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| **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. | |
| 1. **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. | |
| 1. **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. | |
| 1. **Output** (screenshots and explanations)   **Step 1. Create a new repository and clone it into your machine.**    *Figure 1.1. Creating a new repository.*    *Figure 1.2 Git clone the new repository to the machine and copy the needed files from the previous repository.*  **Step 2. Create the needed files and directories, as shown in *Figure 1.3.***    *Figure 1.3. Implementing roles structure inside of repository. This includes the roles for installing Nagios for Ubuntu and CentOS.*  **Step 3. Copy the format below for the inventory file. Take note that the IP address and username varies depending on your machine.**    *Figure 1.4. Modifying the old inventory file to support only two servers.*  **Step 4. Copy the contents of the install\_nagios.yml below.**      *Figure 1.5. Editing the install\_nagios.yml.*  **Step 5. Copy the contents of the main.yml for Centos below.**          *Figure 1.6. Adding the tasks in CentOS server at roles/nagios\_centos/tasks/main.yml.*  **Step 6. Copy the contents of the main.yml for Ubuntu below.**            *Figure 1.7. Adding the tasks in CentOS server at roles/nagios\_ubuntu/tasks/main.yml.*  **Step 7. Check the connection between the computer and the servers by running “ansible all -m ping” (Note: ssh without asking a password is required). Also, you can check you syntax by running “ansible-playbook –syntax-check playbook.yml”**    *Figure 1.8. Running a test to make sure the two servers are reachable.*    *Figure 1.9. Running a test to make sure the scripts does not have any syntax errors.*  **Step 8. Run “ansible-playbook –ask-become-pass playbook.yml” to execute the scripts to the servers.**          *Figure 1.10. Output of the command “ansible-playbook –ask-become-pass install\_nagios.yml”.*  **Step 9. Verify the installation by checking both servers. In firefox the ip address of the machine follows the nagios (e.g http://192.168.122.190/nagios).**   | **VERIFYING NAGIOS IN BOTH SERVER** | | | --- | --- | | **Server** | **Output in Firefox** | | CentOS  *(http://192.168.122.190/nagios)* |  | | Ubuntu  *(http://192.168.122.94/nagios)* |  |   *Table 1.1. The table above shows the proofs in each server.*  **Step 10. Update the repository.**    *Figure 1.11. Pushing the updated repository into Github.*    *Figure 1.12. The screenshot above shows the Github updated repository page.*  Github Link: <https://github.com/piolotorrecampo/CPE232-Activity_8.git> | |
| **Reflections:**  **Answer the following:**   * 1. **What are the benefits of having an availability monitoring tool?** * Availability monitoring tools like Nagios are used to prevent a damaging situation that can lead to site downtime in an enterprise which can result in loss of revenue, reputational damage and severe distress. This tool checks the uptime of infrastructure components like applications and servers. Then it notifies a system administrator where the problems are before it can damage the business. Pertaining to the Nagios application, it has a features of monitoring an IT infrastructure such as servers, services in application or databases, UPS backup system, biometric identification system, CCTV, storages like NAS, and embedded systems. | |
| **Conclusions:**  In summing up, this activity achieved its objective to create and design an ansible playbook that can install, configure and manage monitoring too, specifically the Nagios. In researching Nagios, I found that this is an open source application that monitors a computer system, networks and an entire IT infrastructure. The Nagios application has a bunch of dependencies to install depending on the system but has the same installation process. As I observe, the installation process of Nagios between CentOS and Ubuntu starts by installing the required dependencies in the software. The second step in the installation process is to download the source file for Nagios application and its plugin then extract them in a directory. After extracting, copile them by a bunch of make commands and a script provided in the file. The last process is to restart all of the service to apply the changes in the system. As a result I can now access the Nagios website through firefox by typing ip address and following the nagios (e.g, 192.168.122.90/nagios). | |
| **Honor Pledge:**  *“I affirm that I will not give or receive unauthorized help on this activity and that all will be my own.”* | |