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PROCEDURE:

INSTALL PYTHON3 AND PIP3

```

GNU nano 2.9.3                                install_py3-pip3.yaml
---
- hosts: all
  become: true
  tasks:

    - name: Install Latest Python3 and Pip3 Packages
      apt:
        name:
          - python3
          - python3-pip
        state: latest
        update_cache: yes

```

Created Ansible playbook to install the latest Python3 and Pip3 Packages.

```

roallos-ubuntu@workstation:~/Roallos-PrelimExam$ ansible-playbook install_py3-p
ip3.yaml -K
SUDO password:
[WARNING]: Ignoring invalid attribute: update_cache

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [192.168.56.105]
ok: [192.168.56.106]

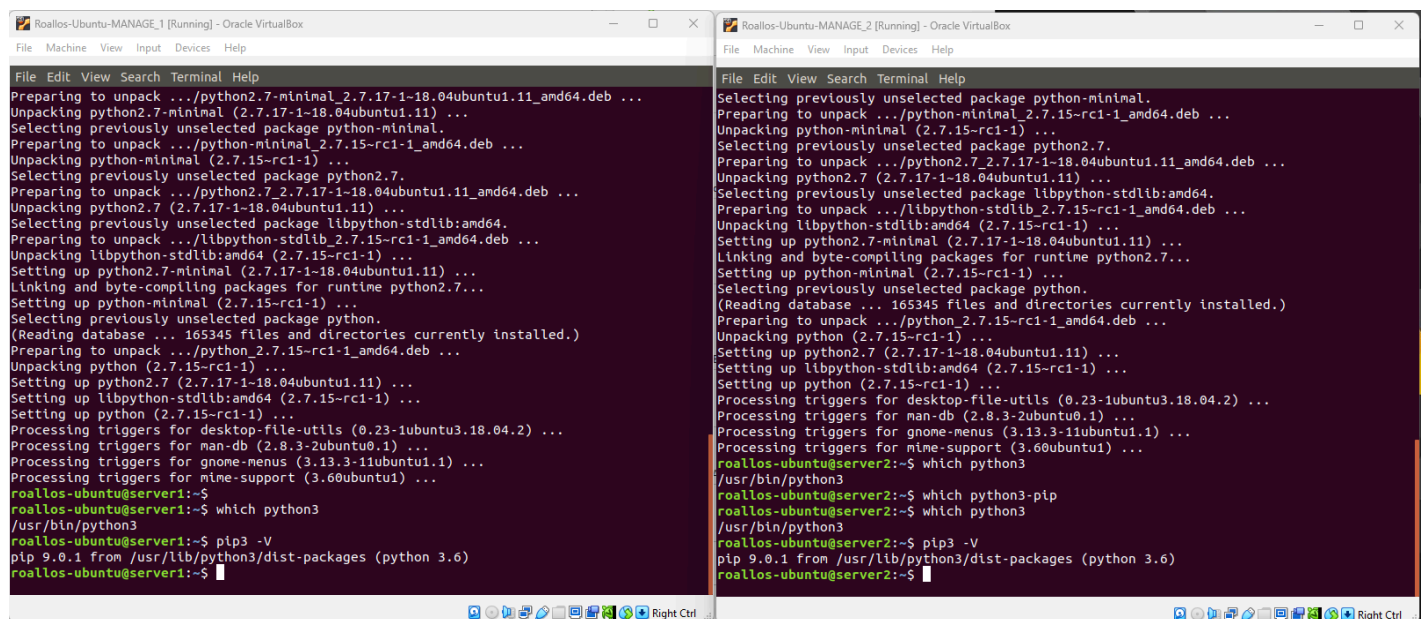
TASK [Install Latest Python3 and Pip3 Packages] *****
*
changed: [192.168.56.106]
changed: [192.168.56.105]

PLAY RECAP *****
*
192.168.56.105      : ok=2    changed=1    unreachable=0    failed=0
192.168.56.106      : ok=2    changed=1    unreachable=0    failed=0

roallos-ubuntu@workstation:~/Roallos-PrelimExam$

```

Ran Ansible playbook “install_py3-pip3.yaml” and showed results.



By running the commands “which python3” and “pip3 -V” in both MNs, this should show and validate installs.

SET PIP3 AS DEFAULT PIP

```

GNU nano 2.9.3                                     set pip3-default.yaml
--
- hosts: all
  become: true
  tasks:

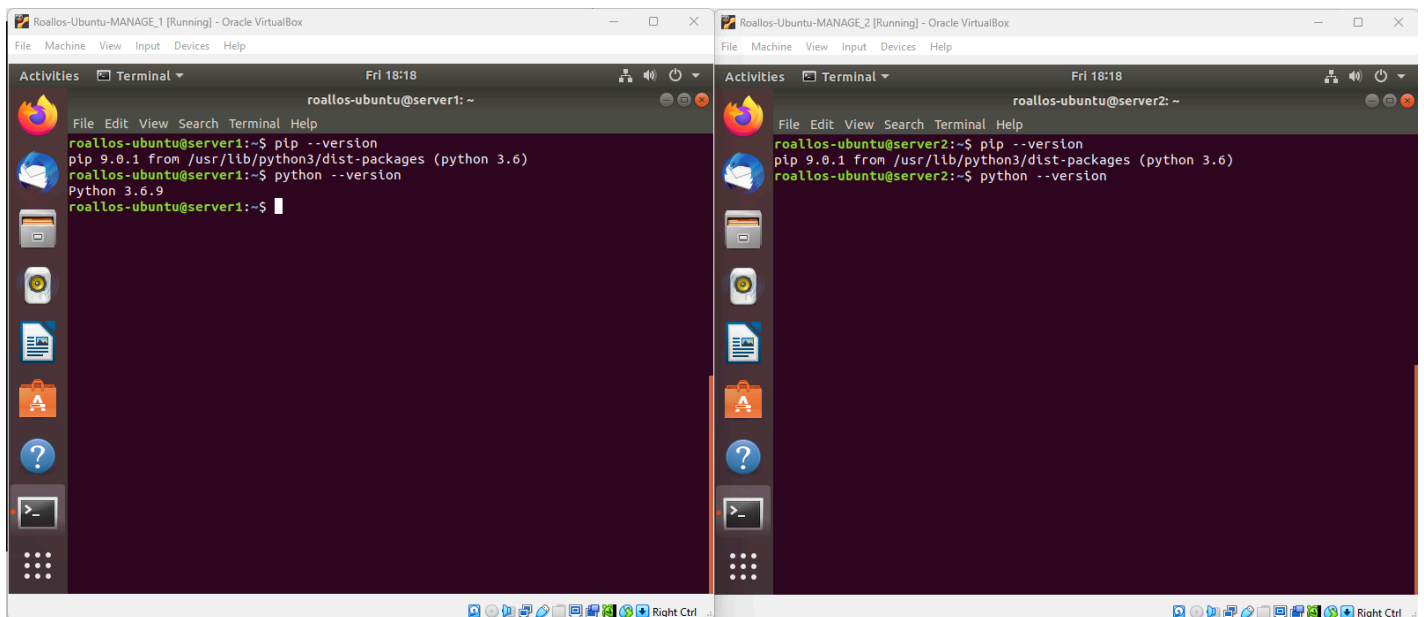
    - name: Set Pip3 as Default
      shell: alias pip=pip3 >> ~/.bashrc
      register: sh_output

    - name: Display Output to CN
      debug:
        msg: "{{ sh_output }}"
  
```

Prompt a command (alias) to CNs that sets ‘pip’ to redirect to ‘pip3’, to be saved within ~/.bashrc

```
TASK [Display Output to CN] *****
* Thunderbird Mail
ok: [192.168.56.105] => {
  "msg": {
    "changed": true,
    "cmd": "alias pip=pip3 >> ~/.bashrc",
    "delta": "0:00:00.001925",
    "end": "2025-08-29 18:57:15.830349",
    "failed": false,
    "rc": 0,
    "start": "2025-08-29 18:57:15.828424",
    "stderr": "",
    "stderr_lines": [],
    "stdout": "",
    "stdout_lines": []
  }
}
ok: [192.168.56.106] => {
  "msg": {
    "changed": true,
    "cmd": "alias pip=pip3 >> ~/.bashrc",
    "delta": "0:00:00.002613",
    "end": "2025-08-29 18:57:15.823071",
    "failed": false,
    "rc": 0,
    "start": "2025-08-29 18:57:15.820458",
    "stderr": "",
    "stderr_lines": []
  }
}
```

Ran Ansible playbook 'set_pip3-default.yaml'. The commands were run successfully.



Displaying proof of aliasing via Ansible by entering the command 'pip --version'

SET PYTHON3 AS DEFAULT PYTHON

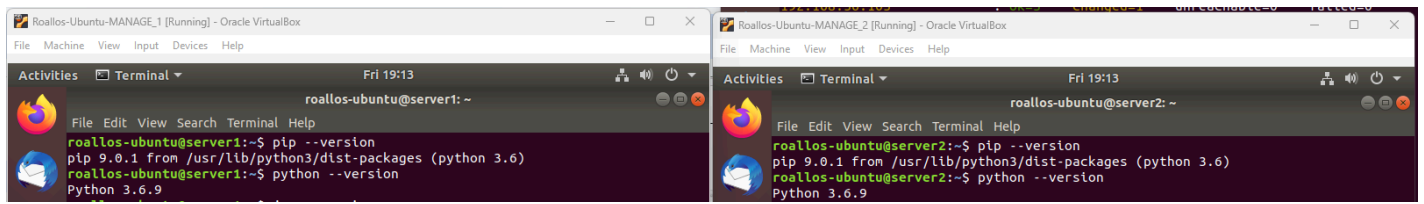
```
GNU nano 2.9.3 set_py3-default.yaml
--
- hosts: all
  become: true
  tasks:

    - name: Set Python3 as Default
      shell: alias python=python3 >> ~/.bashrc
      register: sh_output

    - name: Display Output to CN
      debug:
        msg: "{{ sh_output }}"
```

Prompt a command (alias) to CNs that sets 'python' to redirect to 'python3', to be saved within ~/.bashrc

```
TASK [Display Output to CN] *****
*
ok: [192.168.56.105] => {
  "msg": {
    "changed": true,
    "cmd": "alias python=python3 >> ~/.bashrc",
    "delta": "0:00:00.002029",
    "end": "2025-08-29 18:57:56.993740",
    "failed": false,
    "rc": 0,
    "start": "2025-08-29 18:57:56.991711",
    "stderr": "",
    "stderr_lines": [],
    "stdout": "",
    "stdout_lines": []
  }
}
ok: [192.168.56.106] => {
  "msg": {
    "changed": true,
    "cmd": "alias python=python3 >> ~/.bashrc",
    "delta": "0:00:00.002627",
    "end": "2025-08-29 18:57:56.971299",
    "failed": false,
    "rc": 0,
    "start": "2025-08-29 18:57:56.968672",
    "stderr": "",
    "stderr_lines": []
  }
}
```



INSTALL JAVA OPEN JDK

```
GNU nano 2.9.3                                install_java.yaml
---
- hosts: all
  become: true
  tasks:

    - name: Install Latest Java open-jdk Packages
      apt:
        name:
          - default-jre
          - default-jdk
        state: latest
        update_cache: yes
```

Created Ansible playbook to install the latest Java open-jdk Packages. 'default-jre' is needed before downloading open-jdk (package name: 'default-jdk')

```

roallos-ubuntu@workstation:~/Roallos-PrelimExam$ ansible-playbook install_java.
yaml -K
SUDO password:
[WARNING]: Ignoring invalid attribute: update_cache

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [192.168.56.105]
ok: [192.168.56.106]

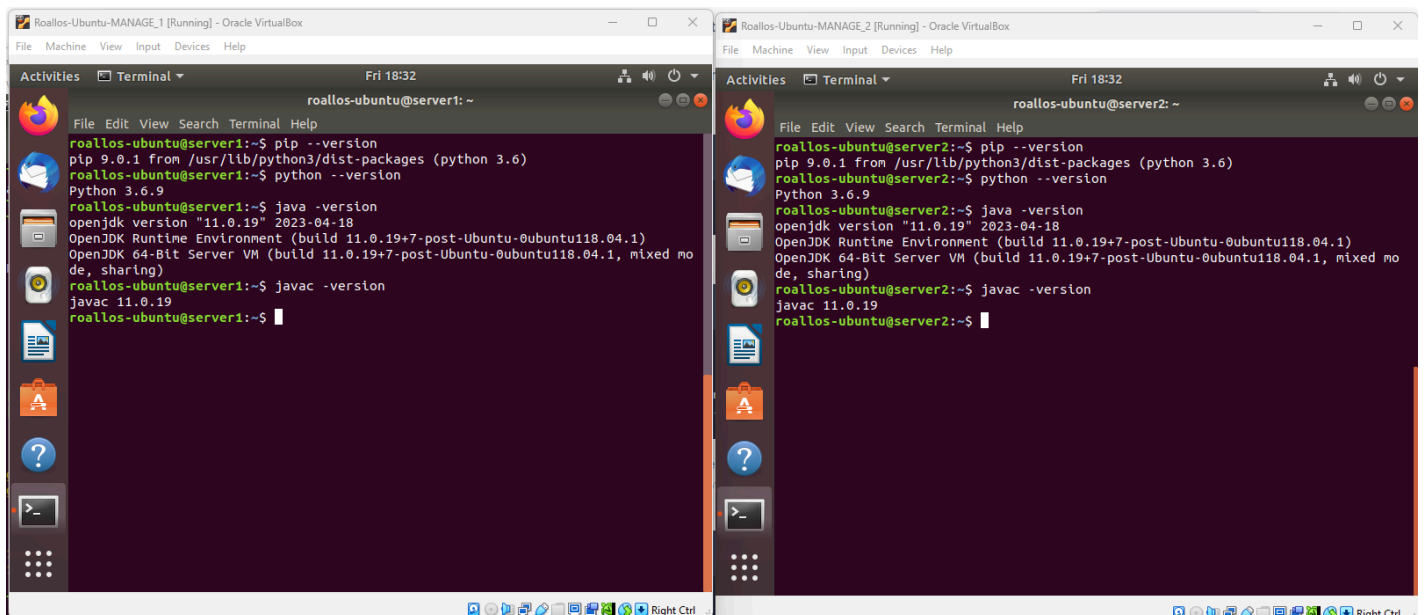
TASK [Install Latest Java open-jdk Packages] *****
*
changed: [192.168.56.105]
changed: [192.168.56.106]

PLAY RECAP *****
*
192.168.56.105      : ok=2    changed=1    unreachable=0    failed=0
192.168.56.106      : ok=2    changed=1    unreachable=0    failed=0

roallos-ubuntu@workstation:~/Roallos-PrelimExam$

```

Ran Ansible playbook “install_java.yaml” and showed results.



By running the commands “java -version” and “javac -version” in both MNs, this should show and validate installs.

INSTALL MARIADB

```

GNU nano 2.9.3                                install_mariadb.ya
---
- hosts: all
  become: true
  tasks:

    - name: Install MariaDB
      apt:
        Rhythmbox:
          - mariadb-server
            state: latest

```

Incomplete Ansible playbook. Only can install latest version of MariaDB

```

roallos-ubuntu@workstation:~/Roallos-PrelimExam$ ansible-playbook install_maria
db.yaml -K
SUDO password:

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [192.168.56.106]
ok: [192.168.56.105]

TASK [Install MariaDB] *****
*
ok: [192.168.56.106]
ok: [192.168.56.105]

PLAY RECAP *****
*
192.168.56.105      : ok=2    changed=0    unreachable=0    failed=0
192.168.56.106      : ok=2    changed=0    unreachable=0    failed=0

roallos-ubuntu@workstation:~/Roallos-PrelimExam$

```

Accomplished installation of MariaDB

CREATE MOTD CONTAINING THE TEXT DEFINED BY A VARIABLE DEFINED IN CONFIG.YAML FILE AND IF THERE IS NO VARIABLE INPUT THE DEFAULT MOTD IS "ANSIBLE MANAGED NODE BY (YOUR USER NAME)"

```
GNU nano 2.9.3 config.yaml
---
- hosts: all
  become: true
  vars:
    motd: "Ansible managed node by roallos-ubuntu"

  tasks:

    - name: Variables
```

Incomplete Ansible playbook.