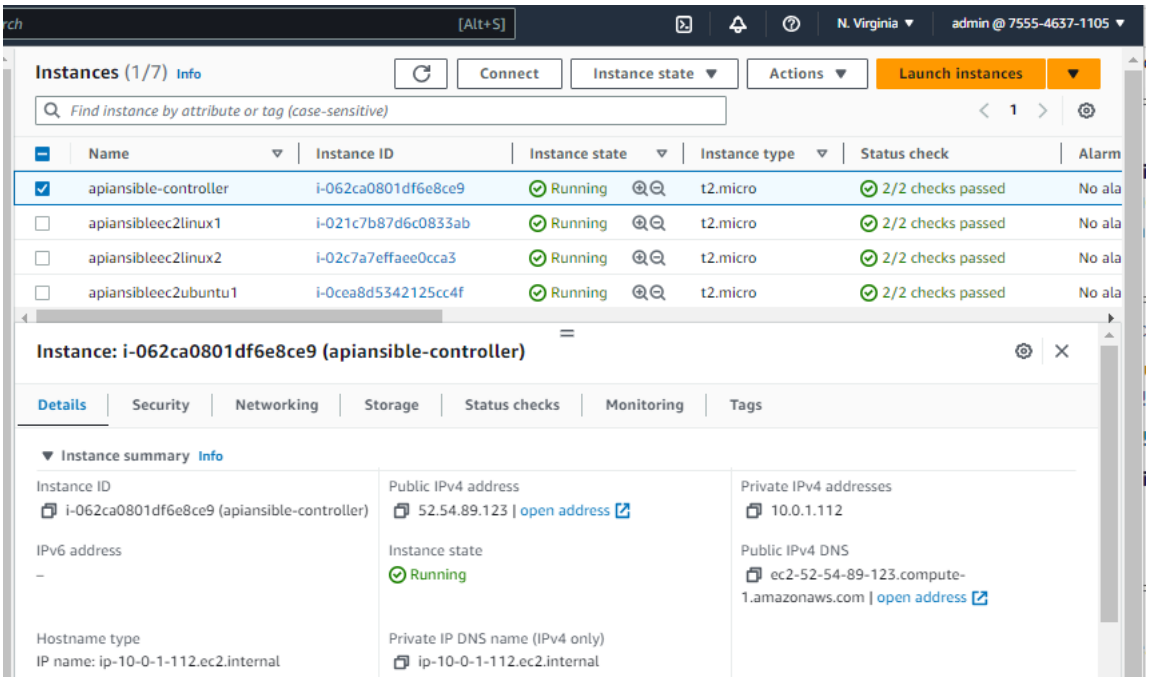
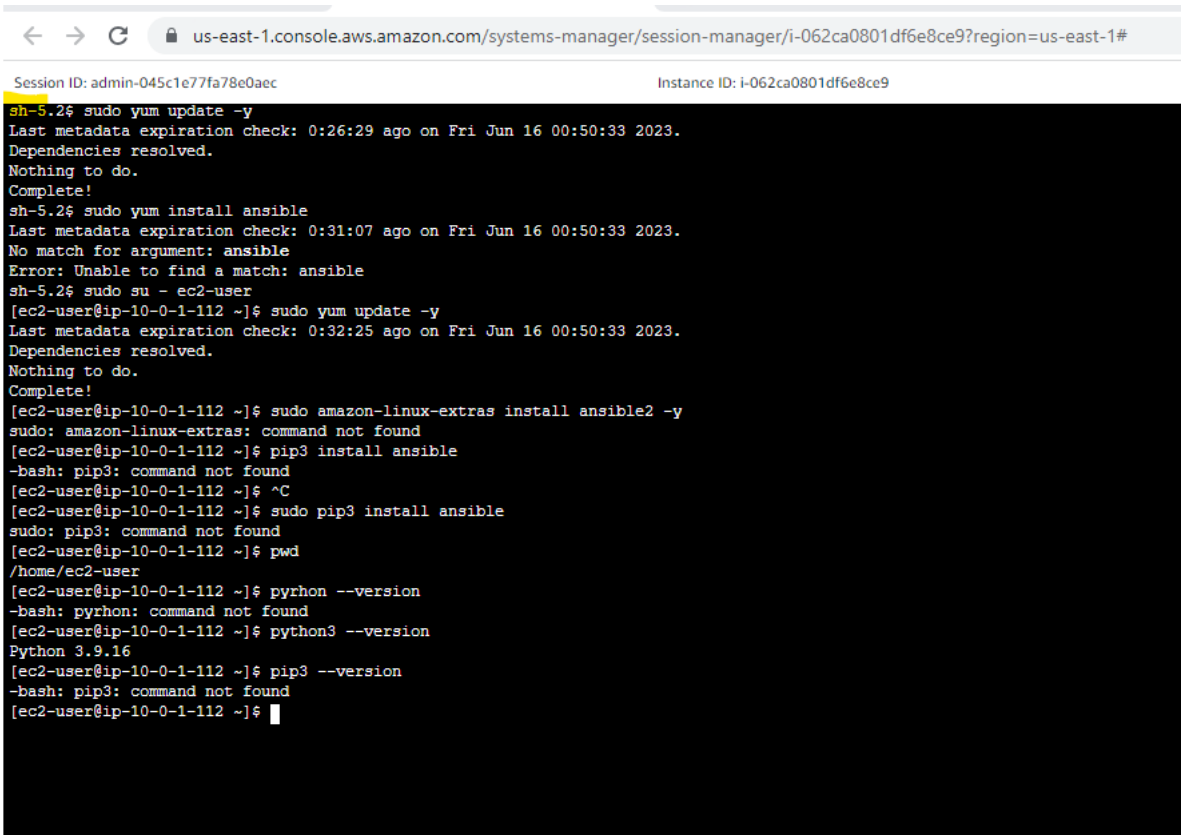
Ansible Assignment 1

Launching 5 EC2s: the controller is running Amazon Linux 2, 2 nodes running Amazon Linux 2 and 2 other nodes running Ubuntu.

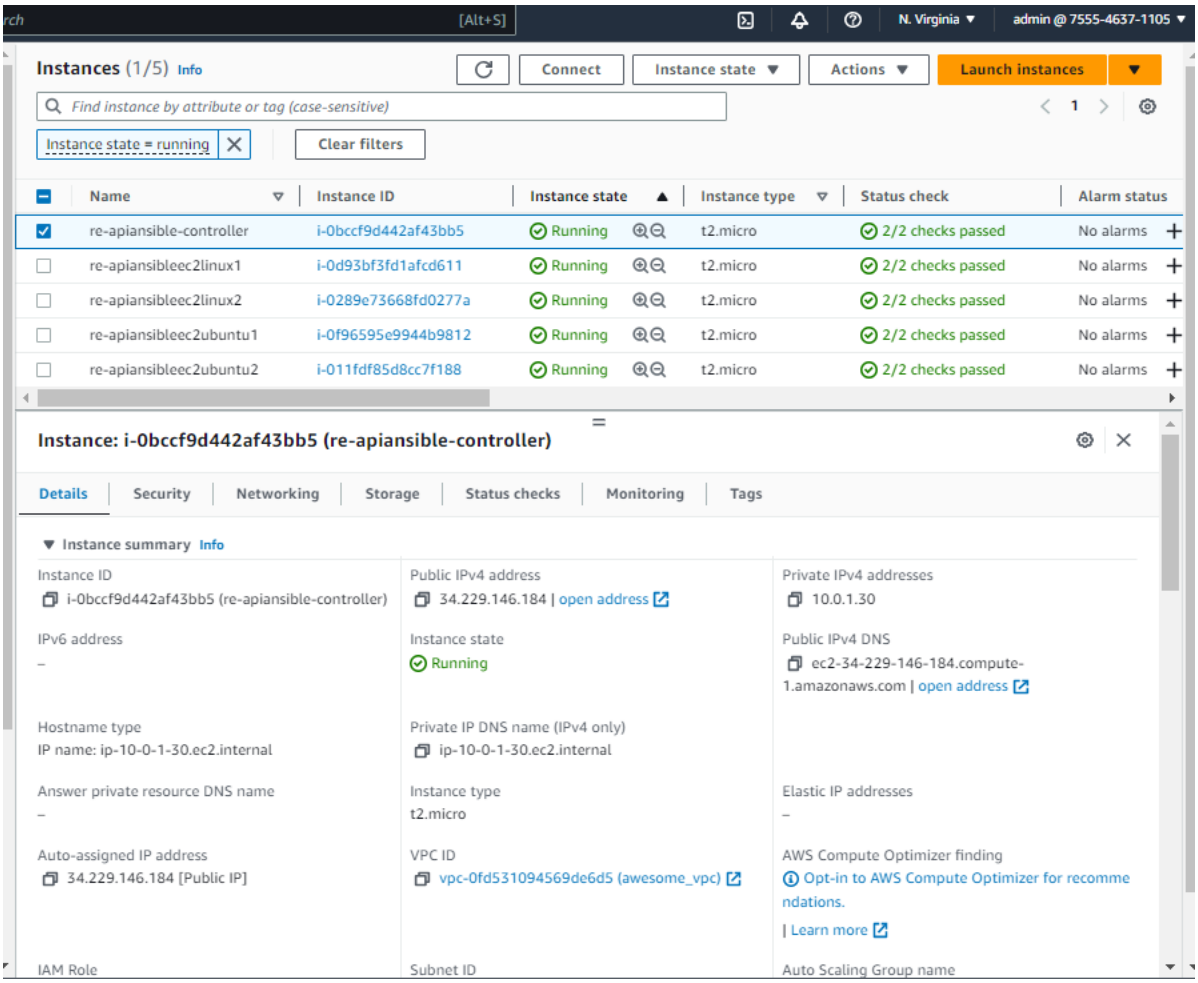


Installing ansible on my EC2 Amazon Linux 2 controller

Still having issues with pip3 on EC2 sh-5.2$ version



Relaunching 5 EC2s using AMIs (Linux and Ubuntu) of the previous EC2 version: the controller is running Amazon Linux 2, 2 nodes running Amazon Linux 2 and 2 other nodes running Ubuntu.



I ran the commands below to verify whether python and python 3 were installed

`sudo su – ec2-user`

`pwd`

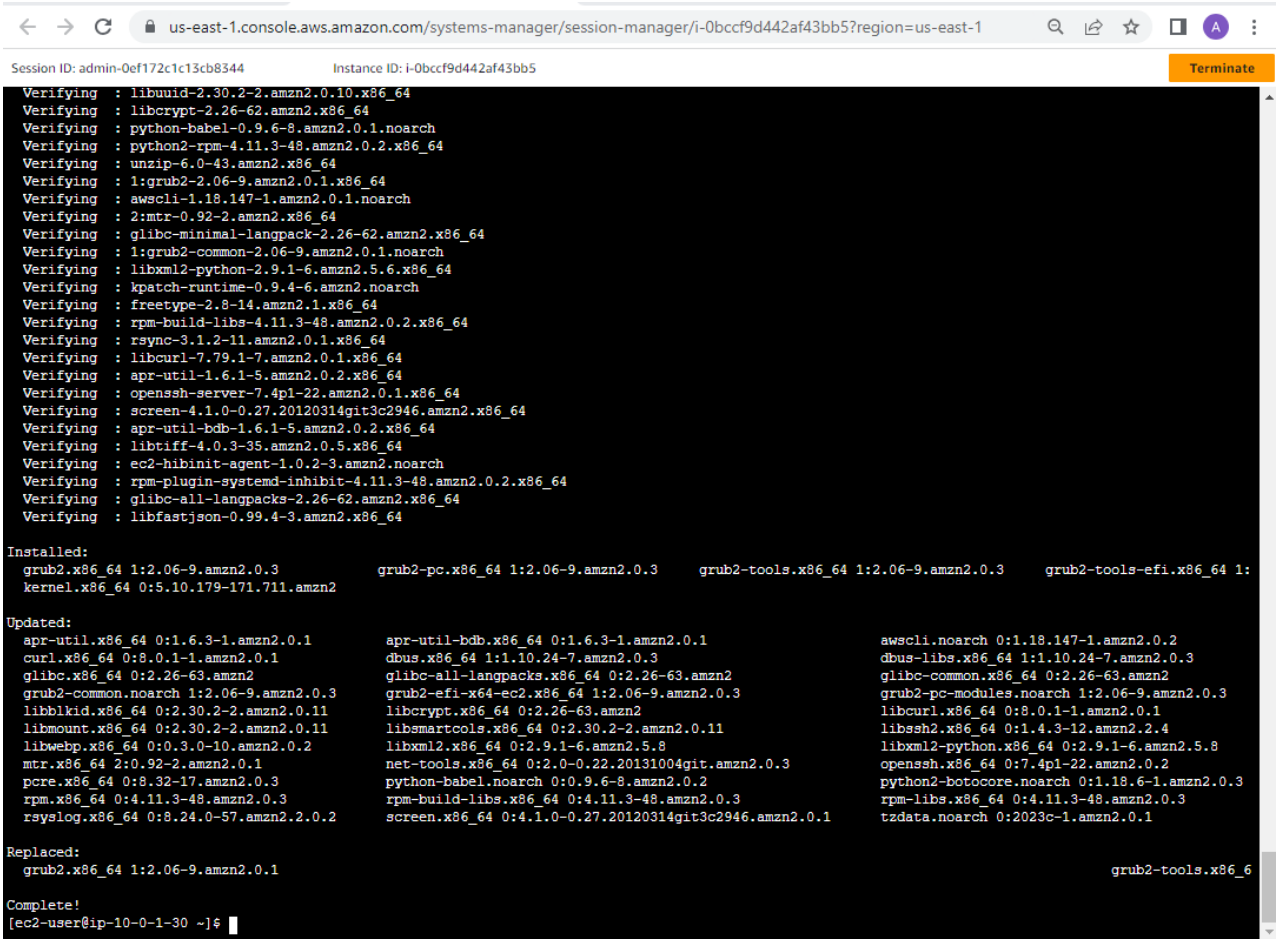
`python --version`

`python 3 --version`

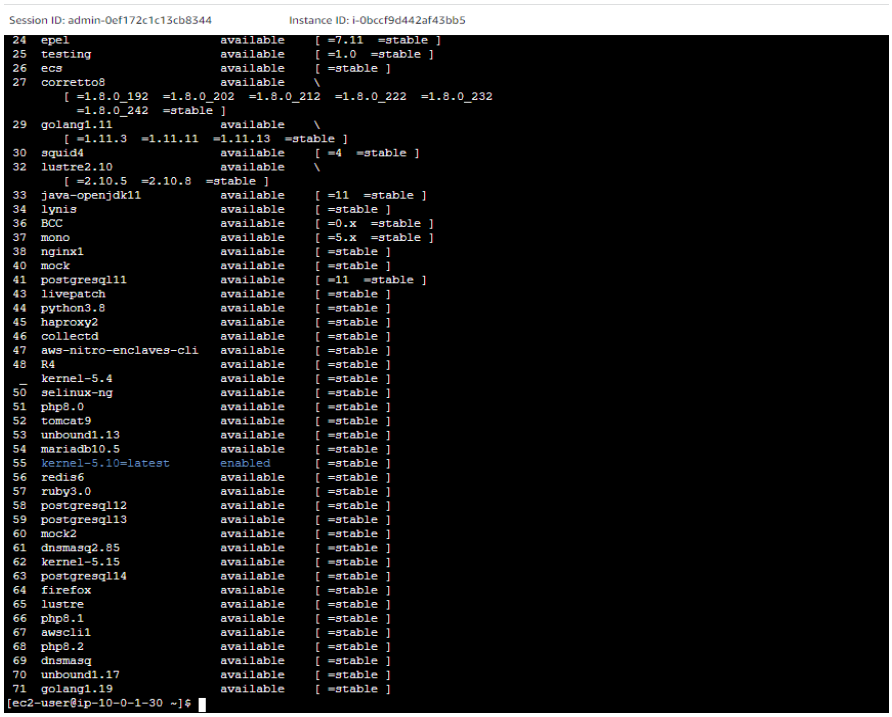
Both were installed in the previous EC2 version that I am using for this assignment.

Installing ansible on the EC2 Amazon Linux 2 I chose to become the controller

$ sudo yum update -y



$ sudo amazon-linux-extras install ansible2 -y



$ ansible –version (the controller has been successfully set up)

```
[ec2-user@ip-10-0-1-30 ~]$ ansible --version
ansible 2.9.23
  config file = /etc/ansible/ansible.cfg
  configured module search path = [u'/home/ec2-user/.ansible/plugins/modules', u'/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python2.7/site-packages/ansible
  executable location = /usr/bin/ansible
  python version = 2.7.18 (default, Feb 28 2023, 02:51:06) [GCC 7.3.1 20180712 (Red Hat 7.3.1-15)]
[ec2-user@ip-10-0-1-30 ~]$
```

Generating the key pair to allow SSH connection between the controller and the nodes

Session ID: admin-0ef172c1c13cb8344 Instance ID: i-0bccf9d442af43bb5 Terminate

```
[ec2-user@ip-10-0-1-30 ~]$ sudo -i
[root@ip-10-0-1-30 ~]# ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /root/.ssh/id_rsa.
Your public key has been saved in /root/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:zSp2pPx8FemjgoJPFsWdImP5OUlkjczibgzTEBSBtsw root@ip-10-0-1-30.ec2.internal
The key's randomart image is:
+---[RSA 2048]----+
| o=+ ooo         |
|... .=+...       |
|+ .+=.= o    .   |
| Eo.o* + o  o    |
|   =. = S o. .   |
|    +o + .  +    |
|   oo =.o  o .   |
|  .o...=. o      |
|   ...  oo       |
+----[SHA256]-----+
[root@ip-10-0-1-30 ~]# cd .ssh
[root@ip-10-0-1-30 .ssh]# ls -l
total 12
-rw------- 1 root root  556 Jun 16 01:41 authorized_keys
-rw------- 1 root root 1679 Jun 16 02:17 id_rsa
-rw-r--r-- 1 root root  412 Jun 16 02:17 id_rsa.pub
[root@ip-10-0-1-30 .ssh]# cat id_rsa^C
[root@ip-10-0-1-30 .ssh]# cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQC8dpDmX0VqvBLcqHb58b4IkaOauUAazfzJYSF5SL33G3/7Iu9JN7T8reJ/6qlalpyAduEuW50kNP7SayWHJM78pBoAtrKb8X344J/0Ke+waQ8xqAM
amnCqJtD7cMbGUZm9N2I3pb4OV1C3F1yHbum/ozFSrqZm+p5w4e3VzUq7v7aK5KA4HsM+oEankTJAjSqP0KrddzVszdxc/8xWIPQzK4qW4bcB root@ip-10-0-1-30.ec2.internal
[root@ip-10-0-1-30 .ssh]#
```

Going to each node to establish the connection with the controller

1st node: re-apiansibleec2linux1

Session ID: admin-09538721dde11be78 Instance ID: i-0d93bf3fd1afcd611

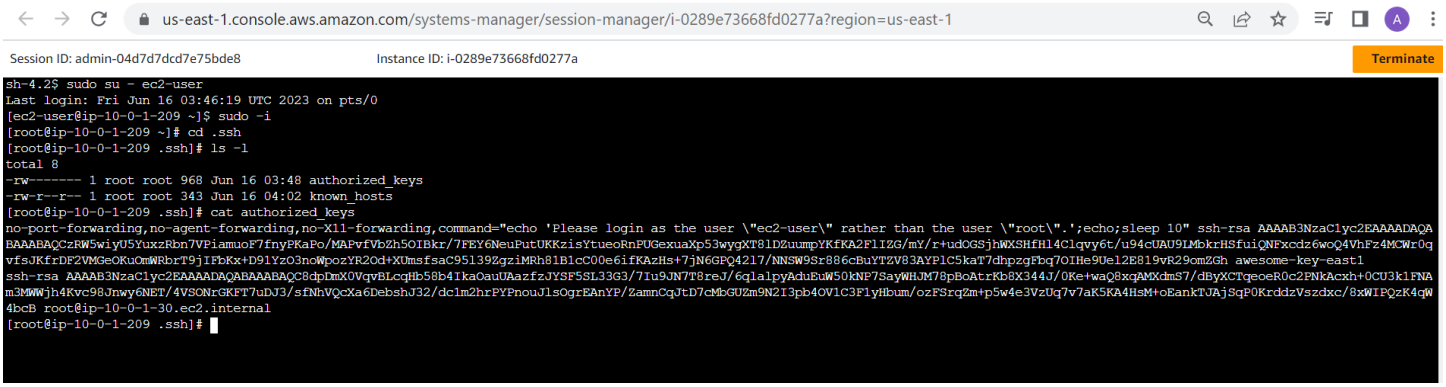
```
sh-4.2$ sudo su - ec2-user
Last login: Sun Jan  8 20:36:19 UTC 2023 from cpe-172-100-103-110.twcny.res.rr.com on pts/0
[ec2-user@ip-10-0-1-76 ~]$ sudo -i
[root@ip-10-0-1-76 ~]# cd .ssh
[root@ip-10-0-1-76 .ssh]# ls -l
total 4
-rw------- 1 root root 556 Jun 16 01:41 authorized_keys
[root@ip-10-0-1-76 .ssh]# cat authorized_keys
```

The public keypair of the controller was successfully copied and pasted in the node's authorized keys file.

```
[root@ip-10-0-1-76 .ssh]# vi authorized_keys
[root@ip-10-0-1-76 .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;slee
PUGexuaXp53wygXT8lDZuumpYKfKA2FlIZG/mY/r+udOGSjhWXSHfHl4Clqvy6t/u94cUAU9LMbkrHSfuiQNFxcdz6woQ4VhFz4MCWr0qvfsJKfrDF2VMGeOKuOmWRbrT9jIFbKx+D91YzO3noWpozY
ome-key-east1
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQC8dpDmX0VqvBLcqHb58b4IkaOauUAazfzJYSF5SL33G3/7Iu9JN7T8reJ/6qlalpyAduEuW50kNP7SayWHJM78pBoAtrKb8X344J/0Ke+waQ8xqAM
amnCqJtD7cMbGUZm9N2I3pb4OV1C3F1yHbum/ozFSrqZm+p5w4e3VzUq7v7aK5KA4HsM+oEankTJAjSqP0KrddzVszdxc/8xWIPQzK4qW4bcB root@ip-10-0-1-30.ec2.internal
[root@ip-10-0-1-76 .ssh]#
```

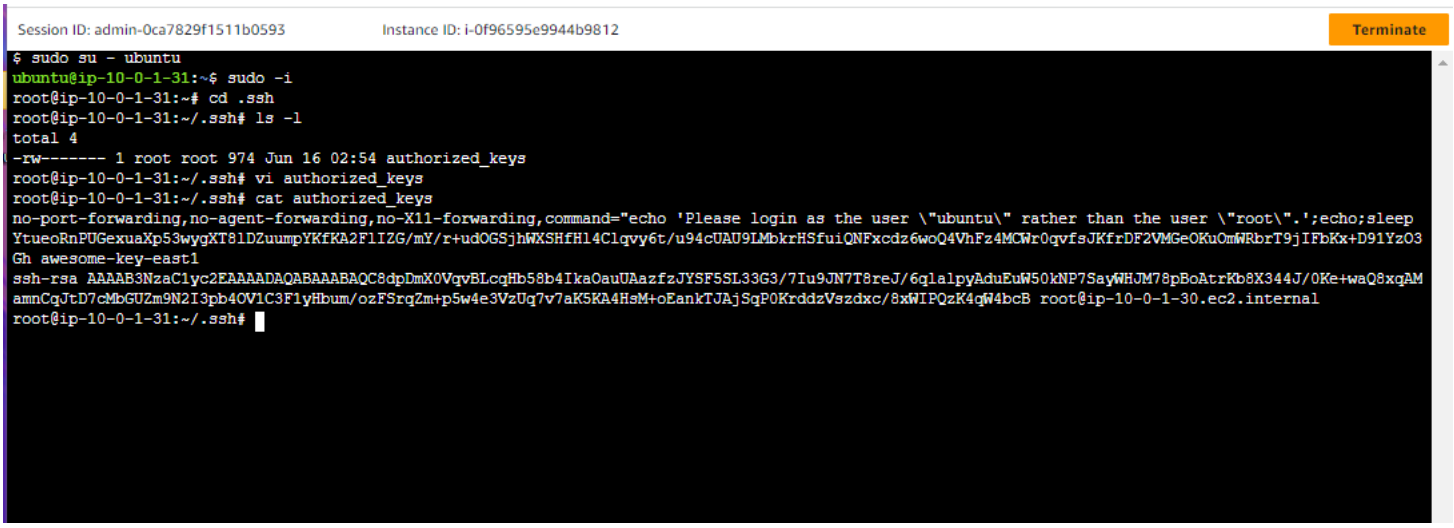
2nd node: re-apiansibleec2linux2

The public keypair of the controller was successfully copied and pasted in the node's authorized keys file.



3rd node: re-apiansibleec2ubuntu1

The public keypair of the controller was successfully copied and pasted in the node's authorized keys file.

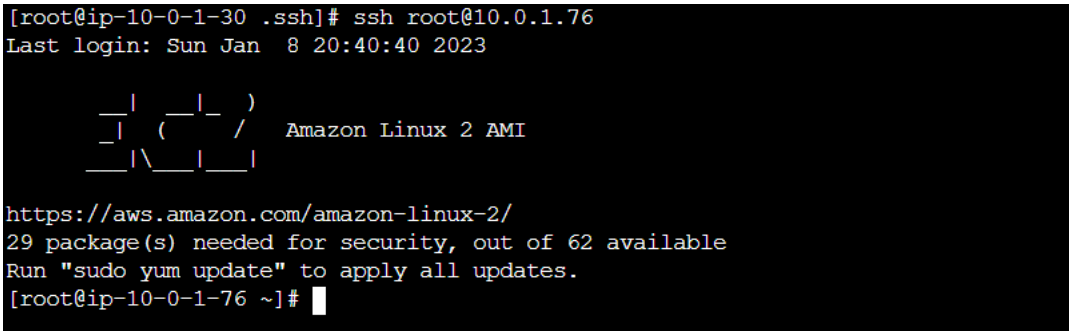


4th node: re-apiansibleec2ubuntu2

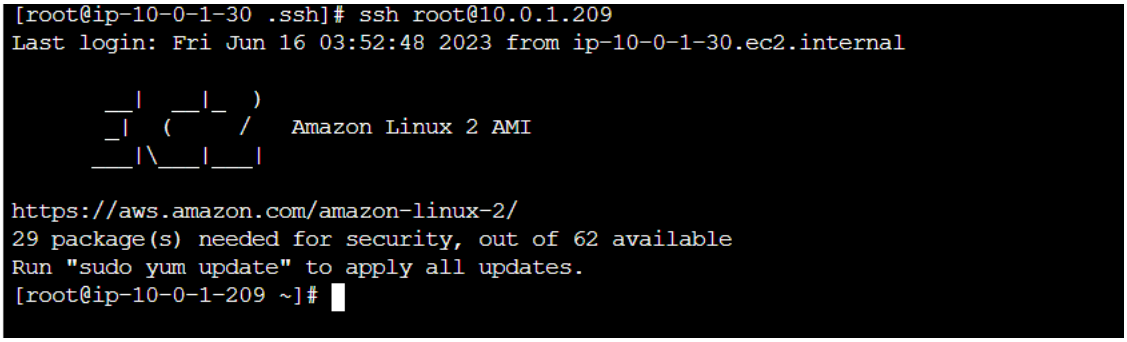
The public keypair of the controller was successfully copied and pasted in the node's authorized keys file.

Testing the connectivity

1st node: re-apiansibleec2linux1 – Successfully connected!



2nd node: re-apiansibleec2linux2 - Successfully connected!

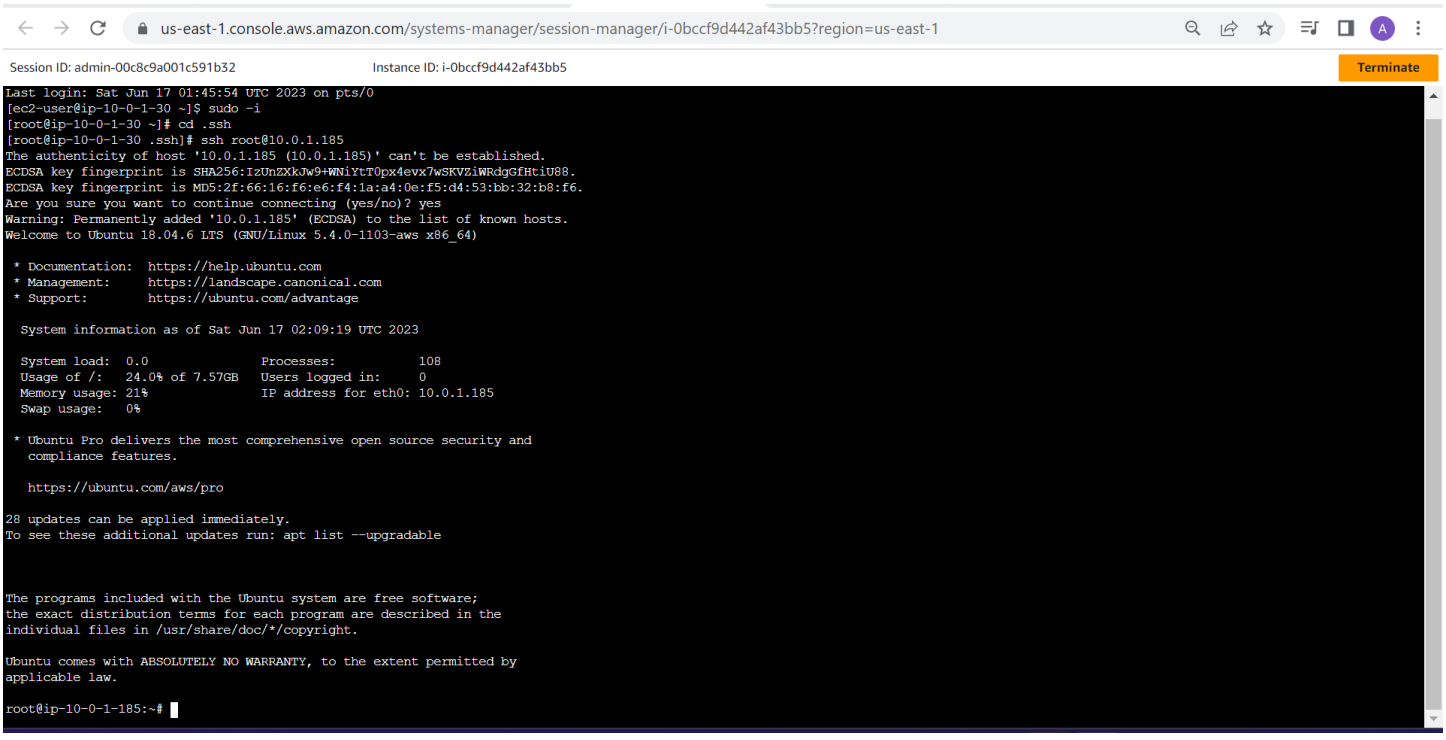


3rd node: re-apiansibleec2ubuntu1 - Successfully connected!

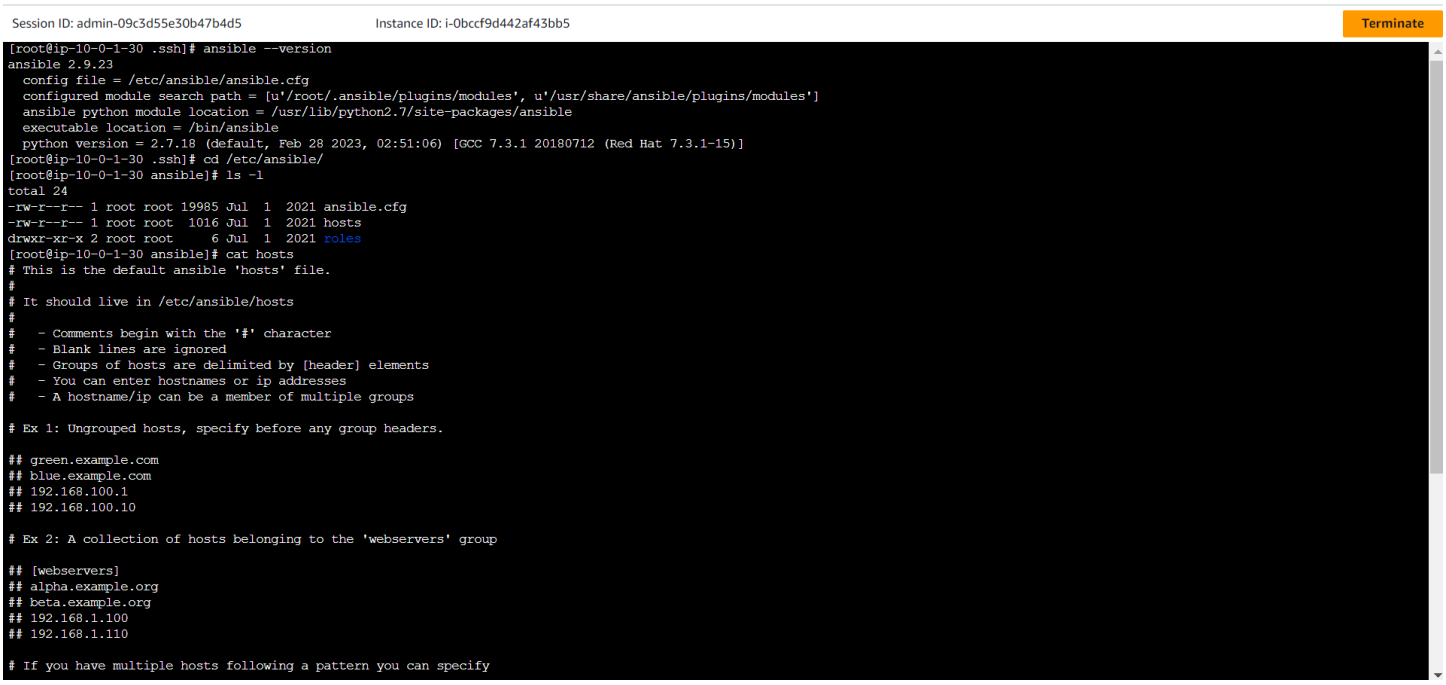
Session ID: admin-04d381ebc46776cf2 Instance ID: i-0bccf9d442af43bb5

```
[root@ip-10-0-1-30 .ssh]# ssh root@10.0.1.31
The authenticity of host '10.0.1.31 (10.0.1.31)' can't be established.
ECDSA key fingerprint is SHA256:rzSZ8683sdWMOCqBUsOV6A8AZjbZqbZrFKaE+GGByRg.
ECDSA key fingerprint is MD5:92:ea:01:47:ed:cb:92:c3:5b:25:e9:d9:44:c6:16:00.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.1.31' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 5.4.0-1103-aws x86_64)

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

  System information as of Sat Jun 17 01:20:57 UTC 2023

  System load:  0.01              Processes:           110
  Usage of /:   24.0% of 7.57GB   Users logged in:     0
  Memory usage: 22%               IP address for eth0: 10.0.1.31
  Swap usage:   0%

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

   https://ubuntu.com/aws/pro

28 updates can be applied immediately.
To see these additional updates run: apt list --upgradable



The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
```

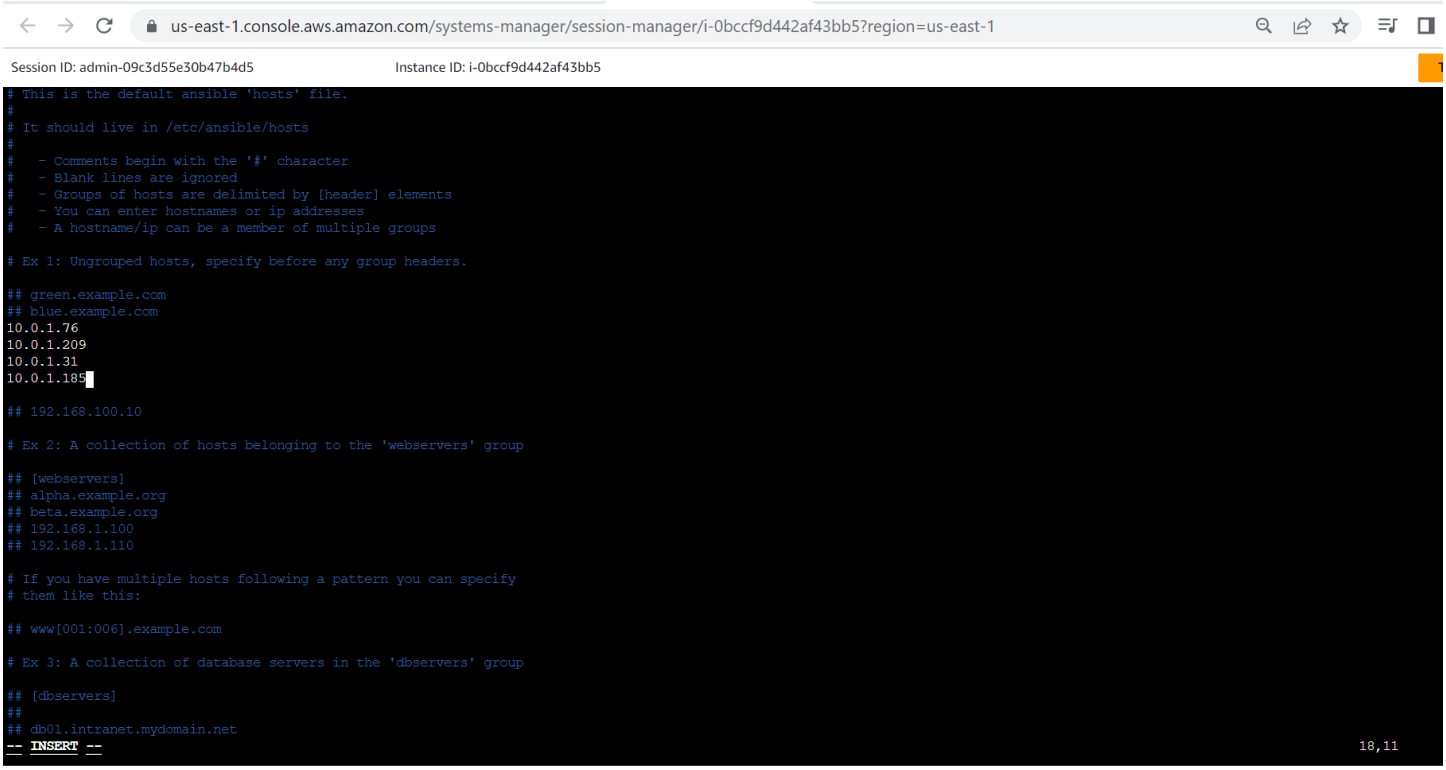
4th node: re-apiansibleec2ubuntu2 - Successfully connected!



Finalizing configuration of the controller



Running the vi hosts command to list the IP address of each node.



Confirming that all the nodes' IPs are stored in the controller (`ansible -m ping all`).