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| <b>Name:</b> Mark Andrei Ponayo        | <b>Date Performed:</b> Oct 21, 2023       |
| <b>Course/Section:</b> BSCPE31S5       | <b>Date Submitted:</b> Oct 21, 2023       |
| <b>Instructor:</b> Engr. Roman Richard | <b>Semester and SY:</b> 1st sem 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

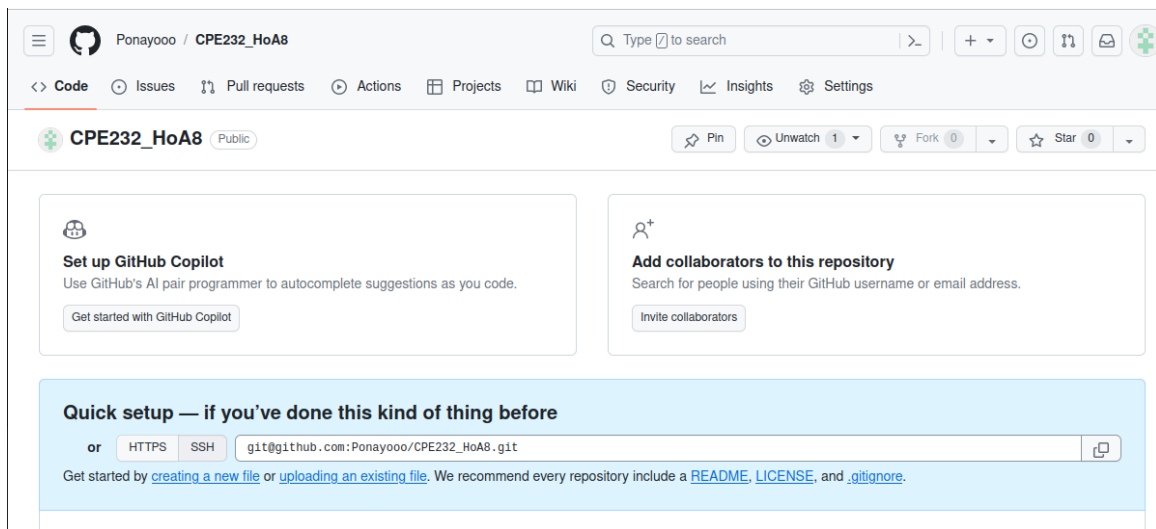
Availability monitoring is a type of monitoring tool that we use if the certain workload is up or reachable on our end. Site downtime can lead to loss of revenue, reputational damage and severe distress. Availability monitoring prevents adverse situations by checking the uptime of infrastructure components such as servers and apps and notifying the webmaster of problems before they impact on business.

#### 3. Tasks

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)

##### Creating Repository:



## Creating directories

On this step, I am creating directories using galaxy command and by using this command will create automatic directories such as defaults, files, handlers, and etc. And also, i also create ansible.cfg, inventory, and site.yml for playbook.

```
ponayo@Workstation:~/CPE232_HoA8$ tree
```

```
├── ansible.cfg
├── inventory
├── roles
│   ├── nagios
│   │   ├── defaults
│   │   │   └── main.yml
│   │   ├── files
│   │   ├── handlers
│   │   │   └── main.yml
│   │   ├── meta
│   │   │   └── main.yml
│   │   ├── README.md
│   │   ├── tasks
│   │   │   ├── main.yml
│   │   │   └── nagios_setup.yml
│   │   ├── templates
│   │   ├── tests
│   │   │   ├── inventory
│   │   │   └── test.yml
│   │   └── vars
│   │       └── main.yml
└── site.yml

10 directories, 12 files
```

DirectX Diagnostic Tool

System Display 1 Display 2 Sound 1 Sound 2 Sound 3 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 to visit each page in sequence.

### System Information

Current Date/Time: Saturday, October 21, 2023, 4:47:13 PM  
Computer Name: DESKTOP-3AE31QN  
Operating System: Windows 10 Pro 64-bit (10.0, Build 19045)  
Language: English (Regional Setting: English)  
System Manufacturer: Gigabyte Technology Co., Ltd.  
System Model: B450 AORUS M  
BIOS: F50  
Processor: AMD Ryzen 5 2600 Six-Core Processor (12 CPUs),  
Memory: 24576MB RAM  
Page file: 16580MB used, 11528MB available  
DirectX Version: DirectX 12

☒ Check for WHQL digital signatures

## Setting up Installation for Nagios:

On this step, I entered the nagios\_setup.yml file inside of the tasks directory. And setting up the installation commands of nation in both ubuntu and centos.

```
ponayo@Workstation: ~/CPE232_HoA8/roles/tasks
```

```
GNU nano 6.2 nagios_setup.yml
# Installing Nagios for Ubuntu
- name: Installing nagios core
  apt:
    name: nagios4-core
    state: latest
    when: ansible_distribution == "Ubuntu"

- name: Installing nagios Plugins
  apt:
    name: nagios-plugins
    state: present
    when: ansible_distribution == "Ubuntu"

# Installing Nagios for CentOS
- name: Installing nagios Core
  yum:
    name: nagios
    state: present
    when: ansible_distribution == "CentOS"

- name: Installing nagios Plugins
  yum:
    name: nagios-plugins-all
    state: present
    when: ansible_distribution == "CentOS"
```

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Processor: AMD Ryzen 5 2600 Six-Core Processor (12 CPUs), ~3.4GHz  
Memory: 24576MB RAM  
Page file: 16580MB used, 11528MB available  
DirectX Version: DirectX 12

☒ Check for WHQL digital signatures

Dxdiag 10.00.19041.3570 64-bit Unicode Copyright © Microsoft. All rights reserved.

Help

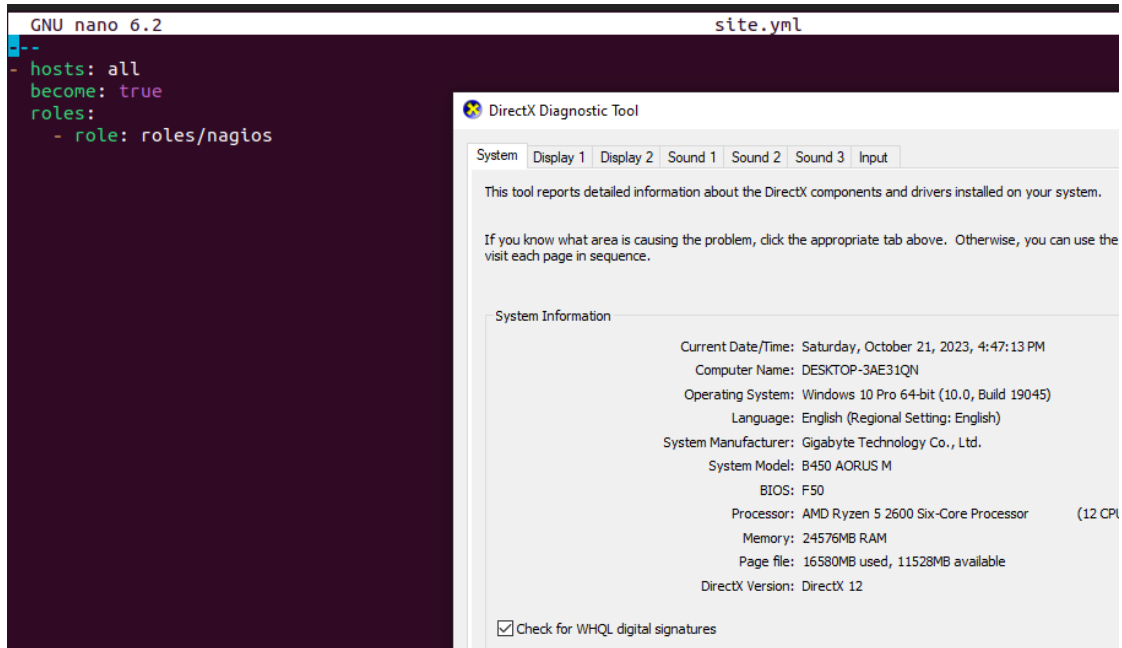
Next Page

Save All Information...

Exit

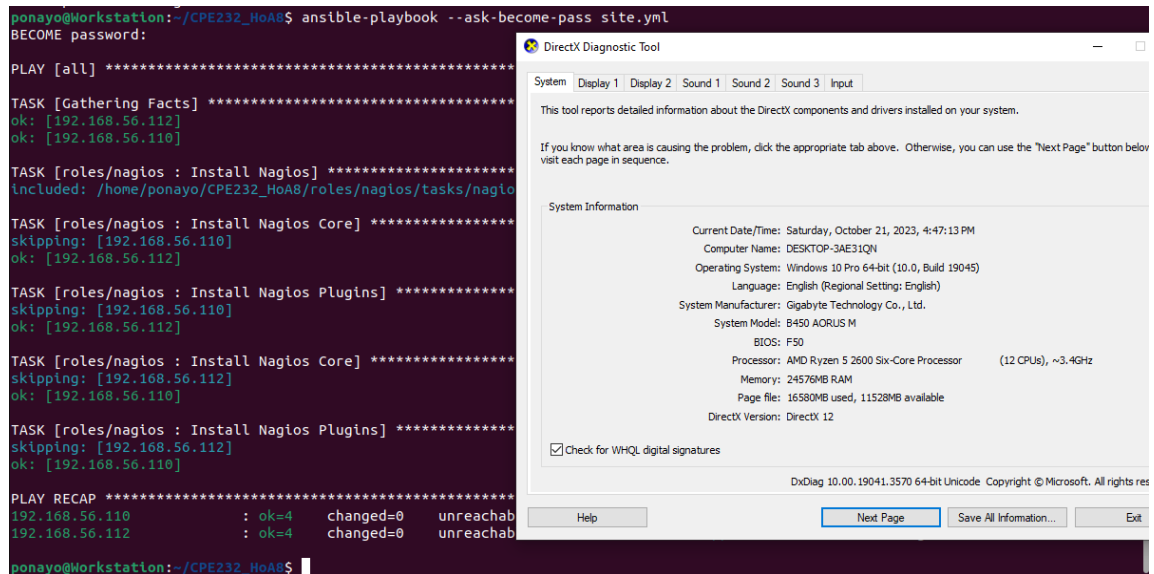
## Calling the nagios\_setup.

On this step, after setting up the installation commands in nagios\_setup. Now im calling the nagios\_setup through the site.yml and that is roles/nagios.



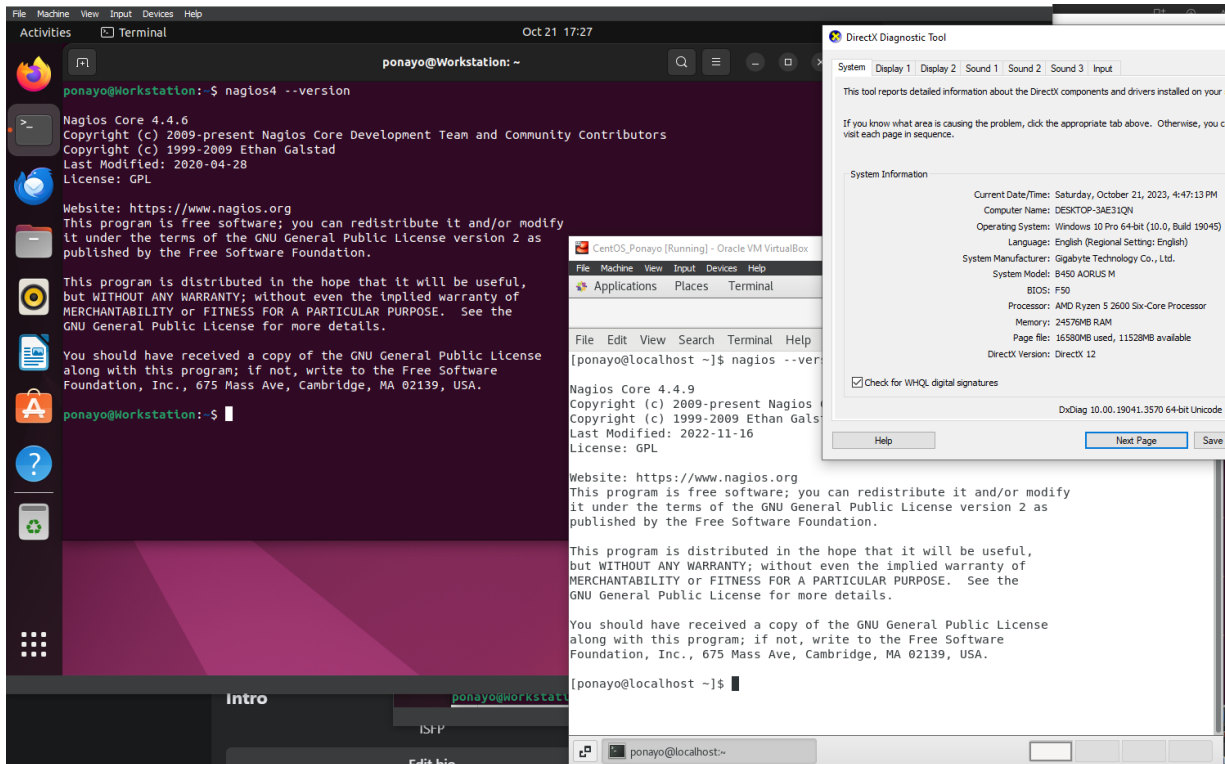
## Running the playbook

On this step, I use the ansible-playbook --ask-become-pass site.yml to execute the commands that I input in the nagios\_setup. And after running the command. It was successful installed the nagios,



## Output:

On this step, I issued the `nagios4 --version` in ubuntu and `nagios --version` to check if I successfully installed the nagios.



The screenshot shows a Linux desktop environment with a terminal window and a Directx Diagnostic Tool window. The terminal window displays the output of the `nagios4 --version` command, showing Nagios Core 4.4.6. The Directx Diagnostic Tool window shows system information, including the current date and time, computer name, operating system, language, system manufacturer, system model, BIOS, processor, memory, page file, and DirectX version.

```
ponayo@Workstation: ~  
ponayo@Workstation: $ nagios4 --version  
Nagios Core 4.4.6  
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors  
Copyright (c) 1999-2009 Ethan Galstad  
Last Modified: 2020-04-28  
License: GPL  
  
Website: https://www.nagios.org  
This program is free software; you can redistribute it and/or modify  
it under the terms of the GNU General Public License version 2 as  
published by the Free Software Foundation.  
  
This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
GNU General Public License for more details.  
  
You should have received a copy of the GNU General Public License  
along with this program; if not, write to the Free Software  
Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.  
  
ponayo@Workstation: $  
[ponayo@localhost ~]$ nagios --version  
Nagios Core 4.4.9  
Copyright (c) 2009-present Nagios  
Copyright (c) 1999-2009 Ethan Galst  
Last Modified: 2022-11-16  
License: GPL  
  
Website: https://www.nagios.org  
This program is free software; you can redistribute it and/or modify  
it under the terms of the GNU General Public License version 2 as  
published by the Free Software Foundation.  
  
This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
GNU General Public License for more details.  
  
You should have received a copy of the GNU General Public License  
along with this program; if not, write to the Free Software  
Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.  
[ponayo@localhost ~]$
```

DirectX Diagnostic Tool  
System | Display 1 | Display 2 | Sound 1 | Sound 2 | Sound 3 | Input |  
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If you know what area is causing the problem, click the appropriate tab above. Otherwise, you c  
visit each page in sequence.  
  
System Information  
Current Date/Time: Saturday, October 21, 2023, 4:47:13 PM  
Computer Name: DESKTOP-3AE31Q9N  
Operating System: Windows 10 Pro 64-bit (10.0, Build 19045)  
Language: English (Regional Setting: English)  
System Manufacturer: Gigabyte Technology Co., Ltd.  
System Model: B450 AORUS M  
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☒ Check for WHQL digital signatures  
DxDiag 10.00.19041.3570 64-bit Unicode  
Help Next Page Save

## Reflections:

Answer the following:

1. What are the benefits of having an availability monitoring tool?
  - The benefits of having an availability monitoring tool. First, it increases uptime and reliability, Availability monitoring can help us to identify and resolve potential issues before they cause outages this can lead to increase uptime and reliability for our critical systems and applications.

## Conclusions:

In conclusion, there are several benefits to using Ansible as Infrastructure as Code (IaC) for creating an organized workflow for installing, configuring, and administering enterprises monitoring solutions. Using this approach allows enterprises to improve productivity, system scalability, monitoring infrastructure consistency, and ultimately proactive management and maintenance of their computer systems. This methodology's intrinsic automation and repeatability eliminate human error, conserve time and resources, and increase the overall effectiveness and dependability of an organization's monitoring solutions. Leveraging Ansible as IaC for this purpose demonstrates to be a powerful technique that allows enterprises to stay ahead in an ever-evolving technical field, where reliable monitoring is crucial for business achievement.