Ansible Setup and Hands-on Notes

1. Install Ansible on Controller Node

```
sudo apt update
sudo apt install ansible -y
```

2. Verify Ansible Installation

```
ansible --version
ansible localhost -m ping
```

3. Configure SSH Access for Managed Nodes

- Generate an SSH key on the controller node:

```
ssh-keygen -t rsa -b 4096
```

- Copy the key to managed nodes:

```
ssh-copy-id sree@private-ip-node1
ssh-copy-id sree@private-ip-node2
```

- Test SSH access:

```
ssh sree@private-ip-node1
ssh sree@private-ip-node2
```

4. Configure Ansible Inventory File

- Open the inventory file:

```
sudo nano /etc/ansible/hosts
```

- Add managed nodes:

```
[webservers]
node1 ansible_host=private-ip-node1 ansible_user=sree
node2 ansible_host=private-ip-node2 ansible_user=sree
```

- Save and exit.

5. Test Ansible Connectivity

```
ansible all -m ping
```

6. Run Basic Ansible Ad-hoc Commands

- Check uptime:

```
ansible all -m command -a "uptime"
```

- Get disk usage:

```
ansible all -m command -a "df -h"
```

- List users:

```
ansible all -m command -a "cat /etc/passwd"
```

7. Create and Run a Simple Ansible Playbook

- Create a playbook file:

```
nano install_apache.yml
```

- Add the following content:

```
---
- name: Install Apache on Web Servers
  hosts: webservers
  become: yes
  tasks:
    - name: Install Apache
      apt:
        name: apache2
        state: present
```

- Run the playbook:

```
ansible-playbook install_apache.yml
```

8. Verify Apache Installation

- Check service status:

```
ansible all -m command -a "systemctl status apache2"
```

- Test Apache from browser:
    - Open http://private-ip-node1
    - Open http://private-ip-node2