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Instructor: Eng.Roman Richard	Semester and SY: 1st sem-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.

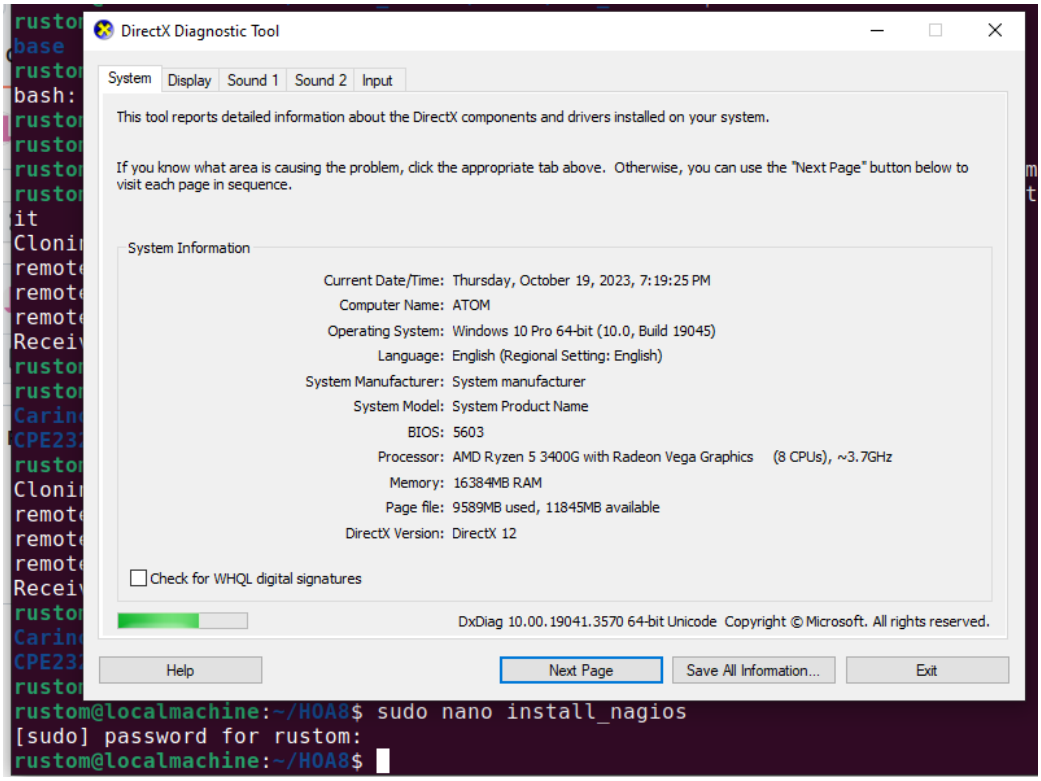


Figure 1.1 Creating a playbook

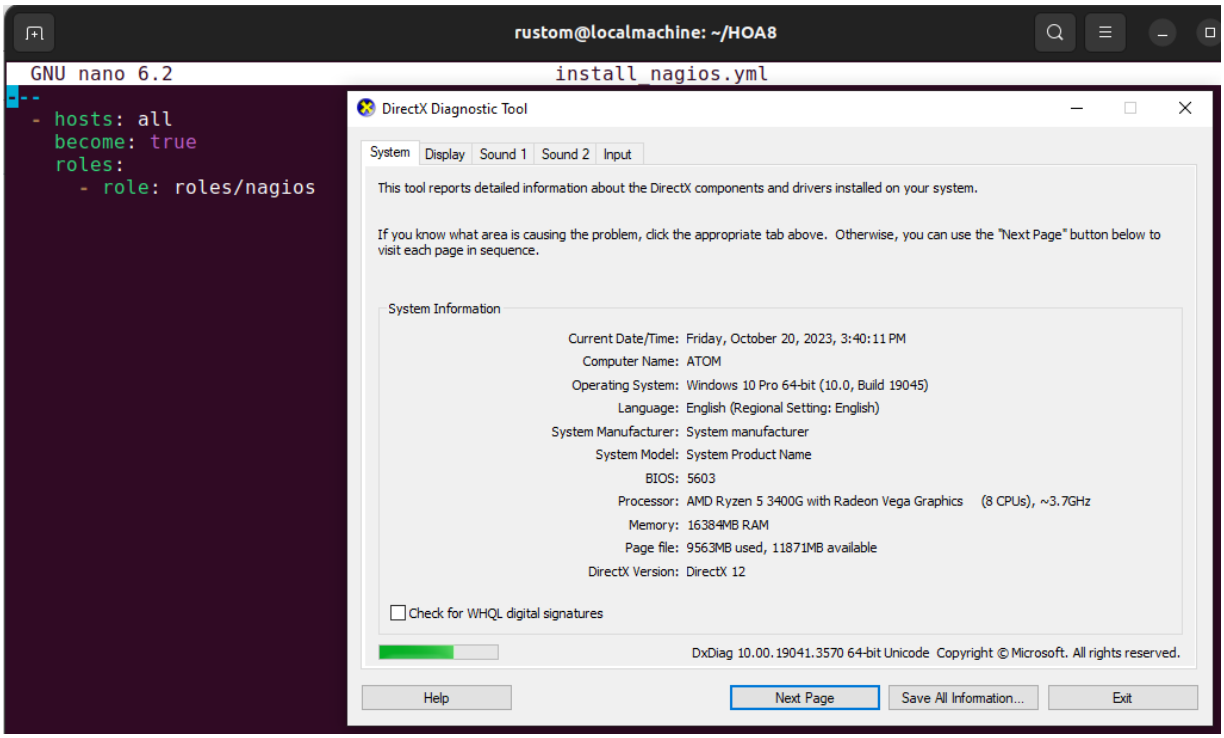


Figure 1.2 Content of install_nagios.yml

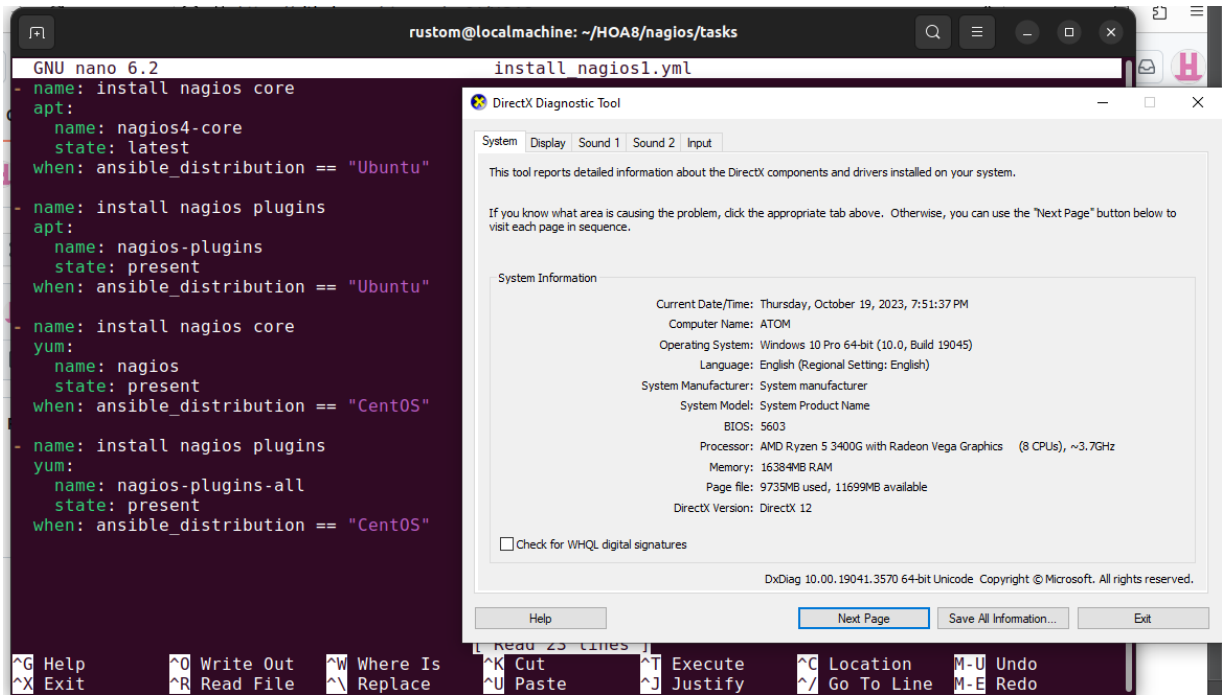
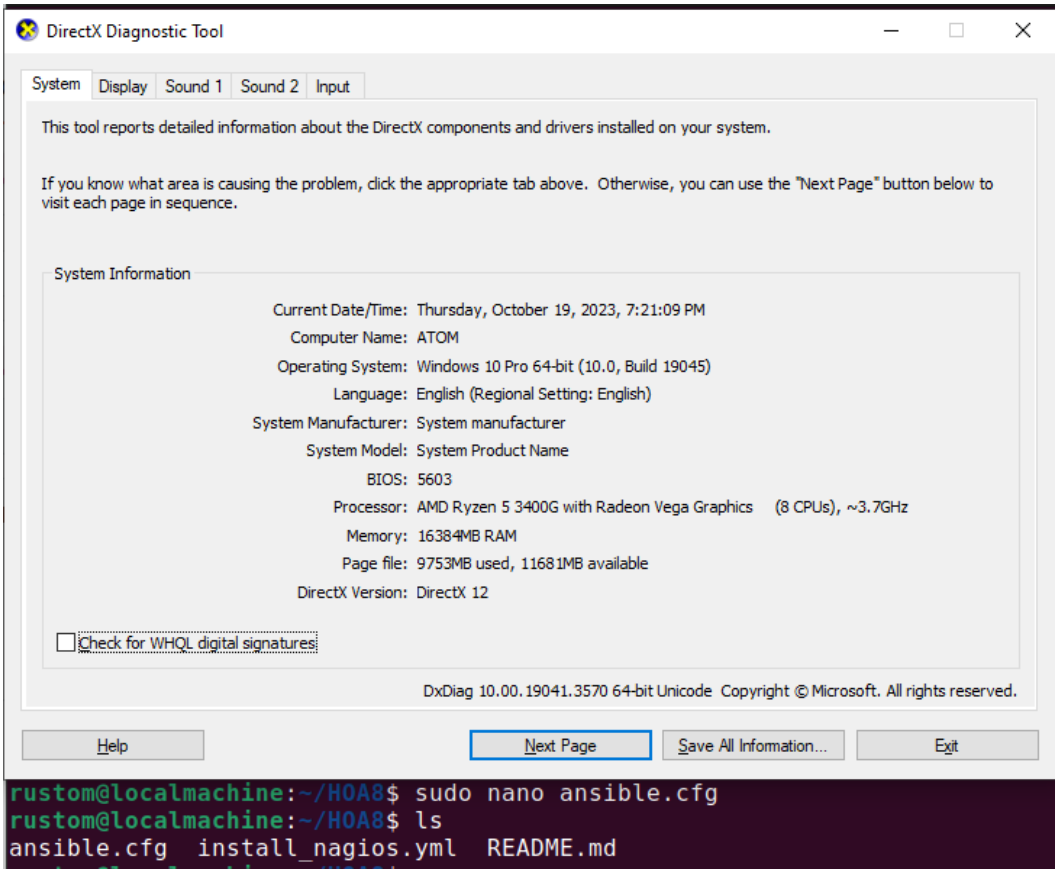
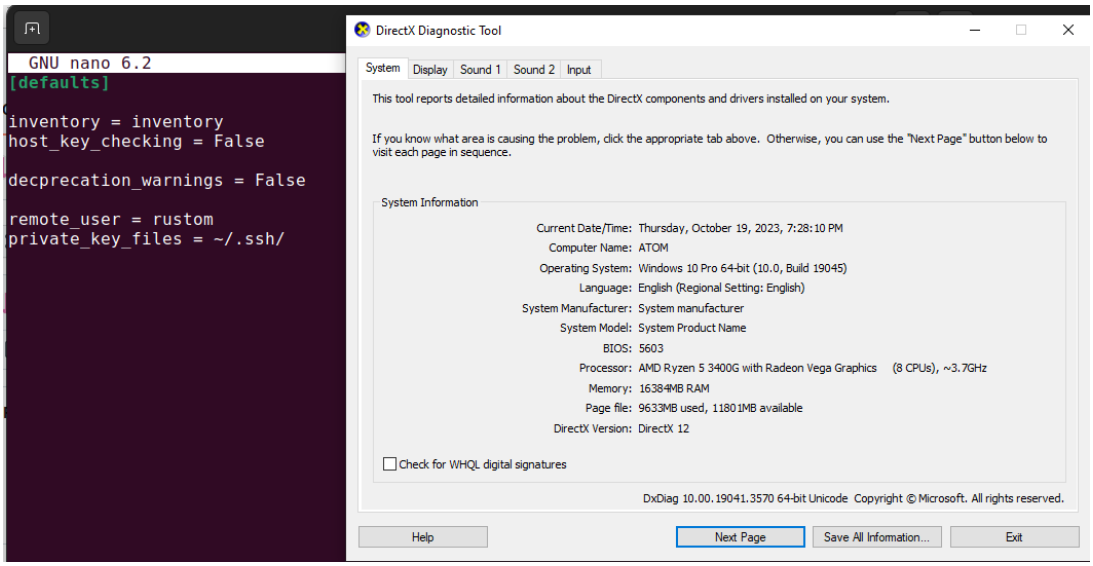


Figure 1.3 Content of install_nagios1.yml inside the roles

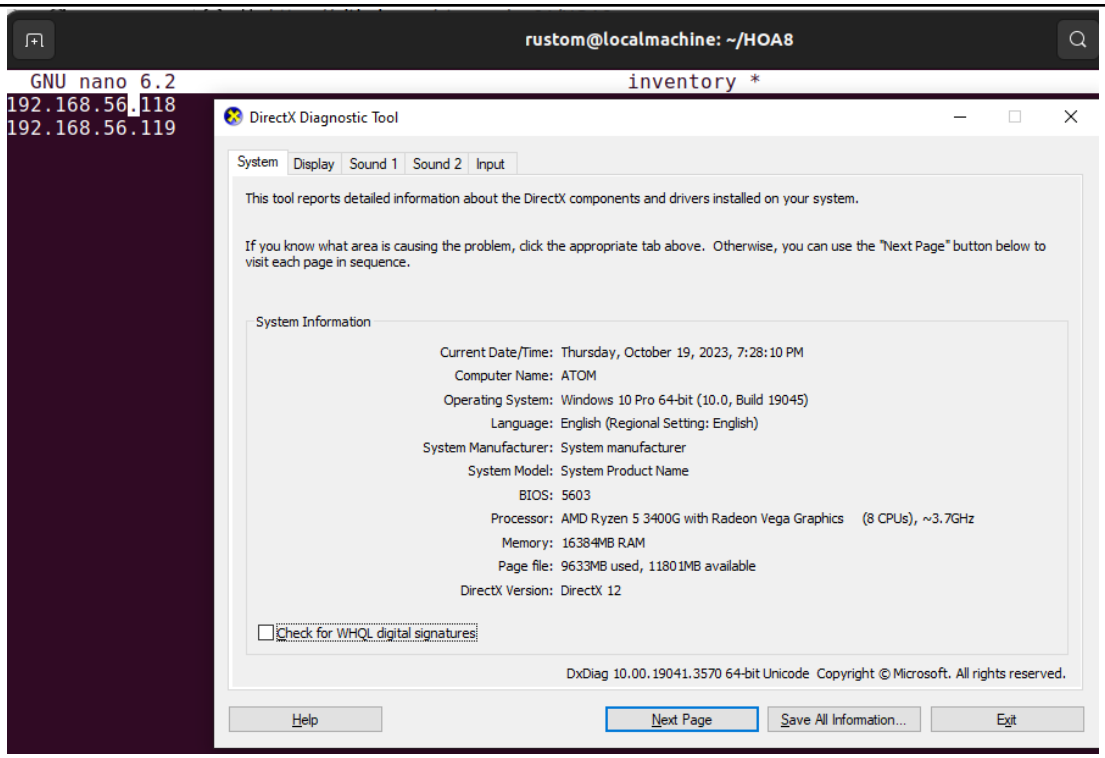
2. Describe how you did step 1. (Provide screenshots and explanations in your report. Make your report detailed such that it will look like a manual.



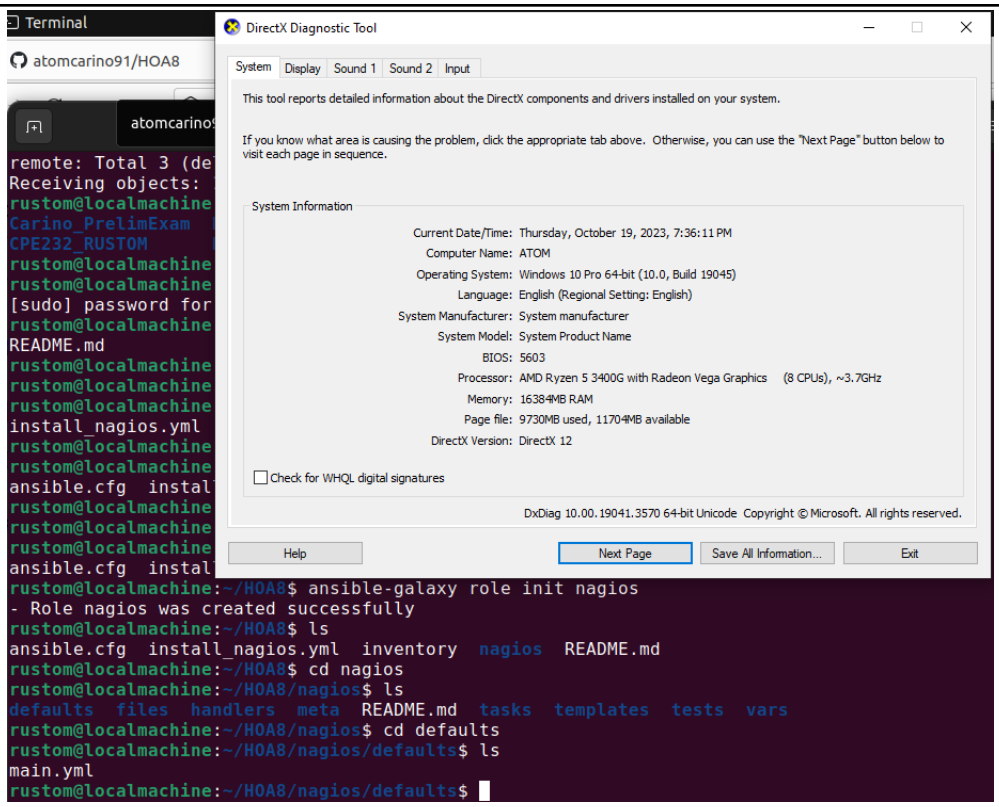
- For configuration, first I created ansible.cfg since the repository I used is freshly made.



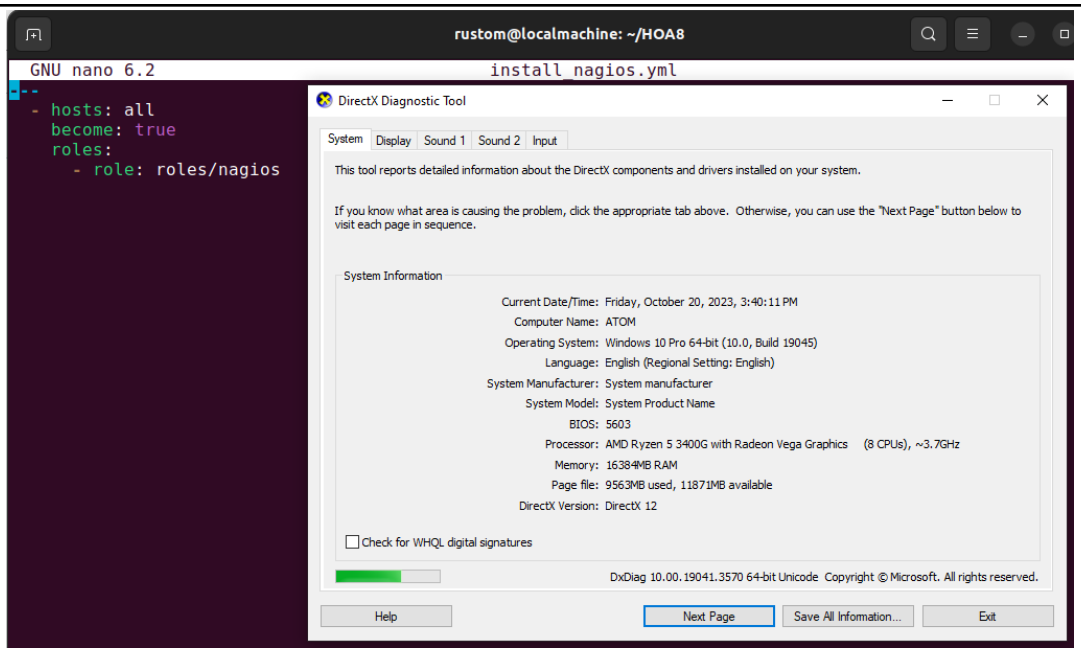
- This is the content of my ansible.cfg, it is also same from the previous activity.



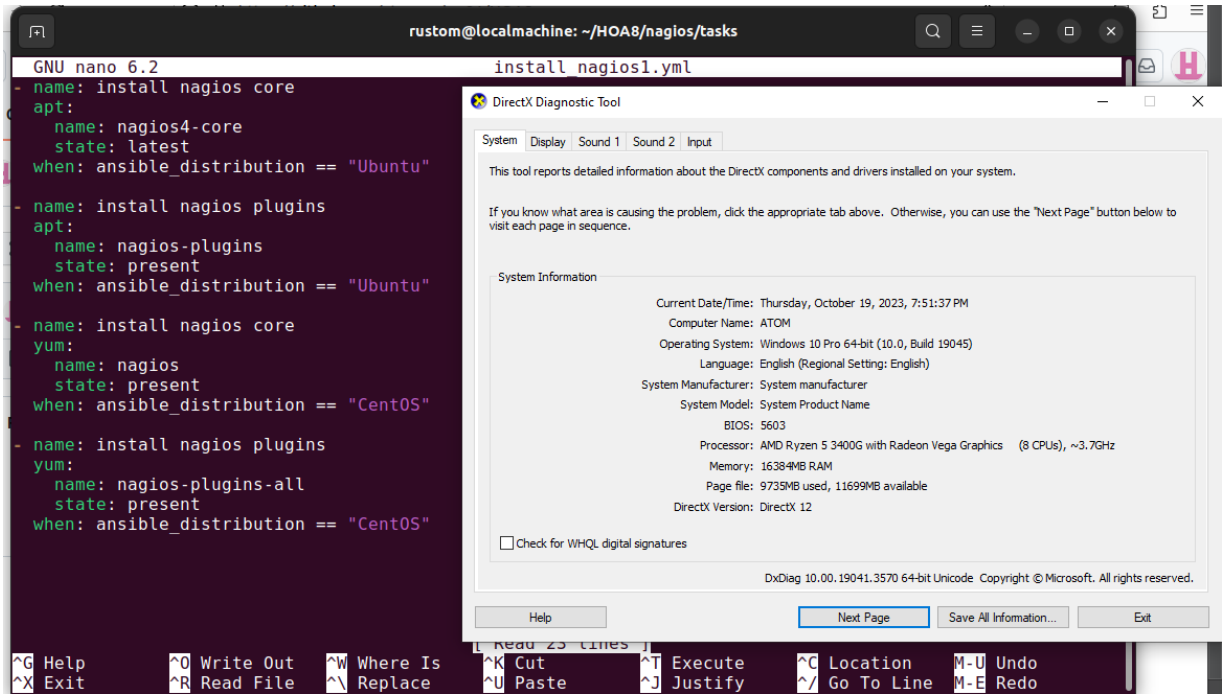
- I also created the inventory and put my 2 managed node which is the server 3 and the centOS.



- For creating roles, I used the ansible-galaxy init roles/nagios to create a directories that includes subdirectories on it. Inside the subdirectories there is the main.yml and the install_nagios1.yml that contains the proper script for installing the nagios in both ubuntu and centos.



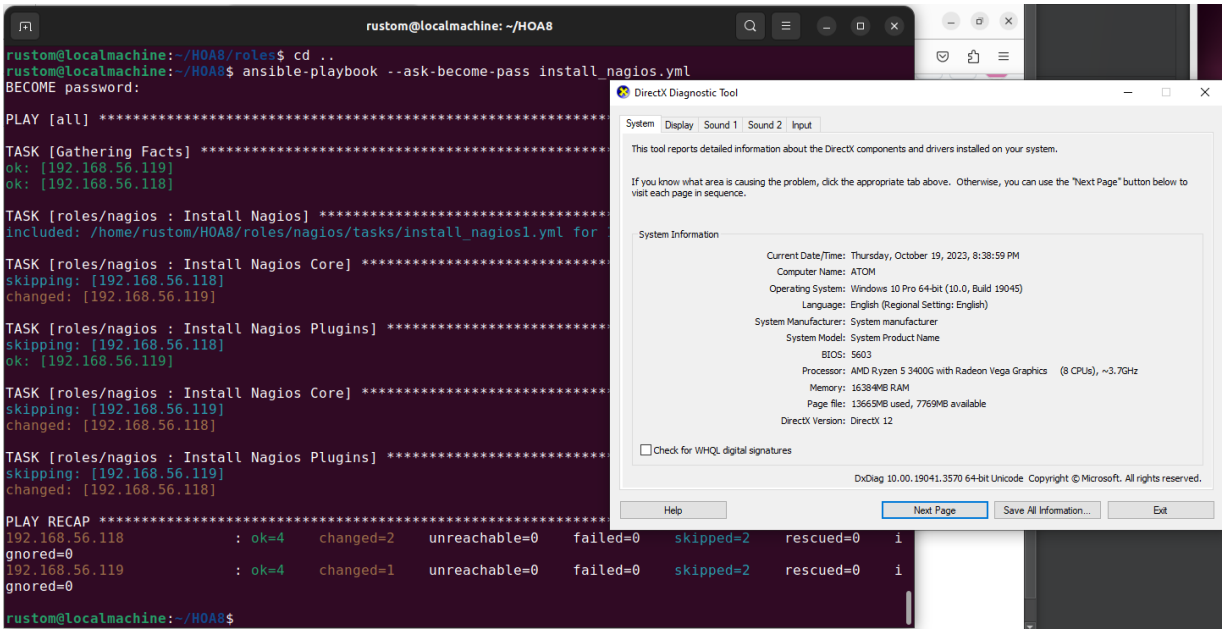
- the install_nagios was located outside the roles. As you can see the playbook is just calling the nagios inside the roles since there is another playbook inside the roles which is the install_nagios1.yml and the main.yml that contain the proper script for installing the nagios in both ubuntu and centos.



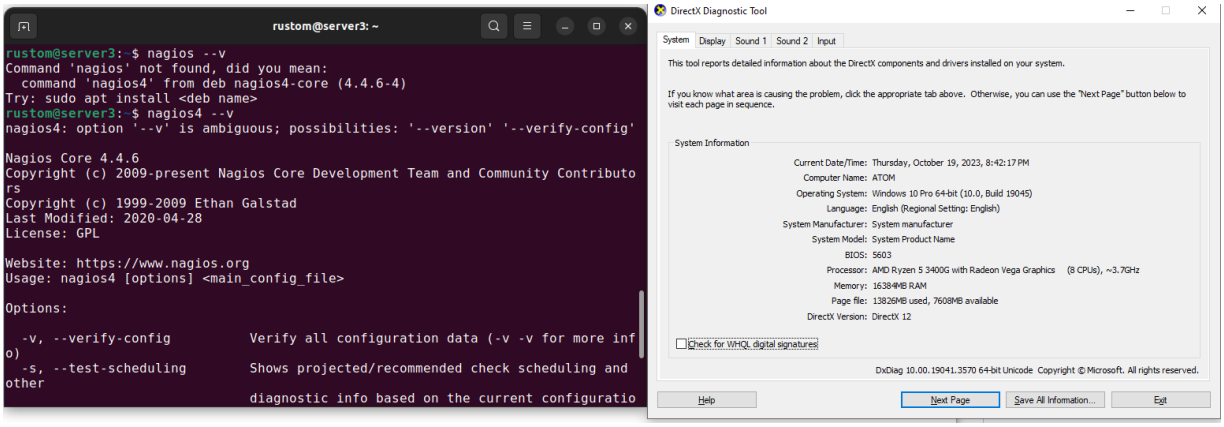
- This is the playbook inside the roles, where the nagios in both ubuntu and centos. As you can see there are 2 task in both ubuntu and centos, the installation for nagios itself and the nagios plugins. In this playbook I want to use a package for efficiency but there are

different installation packages in ubuntu and centos, therefore I separate the task for ubuntu and centos.

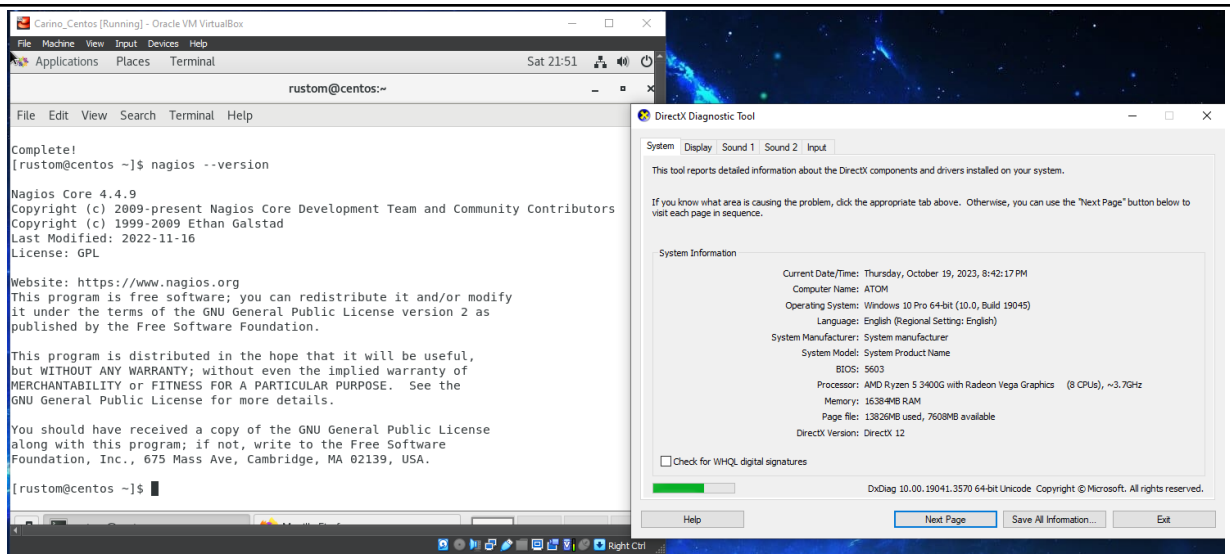
3. Show an output of the installed Nagios for both Ubuntu and CentOS.



- In executing the playbook, there is no error and the output will show that nagios was successfully installed in both servers.



- To see if the nagios was successfully installed in ubuntu, I used the command nagios4 -v and it showed that the nagios was successfully installed and it also displayed the version of the installed nagios.



- To see if the nagios was successfully installed in centos, I used the command nagios4 --version and it showed that the nagios was successfully installed and it also displayed the version of the installed nagios.

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

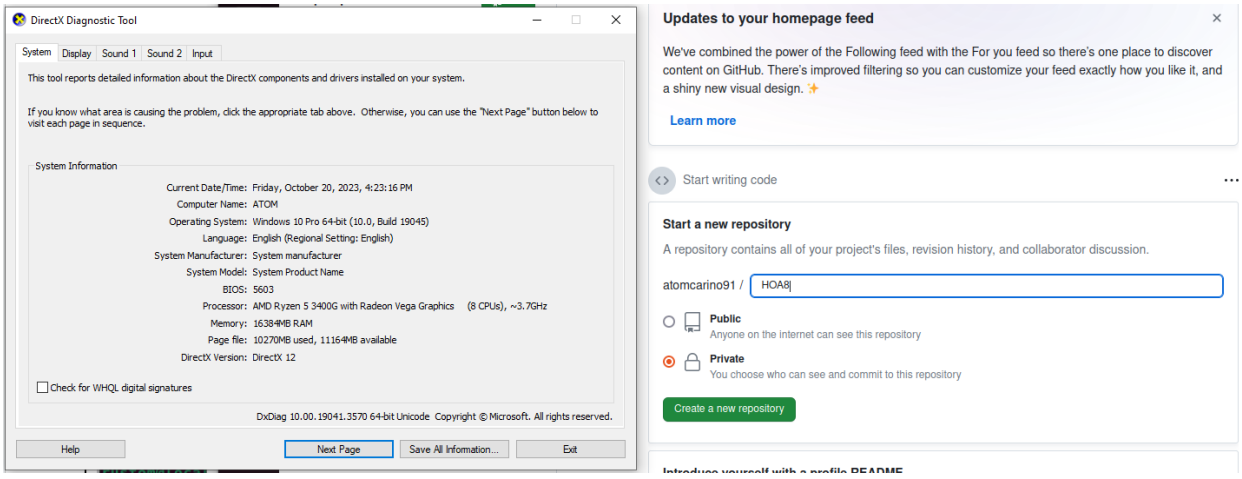


Figure 4.1 Creating new repository in Github

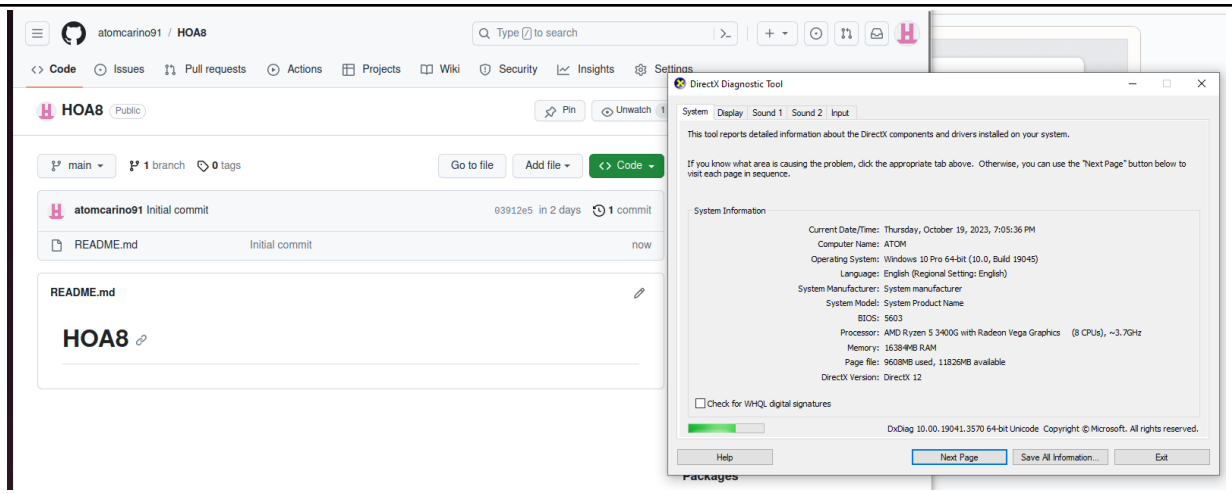


Figure 4.2 Created Repository

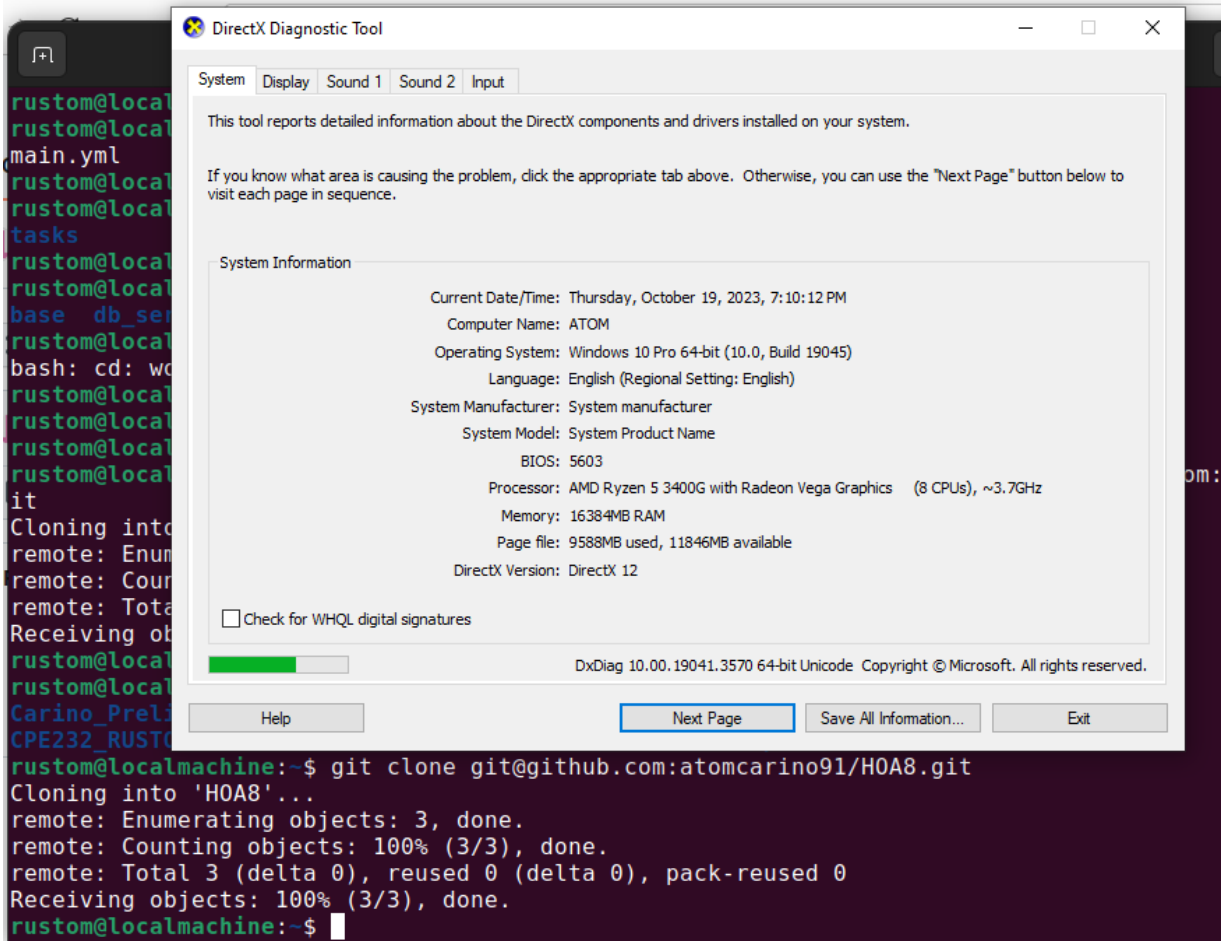


Figure 4.3 Cloning the new repository to ubuntu

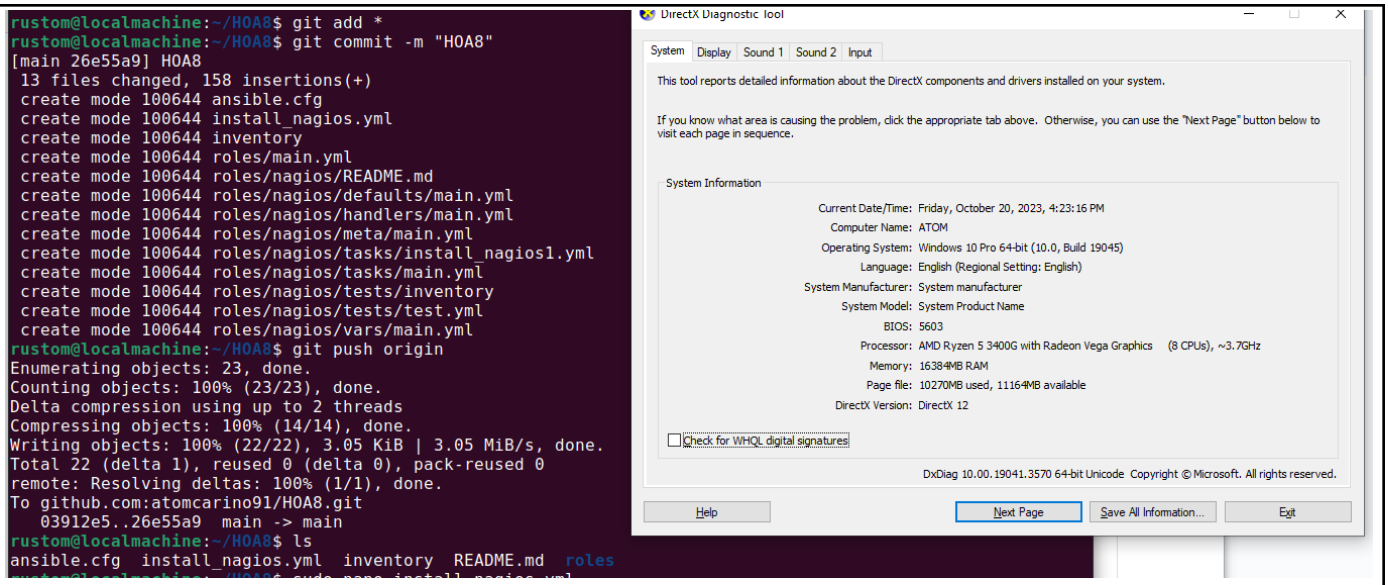


Figure 4.4 pushing the repository.

Reflections:

Answer the following:

1. **What are the benefits of having an availability monitoring tool?**
   - The availability of monitoring tools allows users or administrators to monitor systems in real-time and identify problems before they become serious, which helps IT teams maintain service uptime while reducing downtime. These tools offer insights into resource usage, performance, and security that can help with proactive problem solving and optimization. Organizations may improve user experience, adhere to service level agreements, and lower expenses related to downtime and emergency solutions by ensuring high availability.

Conclusions:

- After completing this hands-on activity I will be able to create and design a workflow that installs, configures and manages enterprise monitoring tools using Ansible as an Infrastructure as Code (IaC) tool. Technologies for enterprise monitoring are extremely beneficial for corporations and new ventures. By deploying and maintaining monitoring technologies, this method makes sure that the crucial services are always accessible and performing at their best.