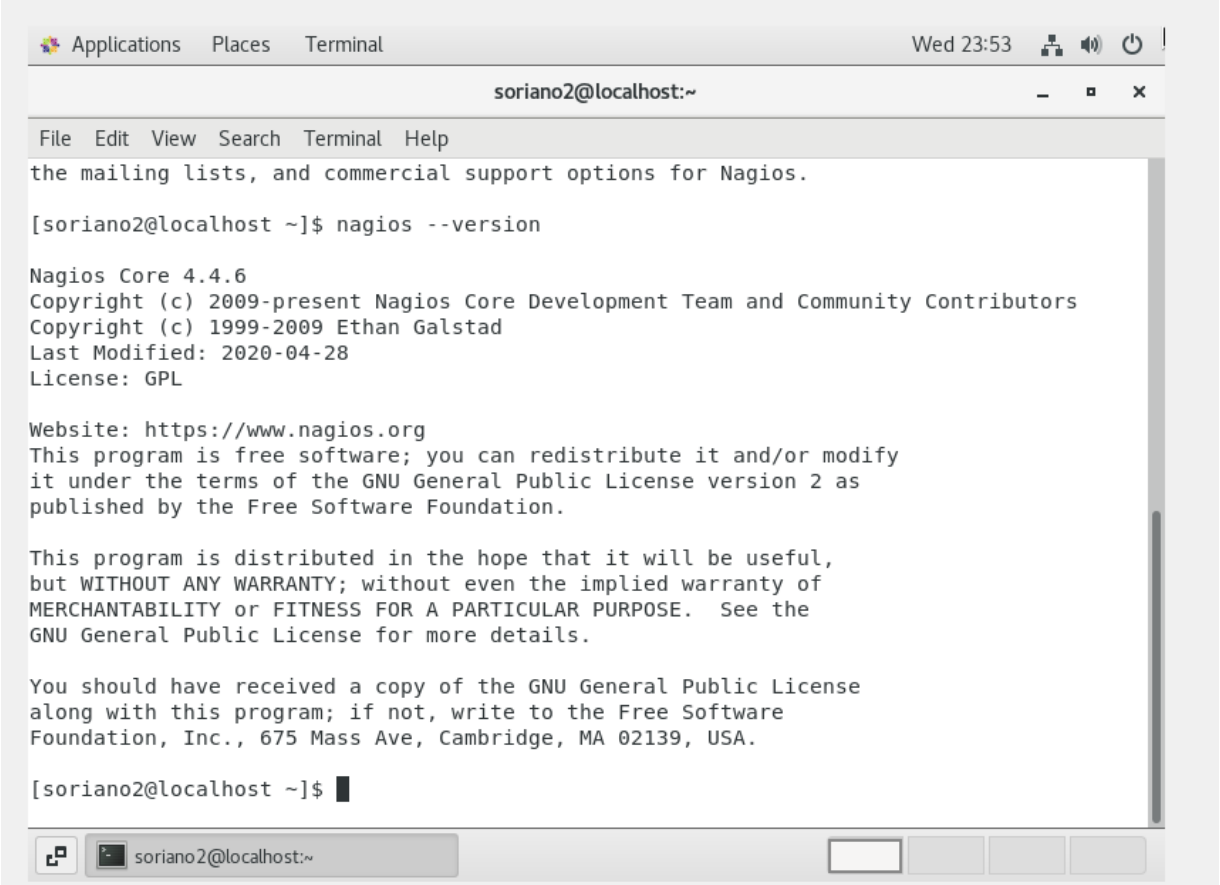


- **This is the proof that the nagios in the ubuntu side is installed successfully.**


Activities
Terminal
Oct 20 11:15
soriano2@soriano2-localmachine: ~/Soriano_Act8
skipping: [192.168.56.118]
ok: [192.168.56.105]
PLAY [all] ***
*
TASK [Gathering Facts] ***
*
ok: [192.168.56.118]
ok: [192.168.56.105]
TASK [install : install nagios in Ubuntu] **
*
skipping: [192.168.56.118]
ok: [192.168.56.105]
TASK [install : install nagios in CentOS] **
*
skipping: [192.168.56.105]
changed: [192.168.56.118]
PLAY RECAP ***
*
192.168.56.105 : ok=4 changed=0 unreachable=0 failed=0
skipped=2 rescued=0 ignored=0
192.168.56.118 : ok=4 changed=1 unreachable=0 failed=0
skipped=2 rescued=0 ignored=0
soriano2@soriano2-localmachine:~/Soriano_Act8$



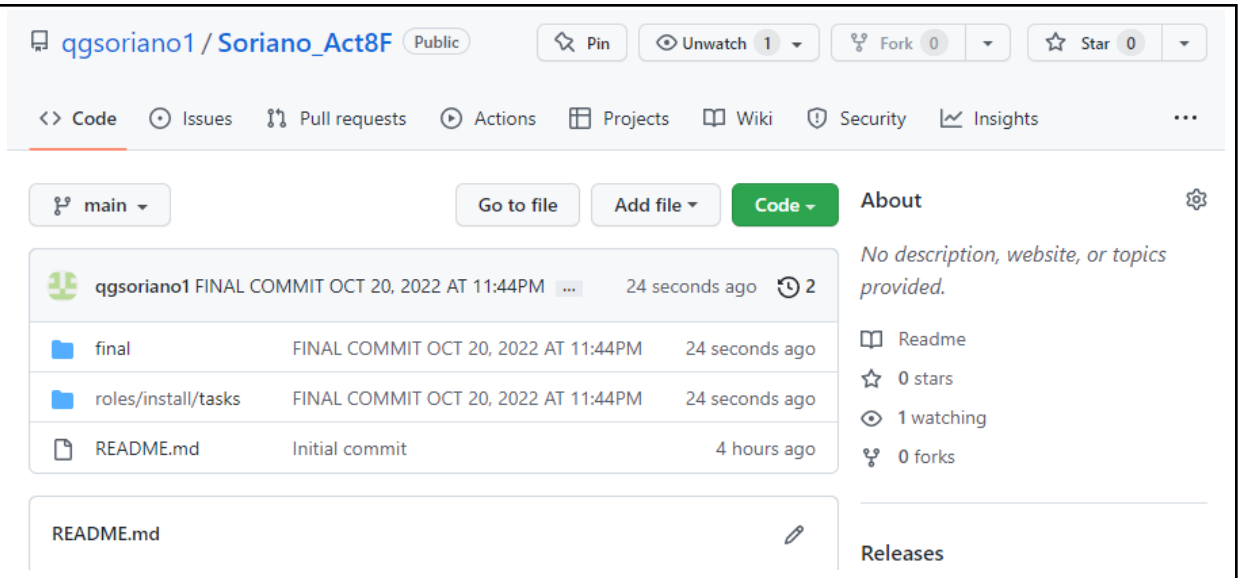
- **In this image, the error has been resolved. I resolved this problem/error by accessing the root of the centOS via ssh from the main ubuntu server. The method is shown above.**



- **This shows the successful test opening and installation of nagios in the centos.**

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.)
    - **Steps, methods, error solving and troubleshooting are stated above with screenshots.**
3. Show an output of the installed Nagios for both Ubuntu and CentOS.
    - **Outputs are shown above by step.**
4. Make sure to create a new repository in GitHub for this activity.

SCREENSHOT:



- **This shows the successful git commit and push of the files that has been done and successfully performed in this activity.**

Git repo link/url: https://github.com/qgsoriano1/Soriano_Act8F.git
git@github.com:qgsoriano1/Soriano_Act8F.git
gh repo clone qgsoriano1/Soriano_Act8F

Reflections:

Answer the following:

1. What are the benefits of having an availability monitoring tool?
   - **Having a monitoring tool available helps our servers and devices avoid outages. You have the visibility you need to stay ahead of potential problems thanks to network monitoring. Network monitoring software assists you in locating outages that might result in bottlenecks by displaying real-time network performance data in an intuitive interface. Additionally, problems are resolved more quickly. When things are bad, time is money. For time-pressed network professionals, network monitoring makes problem-solving simpler and quicker. A network monitoring tool can offer that first level of security and identify security threats. The biggest advantage is a picture of what typical performance for your organization looks like, which makes it simple to identify anything out of the ordinary.**

Conclusions:

In this activity, it is a bit stressful because we have no instructional resources at all from this activity, we have to research on our own and do the activity

appropriately. I have encountered a lot of errors during this activity, including the unreachable status of the centos from the main ubuntu server. This has been resolved by accessing the centos through ssh and creating a file.