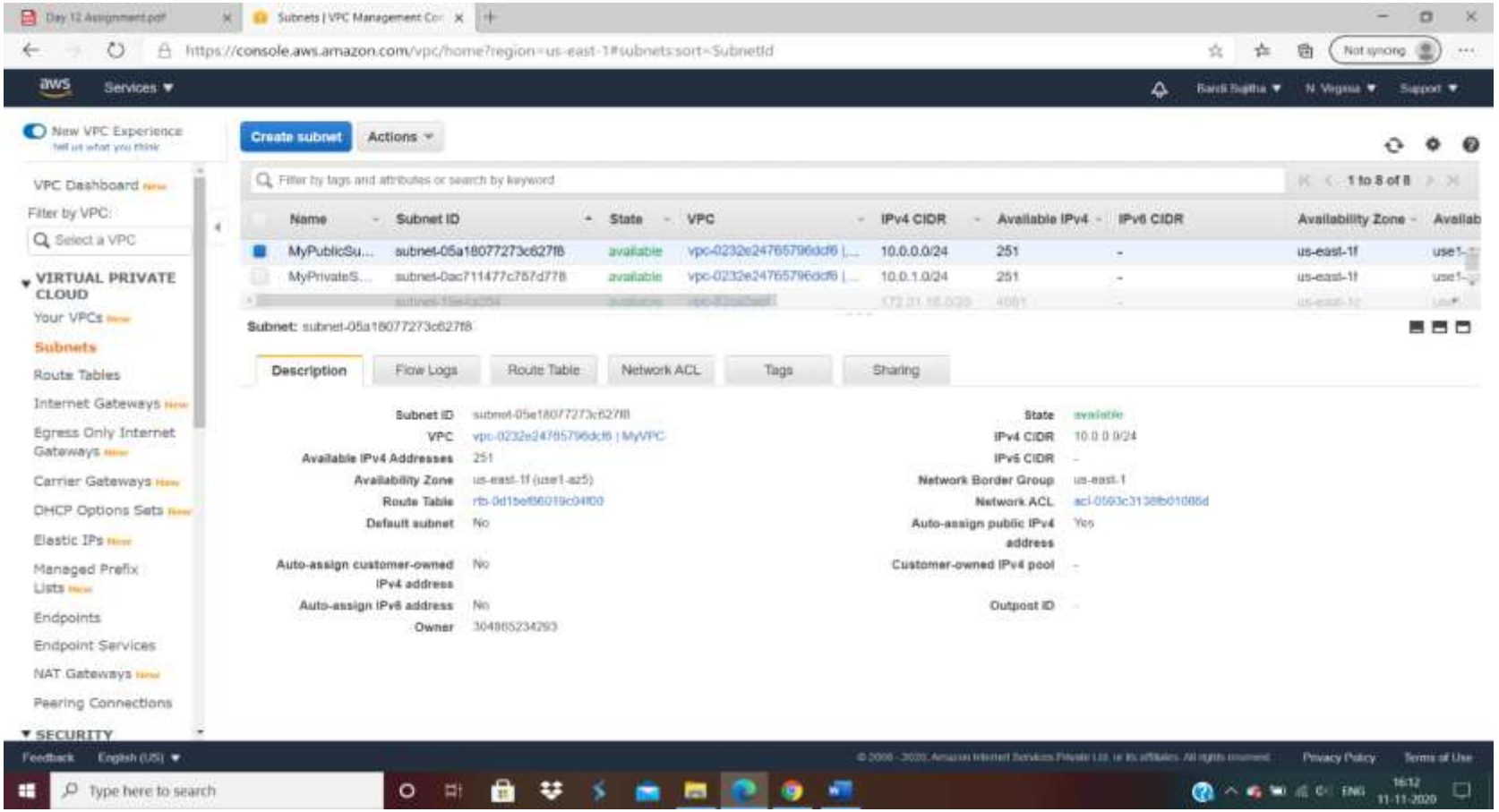
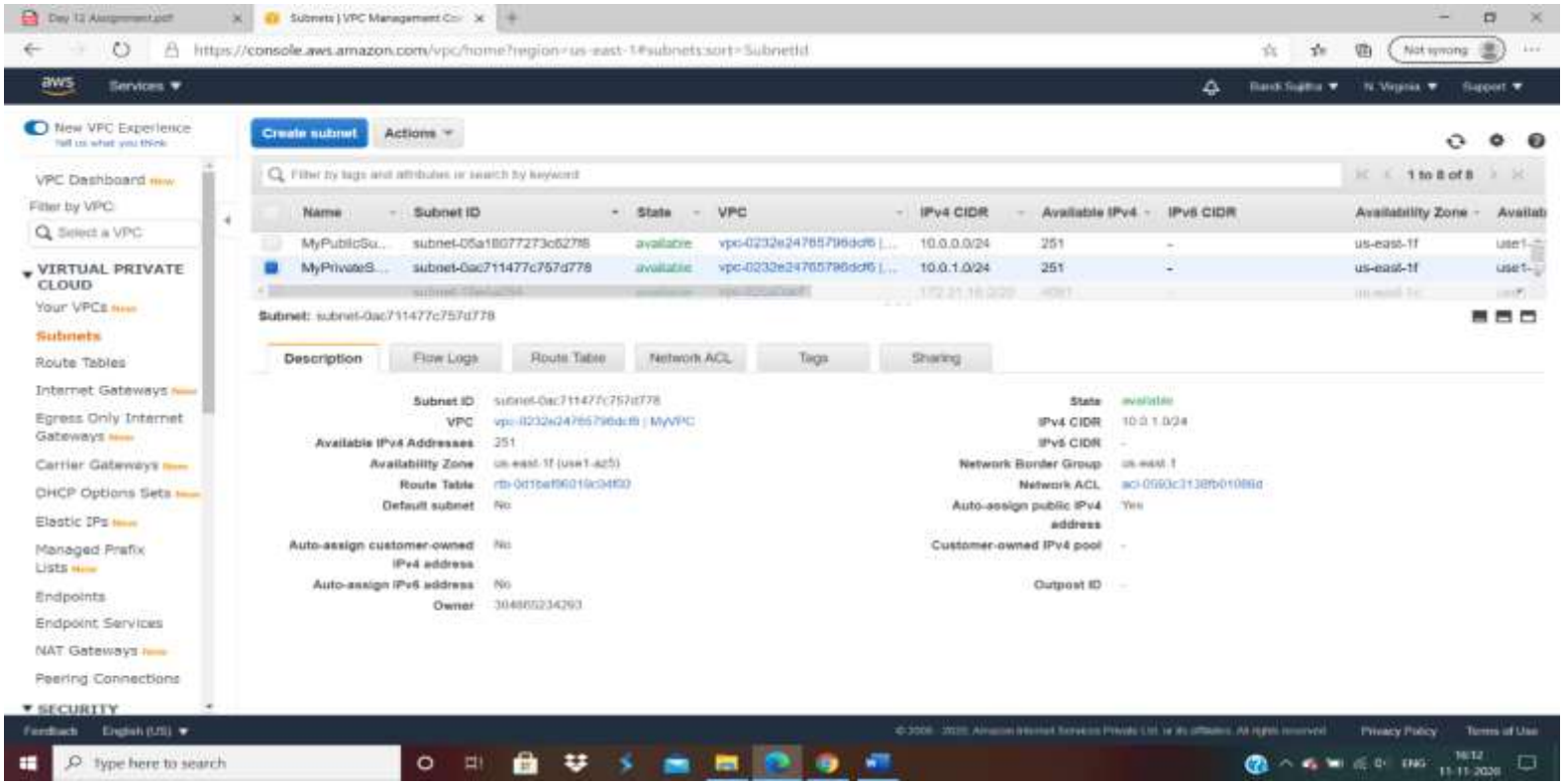
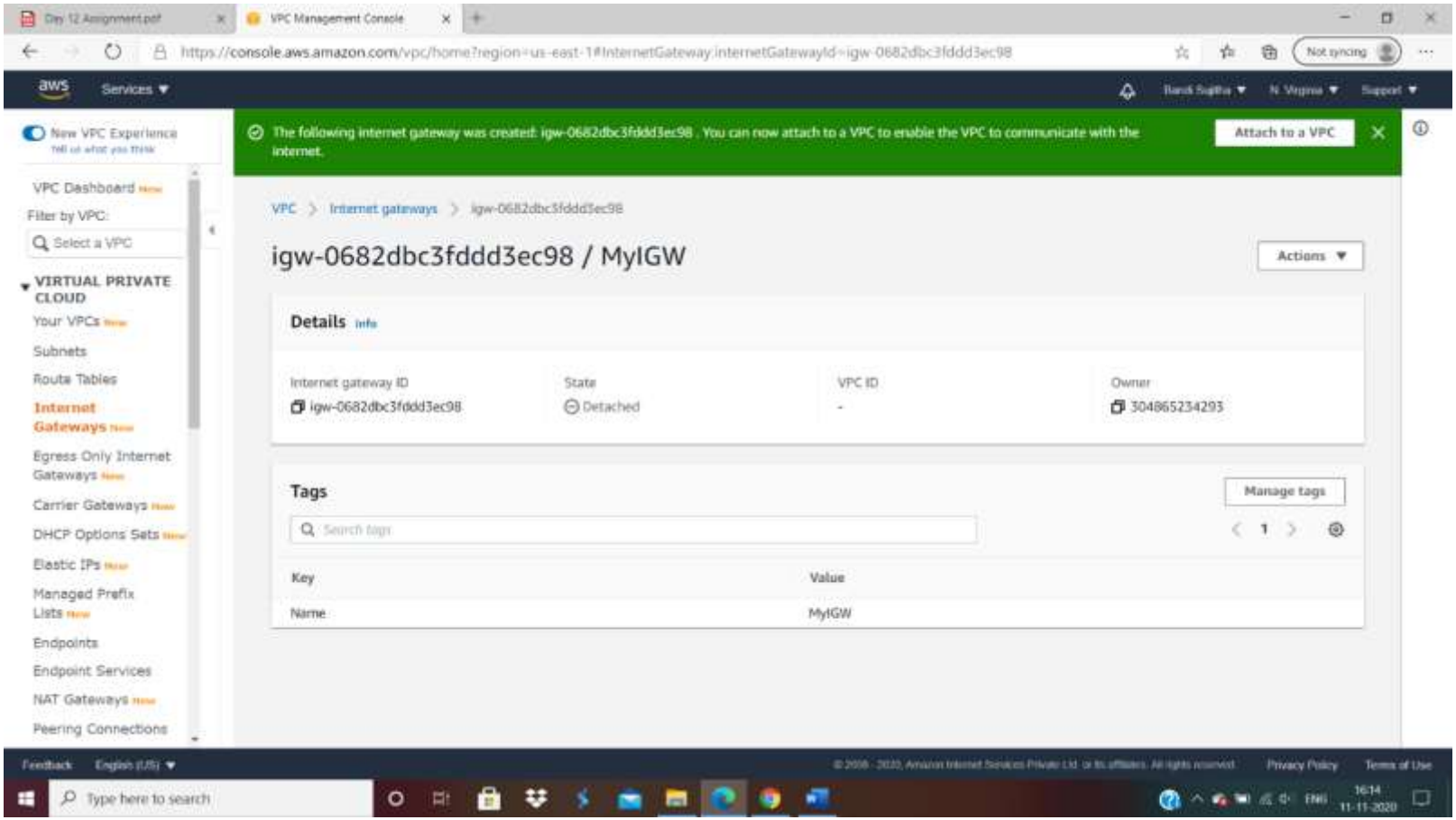
# AWS ASSESSMENT PROJECT

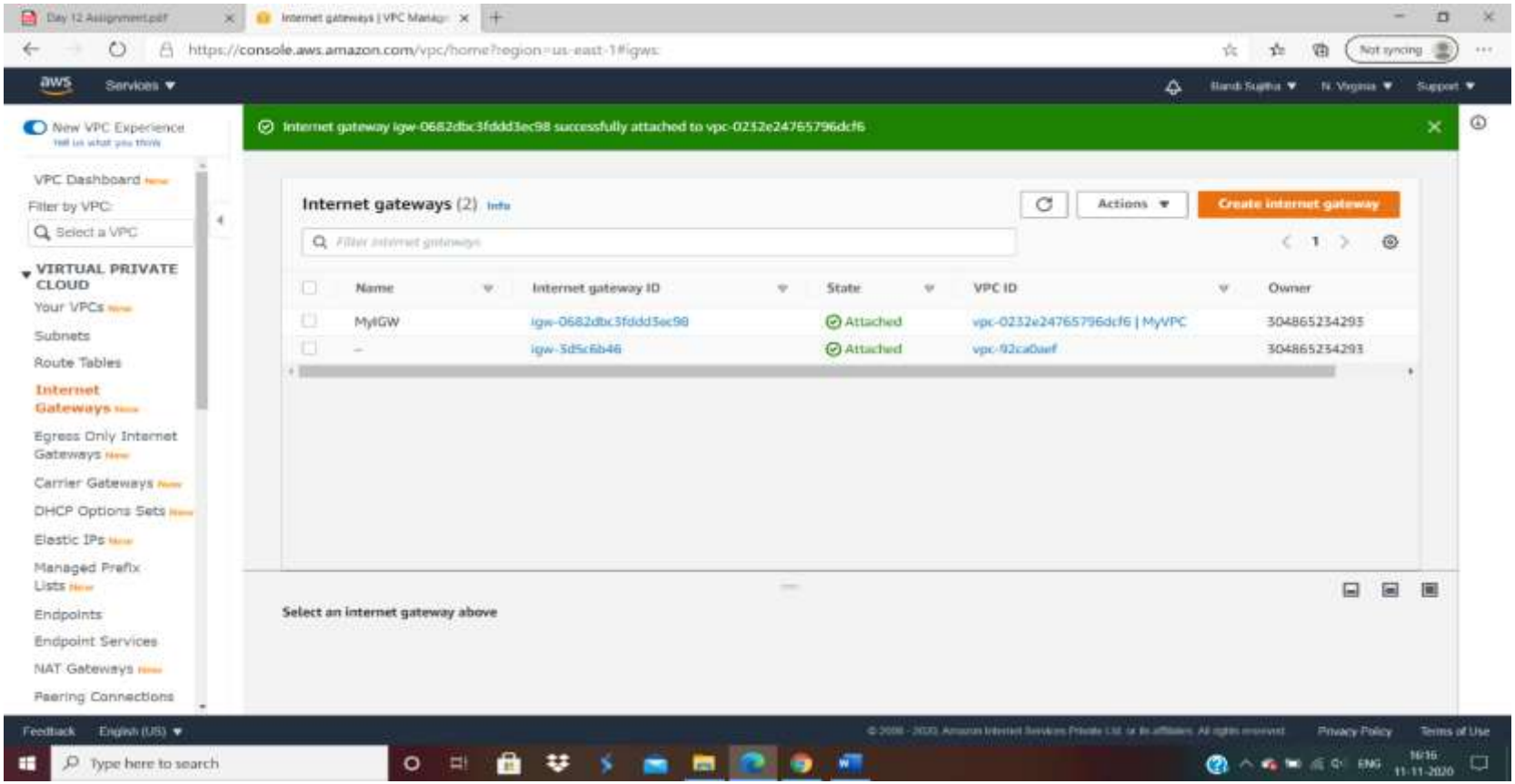
1)Create a VPC with a private subnet and a public subnet



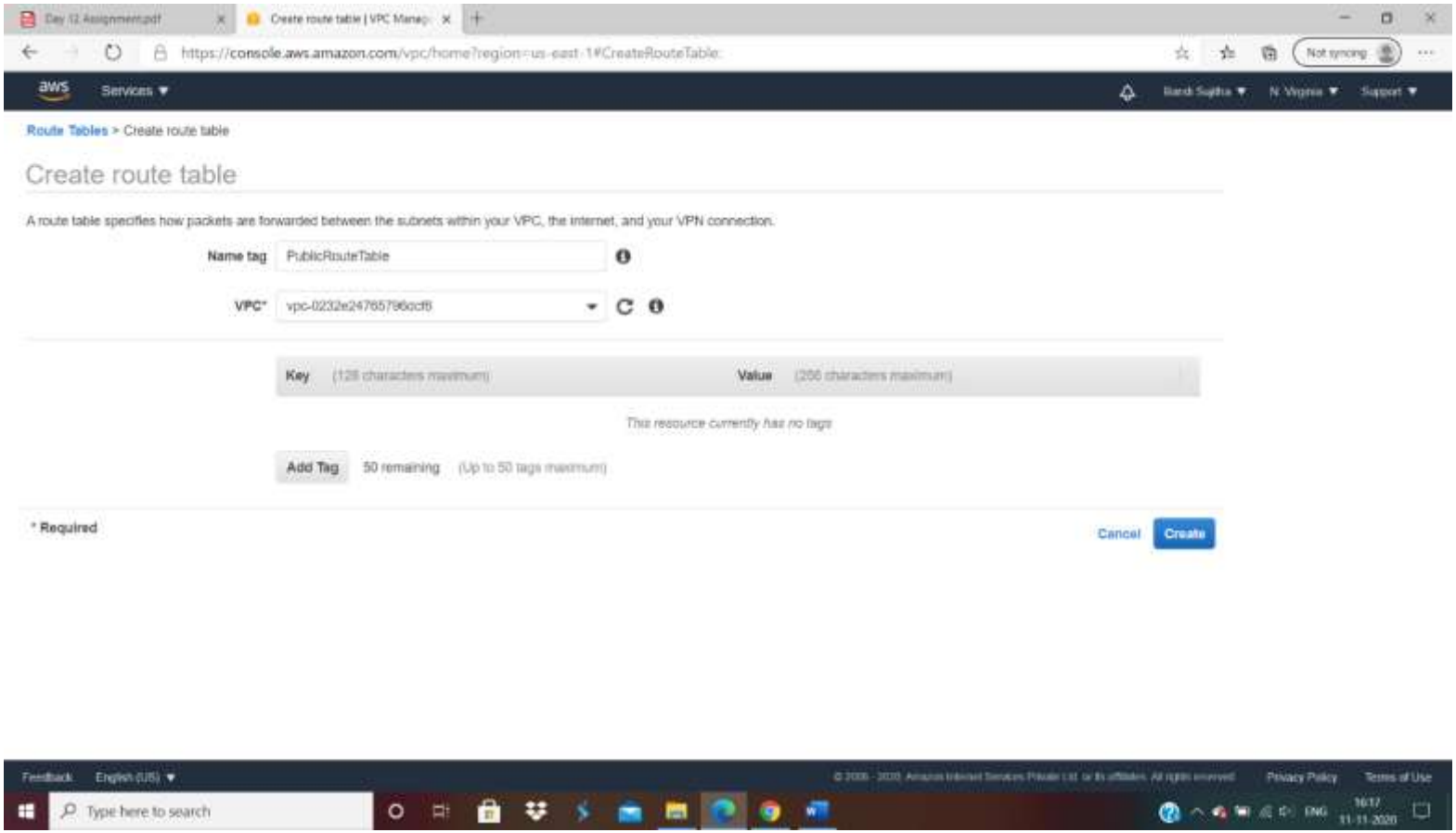

Create subnet
Actions
VPC Dashboard
VIRTUAL PRIVATE CLOUD
Your VPCs
Subnets
Route Tables
Internet Gateways
Egress Only Internet Gateways
Carrier Gateways
DHCP Options Sets
Elastic IPs
Managed Prefix Lists
Endpoints
Endpoint Services
NAT Gateways
Peering Connections
SECURITY
Name
Subnet ID
State
VPC
IPv4 CIDR
Available IPv4
IPv6 CIDR
Availability Zone
MyPublicSu...
subnet-05a18077273c627f8
available
10.0.0.0/24
251
us-east-1f
MyPrivateS...
subnet-0ac711477c757d778
10.0.1.0/24
Subnet: subnet-0ac711477c757d778
Description
Flow Logs
Route Table
Network ACL
Tags
Sharing
Subnet ID
VPC
Available IPv4 Addresses
Availability Zone
Route Table
Default subnet
Auto-assign customer-owned IPv4 address
Auto-assign IPv6 address
Owner
State
IPv4 CIDR
IPv6 CIDR
Network Border Group
Network ACL
Auto-assign public IPv4 address
Customer-owned IPv4 pool
Outpost ID
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search

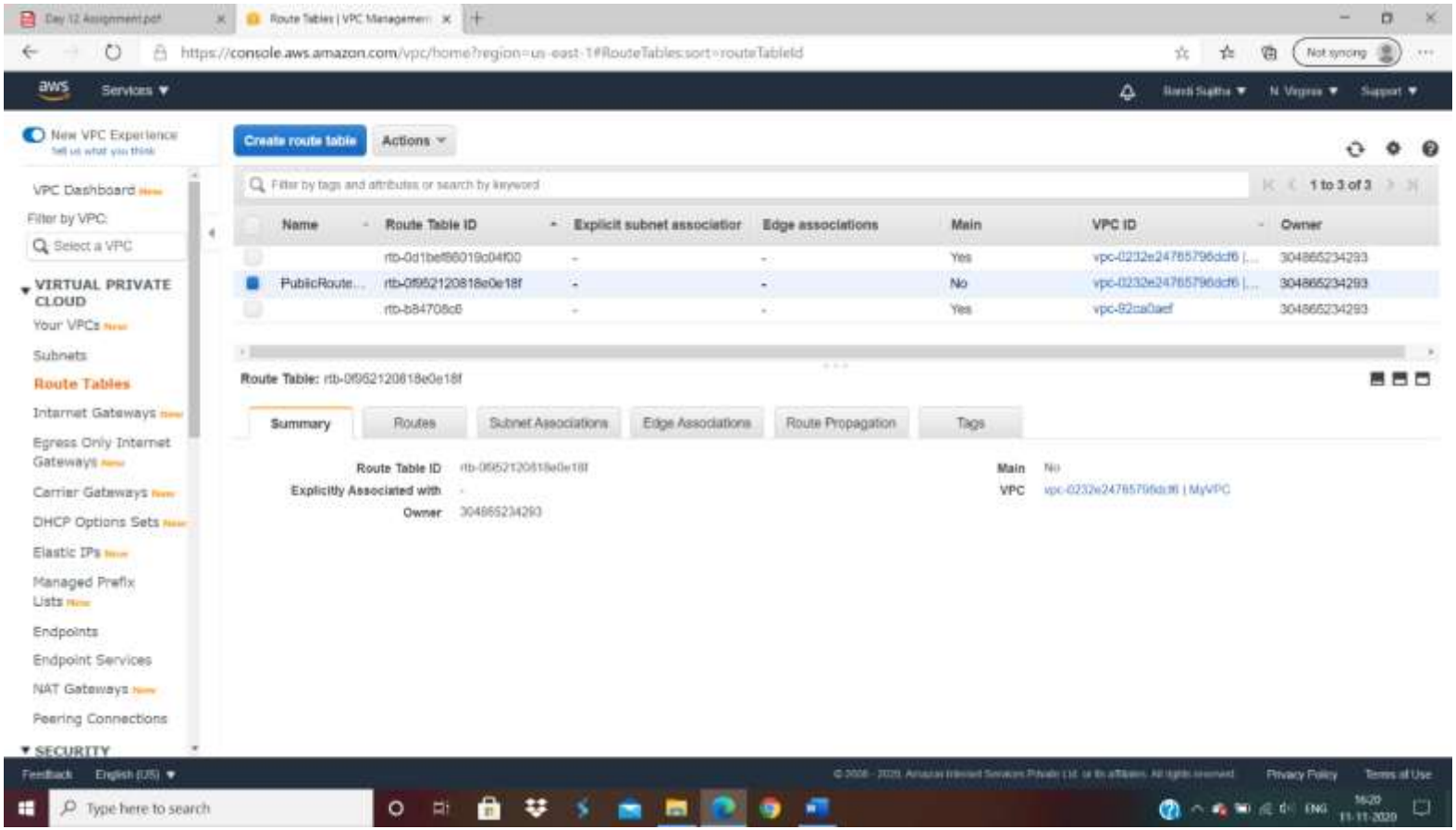
2)Create a IGW and associate with the public subnet



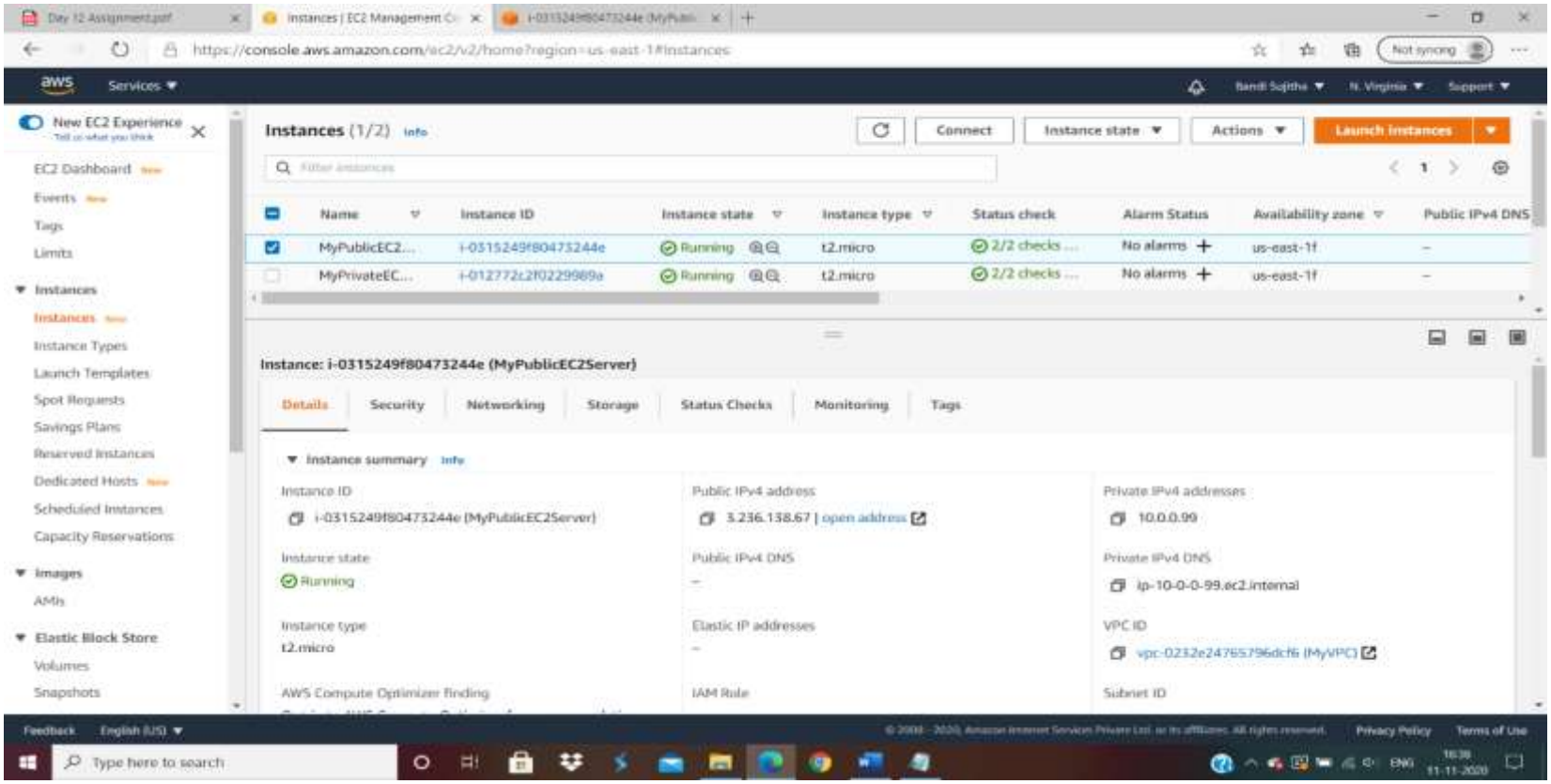

https://console.aws.amazon.com/vpc/home?region=us-east-1#igws:
Services
Internet gateway igw-0682dbc3fddd3ec98 successfully attached to vpc-0232e24765796dcf6
New VPC Experience
VPC Dashboard
Filter by VPC:
Select a VPC
VIRTUAL PRIVATE CLOUD
Your VPCs
Subnets
Route Tables
Internet Gateways
Egress Only Internet Gateways
Carrier Gateways
DHCP Options Sets
Elastic IPs
Managed Prefix Lists
Endpoints
Endpoint Services
NAT Gateways
Peering Connections
Internet gateways (2) Info
Actions
Create internet gateway
Name
Internet gateway ID
State
VPC ID
Owner
MyIGW
igw-0682dbc3fddd3ec98
Attached
vpc-0232e24765796dcf6 | MyVPC
304865234293
igw-5d5c6b46
Attached
vpc-92ca0aef
304865234293
Select an internet gateway above
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search

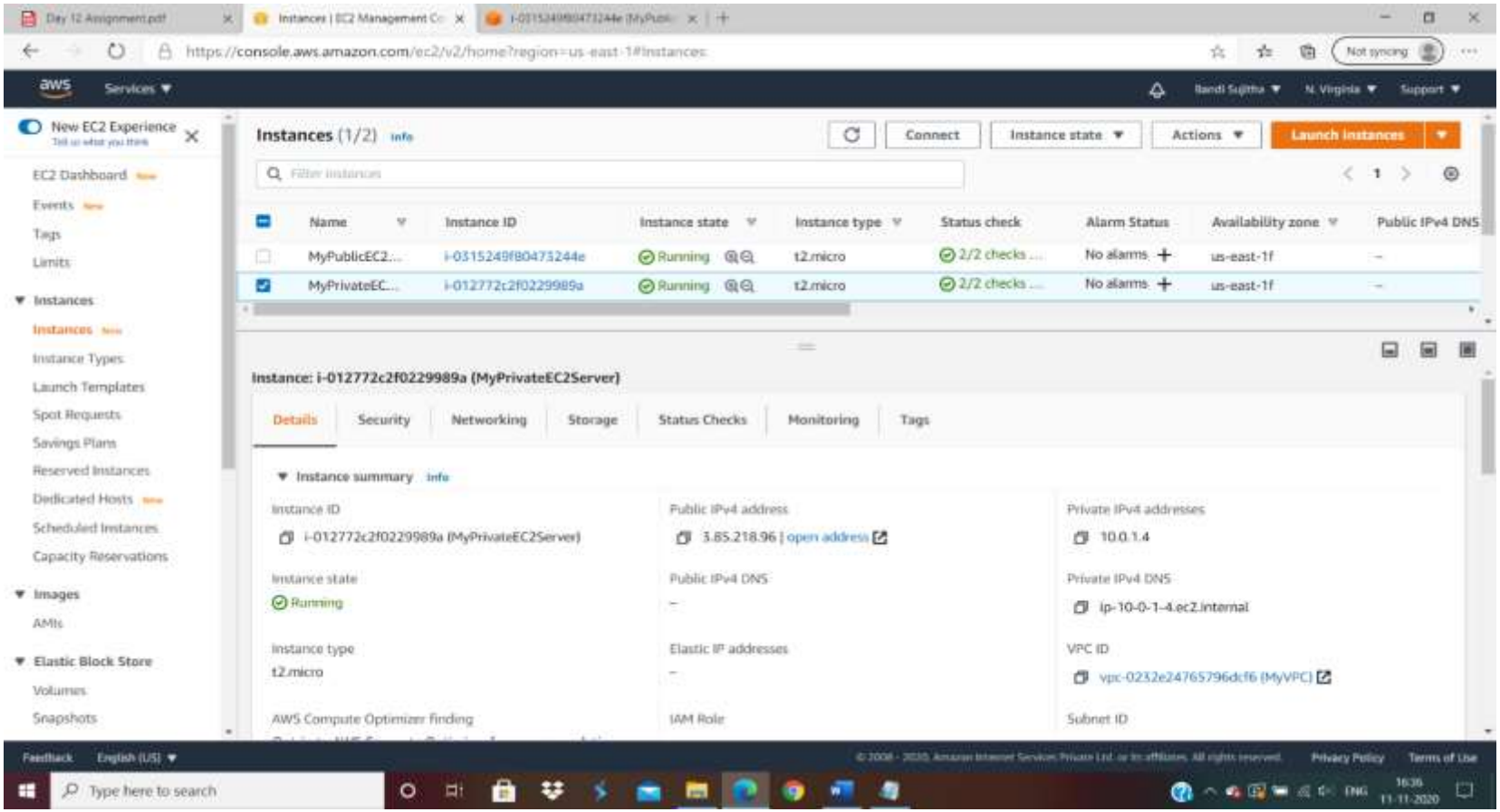
3)Create a route table with VPC



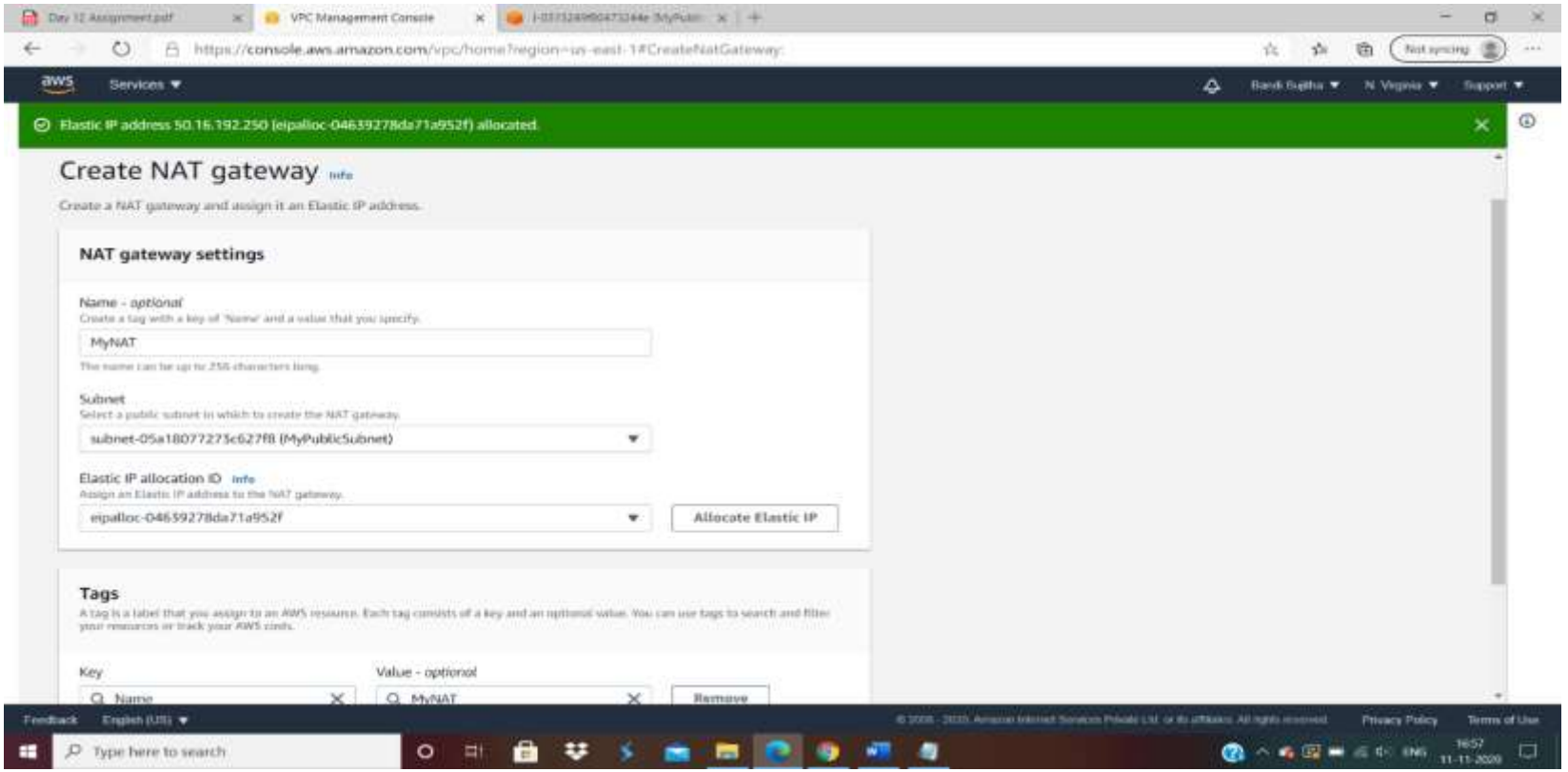

Day 12 Assignment.pdf
Route Tables | VPC Management
https://console.aws.amazon.com/vpc/home?region=us-east-1#RouteTables:sort=routeTableId
Not syncing
aws
Services
Bandi Sujitha
N. Virginia
Support
New VPC Experience
Tell us what you think
Create route table
Actions
VPC Dashboard
Filter by VPC:
Select a VPC
VIRTUAL PRIVATE CLOUD
Your VPCs
Subnets
Route Tables
Internet Gateways
Egress Only Internet Gateways
Carrier Gateways
DHCP Options Sets
Elastic IPs
Managed Prefix Lists
Endpoints
Endpoint Services
NAT Gateways
Peering Connections
SECURITY
Filter by tags and attributes or search by keyword
1 to 3 of 3
Name
Route Table ID
Explicit subnet association
Edge associations
Main
VPC ID
Owner
rtb-0d1bef66019c04f00 - - Yes vpc-0232e24765796dcf6 | ... 304865234293
PublicRoute... rtb-0f952120818e0e18f - - No vpc-0232e24765796dcf6 | ... 304865234293
rtb-b84708c6 - - Yes vpc-92ca0aef 304865234293
Route Table: rtb-0f952120818e0e18f
Summary
Routes
Subnet Associations
Edge Associations
Route Propagation
Tags
Route Table ID rtb-0f952120818e0e18f
Explicitly Associated with -
Owner 304865234293
Main No
VPC vpc-0232e24765796dcf6 | MyVPC
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search
ENG
16:20
11-11-2020

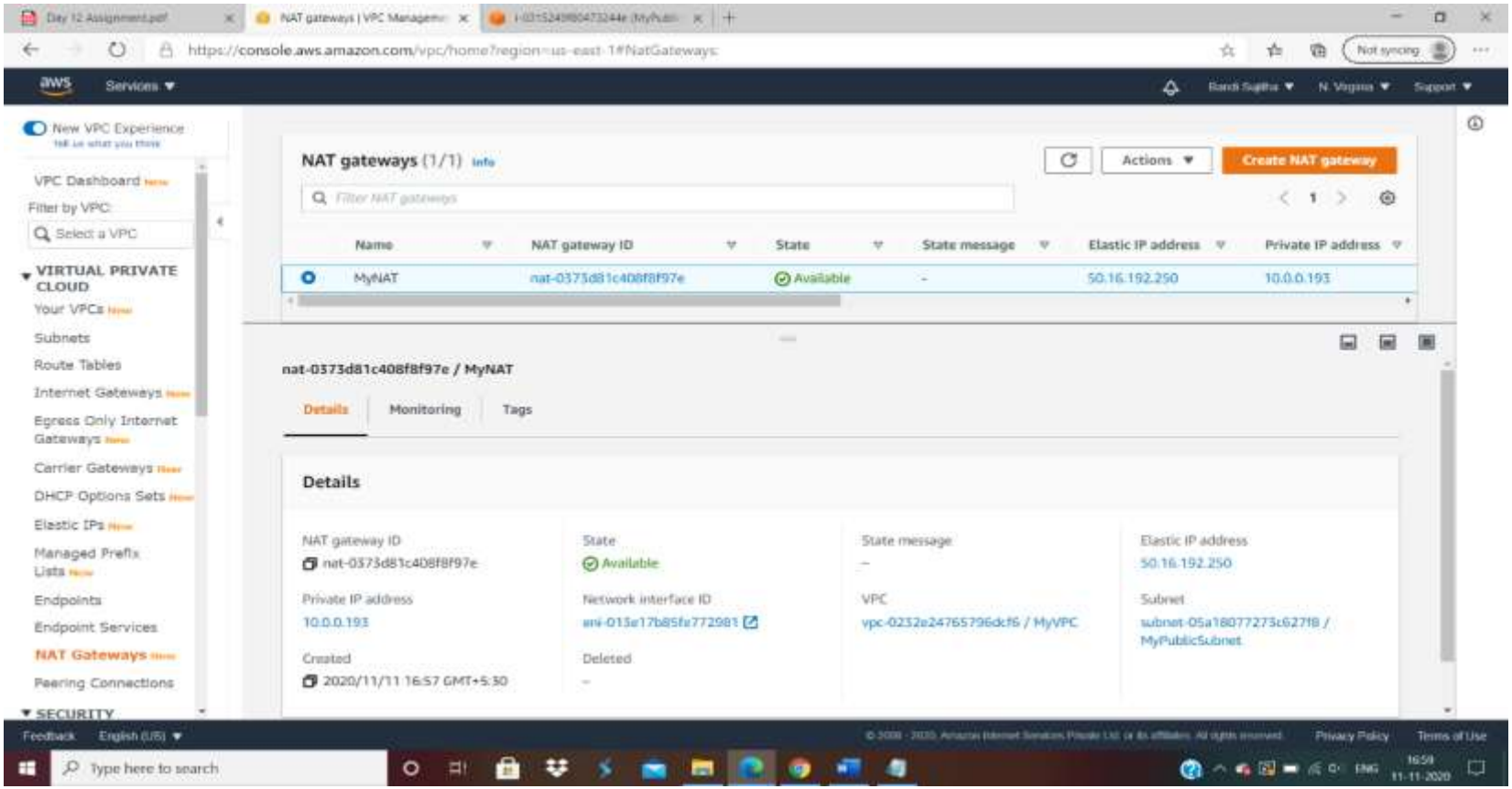
4.Creating two instances using linux

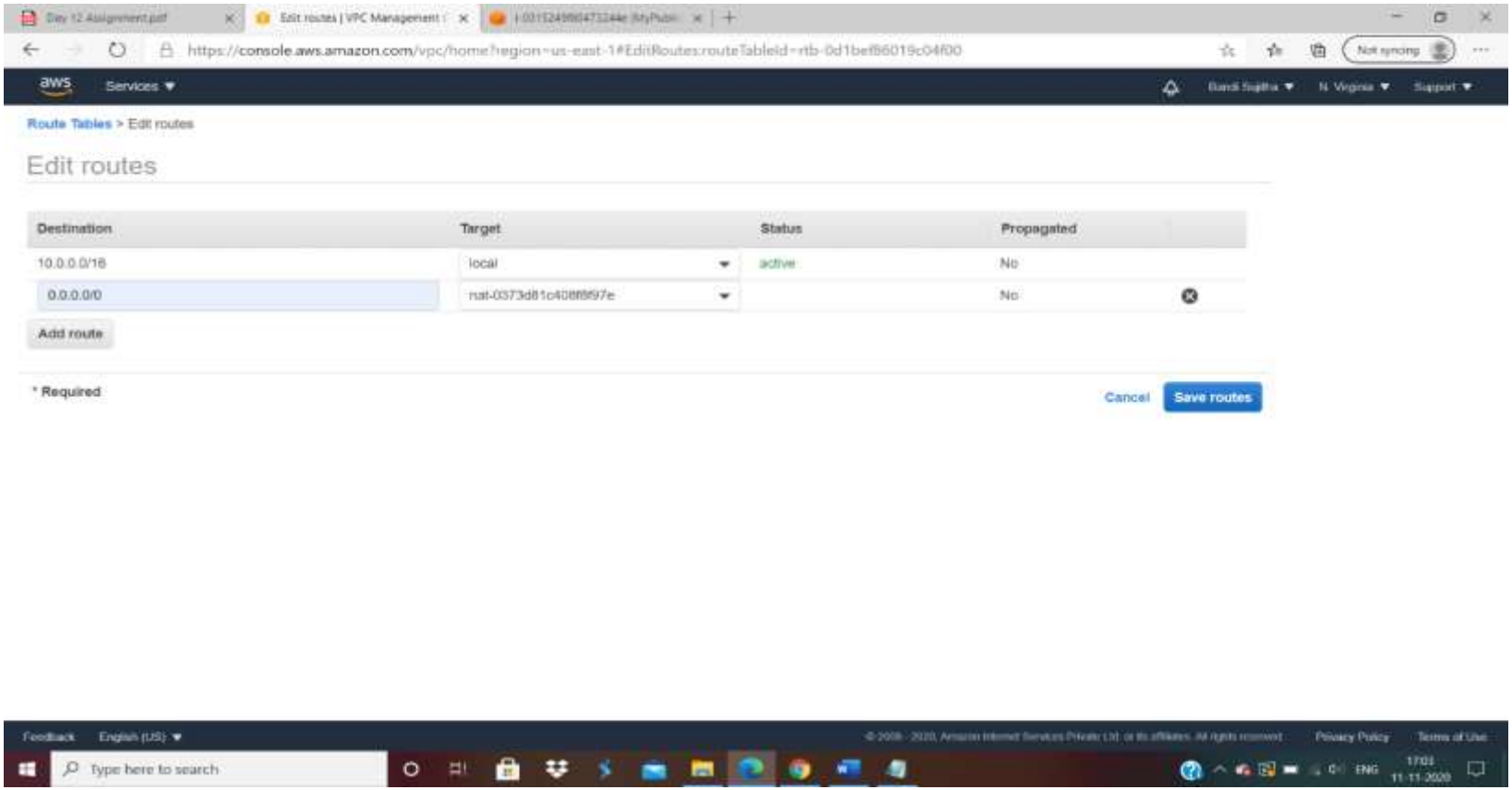



Day 12 Assignment.pdf
Instances | EC2 Management Co
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:
Not syncing
aws
Services
Bandi Sujitha
N. Virginia
Support
New EC2 Experience
EC2 Dashboard
Events
Tags
Limits
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Images
AMIs
Elastic Block Store
Volumes
Snapshots
Instances (1/2) Info
Connect
Instance state
Actions
Launch instances
Filter instances
1
Name
Instance ID
Instance state
Instance type
Status check
Alarm Status
Availability zone
Public IPv4 DNS
MyPublicEC2...
i-0315249f80473244e
Running
t2.micro
2/2 checks ...
No alarms
us-east-1f
MyPrivateEC...
i-012772c2f0229989a
Running
t2.micro
2/2 checks ...
No alarms
us-east-1f
Instance: i-012772c2f0229989a (MyPrivateEC2Server)
Details
Security
Networking
Storage
Status Checks
Monitoring
Tags
Instance summary Info
Instance ID
i-012772c2f0229989a (MyPrivateEC2Server)
Public IPv4 address
3.85.218.96 | open address
Private IPv4 addresses
10.0.1.4
Instance state
Running
Public IPv4 DNS
-
Private IPv4 DNS
ip-10-0-1-4.ec2.internal
Instance type
t2.micro
Elastic IP addresses
-
VPC ID
vpc-0232e24765796dcf6 (MyVPC)
AWS Compute Optimizer finding
IAM Role
Subnet ID
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search
ENG
16:36
11-11-2020

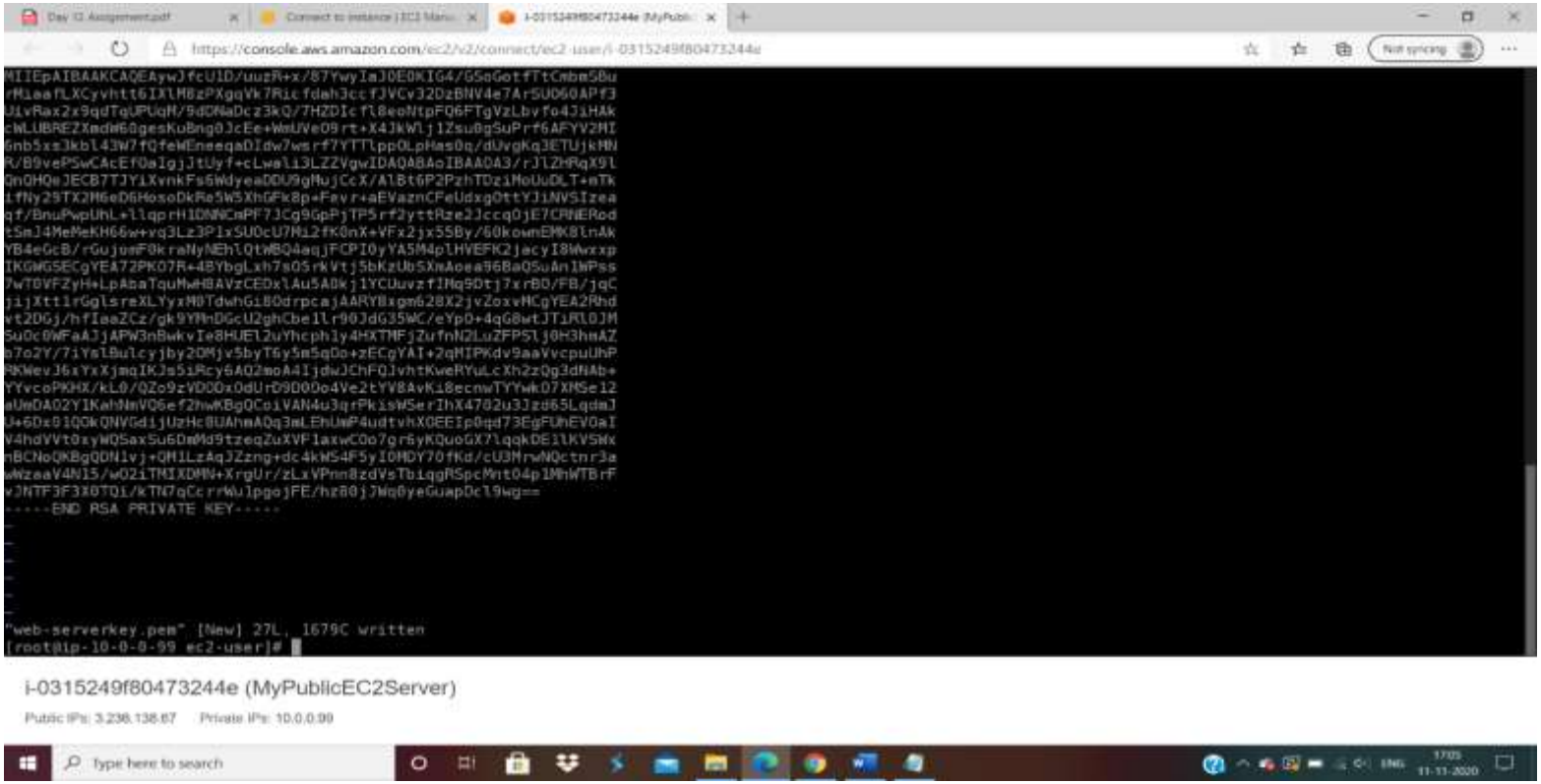
5)Create a NAT gateway and associate with public subnet

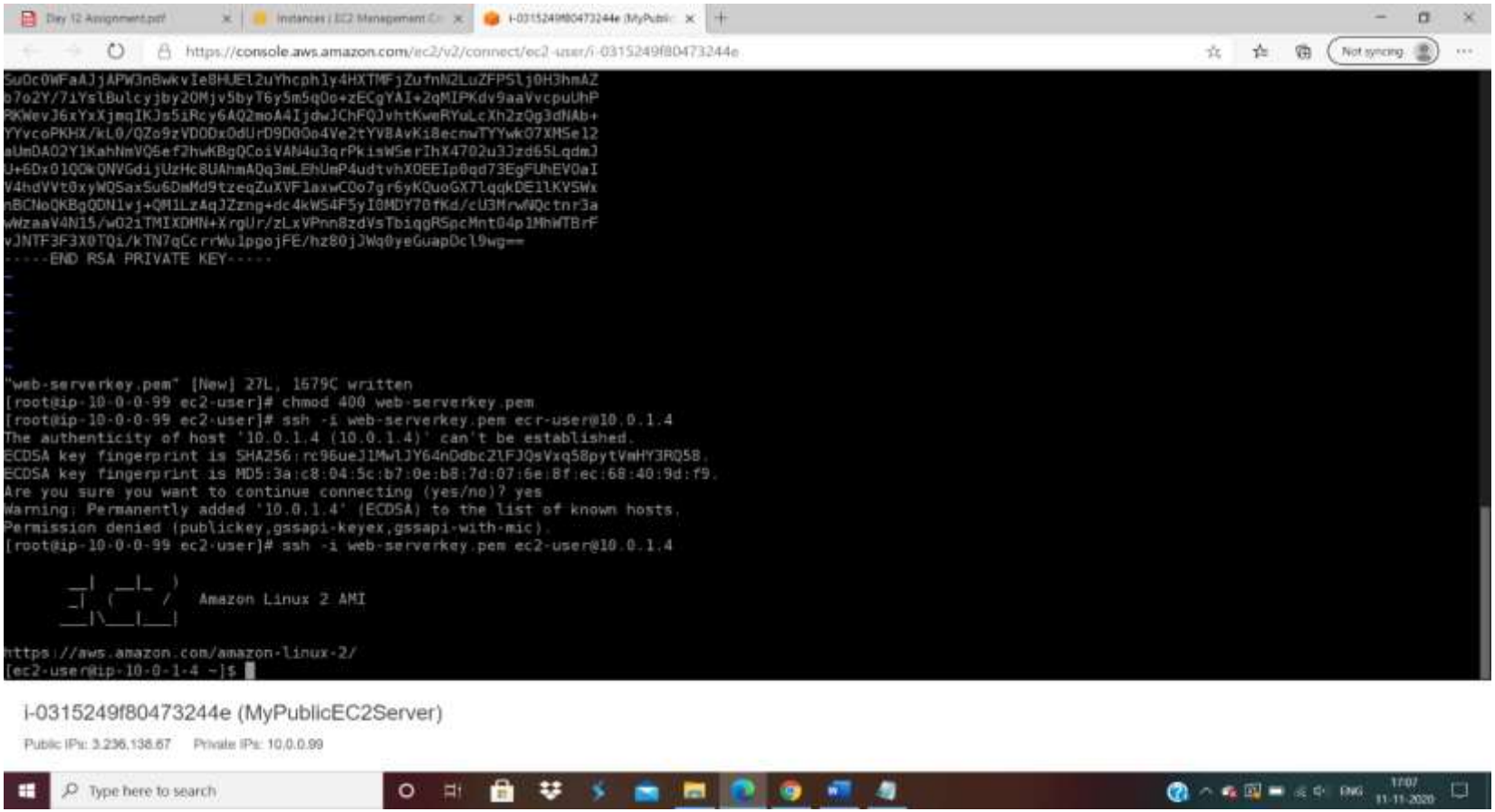



https://console.aws.amazon.com/vpc/home?region=us-east-1#NatGateways:
Services
New VPC Experience
VPC Dashboard
Filter by VPC:
Select a VPC
VIRTUAL PRIVATE CLOUD
Your VPCs
Subnets
Route Tables
Internet Gateways
Egress Only Internet Gateways
Carrier Gateways
DHCP Options Sets
Elastic IPs
Managed Prefix Lists
Endpoints
Endpoint Services
NAT Gateways
Peering Connections
SECURITY
NAT gateways (1/1) info
Actions
Create NAT gateway
Filter NAT gateways
Name
NAT gateway ID
State
State message
Elastic IP address
Private IP address
MyNAT
nat-0373d81c408f8f97e
Available
50.16.192.250
10.0.0.193
nat-0373d81c408f8f97e / MyNAT
Details
Monitoring
Tags
Details
NAT gateway ID
nat-0373d81c408f8f97e
State
Available
State message
Elastic IP address
50.16.192.250
Private IP address
10.0.0.193
Network interface ID
eni-013e17b85fa772981
VPC
vpc-0232e24765796dcf6 / MyVPC
Subnet
subnet-05a18077273c62718 / MyPublicSubnet
Created
2020/11/11 16:57 GMT+5:30
Deleted
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search
ENG
16:59
11-11-2020

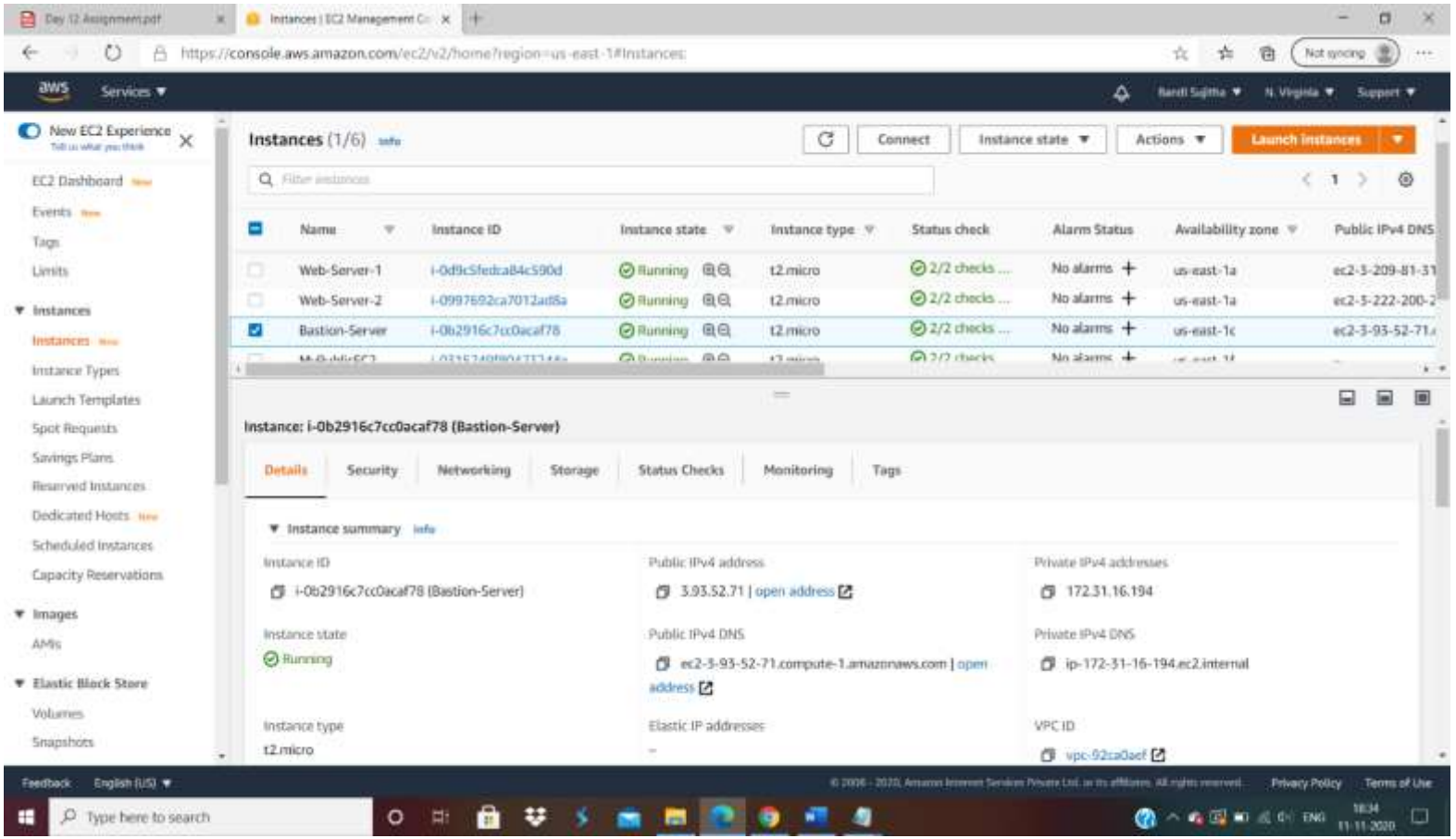

Edit routes | VPC Management
https://console.aws.amazon.com/vpc/home?region=us-east-1#EditRoutes:routeTableId=rtb-0d1bef86019c04f00
Not syncing
aws
Services
Route Tables > Edit routes
Edit routes
Destination
Target
Status
Propagated
10.0.0.0/16
local
active
No
0.0.0.0/0
nat-0373d81c4088697e
No
Add route
* Required
Cancel
Save routes
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search
ENG
17:03
11-11-2020

6)Connect the public instance and copy the private key and login to private ip

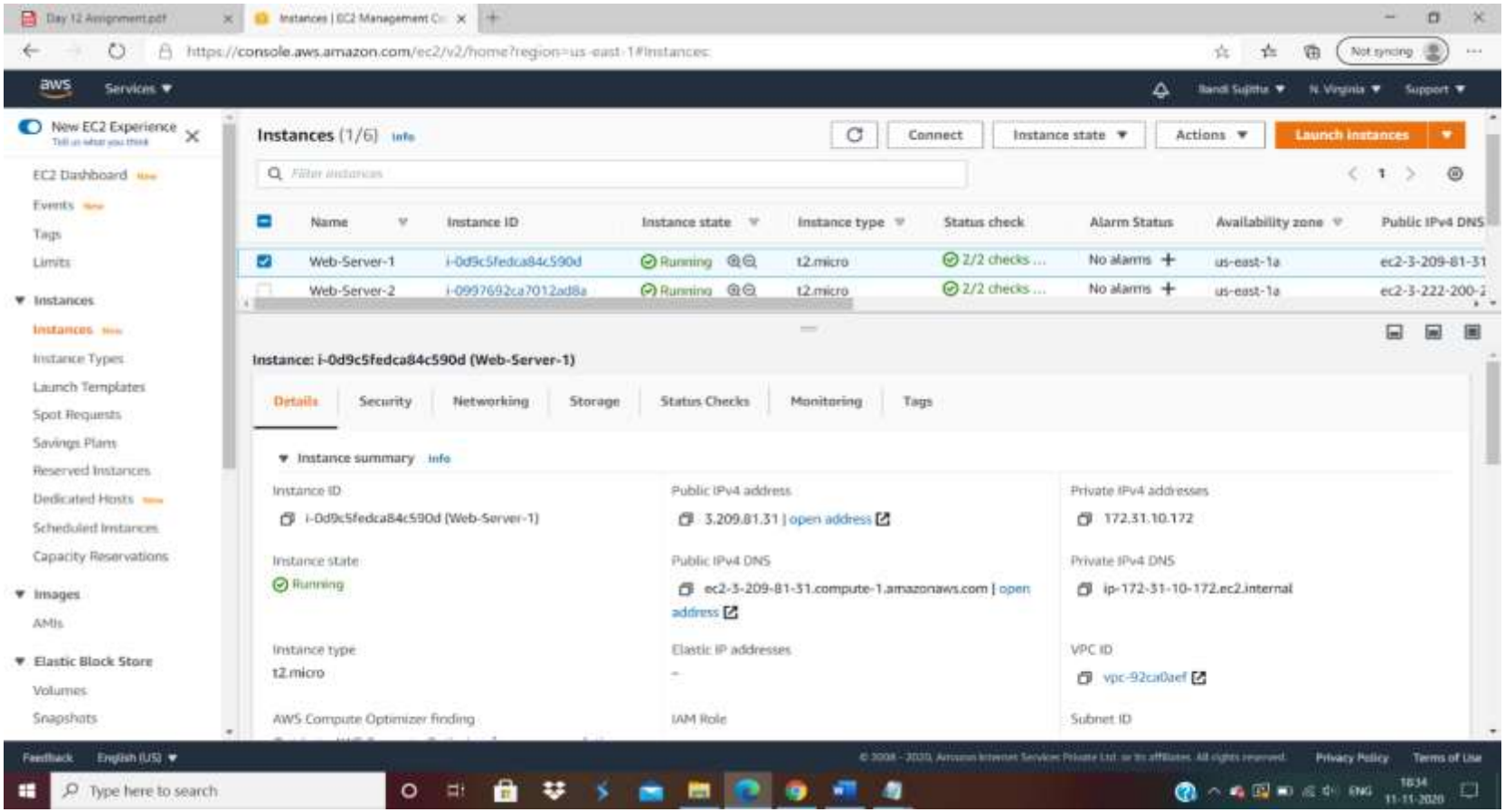


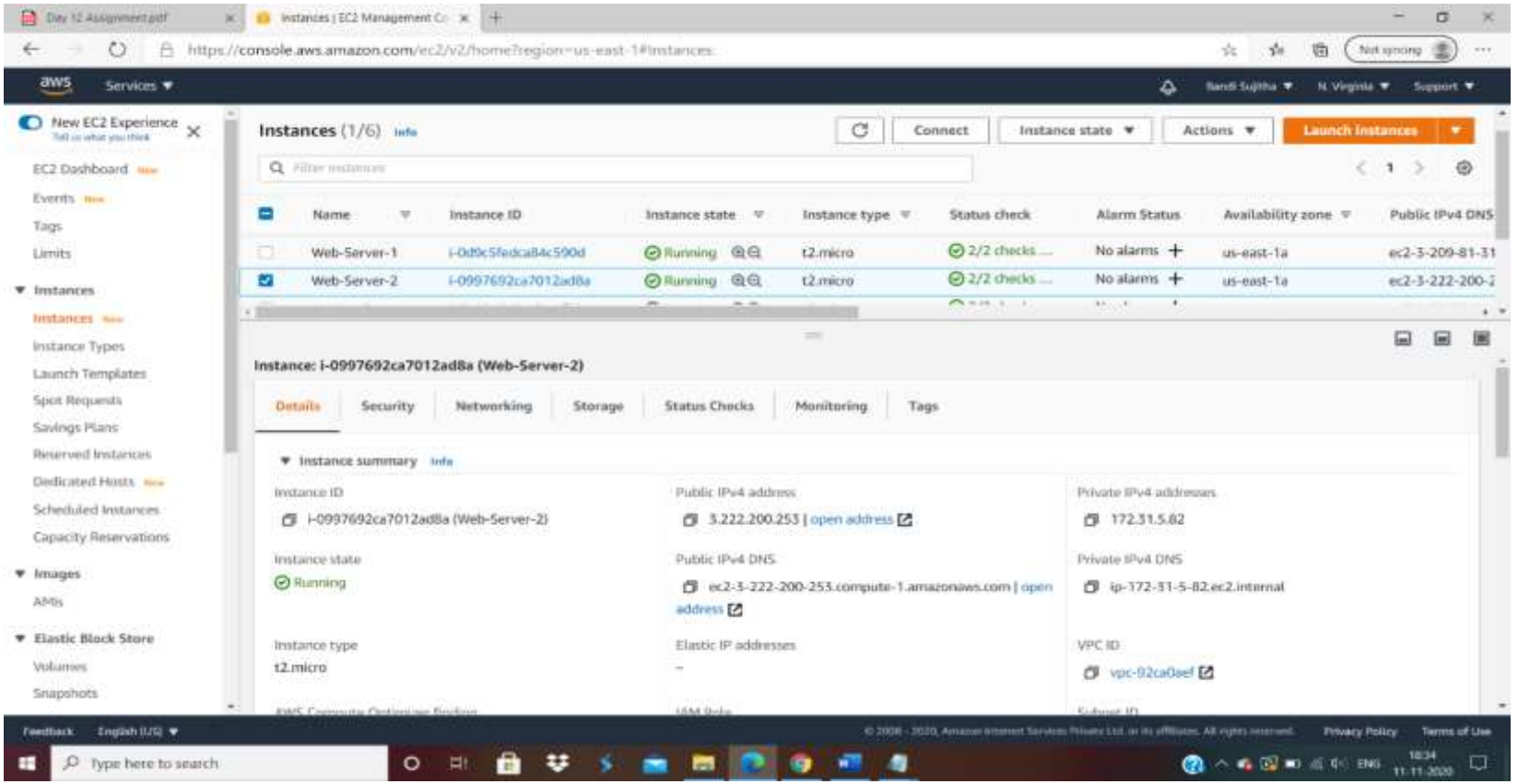

Day 12 Assignment.pdf
Instances | EC2 Management Co
i-0315249f80473244e (MyPublic
https://console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0315249f80473244e
Not syncing
SuOc0WFaAJjAPW3nBwkvIe8HUEl2uYhcphly4HXTMFjZufnN2LuZFPSlj0H3hmAZ
b7o2Y/7iYslBulcyjby2OMjv5byT6y5m5qOo+zECgYAI+2qMIPKdv9aaVvcpuUhP
RKWevJ6xYxXjmqIKJs5iRcy6AQ2moA4IjdwJChFQJvhtKweRYuLcXh2zQg3dNAb+
YYvcoPKHX/kL0/QZo9zVDODxOdUrD9D0Oo4Ve2tYV8AvKi8ecnwTYYwkO7XM5el2
aUmDAO2Y1KahNmVQ6ef2hwKBgQCoiVAN4u3qrPkisW5erIhX4702u3Jzd65LqdmJ
U+6Dx01QOkQNVGdijUzHc8UAhmAQq3mLEhUmP4udtvhXOEEIp0qd73EgFUhEVOaI
V4hdVVt0xyWQSaxSu6DmMd9tzeqZuXVFlaxwCOo7gr6yKQuoGX7lqqkDE1lKYSWx
nBCNoQKBgQDN1vj+QM1LzAqJZzng+dc4kWS4F5yI0MDY70fKd/cU3MrwNQctnr3a
wWzaaV4N15/wO2iTMIXDMN+XrgUr/zLxVPnn8zdVsTbiqgRSpcMnt04p1MhWTBrF
vJNTF3F3X0TQi/kTN7qCcrrWulpgojFE/hz80jJWq0yeGuapDcl9wg==
-----END RSA PRIVATE KEY-----
"web-serverkey.pem" [New] 27L, 1679C written
[root@ip-10-0-0-99 ec2-user]# chmod 400 web-serverkey.pem
[root@ip-10-0-0-99 ec2-user]# ssh -i web-serverkey.pem ecr-user@10.0.1.4
The authenticity of host '10.0.1.4 (10.0.1.4)' can't be established.
ECDSA key fingerprint is SHA256:rc96ueJlMwlJY64nDdbc2lFJQsVxq58pytVmHY3RQ58.
ECDSA key fingerprint is MD5:3a:c8:04:5c:b7:0e:b8:7d:07:6e:8f:ec:68:40:9d:f9.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.1.4' (ECDSA) to the list of known hosts.
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[root@ip-10-0-0-99 ec2-user]# ssh -i web-serverkey.pem ec2-user@10.0.1.4
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-10-0-1-4 ~]$
i-0315249f80473244e (MyPublicEC2Server)
Public IPs: 3.236.138.67
Private IPs: 10.0.0.99
Type here to search
ENG
17:07
11-11-2020

7)Now launch bastion server in the public subnet

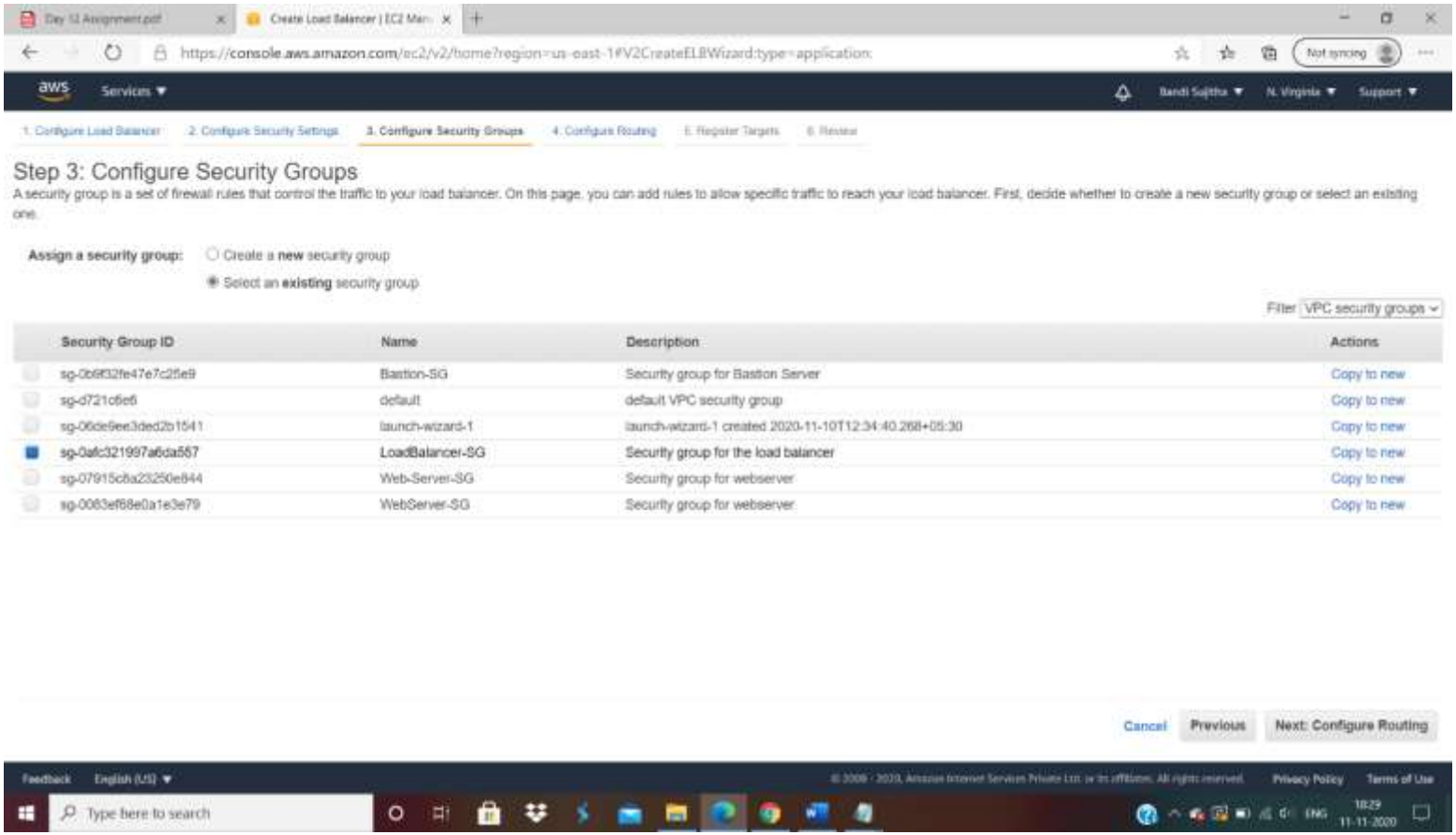


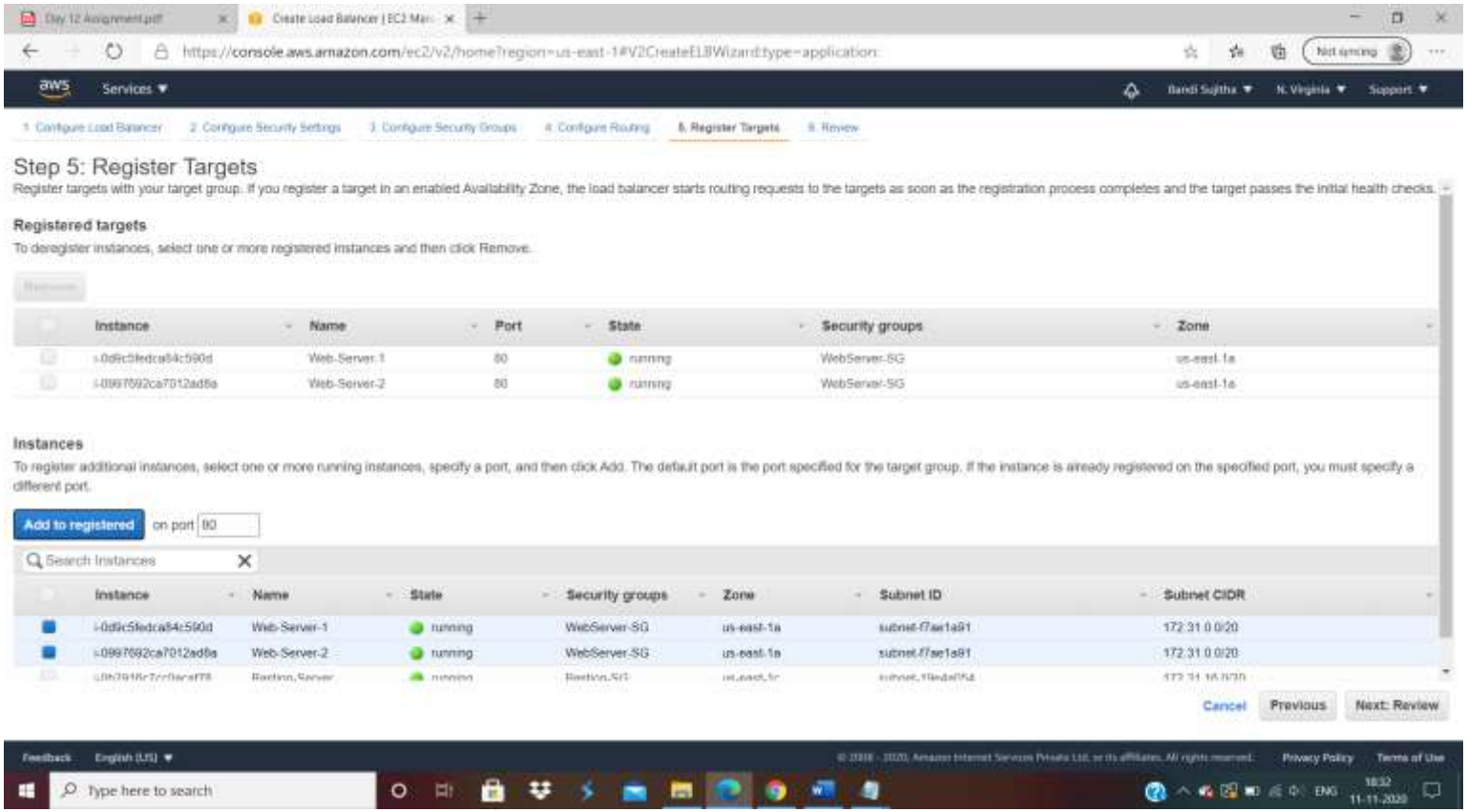
8) launch two webservers in the private subnet

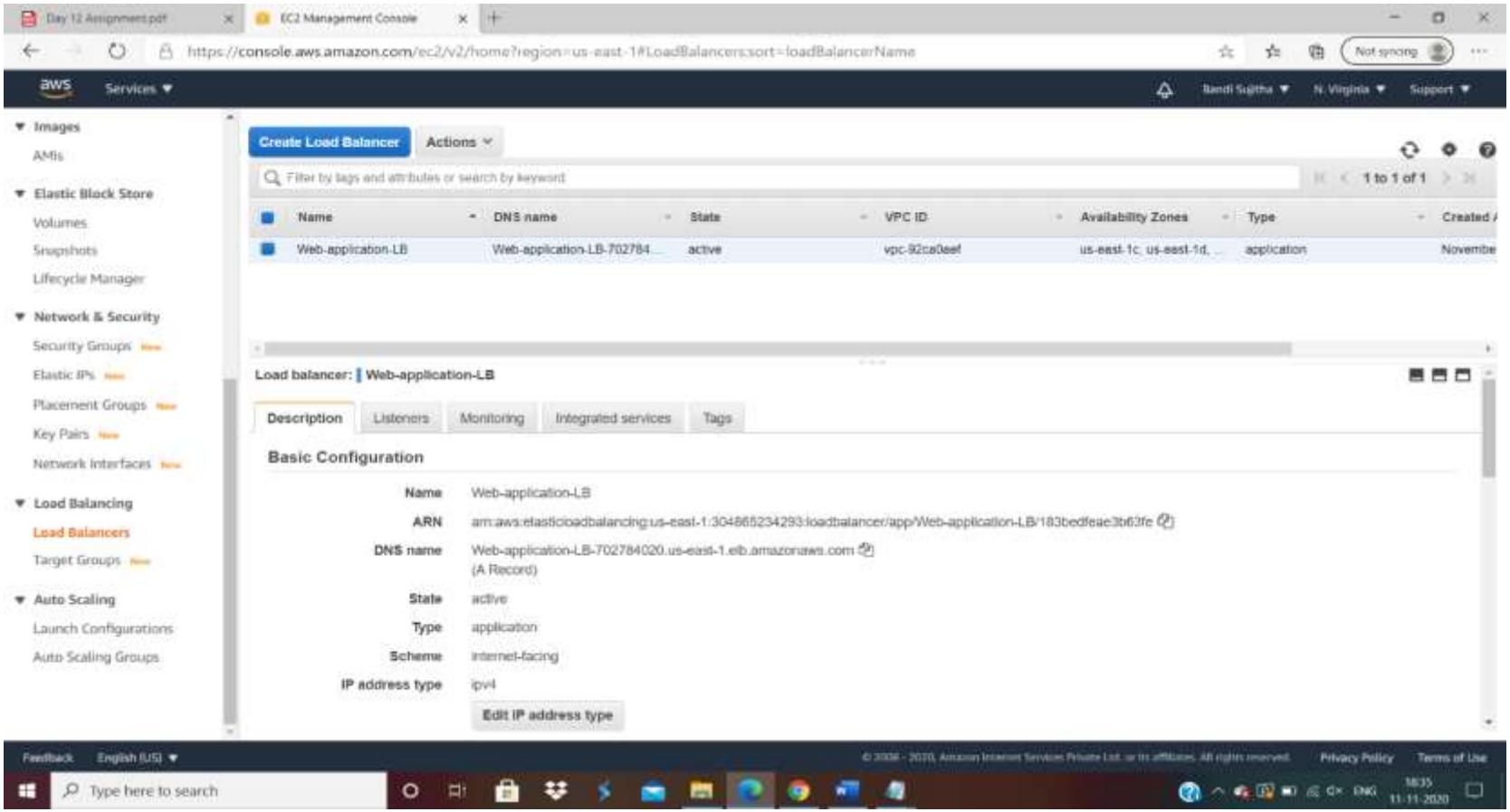



Day 12 Assignment.pdf
Instances | EC2 Management Co
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:
Not syncing
aws
Services
Sandi Sujitha
N. Virginia
Support
New EC2 Experience
Tell us what you think
EC2 Dashboard
Events
Tags
Limits
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Images
AMIs
Elastic Block Store
Volumes
Snapshots
Instances (1/6) Info
Connect
Instance state
Actions
Launch instances
Filter instances
1
Name
Instance ID
Instance state
Instance type
Status check
Alarm Status
Availability zone
Public IPv4 DNS
Web-Server-1
i-0d9c5fedca84c590d
Running
t2.micro
2/2 checks ...
No alarms
us-east-1a
ec2-3-209-81-31
Web-Server-2
i-0997692ca7012ad8a
Running
t2.micro
2/2 checks ...
No alarms
us-east-1a
ec2-3-222-200-2
Instance: i-0997692ca7012ad8a (Web-Server-2)
Details
Security
Networking
Storage
Status Checks
Monitoring
Tags
Instance summary Info
Instance ID
i-0997692ca7012ad8a (Web-Server-2)
Public IPv4 address
3.222.200.253 | open address
Private IPv4 addresses
172.31.5.82
Instance state
Running
Public IPv4 DNS
ec2-3-222-200-253.compute-1.amazonaws.com | open address
Private IPv4 DNS
ip-172-31-5-82.ec2.internal
Instance type
t2.micro
Elastic IP addresses
-
VPC ID
vpc-92ca0aef
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search
ENG
18:34
11-11-2020

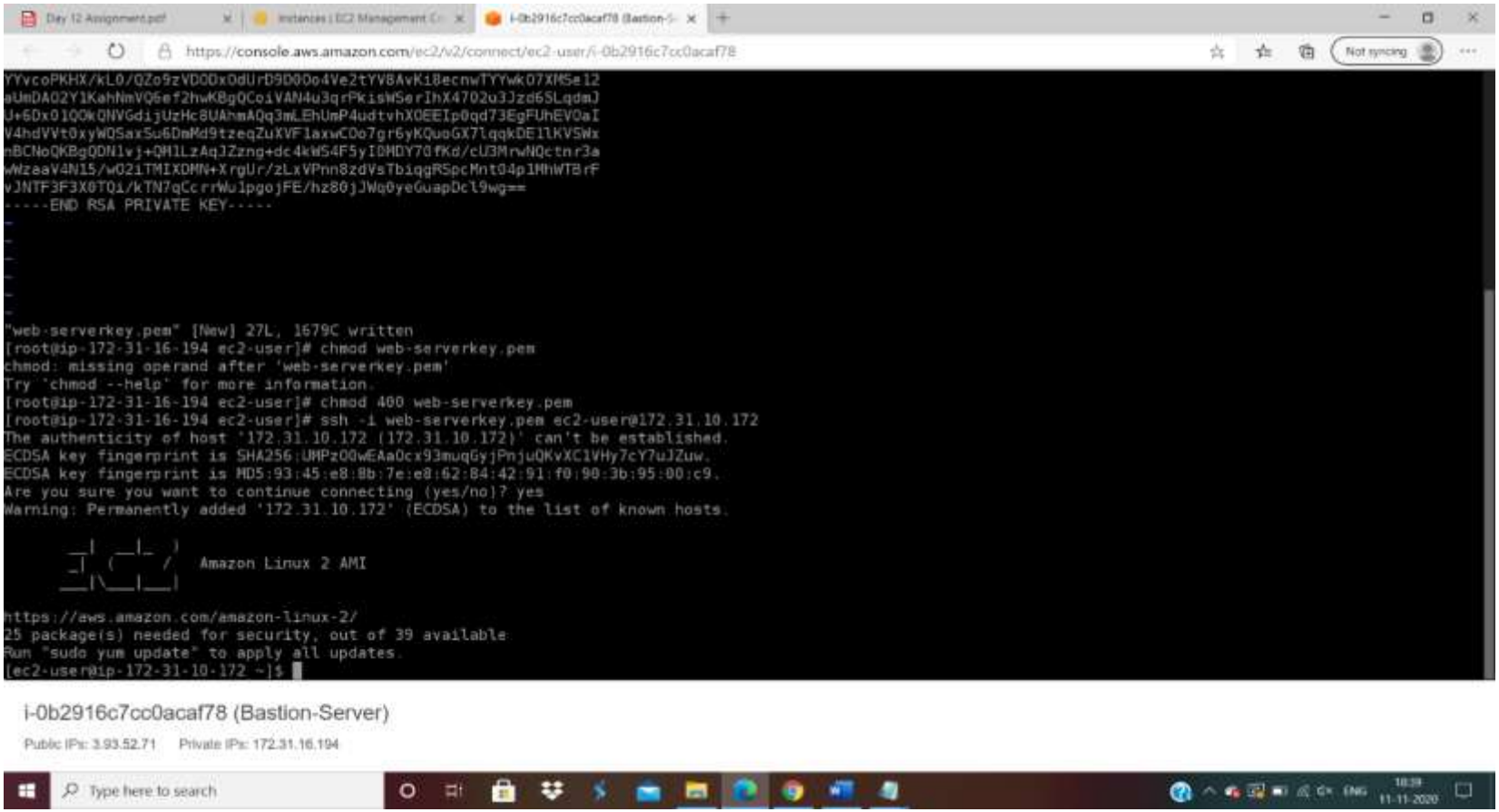
9) Create a load balancer in the public subnet range

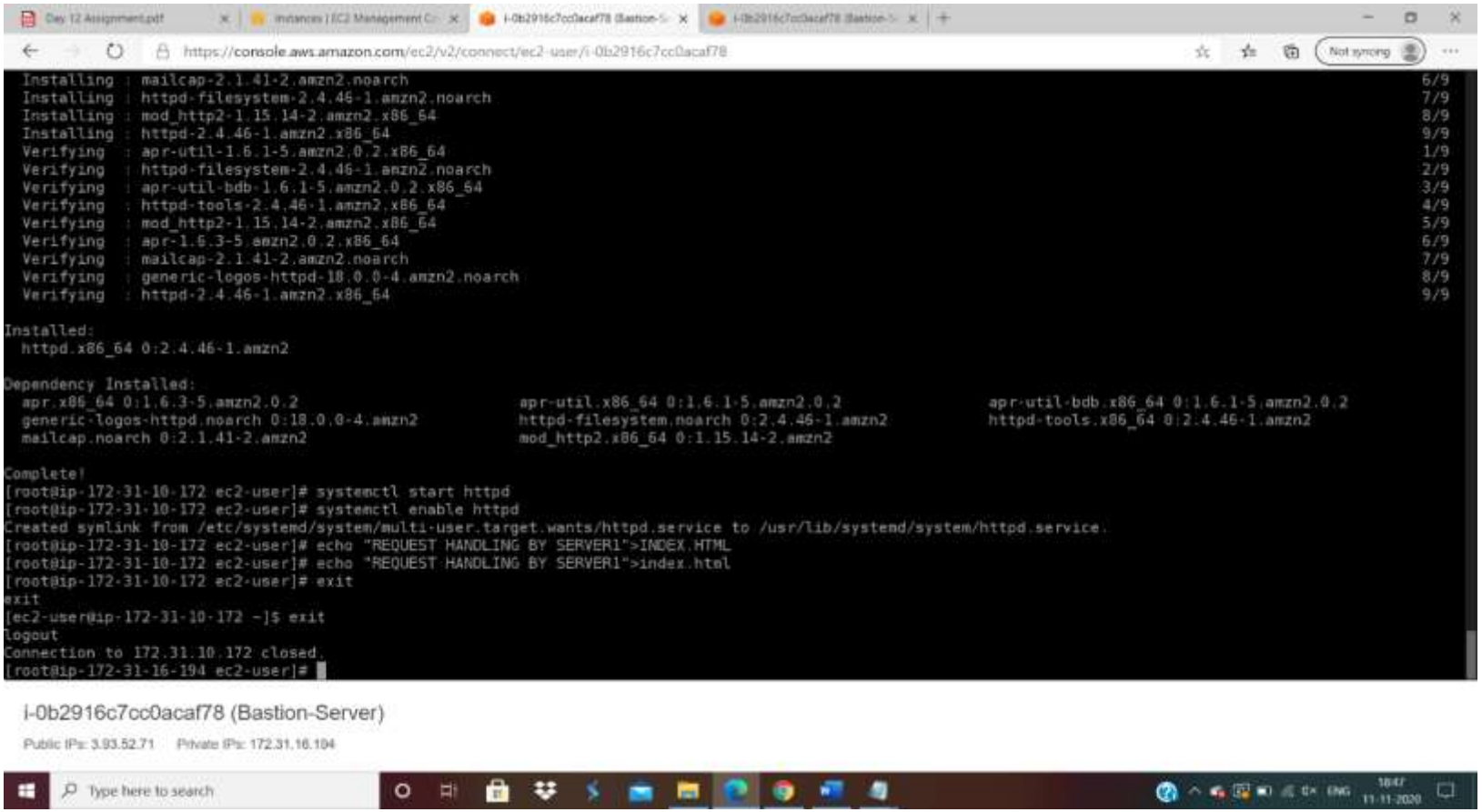


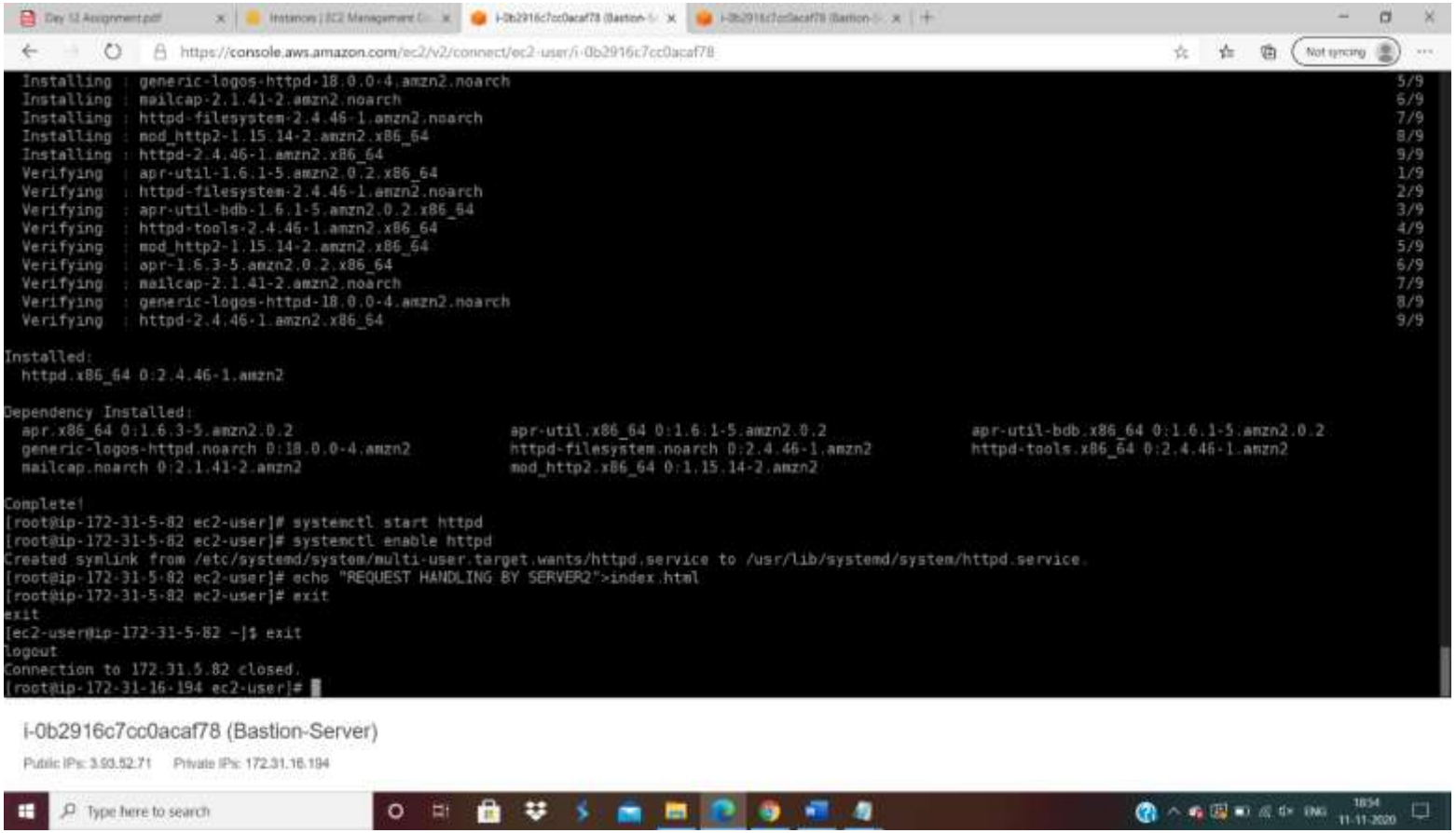

Day 12 Assignment.pdf
Create Load Balancer | EC2 Ma
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#V2CreateELBWizard:type=application:
Not syncing
aws
Services
Bandi Sujitha
N. Virginia
Support
1. Configure Load Balancer
2. Configure Security Settings
3. Configure Security Groups
4. Configure Routing
5. Register Targets
6. Review
Step 5: Register Targets
Register targets with your target group. If you register a target in an enabled Availability Zone, the load balancer starts routing requests to the targets as soon as the registration process completes and the target passes the initial health checks.
Registered targets
To deregister instances, select one or more registered instances and then click Remove.
Remove
Instance
Name
Port
State
Security groups
Zone
i-0d9c5fedca84c590d
Web-Server-1
80
running
WebServer-SG
us-east-1a
i-0997592ca7012ad8a
Web-Server-2
80
running
WebServer-SG
us-east-1a
Instances
To register additional instances, select one or more running instances, specify a port, and then click Add. The default port is the port specified for the target group. If the instance is already registered on the specified port, you must specify a different port.
Add to registered
on port 80
Search Instances
Instance
Name
State
Security groups
Zone
Subnet ID
Subnet CIDR
i-0d9c5fedca84c590d
Web-Server-1
running
WebServer-SG
us-east-1a
subnet-f7ae1a91
172.31.0.0/20
i-0997592ca7012ad8a
Web-Server-2
running
WebServer-SG
us-east-1a
subnet-f7ae1a91
172.31.0.0/20
Cancel
Previous
Next: Review
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search
ENG
18:32
11-11-2020


Day 12 Assignment.pdf
EC2 Management Console
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LoadBalancers:sort=loadBalancerName
Not syncing
aws
Services
Bandi Sujitha
N. Virginia
Support
Images
AMIs
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Auto Scaling
Launch Configurations
Auto Scaling Groups
Create Load Balancer
Actions
Filter by tags and attributes or search by keyword
1 to 1 of 1
Name
DNS name
State
VPC ID
Availability Zones
Type
Created
Web-application-LB
Web-application-LB-702784...
active
vpc-92ca0eef
us-east-1c, us-east-1d, ...
application
Novembe
Load balancer: Web-application-LB
Description
Listeners
Monitoring
Integrated services
Tags
Basic Configuration
Name
Web-application-LB
ARN
arn:aws:elasticloadbalancing:us-east-1:304865234293:loadbalancer/app/Web-application-LB/183bedfeae3b63fe
DNS name
Web-application-LB-702784020.us-east-1.elb.amazonaws.com
(A Record)
State
active
Type
application
Scheme
internet-facing
IP address type
ipv4
Edit IP address type
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search
ENG
11-11-2020

10)Connect the Bastion server with the web server 1 & 2 private ip addresses




https://console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0b2916c7cc0acaf78
Installing : mailcap-2.1.41-2.amzn2.noarch 6/9
Installing : httpd-filesystem-2.4.46-1.amzn2.noarch 7/9
Installing : mod_http2-1.15.14-2.amzn2.x86_64 8/9
Installing : httpd-2.4.46-1.amzn2.x86_64 9/9
Verifying : apr-util-1.6.1-5.amzn2.0.2.x86_64 1/9
Verifying : httpd-filesystem-2.4.46-1.amzn2.noarch 2/9
Verifying : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 3/9
Verifying : httpd-tools-2.4.46-1.amzn2.x86_64 4/9
Verifying : mod_http2-1.15.14-2.amzn2.x86_64 5/9
Verifying : apr-1.6.3-5.amzn2.0.2.x86_64 6/9
Verifying : mailcap-2.1.41-2.amzn2.noarch 7/9
Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 8/9
Verifying : httpd-2.4.46-1.amzn2.x86_64 9/9
Installed:
httpd.x86_64 0:2.4.46-1.amzn2
Dependency Installed:
apr.x86_64 0:1.6.3-5.amzn2.0.2
apr-util.x86_64 0:1.6.1-5.amzn2.0.2
apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
generic-logos-httpd.noarch 0:18.0.0-4.amzn2
httpd-filesystem.noarch 0:2.4.46-1.amzn2
httpd-tools.x86_64 0:2.4.46-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2
mod_http2.x86_64 0:1.15.14-2.amzn2
Complete!
[root@ip-172-31-10-172 ec2-user]# systemctl start httpd
[root@ip-172-31-10-172 ec2-user]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[root@ip-172-31-10-172 ec2-user]# echo "REQUEST HANDLING BY SERVER1">INDEX.HTML
[root@ip-172-31-10-172 ec2-user]# echo "REQUEST HANDLING BY SERVER1">index.html
[root@ip-172-31-10-172 ec2-user]# exit
exit
[ec2-user@ip-172-31-10-172 ~]$ exit
logout
Connection to 172.31.10.172 closed.
[root@ip-172-31-16-194 ec2-user]#
i-0b2916c7cc0acaf78 (Bastion-Server)
Public IPs: 3.93.52.71 Private IPs: 172.31.16.194
Type here to search


https://console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0b2916c7cc0acaf78
Installing : generic-logos-httpd-18.0.0-4.amzn2.noarch 5/9
Installing : mailcap-2.1.41-2.amzn2.noarch 6/9
Installing : httpd-filesystem-2.4.46-1.amzn2.noarch 7/9
Installing : mod_http2-1.15.14-2.amzn2.x86_64 8/9
Installing : httpd-2.4.46-1.amzn2.x86_64 9/9
Verifying : apr-util-1.6.1-5.amzn2.0.2.x86_64 1/9
Verifying : httpd-filesystem-2.4.46-1.amzn2.noarch 2/9
Verifying : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 3/9
Verifying : httpd-tools-2.4.46-1.amzn2.x86_64 4/9
Verifying : mod_http2-1.15.14-2.amzn2.x86_64 5/9
Verifying : apr-1.6.3-5.amzn2.0.2.x86_64 6/9
Verifying : mailcap-2.1.41-2.amzn2.noarch 7/9
Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 8/9
Verifying : httpd-2.4.46-1.amzn2.x86_64 9/9
Installed:
httpd.x86_64 0:2.4.46-1.amzn2
Dependency Installed:
apr.x86_64 0:1.6.3-5.amzn2.0.2
apr-util.x86_64 0:1.6.1-5.amzn2.0.2
apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
generic-logos-httpd.noarch 0:18.0.0-4.amzn2
httpd-filesystem.noarch 0:2.4.46-1.amzn2
httpd-tools.x86_64 0:2.4.46-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2
mod_http2.x86_64 0:1.15.14-2.amzn2
Complete!
[root@ip-172-31-5-82 ec2-user]# systemctl start httpd
[root@ip-172-31-5-82 ec2-user]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[root@ip-172-31-5-82 ec2-user]# echo "REQUEST HANDLING BY SERVER2">index.html
[root@ip-172-31-5-82 ec2-user]# exit
exit
[ec2-user@ip-172-31-5-82 ~]$ exit
logout
Connection to 172.31.5.82 closed.
[root@ip-172-31-16-194 ec2-user]#
i-0b2916c7cc0acaf78 (Bastion-Server)
Public IPs: 3.93.52.71 Private IPs: 172.31.16.194
Type here to search