

## 1-3 empty VMs

3VMs networking is bridged

1-1xansible controller

Playbook to configure the other 2 VMS,each one

1-Rename each server

2-apache2

3-configure 2 virtual hosts on each web server

wp1.ahmed.com

wp2.ahmed.com

4-Upload wordpress to each server

2-2xEmpty VMS

### VM1

Install network manager:

```
$ sudo apt install network-manager
```

```
$ sudo nano /etc/default/grub
```

```
GRUB_CMDLINE_LINUX="", net.ifnames=0 biosdevname=0
```

```
$ sudo grub-mkconfig -o /boot/grub/grub.cfg
```

```
$ sudo touch /etc/NetworkManager/conf.d/10-globally-managed-d.conf
```

```
$ sudo reboot
```

Firewall:

```
$ sudo apt install firewalld
```

```
$ sudo systemctl enable --now firewalld
```

```
$ sudo firewall-cmd --add-service=http
```

```
$ sudo firewall-cmd --permanent --add-service=http
```

```
$ sudo firewall-cmd --reload
```

```
$ ip a
```

clone **VM2 & VM3**

### VM2

```
$ ip a
```

```
$ sudo nmcli con add con-name eth1-new type ethernet ifname eth1 ip4 192.168.10.3/24  
gw4 192.168.10.1
```

```
$ sudo nmcli con mod eth1-new ipv4.dns 4.2.2.2
```

```
$ sudo nmcli con up eth1-new
```

```
ferro98@ubuntu:~$ sudo nmcli con up eth1-new  
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkMa  
nager/ActiveConnection/2)
```

### VM3

```
$ ip a
```

```
$ sudo nmcli con add con-name eth0-new type ethernet ifname eth0 ip4 192.168.10.2/24  
gw4 192.168.10.1
```

```
$ sudo nmcli con mod eth0-new ipv4.dns 4.2.2.2
```

```
$ sudo nmcli con up eth0-new
```

## VM1

### Install pip

```
$ sudo apt install curl
$ curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py
$ python get-pip.py --user
```

### Install ansible

```
$ sudo apt install software-properties-common
$ sudo add-apt-repository --yes --update ppa:ansible/ansible
$ sudo apt install ansible
$ nano hosts
```

```
client1 ansible_host=192.168.1.11 ansible_user=controller ansible_password=1234 ansible_become_password=1234 hostname=guest1 domain=wp1.ahmed.com
client2 ansible_host=192.168.1.12 ansible_user=controller ansible_password=1234 ansible_become_password=1234 hostname=guest2 domain=wp2.ahmed.com
```

```
$ ansible -i hosts client1 -m ping //to test
```

```
$ ansible -i hosts all -m ping
```

```
$ nano rename.yml
```

```
---
```

```
- name: Rename hosts
  become: yes
  hosts: all
  gather_facts: no
  tasks:
    - name: Rename a host
      ansible.builtin.hostname:
        name: "{{ hostname }}"

    - name: Install apache2
      ansible.builtin.package:
        name: apache2
        state: present
```

```
$ ansible-playbook -i hosts rename.yml
```

## VM2 & VM3

```
$ sudo systemctl status apache2
```

## VM1

```
$ nano config.yml
```

```
---
```

```
- name: Rename hosts
  become: yes
  hosts: all
  gather_facts: no
  tasks:

    - name: Rename a host
      ansible.builtin.hostname:
        name: "{{ hostname }}"

    - name: installing apache
      ansible.builtin.package:
        name: apache2
        state: present

    - name: enabled mod_rewrite
      apache2_module:
        name=rewrite
        state=present
```

```

notify:
  - restart apache2

- name: create virtual host file
  ansible.builtin.template:
    src: virtualhost.conf
    dest: /etc/apache2/sites-available/{{ domain }}.conf
  notify:
    - restart apache2

- name: a2ensite "{{ domain }}"
  command: a2ensite "{{ domain }}"
  notify:
    - restart apache2

- name: Install dependencies for wordpress
  apt:
    name={{ item }}
    state=present
  with_items:
    - python3-pip
    - mariadb-server
    - php
    - php-mysql

- name: Install Required pip modules
  pip:
    name:
      - PyMySQL
    state: present
    executable: pip3

- name: Ensure MariaDB is running (and enable it at boot)
  service: name=mariadb state=started enabled=yes

- name: Copy ~/.my.cnf to nodes
  copy: src=~/.my.cnf dest=/root/.my.cnf

- name: Create MariaDB user
  community.mysql.mysql_user: name=wpuser password=1234 state=present login_user=root login_password=1234 priv=*.*:ALL

- name: Create MariaDB database
  mysql_db: name=wpdatabase state=present

- name: Download WordPress
  get_url: url=https://www.wordpress.org/latest.tar.gz dest=/var/www/html/wordpress.tar.gz validate_certs=no

- name: Extract WordPress
  command: "tar xzf /var/www/html/wordpress.tar.gz -C /var/www/html"

- name: copy configuration file of wordpress
  copy: src=~/.wp-config.php dest=/var/www/html/wordpress/wp-config.php mode=0644
handlers:
  - name: restart apache2
    service: name=apache2 state=restarted

```

\$ ansible-playbook -i hosts config.yml