

PRELIM EXAM CPE232

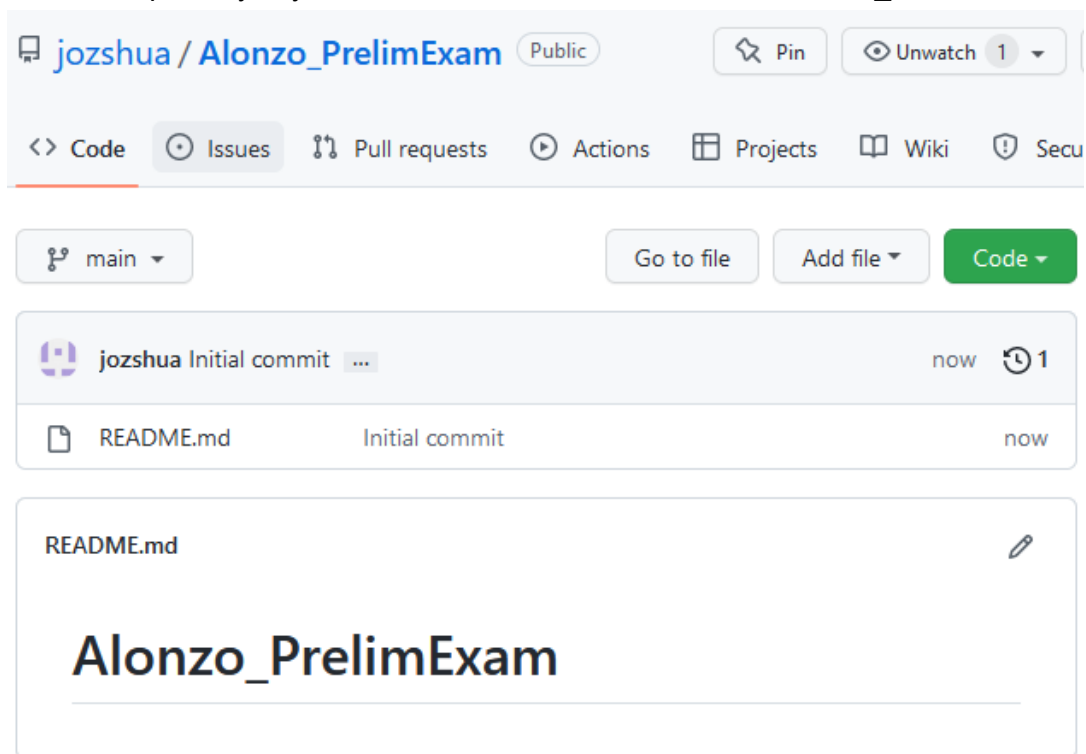
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CPE31S23

Tools Needed:

1. Control Node (CN) - 1
2. Manage Node (MN) - 1 Ubuntu
3. Manage Node (MN) - 1 CentOS

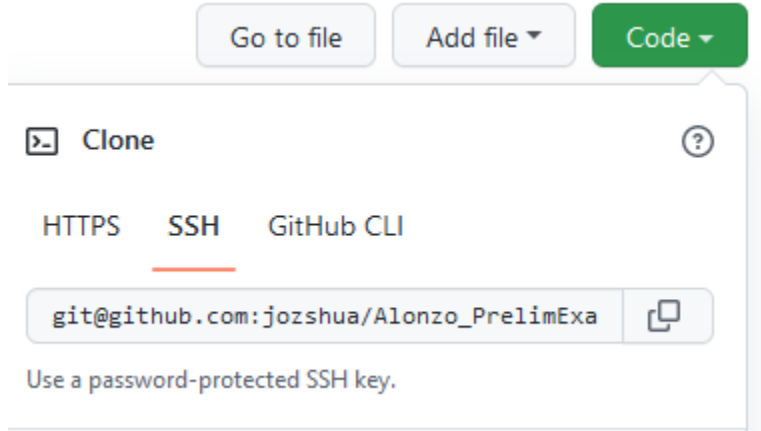
Procedure:

1. Note: You are required to create a document report of the steps you will do for this exam. All screenshots should be labeled and explained properly.
2. Create a repository in your GitHub account and label it as Surname_PrelimExam



Login to your github account then go to the “you repositories” tab to make a new one. You must check the readme.md before creating the repository.

3. Clone your new repository in your CN.



```
jozshua@jozshua-VirtualBox:~$ git clone git@github.com:jozshua/Alonzo_PrelimExa
.git
Cloning into 'Alonzo_PrelimExa'...
The authenticity of host 'github.com (140.82.113.3)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqU.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
```

Copy the code from your repository and use the command `git clone` with the copied code.

4. In your CN, create an inventory file and ansible.cfg files.

```
jozshua@jozshua-VirtualBox:~/Alonzo_PrelimExa/cpe_ansible_PE$ sudo nano inventory
jozshua@jozshua-VirtualBox:~/Alonzo_PrelimExa/cpe_ansible_PE$ sudo nano ansible.cfg
jozshua@jozshua-VirtualBox:~/Alonzo_PrelimExa/cpe_ansible_PE$ ls
ansible.cfg  inventory
```

From the commands `sudo nano inventory` and `sudo nano ansible.cfg`. I created the inventory and ansible.cfg files.

5. Create an Ansible playbook that does the following with an input of a config.yaml file for both Manage Nodes

- Installs the latest python3 and pip3

```

GNU nano 6.2                                install_apache.yml *
---
- hosts: all
  become: true
  tasks:

    - name: install the latest python3 and pip3 for Ubuntu
      apt:
        name:
          - python3
          - python3-pip
        state: latest
        update_cache: yes
        when: ansible_distribution == "Ubuntu"

    - name: install the latest python3 and pip3 for CentOS
      dnf:
        name:
          - python3
          - python3-pip
        state: latest
        update_cache: yes
        when: ansible_distribution == "CentOS"

```

Modify the `install_apache.yml` file and run the `ansible-playbook` command.

```

jozshua@jozshua-VirtualBox:~/Alonzo_PrelimExam/cpe_ansible_PE$ ansible-playbook
--ask-become-pass install_apache.yml
BECOME password:

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [jozshua@192.168.56.116]
ok: [jozshua@192.168.56.112]

TASK [install the latest python3 and pip3 for Ubuntu] *****
*
skipping: [jozshua@192.168.56.116]
changed: [jozshua@192.168.56.112]

TASK [install the latest python3 and pip3 for CentOS] *****
*
skipping: [jozshua@192.168.56.112]
changed: [jozshua@192.168.56.116]

PLAY RECAP *****
*
jozshua@192.168.56.112      : ok=2    changed=1    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
jozshua@192.168.56.116      : ok=2    changed=1    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0

```

As we can see we have *skipped* state because from the other tasks is

for ubuntu and centos that is normal because it has different tasks that is available for each them to run successfully.

- use pip3 as default pip

```
GNU nano 6.2                                install_apache.yml
---

- hosts: all
  become: true
  tasks:

  - name: echo "alias pip=/usr/local/bin/pip3" for Ubuntu
    apt:
      name:
        - python3
        - python3-pip
      state: latest
      update_cache: yes
      when: ansible_distribution == "Ubuntu"

  - name: echo "alias pip=/usr/local/bin/pip3" for CentOS
    dnf:
      name:
        - python3
        - python3-pip
      state: latest
      update_cache: yes
      when: ansible_distribution == "CentOS"

jozshua@jozshua-VirtualBox:~/Alonzo_PrelimExam/cpe_ansible_PE$ ansible-playbook
--ask-become-pass install_apache.yml
BECOME password:

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [jozshua@192.168.56.112]
ok: [jozshua@192.168.56.116]

TASK [echo "alias pip=/usr/local/bin/pip3" for Ubuntu] *****
*
skipping: [jozshua@192.168.56.116]
ok: [jozshua@192.168.56.112]

TASK [echo "alias pip=/usr/local/bin/pip3" for CentOS] *****
*
skipping: [jozshua@192.168.56.112]
ok: [jozshua@192.168.56.116]

PLAY RECAP *****
*
jozshua@192.168.56.112    : ok=2    changed=0    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
jozshua@192.168.56.116    : ok=2    changed=0    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
```

To make the pip3 as default pip I need to modify the codes inside the install_apache.yml from the task name section and after that run the command ansible-playbook.

- use python3 as default python

```
GNU nano 6.2                                install_apache.yml *
```

```
---
- hosts: all
  become: true
  tasks:

  - name: echo "alias python=/usr/local/bin/python3" for Ubuntu
    apt:
      name:
        - python3
        - python3-pip
      state: latest
      update_cache: yes
      when: ansible_distribution == "Ubuntu"

  - name: echo "alias python=/usr/local/bin/python3" for CentOS
    dnf:
      name:
        - python3
        - python3-pip
      state: latest
      update_cache: yes
      when: ansible_distribution == "CentOS"
```

```
jozshua@jozshua-VirtualBox:~/Alonzo_PrelimExam/cpe_ansible_PE$ ansible-playbook
--ask-become-pass install_apache.yml
BECOME password:

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [jozshua@192.168.56.112]
ok: [jozshua@192.168.56.116]

TASK [echo "alias python=/usr/local/bin/python3" for Ubuntu] *****
*
skipping: [jozshua@192.168.56.116]
ok: [jozshua@192.168.56.112]

TASK [echo "alias python=/usr/local/bin/python3" for CentOS] *****
*
skipping: [jozshua@192.168.56.112]
ok: [jozshua@192.168.56.116]

PLAY RECAP *****
*
jozshua@192.168.56.112      : ok=2    changed=0    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
jozshua@192.168.56.116      : ok=2    changed=0    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
```

To make the python3 as default python I need to modify the codes

inside the install apache.yml from the task name section and after that run the command ansible-playbook.

- Install Java open-jdk

```
GNU nano 6.2                                install_apache.yml *
---
- hosts: all
  become: true
  tasks:

  - name: install pip3, python3 and Java open-jdk for Ubuntu
    apt:
      name:
        - python3
        - python3-pip
        - openjdk-11-jdk
      state: latest
      update_cache: yes
      when: ansible_distribution == "Ubuntu"

  - name: install pip3, python3 and Java open-jdk for CentOS
    dnf:
      name:
        - python3
        - python3-pip
        - java-1.8.0-openjdk
      state: latest
      update_cache: yes
      when: ansible_distribution == "CentOS"
```

```

--ask-become-pass install_apache.yml
BECOME password:

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [jozshua@192.168.56.116]
ok: [jozshua@192.168.56.112]

TASK [install pip3, python3 and Java open-jdk for Ubuntu] *****
*
skipping: [jozshua@192.168.56.116]

changed: [jozshua@192.168.56.112]

TASK [install pip3, python3 and Java open-jdk for CentOS] *****
*
skipping: [jozshua@192.168.56.112]
ok: [jozshua@192.168.56.116]

PLAY RECAP *****
*
jozshua@192.168.56.112 : ok=2    changed=1    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
jozshua@192.168.56.116 : ok=2    changed=0    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0

```

I edited the task section in the install_apache.yml file to have installation the java open-jdk then save. Run the command ansible-playbook command and as we could see the server from ubuntu was changed while from the centos is having ok state.

- 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)"
- Create a user with a variable defined in config.yaml

```

jozshua@jozshua-VirtualBox: ~/Alonzo_PrelimExam/cpe_an...
GNU nano 6.2 config.yaml
--
- hosts: all
  become: true
  tasks:
    - shell: echo 'jozshua'
      register: username
    - debug: msg= "Playbook servers is created by {{ username.stdout }}"
    - shell: echo 'Jozshua Amiel Alonzo'
      register: myName
    - debug: msg= "Good day! my name is {{ myName.stdout }}, from CPE dept."

```

```

jozshua@jozshua-VirtualBox:~/Alonzo_PrelimExam/cpe_ansible_PE$ ansible-playbook
--ask-become-pass config.yaml
BECOME password:

PLAY [all] *****
*

TASK [Gathering Facts] *****
*
ok: [jozshua@192.168.56.112]
ok: [jozshua@192.168.56.116]

TASK [shell] *****
*
changed: [jozshua@192.168.56.112]
changed: [jozshua@192.168.56.116]

TASK [debug] *****
*
ok: [jozshua@192.168.56.112] => {
  "msg": "Playbook servers is created by jozshua"
}
ok: [jozshua@192.168.56.116] => {
  "msg": "Playbook servers is created by jozshua"
}

TASK [shell] *****
*
changed: [jozshua@192.168.56.112]
changed: [jozshua@192.168.56.116]


TASK [debug] *****
*
ok: [jozshua@192.168.56.112] => {
  "msg": "Good day! my name is Jozshua Amiel Alonzo, from CPE dept."
}
ok: [jozshua@192.168.56.116] => {
  "msg": "Good day! my name is Jozshua Amiel Alonzo, from CPE dept."
}

PLAY RECAP *****
*
jozshua@192.168.56.112 : ok=5    changed=2    unreachable=0    failed=0
skipped=0    rescued=0    ignored=0
jozshua@192.168.56.116 : ok=5    changed=2    unreachable=0    failed=0
skipped=0    rescued=0    ignored=0


```

First we need to create the config.yaml file then insert the right commands with it with your personal message of the day. Then modified the command ansible-playbook with the ansible-playbook --ask-become-pass config.yaml because it is different file that we are trying to run with the playbook.

5. PUSH and COMMIT your PrelimExam in your GitHub repo





 main ▾ [Alonzo_PrelimExam](#) / [cpe_ansible_PE](#) /

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 **jozshua** Prelim EXAM

e13dff3 1 minute ago [History](#)

..

 ansible.cfg	Prelim EXAM	1 minute ago
 config.yaml	Prelim EXAM	1 minute ago
 install_apache.yml	Prelim EXAM	1 minute ago
 inventory	Prelim EXAM	1 minute ago

6. Your document report should be submitted here.

7. For your prelim exam to be counted, please paste your repository link here.

https://github.com/jozshua/Alonzo_PrelimExam.git