

## Assignment Solution - Day 5 & 6

- **PROJECT 1 :**

Working with IAM Roles with S3 and bootstrapping with EC2

### I. Task 1 : Creating a Bootstrapped Instance

#### 1. Instance overview

The screenshot displays the AWS Management Console interface for the 'Instances (1/1)' page. The instance 'Project 1 - Task 1' (ID: i-0feb4f4f672150a51) is shown in a 'Running' state. The instance summary includes the following details:

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0feb4f4f672150a51 (Project 1 - Task 1)	3.23.94.63   <a href="#">open address</a>	172.31.18.201

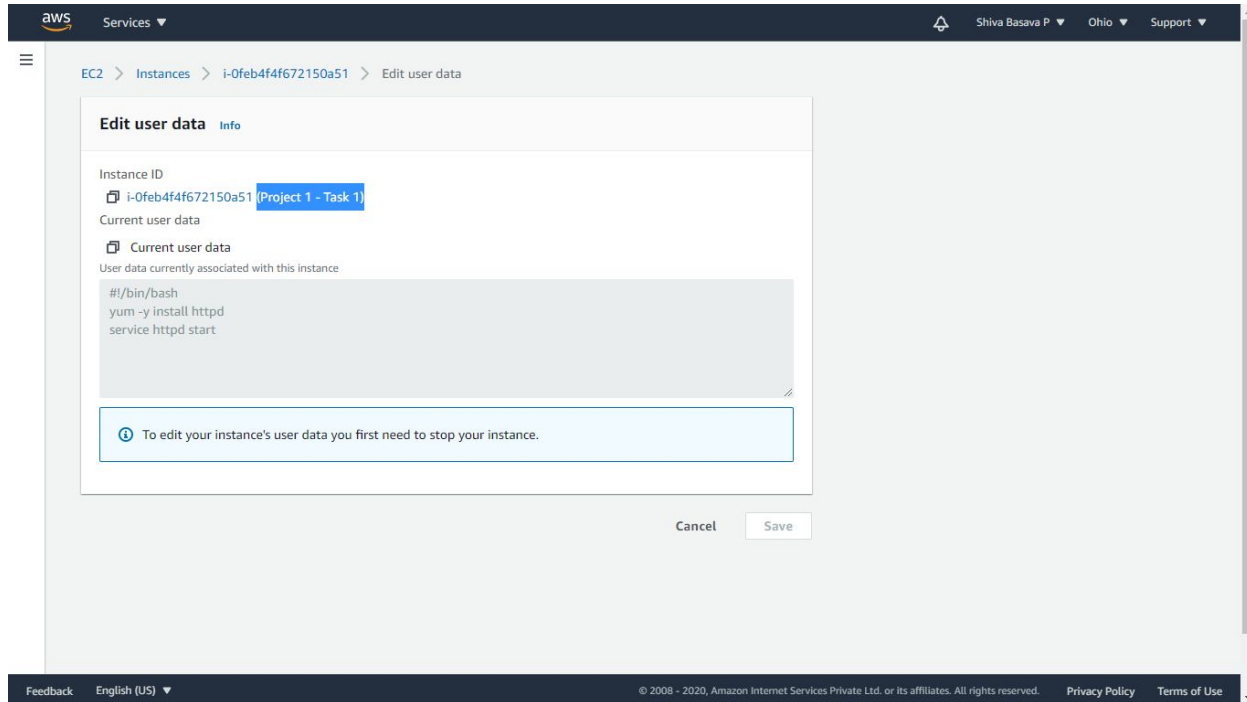
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-3-23-94-63.us-east-2.compute.amazonaws.com   <a href="#">open address</a>	ip-172-31-18-201.us-east-2.compute.internal

Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-4e6ac125

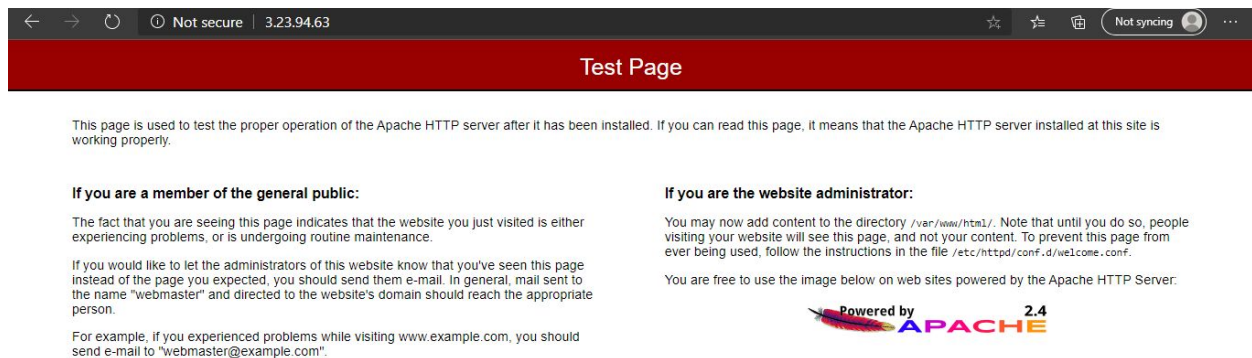
IAM Role	Subnet ID
-	subnet-f6434b8c

The console also shows a table of instances with columns: Name, Instance ID, Instance type, Status check, Availability Zone, Public IPv4 DNS, and Public IPv4 address. The instance 'Project 1 - Task 1' is listed with a status of 'Running' and a public IP of 3.23.94.63.

#### 2. User Data of instance

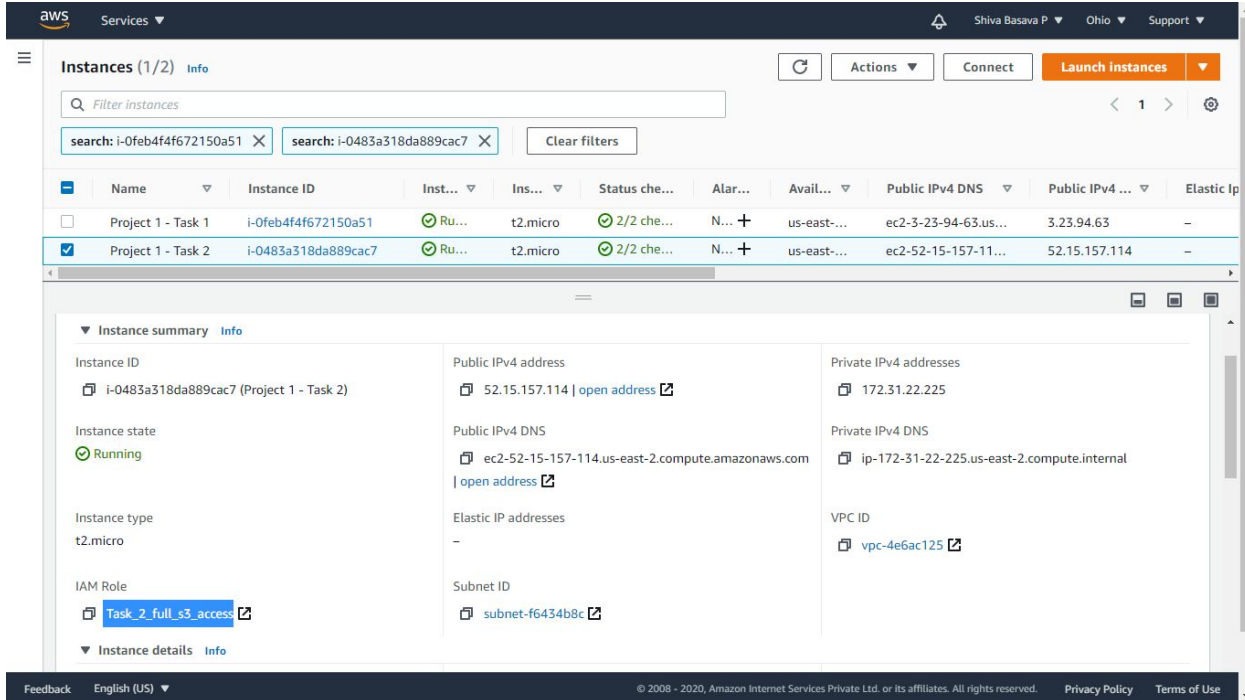


### 3. Web page at IP - 3.23.94.63



## II. Task 2 : Checking bucket list and creating a new bucket from EC2 using IAM Roles

### 1. Instance overview



**Instances (1/2)** Info

Filter instances

search: i-0feb4f4f672150a51 search: i-0483a318da889cac7 Clear filters

	Name	Instance ID	Inst...	Ins...	Status che...	Alar...	Avail...	Public IPv4 DNS	Public IPv4 ...	Elastic Ip
<input type="checkbox"/>	Project 1 - Task 1	i-0feb4f4f672150a51	✓ Ru...	t2.micro	✓ 2/2 che...	N... +	us-east-...	ec2-3-23-94-63.us...	3.23.94.63	-
<input checked="" type="checkbox"/>	Project 1 - Task 2	i-0483a318da889cac7	✓ Ru...	t2.micro	✓ 2/2 che...	N... +	us-east-...	ec2-52-15-157-11...	52.15.157.114	-

**Instance summary** Info

Instance ID: i-0483a318da889cac7 (Project 1 - Task 2)

Instance state: **Running**

Instance type: t2.micro

IAM Role: Task\_2\_full\_s3\_access

Public IPv4 address: 52.15.157.114 | open address

Public IPv4 DNS: ec2-52-15-157-114.us-east-2.compute.amazonaws.com | open address

Elastic IP addresses: -

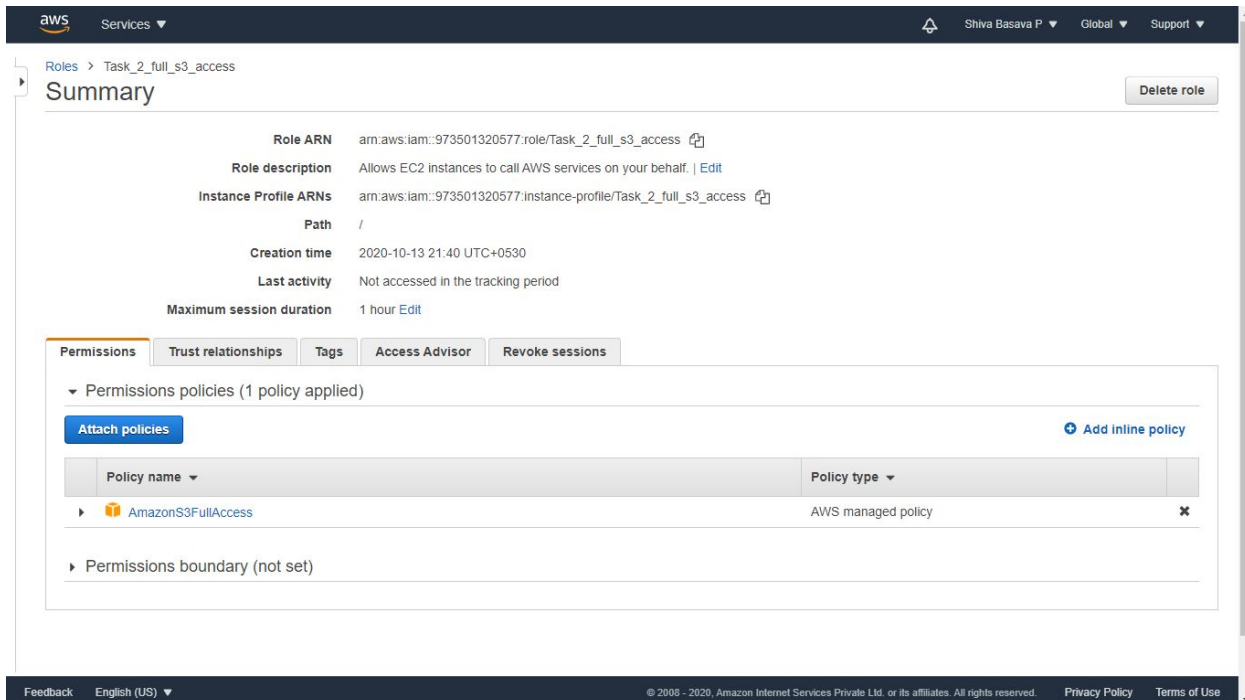
Subnet ID: subnet-f6434b8c

Private IPv4 addresses: 172.31.22.225

Private IPv4 DNS: ip-172-31-22-225.us-east-2.compute.internal

VPC ID: vpc-4e6ac125

## 2. IAM role for S3 full access



**Task\_2\_full\_s3\_access**

Summary

Role ARN: am:aws:iam::973501320577:role/Task\_2\_full\_s3\_access

Role description: Allows EC2 instances to call AWS services on your behalf. | Edit

Instance Profile ARNs: am:aws:iam::973501320577:instance-profile/Task\_2\_full\_s3\_access

Path: /

Creation time: 2020-10-13 21:40 UTC+0530

Last activity: Not accessed in the tracking period

Maximum session duration: 1 hour Edit

Permissions | Trust relationships | Tags | Access Advisor | Revoke sessions

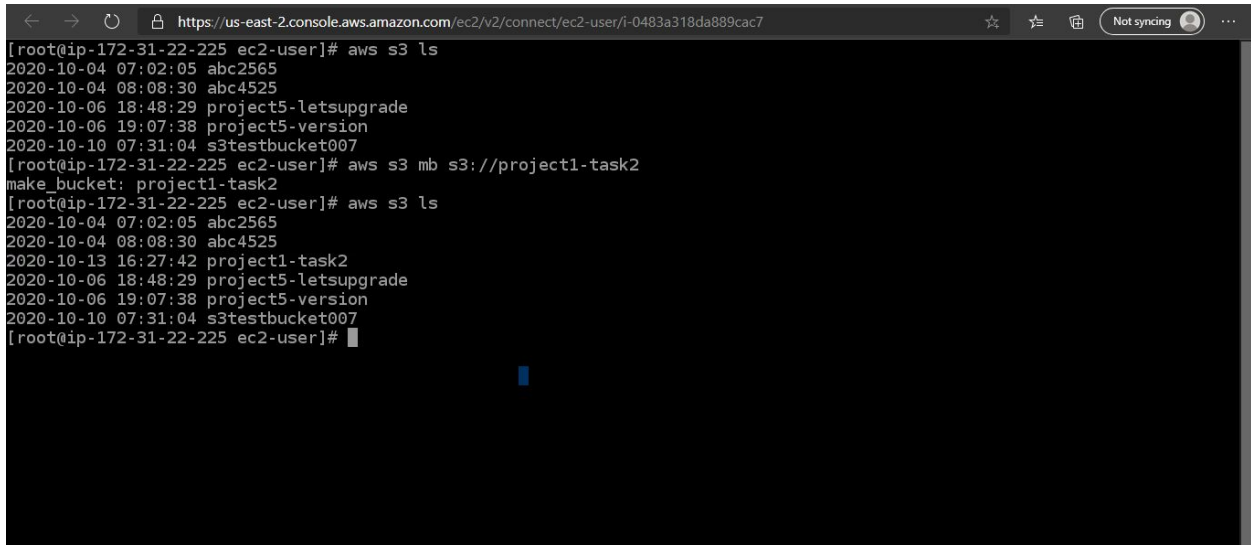
Permissions policies (1 policy applied)

Attach policies Add inline policy

Policy name	Policy type
AmazonS3FullAccess	AWS managed policy

Permissions boundary (not set)

### 3. Commands Executed at Linux instance



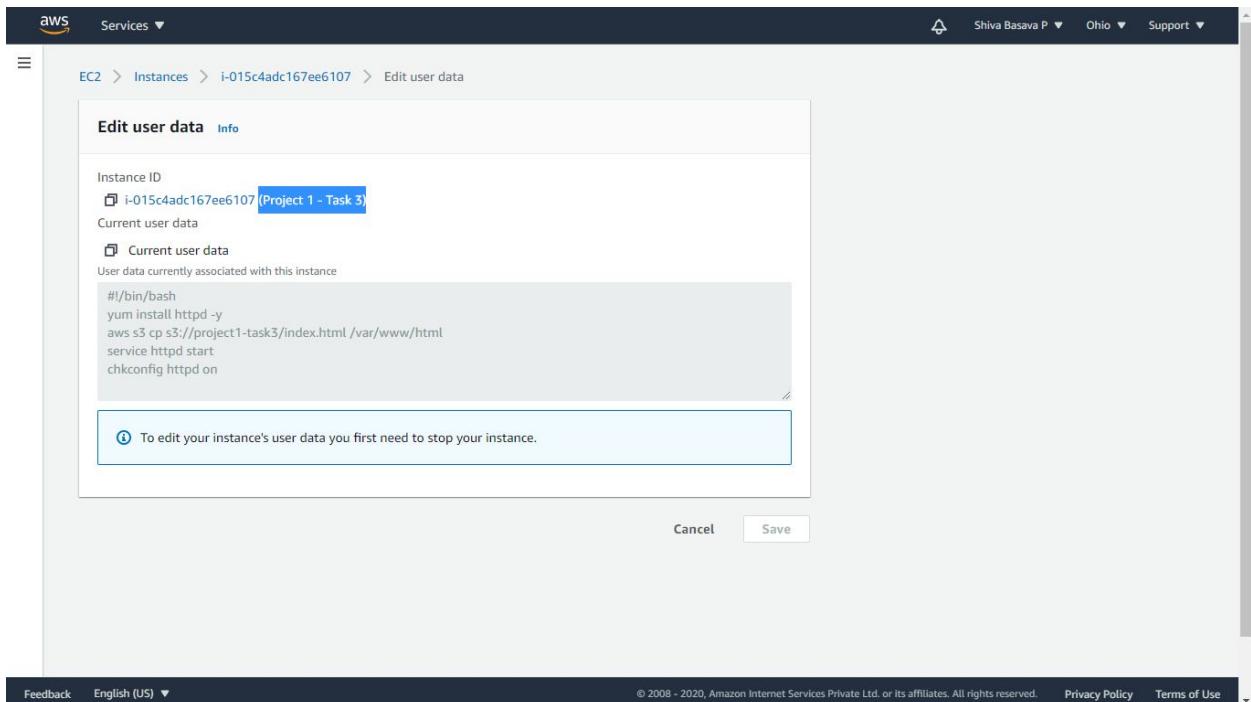
```
[root@ip-172-31-22-225 ec2-user]# aws s3 ls
2020-10-04 07:02:05 abc2565
2020-10-04 08:08:30 abc4525
2020-10-06 18:48:29 project5-letsupgrade
2020-10-06 19:07:38 project5-version
2020-10-10 07:31:04 s3testbucket007
[root@ip-172-31-22-225 ec2-user]# aws s3 mb s3://project1-task2
make_bucket: project1-task2
[root@ip-172-31-22-225 ec2-user]# aws s3 ls
2020-10-04 07:02:05 abc2565
2020-10-04 08:08:30 abc4525
2020-10-13 16:27:42 project1-task2
2020-10-06 18:48:29 project5-letsupgrade
2020-10-06 19:07:38 project5-version
2020-10-10 07:31:04 s3testbucket007
[root@ip-172-31-22-225 ec2-user]#
```

i-0483a318da889cac7 (Project 1 - Task 2)

Public IPs: 52.15.157.114 Private IPs: 172.31.22.225

### III. Task 3 :

#### 1. User data for Linux Instance



#### 2. Overview of Instance

**Instances (1/3) Info**

Filter instances

search: i-0feb4f4672150a51 X search: i-0483a318da889cac7 X search: i-015c4adc167ee6107 X Clear filters

	Name	Instance ID	Inst...	Ins...	Status che...	Alar...	Avail...	Public IPv4 DNS	Public IPv4 ...
<input type="checkbox"/>	Project 1 - Task 1	i-0feb4f4672150a51	✓ Ru...	t2.micro	✓ 2/2 che...	N... +	us-east-...	ec2-3-23-94-63.us...	3.23.94.63
<input type="checkbox"/>	Project 1 - Task 2	i-0483a318da889cac7	✓ Ru...	t2.micro	✓ 2/2 che...	N... +	us-east-...	ec2-52-15-157-11...	52.15.157.114
<input checked="" type="checkbox"/>	Project 1 - Task 3	i-015c4adc167ee6107	✓ Ru...	t2.micro	✓ 2/2 che...	N... +	us-east-2c	ec2-3-19-141-37.u...	3.19.141.37

**Instance summary Info**

Instance ID i-015c4adc167ee6107 (Project 1 - Task 3)	Public IPv4 address 3.19.141.37   <a href="#">open address</a>	Private IPv4 addresses 172.31.47.85
Instance state Running	Public IPv4 DNS ec2-3-19-141-37.us-east-2.compute.amazonaws.com   <a href="#">open address</a>	Private IPv4 DNS ip-172-31-47-85.us-east-2.compute.internal
Instance type t2.micro	Elastic IP addresses -	VPC ID vpc-4e6ac125
IAM Role Task_3_full_s3_access	Subnet ID subnet-b95424f5	

### 3. Bucket with an Index.html file

https://s3.console.aws.amazon.com/s3/buckets/project1-task3/?region=us-east-1&tab=overview

Amazon S3 > project1-task3

project1-task3

Overview Properties Permissions Management Access points

Type a prefix and press Enter to search. Press ESC to clear.

Upload Create folder Download Actions

US East (N. Virginia)

Viewing 1 to 1

Name	Last modified	Size	Storage class
index.html	Oct 13, 2020 10:26:02 PM GMT+0530	40.0 B	Standard

Viewing 1 to 1

### 4. Web page at IP - 3.19.141.37

Not secure | 3.19.141.37

Hello welcome!

- **PROJECT 2 :**  
**Creating an EC2 instance in custom VPC**

1. Task 1: Created a VPC

The screenshot shows the AWS Management Console interface for a VPC. At the top, a green notification bar states: "You successfully created vpc-073b94d5203d7829c / vpc\_project2". Below this, the VPC name "vpc-073b94d5203d7829c / vpc\_project2" is displayed. The "Details" tab is active, showing a table of VPC attributes:

Details			
VPC ID	State	DNS hostnames	DNS resolution
vpc-073b94d5203d7829c	Available	Disabled	Enabled
Tenancy	DHCP options set	Route table	Network ACL
Default	dopt-f6fe729d	rtb-02a805d7ad4be0513	acl-0c93a2dc31e9d64da
Default VPC	IPv4 CIDR	IPv6 pool	IPv6 CIDR
No	172.16.0.0/16	-	-
Owner ID			
973501320577			

Below the details, the "CIDRs" tab is selected, showing a table of IPv4 CIDRs:

IPv4 CIDRs	
CIDR	Status
172.16.0.0/16	Associated

2. Task 2: Created Internet Gateway & associated it with the above VPC

The screenshot shows the AWS Management Console interface for an Internet Gateway. At the top, a green notification bar states: "Internet gateway igw-0a1df14b1433b92a6 successfully attached to vpc-073b94d5203d7829c". Below this, the IGW name "igw-0a1df14b1433b92a6 / IGW\_project2" is displayed. The "Details" tab is active, showing a table of Internet Gateway attributes:

Details			
Internet gateway ID	State	VPC ID	Owner
igw-0a1df14b1433b92a6	Attached	vpc-073b94d5203d7829c   vpc_project2	973501320577

Below the details, the "Tags" tab is selected, showing a table of tags:

Tags	
Key	Value
Name	IGW_project2

### 3. Task 3: Created a Route Table, added a Route & made it as a Main

The screenshot shows the AWS Management Console interface for a Route Table. The top navigation bar includes the AWS logo, 'Services' dropdown, and user information 'Shiva Basava P' in 'Ohio' with a 'Support' link. The main content area is titled 'Route Table: rtb-0377c4d79976efd97'. It features a 'Create route table' button and an 'Actions' dropdown. A search bar contains 'rtb-0377c4d79976efd97'. Below the search bar is a table listing route tables:

Name	Route Table ID	Explicit	Edge as	Main	VPC ID	Owner
route_project2	rtb-0377c4d79976efd97	-	-	Yes	vpc-073b94d5203d7829c   vpc_project2	973501320577

Below the table, the 'Routes' tab is selected. It shows a 'View' dropdown set to 'All routes'. The routes table is as follows:

Destination	Target	Status	Propagated
172.16.0.0/16	local	active	No
0.0.0.0/0	igw-0a1df14b1433b92a6	active	No

The bottom of the console shows a footer with 'Feedback', 'English (US)', and copyright information: '© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.' along with 'Privacy Policy' and 'Terms of Use' links.

### 4. Task 4: Created a Subnet

The screenshot shows the AWS Management Console interface for a Subnet. The top navigation bar is identical to the previous screenshot. The main content area is titled 'Subnet: subnet-028b5afa8948447b'. It features a 'Create subnet' button and an 'Actions' dropdown. A search bar contains 'subnet-028b5afa8948447b'. Below the search bar is a table listing subnets:

Name	Subnet ID	State	VPC	IPv4 CIDR	Availab	IPv6 CIDR	Availability Zone	Availability Zone II
subnet_project2	subnet-028b5afa8948447b	available	vpc-073b94d5203d7829c   vpc_project2	172.16.16.0/24	251	-	us-east-2c	use2-az3

Below the table, the 'Description' tab is selected. It displays the following details:

Subnet ID	subnet-028b5afa8948447b	State	available
VPC	vpc-073b94d5203d7829c   vpc_project2	IPv4 CIDR	172.16.16.0/24
Available IPv4 Addresses	251	IPv6 CIDR	-
Availability Zone	us-east-2c (use2-az3)	Route Table	rtb-0377c4d79976efd97   route_project2
Network ACL	acl-0c93a2dc31e9d64da	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	973501320577

The bottom of the console shows a footer with 'Feedback', 'English (US)', and copyright information: '© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.' along with 'Privacy Policy' and 'Terms of Use' links.



5. Task 5: Created a Windows Instance and added the above VPC to it.

Name	Instance ID	Instance s...	Ins...	Status che...	Alar...	Avail...	Public IPv4 DNS	Public IPv4 ...
Project 2 - Task 2	i-0e2994cfef64cb321	Running	t2.micro	2/2 che...	N...	us-east-2c	-	3.19.68.209
Project 1 - Task 1	i-0feb4f4f672150a51	Running	t2.micro	2/2 che...	N...	us-east-...	ec2-3-23-94-63.us...	3.23.94.63
Project 1 - Task 2	i-0483a318da889cac7	Running	t2.micro	2/2 che...	N...	us-east-...	ec2-52-15-157-11...	52.15.157.114

**Instance summary**

Instance ID i-0e2994cfef64cb321 (Project 2 - Task 2)	Public IPv4 address 3.19.68.209   <a href="#">open address</a>	Private IPv4 addresses 172.16.16.127
Instance state Running	Public IPv4 DNS -	Private IPv4 DNS ip-172-16-16-127.us-east-2.compute.internal
Instance type t2.micro	Elastic IP addresses -	VPC ID vpc-073b94d5203d7829c (vpc_project2)
IAM Role -	Subnet ID subnet-028b5afa894844f7b (subnet_project2)	

6. Task 6: Connected to the above Windows Instance, Checking **ipconfig** for the same.

```

Administrator: Command Prompt
Microsoft Windows [Version 10.0.17763.1457]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : us-east-2.compute.internal
    Link-local IPv6 Address . . . . . : fe80::add6:7892:74ad:cbf9%4
    IPv4 Address. . . . . : 172.16.16.127
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 172.16.16.1

C:\Users\Administrator>
  
```

Hostname: EC2AMAZ-DLRGMP7  
 Instance ID: i-0e2994cfef64cb321  
 Public IP Address: 3.19.68.209  
 Private IP Address: 172.16.16.127  
 Instance Size: t2.micro  
 Availability Zone: us-east-2c  
 Architecture: AMD64  
 Total Memory: 1024 MB  
 Network Performance: Low to Moderate