

Ansible Task 3 - Launching Instance in AWS using Ansible and creating one Load Balancer and three Target system which has webserver running on them

1. EC2 Instances are launched using “ec2” module.

```
Activities Terminal Fri 17:41
root@localhost:~/ansible_playbook/load_balancer

File Edit View Search Terminal Tabs Help

root@localhost:~/ansible_playbook/ansible_task_3 x root@localhost:~/ansible_playbook/load_balancer x root@localhost:/etc/ansible/hosts x

[root@localhost load_balancer]# ansible-playbook --ask-vault-pass ec2_provision.yml
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [localhost] *****

TASK [Gathering Facts] *****
ok: [localhost]

TASK [provision instance for load balancer] *****
changed: [localhost]

TASK [provision instance for webserver] *****
changed: [localhost]

PLAY RECAP *****
localhost : ok=3 changed=2 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

[root@localhost load_balancer]# ansible-playbook webserver_setup.yml
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [tag_Name_webserver] *****

TASK [Gathering Facts] *****
The authenticity of host '13.210.246.233 (13.210.246.233)' can't be established.
ECDSA key fingerprint is SHA256:JgANbHDyqQHDBKYER0wF80JnmXxL0t2fyJN0uvKuguI.
Are you sure you want to continue connecting (yes/no)? The authenticity of host '54.252.149.124 (54.252.149.124)' can't be established.
ECDSA key fingerprint is SHA256:NzUJFFzw3htWvK8A3toqKl9v6v5Foov5J0vNBn3YvFE.
```

```
Activities Terminal Fri 17:42
root@localhost:~/ansible_playbook/load_balancer

File Edit View Search Terminal Tabs Help

root@localhost:~/ansible_playbook/ansible_task_3 x root@localhost:~/ansible_playbook/load_balancer x root@localhost:/etc/ansible/hosts x

ok: [13.210.246.233]
yes
ok: [54.252.149.124]
yes
ok: [3.25.67.155]

TASK [webserver : install httpd server on ec2 instance] *****
changed: [3.25.67.155]
changed: [54.252.149.124]
changed: [13.210.246.233]

TASK [webserver : copy content] *****
changed: [13.210.246.233]
changed: [54.252.149.124]
changed: [3.25.67.155]

TASK [webserver : httpd service starts] *****
changed: [3.25.67.155]
changed: [13.210.246.233]
changed: [54.252.149.124]

PLAY RECAP *****
13.210.246.233 : ok=4 changed=3 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
3.25.67.155 : ok=4 changed=3 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
54.252.149.124 : ok=4 changed=3 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

[root@localhost load_balancer]#
```

2. Webserver is setup on the three instances

```
Activities Terminal Fri 17:42
root@localhost:~/ansible_playbook/load_balancer

File Edit View Search Terminal Tabs Help

root@localhost:~/ansible_playbook/ansible_task_3 x root@localhost:~/ansible_playbook/load_balancer x root@localhost:/etc/ansible/hosts x

[root@localhost load_balancer]# ansible-playbook webserver_setup.yml
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [tag_Name_webserver] *****

TASK [Gathering Facts] *****
The authenticity of host '13.210.246.233 (13.210.246.233)' can't be established.
ECDSA key fingerprint is SHA256:JgANbHDyq0HDBKYER0wF80JnmXxL0t2fyJN0uvKuguI.
Are you sure you want to continue connecting (yes/no)? The authenticity of host '54.252.149.124 (54.252.149.124)' can't be established.
ECDSA key fingerprint is SHA256:NzUJFFzw3htWvk8A3tqoK19y6y5F0ov5J0vNBn3YvFE.
Are you sure you want to continue connecting (yes/no)? The authenticity of host '3.25.67.155 (3.25.67.155)' can't be established.
ECDSA key fingerprint is SHA256:HUG0PEAPxMQULeUlz6gAs/E4ILH0lbSC0L5fv/oxkpg.
Are you sure you want to continue connecting (yes/no)? yes
ok: [13.210.246.233]
yes
ok: [54.252.149.124]
yes
ok: [3.25.67.155]

TASK [webserver : install httpd server on ec2 instance] *****
changed: [3.25.67.155]
changed: [54.252.149.124]
changed: [13.210.246.233]

TASK [webserver : copy content] *****
changed: [13.210.246.233]
changed: [54.252.149.124]
changed: [3.25.67.155]
```

3. Load Balancer setup on one instance

```
Activities Terminal Fri 17:44
root@localhost:~/ansible_playbook/load_balancer

File Edit View Search Terminal Tabs Help

root@localhost:~/ansible_playbook/ansible_task_3 x root@localhost:~/ansible_playbook/load_balancer x root@localhost:/etc/ansible/hosts x

[root@localhost load_balancer]# ansible-playbook lb_setup.yml
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [tag_Name_lb] *****

TASK [Gathering Facts] *****
The authenticity of host '13.54.245.75 (13.54.245.75)' can't be established.
ECDSA key fingerprint is SHA256:jKVjjVEt17EGg8RhqqpUm2Q2/JrHP5rh0xtwQlqLVuM.
Are you sure you want to continue connecting (yes/no)? yes
ok: [13.54.245.75]

TASK [lbserver : install HAProxy software in ec2 instance] *****
changed: [13.54.245.75]

TASK [lbserver : copy haproxy config file] *****
changed: [13.54.245.75]

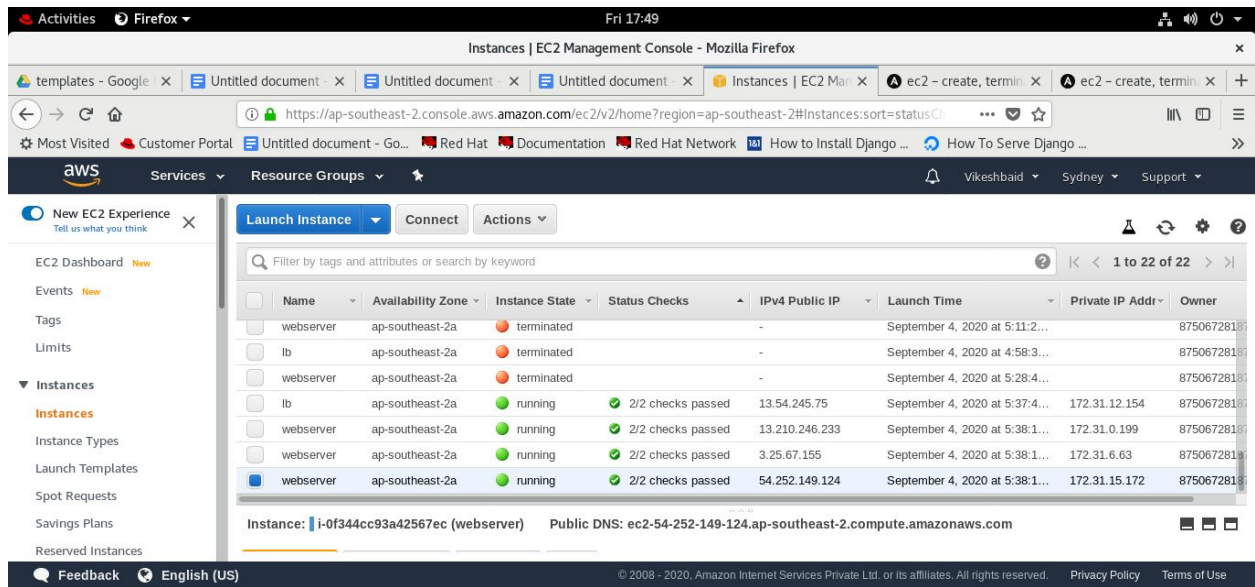
TASK [lbserver : start haproxy service] *****
changed: [13.54.245.75]

RUNNING HANDLER [lbserver : restart haproxy service] *****
changed: [13.54.245.75]

PLAY RECAP *****
13.54.245.75 : ok=5 changed=4 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

[root@localhost load_balancer]#
```

4. Instance running on AWS cloud which is showing private ip of Webserver used to identify that Load balancer is working perfectly

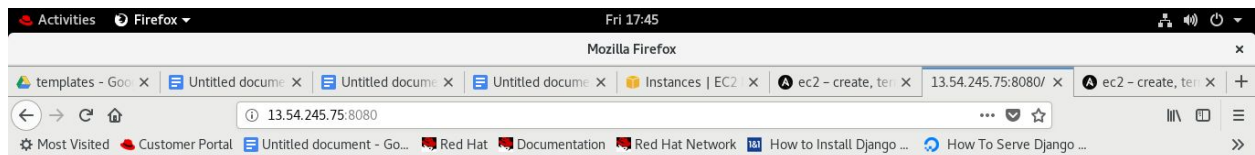


The screenshot shows the AWS Management Console for the 'Instances | EC2 Management Console'. The left sidebar contains navigation options like 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', and 'Reserved Instances'. The main area displays a table of EC2 instances. The table has columns for Name, Availability Zone, Instance State, Status Checks, IPv4 Public IP, Launch Time, Private IP Address, and Owner. The instances listed are:

Name	Availability Zone	Instance State	Status Checks	IPv4 Public IP	Launch Time	Private IP Address	Owner
webserver	ap-southeast-2a	terminated		-	September 4, 2020 at 5:11:2...		8750672818
lb	ap-southeast-2a	terminated		-	September 4, 2020 at 4:58:3...		8750672818
webserver	ap-southeast-2a	terminated		-	September 4, 2020 at 5:28:4...		8750672818
lb	ap-southeast-2a	running	2/2 checks passed	13.54.245.75	September 4, 2020 at 5:37:4...	172.31.12.154	8750672818
webserver	ap-southeast-2a	running	2/2 checks passed	13.210.246.233	September 4, 2020 at 5:38:1...	172.31.0.199	8750672818
webserver	ap-southeast-2a	running	2/2 checks passed	3.25.67.155	September 4, 2020 at 5:38:1...	172.31.6.63	8750672818
webserver	ap-southeast-2a	running	2/2 checks passed	54.252.149.124	September 4, 2020 at 5:38:1...	172.31.15.172	8750672818

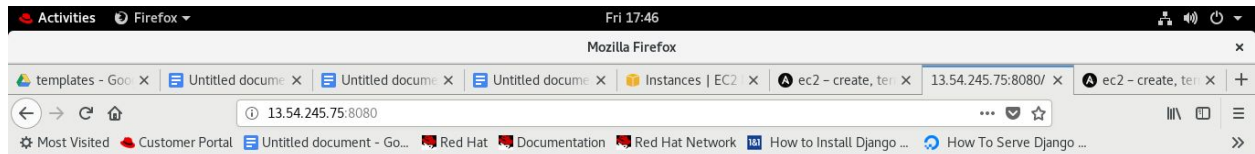
Below the table, the details for the selected instance (i-0f344cc93a42567ec) are shown, including the Public DNS: ec2-54-252-149-124.ap-southeast-2.compute.amazonaws.com.

5. Sending request from client using Load Balancer Public IP and reaching to Target Nodes

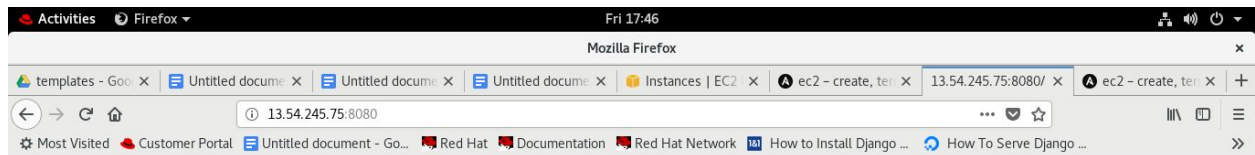


The screenshot shows a Mozilla Firefox browser window with the address bar displaying '13.54.245.75:8080'. The browser's tab bar shows several tabs, including 'templates - Google', 'Untitled document', 'Instances | EC2', and 'ec2 - create, termin...'. The browser's address bar also shows the IP address '13.54.245.75:8080'.

hi from private ip-172-31-15-172 of aws ec2 machine



hi from private ip ip-172-31-0-199 of aws ec2 machine



hi from private ip ip-172-31-6-63 of aws ec2 machine