# Homework

## I-       One ansible controller(Ubuntu) and four clients (2 linux and 2 ubuntu) set up

**1- Screenshot of the keypair generated for unbuntu-host1 and ubuntu-host2**

```
root@ubuntu-host1:~# cd .ssh
root@ubuntu-host1:~/.ssh# ll
total 12
drwx------ 2 root root 4096 Jul 30 18:59 ./
drwx------ 4 root root 4096 Jul 30 18:59 ../
-rw------- 1 root root  556 Jul 30 18:59 authorized_keys
root@ubuntu-host1:~/.ssh#
root@ubuntu-host1:~/.ssh# cat authorized_keys
no-port-forwarding,no-agent-forwarding,no-X11-forwarding,command="echo 'Please login as the user \"ubuntu\" rather than the user \"root\".';echo;sleep 10;exit
142" ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCINDJwI3edZ9yPWQSYw4+aZCMa4zYTxUQsQExBuZuaFuD4dhJWDaK104ECoHgyYSgncvpp5qYvVFeUlJ8Ts0HDBdwruMgsAwKao1JO2lDTsDCsC3rb
JPpss6e+Lz8l14ajJn8i683gyUILFXZ31G70r97aY03HkBIK8wHEQ2XGMXcTtD9lrJkiNVFmLftZdc4gSOBsgNtpzIulaUkftMZJ+4DWNIR4Rk99KSagBcSGMkOmpa1UqUaFwJL2XLy2sjKgfTgKsbe/hJ6PvE
nnjRFFbWWUWI9ler10ircPNqtjgI/wii/hlhYLTUGV7ZR3fKpYcqmd1MufnYdbR+7cQEwj ubuntu-key
root@ubuntu-host1:~/.ssh# vi authorized_keys
root@ubuntu-host1:~/.ssh#
```

```
root@ubuntu-host2:~# cd .ssh
root@ubuntu-host2:~/.ssh# ll
total 12
drwx------ 2 root root 4096 Jul 30 18:58 ./
drwx------ 4 root root 4096 Jul 30 18:58 ../
-rw------- 1 root root  556 Jul 30 18:58 authorized_keys
root@ubuntu-host2:~/.ssh# cat authorized_keys
no-agent-forwarding,no-X11-forwarding,command="echo 'Please login as the user \"ubuntu\" rather than the user \"root\".';echo;sleep 10;exit
 142" ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCINDJwI3edZ9yPWQSYw4+aZCMa4zYTxUQsQExBuZuaFuD4dhJWDaK104ECoHgyYSgncvpp5qYvVFeUlJ8Ts0HDBdwruMgsAwKao1JO2lDTsDCsC3rb
JPpss6e+Lz8l14ajJn8i683gyUILFXZ31G70r97aY03HkBIK8wHEQ2XGMXcTtD9lrJkiNVFmLftZdc4gSOBsgNtpzIulaUkftMZJ+4DWNIR4Rk99KSagBcSGMkOmpa1UqUaFwJL2XLy2sjKgfTgKsbe/hJ6PvE
nnjRFFbWWUWI9ler10ircPNqtjgI/wii/hlhYLTUGV7ZR3fKpYcqmd1MufnYdbR+7cQEwj ubuntu-key
root@ubuntu-host2:~/.ssh# vi authorized_keys
root@ubuntu-host2:~/.ssh#
```

**2- Screenshot of the keypair generated for linux-host1 and linux-host2**

```
[root@linux-host1 ~]# cd .ssh
[root@linux-host1 .ssh]# ll
total 4
-rw------- 1 root root 548 Jul 30 19:07 authorized_keys
[root@linux-host1 .ssh]# cat authorized_keys
no-port-forwarding,no-agent-forwarding,no-X11-forwarding,command="echo 'Please login as the user \"ec2-user\" rather than the user \"root\".';echo;sleep 10" s
sh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCpfoVwg+YM6KOvr4X0xkGnZL0axPnL8BWVv7Svhh1g1lNl1DHLtubxKpfc9opxQKVOxGBE6t008MvG7Yk9gep8Bi3TAuN0I+BrfYVQhi1FkB2J+H1ZkyTySrM
PZEn0MY8ixkULHlIdZYPvzfrmTZxwqx7L4wt+t/Q/0LE/lYNCECXJTUk7GMDpv+ijx4uDY37wt1rCMUv+Y/z7cgYLkdeBMr4IdulD3Qu6SG2varYltGvCk13ZtMY2JUYoZ6B6ABYDxJcODOrtyIwONfjE2mOYY
haEXAbkXt7/zymi+3bqHoasTynmMbv5dDybNoX3twUTGRCkj0WfrqFF48u7iNyh linux-key
[root@linux-host1 .ssh]# vi authorized_keys
[root@linux-host1 .ssh]#
```

```
root@linux-host2 ~]# cd .ssh
root@linux-host2 .ssh]# ll
otal 4
rw------- 1 root root 548 Jul 30 19:07 authorized_keys
root@linux-host2 .ssh]# cat authorized_keys
o-port-forwarding,no-agent-forwarding,no-X11-forwarding,command="echo 'Please login as the user \"ec2-user\" rather than the user \"root\".';echo;sleep 10" s
sh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCpfoVwg+YM6KOvr4X0xkGnZL0axPnL8BWVv7Svhh1g1lNl1DHLtubxKpfc9opxQKVOxGBE6t008MvG7Yk9gep8Bi3TAuN0I+BrfYVQhi1FkB2J+H1ZkyTySrM
PZEn0MY8ixkULHlIdZYPvzfrmTZxwqx7L4wt+t/Q/0LE/lYNCECXJTUk7GMDpv+ijx4uDY37wt1rCMUv+Y/z7cgYLkdeBMr4IdulD3Qu6SG2varYltGvCk13ZtMY2JUYoZ6B6ABYDxJcODOrtyIwONfjE2mOYY
aEXAbkXt7/zymi+3bqHoasTynmMbv5dDybNoX3twUTGRCkj0WfrqFF48u7iNyh linux-key
root@linux-host2 .ssh]# vi authorized_keys
root@linux-host2 .ssh]#
```

**3- Screenshot inventory on the controller (Ubuntu-controller)**

```
[root@linux-host2 ~]# exit
logout
Connection to 10.0.1.183 closed.
root@ubuntu-controller:/etc/ansible# cat hosts
# This is the default ansible 'hosts' file.
#
# It should live in /etc/ansible/hosts
#
#    - Comments begin with the '#' character
#    - Blank lines are ignored
#    - Groups of hosts are delimited by [header] elements
#    - You can enter hostnames or ip addresses
#    - A hostname/ip can be a member of multiple groups

# Ex 1: Ungrouped hosts, specify before any group headers:

## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10

# Ex 2: A collection of hosts belonging to the 'webservers' group:

 [ubuntu-hosts]
10.0.3.234
10.0.13.108

 [linux-hosts]
10.0.10.85
10.0.1.183

## 192.168.1.100
## 192.168.1.110
```

**II- Screenshot of all the hosts successfully pinged by the controller(Ubuntu-controller) using ad-hoc cmd PING**

```
[WARNING]: Platform linux on host 10.0.10.85 is using the discovered Python interpreter at /usr/bin/python3.7, but future
installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.16/reference_appendices/interpreter_discovery.html for more information.
10.0.10.85 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.7"
    },
    "changed": false,
    "ping": "pong"
}
[WARNING]: Platform linux on host 10.0.1.183 is using the discovered Python interpreter at /usr/bin/python3.7, but future
installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.16/reference_appendices/interpreter_discovery.html for more information.
10.0.1.183 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.7"
    },
    "changed": false,
    "ping": "pong"
}
10.0.13.108 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
10.0.3.234 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
root@ubuntu-controller:/etc/ansible#
```

## III- Screenshot of both the controller and hosts of the playbook with the 3 phases

### 1- Result of the Controller running the play book

```
root@ubuntu-controller:~/web# vim ubuntu-apache-playbook.yaml
root@ubuntu-controller:~/web# ansible-playbook ubuntu-apache-playbook.yaml
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [Deploy Apache to Ubuntu webservers] ********************************************************************************

TASK [Gathering Facts] **************************************************************************************************
ok: [10.0.13.108]
ok: [10.0.3.234]

TASK [Update all packages to their latest version] **********************************************************************
ok: [10.0.13.108]
ok: [10.0.3.234]

TASK [Install Apache HTTP server] ***************************************************************************************
changed: [10.0.3.234]
changed: [10.0.13.108]

TASK [Start Apache HTTP server, if not started] *************************************************************************
ok: [10.0.3.234]
ok: [10.0.13.108]

TASK [Enable Apache HTTP server to start on boot] ***********************************************************************
ok: [10.0.13.108]
ok: [10.0.3.234]

TASK [Copy index file to the web server] ********************************************************************************
changed: [10.0.13.108]
changed: [10.0.3.234]

PLAY [Install Git on Ubuntu webservers] *********************************************************************************

TASK [Gathering Facts] **************************************************************************************************
ok: [10.0.3.234]
ok: [10.0.13.108]

TASK [Install Git] ******************************************************************************************************
ok: [10.0.3.234]
ok: [10.0.13.108]
```
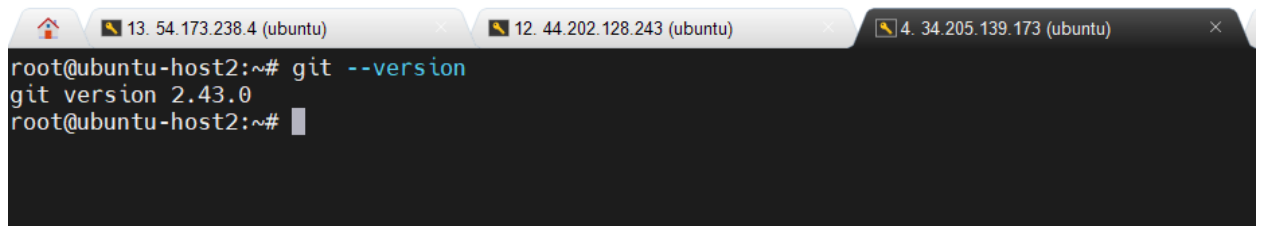
```
PLAY [Display the name of the student] ************************************************************************

TASK [Gathering Facts] ****************************************************************************************
ok: [10.0.13.108]
ok: [10.0.3.234]
[WARNING]: Platform linux on host 10.0.1.183 is using the discovered Python interpreter at /usr/bin/python3.7, but future installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.16/reference_appendices/interpreter_discovery.html for more
information.
ok: [10.0.1.183]
[WARNING]: Platform linux on host 10.0.10.85 is using the discovered Python interpreter at /usr/bin/python3.7, but future installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.16/reference_appendices/interpreter_discovery.html for more
information.
ok: [10.0.10.85]

TASK [Display the name of the student] ********************************************************************
ok: [10.0.3.234] => {
    "msg": "The student name is: Elie Tachenko"
}
ok: [10.0.13.108] => {
    "msg": "The student name is: Elie Tachenko"
}
ok: [10.0.10.85] => {
    "msg": "The student name is: Elie Tachenko"
}
ok: [10.0.1.183] => {
    "msg": "The student name is: Elie Tachenko"
}

PLAY RECAP ****************************************************************************************************
10.0.1.183                 : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
10.0.10.85                 : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
10.0.13.108                : ok=10   changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
10.0.3.234                 : ok=10   changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

root@ubuntu-controller:~/web# 
```

2- Screenshot of the output of play1 on all Ubuntu-hosts



Welcome to Elie Tachenko's round up Homework on Ansible!
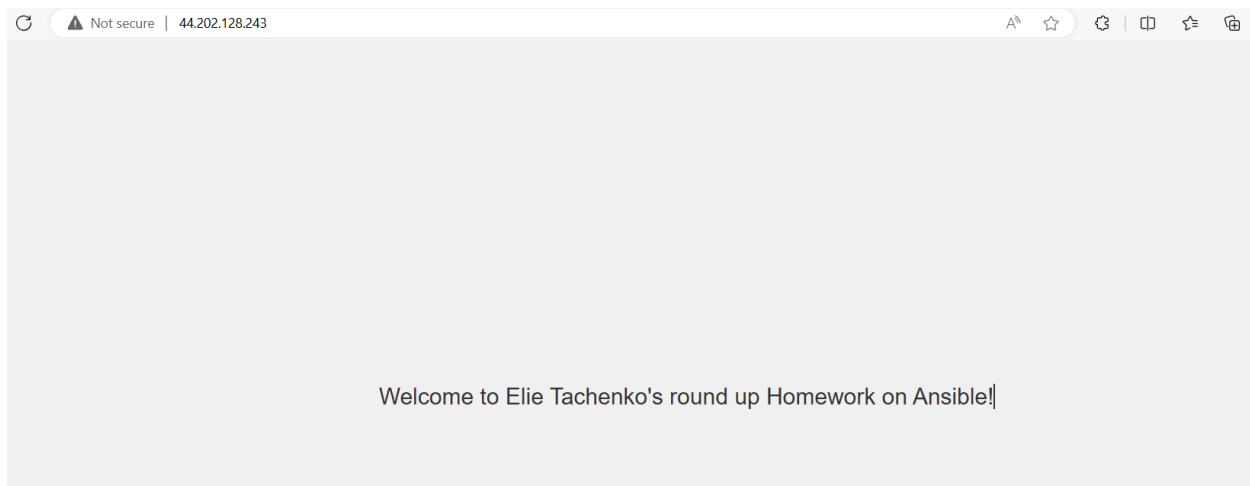
3- Screenshot of the output of play2 on all Ubuntu-hosts
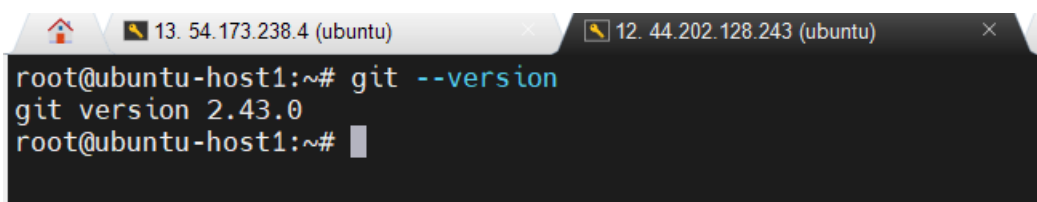


```
root@ubuntu-host1:~# git --version
git version 2.43.0
root@ubuntu-host1:~# 
```

```
root@ubuntu-host2:~# git --version
git version 2.43.0
root@ubuntu-host2:~#
```