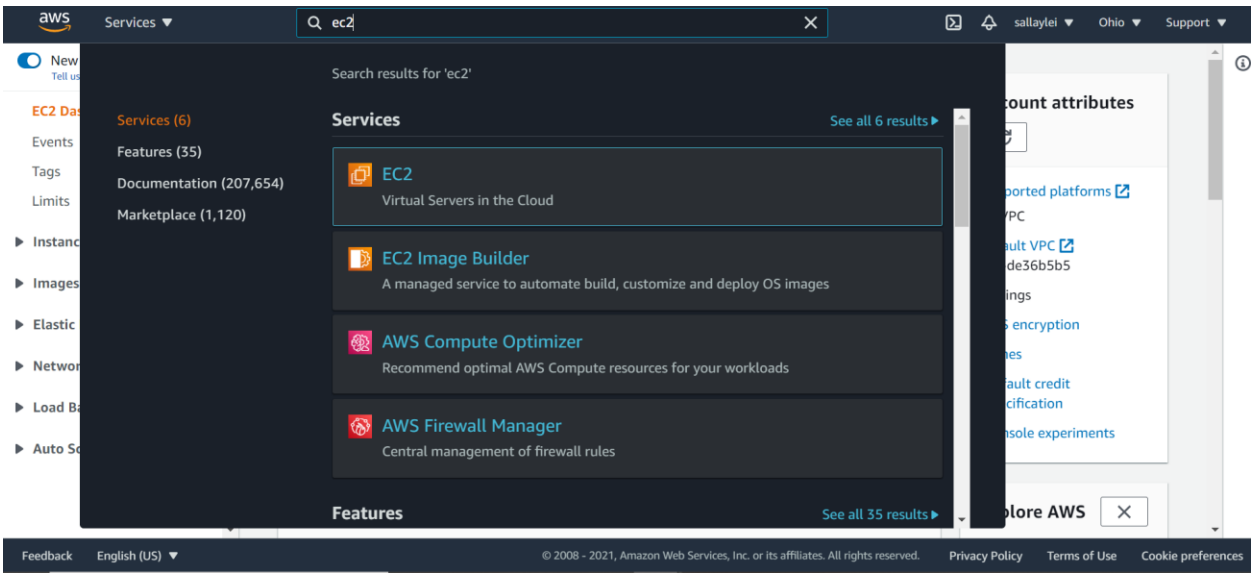
EC2 Exercise 1.1: Host a Static Webpage Part 1

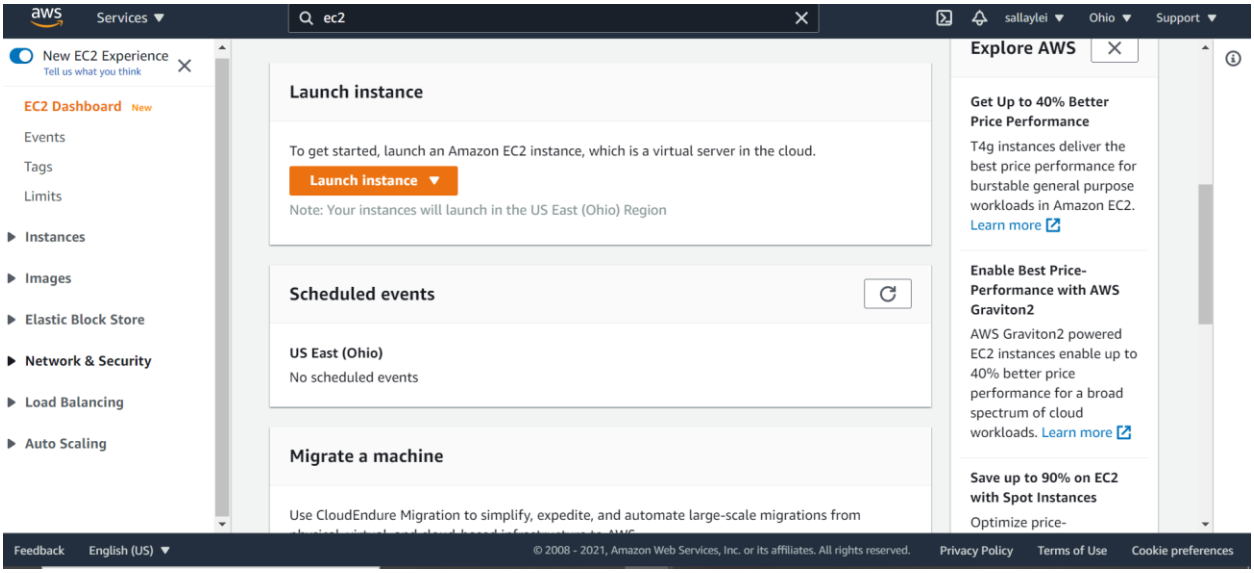
Launch an EC2 instance:

Get EC2 ready

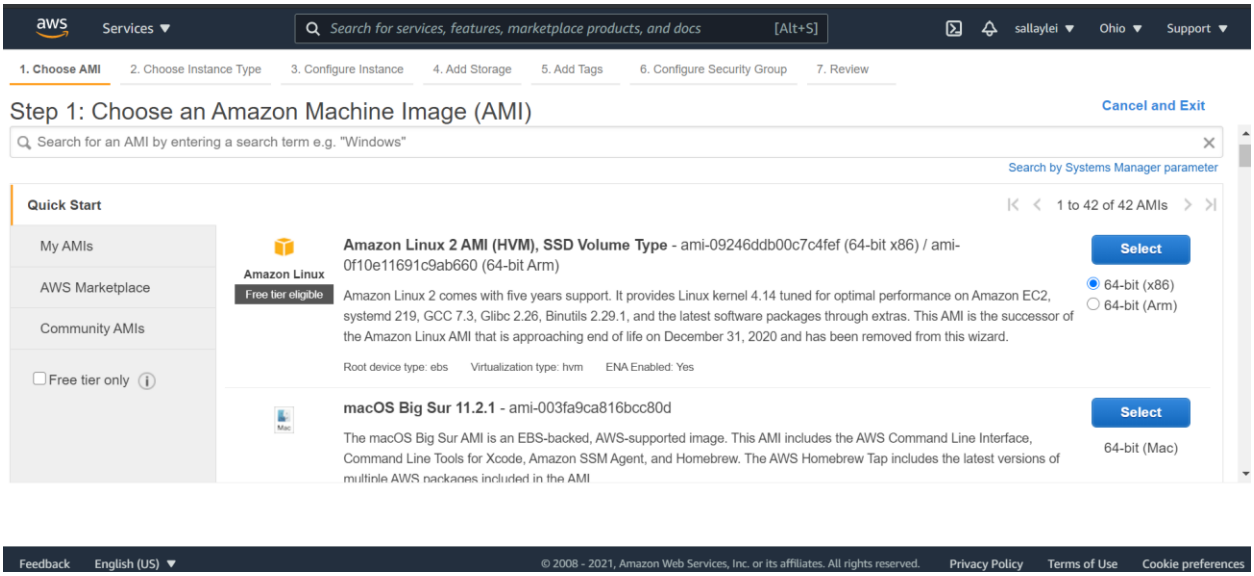
- Create an AWS account with the link below if you haven't
- https://aws.amazon.com/
- Sign into the AWS console and search for "EC2"



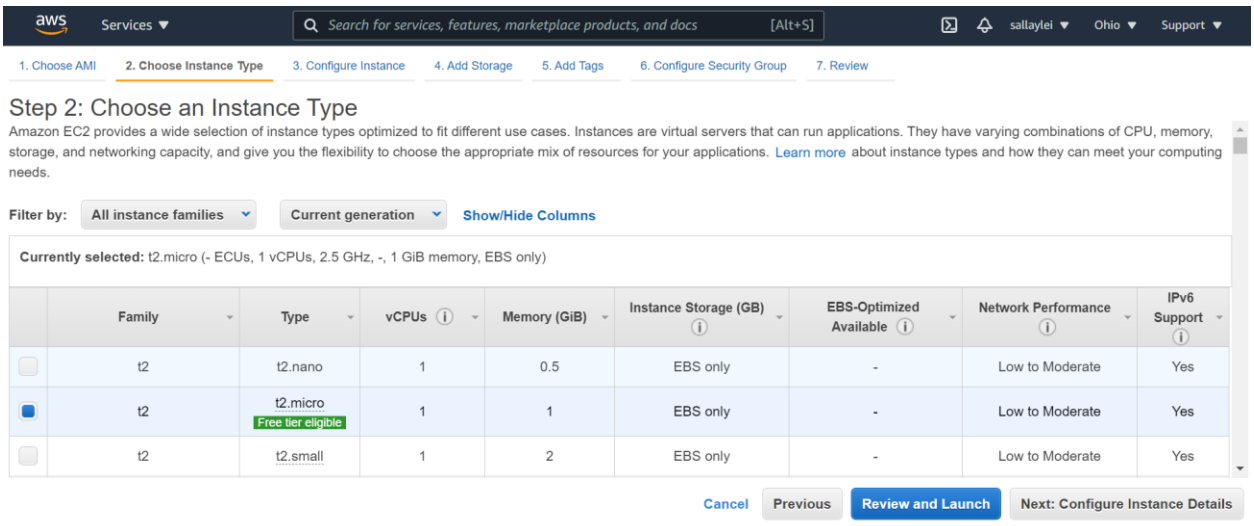
- Navigate to the EC2 dashboard and click "Launch Instance"



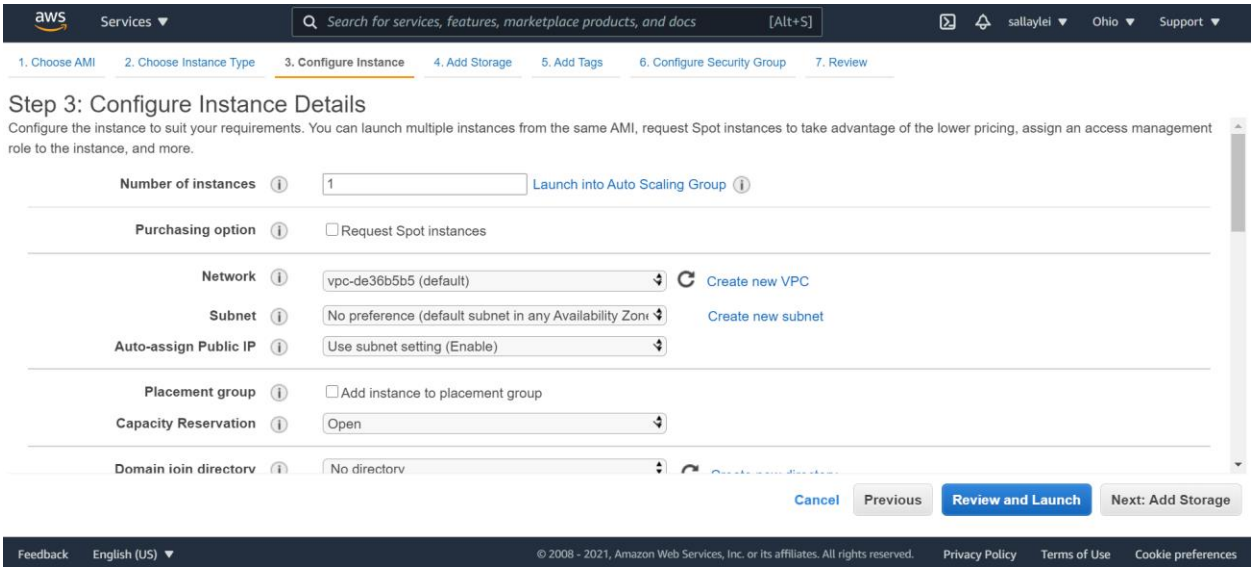
1. Choose AMI
    - Choose a free-tier eligible Linux option (Amazon Linux 2 AMI, SSD Volume Type) and click “Select”



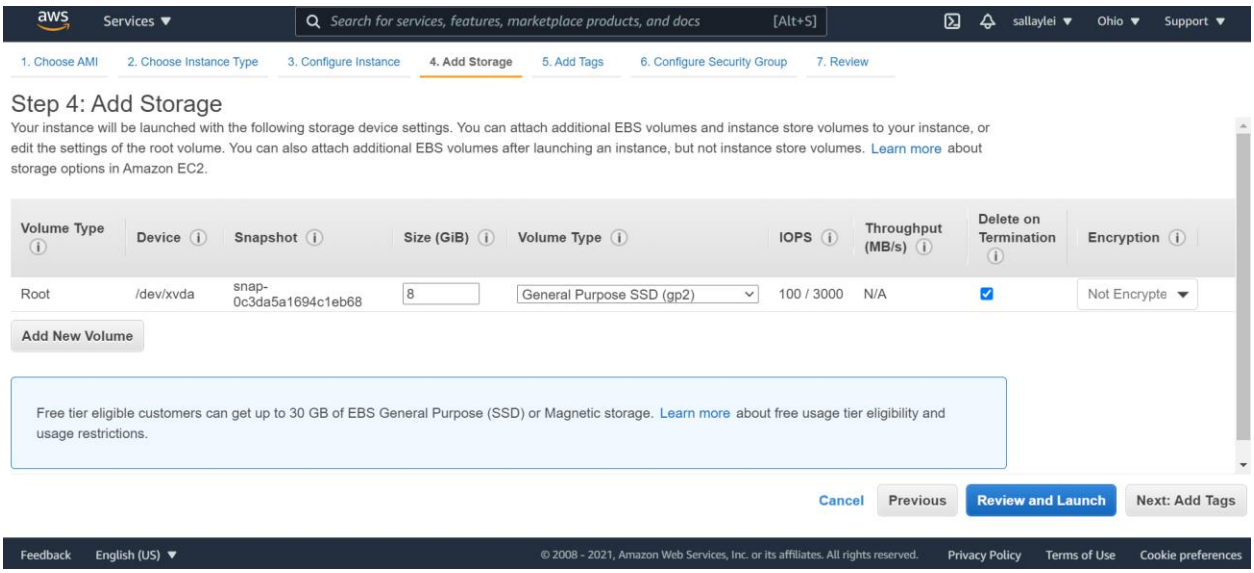
2. Choose instance type
    - Choose the option marked as free tier eligible. Click next to configure instance details



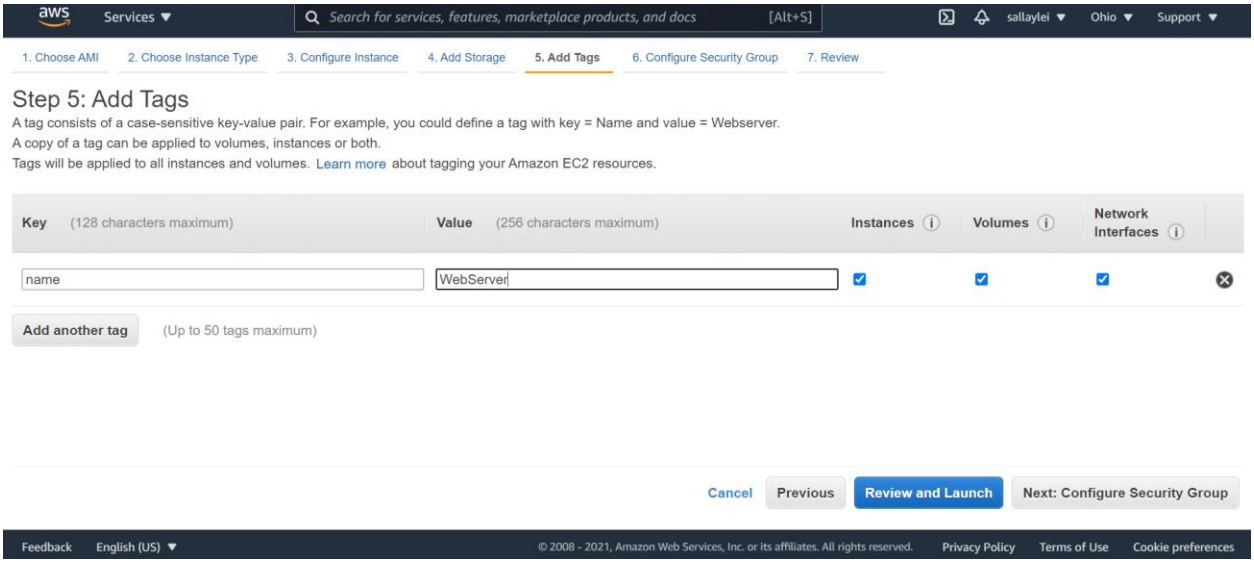
3. Configure instance
    - In this step, you will accept all of the default options, so no need to choose anything here. Click next to add storage.



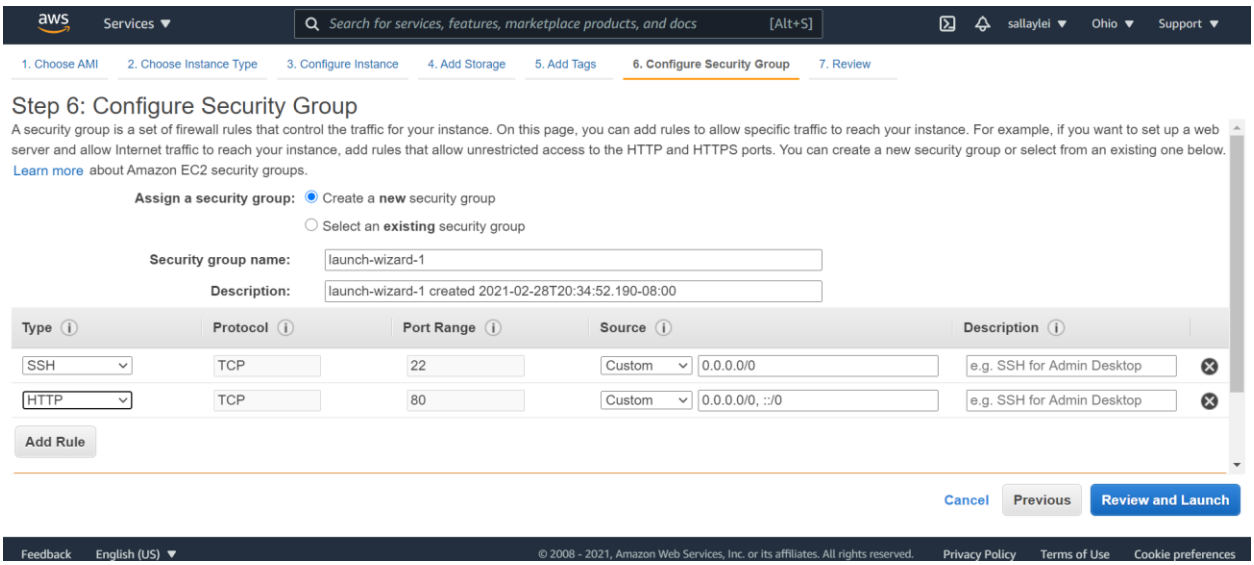
4. Add storage
    - We will accept the default options again. Click next to add tags.



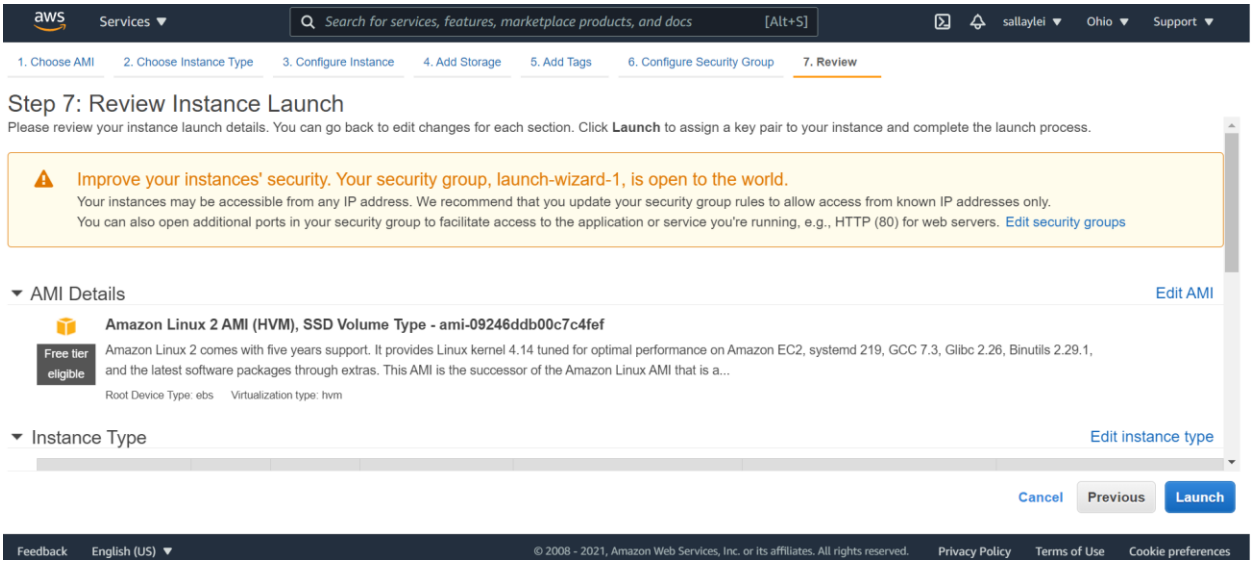
5. Add Tags
    - Click Add Tag— enter “name” for the key and “WebServer” for the value.
    - Click Next to Configure the Security Group



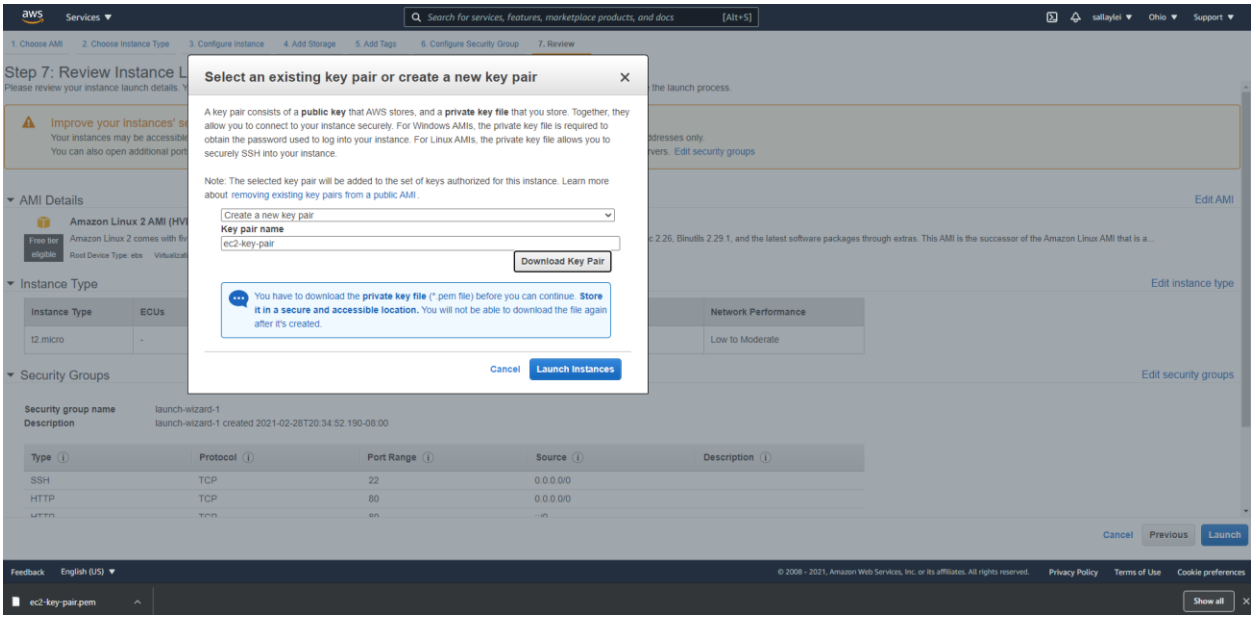
6. Configure security group
    - Select “Create a new security group”
    - Keep the SSH rule that is already listed
    - Click “add rule”. Select HTTP for the type and keep everything else as it is
    - Click review and launch



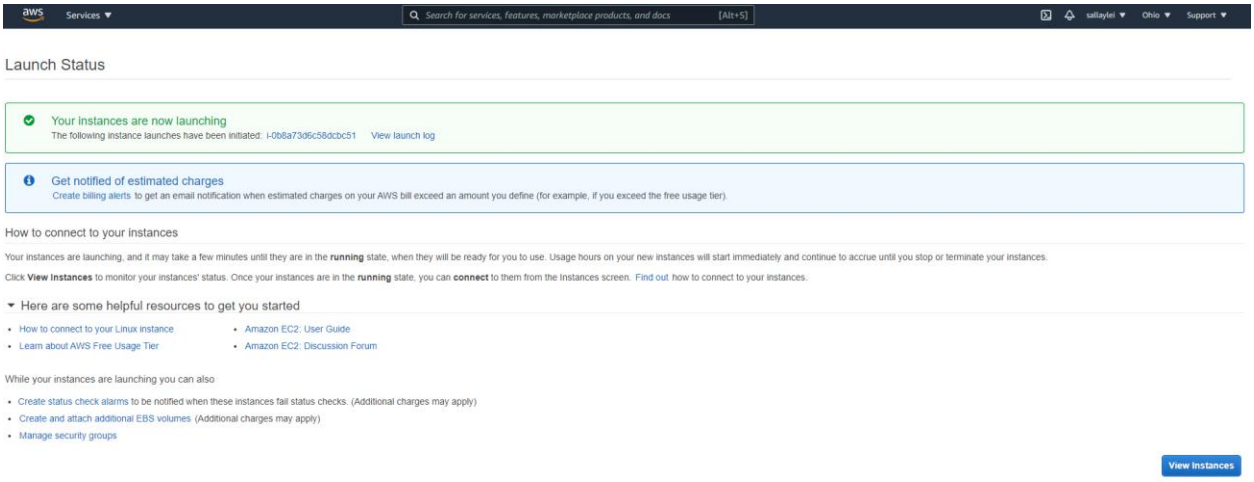
7. Review
    - Ignore the security warning and click Launch



- A pop-up window will appear, select ‘Create a new key pair
- Give the Key Pair a name — ‘ec2-key-pair’
- Click Download Key Pair
- Click Launch Instances



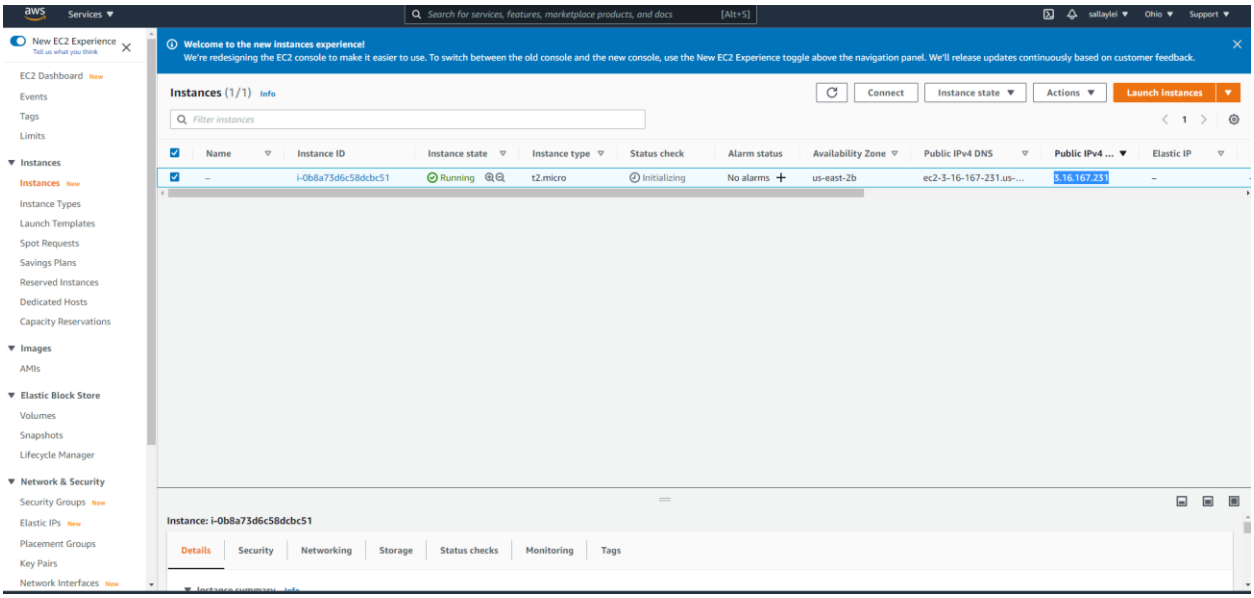
- Click View Instance to navigate back to the EC2 dashboard



EC2 Exercise 1.1: Host a Static Webpage Part 2

SSH into the EC2 instance and Install a Web Server

- You can your new instance listed on the EC2 dashboard. Wait until the Instance State is 'running'
- Selecting the instance (click the button next to the instance) displays information about the instance below. In this area, you will see the public IPv4 IP address of your instance.
- If you are on Mac, copy it and use it in the next step where you do ssh -i



If you are on Windows, please scroll down until you see **Windows**

If you are on **Mac**, please follow the step below:

- First, save the downloaded key-pair .pem file to a directory of your choice
- Navigate to the terminal and do the command below to change the permission
- chmod 400 *<path_to_key_pair_file>*
- Then, do the command below
- ssh -i *<path_to_key_pair_file>* ec2-user@*<public_ip_from_dashboard>*
- Type yes to continue. (At this point, your terminal is now interacting directly with your EC2 instance (aka your "virtual laptop") — rather than your physical machine)

Then, elevate your privilege by doing the command below:

- `sudo su`

Then, Update all of the packages on the instance by doing the command below:

- yum update -y

Then, install an apache webserver by doing the command below:

- yum install httpd -y

Then, Start the webserver by doing the command below:

- service httpd start

Then, Configure the web server to restart if it gets stopped by doing the command below:

- chkconfig httpd on

Add a static HTML file to be served:

- By default, the apache web server will display the index.html file found in /var/www/html directory in the root path of your website.

1. Navigate to the directory:
    - cd /var/www/html
2. Manually create an index.html file in this directory
    - nano index.html
3. Add valid html to the file
    - <html><body>My first EC2 instance</body></html>

- To exit the nano editor *crtl+X*, then type *Y* for yes, then press *Enter*

4. Make sure that the file has content by doing the command below:
    - cat index.html

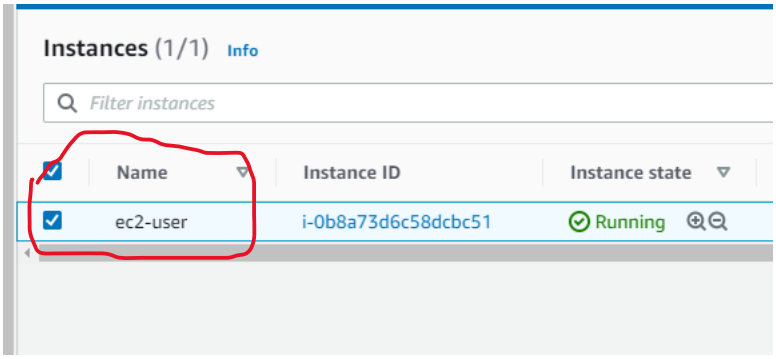
❖ Navigate back to the EC2 dashboard in the AWS console and copy the **Public DNS(IPV4)** of your instance into your clipboard. Paste that address into your browser. If all went well, you will see the html that you just created! (This will take some time, refresh the page a couple times if you don't see the html content.) (You can see the final result in the end of this document.)

❖ To clean up, navigate to the EC2 dashboard, select your instance, and click on Actions. Select Instance State → Terminate. Confirm that you want to terminate, and you're done. This will automatically kick you out of the SSH session in your terminal.

Windows-please follow the steps below:

- https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/putty.html
- Click into the above link and follow the instructions only on "*Convert your private key using **PuTTYgen***" and "*Connect to your Linux instance*"

- In the "*Connect to your Linux instance*" part where you need to enter <my-instance-user-name>@<my-instance-public-dns-name>, you can put **ec2-user** for <my-instance-user-name>@, but remember to go back to the EC2 dashboard and put ec2-user for the **Name** as well**.**



After you successfully SSH into the ec2 instance, please do the following:

Elevate your privilege by doing the command below:

- `sudo su`

Then, Update all of the packages on the instance by doing the command below:

- yum update -y

Then, install an apache webserver by doing the command below:

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❖ Navigate back to the EC2 dashboard in the AWS console and copy the **Public DNS(IPV4)** of your instance into your clipboard. Paste that address into your browser. If all went well, you will see the html that you just created! (This will take some time, refresh the page a couple times if you don't see the html content.) (You can see the final result in the end of this document.)

❖ To clean up, navigate to the EC2 dashboard, select your instance, and click on Actions. Select Instance State → Terminate. Confirm that you want to terminate, and you're done. This will automatically kick you out of the SSH session in your terminal.

The final result should be the same as below: