

ANSIBLE Installation Project

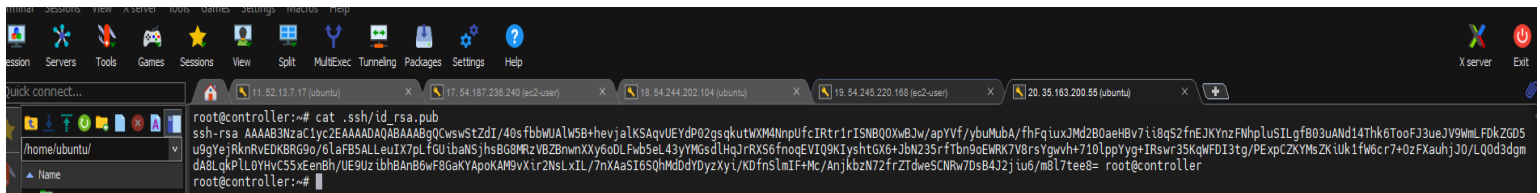
<https://github.com/christ222/Another-Flavor-of-IaC-ANSIBLE>

Prerequisites

- **Ansible Controller:** This EC2 instance(Ubuntu 24.04)
- **Ansible Worker:** Four EC2 instances (2 Amazon Linux 2023 and 2 Ubuntu24.04).
- **2 keys pairs :** Ansible_controller_kp ; Ansible_worker_kp

1-Screenshots of the root key pair generate (pub key) on the controller account

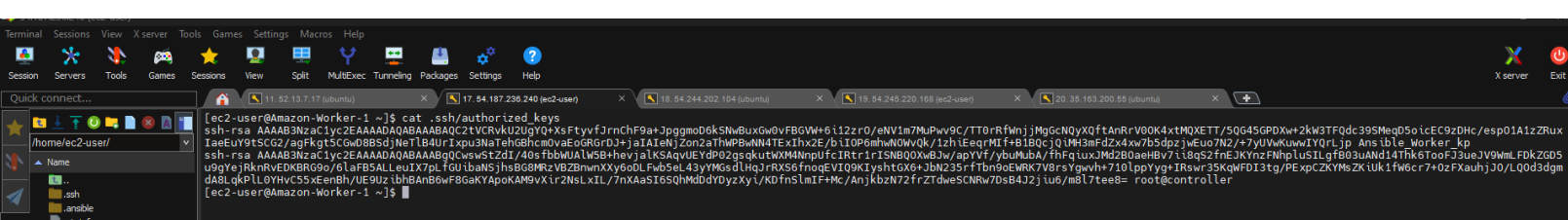
***This key will be shared with all the workers**



```
root@controller:~# cat .ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGCwsWStZdI/40sfbWUAlW5B+hevjaKSAqvUEYdP02gskutWXMNnpUfcIRtr1rISNBQ0XwB3w/apYVf/ybuMubA/fhFqiuXJMd2B0aeHBv7i18qS2fneJYnzFnhPluSILgf803uAnd14Thk6ToofJ3ueJV9WmLFDkZGDS
u9gYeJRknRvEDKBRG9o/6laFBSALLeuIX7pLfgUibaNSjhsBG8MRzVBZBwnXXy6oDLFw5eL43yYMcSdLHqjrRXS6fnogEVIQ9KIyshtGX6+JbN235rftbn9oEWRK7V8rsYgwhv+710lppYyg+IRswr35KqWFDI3tg/PExpCZKYMsZkIUk1fw6cr7+0zFXauhjJ0/LQ0d3dgm
dABLqkPLl0YHvC55xEnBh/UE9UzibhBAnB6wF8GaKYApokAM9vXlr2NsLxL/7nXaASi6SQhMddYdyzXyi/KDfnsLmIF+Mc/AnjkbzN72frZTdwSCNRw7DsB4J2jiu6/m8l7tee8= root@controller
root@controller:~#
```

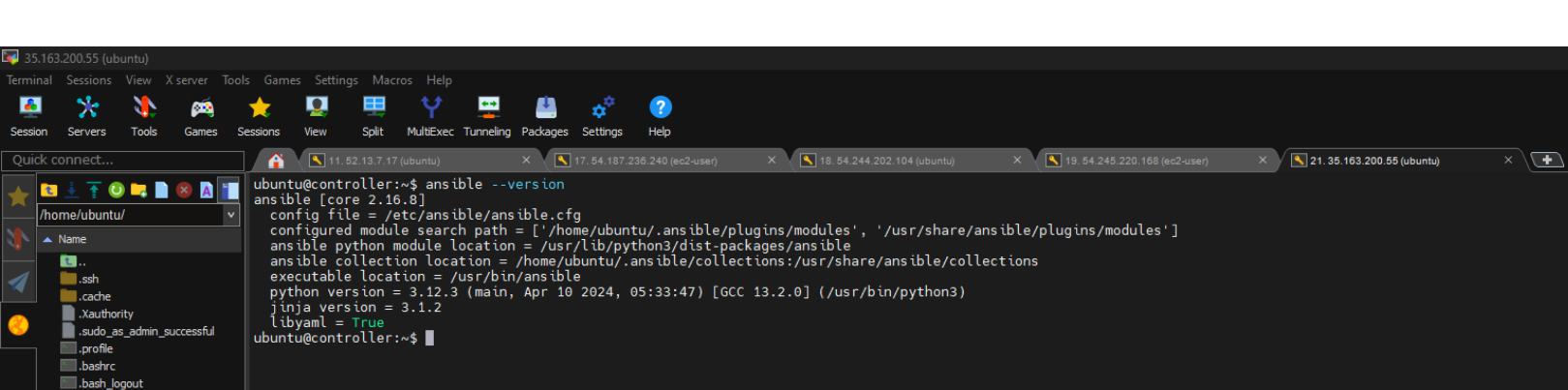
2-Screenshot of the worker's file .ssh/authorized_key showing the controller keypair

***All the workers .ssh/authorized_key file should have the controller pub key**



```
[ec2-user@Amazon-Worker-1 ~]$ cat .ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGC2iVCRvKUZ0gYQ+XsFtyvfrnchF9a+Jpggm0dKSNbuxQwDvFBGvW+6i12zr0/vNv1m7Mbw9C/TT0rRfwnjMgCQvX0fAnRv00K1xthOXETT/50G4SGP0Xw+2k3ATFQdc39SMq0S0icEC9oDhc/esp01A1zZRux
TaeEuY9TS5C2/agfKgt5C6w0B85dJNoTlB4UirXp03NaTehGehcnoVaEodGrD3+ja1A1eNjZon2aTmPBuNM4TE+thx2E/b1I0P6fhW0dw0K/1zh1eagrMfFb180cJgUmsfFdzAzw2b5d0zjW6uo7N2/7yUUVkUwzJYQrtJpAnsibleWorkerkp
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGCwsWStZdI/40sfbWUAlW5B+hevjaKSAqvUEYdP02gskutWXMNnpUfcIRtr1rISNBQ0XwB3w/apYVf/ybuMubA/fhFqiuXJMd2B0aeHBv7i18qS2fneJYnzFnhPluSILgf803uAnd14Thk6ToofJ3ueJV9WmLFDkZGDS
u9gYeJRknRvEDKBRG9o/6laFBSALLeuIX7pLfgUibaNSjhsBG8MRzVBZBwnXXy6oDLFw5eL43yYMcSdLHqjrRXS6fnogEVIQ9KIyshtGX6+JbN235rftbn9oEWRK7V8rsYgwhv+710lppYyg+IRswr35KqWFDI3tg/PExpCZKYMsZkIUk1fw6cr7+0zFXauhjJ0/LQ0d3dgm
dABLqkPLl0YHvC55xEnBh/UE9UzibhBAnB6wF8GaKYApokAM9vXlr2NsLxL/7nXaASi6SQhMddYdyzXyi/KDfnsLmIF+Mc/AnjkbzN72frZTdwSCNRw7DsB4J2jiu6/m8l7tee8= root@controller
[ec2-user@Amazon-Worker-1 ~]$
```


3-Screenshot showing Ansible installed on the controller server.



```
ubuntu@controller:~$ ansible --version
ansible [core 2.16.8]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Apr 10 2024, 05:33:47) [GCC 13.2.0] (/usr/bin/python3)
  jinja version = 3.1.2
  libyaml = True
ubuntu@controller:~$
```

4- screenshot showing the inventory file on the controller.

***You can either create the inventory file in INI or YAML format. Here we use INI**



```

35.163.200.55 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultExec Tunneling Packages Settings Help

Quick connect...
/home/ubuntu/
Name
  .ssh
  .cache
  .ansible
  .Xauthority
  .sudo_as_admin_successful
  .profile

root@controller:~# pwd
/root
root@controller:~# cat ansible-setup/inventory/inventory
[amazon-linux]
amazon-linux-client1 ansible_host=54.187.236.240 ansible_user=ec2-user
amazon-linux-client2 ansible_host=54.245.220.168 ansible_user=ec2-user

[ubuntu]
ubuntu-client1 ansible_host=52.13.7.17 ansible_user=ubuntu
ubuntu-client2 ansible_host=54.244.202.104 ansible_user=ubuntu

root@controller:~#

```

5-Screenshot showing connection between the controller and all the 4 workers(client)

***Controller – Amazon_worker_1**

```
root@controller:~# ssh ec2-user@54.187.236.240
```

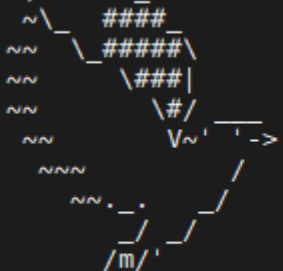
```
#_
~\####_      Amazon Linux 2023
~~\#####\
~~\###|
~~\#/
~~V~'-'>
    ~~~
     ~~-.-
        /\ 
       /\ 
      /\m/'-/\
```

<https://aws.amazon.com/linux/amazon-linux-2023>

Last login: Fri Jul 5 12:18:36 2024 from 162.251.173.95
[ec2-user@Amazon-Worker-1 ~]\$ █

*Controller – Amazon_worker_2

```
root@controller:~# ssh ec2-user@54.245.220.168
```



```
#_#####  
~\#####  
~~\#####  
~~\###|  
~~\#/ https://aws.amazon.com/linux/amazon-linux-2023  
~~V~' ->  
    ~~~  
      ~~-.-  
        / \  
       /m/'
```

```
Last login: Fri Jul 5 12:23:10 2024 from 162.251.173.95  
[ec2-user@Amazon-worker-2 ~]$
```

*Controller – Ubuntu_Worker_1

```
root@controller:~# ssh ubuntu@52.13.7.17
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1009-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Jul  5 13:23:12 UTC 2024

System load:  0.0                Processes:            111
Usage of /:   29.0% of 6.71GB    Users logged in:     1
Memory usage: 25%               IPv4 address for enX0: 172.31.31.125
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Pending kernel upgrade!
Running kernel version:
  6.8.0-1009-aws
Diagnostics:
  The currently running kernel version is not the expected kernel version 6.8.0-1010-aws.
Last login: Fri Jul  5 13:23:12 2024 from 35.163.200.55
ubuntu@Ubuntu-worker-1:~$
```

*Controller – Ubuntu_Worker_2

```
root@controller:~# ssh ubuntu@54.244.202.104
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1009-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Jul  5 13:26:54 UTC 2024

System load:  0.0                Processes:            110
Usage of /:   29.0% of 6.71GB    Users logged in:     1
Memory usage: 27%               IPv4 address for enX0: 172.31.19.69
Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
  compliance features.

https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Pending kernel upgrade!
Running kernel version:
  6.8.0-1009-aws
Diagnostics:
  The currently running kernel version is not the expected kernel version 6.8.0-1010-aws.
Last login: Fri Jul  5 12:21:30 2024 from 162.251.173.95
ubuntu@Ubuntu-worker-2:~$
```