ACF Lab 2: Build a VPC and launch a Web Server

COS 20019- Cloud Computing Architecture

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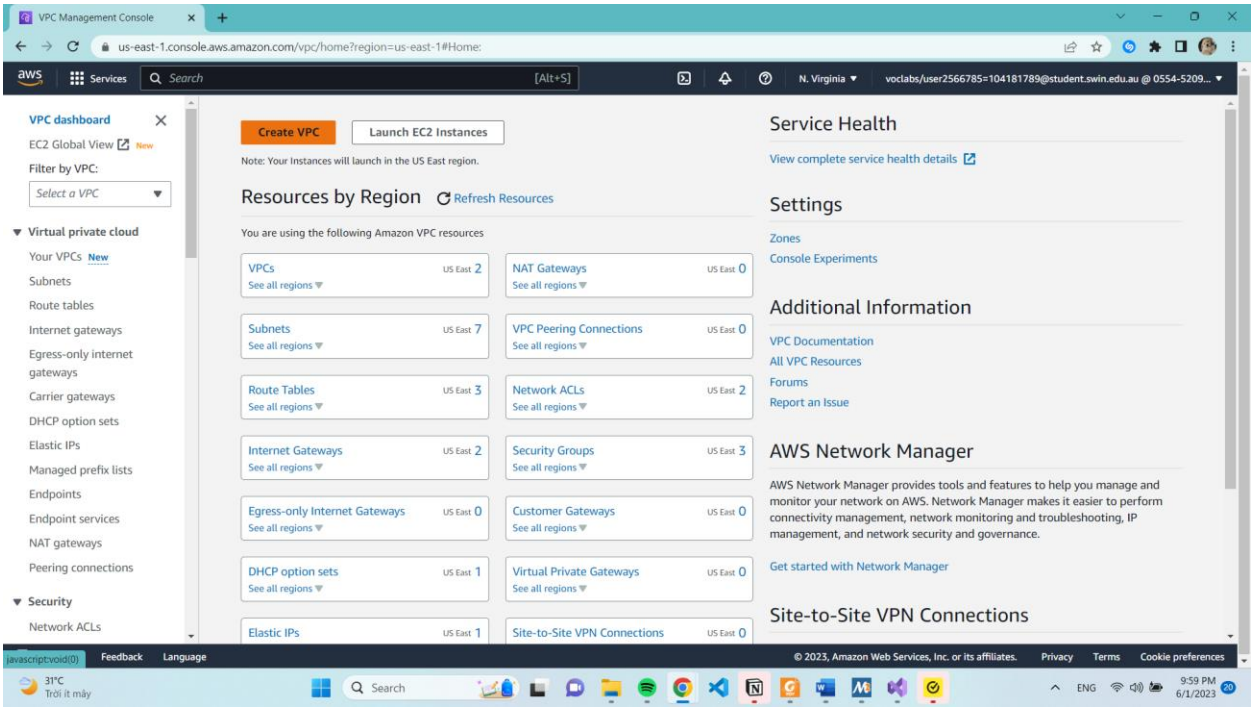
So this is all my step to finish ACF Lab 2, belong with detailed explanation.

Task 1: Create Your VPC

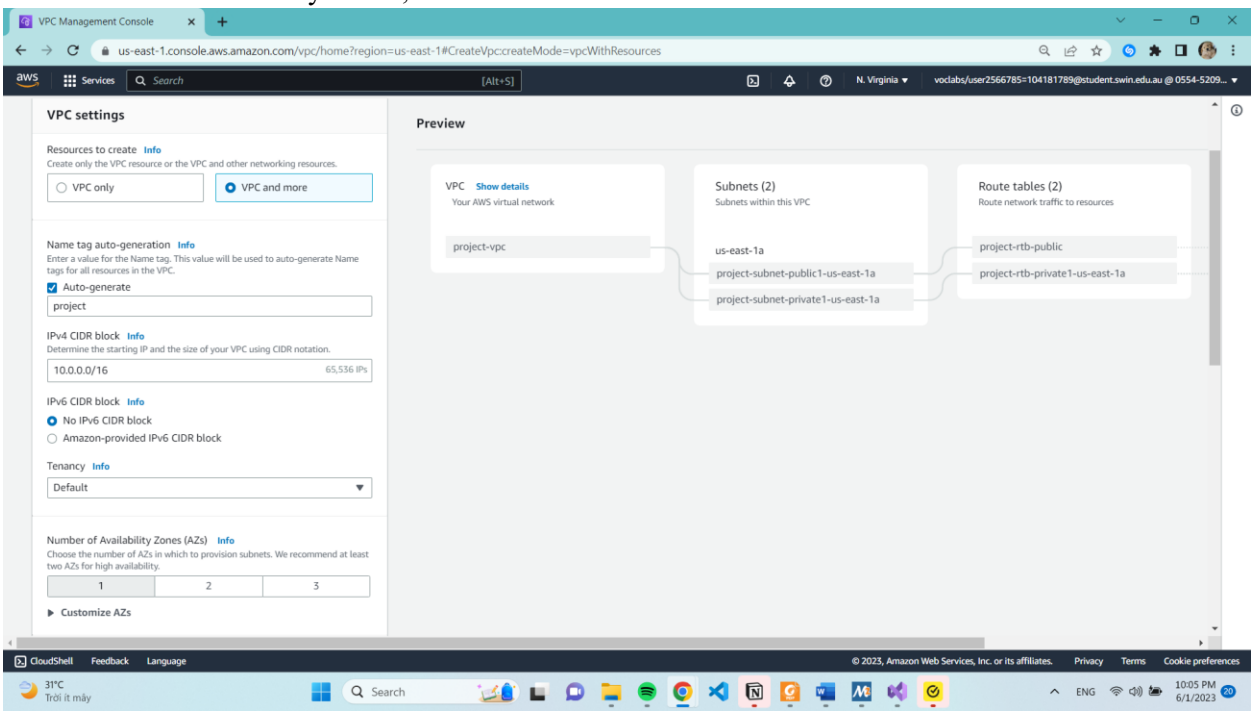
6. Begin creating a VPC

- In the top right of the screen, verify that N. Virginia (us-east-1) is the region.
- Choose the VPC dashboard link which is also towards the top left of the console.
- Next, choose Create VPC.

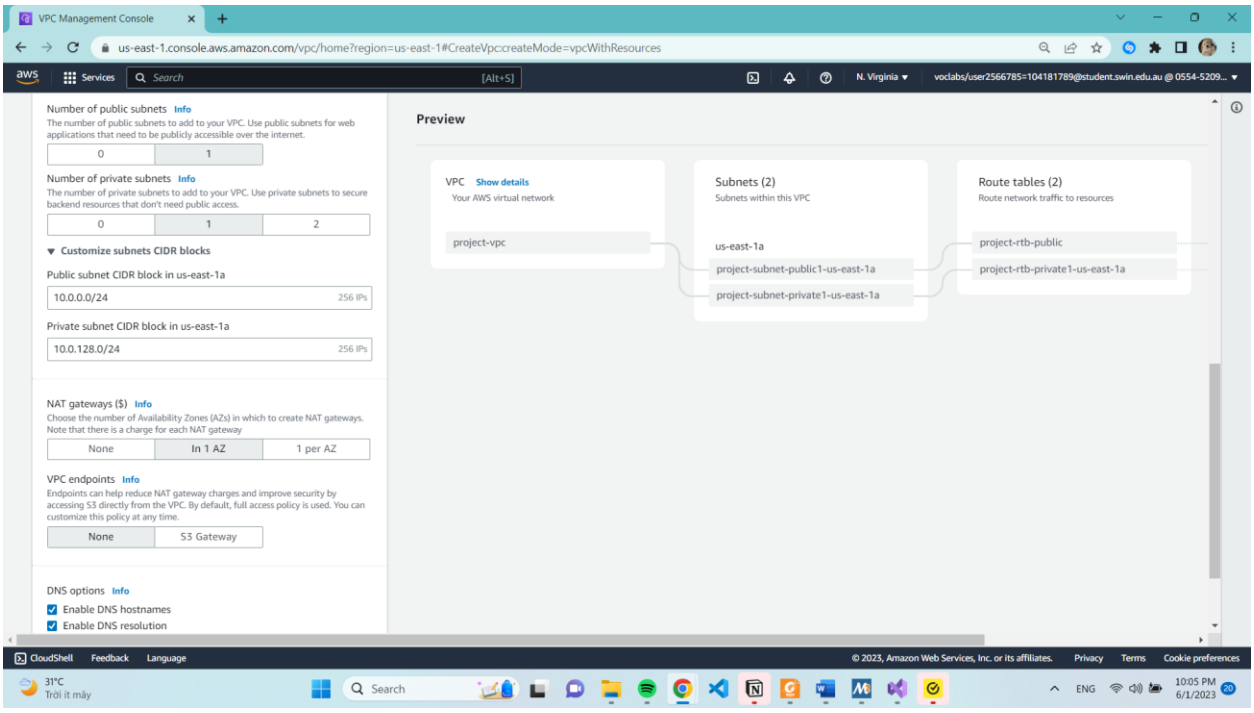


7. Configure the VPC details in the VPC settings panel on the left:

- Choose VPC and more.
- Under Name tag auto-generation, keep Auto-generate selected, however change the value from project to lab.
- Keep the IPv4 CIDR block set to 10.0.0.0/16
- For Number of Availability Zones, choose 1.

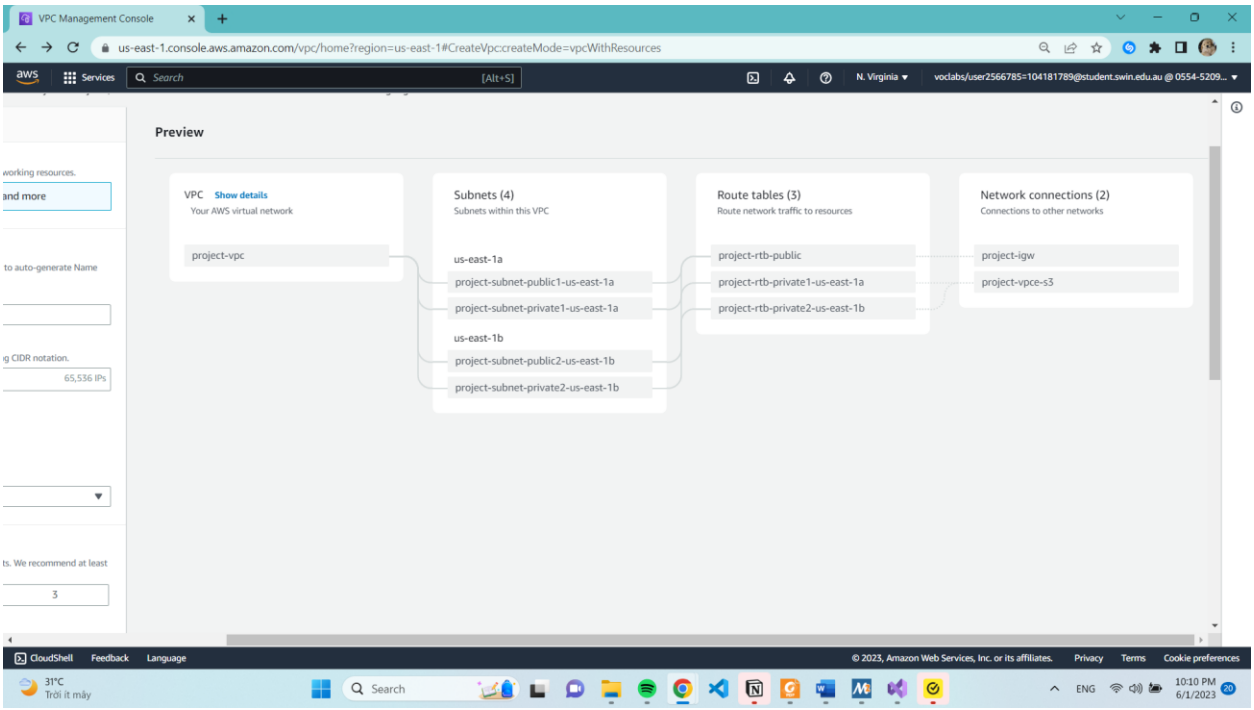


- For Number of public subnets, keep the 1 setting.
- For Number of private subnets, keep the 1 setting.
- Expand the Customize subnets CIDR blocks section
- Change Public subnet CIDR block in us-east-1a to 10.0.0.0/24
- Change Private subnet CIDR block in us-east-1a to 10.0.1.0/24
- Set NAT gateways to In 1 AZ.
- Set VPC endpoints to None.
- Keep both DNS hostnames and DNS resolution enabled.



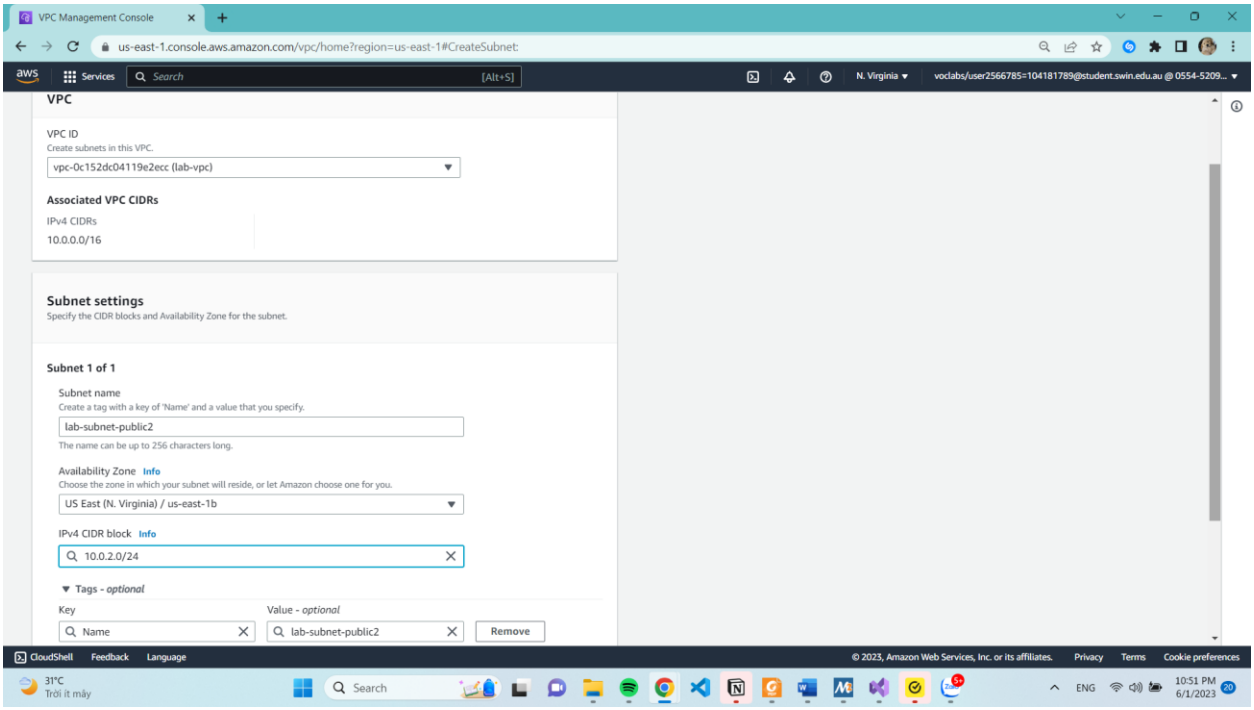
8. Confirm the settings I have configured.

- **VPC**: lab-vpc
- **Subnets:**
  - us-east-1a
- **Public subnet name**: lab-subnet-public1-us-east-1a
- **Private subnet name:** lab-subnet-private1-us-east-1a
- **Route table**
  - lab-rtb-public
  - lab-rtb-private1-us-east-1a
- **Network connections**
  - lab-igw
  - lab-nat-public1-us-east-1a



12. Choose **Create subnet** then configure:

- **VPC ID**: lab-vpc (select from the menu).
- **Subnet name: l**ab-subnet-public2
- **Availability Zone:** Select the second Availability Zone (for example, us-east-1b)
- **IPv4 CIDR block**: 10.0.2.0/24
  The subnet will have all IP addresses starting with **10.0.2.x.**

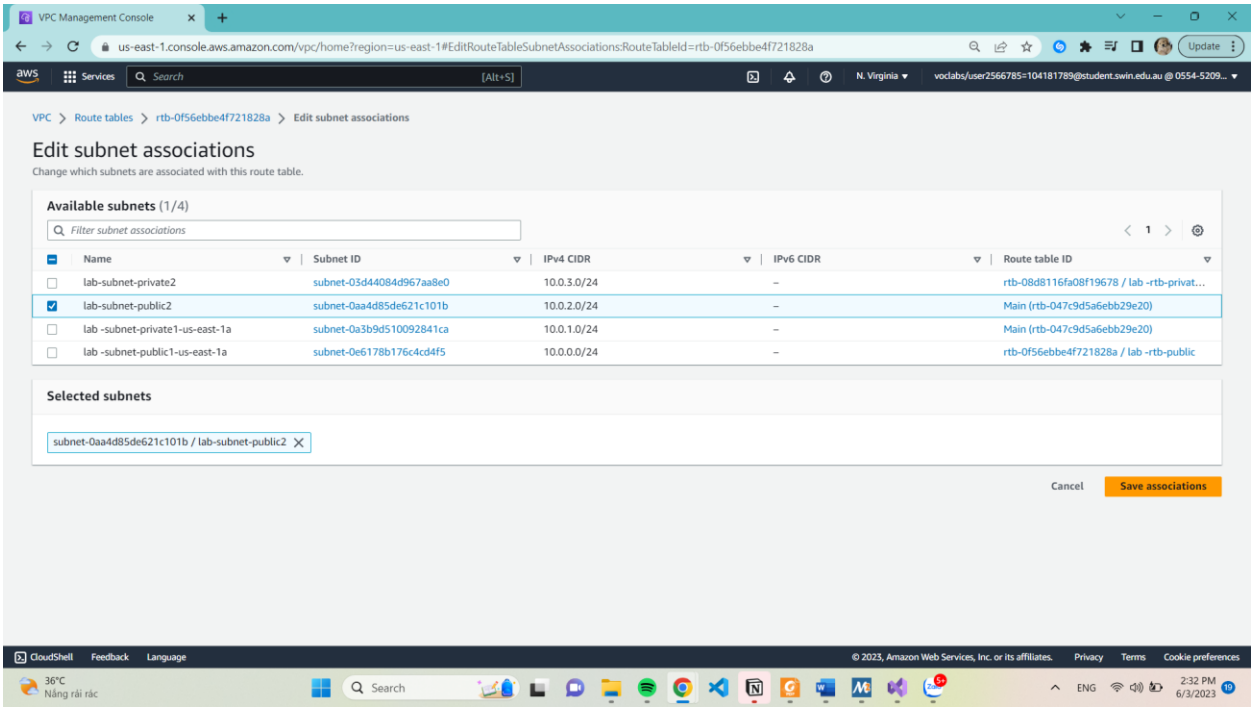


To Create another subnet, Choose Create subnet then configure:

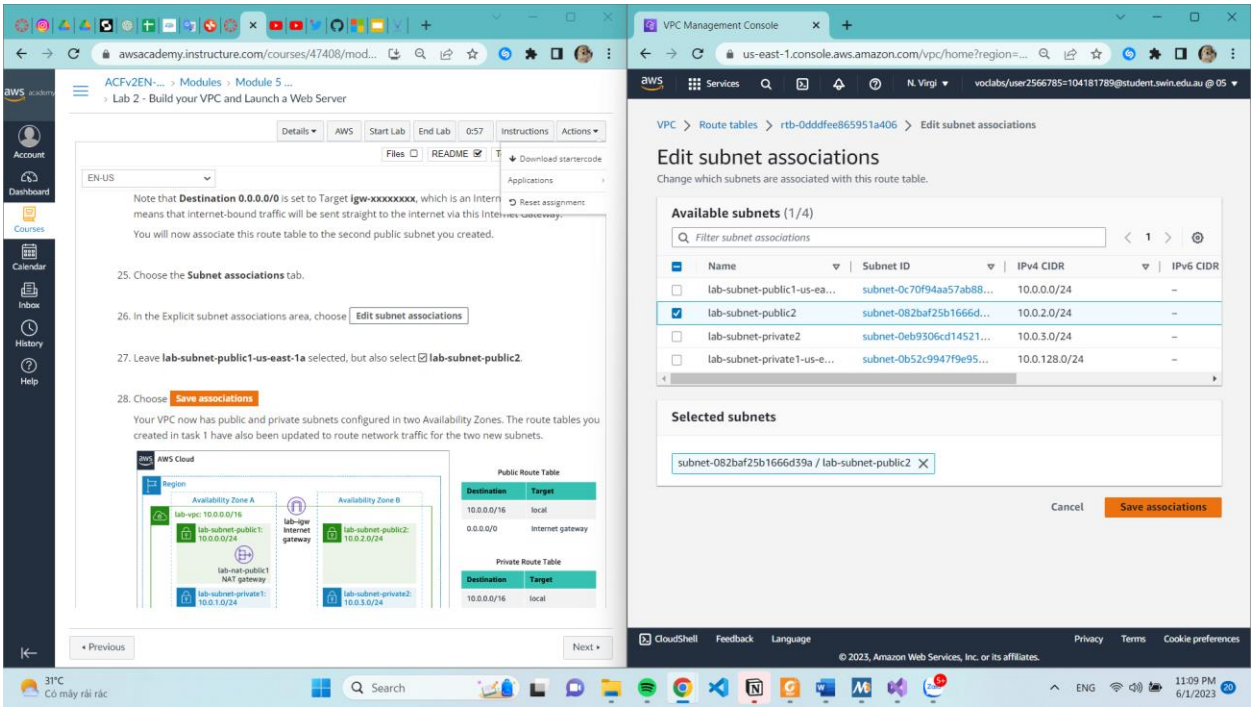
- **VPC ID**: lab-vpc
- **Subnet name**: lab-subnet-private2
- **Availability Zone:** Select the second Availability Zone (for example, us-east-1b)
- **IPv4 CIDR block:** 10.0.3.0/24

The subnet will have all IP addresses starting with **10.0.3.x.**

20-21. Edit subnet associations. -> Leave **lab-subnet-private1-us-east-1a** selected, but also select **lab-subnet-private2.**



27.



Task 3: Create a VPC Security Group

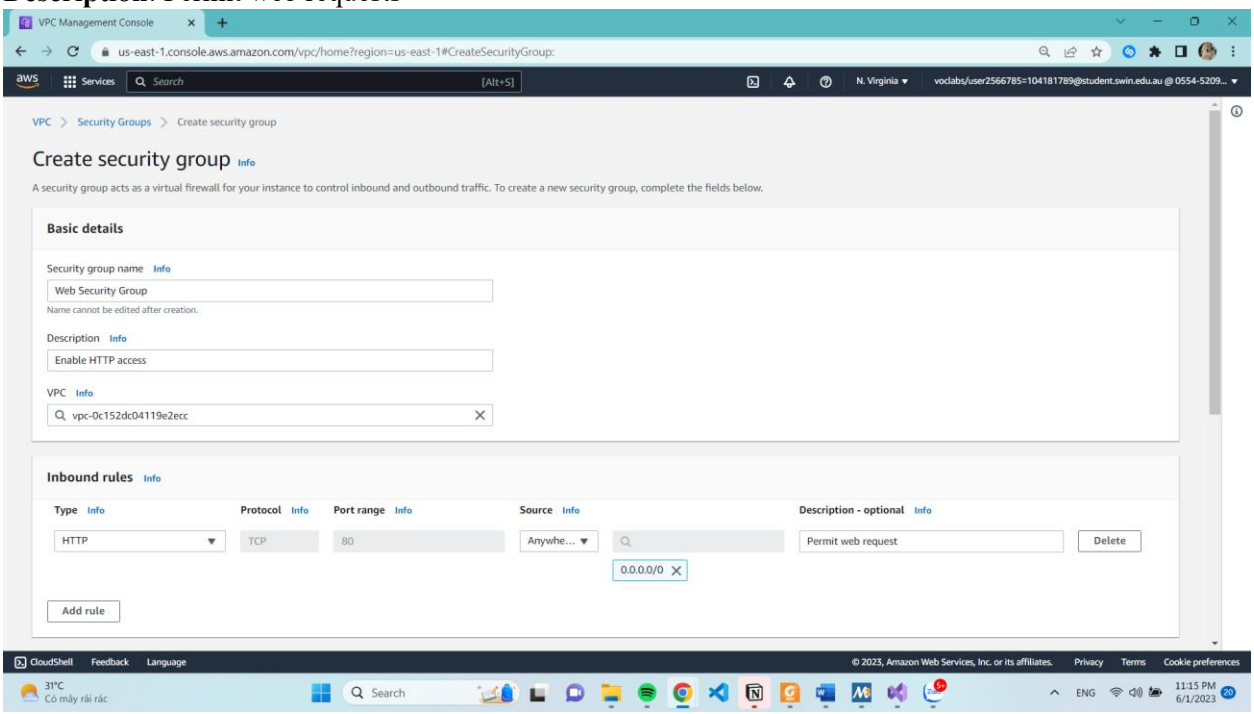
30.

Choose **Create security group** and then configure:

- **Security group name**: Web Security Group
- **Description:** Enable HTTP access
- **VPC:** choose the X to remove the currently selected VPC, then from the drop down list choose **lab-vpc**

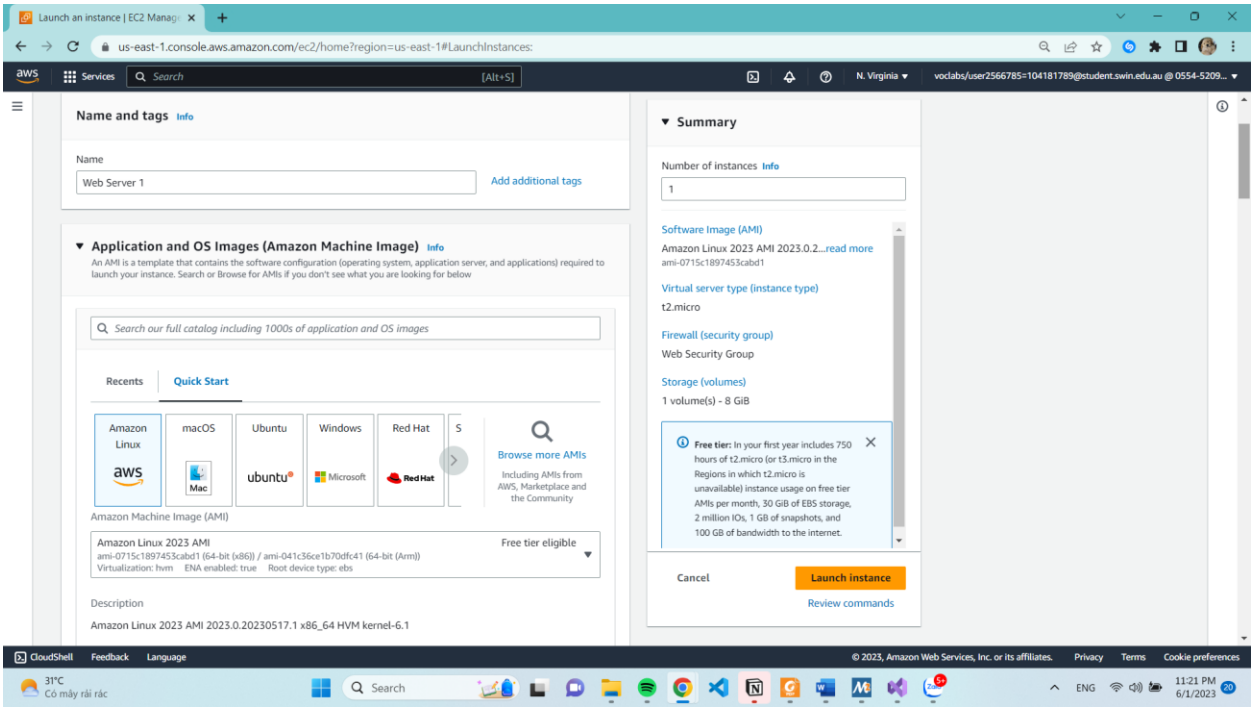
31. Add Inbound rule

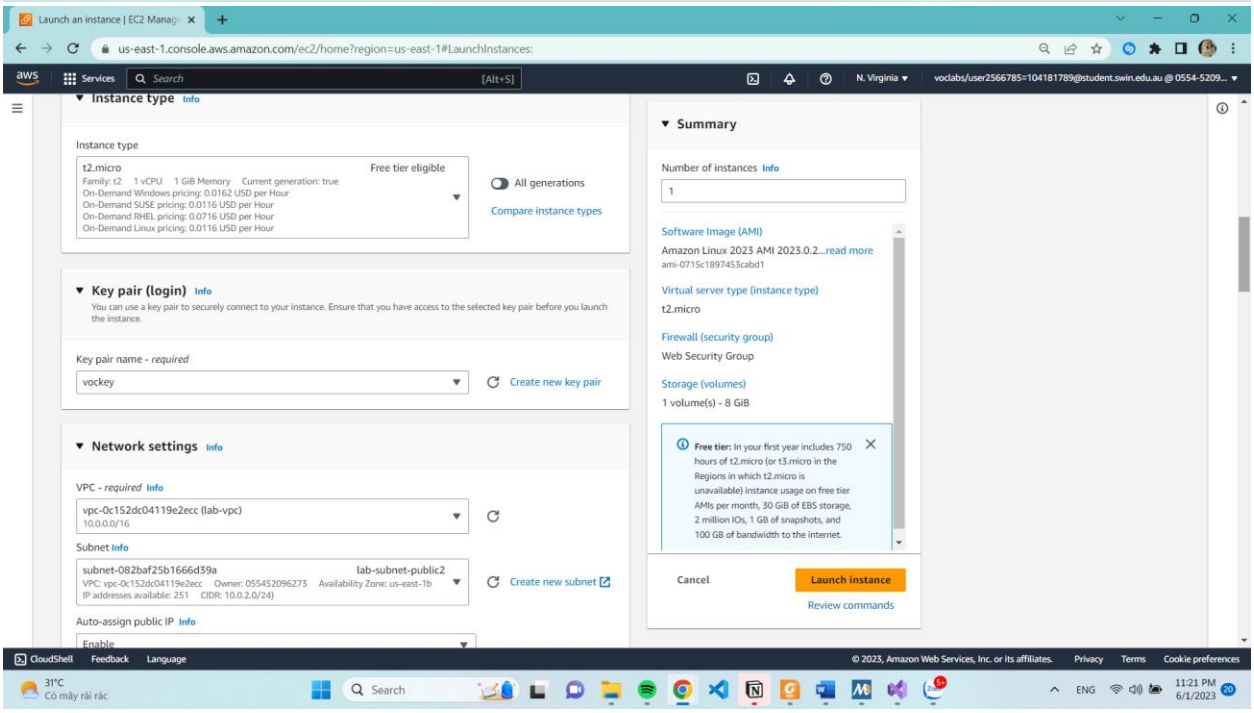
- **Type:** HTTP
- **Source**: Anywhere-IPv4
- **Description**: Permit web requests

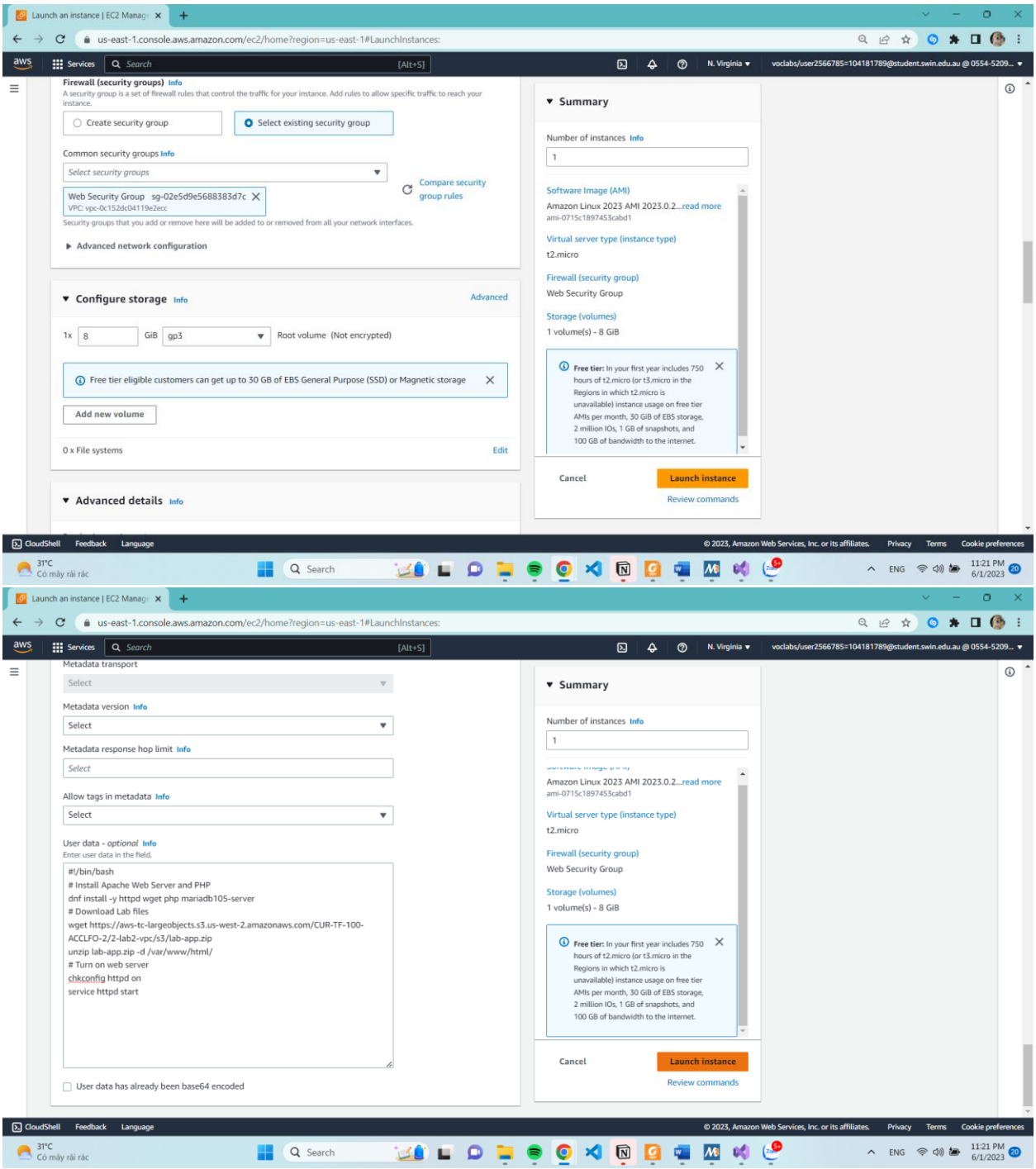


Task 4: Launch a Web Server Instance

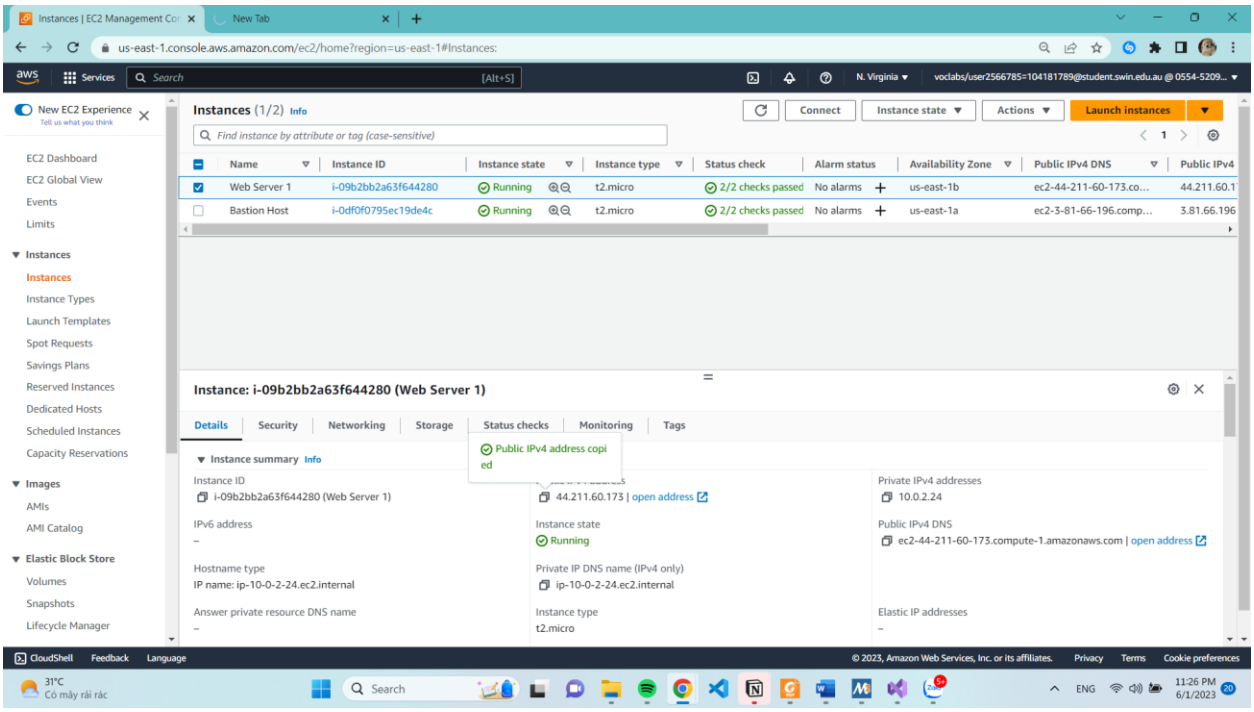
35-42. Configuring Web Server Instance






Launch an instance | EC2 Manag
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
Services
Search
[Alt+S]
N. Virginia
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
Common security groups Info
Select security groups
Web Security Group sg-02e5d9e5688383d7c
VPC: vpc-0c152dc04119e2ecc
Compare security group rules
Security groups that you add or remove here will be added to or removed from all your network interfaces.
Advanced network configuration
Configure storage Info
Advanced
1x 8 GiB gp3 Root volume (Not encrypted)
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage
Add new volume
0 x File systems
Edit
Advanced details Info
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2023 AMI 2023.0.2...read more
ami-0715c1897453cabd1
Virtual server type (instance type)
t2.micro
Firewall (security group)
Web Security Group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Launch instance
Review commands
CloudShell
Feedback
Language
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
31°C
Có mây rải rác
Search
ENG
11:21 PM
6/1/2023

Launch an instance | EC2 Manag
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
Services
Search
[Alt+S]
N. Virginia
Metadata transport
Select
Metadata version Info
Select
Metadata response hop limit Info
Select
Allow tags in metadata Info
Select
User data - optional Info
Enter user data in the field.
#!/bin/bash
Install Apache Web Server and PHP
dnf install -y httpd wget php mariadb105-server
Download Lab files
wget https://aws-tc-largeobjects.s3.us-west-2.amazonaws.com/CUR-TF-100-ACCLFO-2/2-lab2-vpc/s3/lab-app.zip
unzip lab-app.zip -d /var/www/html/
Turn on web server
chkconfig httpd on
service httpd start
User data has already been base64 encoded
Summary
Number of instances Info
1
Amazon Linux 2023 AMI 2023.0.2...read more
ami-0715c1897453cabd1
Virtual server type (instance type)
t2.micro
Firewall (security group)
Web Security Group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Launch instance
Review commands
CloudShell
Feedback
Language
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
31°C
Có mây rải rác
Search
ENG
11:21 PM
6/1/2023



47. Copy the **Public IPv4 DNS** value then Open a new web browser tab, paste the Public DNS value and press Enter.