

## Lab Assignment-1


### Creating an AWS Free-Tier Account

1. Using my Steven's email ID **sdutt@stevens.edu**, I registered for an aws account and set up an account name, **shubhangi\_dutt** for it.

← → ↻ portal.aws.amazon.com/billing/signup#/start/email 🔍 📄 ☆ 🌐 AWP ⚙️ S ⋮


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English ▼



**Explore Free Tier products with a new AWS account.**

To learn more, visit [aws.amazon.com/free](https://aws.amazon.com/free).



### Sign up for AWS

**Root user email address**  
Used for account recovery and some administrative functions

**AWS account name**  
Choose a name for your account. You can change this name in your account settings after you sign up.

**Verify email address**

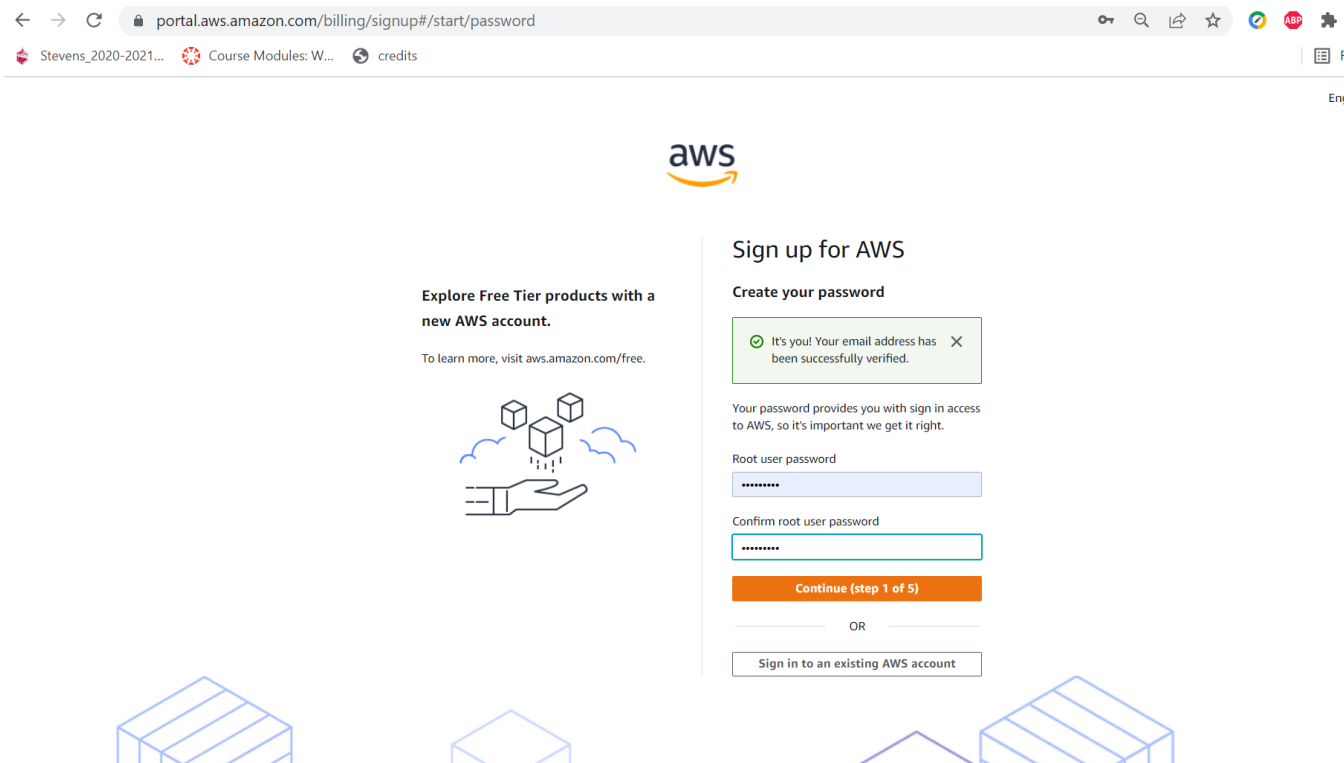
OR

**Sign in to an existing AWS account**

[Privacy Policy](#) | [Terms of Use](#) | [Cookie Preferences](#)

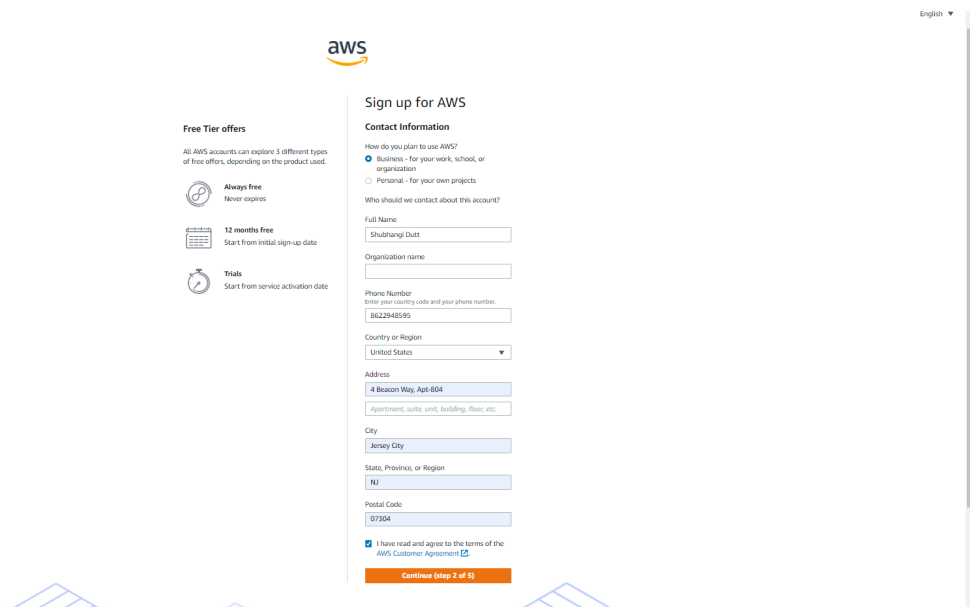
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## 2. I set up the password for my account and confirmed it.



The screenshot shows the AWS sign-up page at the URL `portal.aws.amazon.com/billing/signup#/start/password`. The page features the AWS logo at the top center. On the left, there is a section titled "Explore Free Tier products with a new AWS account." with a link to `aws.amazon.com/free` and an illustration of a hand holding three cubes. On the right, the "Sign up for AWS" section is active, showing the "Create your password" step. A green verification message states: "It's you! Your email address has been successfully verified." Below this, there are two password input fields: "Root user password" and "Confirm root user password", both containing masked characters. An orange "Continue (step 1 of 5)" button is positioned below the confirm field. A link "Sign in to an existing AWS account" is at the bottom right. The browser's address bar and tabs are visible at the top.

## 3. I entered the address for the account.



The screenshot shows the AWS sign-up page at the "Contact Information" step. On the left, the "Free Tier offers" section lists three options: "Always free" (Never expires), "12 months free" (Start from initial sign-up date), and "Trials" (Start from service activation date). The "Sign up for AWS" section on the right contains the "Contact Information" form. The form includes fields for "Full Name" (Shubhangi Dutt), "Organization name", "Phone Number" (8622946595), "Country or Region" (United States), "Address" (4 Beacon Way, Apt. 804), "City" (Jersey City), "State, Province, or Region" (NJ), and "Postal Code" (07304). A checkbox for "I have read and agree to the terms of the AWS Customer Agreement" is checked. An orange "Continue (step 2 of 5)" button is at the bottom. The browser's address bar and tabs are visible at the top.

4. Next I entered my billing information.

The screenshot shows the AWS sign-up page for billing information. The browser address bar displays `portal.aws.amazon.com/billing/signup#/paymentinformation`. The page features the AWS logo at the top center. On the left, a 'Secure verification' section includes a blue box with text: 'We will not charge you for usage below AWS Free Tier limits. We may temporarily hold up to \$1 USD (or an equivalent amount in local currency) as a pending transaction for 3-5 days to verify your identity.' Below this is a shield icon with a checkmark. The main 'Sign up for AWS' section is titled 'Billing Information' and contains the following fields: 'Credit or Debit card number' (with a red error message 'The credit card number is required.' and logos for Visa, Mastercard, and Discover), 'Expiration date' (set to June 2032), 'Cardholder's name' (set to XYZ), and 'Billing address' (set to 4 Beacon Way, Apt-804, Jersey City NJ 07304, US). There are two radio buttons for 'Use my contact address' (selected) and 'Use a new address'. An orange button labeled 'Verify and Continue (step 3 of 5)' is at the bottom. A small note below the button states: 'You might be redirected to your bank's website to authorize the verification charge.'

5. I used my phone number to confirm my identity then did a security check by entering captcha. I used the code that was received on my phone and went on to the next step.

The screenshot shows the AWS sign-up page for identity verification. The browser address bar displays `portal.aws.amazon.com/billing/signup#/identityverification`. The page features the AWS logo at the top center. On the left, there is an icon of a person's profile with a checkmark. The main 'Sign up for AWS' section is titled 'Confirm your identity' and includes the text: 'Before you can use your AWS account, you must verify your phone number. When you continue, the AWS automated system will contact you with a verification code.' Below this, there are two radio buttons for 'How should we send you the verification code?': 'Text message (SMS)' (selected) and 'Voice call'. The 'Country or region code' is set to 'United States (+1)'. The 'Mobile phone number' field contains '8622948596'. A 'Security check' section shows a CAPTCHA image with the characters 'sx6s85' and a text input field below it containing 'sx6s85'. An orange button labeled 'Send SMS (step 4 of 5)' is at the bottom.

## 6. I selected the free support plan to avoid charges.

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**aws**


### Sign up for AWS

#### Select a support plan

Choose a support plan for your business or personal account. [Compare plans and pricing examples](#)  
[You can change your plan anytime in the AWS Management Console.](#)


☒ **Basic support - Free**

- Recommended for new users just getting started with AWS
- 24x7 self-service access to AWS resources
- For account and billing issues only
- Access to Personal Health Dashboard & Trusted Advisor




☐ **Developer support - From \$29/month**


- Recommended for developers experimenting with AWS
- Email access to AWS Support during business hours
- 12 (business)-hour response times



☐ **Business support - From \$100/month**

- Recommended for running production workloads on AWS
- 24x7 tech support via email, phone, and chat
- 1-hour response times
- Full set of Trusted Advisor best-practice recommendations



 **Need Enterprise level support?**  
From \$15,000 a month you will receive 15-minute response times and concierge-style experience with an assigned Technical Account Manager. [Learn more](#)

**Complete sign up**


## 7. My AWS account was successfully set up, free of charge.

← → ↻ aws.amazon.com/registration-confirmation/ 📄 ☆ 🌐 🇮🇳 📧 ⋮ Reading list

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**aws** Contact Us Support ▾ English ▾ My Account ▾ Sign In **Complete Sign Up**

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## Congratulations!

Thank you for signing up with AWS.

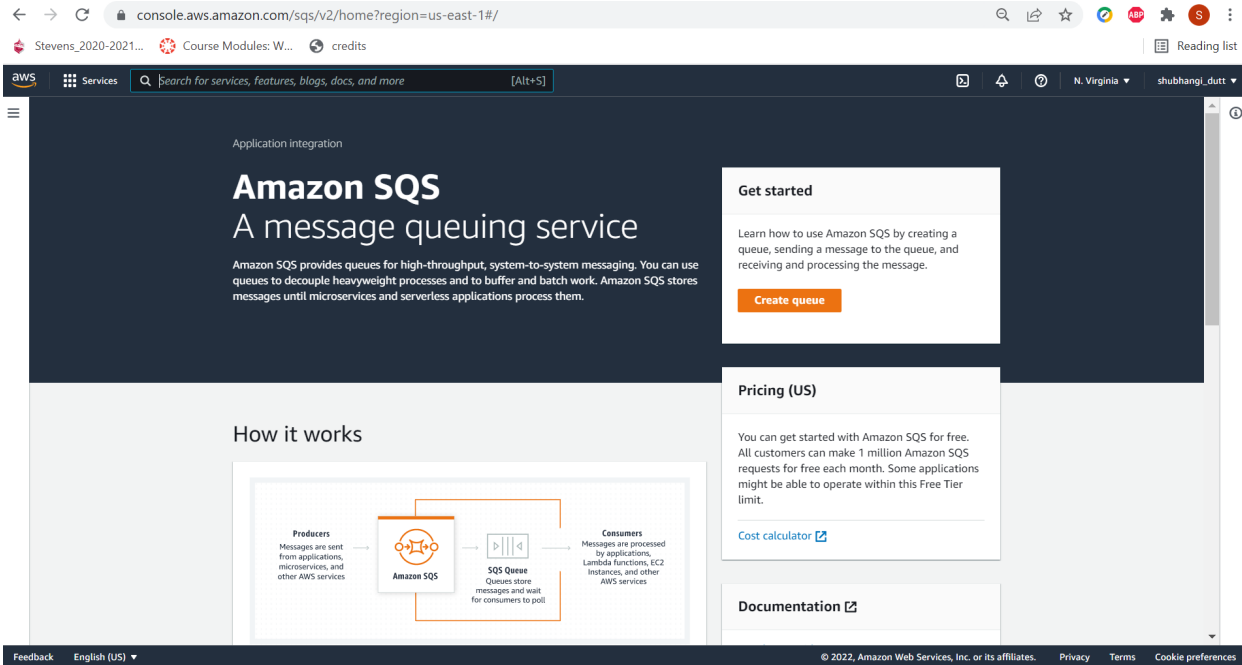
We are activating your account, which should take a few minutes. You will receive an email when this is complete.

**Go to the AWS Management Console**

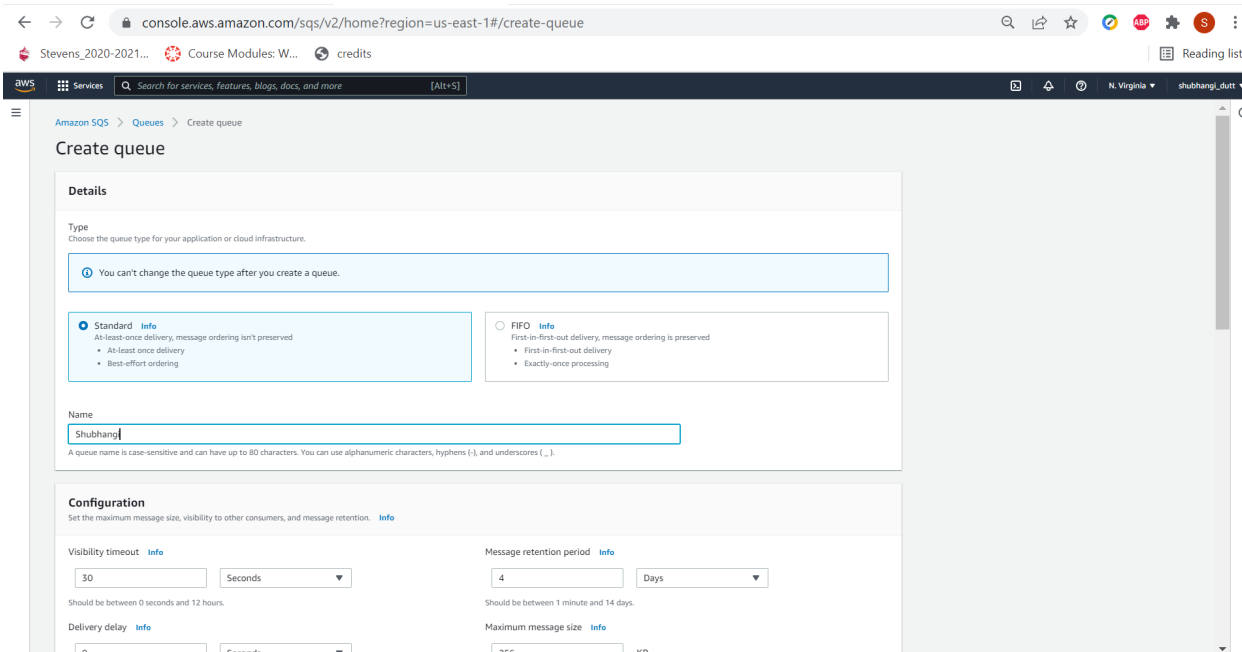
[Sign up for another account](#) or [Contact Sales](#)

## Creating a Queue

1. I went on to the AWS console and selected Amazon SQS. I selected the 'Create Queue' button.



2. I entered the details for creating a new queue. I entered my name **Shubhangi**, as the name of the queue and let the rest of the configurations be default.



console.aws.amazon.com/sqs/v2/home?region=us-east-1#/create-queue

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[Alt+S]

Access policy

Define who can access your queue. [Info](#)

Choose method

☒ Basic

Use simple criteria to define a basic access policy.

☐ Advanced

Use a JSON object to define an advanced access policy.

Define who can send messages to the queue

☒ Only the queue owner

Only the owner of the queue can send messages to the queue.

☐ Only the specified AWS accounts, IAM users and roles

Only the specified AWS account IDs, IAM users and roles can send messages to the queue.

Define who can receive messages from the queue

☒ Only the queue owner

Only the owner of the queue can receive messages from the queue.

☐ Only the specified AWS accounts, IAM users and roles

Only the specified AWS account IDs, IAM users and roles can receive messages from the queue.

JSON (read-only)

```
{  "Version": "2008-10-17",  "Id": "__default_policy_ID",  "Statement": [    {      "Sid": "__owner_statement",      "Effect": "Allow",      "Principal": {        "AWS": "242462712086"      },      "Action": [        "SQS:*"      ],      "Resource": "arn:aws:sqs:us-east-1:242462712086:Shubhangi"    }  ]}
```

▼ Redrive allow policy - *Optional*

Identify which source queues can use this queue as the dead-letter queue. [Info](#)

Select which source queues can use this queue as the dead-letter queue.

☒ Disabled

☐ Enabled

► Encryption - *Optional*

Feedback

English (US) ▼

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3. Upon confirming my details I selected the ‘Create Queue’ option. The next window that opened showed the queue that I created.

The screenshot shows the 'Create Queue' page in the AWS Management Console. The browser address bar displays the URL: `console.aws.amazon.com/sqs/v2/home?region=us-east-1#/create-queue`. The page features several optional configuration sections:

- Redrive allow policy - Optional**: A section to identify which source queues can use this queue as the dead-letter queue. It includes a radio button to select 'Disabled' (which is selected) or 'Enabled'.
- Encryption - Optional**: A section to enable server-side encryption. It includes a radio button to select 'Disabled' (which is selected) or 'Enabled'.
- Dead-letter queue - Optional**: A section to send undeliverable messages to a dead-letter queue. It includes a link to 'Info'.
- Tags - Optional**: A section to add tags to the queue. It includes a form with 'Key' and 'Value - optional' input fields, an 'Add new tag' button, and a 'Remove' button. A note states: 'You can add 49 more tags.'

At the bottom right, there are two buttons: 'Cancel' and 'Create queue'.

4. I selected the ‘Send and Receive messages’ option.

The screenshot shows the 'Queue Shubhangi' page in the AWS Management Console. The browser address bar displays the URL: `console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F242462712086%2F...`. A green notification banner at the top states: 'Queue Shubhangi created successfully. You can now send and receive messages.'

The page displays the details of the queue 'Shubhangi' with the following information:

Details	
Name	Shubhangi
Type	Standard
ARN	arn:aws:sqs:us-east-1:242462712086:Shubhangi
Encryption	Disabled
URL	https://sqs.us-east-1.amazonaws.com/242462712086/Shubhangi
Dead-letter queue	-

Below the details, there are tabs for various queue settings: 'SNS subscriptions', 'Lambda triggers', 'Dead-letter queue', 'Monitoring', 'Tagging', 'Access policy', 'Encryption', and 'Dead-letter queue redrive tasks'. The 'SNS subscriptions' tab is currently selected, showing a 'Subscription region' dropdown set to 'us-east-1' and a 'Subscribe to Amazon SNS topic' button.

5. I entered the message body which was a fun fact about me and then pressed 'Sent'.

The screenshot shows the AWS Management Console interface for the 'Send and receive messages' page of an Amazon SQS queue. The browser address bar shows the URL: `console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F24262712086%2...`. The console header includes the AWS logo, a search bar, and the user's name 'shubhangi\_dutt'.

**Send message** [Info](#)

Message body  
Enter the message to send to the queue.

Delivery delay [Info](#)  
 Seconds  
Should be between 0 seconds and 15 minutes.

[Message attributes - Optional](#) [Info](#)

**Receive messages** [Info](#)

[Edit poll settings](#) [Stop polling](#) [Poll for messages](#)

Messages available	Polling duration	Maximum message count	Polling progress
0	30	10	0 receives/second 0%

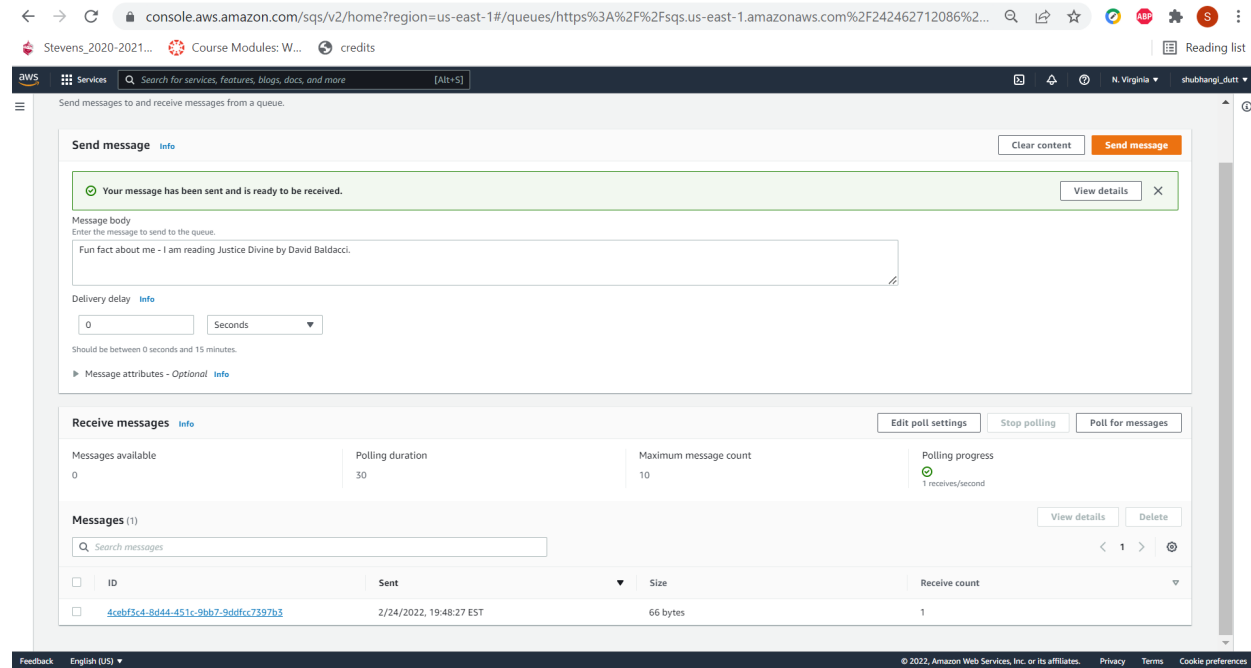
**Messages (0)**

ID	Sent	Size	Receive count
No messages. To view messages in the queue, poll for messages.			

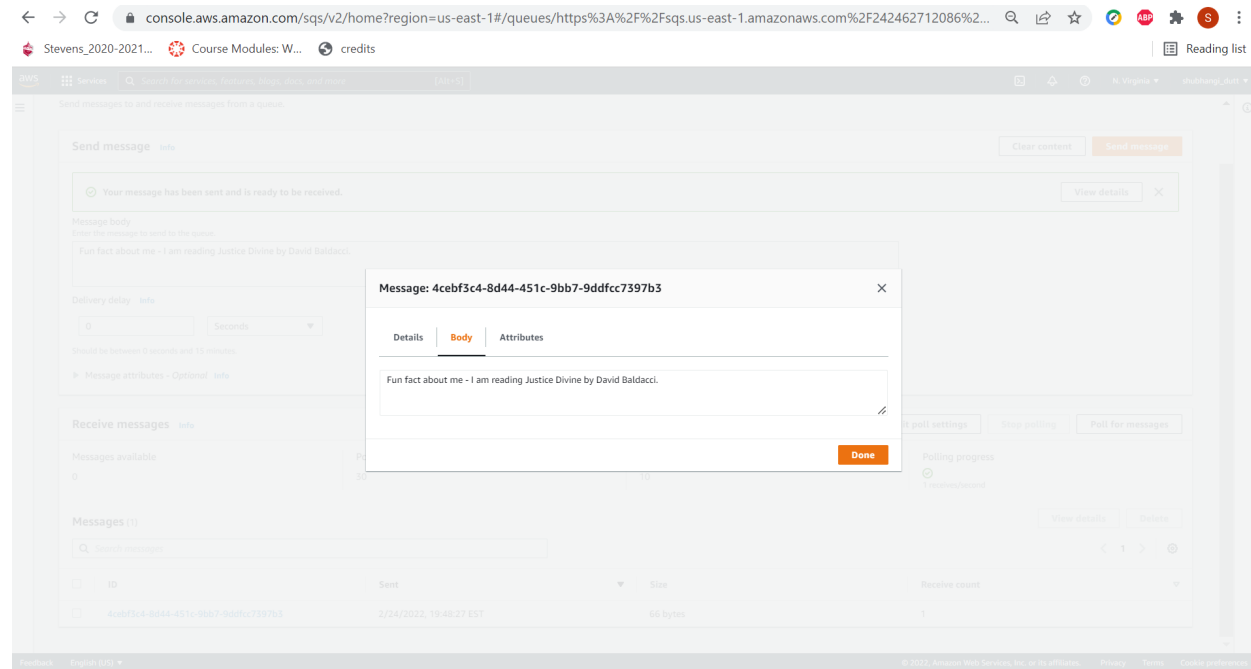
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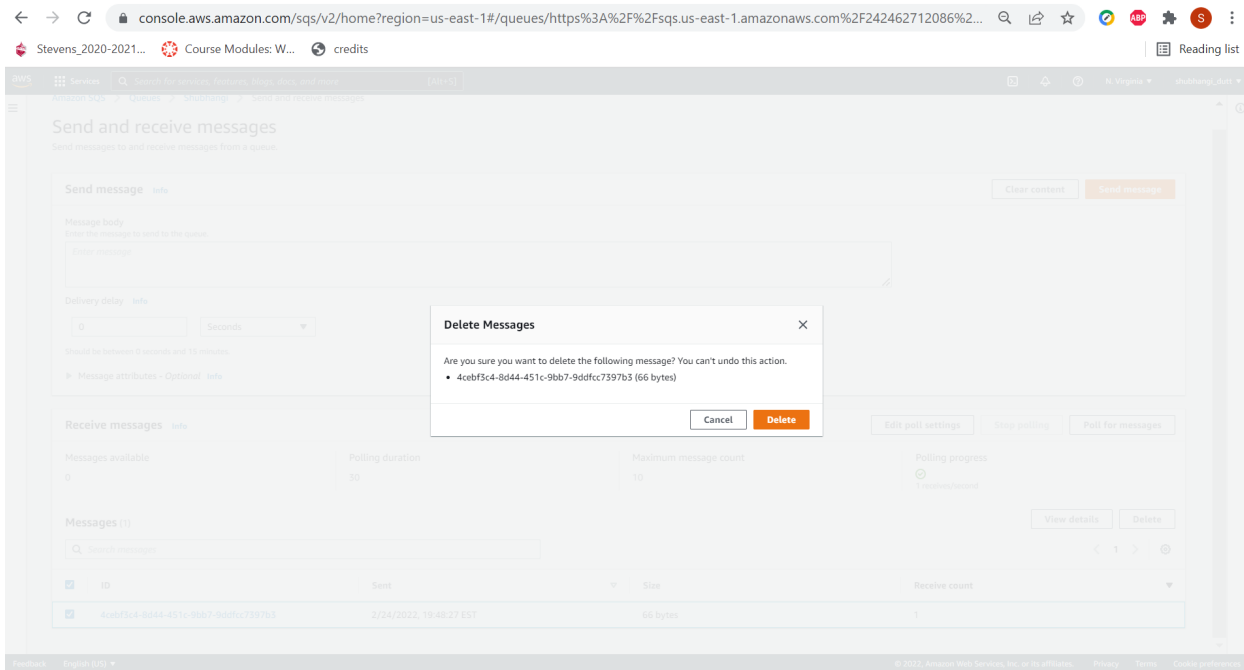
6. Once the confirmation of the message being sent was received as a prompt on the top of the page I selected the 'Poll for message' option and I could see the message list showing (1) message.



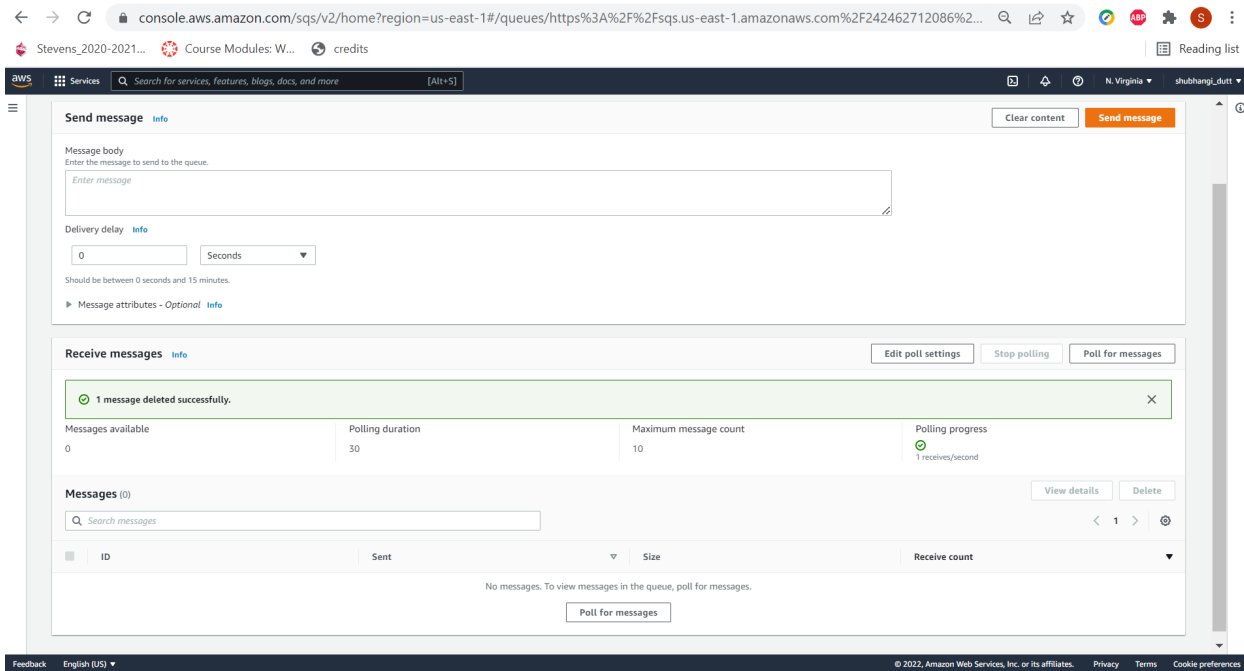
7. I selected the message and a dialogue box opened up with the message. After reading I pressed 'Done'.



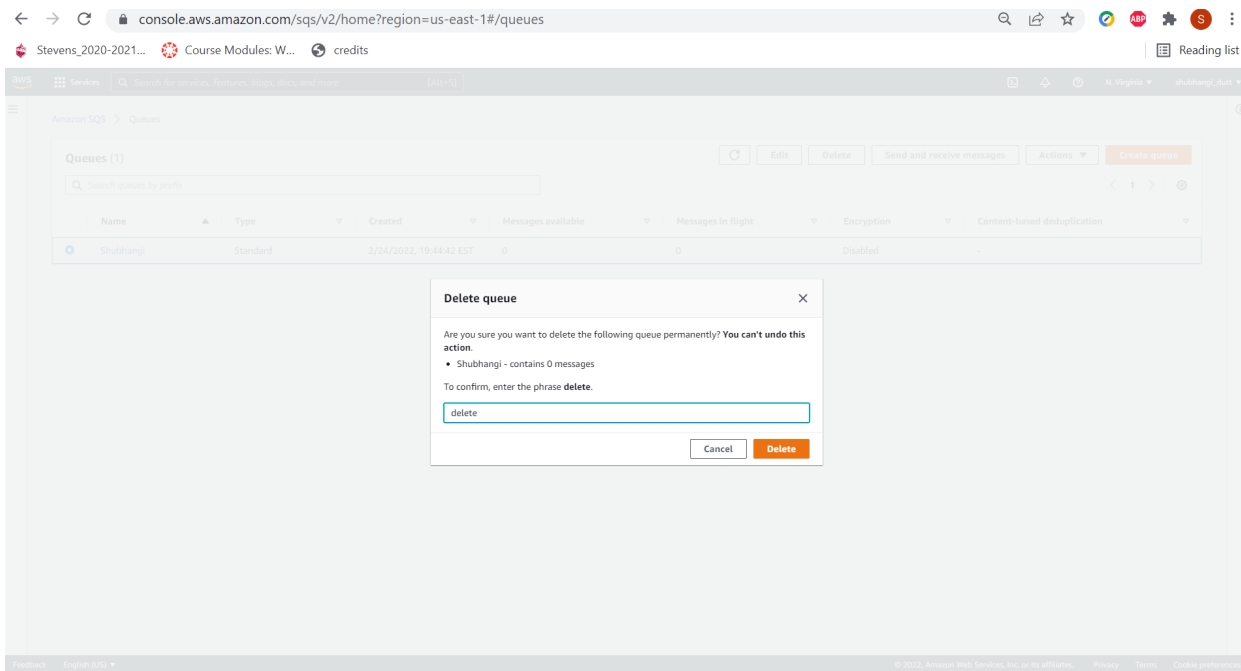
8. I then selected the message from the message list and clicked on the delete option. Upon which i got the dialogue box to delete the message.



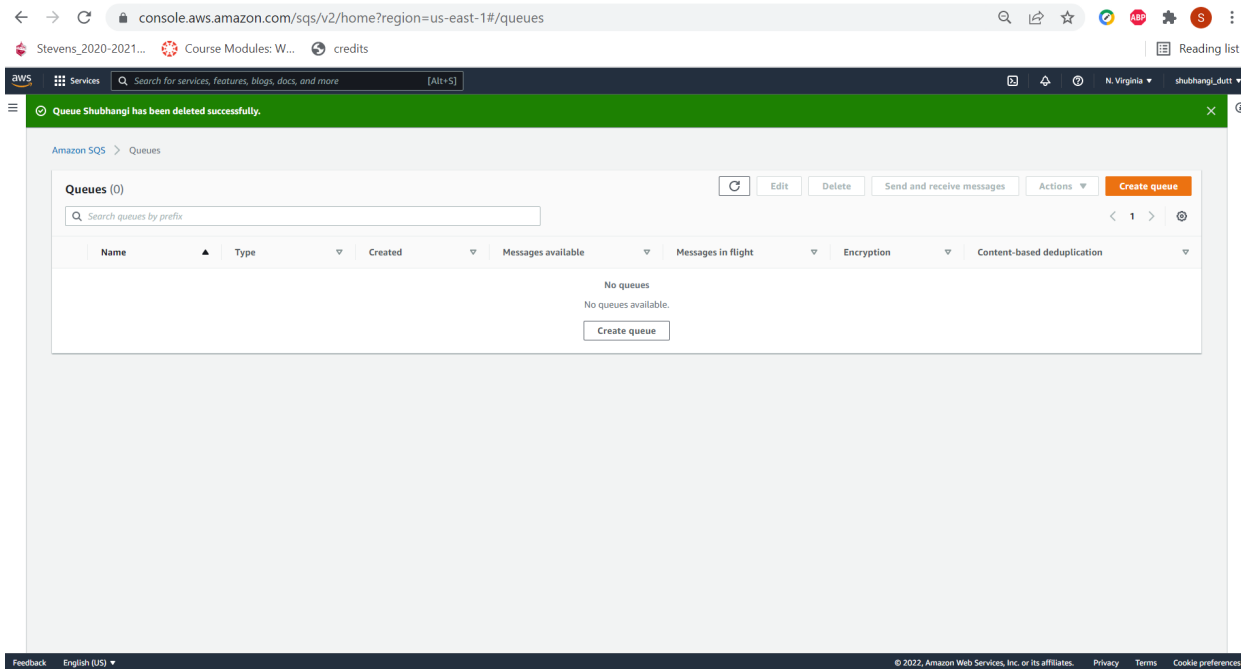
9. The message was deleted.



10. Next I deleted the queue by selecting the queue from the list and selecting 'Actions' → 'Delete'. A dialogue box opened up and I entered the phrase 'Delete'.

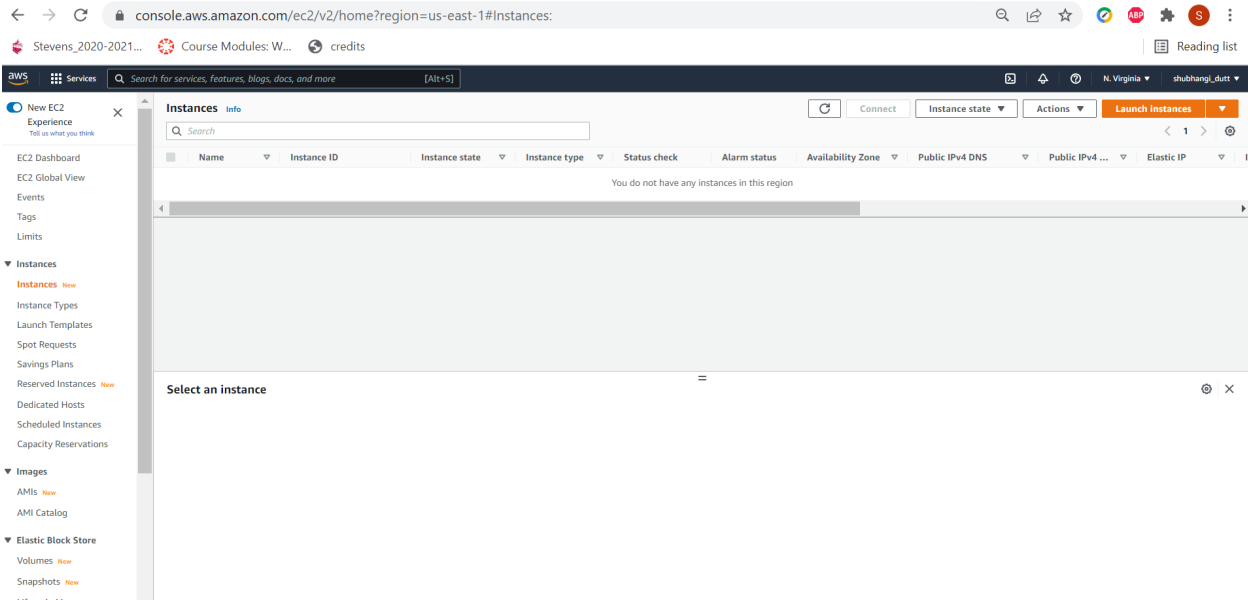


11. The queue was successfully deleted.

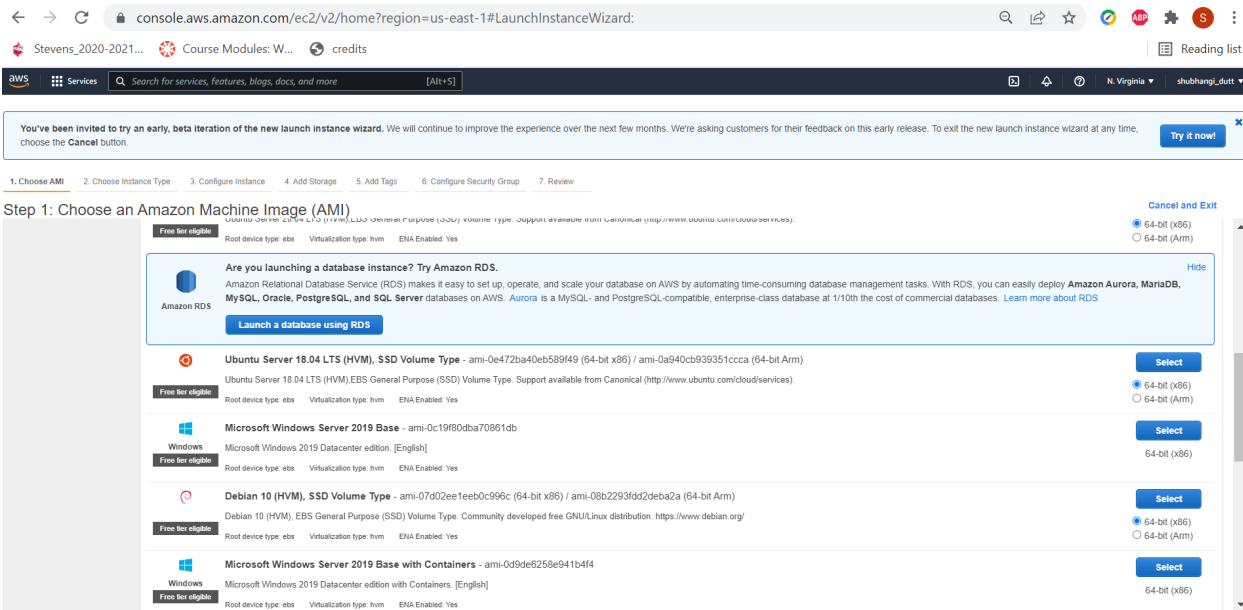


## Creating an Instance

1. From the Console I selected EC2 and on the new page I selected ‘Launch Instance’.



2. I selected the ‘Free-tier only’ filter and then went for Ubuntu 20.04 version.



3. I then selected ‘Review and Launch’.

← → ↺ console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard: 🔍 📄 ☆ 🌐 📶 📶 📶 📶 📶

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance families Current generation Show/Hide Columns

Currently selected: t2.micro (1 ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	t2	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	t3	t3.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.micro	2	1	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.small	2	2	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.medium	2	4	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.large	2	8	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.xlarge	4	16	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.2xlarge	8	32	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel Previous **Review and Launch** Next: Configure Instance Details

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## 4. I selected the option to 'Launch'.

← → ↺ console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard: 🔍 📄 ☆ 🌐 📶 📶 📶 📶 📶

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

**Improve your instances' security. Your security group, launch-wizard-1, is open to the world.**

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

**Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-0e472ba40eb589f49**

Free tier eligible Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

Security Groups [Edit security groups](#)

**Security group name:** launch-wizard-1

**Description:** launch-wizard-1 created 2022-02-24T20:03:01.422-05:00

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	0.0.0.0/0	

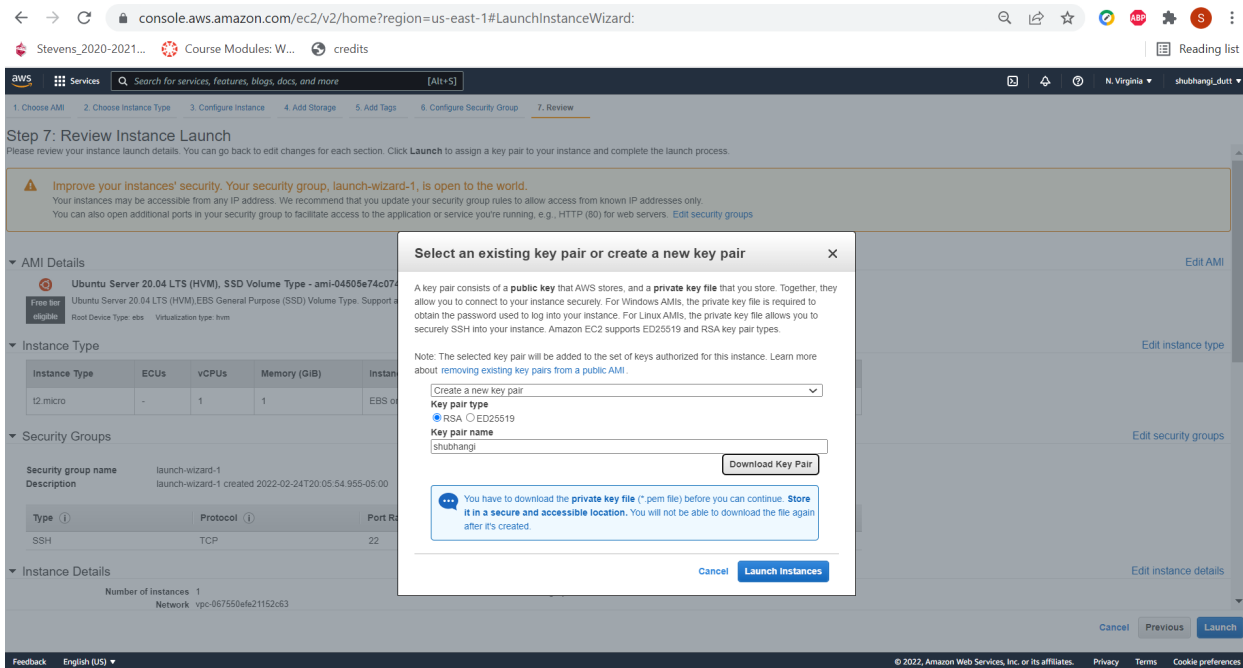
Instance Details [Edit instance details](#)

Storage [Edit storage](#)

Cancel Previous **Launch**

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5. A prompt opened up regarding ‘key pair’. I saved the key pair name as shubhangi and generated a new key pair. Then I selected launch instances.



6. I could see the new instance in the list of instances. I waited for the instance state to go from pending to running and the right clicked on the instance id, selected ‘connect’ and connected to the bash.

## Running Commands

1. I ran the following commands on the bash

uname -a

whoami

df -h

ifconfig -a

netstat

```
buntu@ip-172-31-83-78:~$ uname -a
Linux ip-172-31-83-78 5.11.0-1022-aws #23~20.04.1-Ubuntu SMP Mon Nov 15 14:03:19 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
buntu@ip-172-31-83-78:~$ whoami
ubuntu
buntu@ip-172-31-83-78:~$ df -h
filesystem      Size  Used Avail Use% Mounted on
dev/root        7.7G   2.0G   5.8G  26% /
devtmpfs        479M    0   479M   0% /dev
tmpfs           485M    0   485M   0% /dev/shm
tmpfs           97M    0    97M   1% /run
tmpfs           5.0M    0    5.0M   0% /run/lock
tmpfs           485M    0   485M   0% /sys/fs/cgroup
dev/loop1       27M    0    27M  100% /snap/amazon-ssm-agent/5163
dev/loop0       25M    0    25M  100% /snap/amazon-ssm-agent/4046
dev/loop2       56M    0    56M  100% /snap/core18/2253
dev/loop3       56M    0    56M  100% /snap/core18/2284
dev/loop5       62M    0    62M  100% /snap/core20/1361
dev/loop4       62M    0    62M  100% /snap/core20/1242
dev/loop6       68M    0    68M  100% /snap/lxd/21835
dev/loop7       68M    0    68M  100% /snap/lxd/22526
dev/loop8       44M    0    44M  100% /snap/snapd/14978
tmpfs           97M    0    97M   0% /run/user/1000
buntu@ip-172-31-83-78:~$
```

**Uname** - The uname command is used to find out about the processor architecture, system hostname, and kernel version operating on the system. It prints this system information.

-a parameter is used with uname 'uname -a' to print all the system information available which includes kernel-name, node-name, kernel release, kernel-version, machine or hardware's name and the processor information.

The output here is as follows :-

Kernel name -Linux

Node name -ip-172-31-83-78

Kernel Release -5.11.0-1022-aws

Kernel Version- #23~20.04.1-Ubuntu SMP Mon Nov 15 14:03:19 UTC 2021

Kernel Machine-x86\_64

**Whoami** - The Whoami command is used to display the current user's username. It is a concatenation of the words 'who', 'am', 'I'. The output here is 'Ubuntu'.

**Df** - On a file system, the "df" command displays device name, total blocks, total disk space, utilized disk space, available disk space, and mount points.

The output in the image displays this information in the following columns-Filesystem, Size, Used, Avail, Use% and Mounted on. For example in the first row the information is as follows :-

Filesystem- dev/root

Size-7.7 Gb (gives total size available)

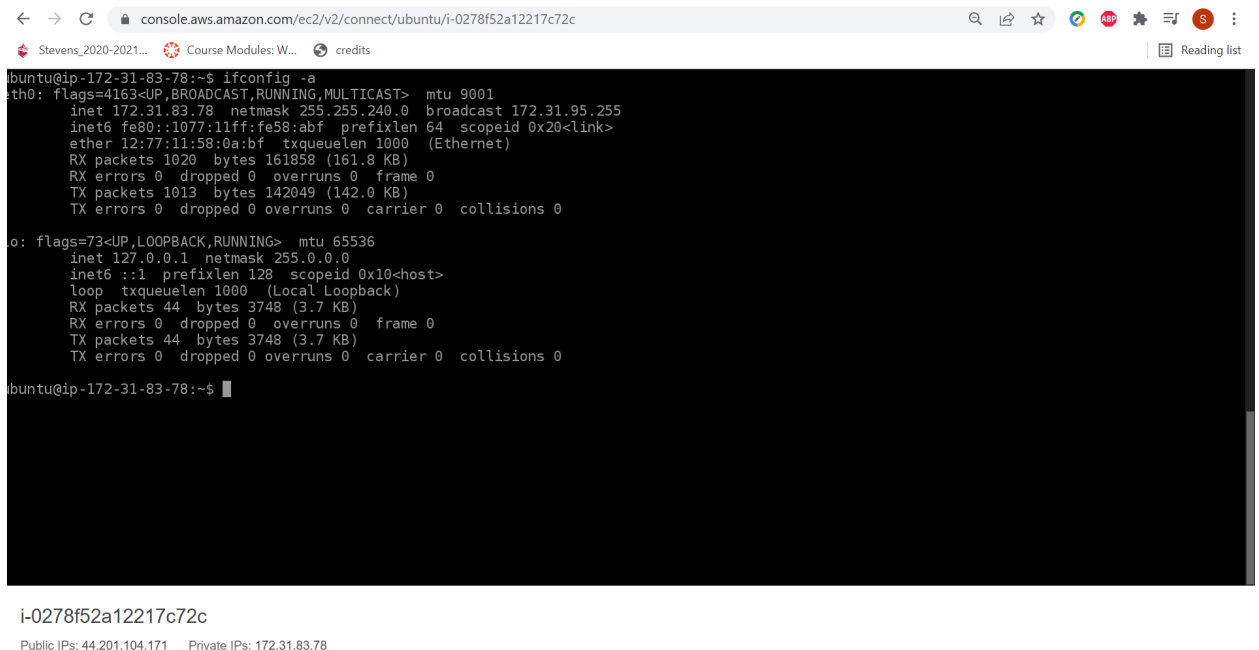
Used-2.0 Gb (gives total used size in human readable form)

Avail-5.8 Gb (gives available disk space in human readable form)

Use%-26% (gives used percentage of disk space)

Mounted on-/ (gives mount point information)

-h parameter prints data in human readable format. The df command usually prints data in bytes which is difficult to comprehend since we are accustomed to reading data in Megabytes and gigabytes etc. -h prints the information retrieved by df command in Kb, Gb, Mb etc.



The screenshot shows a terminal window with the command `ifconfig -a` executed. The output displays network configuration for `eth0` and `lo`. The `eth0` interface is configured with IP `172.31.83.78`, netmask `255.255.240.0`, and broadcast `172.31.95.255`. It also shows MAC address `12:77:11:58:0a:bf` and various statistics. The `lo` interface is a loopback with IP `127.0.0.1` and netmask `255.0.0.0`. The terminal window is titled "console.aws.amazon.com/ec2/v2/connect/ubuntu/i-0278f52a12217c72c" and shows the user `buntu@ip-172-31-83-78`.

```
buntu@ip-172-31-83-78:~$ ifconfig -a
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 9001
    inet 172.31.83.78 netmask 255.255.240.0  broadcast 172.31.95.255
    inet6 fe80::1077:11ff:fe58:abf prefixlen 64 scopeid 0x20<link>
    ether 12:77:11:58:0a:bf txqueuelen 1000  (Ethernet)
    RX packets 1020 bytes 161858 (161.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1013 bytes 142049 (142.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 44 bytes 3748 (3.7 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 44 bytes 3748 (3.7 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

buntu@ip-172-31-83-78:~$
```

i-0278f52a12217c72c

Public IPs: 44.201.104.171 Private IPs: 172.31.83.78

**Ifconfig** -The "ifconfig" command is used to show current network configuration information, configure a network interface with an ip address, netmask, or broadcast



address, create an alias for the network interface, configure hardware addresses, and enable or deactivate network interfaces.

-a parameter is used to include pseudo, duplicate, inaccessible file systems

Eth0- The Ethernet network card is represented by eth0, which is a physical interface. It allows us to communicate with other computers on our network and across the Internet.

L0- The loopback device is a unique virtual network interface. Loopback is mostly used for diagnostics and debugging, as well as connecting to local host services.

- Inet- displays IPv4 address which has been assigned to the interface.
- Inet6- displays IPv6 address which has been assigned to the interface
- RX packets- These are interface stats that display the number of packets received.
- RX bytes- These are interface stats that display the number of bytes received.
- RX frame- is a collection of mismatched frames, that is, frames whose length is not divisible by eight.
- TX packets- These are interface stats that display the number of packets transmitted.
- TX carrier- is a collection of packets that have undergone carrier loss. This is most common when the connection is flapping.
- TX collision- is the total number of packets that have been sent but have encountered Ethernet collisions.
- RX/TX errors- These are interface stats that indicate the total number of packets with errors received. Too-long frames, ring-buffer overflows, CRC issues, frame alignment faults, fifo overruns, and lost packets are all examples of this.
- RX/TX dropped- is the amount of packets lost as a result of unwanted VLAN tagging or receiving IPv6 frames on an interface that isn't set for IPv6.
- RX/TX overruns- is the number of received packets that encountered fifo overruns as a result of the kernel's inability to clear a buffer at a fast enough pace.

```

ubuntu@ip-172-31-83-78:~$ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 368 ip-172-31-83-78.ec2:ssh ec2-18-206-107-24:43995 ESTABLISHED

Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags     Type       State      I-Node  Path
unix    2      [ ]      DGRAM          26105     /run/user/1000/systemd/notify
unix    3      [ ]      DGRAM          14363     /run/systemd/notify
unix    2      [ ]      DGRAM          14380     /run/systemd/journal/syslog
unix    8      [ ]      DGRAM          14390     /run/systemd/journal/dev-log
unix    9      [ ]      DGRAM          14394     /run/systemd/journal/socket
unix    3      [ ]      STREAM        CONNECTED  22793
unix    3      [ ]      STREAM        CONNECTED  20543
unix    2      [ ]      DGRAM          25854
unix    2      [ ]      DGRAM          21870
unix    3      [ ]      STREAM        CONNECTED  19731
unix    3      [ ]      STREAM        CONNECTED  23075
unix    3      [ ]      STREAM        CONNECTED  24262
unix    3      [ ]      STREAM        CONNECTED  23578     /run/systemd/journal/stdout
unix    3      [ ]      STREAM        CONNECTED  22499     /run/dbus/system_bus_socket
unix    3      [ ]      STREAM        CONNECTED  20545     /run/systemd/journal/stdout
unix    3      [ ]      STREAM        CONNECTED  22936     /run/dbus/system_bus_socket
unix    3      [ ]      STREAM        CONNECTED  21260
unix    2      [ ]      DGRAM          20547
unix    3      [ ]      STREAM        CONNECTED  22083
unix    2      [ ]      DGRAM          19737
unix    3      [ ]      STREAM        CONNECTED  20079
unix    3      [ ]      STREAM        CONNECTED  21412
unix    3      [ ]      STREAM        CONNECTED  23077     /run/systemd/journal/stdout
unix    2      [ ]      DGRAM          14755
unix    3      [ ]      STREAM        CONNECTED  22501     /run/dbus/system_bus_socket
  
```

i-0278f52a12217c72c

Public IPs: 44.201.104.171 Private IPs: 172.31.83.78

**Netstat** -The netstat command provides information on network connections, routing tables, interface statistics, masquerade connections, and multicast memberships, among other things. Netstat, which is formed from the terms "network" and "statistics," is a command-line software that is managed by instructions. It provides users with basic statistics on all network operations, as well as information on which ports and addresses the appropriate connections (TCP, UDP) are operating and which ports are available for tasks.

**Proto**-All of the connections on the system executing Netstat are listed in the first column (proto stands for protocol).

**Recv-Q**- List of received packets is displayed in this column.

**Send-Q**- List of sent packets is displayed in this queue.

**LocalAddress**- The machine's local IP address and port number appear in this column.

**ForeignAddress**- The remote or foreign address and port number appear in this column.

**State**- This column displays state of the connection.

**Refcnt**- It displays the number of users of the socket.

**Flags**-Represents the internal kernel flags holding the status of the socket.

**Type**- Displays information is passed end-to-end or dedicatedly via datagram or streams.

**Path**-Path is the bound path (if any) of the socket.

Resources:-

<https://unix.stackexchange.com/questions/183140/what-is-the-meaning-of-the-contents-of-f-proc-net-unix>

<https://goinbigdata.com/demystifying-ifconfig-and-network-interfaces-in-linux/#:~:text=eth0%20is%20a%20physical%20interface,network%20interface%20called%20loopback%20device>.

<https://aws.amazon.com/console/>

<https://www.geeksforgeeks.org/whoami-command-linux-example/>

[https://www.computerweekly.com/tip/How-to-use-a-netstat-command-in-Windows-to-watch-open-ports#:~:text=The%20first%20column%20\(proto%20stands,foreign%20address%20and%20port%20number](https://www.computerweekly.com/tip/How-to-use-a-netstat-command-in-Windows-to-watch-open-ports#:~:text=The%20first%20column%20(proto%20stands,foreign%20address%20and%20port%20number).