**Deploy a virtual machine in VMware vCenter/ESXi using an Ansible playbook**

**Deploy a virtual machine in VMware vCenter/ESXi using an Ansible playbook**, you'll use the **community.vmware** Ansible collection. Below is a step-by-step guide including an **Ansible playbook example**.

**Prerequisites**

**Ansible installed** on a control machine.

**Python libraries**:

# pip install pyvmomi

# pip install pyvmomi==7.0.3

# ansible-galaxy collection install community.vmware

**vCenter/ESXi credentials** with permissions to deploy VMs.

**Existing VM template** or ISO to deploy from.

**Example Inventory (inventory.yml)**

# vim inventory.yaml

all:

vars:

vcenter\_hostname: “10.0.0.176”

vcenter\_username: “administrator@vsphere.local”

vcenter\_password: “P@ssw0rd24”

datacenter\_name: “MYLAB-DC”

cluster\_name: “MYLAB-Cluster”

datastore\_name: “datastore1”

template\_name: “baseline”

vm\_name: “vm-from-ansible”

vm\_folder: “Ansible-VMs”

guest\_os: “rhel8\_64Guest”

hosts:

localhost:

**Ansible Playbook (deploy\_vm.yml)**

# vim deploy\_vm.yaml

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- name: Deploy VM from template in vCenter

hosts: localhost

gather\_facts: false

collections:

- community.vmware

vars\_files:

- vault.yaml

tasks:

- name: Clone VM from template

community.vmware.vmware\_guest:

hostname: “{{ vcenter\_hostname }}”

username: “{{ vcenter\_username }}”

password: “{{ vcenter\_password }}”

validate\_certs: false

datacenter: “{{ datacenter\_name }}”

folder: “{{ vm\_folder }}”

name: “{{ vm\_name }}”

template: “{{ template\_name }}”

cluster: “{{ cluster\_name }}”

datastore: “{{ datastore\_name }}”

state: poweredon

hardware:

memory\_mb: 2048

num\_cpus: 2

scsi: paravirtual

osid: “rhel8\_64Guest”

networks:

- name: “VM Network”

type: static

ip: “10.0.0.17”

netmask: “255.255.255.0”

gateway: “10.0.0.1”

dns\_servers:

- “10.0.0.11”

- “8.8.8.8”

customization:

hostname: “{{ vm\_name }}”

domain: "henogez.com"

delegate\_to: localhost

**Best Practice: Use ansible-vault for credentials**

To avoid hardcoding passwords:

# ansible-vault create vault.yaml

**Put your secrets inside:**

vcenter\_username: “administrator@vsphere.local”

vcenter\_password: “P@ssw0rd24”

**Then reference them with vars\_files:**

yaml

vars\_files:

- vault.yaml

**Run the Playbook**

# sudo ansible-playbook -i inventory.yaml deploy\_vm.yaml --ask-vault-pass --syntax-check

# sudo ansible-playbook -i inventory.yaml deploy\_vm.yaml --ask-vault-pass