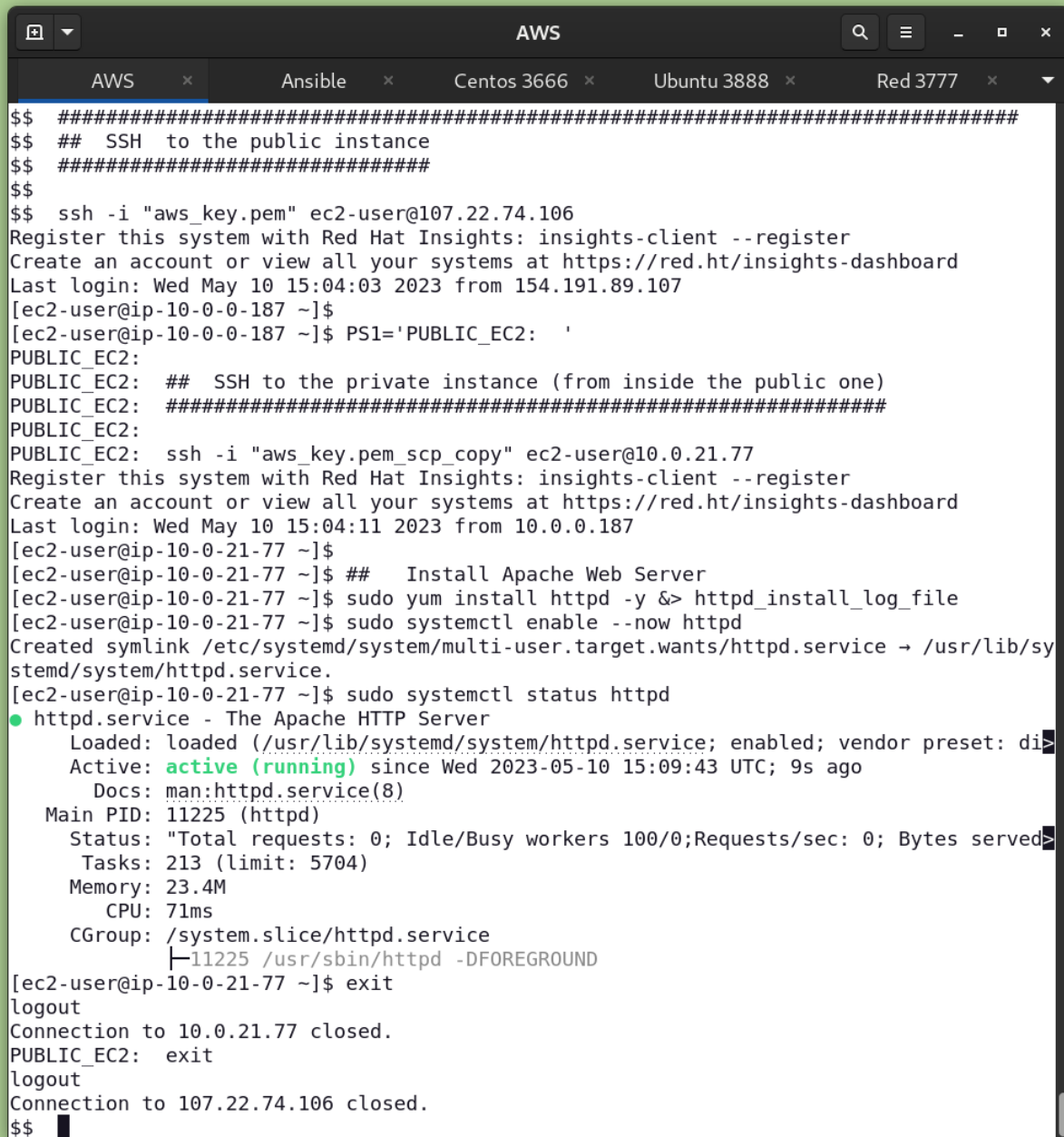


## 1. Launch a jump host

- Take a screen while you are ssh to the jumphost
- Also When you ssh from bastion to the private machine



```
$$$ #####
$$$ ## SSH to the public instance
$$$ #####
$$$
$$$ ssh -i "aws_key.pem" ec2-user@107.22.74.106
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Wed May 10 15:04:03 2023 from 154.191.89.107
[ec2-user@ip-10-0-0-187 ~]$
[ec2-user@ip-10-0-0-187 ~]$ PS1='PUBLIC_EC2: '
PUBLIC_EC2:
PUBLIC_EC2: ## SSH to the private instance (from inside the public one)
PUBLIC_EC2: #####
PUBLIC_EC2:
PUBLIC_EC2: ssh -i "aws_key.pem_scp_copy" ec2-user@10.0.21.77
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Wed May 10 15:04:11 2023 from 10.0.0.187
[ec2-user@ip-10-0-21-77 ~]$
[ec2-user@ip-10-0-21-77 ~]$ ## Install Apache Web Server
[ec2-user@ip-10-0-21-77 ~]$ sudo yum install httpd -y &> httpd_install_log_file
[ec2-user@ip-10-0-21-77 ~]$ sudo systemctl enable --now httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/sy
stemd/system/httpd.service.
[ec2-user@ip-10-0-21-77 ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: di>
   Active: active (running) since Wed 2023-05-10 15:09:43 UTC; 9s ago
     Docs: man:httpd.service(8)
   Main PID: 11225 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served>
      Tasks: 213 (limit: 5704)
     Memory: 23.4M
        CPU: 71ms
    CGroup: /system.slice/httpd.service
            └─11225 /usr/sbin/httpd -DFOREGROUND
[ec2-user@ip-10-0-21-77 ~]$ exit
logout
Connection to 10.0.21.77 closed.
PUBLIC_EC2: exit
logout
Connection to 107.22.74.106 closed.
$$$
```

- Screenshot from the console showing the instances Ips

The screenshot displays the AWS Management Console's 'Instances' page. At the top, there's a header with 'Instances (1/2)' and an 'Info' link. Below this is a search bar and a table of instances. The table has columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability Zone. Two instances are listed: 'lab1,2\_public\_instance' and 'lab1,2\_private\_instance'. The second instance is selected. Below the table, the details for 'Instance: i-0a2acae25eb46f076 (lab1,2\_private\_instance)' are shown. The details are organized into tabs: Details, Security, Networking, Storage, Status checks, Monitoring, and Tags. The 'Details' tab is active, showing a summary of the instance's configuration and status.

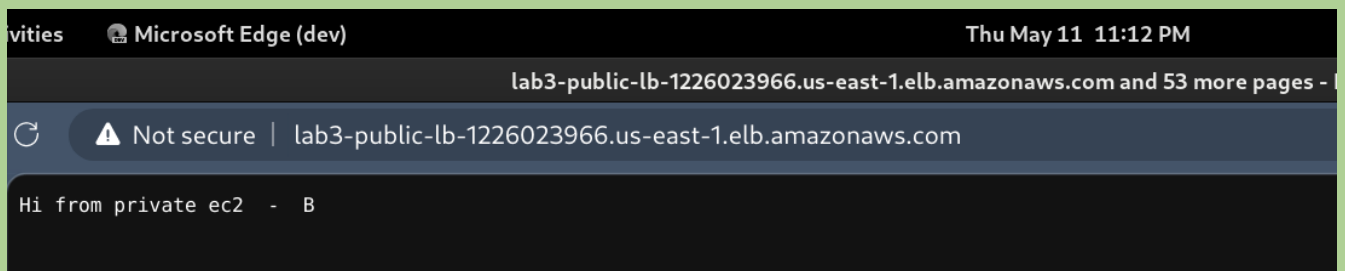
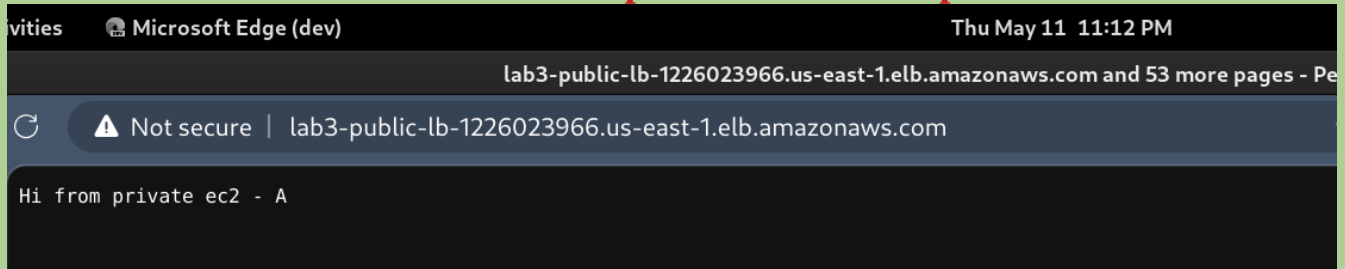
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
lab1,2_public_instance	i-08c78bb809e080a06	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a
lab1,2_private_instance	i-0a2acae25eb46f076	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a

Instance: i-0a2acae25eb46f076 (lab1,2_private_instance)		
▼ Instance summary Info		
Instance ID i-0a2acae25eb46f076 (lab1,2_private_instance)	Public IPv4 address -	Private IPv4 addresses 10.0.21.77
IPv6 address -	Instance state Running	Public IPv4 DNS -

## 2. Implement the below diagram then

- take a screenshot while you put dns of the load balancer into the browser and it returns a response from the 2 apache instanctnes



- Also Screenshot from the console showing the machines BE WS have private Ips

Instance: i-0f2641c87bde2c407 (lab3-private-ec2)		
Details	Security	Networking
▼ Instance summary Info		
Instance ID i-0f2641c87bde2c407 (lab3-private-ec2)	Public IPv4 address -	Private IPv4 addresses 10.10.11.244

Instance: i-08d8bd77b8c714fa0 (lab-private-ec2-2)		
Details	Security	Networking
▼ Instance summary Info		
Instance ID i-08d8bd77b8c714fa0 (lab-private-ec2-2)	Public IPv4 address -	Private IPv4 addresses 10.10.12.200
IPv6 address -	Instance state Running	Public IPv4 DNS -

- And finally a screenshot showing the targets of the 2 loadbalancers target groups are healthy

EC2 > Target groups > lab3-public-tg

## lab3-public-tg

Actions ▼

### Details

arn:aws:elasticloadbalancing:us-east-1:385582076770:targetgroup/lab3-public-tg/baed87826be8a4ae

Target type Instance	Protocol : Port HTTP: 80	Protocol version HTTP1	VPC <a href="#">vpc-0d7292c43121b34fd</a>
IP address type IPv4	Load balancer <a href="#">lab3-public-lb</a>		

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
2	✔ 2	✘ 0	⋮ 0	⬇ 0	⬇ 0

► **Distribution of targets by Availability Zone (AZ)**  
Select values in this table to see corresponding filters applied to the Registered targets table below.

## lab3-private-tg

### Details

arn:aws:elasticloadbalancing:us-east-1:385582076770:targetgroup/lab3-private-tg/ea54fc21ba89fb71

Target type Instance	Protocol : Port HTTP: 80	Protocol version HTTP1
IP address type IPv4	Load balancer <a href="#">lab3-private-lb</a>	

Total targets	Healthy	Unhealthy	Unused
2	✔ 2	✘ 0	⋮ 0

► **Distribution of targets by Availability Zone (AZ)**  
Select values in this table to see corresponding filters applied to the Registered targets table below.

**Targets** | Monitoring | Health checks | Attributes | Tags

### Registered targets (2)

🔍 Filter resources by property or value

<input type="checkbox"/>	Instance ID ▼	Name ▼	Port ▼	Zone ▼	Health status ▼	Health status details
<input type="checkbox"/>	i-08d8bd77b8c714fa0	lab-private-ec2-2	80	us-east-1d	✔ healthy	
<input type="checkbox"/>	i-0f2641c87bde2c407	lab3-private-ec2	80	us-east-1c	✔ healthy	