Ansible Diagram

Idempotent Modules/Behaviour
Desired State (OK, Changed, Fatal, ignoring)
Check if the Managed Hosts has already those configs ?
If Yes, Nothing Happen
If No, Config Changed Done

1. Copy module.py from Control Node to Managed Host (Temp Folder)
2. Change permission of module.py to executable via chmod u+x module.py
3. Check & Execute using "python module.py" and make changes(if not DESIRED)
4. Remove Module which was copied (rm -rf Module_path)

Configuration Node

Control Node/Workstation (Linux/Unix Only)
yum install ansible ansible-navigator python -y

Inventory
- Static [static file with system name/IP] (yaml/ini)
- Dynamic [Active Directory, LDAP, Satellite CMDB, Openstack,AWS,VMWare, VirtualBox] via python script

Push a Task to Managed Hosts
1. Ad-Hoc Command (Development/Testing) One time NOT reusable (Terminal)
   ansible servera -m yum -a 'name=httpd state=latest'
2. Playbook (Production) Reusable as many time
   ansible-playbook play1.yml

INVENTORY:
Default File: /etc/ansible/hosts
Custom File: --inventory CUSTOM_FILE_PATH

Human Readable Automation
Playbook YAML Syntax

Modules Path:
/usr/lib/python3.6/site-packages/ansible/modules

Default Settings
ansible_connection: ssh (ssh.py)
ansible_port: 22
ansible_user: root (variable file)
remote_user=devops (ansible.cfg)
ansible_password: redhat (SSH_KEY) [--ask-pass for Ad-hoc]

Custom Windows Settings
ansible_connection: winrm (winrm.py)
ansible_port: 5986
ansible_user: devops   (remote_user)
ansible_password: redhat (SSH_KEY)

Custom Network Device Settings
ansible_connection: network_cli/netconf
                (network_cli.py/netconf.py)
ansible_port: 22 (Depend)
ansible_user: admin/vyos (remote_user)
ansible_password: student/vyos (SSH_KEY)

Managed Hosts/Nodes

Python Installed   Linux
[privilege_escalation]
become: true
become_user: root
become_method: sudo/su
become_ask_pass: true/false

PowerShell Installed   Windows
[privilege_escalation]
become: true
become_user: administrator
become_method: runas
become_ask_pass: true/false

Python May/May Not   Network Device
[privilege_escalation]
become: true
become_user: admin
become_method: enable
become_ask_pass: true/false

Cloud

NO Agent
James Bond

user

Execution Node

Playbooks: Python 3.5
vim play.yaml
- name: Playbook Purpose
  hosts: list_host
  tasks:
- name: Install httpd
  yum:
      name: httpd
      state: latest
- name: Create user
  Module_name:
       Module_options:

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Playbooks: Python 3.9
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  hosts: list_host
  tasks:
- name: Install httpd
  yum:
      name: httpd
      state: latest
- name: Create user
  Module_name:
       Module_options:

Container Image1
collection cisco v1
collection mysql v1
python3.5

Container Image2
cisco v2
postgresql
python 3.6

Container Image3
cisco v2
postgresql
python 3.9

thread 100 MB
thread 100 MB
thread 100 MB
thread 100 MB
thread 100 MB
thread 100 MB
thread 100 MB

Image 1
python 3.5

Image 2
python 3.6

Image 3
python 3.9

OLD Way:
ansible-playbook play.yml -i inventory --ask-become-pass
New Way:
ansible-navigator run linux.yml --inventory gabriel_inventory --eei hub.lab.example.com/ee-supported-rhel8 --pull-policy missing
-e 'ansible_become_password=redhat ansible_password=redhat' -m stdout