**Ansible Server Configuration, Infrastructure Management, SSH Connection in Ansible Master, YAML Scripts, Host Inventory, Host Variables, Group Variables, Host and Group Specific Data, Ad-hoc Commands**

sudo apt update

sudo apt install ansible

ansible –version

**Playbooks: Variables, Conditionals, Loops, Blocks, Handlers, Templates, Modules: Core Modules, Extra Modules, Ansible Roles**

mkdir ~/ansible  
cd ~/ansible

touch hosts.ini

[local]  
localhost ansible\_connection=local

touch local\_playbook.yml

---  
- name: Install Nginx on Local Machine  
  hosts: local  
  become: yes  # This will use sudo to run tasks with elevated privileges  
  tasks:  
    - name: Ensure Nginx is installed  
      apt:  
        name: nginx  
        state: present

ansible-playbook -i hosts.ini local\_playbook.yml

PLAY [Install Nginx on Local Machine] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
TASK [Ensure Nginx is installed] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [localhost]  
  
PLAY RECAP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
localhost                  : ok=1    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

systemctl status nginx

echo "Hello World" | sudo tee /var/www/html/index.html

sudo gedit /etc/nginx/sites-available/default

server {  
    listen 80 default\_server;  
    listen [::]:80 default\_server;

    root /var/www/html;  
    index index.html index.htm;

    server\_name \_;

    location / {  
        try\_files $uri $uri/ =404;  
    }  
}

sudo systemctl restart nginx

<http://localhost>

**Host Inventory**

The inventory is a file (commonly called hosts or inventory) that lists all the hosts that Ansible will manage. It can be static or dynamic.

**Host Variables**

Host variables are values that are specific to a given host. You can define these in a YAML file inside the inventory directory or dynamically within the playbook.

**Group Variables**

Group variables are used when you need to apply common variables to a group of hosts (e.g., all web servers or all database servers).

**Host and Group Specific Data**

Ansible allows you to combine both host-specific and group-specific variables. The group variables can be defined in group\_vars/, and host-specific variables can be defined in host\_vars/.

**Ad-hoc Commands**

Ansible allows you to run simple commands directly from the command line without writing a playbook. These commands are useful for quick tasks or testing connectivity.

**SSH Connection in Ansible Master**

To enable communication between your Ansible Master and the managed nodes, you must configure SSH access:

* Ensure that the Ansible Master has SSH keys set up to access the managed nodes without a password prompt.

**Infrastructure Management**

Infrastructure management with Ansible involves creating a structured approach to handle your systems, networks, and applications using YAML-based playbooks and inventories.