

Tech Dev-Ops (B) 2.2

TASK - 4

Submitted by:

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Employee ID: TEN/DE179

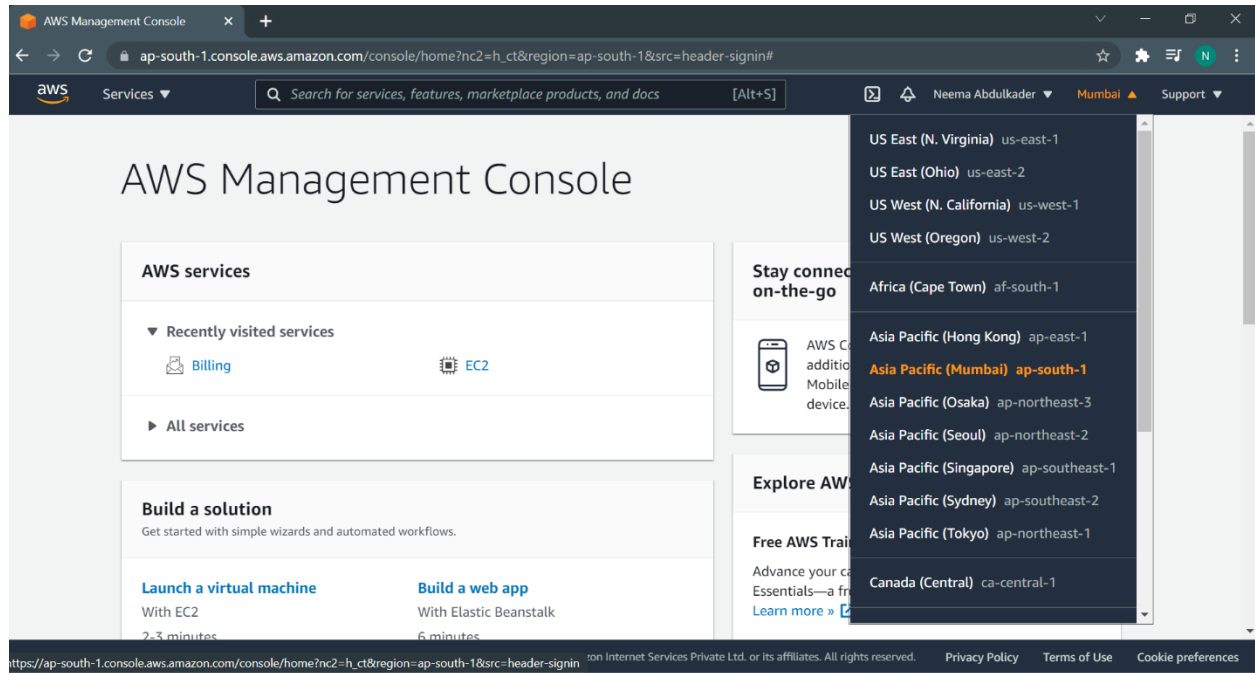
Create an ec2-instance with Linux machine

Step by step procedure:

Step 1:

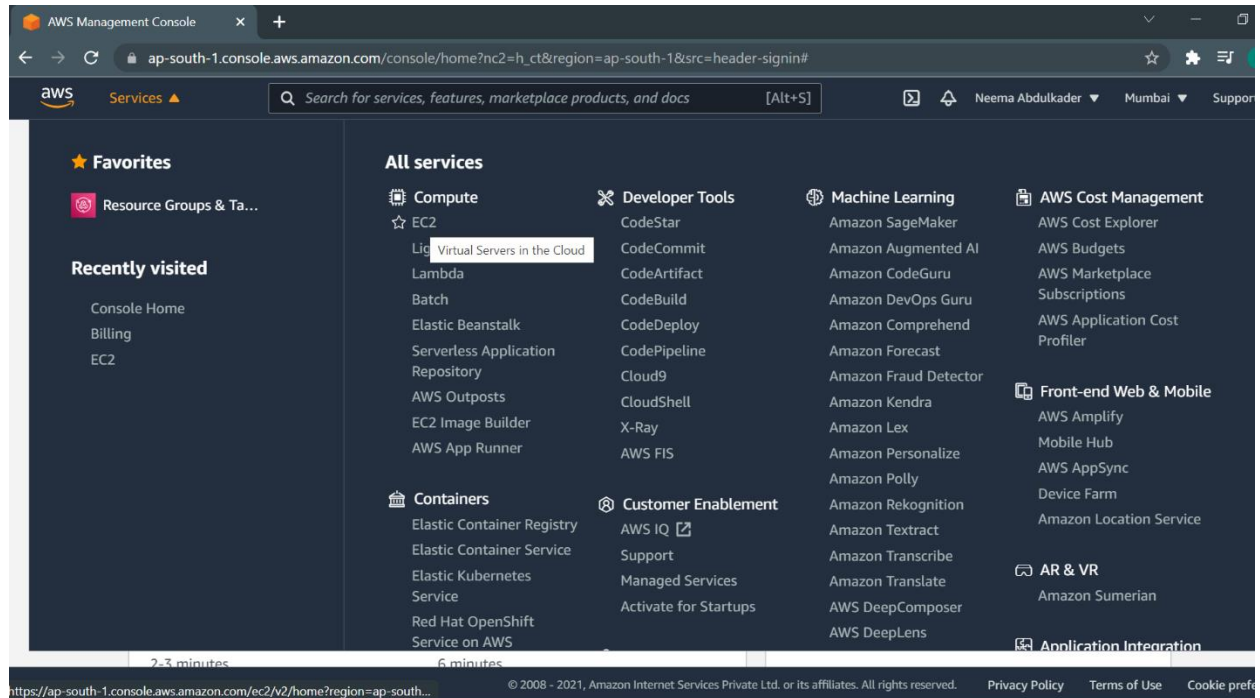
In aws.amazon.com → Sign in to the console.

1. Select location



Step 2:
Click services

Step 3:
After login you have to select the region.
Then select EC2

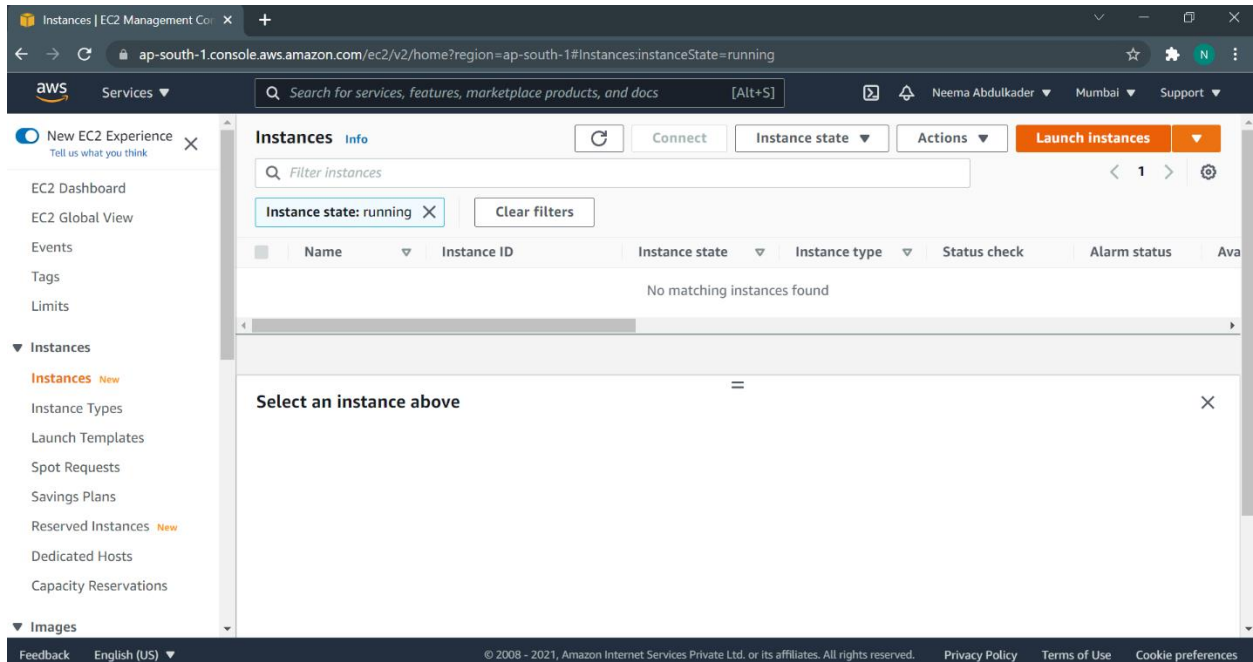


Step 4:

1. Select EC2 dashboard
2. Click instances (running)

Step 5:

Select launch instances.



Step 6:
Select free tier option

Step 7:
Choose Amazon Linux2 AMI

Launch instance wizard | EC2 M... x

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-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 1: Choose an Amazon Machine Image (AMI) Cancel and Exit

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows" Search by Systems Manager parameter

Quick Start

My AMIs

AWS Marketplace

Community AMIs

☒ Free tier only ⓘ

Amazon Linux

Free tier eligible

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-041d6256ed0f2061c (64-bit x86) / ami-0c03e9ead27ad6c0 (64-bit Arm)

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

64-bit (x86) ☒ 64-bit (Arm) ☐

Red Hat

Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-06a0b4e3b7eb7a300 (64-bit x86) / ami-0cbe04a3ce796c98e (64-bit Arm)

Select

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Step 8:

1. Select free tier eligible
2. Next: Configure Instance Details

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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 (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs ⓘ	Memory (GiB)	Instance Storage (GB) ⓘ	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 Free tier eligible	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

Cancel Previous Review and Launch Next: Configure Instance Details

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Step 9:

1. Give the details
2. Next: Add Storage

The screenshot shows the 'Configure Instance Details' step of the AWS Launch Instance Wizard. The breadcrumb trail at the top indicates the current step is '3. Configure Instance', with previous steps being '1. Choose AMI', '2. Choose Instance Type', and subsequent steps being '4. Add Storage', '5. Add Tags', '6. Configure Security Group', and '7. Review'. The main heading is 'Step 3: Configure Instance Details', followed by a descriptive paragraph. The configuration options include: 'Number of instances' set to 1 with a 'Launch into Auto Scaling Group' link; 'Purchasing option' with a checkbox for 'Request Spot instances'; 'Network' set to 'vpc-01a61a5de58571f97 (default)' with a 'Create new VPC' link; 'Subnet' set to 'No preference (default subnet in any Availability Zone)' with a 'Create new subnet' link; 'Auto-assign Public IP' set to 'Use subnet setting (Enable)'; 'Placement group' with a checkbox for 'Add instance to placement group'; 'Capacity Reservation' set to 'Open'; and 'Domain join directory' set to 'No directory' with a 'Create new directory' link. At the bottom right, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Add Storage'. The footer contains 'Feedback', 'English (US)', copyright information, and links for 'Privacy Policy', 'Terms of Use', and 'Cookie preferences'.

Launch instance wizard | EC2 M... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-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 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances ⓘ 1 Launch into Auto Scaling Group ⓘ

Purchasing option ⓘ ☐ Request Spot instances

Network ⓘ vpc-01a61a5de58571f97 (default) Create new VPC

Subnet ⓘ No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP ⓘ Use subnet setting (Enable)

Placement group ⓘ ☐ Add instance to placement group

Capacity Reservation ⓘ Open

Domain join directory ⓘ No directory Create new directory

Cancel Previous Review and Launch Next: Add Storage

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Step 10:

Next: Add Tags

The screenshot shows the 'Add Storage' step of the AWS Launch Instance Wizard. The breadcrumb trail at the top indicates the current step is '4. Add Storage', with previous steps being '1. Choose AMI', '2. Choose Instance Type', '3. Configure Instance', and subsequent steps being '5. Add Tags', '6. Configure Security Group', and '7. Review'. The main heading is 'Step 4: Add Storage', followed by a descriptive paragraph. Below the text is a table with columns: 'Volume Type', 'Device', 'Snapshot', 'Size (GiB)', 'Volume Type', 'IOPS', 'Throughput (MB/s)', 'Delete on Termination', and 'Encryption'. The first row represents the 'Root' volume, with values: '/dev/xvda', snapshot 'snap-08f396297d7b310af', size '8', volume type 'General Purpose SSD (gp2)', IOPS '100 / 3000', throughput 'N/A', 'Delete on Termination' checked, and 'Encryption' set to 'Not Encrypt'. Below the table is an 'Add New Volume' button. A blue information box states: 'Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. Learn more about free usage tier eligibility and usage restrictions.' At the bottom right, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Add Tags'. The footer contains 'Feedback', 'English (US)', copyright information, and links for 'Privacy Policy', 'Terms of Use', and 'Cookie preferences'.

Launch instance wizard | EC2 M... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-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 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GiB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Throughput (MB/s) ⓘ	Delete on Termination ⓘ	Encryption ⓘ
Root	/dev/xvda	snap-08f396297d7b310af	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Cancel Previous Review and Launch Next: Add Tags

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Step 11:

Add tag

Step 12:

1. Add – Name
2. Next: configure security group

The screenshot shows the 'Add Tags' step of the AWS Launch Instance Wizard. The browser address bar shows the URL: `ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard`. The navigation bar includes the AWS logo, a search bar, and user information (Neema Abdulkader, Mumbai, Support). The wizard progress bar shows seven steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags (active), 6. Configure Security Group, and 7. Review.

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)	Instances <small>(i)</small>	Volumes <small>(i)</small>	Network Interfaces <small>(i)</small>
Name	Linux	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add another tag](#) (Up to 50 tags maximum)

Navigation buttons: [Cancel](#), [Previous](#), [Review and Launch](#), [Next: Configure Security Group](#)

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Step 13:

Click review and launch

Launch instance wizard | EC2 Ma x

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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 6: Configure Security Group


A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

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

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

 **Warning**

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

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Step 14:

Review it and then launch

Step 15:

1. If you want to launch you need a password and that password is been created through this key pair=> create a new key pair.
2. Give key pair name
3. Then we have to download key pair
4. Launch instance

Select an existing key pair or create a new key pair



A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair 

Key pair type

☒ RSA ☐ ED25519

Key pair name

Linux

Download Key Pair

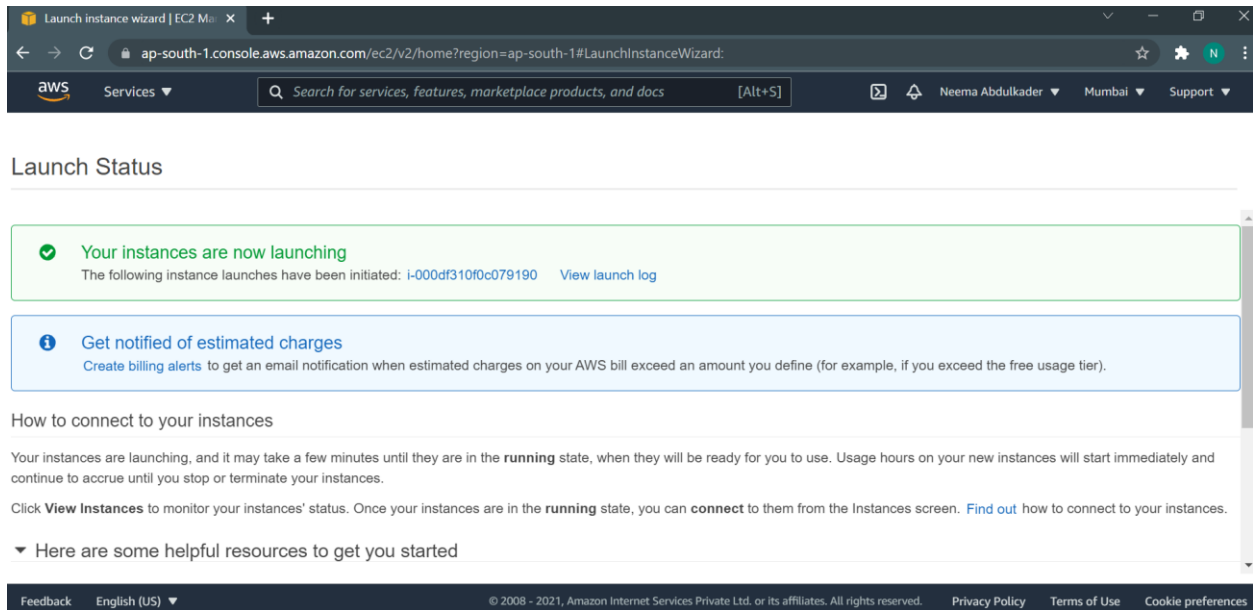


You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

Cancel

Launch Instances

Step 16: View instances



The screenshot shows the 'Launch Status' section of the AWS Launch Instance Wizard. It features a green success message: 'Your instances are now launching' with a checkmark icon. Below this, it states 'The following instance launches have been initiated: i-000df310f0c079190' and provides a link to 'View launch log'. A blue information box below the success message says 'Get notified of estimated charges' and 'Create billing alerts' to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

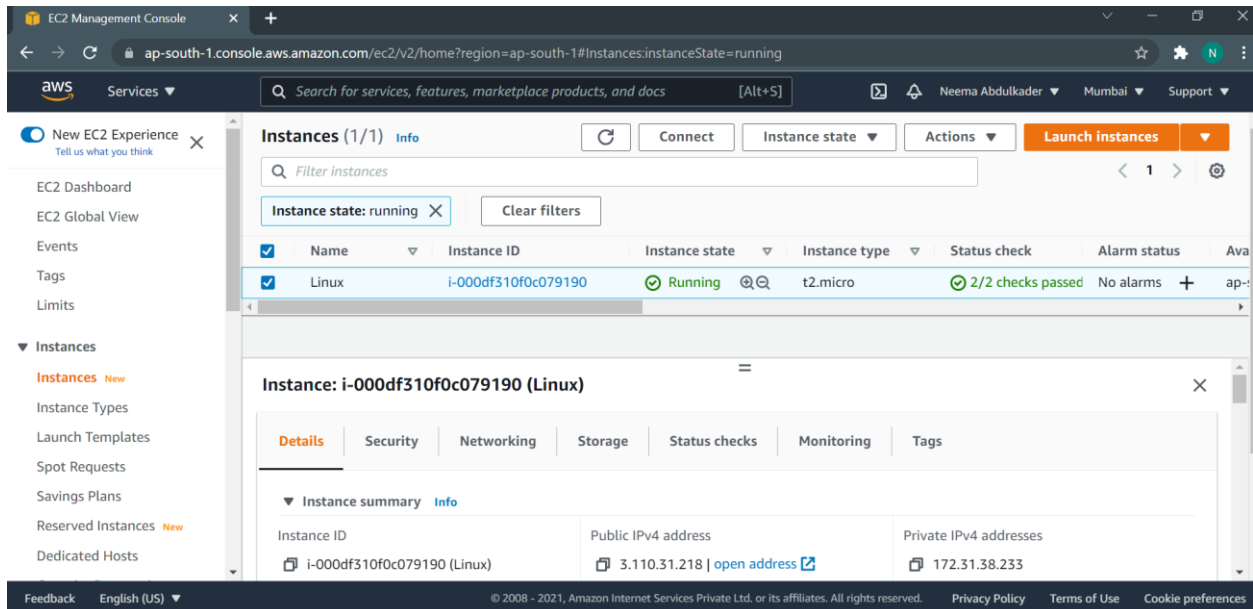
Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

▼ Here are some helpful resources to get you started

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Step 17: Instance running



The screenshot shows the AWS EC2 Management Console. The 'Instances (1/1)' section is active, displaying a table with one instance: 'Linux' with ID 'i-000df310f0c079190', state 'Running', type 't2.micro', and status '2/2 checks passed'. Below the table, the 'Instance: i-000df310f0c079190 (Linux)' details are shown, including the 'Instance summary' tab. The summary shows the Instance ID 'i-000df310f0c079190 (Linux)', Public IPv4 address '3.110.31.218', and Private IPv4 addresses '172.31.38.233'.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Linux	i-000df310f0c079190	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1

Instance: i-000df310f0c079190 (Linux)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-000df310f0c079190 (Linux)	3.110.31.218 open address	172.31.38.233

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