Name: Quizon, Nowell Gabriel C.	**Date Performed:** 10/21/2023
Course/Section: CPE31S5	**Date Submitted:** 10/2 /2023
Instructor: Engr. Roman Richard	**Semester and SY:** 1st and 2023-2024

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

1. Objectives

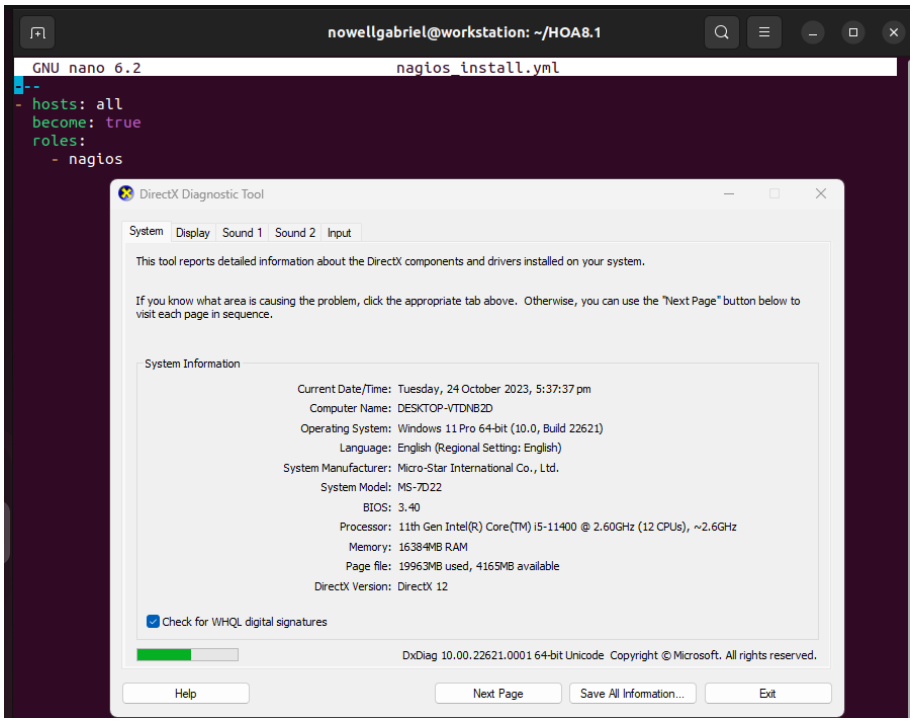
Create and design a workflow that installs, configure and manage enterprise monitoring tools using Ansible as an Infrastructure as Code (IaC) tool.

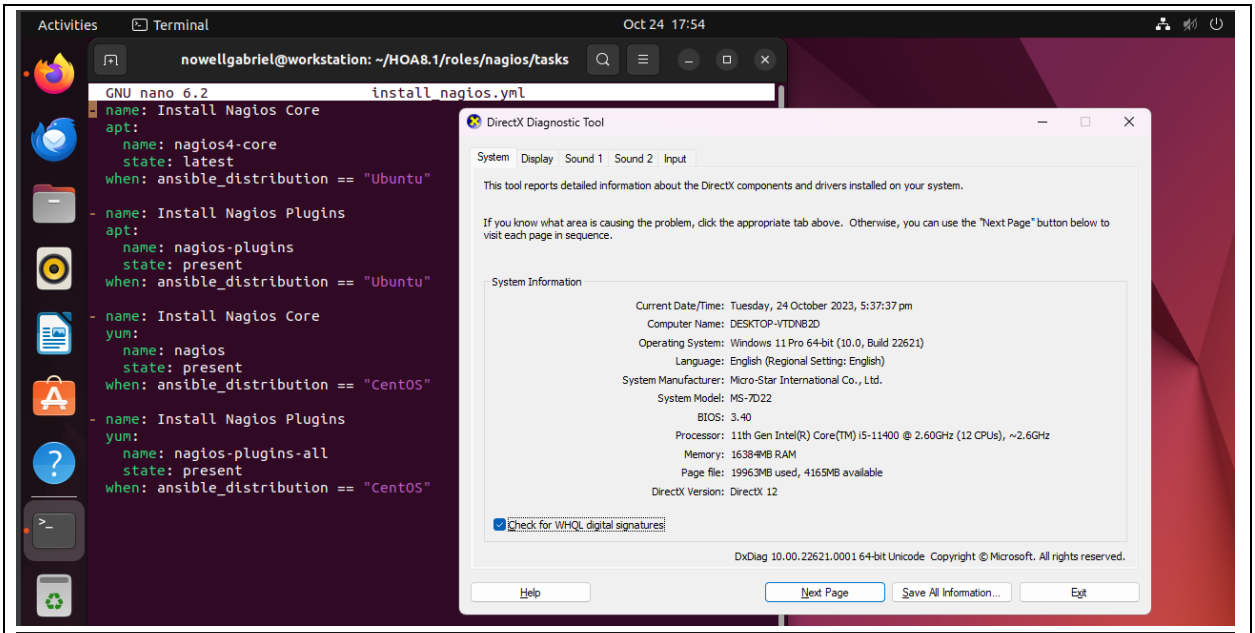
2. Discussion

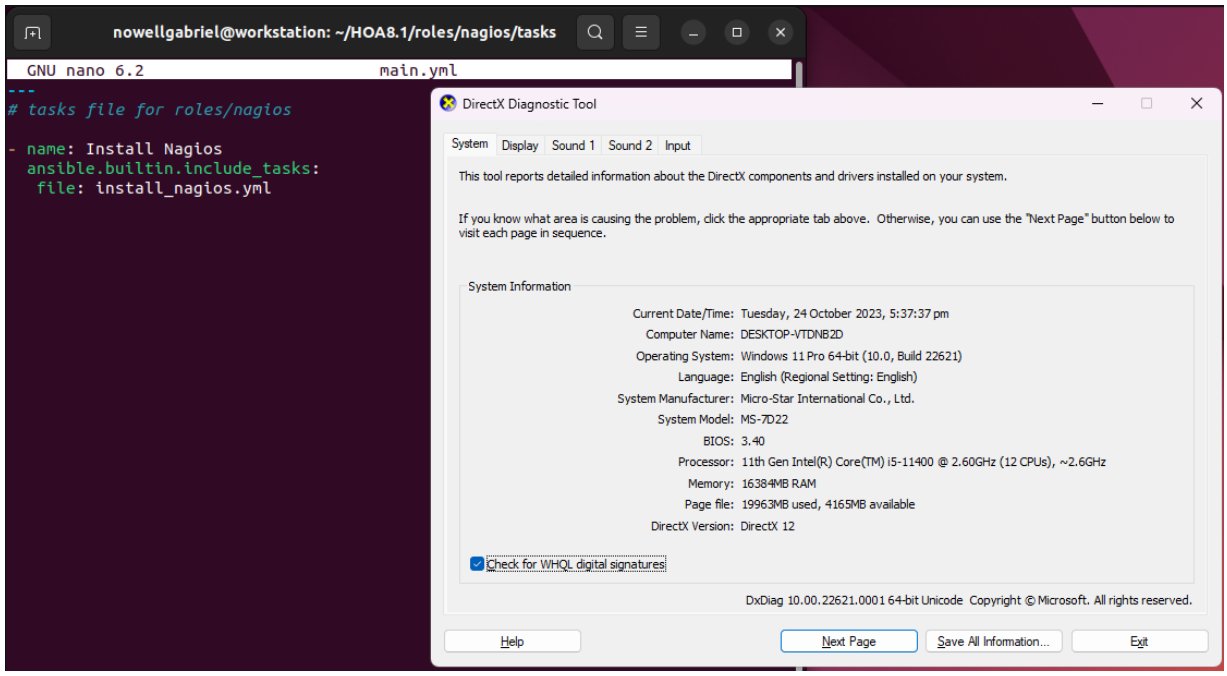
Availability monitoring is a type of monitoring tool that we use if the certain workload is up or reachable on our end. Site downtime can lead to loss of revenue, reputational damage and severe distress. Availability monitoring prevents adverse situations by checking the uptime of infrastructure components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




Activities
Terminal
Oct 24 17:54
nowellgabriel@workstation: ~/HOA8.1/roles/nagios/tasks
GNU nano 6.2 install_nagios.yml
- name: Install Nagios Core
apt:
name: nagios4-core
state: latest
when: ansible_distribution == "Ubuntu"
- name: Install Nagios Plugins
apt:
name: nagios-plugins
state: present
when: ansible_distribution == "Ubuntu"
- name: Install Nagios Core
yum:
name: nagios
state: present
when: ansible_distribution == "CentOS"
- name: Install Nagios Plugins
yum:
name: nagios-plugins-all
state: present
when: ansible_distribution == "CentOS"
DirectX Diagnostic Tool
System Display Sound 1 Sound 2 Input
This tool reports detailed information about the DirectX components and drivers installed on your system.
If you know what area is causing the problem, click the appropriate tab above. Otherwise, you can use the "Next Page" button below to visit each page in sequence.
System Information
Current Date/Time: Tuesday, 24 October 2023, 5:37:37 pm
Computer Name: DESKTOP-VTDNB2D
Operating System: Windows 11 Pro 64-bit (10.0, Build 22621)
Language: English (Regional Setting: English)
System Manufacturer: Micro-Star International Co., Ltd.
System Model: MS-7D22
BIOS: 3.40
Processor: 11th Gen Intel(R) Core(TM) i5-11400 @ 2.60GHz (12 CPUs), ~2.6GHz
Memory: 16384MB RAM
Page file: 19963MB used, 4165MB available
DirectX Version: DirectX 12
Check for WHQL digital signatures
DxDiag 10.00.22621.0001 64-bit Unicode Copyright © Microsoft. All rights reserved.
Help
Next Page
Save All Information...
Exit


nowellgabriel@workstation: ~/HOA8.1/roles/nagios/tasks
GNU nano 6.2 main.yml
---
tasks file for roles/nagios
- name: Install Nagios
ansible.builtin.include_tasks:
file: install_nagios.yml
DirectX Diagnostic Tool
System Display Sound 1 Sound 2 Input
This tool reports detailed information about the DirectX components and drivers installed on your system.
If you know what area is causing the problem, click the appropriate tab above. Otherwise, you can use the "Next Page" button below to visit each page in sequence.
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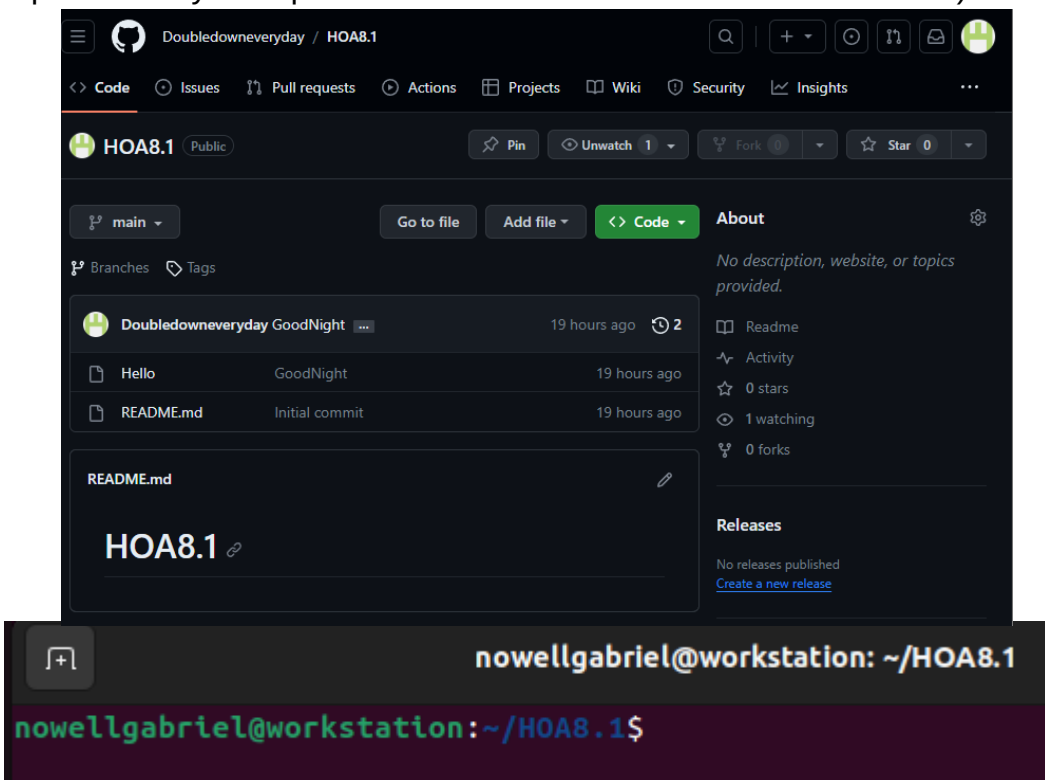
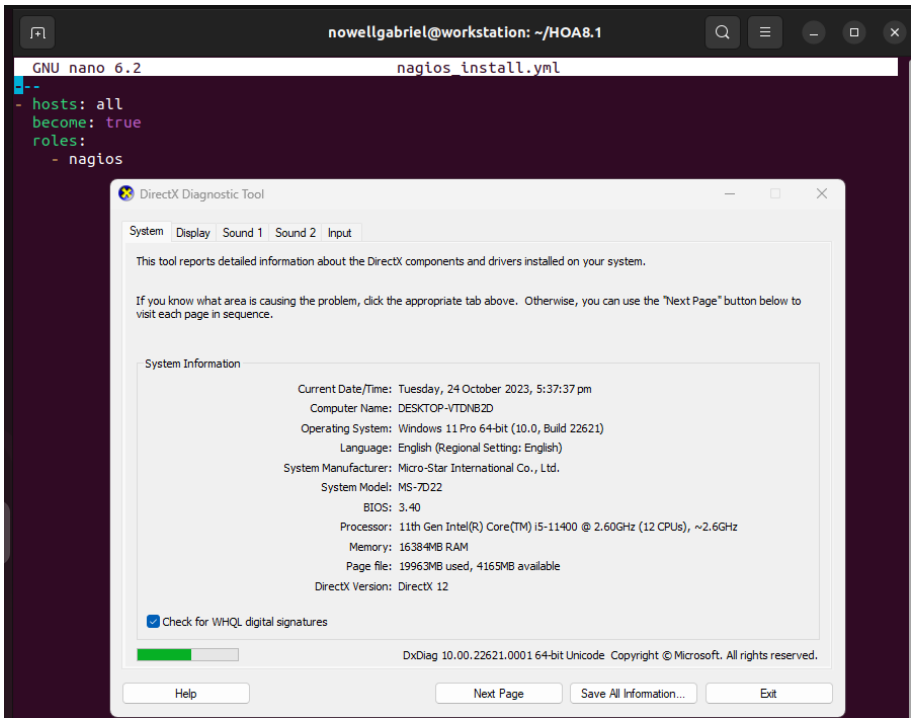
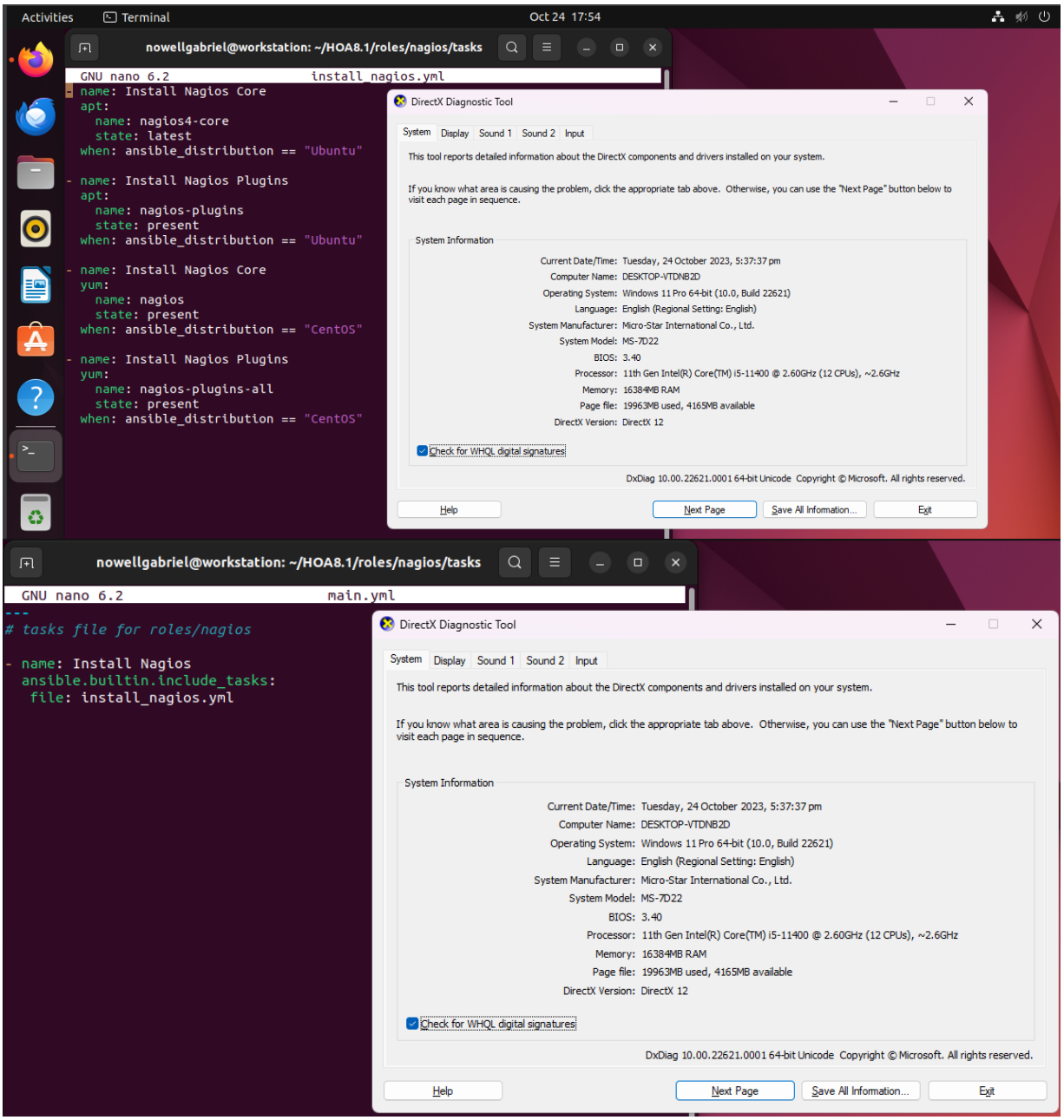
Check for WHQL digital signatures
DxDiag 10.00.22621.0001 64-bit Unicode Copyright © Microsoft. All rights reserved.
Help
Next Page
Save All Information...
Exit

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.)



- First, I created a new repository for this activity.



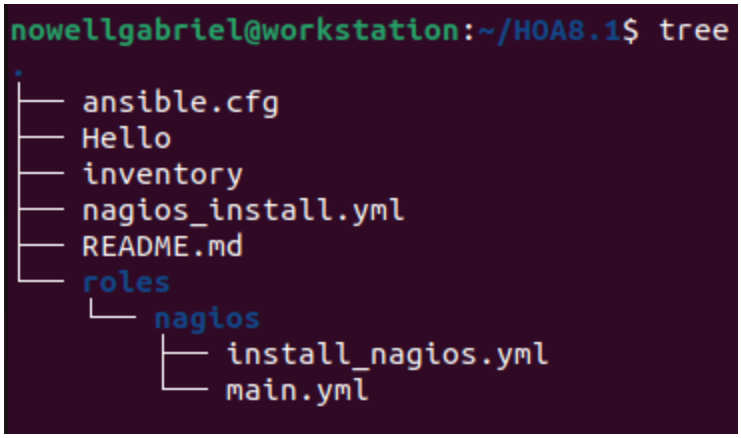


- Then, I created the needed playbooks.

```
nowellgabriel@workstation: ~/HOA8.1
  GNU nano 6.2                                  ansible.cfg
[defaults]

inventory = inventory
host_key_checking = False

deprecation_warnings = False

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

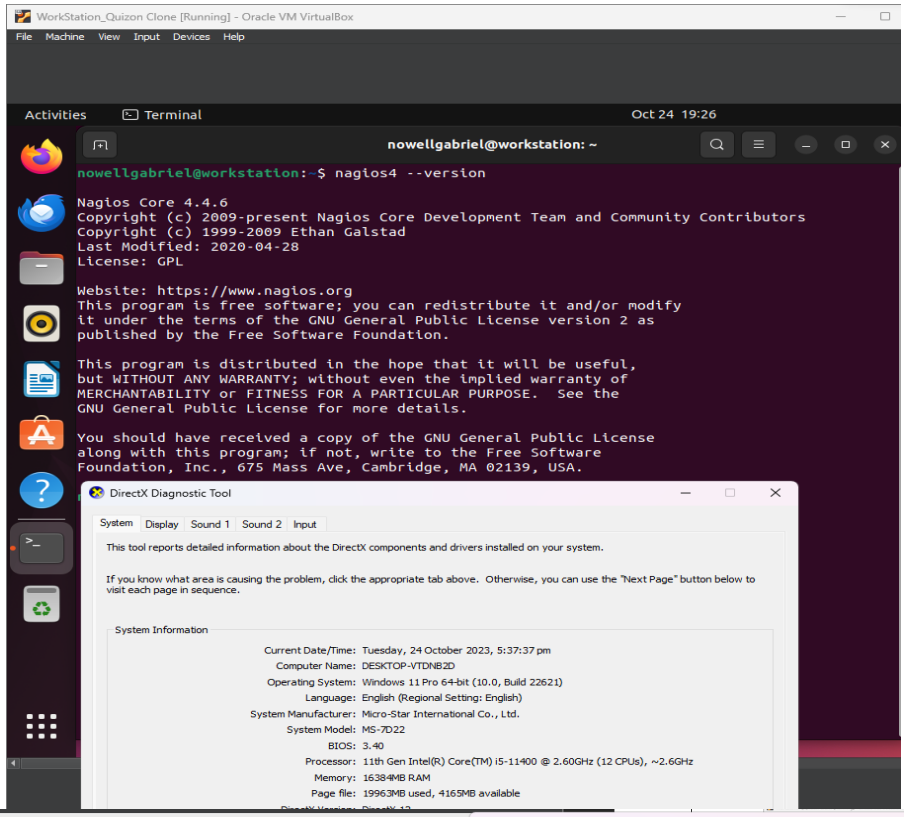
```
nowellgabriel@workstation: ~/HOA8.1
  GNU nano 6.2                                  inventory
192.168.56.108
192.168.56.110
```

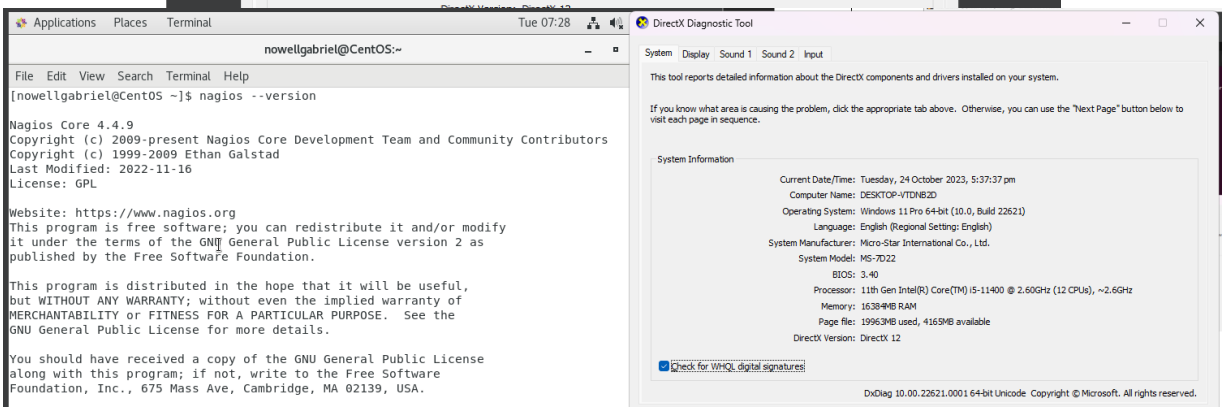
- Then, I created the ansible.cfg and inventory files.



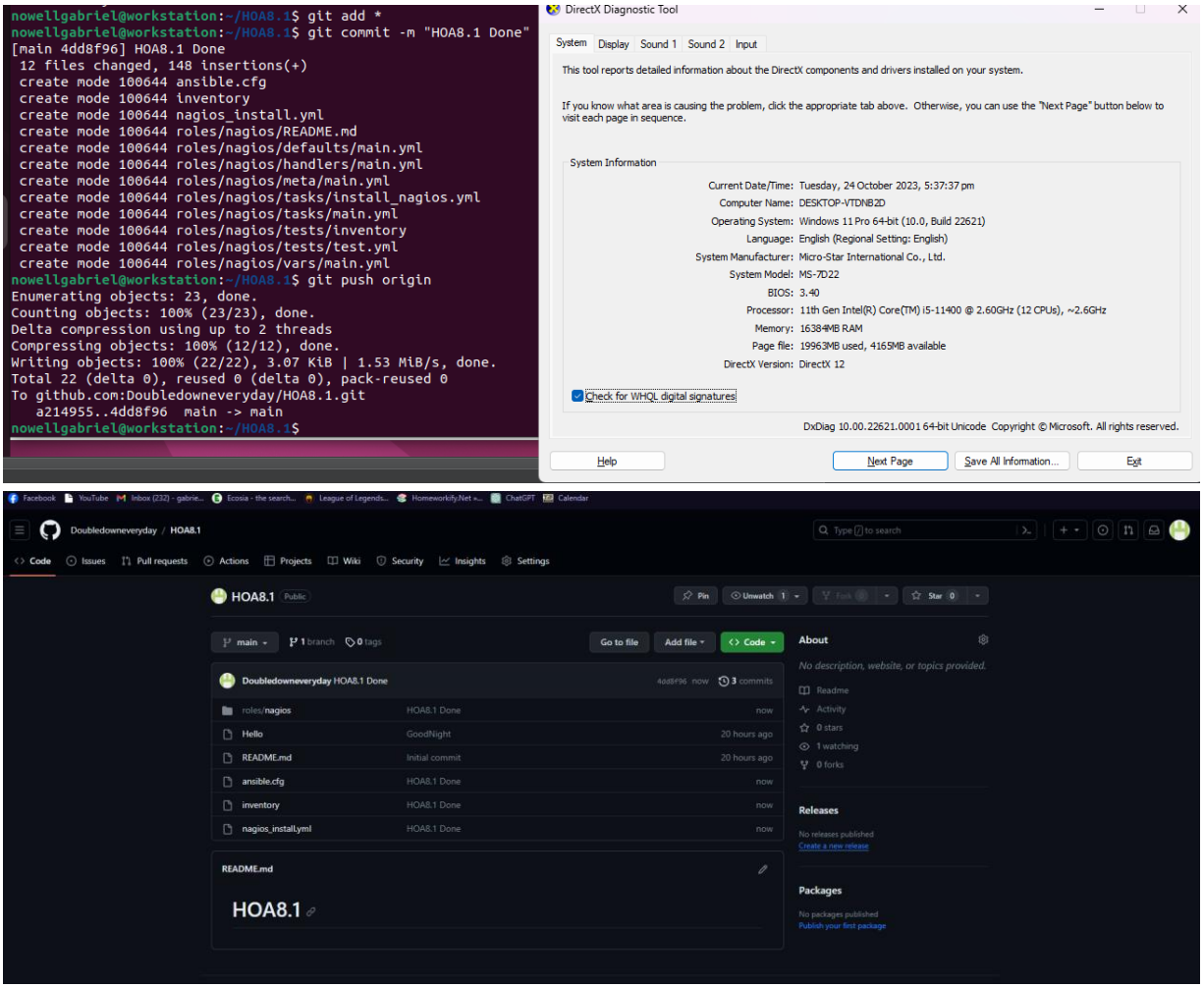
- This is the summary of the files and directories I created.

3. Show an output of the installed Nagios for both Ubuntu and CentOS.

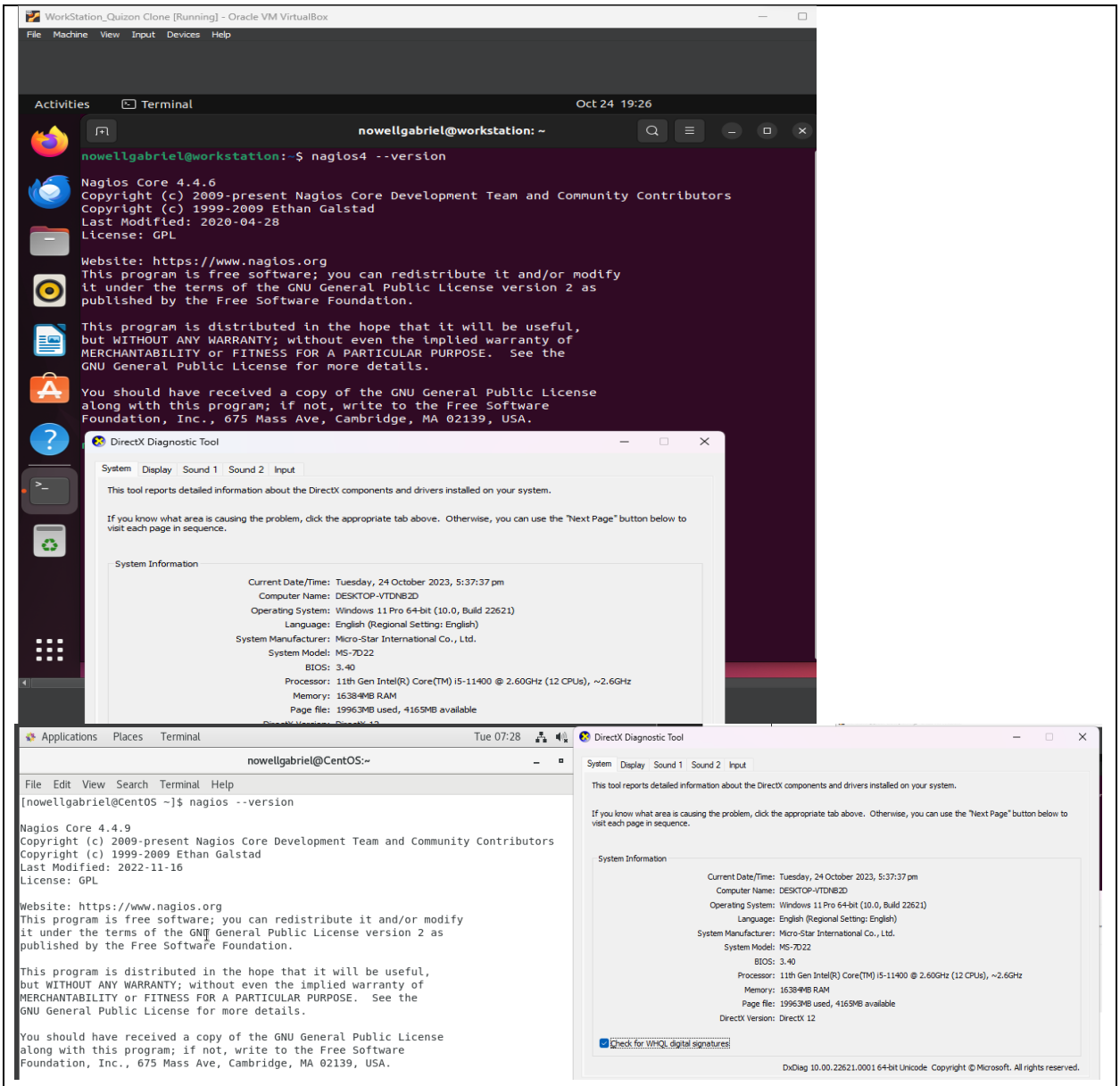




4. Make sure to create a new repository in GitHub for this activity.



4. Output (screenshots and explanations)



- After playing the playbook, it successfully installed nagios on both servers. I observed that by using roles, I can create a more efficient way to run the commands. Using this method makes it easier to make changes without having to configure so many parts of the different files that I have created.

Reflections:

Answer the following:

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

   Availability monitoring tools ensure continuous online service and detect downtime. They enhance user experience, prevent revenue loss, build trust, and aid in performance optimization. They also support compliance, enable proactive issue resolution, and offer valuable historical data for analysis and capacity planning.

Conclusions:

In conclusion, designing a procedure for installing and managing enterprise monitoring tools using Ansible as an Infrastructure as Code tool is an appropriate strategic decision for efficient system management. Availability monitoring is crucial in minimizing revenue loss, maintaining reputation, and ensuring smooth operations through the early discovery and resolution of downtime issues. In order to protect business interests and customer satisfaction, it is crucial.