Task 11. Yaml, Ansible

1. **Create YAML file that's described persons:**

https://github.com/dennis00010011b/epam-devops-training/blob/master/Task11/persons.yml

Checked with validator https://codebeautify.org/yaml-validator

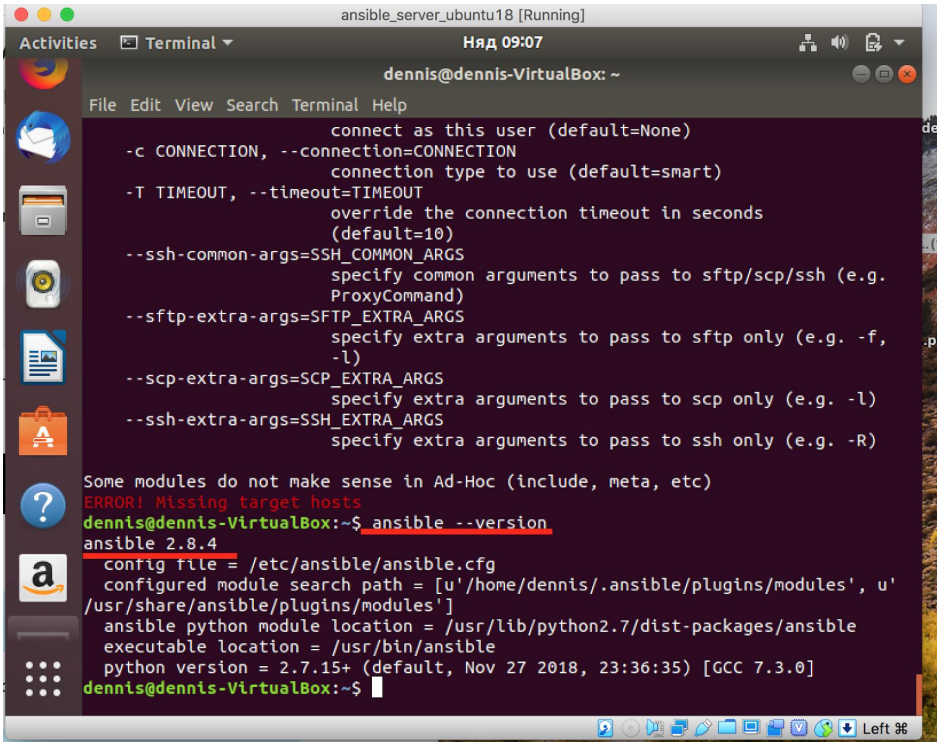
```
---
  persons:
    - person: &id001
        lastName: Tikhomirov
        firstName: Dennis
        group: Devops_Summer_2019
        email: dennistikhomirov@gmail.com
        languages:
          english: c2
          chinese: b1
        programming:
          paskal: 8
          cobol: 4

    - person: &id002
        lastName: Doe
        firstName: John
        group: Cementry_1977
        email: john_doe@gmail.com
        languages:
          english: c2
          chinese: b1
        programming:
          paskal: 8
          cobol: 4
---
  hired: *id001
  died: *id002
```

2. Ansible

2.1 Install Ansible

I used virtual machine with Ubuntu18 as a server.
Installation process described here:
https://www.digitalocean.com/community/tutorials/how-to-install-and-configure-ansible-on-ubuntu-18-04



2.2 Add SSH keys on hosts machines

Create SSH keys ,nice tutorial:
https://www.digitalocean.com/community/tutorials/how-to-set-up-ssh-keys-on-ubuntu-1804

Don't forget to install on server and host's machines:
`sudo apt-get install openssh-server openssh-client`

Create SSH keys on server:
`Ssh-keygen  // no password, location ~/.ssh/id_rsa`

Copy public key from server `~/.ssh/id_rsa.pub` to host machine to `~/.ssh/authorized_keys`

Now server can connect to the host via SSH without password entering:
`ssh dennis@192.168.33.11`

Lastly, because Ansible uses a python interpreter located at `/usr/bin/python` to run its modules, you'll need to install Python 2 on the **host** in order for Ansible to communicate with it. Run the following commands to update the host's package index and install the python package. On each host:

```
sudo apt update
sudo apt install python
```

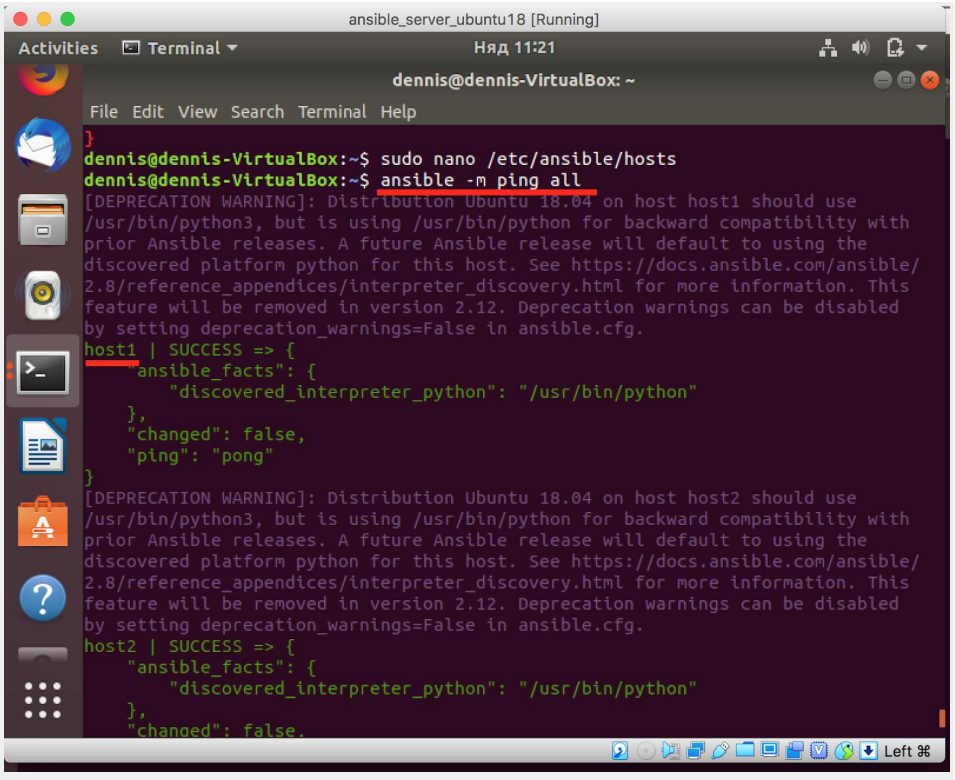
2.3 Inventory file

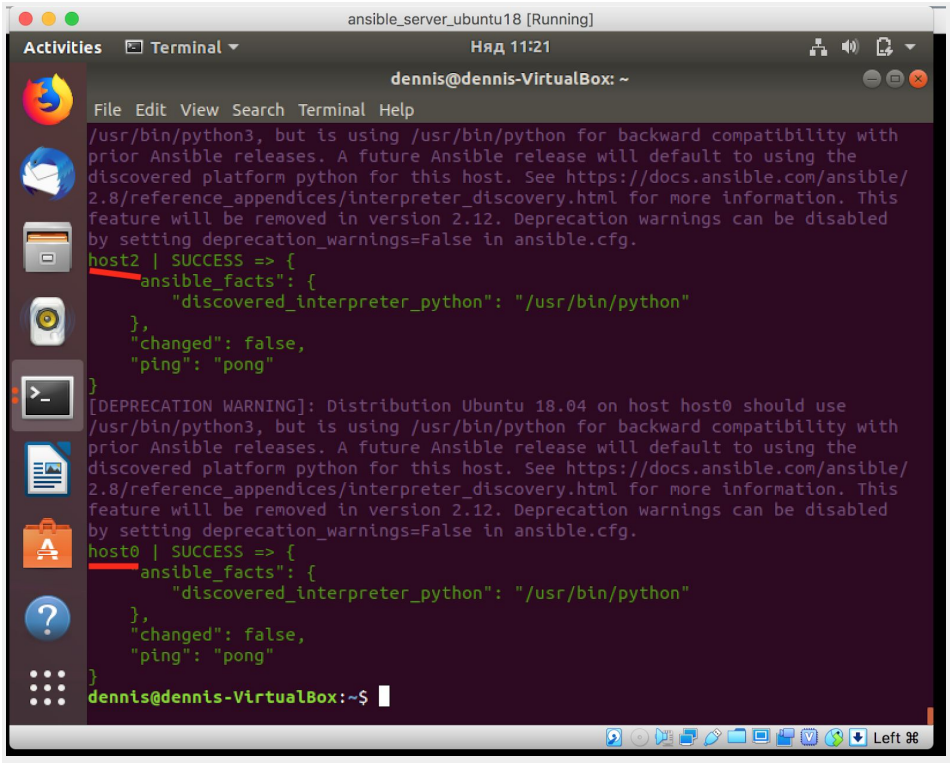
Located on server machine in `/etc/ansible/hosts`

```
[hosts]
host0 ansible_ssh_host=192.168.33.11 ansible_ssh_user=dennis
host1 ansible_ssh_host=192.168.33.12 ansible_ssh_user=dennis
host2 ansible_ssh_host=192.168.33.13 ansible_ssh_user=dennis
```

2.4 Ping all hosts:

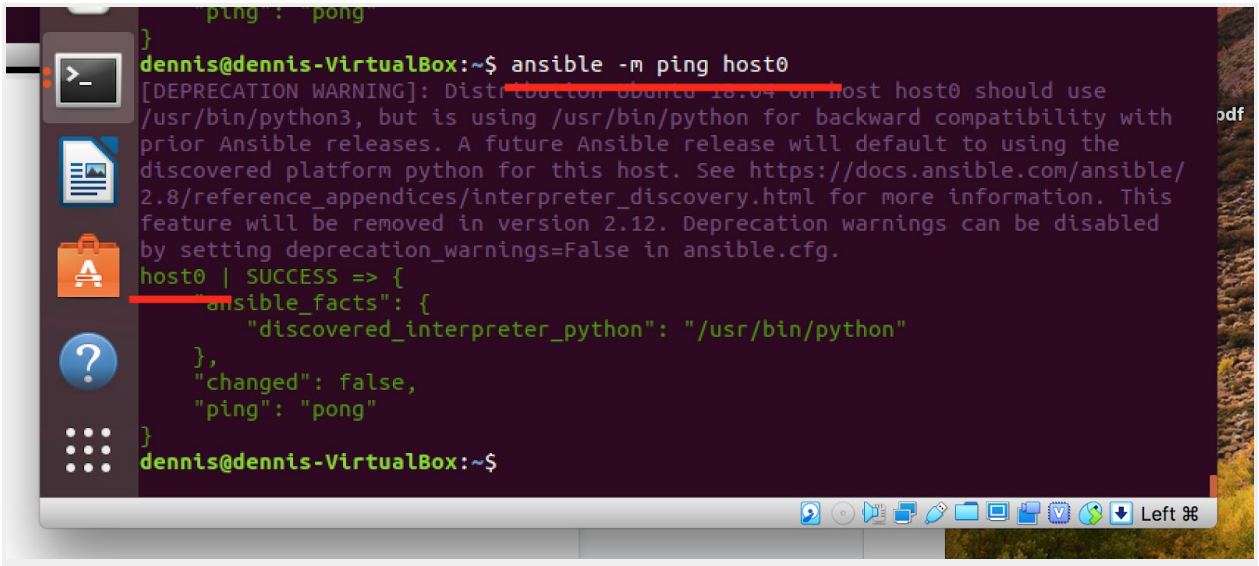
```
ansible -m ping all
```





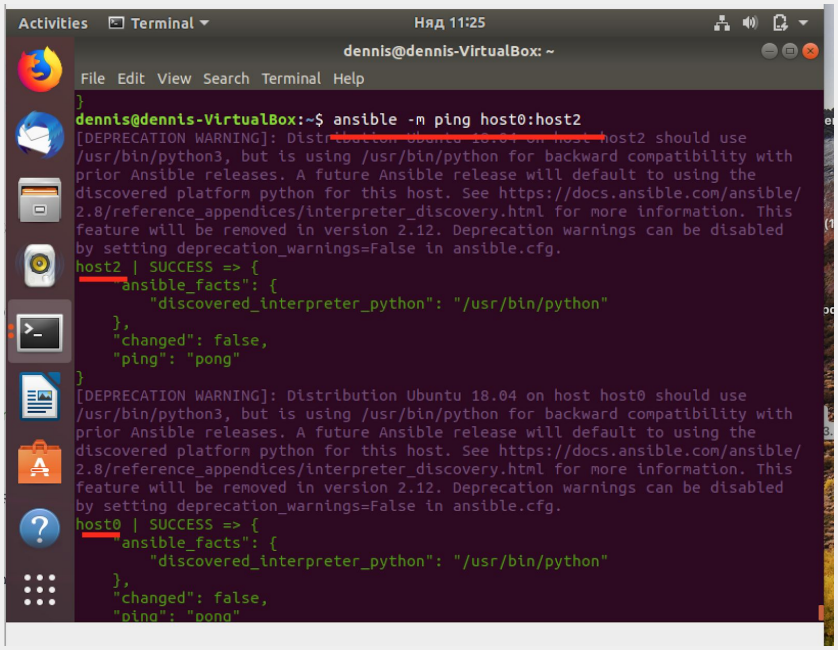
2.5 Ping single host:

`ansible -m ping host0`



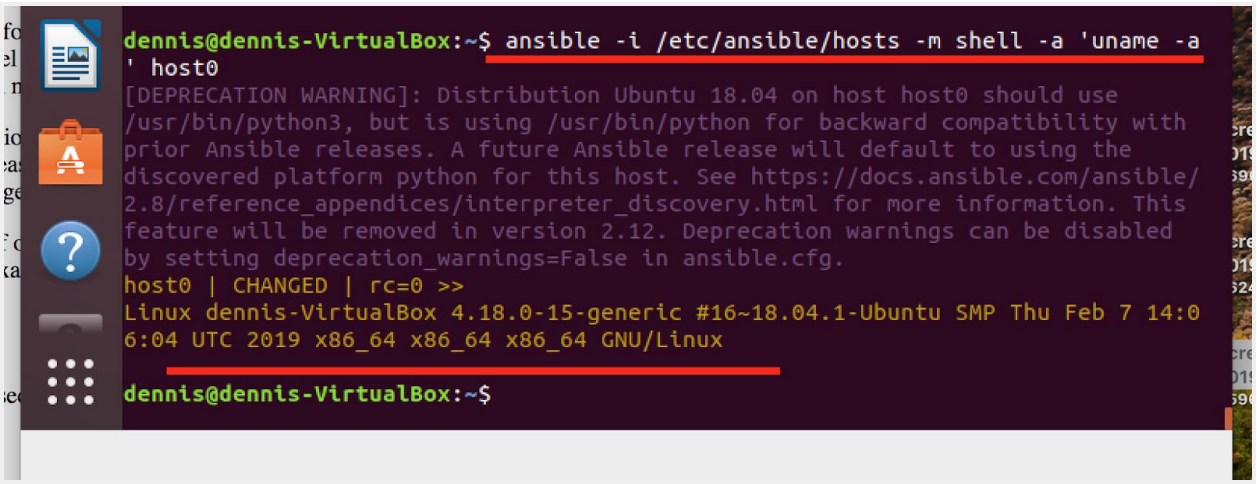
2.5 Ping specified hosts:

```
ansible -m ping host0:host2
```

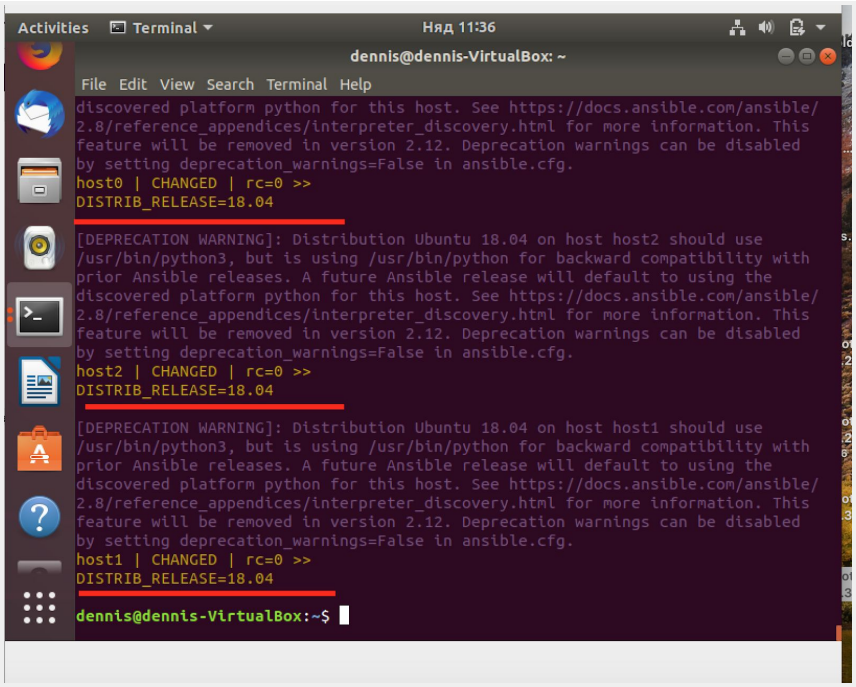


2.6 Try various commands

```
ansible -i /etc/ansible/hosts -m shell -a 'uname -a' host0
```



```
ansible -i /etc/ansible/hosts -m shell -a 'grep DISTRIB_RELEASE /etc/lsb-release' all
```



Gathers facts about remote hosts

```
ansible -i /etc/ansible/hosts -m setup host2
```