

# AWS ASSESSMENT PROJECT

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

The screenshot displays the AWS Management Console interface for the Subnets page. The console shows a list of subnets, including 'MyPublicSubnet' and 'MyPrivateSubnet', both in an 'available' state. The 'MyPublicSubnet' details are expanded, showing its configuration: Subnet ID (subnet-05a18077273c627f8), VPC (vpc-0232e247b5796dd6), IPv4 CIDR (10.0.0.0/24), Available IPv4 (251), IPv6 CIDR (-), Availability Zone (us-east-1f), and Auto-assign public IPv4 address (Yes). The console also shows a sidebar with navigation links for VPC Dashboard, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, Carrier Gateways, DHCP Options Sets, Elastic IPs, Managed Prefix Lists, Endpoints, Endpoint Services, NAT Gateways, and Peering Connections. The bottom of the screen shows the Windows taskbar with the search bar and various application icons.

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR	Availability Zone	Availability
MyPublicSubnet	subnet-05a18077273c627f8	available	vpc-0232e247b5796dd6	10.0.0.0/24	251	-	us-east-1f	use1-
MyPrivateSubnet	subnet-0ac711477c757d778	available	vpc-0232e247b5796dd6	10.0.1.0/24	251	-	us-east-1f	use1-

Subnet: subnet-05a18077273c627f8

Description	Flow Logs	Route Table	Network ACL	Tags	Sharing
Subnet ID	subnet-05a18077273c627f8				
VPC	vpc-0232e247b5796dd6   MyVPC				
Available IPv4 Addresses	251				
Availability Zone	us-east-1f (use1-az5)				
Route Table	rtb-0d1b0f8019c04800				
Default subnet	No				
Auto-assign customer-owned IPv4 address	No				
Auto-assign IPv6 address	No				
Owner	304805234293				
State	available				
IPv4 CIDR	10.0.0.0/24				
IPv6 CIDR	-				
Network Border Group	us-east-1				
Network ACL	acl-0593c3130fb01086d				
Auto-assign public IPv4 address	Yes				
Customer-owned IPv4 pool	-				
Outpost ID	-				

Day 12 Assignment.pdf Subnets | VPC Management Console

https://console.aws.amazon.com/vpc/home?region=us-east-1#subnets:sort=SubnetId

Services

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**Subnets**

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Managed Prefix Lists **new**

Endpoints

Endpoint Services

NAT Gateways **new**

Peering Connections

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16:12 11-11-2020

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Back to top N. Virginia Support

Create subnet Actions

Filter by tags and attributes or search by keyword 1 to 8 of 8

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR	Availability Zone	Available
MyPublicSu...	subnet-05a18077273c62798	available	vpc-0232e24765796dd6 [...]	10.0.0.0/24	251	-	us-east-1f	use1-
MyPrivateS...	subnet-0ac711477c757d778	available	vpc-0232e24765796dd6 [...]	10.0.1.0/24	251	-	us-east-1f	use1-
subnet-05a18077273c62798	subnet-05a18077273c62798	available	vpc-0232e24765796dd6 [...]	10.0.0.0/24	251	-	us-east-1f	use1-

Subnet: subnet-0ac711477c757d778

Description Flow Logs Route Table Network ACL Tags Sharing

Subnet ID	subnet-0ac711477c757d778	State	available
VPC	vpc-0232e24765796dd6   MyVPC	IPv4 CIDR	10.0.1.0/24
Available IPv4 Addresses	251	IPv6 CIDR	-
Availability Zone	us-east-1f (use1-az5)	Network Border Group	us-east-1
Route Table	rtb-0d15ef96019c34f50	Network ACL	acl-0593c3138b01086d
Default subnet	No	Auto-assign public IPv4 address	Yes
Auto-assign customer-owned IPv4 address	No	Customer-owned IPv4 pool	-
Auto-assign IPv6 address	No	Outpost ID	-
Owner	304800234293		

2) Create a IGW and associate with the public subnet

The screenshot shows the AWS Management Console interface for an Internet Gateway. The browser address bar displays the URL: `https://console.aws.amazon.com/vpc/home?region=us-east-1#InternetGateway:internetGatewayId=igw-0682dbc3fddd3ec98`. The console header includes the AWS logo, 'Services' dropdown, and navigation links for 'Burst Support', 'N. Virginia', and 'Support'.

A green banner at the top of the console area states: "The following internet gateway was created: igw-0682dbc3fddd3ec98. You can now attach to a VPC to enable the VPC to communicate with the Internet." An "Attach to a VPC" button is visible on the right side of the banner.

The main content area shows the breadcrumb navigation: `VPC > Internet gateways > igw-0682dbc3fddd3ec98`. Below this, the title `igw-0682dbc3fddd3ec98 / MyIGW` is displayed, followed by an "Actions" dropdown menu.

The "Details" section provides information about the gateway:

Internet gateway ID	State	VPC ID	Owner
igw-0682dbc3fddd3ec98	Detached	-	304865234293

The "Tags" section includes a search bar and a table of tags:

Key	Value
Name	MyIGW

The bottom of the screenshot shows the Windows taskbar with the search bar, task icons, and system tray area displaying the time as 16:14 on 11-11-2020.



### 3) Create a route table with VPC

Day 12 Assignment.pdf x Create route table | VPC Manager x

← → ↻ 🔒 https://console.aws.amazon.com/vpc/home?region=us-east-1#CreateRouteTable

aws Services

Route Tables > Create route table

## Create route table

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Name tag  ⓘ

VPC\*  ↕ ⓘ

Key	Value
This resource currently has no tags	

Add Tag 50 remaining (Up to 50 tags maximum)

\* Required

Cancel Create

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Day 12 Assignment.pdf | Route Tables | VPC Management |

https://console.aws.amazon.com/vpc/home?region=us-east-1#RouteTables:sort=routeTableId

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Create route table | Actions

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-0d1be96019c04f00	-	-	Yes	vpc-0232e24785796dcf6   ...	304865234293
PublicRoute...	rtb-0952120818e0e18f	-	-	No	vpc-0232e24785796dcf6   ...	304865234293
	rtb-b84708c8	-	-	Yes	vpc-62ca0aef	304865234293

Route Table: rtb-0952120818e0e18f

Summary | Routes | Subnet Associations | Edge Associations | Route Propagation | Tags

Route Table ID	rtb-0952120818e0e18f	Main	No
Explicitly Associated with	-	VPC	vpc-0232e24785796dcf6   MyVPC
Owner	304865234293		

#### 4. Creating two instances using linux

The screenshot displays the AWS Management Console's EC2 Instances page. Two instances are listed:

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-012772c2f0229969a	Running	t2.micro	2/2 checks ...	No alarms +	us-east-1f	-

The details for the instance **i-0315249f80473244e (MyPublicEC2Server)** are shown below:

- Instance ID:** i-0315249f80473244e (MyPublicEC2Server)
- Instance state:** Running
- Instance type:** t2.micro
- Public IPv4 address:** 3.236.138.67 | [open address](#)
- Public IPv4 DNS:** -
- Elastic IP addresses:** -
- IAM Role:** -
- Private IPv4 addresses:** 10.0.0.99
- Private IPv4 DNS:** ip-10-0-0-99.ec2.internal
- VPC ID:** vpc-0232e24765796dcf6 (MyVPC)
- Subnet ID:** -



Day 12 Assignment.pdf x Instances | EC2 Management Co x I-015249f80473244e (MyPub... x +

https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#instances:

aws Services

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 (1/2) info

Filter instances

Connect Instance state Actions Launch instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone	Public IPv4 DNS
<input type="checkbox"/>	MyPublicEC2...	i-0315249f80473244e	Running	t2.micro	2/2 checks ...	No alarms +	us-east-1f	-
<input checked="" type="checkbox"/>	MyPrivateEC2...	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	Public IPv4 address	Private IPv4 addresses
i-012772c2f0229989a (MyPrivateEC2Server)	3.85.218.96   open address	10.0.1.4
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	-	ip-10-0-1-4.ec2.internal
Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-0232e24765796dcf6 (MyVPC)
AWS Compute Optimizer finding	IAM Role	Subnet ID

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## 5) Create a NAT gateway and associate with public subnet

Day 12 Assignment.pdf VPC Management Console J-037324960473344e MyPublic

https://console.aws.amazon.com/vpc/home?region=us-east-1#CreateNatGateway

Not syncing

aws Services

Barclay Hughes N. Virginia Support

Elastic IP address 50.16.192.250 (eipalloc-04659278da71a952f) allocated

### Create NAT gateway [info](#)

Create a NAT gateway and assign it an Elastic IP address.

#### NAT gateway settings

**Name - optional**  
Create a tag with a key of 'Name' and a value that you specify.

MyNAT

The name can be up to 255 characters long.

**Subnet**  
Select a public subnet in which to create the NAT gateway.

subnet-05a18077275c627fb (MyPublicSubnet)

**Elastic IP allocation ID [info](#)**  
Assign an Elastic IP address to the NAT gateway.

eipalloc-04659278da71a952f [Allocate Elastic IP](#)

#### Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key Value - optional

Name MyNAT Remove

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Day 12 Assignment.pdf NAT gateways | VPC Management i-031524980473244e (MyPublic) +

https://console.aws.amazon.com/vpc/home?region=us-east-1#NatGateways

Not syncing

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### NAT gateways (1/1) [info](#)

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-013ae17b85fe772981 <a href="#">View</a>	VPC vpc-0232e24765796dcf6 / MyVPC	Subnet subnet-05a18077273c627f8 / MyPublicSubnet
Created 2020/11/11 16:57 GMT+5:30	Deleted -		

Route Tables > Edit routes

## Edit routes

Destination	Target	Status	Propagated
10.0.0.0/18	local	active	No
0.0.0.0/0	nat-0373d81c4d8f897e		No

Add route

\* Required

Cancel

Save routes

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

The screenshot shows a web browser window with the AWS Management Console interface. The address bar displays the URL: `https://console.aws.amazon.com/ec2/v2/connect/ec2-user/-0315249f80473244e`. The main content area is a terminal window with a black background and white text. The terminal output shows a long RSA private key being displayed, followed by the message: `"web-serverkey.pem" [New] 27L, 1679C written`. Below the terminal window, the instance details for `i-0315249f80473244e (MyPublicEC2Server)` are shown, including the Public IP: `3.236.138.67` and Private IP: `10.0.0.99`. The bottom of the image shows a Windows taskbar with the Start button, a search bar, and several application icons.

```
MIIEpAIBAAKCAQEAywjfcU1D/uuzR+x/87YvyIaJ0E0KIG4/G5oGotfttCmba5Bu
rMlaaFLXcyvhtt6IXLM8zPXggVk7R1cfdah3ccfJVCv32DzBNV4e7A+SU060APf3
U4vRax2x9qdTgUPUqM/9dQNaDcz3kQ/7H2DIcfl8eeNtpF06FTgVzLbvfo4J1HAK
cMLUBRE2KadH68gesK0Bng0JcEe+waUve09rt+K41kkWlj1Zsu8gSuPrf6AFYV2HI
6nb5xs3kb143W7TQfeHEneagaDIw7wrf7YTTlpp0Lphas0g/dUyqKq3ETUjkHW
R/B9vePswCacEF0aIggJttUyfcLwa113LZZYgvlDA0A8AoIBAA0A3/rJLZhRqX9L
QnQH0eJECB7TJY1XvntFs6WdyeaDDU9gHuJGcX/A18t6P2PzhT0ziMoUuDLT+nTk
LffNy29TX2H5eD6HosoDkRe5W5XhGfK8p+Favri+aeVaznCFeUdxg0ttYJ1NVSIZea
qf/BnuPwpUhl+LlqprH10NWCnPF7JCG9GpPjTP5rf2yttRze2Jccq0JE7CRHERod
tSmJ4MeMeKH66w+vg3Lz3P1xSU0cU7M12fk0nX+VFx2jx55Bv/60kownEMK81nAK
YB4eGcB/rGuJusF0kraNyNEh1QtWBQ4eqJFCPI0yYA5M4pLHVEFK2JecyI8Wvxxp
IKGWS5ECgYEAE72PK07R+4B9bglxh7a05rkVtj5bKzUb5XnAoea96BaoQsuAnIhPss
7wT0VFZyH+LpAaaTouMeh8AVzCEBx1Au5A0k;1YCUuvzf1Nq9Dtj7xRBD/FB/jqC
j1jXt11rGgl5reXLyXN0TdwHgl80drpcajAARY8xgm628X2jvZoxvHCgYEA2Rhd
vt2DGj/hfIaaZCz/gk9YfnD6cU2ghCbe1Lr90JdG35Mc/eYp0+4qG8wtJT1RL0JM
Su0c0mFaA3jAPW3nBwkvIe8HUE12uYncph1y4HXTHFjZuFnN2LuZFP5Lj0H3hnaZ
b7o2Y/7iYb1Bu1cyjby20Mjv5byT5ysm5qDo+ZECgYAI+2qH1PKdv9aaVvcpuUhp
RKWevJ6xYxJmqIKJ551Rcy5A02moA4IjdWJChFQ1vhtKweRYuLcXh2zQg3dHAb+
YYvcoPKHX/kL0/QZo9zVDD0x0dUrd9D00o4Ve2tYV8AvK18ecnwTYWkD7XMSz12
aUwDA02YIKahNnVQ6ef2hwKBQCo1VAN4u3qrFk1sW5erIhX4702u3Jz65LqdaI
U+6Dx910QKQNVGd1jUzHcBUAhnA0q3mLEhUwP4udtVhX0EEIpoqd73EgFUhEV0aI
V4hdVvt0xyWQ5ax5u6Dm0d9tzeqZuXVF1axwC0o7gr5yKQuoGX7LqqKDE1LKV5Mx
nBCNoQMbg0M1lv+0H1LzAgJZzng+dc4kMS4F5y10HDY70fKd/cU3MnwN0ctnr3a
wIzeaV4N15/w021THIXDMW+XrgUr/zLxVPnn8zdVsTb1qgRSpcMnt04p1MhWTRf
vJNTF3F3X0TQ1/kTH7qCcrrWUlpgojFE/hz80j7Mq8yeGuap0c19wg==
-----END RSA PRIVATE KEY-----

"web-serverkey.pem" [New] 27L, 1679C written
[root@ip-10-0-0-99 ec2-user]#
```

i-0315249f80473244e (MyPublicEC2Server)  
Public IP: 3.236.138.67 Private IP: 10.0.0.99

Day 12 Assignment.pdf Instances | EC2 Management Console I-0315249f80473244e (MyPublicEC2Server)

https://console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0315249f80473244e

```
Su0c0WFAAJjAPW3n8wkvIe8HUE12uYhchp1y4HXtMFjZuFnM2LuZFP5l1j0H3hmAZ
b7o2Y/71Ys1Bu1cyjby20Mjv5byT6y5m5q0o+zECgYAI+2qMIPKdv9aaVvcpuUHP
PKWeyJ6xYxXjmqIKjs5iRcy6A02moA4IjdwJChFQJvhtKweRYuLcXh2zQg3dHAb+
YYvcoPKHX/kL0/QZo9zVDD0x0dUrD9D0Qo4Ve2tYV8AvK18ecwTYTvk07XHSe12
aUmDA02Y1KahNmVQSeF2hwKBgQCo1VAN4u3qrPkisWSeRihX4702u3Jzd65LqdmJ
U+6Dx010QkQNVGd1jUzHc8UAhmAQq3mLEhUmP4udtvhX0EEIp8qd73EgFUhEV0aI
V4hdVYt0xyWQsaxSu6DmMd9tzeqZuXVF1axwC0o7gr6yKQoGX7LqqkDE1LKVSWx
nBCHoQKBgQDN1vj+QM1LzAqJZzng+dc4kWS4F5yI0MDY70fKd/cU3HrwWQctnr3a
wWzaaV4N15/w021TMIKDMN+XrgUr/zLxVPnn8zdVsTbiqgRSpcMnt04p1MhWtBrF
vJNTF3F3X0TQ1/kTN7qCcrrWu1ppoJFE/hz80jJWq0yeGuapDc19wg==
-----END RSA PRIVATE KEY-----

[web-serverkey.pem] [New] 27L, 1579C 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 ec2-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:rc96ueJ1MwLJY64nDdbC21FJQsVxq58pytVmHY3RQ58.
ECDSA key fingerprint is MD5:3a:c8:04:5c:b7:0e:b8:7d:07:6e:Bf: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 IP: 3.236.138.67 Private IP: 10.0.0.99

Type here to search

11/11/2020

7) Now launch bastion server in the public subnet

The screenshot displays the AWS Management Console's EC2 Instances page. A table lists four instances: 'Web-Server-1', 'Web-Server-2', 'Bastion-Server', and 't2.micro'. The 'Bastion-Server' is selected, and its details are expanded below. The details include the instance ID, state (Running), type (t2.micro), public IPv4 address (3.93.52.71), public IPv4 DNS (ec2-3-93-52-71.compute-1.amazonaws.com), private IPv4 address (172.31.16.194), private IPv4 DNS (ip-172-31-16-194.ec2.internal), and VPC ID (vpc-92ca0aef).

Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone	Public IPv4 DNS
Web-Server-1	i-0d9c5feda84c590d	Running	t2.micro	2/2 checks ...	No alarms	us-east-1a	ec2-3-209-81-31
Web-Server-2	i-0997b92ca7012ad8a	Running	t2.micro	2/2 checks ...	No alarms	us-east-1a	ec2-3-222-200-2
Bastion-Server	i-0b2916c7cc0acaf78	Running	t2.micro	2/2 checks ...	No alarms	us-east-1c	ec2-3-93-52-71
t2.micro	i-021574080a711148a	Running	t2.micro	2/2 checks ...	No alarms	us-east-1c	

**Instance: i-0b2916c7cc0acaf78 (Bastion-Server)**

**Instance summary**

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0b2916c7cc0acaf78 (Bastion-Server)	3.93.52.71   open address	172.31.16.194

Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-3-93-52-71.compute-1.amazonaws.com   open address	ip-172-31-16-194.ec2.internal

Instance type	Elastic IP addresses	VPC ID
t2.micro		vpc-92ca0aef

8) launch two web servers in the private subnet

The screenshot shows the AWS Management Console interface. On the left, there is a navigation menu with options like EC2 Dashboard, Events, Tags, Limits, and Instances. The main area displays a list of EC2 instances. Two instances are listed: Web-Server-1 and Web-Server-2. Both are in a 'Running' state. Below the list, the details for Web-Server-1 are expanded, showing its configuration and status.

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-0d9c5fedca84c590d (Web-Server-1)**

**Instance summary**

- Instance ID: i-0d9c5fedca84c590d (Web-Server-1)
- Instance state: Running
- Instance type: t2.micro
- AWS Compute Optimizer finding: -
- Public IPv4 address: 3.209.81.31 | open address
- Public IPv4 DNS: ec2-3-209-81-31.compute-1.amazonaws.com | open address
- Elastic IP addresses: -
- IAM Role: -
- Private IPv4 addresses: 172.31.10.172
- Private IPv4 DNS: ip-172-31-10-172.ec2.internal
- VPC ID: vpc-92ca0aef
- Subnet ID: -



Day 12 Assignment.pdf Instances | EC2 Management Console

https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:

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Events

Tags

Limits

Instances

Instances

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Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs

Elastic Block Store

Volumes

Snapshots

Instances (1/6) info

Filter instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone	Public IPv4 DNS
<input type="checkbox"/>	Web-Server-1	i-0db9c5fedca84c590d	Running	t2.micro	2/2 checks	No alarms	us-east-1a	ec2-3-209-81-31
<input checked="" type="checkbox"/>	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	Public IPv4 address	Private IPv4 addresses
i-0997692ca7012ad8a (Web-Server-2)	5.222.200.253   open address	172.31.5.82
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-3-222-200-253.compute-1.amazonaws.com   open address	ip-172-31-5-82.ec2.internal
Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-92ca0aef

Feedback English (US)

Type here to search

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18:34 11-11-2020

## 9) Create a load balancer in the public subnet range

The screenshot shows the AWS Management Console interface for creating a load balancer. The browser address bar displays the URL: `https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#V2CreateELBWizard:type=application`. The console header shows the user is logged in as Bandi Sujitha in the N. Virginia region. The wizard progress bar indicates the current step is "3. Configure Security Groups".

### Step 3: Configure Security Groups

A security group is a set of firewall rules that control the traffic to your load balancer. On this page, you can add rules to allow specific traffic to reach your load balancer. First, decide whether to create a new security group or select an existing one.

**Assign a security group:** ☐ Create a new security group ☒ Select an existing security group

Filter: VPC security groups

Security Group ID	Name	Description	Actions
sg-0b6032fe47e7c25fe9	Bastion-SG	Security group for Bastion Server	<a href="#">Copy to new</a>
sg-d721c6e6	default	default VPC security group	<a href="#">Copy to new</a>
sg-06de9ee3dded2b1541	launch-wizard-1	launch-wizard-1 created 2020-11-10T12:34:40.268+05:30	<a href="#">Copy to new</a>
sg-0a6c321997a6da557	LoadBalancer-SG	Security group for the load balancer	<a href="#">Copy to new</a>
sg-07915c8a23250e844	Web-Server-SG	Security group for webserver	<a href="#">Copy to new</a>
sg-0063ef68e0a1e3e79	WebServer-SG	Security group for webserver	<a href="#">Copy to new</a>

At the bottom of the wizard, there are buttons for "Cancel", "Previous", and "Next: Configure Routing". The footer of the console shows the date and time as 18:29 on 11-11-2020.

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.

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.

To deregister instances, select one or more registered instances and then click Remove.

To deregister instances, select one or more registered instances and then click Remove.

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.

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.

[Return to Table of Contents](#)
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[Glossary](#)
[Index](#)
[Search](#)
[Home](#)

Day 12 Assignment.pdf x EC2 Management Console x

https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LoadBalancers:sort=loadBalancerName

Not syncing

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	November

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)

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Type here to search

18:35 11-11-2020

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

```
Day 12 Assignment.pptx | EC2 Management | I-0b2916c7cc0acaf78 (Bastion-Server) | I-0b2916c7cc0acaf78
https://console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0b2916c7cc0acaf78
rYVcoPKHX/kL0/QZo9zVD00x0dURD9D00o4Ve2tYV8AvK18ecnwTYYwk07XMSel2
eUeDA02Y1KahNmYQ6ef2hwK8g0CojVAN4u3grPkishSerIhX4702u3Jzd6SLqdm]
J+6Dx0 IQ0k QHVGdijUzHc8UAhmAQq3mL.EhUmP4udtvhX0EEIp0qd73EgFUhEVQaI
V4hdVVt0xyWQ5axSu6DmMd9tzeqZuXVF1axxC0o7gr6yKQuoGX7lqqkDE1LKV5Wx
nBCNoQK8g0Q0N1vj+QH1LzAqJZzng+dc4kWS4F5yIDMDY70fKd/cU3MrwNQctnr3a
wWzaaV4N15/w021TMIxDMM+XrgUr/zLxVPnn8zdVsTbiqgRSpcMnt94p1MhWtB.rf
vJNTF3F3X0TQ1/kTN7qCcrrWu1pgojFE/hz80jJWq0yeGuapDcL9wg==
-----END RSA PRIVATE KEY-----

[web-serverkey.pem] [New] 27L, 1679C written
[root@ip-172-31-16-194 ec2-user]# chmod web-serverkey.pem
chmod: missing operand after 'web-serverkey.pem'
Try 'chmod --help' for more information.
[root@ip-172-31-16-194 ec2-user]# chmod 400 web-serverkey.pem
[root@ip-172-31-16-194 ec2-user]# ssh -i web-serverkey.pem ec2-user@172.31.10.172
The authenticity of host '172.31.10.172 (172.31.10.172)' can't be established.
ECDSA key fingerprint is SHA256:UHPz0QwEAa0cx93muqGyJpnju0KvXC1VHy7cY7uJZuw.
ECDSA key fingerprint is MD5:93:45:e8:8b:7e:e8:62:84:42:91:f0:90:3b:95:00:c9.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.31.10.172' (ECDSA) to the list of known hosts.

 _ _ | _ _ |
 _ | _ | _ |
 _ | _ | _ |

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
25 package(s) needed for security, out of 39 available.
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-10-172 ~]$
```

```
Day 12 Assignment.pdf | instances | EC2 Management Co... | i-0b2916c7cc0acaf78 (Bastion-S... | i-0b2916c7cc0acaf78 (Bastion-S... |
https://console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0b2916c7cc0acaf78
Not syncing
Installing : mailcap-2.1.41-2.amzn2.noarch 6/9
Installing : httpd filesystem-2.4.46-1.amzn2.x86_64 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.x86_64 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

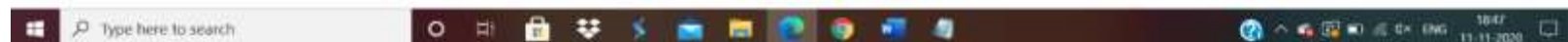
Installed:
httpd.x86_64 0:2.4.46-1.amzn2

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: 172.31.16.104



```
Day 12 Assignment.pdf x Instances | EC2 Management Console x i-0b2916c7cc0acaf78 (Bastion-Server) x i-0b2916c7cc0acaf78 (Bastion-Server) x
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 IP: 3.93.52.71 Private IP: 172.31.16.194