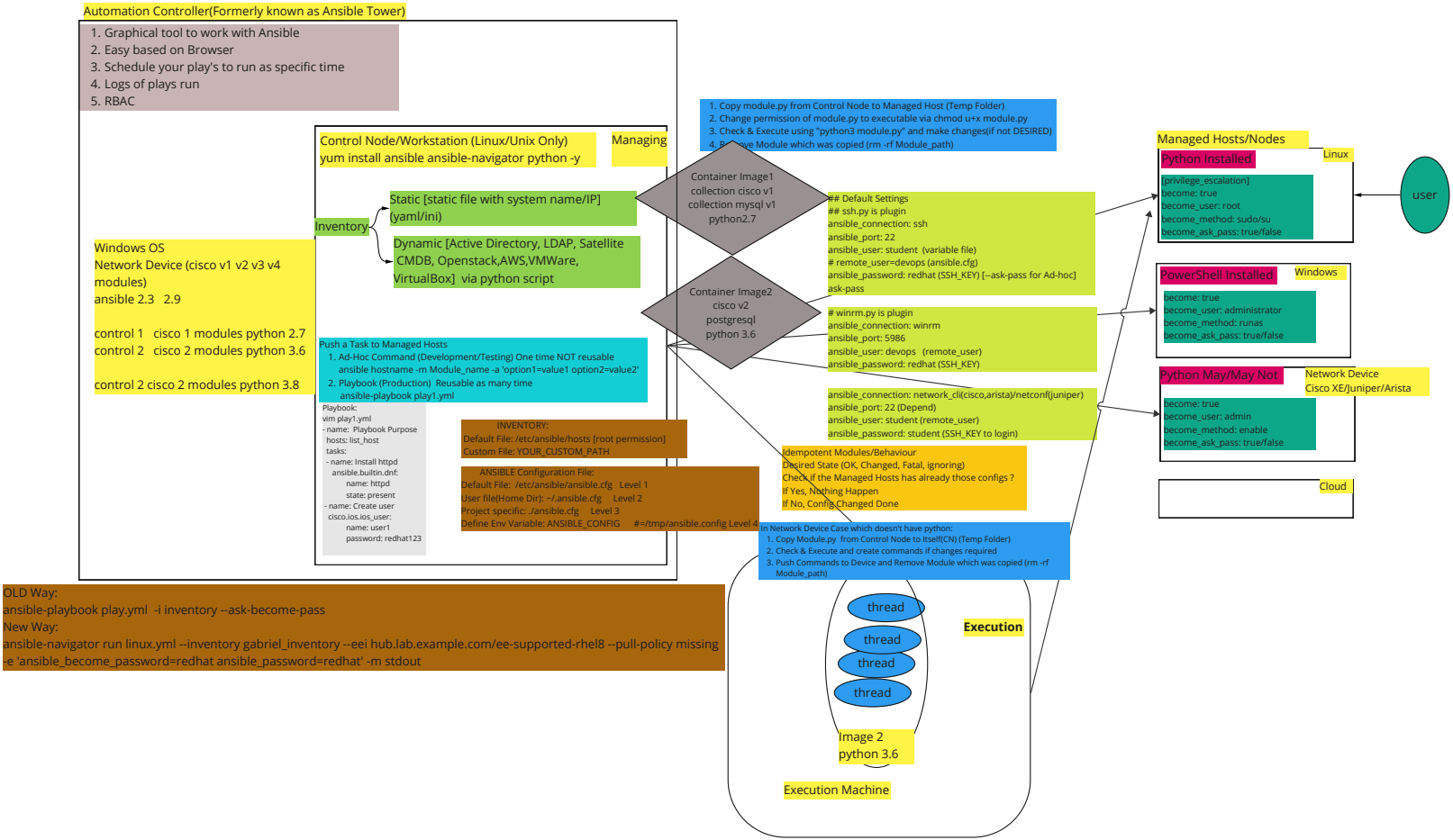
Automation Controller(Formerly known as Ansible Tower)
1. Graphical tool to work with Ansible
2. Easy based on Browser
3. Schedule your play's to run as specific time
4. Logs of plays run
5. RBAC
Control Node/Workstation (Linux/Unix Only)
yum install ansible ansible-navigator python -y
Managing
Inventory
Static [static file with system name/IP] (yaml/ini)
Dynamic [Active Directory, LDAP, Satellite CMDB, Openstack,AWS,VMWare, VirtualBox] via python script
Windows OS
Network Device (cisco v1 v2 v3 v4 modules)
ansible 2.3 2.9
control 1 cisco 1 modules python 2.7
control 2 cisco 2 modules python 3.6
control 2 cisco 2 modules python 3.8
Push a Task to Managed Hosts
1. Ad-Hoc Command (Development/Testing) One time NOT reusable
ansible hostname -m Module_name -a 'option1=value1 option2=value2'
2. Playbook (Production) Reusable as many time
ansible-playbook play1.yml
Playbook:
vim play1.yml
- name: Playbook Purpose
hosts: list_host
tasks:
- name: Install httpd
ansible.builtin.dnf:
name: httpd
state: present
- name: Create user
cisco.ios.ios_user:
name: user1
password: redhat123
INVENTORY:
Default File: /etc/ansible/hosts [root permission]
Custom File: YOUR_CUSTOM_PATH
ANSIBLE Configuration File:
Default File: /etc/ansible/ansible.cfg Level 1
User file(Home Dir): ~/.ansible.cfg Level 2
Project specific: ./ansible.cfg Level 3
Define Env Variable: ANSIBLE_CONFIG #=/tmp/ansible.config Level 4
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
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 "python3 module.py" and make changes(if not DESIRED)
4. Remove Module which was copied (rm -rf Module_path)
Container Image1
collection cisco v1
collection mysql v1
python2.7
Container Image2
cisco v2
postgresql
python 3.6
Default Settings
ssh.py is plugin
ansible_connection: ssh
ansible_port: 22
ansible_user: student (variable file)
remote_user=devops (ansible.cfg)
ansible_password: redhat (SSH_KEY) [--ask-pass for Ad-hoc]
ask-pass
winrm.py is plugin
ansible_connection: winrm
ansible_port: 5986
ansible_user: devops (remote_user)
ansible_password: redhat (SSH_KEY)
ansible_connection: network_cli(cisco,arista)/netconf(juniper)
ansible_port: 22 (Depend)
ansible_user: student (remote_user)
ansible_password: student (SSH_KEY to login)
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
In Network Device Case which doesn't have python:
1. Copy Module.py from Control Node to Itself(CN) (Temp Folder)
2. Check & Execute and create commands if changes required
3. Push Commands to Device and Remove Module which was copied (rm -rf Module_path)
thread
thread
thread
thread
Execution
Image 2
python 3.6
Execution Machine
Managed Hosts/Nodes
Python Installed
Linux
[privilege_escalation]
become: true
become_user: root
become_method: sudo/su
become_ask_pass: true/false
user
PowerShell Installed
Windows
become: true
become_user: administrator
become_method: runas
become_ask_pass: true/false
Python May/May Not
Network Device
Cisco XE/Juniper/Arista
become: true
become_user: admin
become_method: enable
become_ask_pass: true/false
Cloud