



# Ansible Short notes

FOR DEVOPS ENGINEERS

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# ANSIBLE SHORT NOTES



## Introduction to Ansible

- Ansible is an open-source automation tool used for configuration management, application deployment, and orchestration.
- It follows a declarative approach, where you define the desired state of the system rather than scripting specific commands.
- Ansible uses SSH for communication with target systems, making it agentless and easy to set up.

### Key Concepts:

- Inventory: The inventory file lists the target hosts on which Ansible will run tasks. It can be a static file or generated dynamically.
- Playbooks: Playbooks are YAML files that define a set of tasks and configurations to be executed on target hosts.
- Tasks: Tasks are the individual units of work in Ansible. They represent actions to be performed on target hosts.
- Modules: Ansible provides a wide range of modules for various tasks, such as package installation, file manipulation, service management, etc.
- Roles: Roles are reusable units of playbooks. They encapsulate related tasks, handlers, variables, and files into a directory structure.

A

## Installation of Ansible

```
sudo apt-add-
repository
ppa:ansible/ansible
sudo apt update
sudo apt install ansible
```

```
sudo nano /etc/ansible/hosts
ansible-inventory --list -y
```

### [servers]

```
server1 ansible_host=<Public IP>
server2 ansible_host=<Public IP>
server3 ansible_host=<Public IP>
```

### [all:vars]

```
ansible_python_interpreter=/usr/bin/python3
ansible_user=ubuntu
ansible_ssh_private_key_file=/<file>
```



## Ansible Adhoc commands vs modules

ad hoc commands are great for tasks you repeat rarely.

-a is used for adhoc  
commands

```
ansible all -a "df -h" -u ubuntu  
ansible servers -a "uptime" -u  
ubuntu
```

Ansible modules are units of code that can control system resources or execute system commands

eg. -m is used for modules  
ansible all -m ping -u ubuntu



## Ansible Playbooks

```
name: Date playbook
hosts: servers
tasks:
  - name: this will show the
    date
    command: date
```



## Ansible Playbook to install Tools

```
name: This playbook will  
install nginx  
hosts: servers  
become: yes  
tasks:  
  - name: install nginx  
    apt:  
      name: nginx  
      state: latest  
  - name: start nginx  
    service:  
      name: nginx  
      state: started  
      enabled: yes
```



## Ansible Playbooks with Conditional statements

```
name: this will install based on os
hosts: servers
become: yes
tasks:
  - name: install Docker
    apt:
      name: docker.io
      state: latest
  - name: install aws cli
    apt:
      name: awscli
      state: latest
    when: ansible_distribution == 'Debian'
  or ansible_distribution == 'Ubuntu'
```

# Thank You Dosto



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