**Ansible**

**Tasks to be performed:**

**Section A:**

* Create 2 Ansible roles
* Install Apache2 on slave1 using one role and NGINX on slave2 using the other role
* Above should be implemented using different Ansible roles

**Section B:**

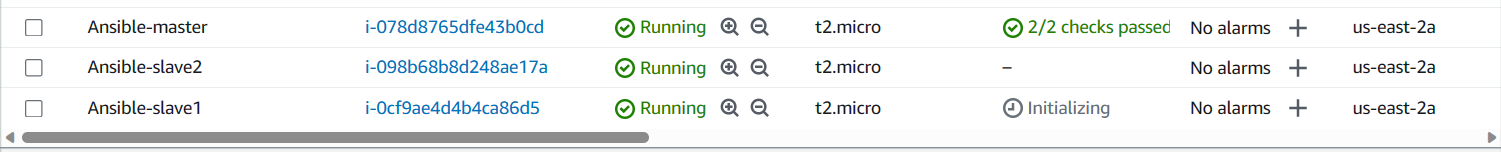
* Use the previous deployment of Ansible cluster
* Configure the files folder in the role with index.html which should be replaced with the original index.html
* All of the above should only happen on the slave which has NGINX installed using the role.

**Section C:**

* Create a new deployment of Ansible cluster of 5 nodes
* Label 2 nodes as test and other 2 as prod
* Install Java on test nodes
* Install MySQL server on prod nodes
* Use Ansible roles for the above and group the hosts under test and prod

**Configuring Master/slave nodes:**

1. Create an Ansible cluster using 3 nodes



1. Configuring the prerequisites for Master-slave connection. Enable keyless SSH access between Master and slave using ssh-keygen

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1. Installing Ansible on Master

Sudo apt install ansible

1. Configure the slave by creating hosts file in the master node

Sudo nano /etc/ansible/hosts

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1. Test master-slave connection

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**Solution:**

**Section A:**

1. Create 2 ansible roles
2. Install Apache2 on slave1 using one role and NGINX on slave2 using the other role
3. Above should be implemented using different ansible roles
4. Go to /etc/ansible/roles and create a role using ansible-galaxy command

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1. Install the tree package using “sudo apt install tree”

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1. Go inside the task folder inside the apache directory and create a file called install.yml

Sudo nano install.yml

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1. Include the task file install.yml in main.yml file

Sudo nano main.yml

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1. For the second role, go inside /etc/ansible/roles/nginx/tasks and create install.yml file

Sudo nano install.yml

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1. Include the task file install.yml in main.yml file

Sudo nano main.yml

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1. Now create a playbook to use these roles

Go to ansible folder and create a playbook

Sudo nano play3.yml

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1. Execute the playbook

Ansible-playbook play3.yml

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1. Verify the output using public IP address of slave1 and slave2

Slave1

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Slave2

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**Section B:**

1. Configure the files folder in the role with index.html which should be replaced with the original index.html
2. Cd /etc/ansible/roles/apache/files

Sudo nano index.html and add the text below

“Custom Apache2 HTML file”

1. Create tasks for replacing the original index.html file

Cd /etc/ansible/roles/apache/tasks

Sudo nano copy.yml

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1. Include the copy.yml file in main.yml

Sudo nano main.yml

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1. Do the same for nginx role

Cd /etc/ansible/roles/nginx/files

Sudo nano index.html and add the below text

“Custom NGINX web page”

1. Cd /etc/ansible/roles/nginx/tasks

Sudo nano copy.yml

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Sudo main.yml

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1. Execute the playbook

Ansible-playbook –syntax-check

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1. Verify the output by using public IP of slave1 and slave2

Slave 1:

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Slave 2:

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**Section C:**

1. Create a new deployment of ansible cluster of 5 nodes
2. Label 2 nodes as test and the other 2 as prod
3. Install Java on test nodes and MySQL server on prod nodes
4. Launch 2 more instances Ansible-slave3 and Ansible-slave4 and create keyless SSH connection between master and slaves
5. Update the hosts file with slave IP addresses

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1. Create roles for test and prod groups

Cd /etc/ansible/roles

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1. Cd /etc/ansible/roles/java/tasks

Sudo nano install.yml

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1. Include this in the main.yml file

Sudo nano main.yml

* Include\_tasks: install.yml

1. Do the same for mysql role

Cd /etc/ansible/roles/mysql/tasks

Sudo nano install.yml

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1. Include this in the main.yml file

Sudo nano main.yml

* Include\_tasks: install.yml

1. Create a playbook play5.yml

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1. Execute the playbook

Ansible-playbook play5.yml

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1. Verify output to confirm slave1 and slave3 having java installed

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Description automatically generated

A screen shot of a computer program

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1. Verify output to confirm slave2 and slave4 having mysql server installed

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Description automatically generated

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