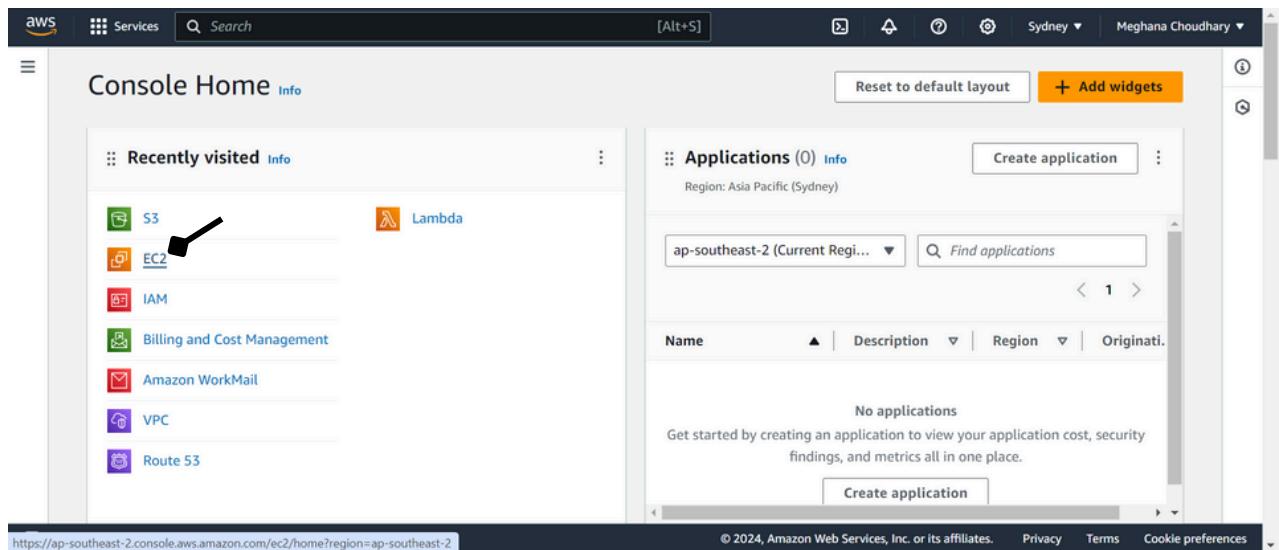


14. PROBLEM STATEMENT:

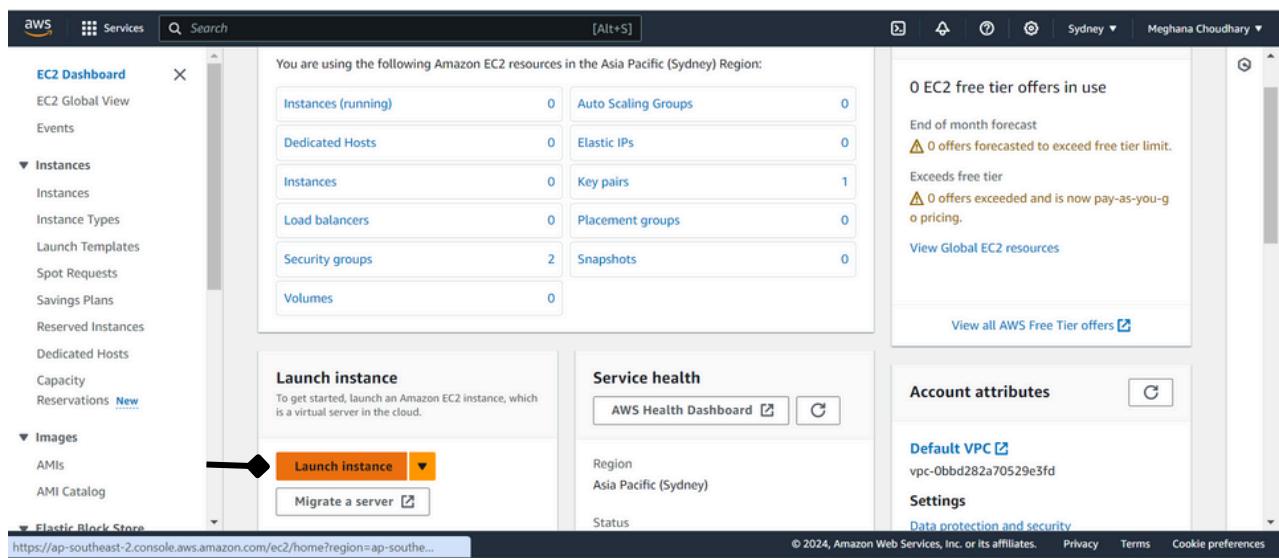
Create an Elastic IP for an instance.

1. Log into AWS console and click on “EC2”.



The screenshot shows the AWS Console Home page. The top navigation bar includes the AWS logo, a Services menu, a search bar, and account information for "Meghana Choudhary". Below the navigation is a "Console Home" section with a "Recently visited" list containing S3, EC2 (with a black arrow pointing to it), Lambda, IAM, Billing and Cost Management, Amazon WorkMail, VPC, and Route 53. To the right is an "Applications" section showing 0 applications with a "Create application" button. At the bottom of the page is a footer with copyright information and links for Privacy, Terms, and Cookie preferences.

2. Click on ‘Launch instance’.



The screenshot shows the EC2 Dashboard. On the left is a sidebar with "EC2 Dashboard" and several navigation items: EC2 Global View, Events, Instances (with sub-items Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity, Reservations), Images (with sub-items AMIs, AMI Catalog), and Elastic Block Store. The main content area displays EC2 resources in the Asia Pacific (Sydney) Region, including Instances (running: 0), Auto Scaling Groups (0), Dedicated Hosts (0), Elastic IPs (0), Instances (0), Key pairs (1), Load balancers (0), Placement groups (0), Security groups (2), Snapshots (0), and Volumes (0). Below this is a "Launch instance" section with a "Launch instance" button (highlighted with a black arrow) and a "Migrate a server" link. To the right are sections for Service health (AWS Health Dashboard), Account attributes (Default VPC set to vpc-0bbd282a70529e3fd), and Settings (Data protection and security). The footer contains copyright and navigation links.

3. Fill the required details.

Give a name to your server and choose ubuntu Server as the OS Image.

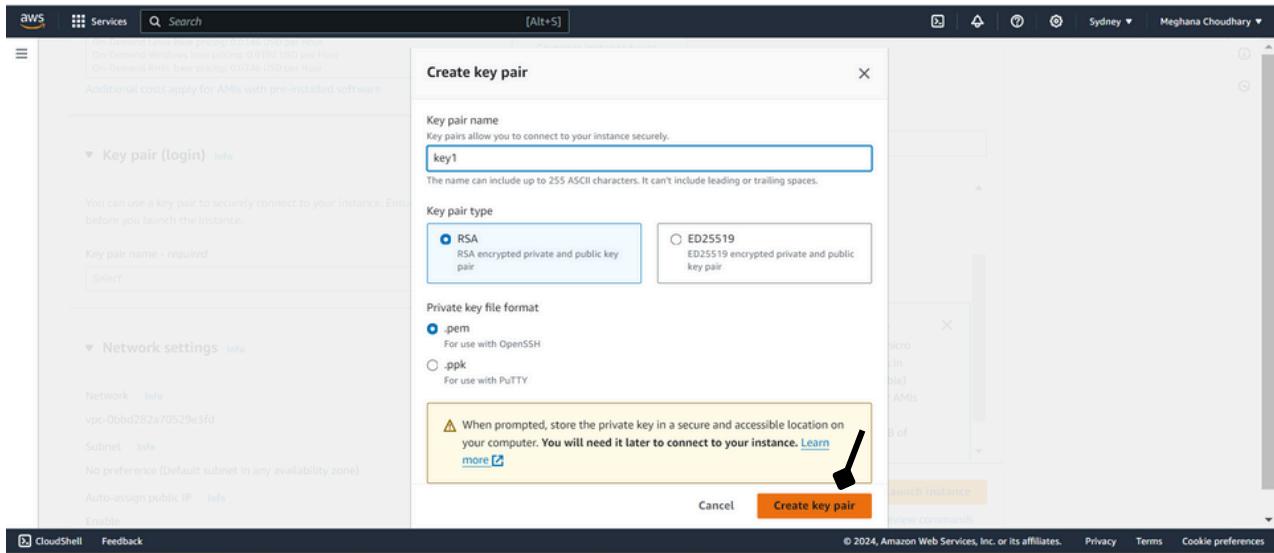
The screenshot shows the 'Launch an instance' wizard. In the 'Name and tags' step, the name 'ece2' is entered. In the 'Application and OS Images (Amazon Machine Image)' step, the AMI 'Canonical, Ubuntu, 22.04 LTS' is selected. The 'Summary' pane on the right shows 1 instance, the selected AMI, t2.micro instance type, and a new security group. A 'Launch instance' button is at the bottom.

This screenshot continues the 'Launch an instance' wizard. It shows the 'Application and OS Images (Amazon Machine Image)' step with a search bar and a 'Quick Start' section featuring various OS icons. The 'Amazon Machine Image (AMI)' section details the selected AMI: 'Ubuntu Server 22.04 LTS (HVM), SSD Volume Type'. A tooltip for the 'Free tier eligible' badge indicates it includes 750 hours of t2.micro usage. The 'Summary' pane remains the same, and a 'Launch instance' button is present.

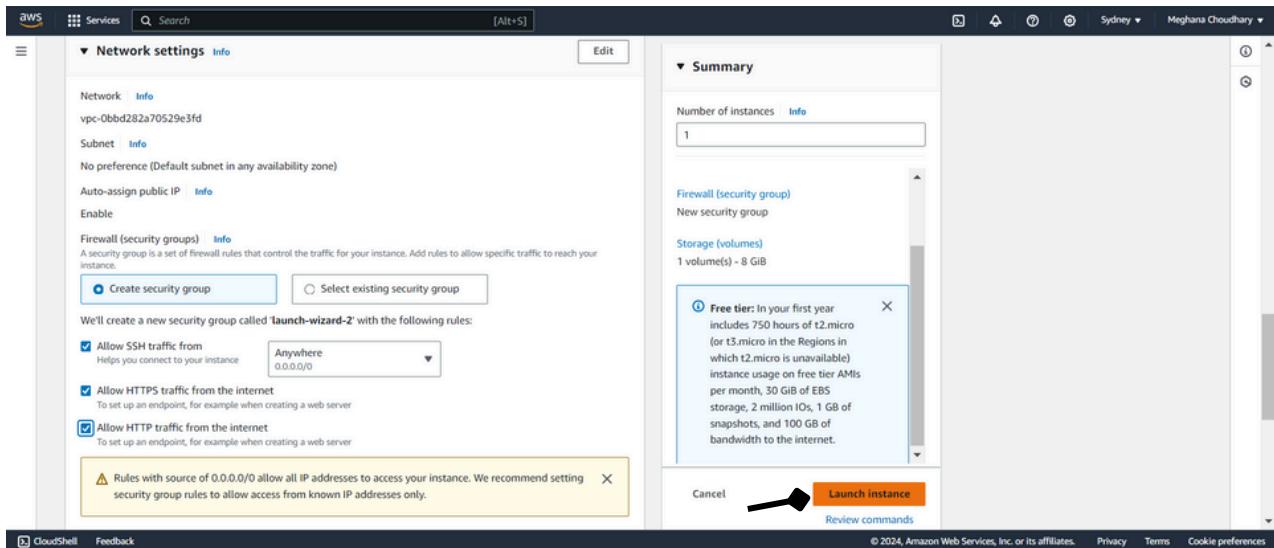
4. For Key pair, if you have a existing key pair select that else ‘Create e new key pair’.

The screenshot shows the 'Key pair (login)' step. It has a dropdown for 'Key pair name - required' with 'Select' and a 'Create new key pair' button. The 'Summary' pane on the right shows the same configuration as previous steps, including the free tier tooltip for 750 hours of t2.micro usage. A 'Launch instance' button is at the bottom.

5. Give a name to the key pair. Make sure the key pair type is 'RSA' and the file extension is '.pem'.



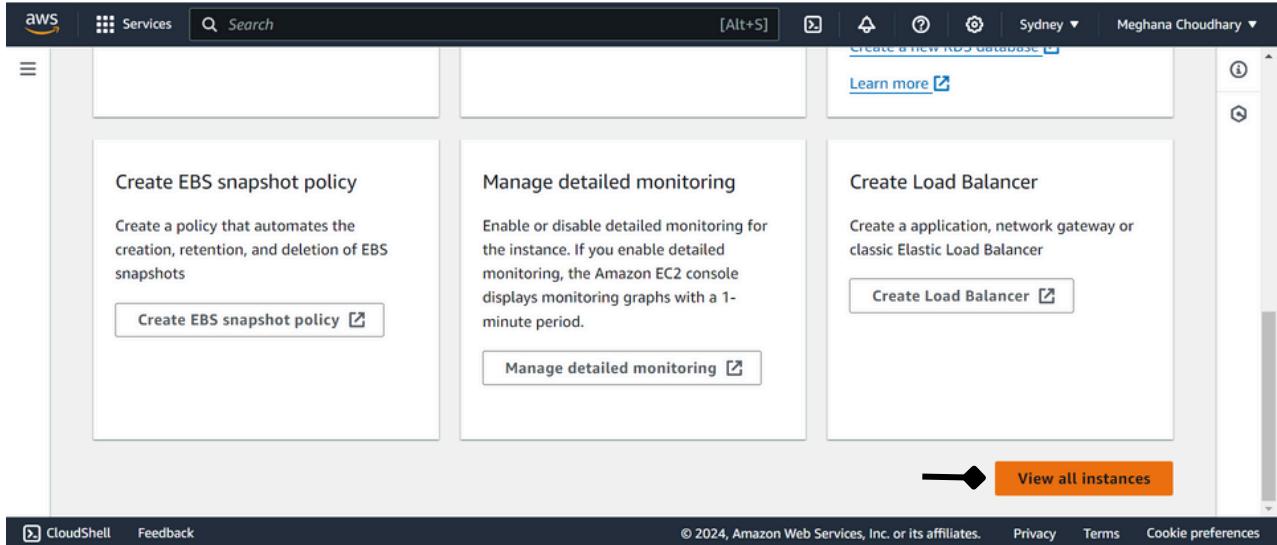
6. For 'Network Settings' Select all the check boxes(SSH, HTTPS,HTTP). Then Click on 'Launch instance'.



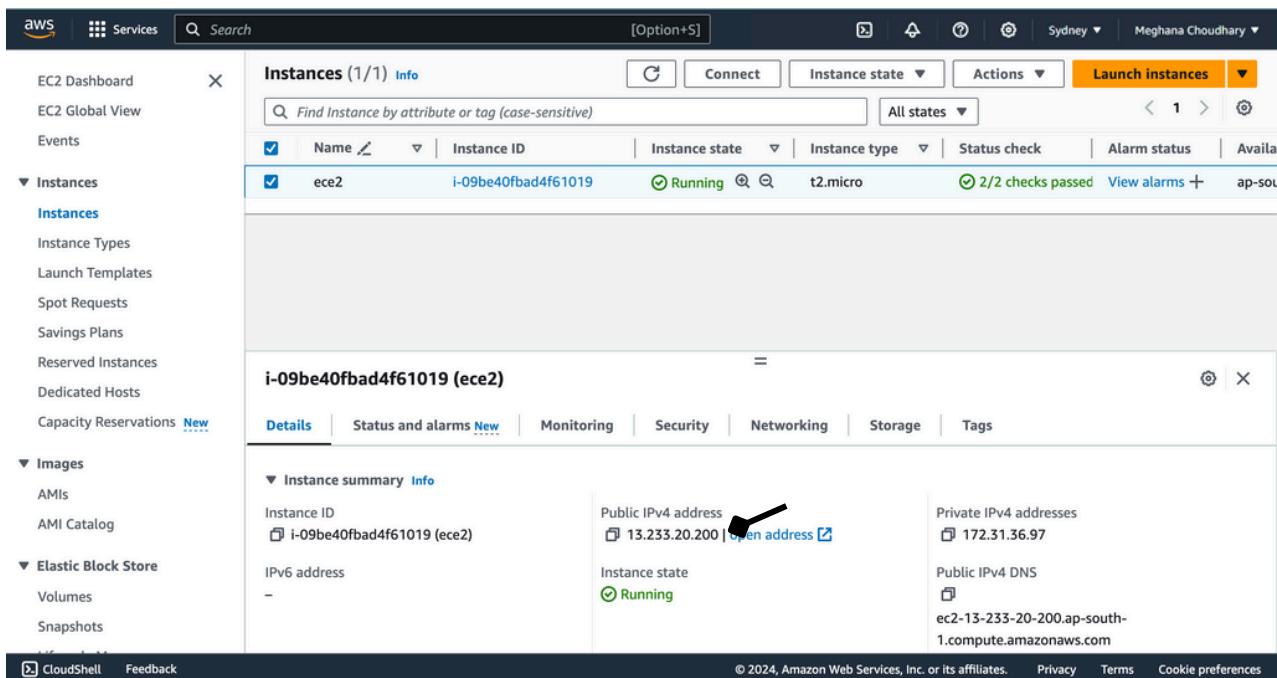
7. Your instance is created successfully.



8. Then Scroll Down and Click on 'View all instances'.



9. Select Your instance and take a note of your Public IPv4 address.



10. Stop the instance and start it again.

The screenshots show the AWS EC2 Instances page. In the first and third screenshots, the 'Actions' dropdown menu is open, with 'Stop instance' and 'Start instance' respectively highlighted. The second and fourth screenshots show a green success message box at the top of the page indicating the instance has been successfully stopped or started. The Instances table shows a single instance named 'ece2' with the status 'Running' in the first and third screenshots, and 'Stopped' in the second and fourth screenshots.

11. Take a note of the Public IPv4 address now. It has changed.

The screenshot shows the AWS EC2 Instances Details page for the instance 'i-09be40fbad4f61019 (ece2)'. The 'Details' tab is active. In the 'Instance summary' section, the 'Public IPv4 address' field is highlighted with a red box and a black arrow. The value '65.216.104' is shown next to it. Other fields visible include 'Instance ID' (i-09be40fbad4f61019), 'Instance state' (Running), 'Instance type' (t2.micro), and 'Status check' (Initializing). The 'Private IPv4 addresses' field shows '172.31.36.97'. At the bottom of the page, there are links for 'CloudShell', 'Feedback', '© 2024, Amazon Web Services, Inc. or its affiliates.', 'Privacy', 'Terms', and 'Cookie preferences'.

12. To resolve this, go to ‘Elastic IPs’ under Network and Security.

The screenshot shows the AWS CloudWatch Metrics interface. At the top, a green banner indicates "Successfully started i-09be40fbad4f61019". Below this, the "Instances (1/1) Info" section displays a single instance named "ece2" with the ID "i-09be40fbad4f61019". The instance is shown as "Running" with the type "t2.micro". A status check is listed as "Initializing". The "Details" tab is selected, showing the "Instance summary" with the instance ID and state. The public IPv4 address is listed as 65.2.168.104. The private IPv4 address is 172.31.36.97. The public IPv4 DNS name is ec2-65-2-168-104.ap-south-1.compute.amazonaws.com. The instance state is also listed as "Running".

13. Allocate Elastic IP address.

The screenshot shows the AWS Elastic IP addresses page. The main header is "Elastic IP addresses". On the right side, there is a prominent orange button labeled "Allocate Elastic IP address". The page displays a table with columns for Name, Allocated IPv4 addr..., Type, and Allocation ID. A message at the bottom states "No Elastic IP addresses found in this Region".

14. Keeping every thing default click on Allocate.

The screenshot shows the AWS Global Accelerator creation wizard. It includes sections for "Customer-owned pool of IPv4 addresses", "Global static IP addresses", and "Tags - optional". The "Tags - optional" section shows a note about tags and a "Create accelerator" button. In the "Tags - optional" section, there is a "Add new tag" button and a note about adding up to 50 tags. At the bottom, there are "Cancel" and "Allocate" buttons, with the "Allocate" button highlighted by a red box and a black arrow pointing to it.

15. Choose the Elastic IP address you just created.

The screenshot shows the AWS EC2 Dashboard with the 'Elastic IP addresses' service selected. The main pane displays a table titled 'Elastic IP addresses (1)'. The table has columns for 'Name', 'Allocated IPv4 addr...', 'Type', and 'Allocation ID'. There is one row with a single item. The 'Name' column contains a minus sign ('-'). The 'Allocated IPv4 address' column contains '13.202.107.161'. The 'Type' column shows 'Public IP' and the 'Allocation ID' column shows 'eipalloc-0fbe5b4912f7470b2'. A black arrow points to the value '13.202.107.161' in the 'Allocated IPv4 address' column.

16. Associate Elastic IP address.

The screenshot shows the AWS EC2 Dashboard with the 'Elastic IP addresses' service selected. The main pane displays the details for the IP address '13.202.107.161'. The title bar shows 'EC2 > Elastic IP addresses > 13.202.107.161'. The 'Actions' dropdown menu is open, and the 'Associate Elastic IP address' button is highlighted with a black arrow. The summary table includes columns for Allocated IPv4 address, Type, Allocation ID, Reverse DNS record, Association ID, Scope, Associated instance ID, Private IP address, Network interface ID, Network interface owner account ID, Public DNS, NAT Gateway ID, Address pool, and Network border group.

17. Select your instance and click 'Associate'.

The screenshot shows the 'Associate Elastic IP address' wizard. The top navigation bar shows 'EC2 > Elastic IP addresses > 13.202.107.161 > Associate Elastic IP address'. The main section is titled 'Associate Elastic IP address' with the sub-instruction 'Choose the instance or network interface to associate to this Elastic IP address (13.202.107.161)'. The 'Resource type' section has a radio button for 'Instance' (selected) and another for 'Network interface'. A warning message states: '⚠ If you associate an Elastic IP address with an instance that already has an Elastic IP address associated, the previously associated Elastic IP address will be disassociated, but the address will still be allocated to your account.' Below this is a note: 'If no private IP address is specified, the Elastic IP address will be associated with the primary private IP address.' The 'Choose an instance' dropdown contains the option 'i-09be40fbad4f61019 (ece2) - running'. The 'Private IP address' section allows selecting a private IP address from a dropdown. The 'Reassociation' section has a checkbox for 'Allow this Elastic IP address to be reassociated'. At the bottom are 'Cancel' and 'Associate' buttons, with the 'Associate' button highlighted with a black arrow.

18. After the IP is associated successfully go back to instances.

The screenshot shows the AWS EC2 Instances page. A success message at the top states: "Elastic IP address associated successfully. Elastic IP address 13.202.107.161 has been associated with instance i-09be40fbad4f61019". Below this, the instance details for 13.202.107.161 are displayed, including its allocation ID, association ID, and associated instance ID (i-09be40fbad4f61019). The private IP address is listed as 172.31.36.97. A black arrow points to the "Instances" link in the left sidebar.

19. Stopping and Starting your instance now, doesn't changes your public IPv4 address.

The screenshot shows the AWS EC2 Instances page. An instance named "ece2" (with ID i-09be40fbad4f61019) is currently running. A context menu is open over this instance, with the "Stop instance" option highlighted by a black arrow. Other options in the menu include "Start instance", "Reboot instance", and "Terminate instance". The status bar at the bottom indicates "2/2 checks passed".

The screenshot shows the AWS EC2 Instances page again. The same instance "ece2" is now shown as "Running" in the status column. A success message at the top says "Successfully started i-09be40fbad4f61019". The instance details page for "ece2" shows its public and private IP addresses and DNS names. A black arrow points to the "Public IPv4 address" field.