



Ansible

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AGENDA

1. What is Ansible?
2. Why Ansible?
3. How Ansible works?
4. When is Ansible used?
5. Important Terminologies
6. Ansible vs alternatives Tools
7. Next ?



What is Ansible?



Ansible is an IT automation tool. It can configure systems, deploy software, and orchestrate more advanced IT tasks such as continuous deployments or zero downtime rolling updates.



Why Ansible?



To perform repetitive tasks:

- Update
- Back Ups
- System Reboots
- Create User
- Assign Groups
- Assign Permissions

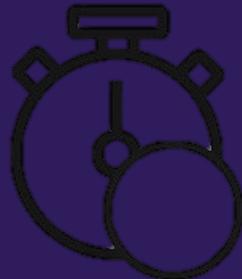
Why Ansible?



More Efficient



Less Time Consuming



Less Likely for
Errors



A

How Ansible work?

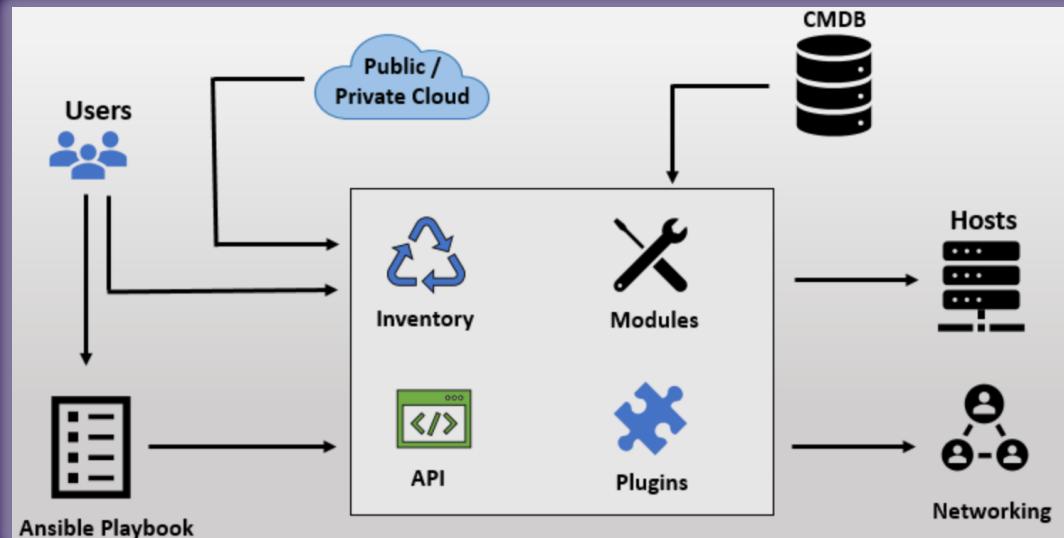
Modules

Module = one small specific task.

Get pushed to the target server.

Do their work and get removed.

Ansible uses YAML.





Example module usages

Jenkins Module

Creating a job

deleting a job

```
# Create a jenkins job using basic authentication
- jenkins_job:
    config: "{{ lookup('file', 'templates/test.xml') }}"
    name: test
    password: admin
    url: http://localhost:8080
    user: admin

# Delete a jenkins job using the token
- jenkins_job:
    name: test
    token: asdfasfasfasdfasdfafafasfasdfasdfc
    state: absent
    url: http://localhost:8080
    user: admin
```

Docker Module

- Create container.
- Start container
- Apply config

```
- name: Create a data container
  docker_container:
    name: mydata
    image: busybox
    volumes:
      - /data

- name: Start a container with a command
  docker_container:
    name: sleepy
    image: ubuntu:14.04
    command: ["sleep", "infinity"]

- name: Add container to networks
  docker_container:
    name: sleepy
    networks:
      - name: TestingNet
        ipv4_address: 172.1.1.18
        links:
          - sleeper
      - name: TestingNet2
        ipv4_address: 172.1.10.20
```

When is Ansible used?

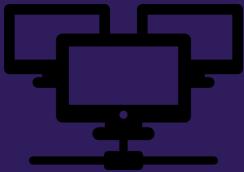
Its an agentless tool once installed on a machine, it can manage other servers remotely. So you don't need any deployment effort in beginning and no effort for upgrade.



Supporting all infrastructure



From operating systems..



Application deployment



Creating and managing DBs



Cloud provisioning



OS level updates

..to cloud Provider

Important Ansible Key Terms

- Playbooks
- Server
- Target Machine
- Task
- Machine
- Modules
- Roles
- Variables



Ansible vs alternative Tools

Ansible

Pros:

- Free
- Simple YAML
- Agentless
- Powerful
- Efficient

Cons:

- Backward compatibility
- Bloated

Kubernetes

Pros:

- Rapid integration
- Isolation
- Open source
- Testability

Cons:

- Broken features
- Unreliable networking
- Moves quickly

Docker Swarm

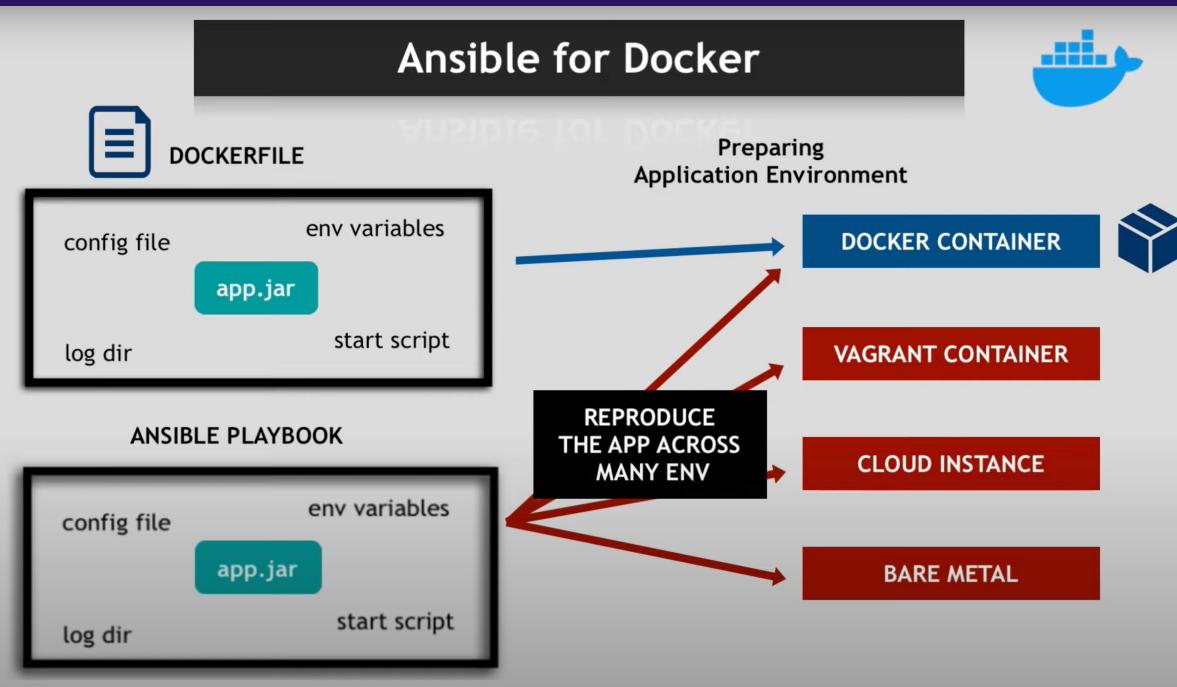
Pros:

- Simple and Powerful
- Open source
- Backed by google
- Leading docker

Cons

- Poor workflow
- Steep learning curves
- Orchestrates only infras

Ansible usage.



Next ?



Quiz:
<https://quizizz.com/join>

Source

<https://docs.ansible.com/ansible-core-devel/index.html>

<https://www.logicmonitor.com/blog/ansible-key-terms-getting-started>

https://www.youtube.com/watch?v=1id6ERvfozo&t=831s&ab_channel=TechWorldwithNana

https://www.simplilearn.com/tutorials/ansible-tutorial/what-is-ansible#benefits_of_ansible

<https://reviewnprep.com/blog/devops-tool-comparison-docker-vs-kubernetes-vs-ansible/>