

Q-2:Ansible:

1.Why did that occur means?

The package manager couldn't find a package named python3.

Different Linux distributions use different package managers and sometimes different package names

2.How to handle this dynamically using Ansible Facts?

To run the correct package installation module (apt, yum, etc.) with the right package name.

3.to install python3 on linux {master,worker1,worker2}

Created a folder and written an playbook for it and written hosts file for configuration

```
master@master-vm:~/python-install$ ls -ltr
total 12
-rw-rw-r-- 1 master master 434 Apr 10 10:13 install_python.yml
drwxrwxr-x 2 master master 4096 Apr 10 10:15 inventory
-rw-rw-r-- 1 master master 109 Apr 10 10:16 ansible.cfg
master@master-vm:~/python-install$
```

```
master@master-vm:~/python-install/inventory$ cat hosts
[all]
master ansible_host=192.168.147.128 ansible_user=master
worker1 ansible_host=192.168.147.129 ansible_user=worker1
worker2 ansible_host=192.168.147.130 ansible_user=worker2
```

```
master@master-vm:~/python-install$ cat ansible.cfg
[defaults]
inventory = ./inventory/hosts
remote_user = master
host_key_checking = False
roles_path = ./roles
```

This contains all the packages to be installed on which linux:

```
remote_user = master
host_key_checking = False
roles_path = ./roles
master@master-vm:~/python-install$ cat install_python.yml
- name: Install Python3 on master (handle broken APT repo)
  hosts: master
  become: yes
  tasks:
    - name: Remove broken Kubernetes APT source
      file:
        path: /etc/apt/sources.list.d/kubernetes.list
        state: absent

    - name: Update apt cache
      apt:
        update_cache: yes

    - name: Install Python3
      apt:
        name: python3
        state: present

- name: Install Python3 on worker1 and worker2
  hosts: worker1,worker2
  become: yes
  tasks:
    - name: Update apt cache
      apt:
        update_cache: yes

    - name: Install Python3
      apt:
        name: python3
        state: present
master@master-vm:~/python-install$
```

After running playbook the python3 installed on all the nodes:

```
master@master-vm:~/python-install$ nano ansible.cfg
master@master-vm:~/python-install$ ansible-playbook install_python.yml --ask-become-pass
BECOME password:

PLAY [Install Python3 on all nodes] *****

TASK [Gathering Facts] *****
ok: [worker1]
ok: [worker2]
ok: [master]

TASK [Install Python3 on Debian/Ubuntu] *****
ok: [worker1]
ok: [worker2]

master@master-vm:~/python-install$ nano install_python.yml
master@master-vm:~/python-install$ ansible-playbook install_python.yml --ask-become-pass
BECOME password:

PLAY [Install Python3 on master (handle broken APT repo)] *****

TASK [Gathering Facts] *****
ok: [master]

TASK [Remove broken Kubernetes APT source] *****
ok: [master]

TASK [Update apt cache] *****
changed: [master]

TASK [Install Python3] *****
ok: [master]

PLAY [Install Python3 on worker1 and worker2] *****

TASK [Gathering Facts] *****
ok: [worker1]
ok: [worker2]

TASK [Update apt cache] *****
changed: [worker2]
changed: [worker1]

TASK [Install Python3] *****
ok: [worker1]
ok: [worker2]

PLAY RECAP *****
master      : ok=4    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
worker1     : ok=3    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```