Implementation 1

Goal: Complete all the problem statements and you are expected to upload end goal deployment screenshots in a simple doc to LMS.

Problem Statement: To Create a simple 3 node EC2 Virtual machine with Terraform and use ansible playbooks to deploy a sample LAMP web application on top of them. This should be done on Azure. The source code for this deployment should be checked into Git with proper branching strategies.

# Expectation:

1. Use Terraform to create 3 Node virtual machines on azure subscription given out to you.
2. State management should be in Azure storage account.
3. Use Ansible playbooks prewritten to deploy a sample LAMP stack on top of the Azure VMs created.
4. All the code l.e Terraform and Ansible playbooks to be committed to Azure repos in feature branches.

**It is expected from participants to follow below mentioned process.**

1. Each Executed step must be documented with appropriate screenshots, which need to be uploaded in LMS for evaluation.
2. All participants need to execute all steps as mentioned in problem statement with best possible way.
3. On evaluation day anyone will be asked to share the screen randomly and all must explain steps and technologies used.

Solution:

1. Create 3 VMs using Terraform
2. Install LAMP application in these 3 VMs using Ansible playbook
3. There will be .sh file -> copy to all vms using the terraform copy file
4. Then using remote execution run the shell file

* Installed ansible

Generated ssh key in master node 1 and copied the public key to authorized\_key file successfully

Connect to Node 1, 2 and 3

# ansible all -m ping -i inventory

Transfer the authorized\_keys file from Node 1 to 2 and 3

# scp authorized\_keys 10.0.0.5:/home/keerthana123/.ssh/authorized\_keys

* Check how to get the ip\_address and pass it to the shell command
* Check other ways to send ip\_address to the shell command.
* Create the inventory file in the local / remote

1. Create the file in local and transfer to remote
2. Transfer the details in remote and the create the file

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Scenario: -

1. Create playbook, that can run on both Redhat and Debian OS.

2. On each machine,

a. install apache2, git, terraform,

b. Start the apache2 service.

c. Group all the tasks as one.

d. Provide tag for this group.

e. Also make sure to have the when condition

f. The above task needs to be configured for both Redhat and Debain OS

3. Software specific to Debain OS.

a. Install DB

b. Start the DB

c. Group these 2 tasks

d. Provide tag