Get Started with Amazon EC2 Linux Instances

Use this tutorial to get started with Amazon Elastic Compute Cloud (Amazon EC2). You'll learn how to launch, connect to, and use an Amazon EC2 Linux instance. An instance is a virtual server in the AWS Cloud. With Amazon EC2, you can set up and configure the operating system and applications that run on your instance.

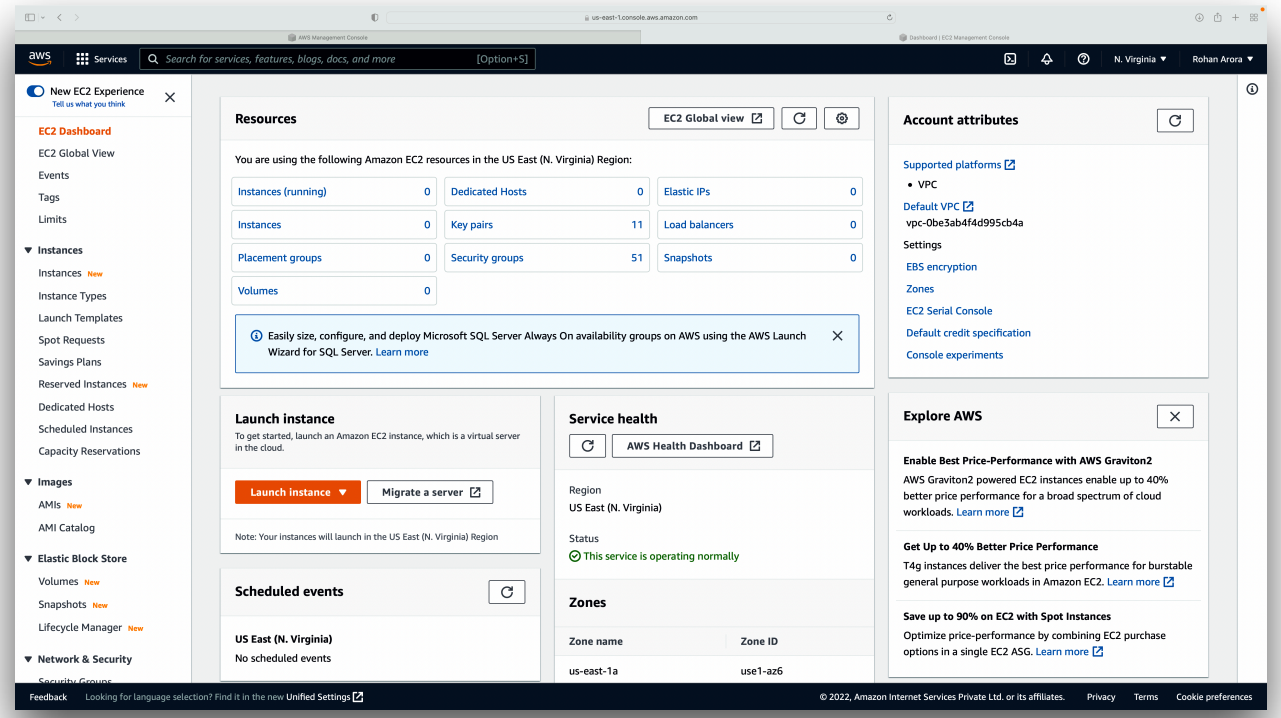
In this hands-on, you will launch an instance using defined parameters.You can accept any or all of the defaults, or configure an instance by specifying your own values for each parameter. The parameters are grouped in the launch instance wizard. The following instructions take you through each parameter group.

Parameters for instance configuration

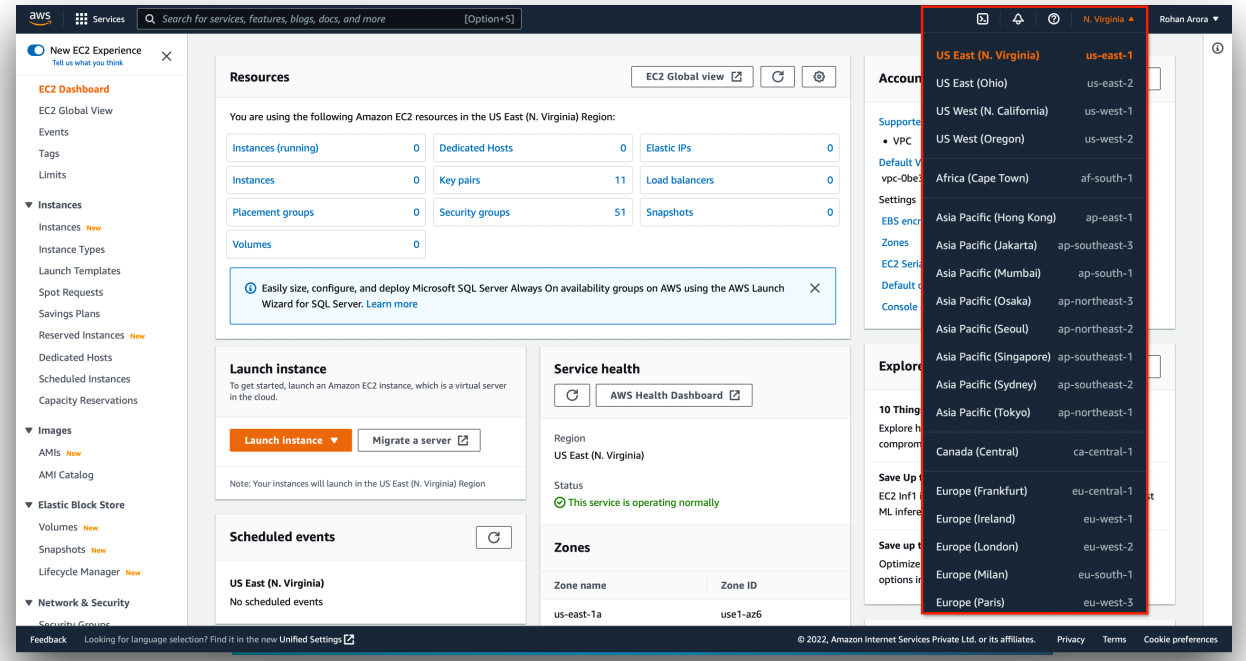
- Initiate instance launch
- Name and tags
- Application and OS Images (Amazon Machine Image)
- Instance type
- Key pair (login)
- Network settings
- Configure storage
- Advanced details
- Summary

Initiate instance launch

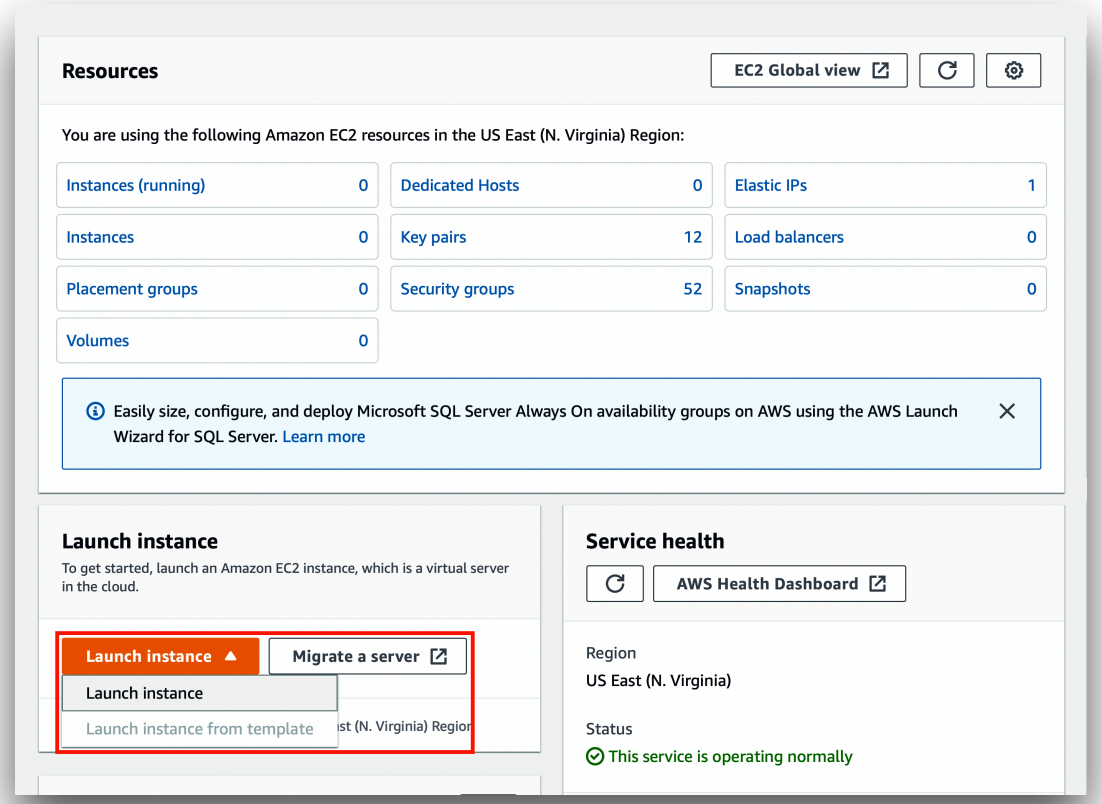
1. Open the Amazon EC2 console at https://console.aws.amazon.com/ec2/.



2. In the navigation bar at the top of the screen, the current AWS Region is displayed (for example, US East (N.Virginia)). Select a Region in which to launch the instance. This choice is important because some Amazon EC2 resources can be shared between Regions, while others can't.



3. From the Amazon EC2 console dashboard, choose **Launch instance**.

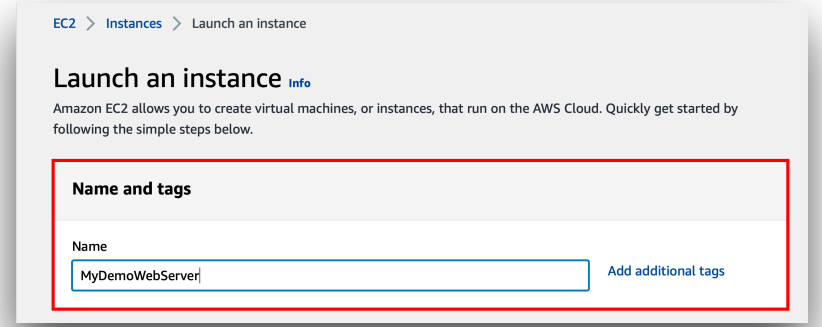


Name and tags

The instance name is a tag, where the key is **Name**, and the value is the name that you specify. You can tag the instance, the volumes, and elastic graphics. For Spot Instances, you can tag the Spot Instance request only.

4. Specifying an instance name and additional tags is optional.

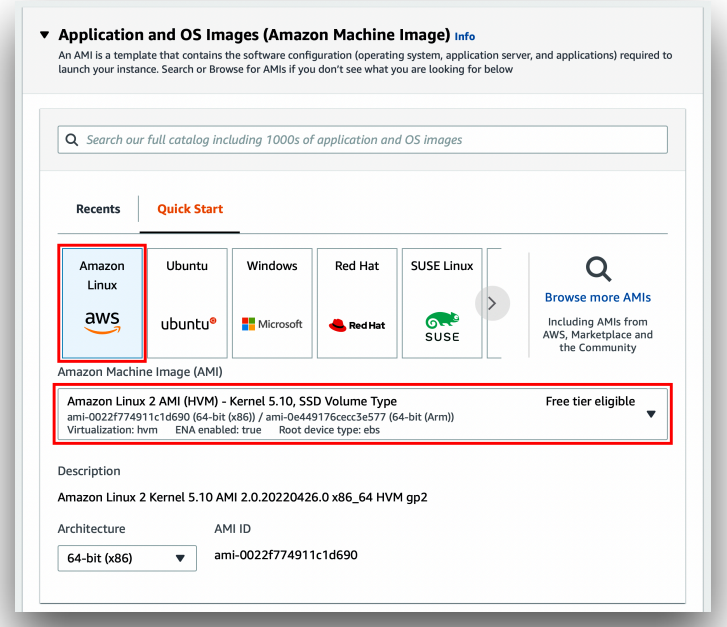
- For **Name**, enter a descriptive name for the instance. If you don't specify a name, the instance can be identified by its ID, which is automatically generated when you launch the instance.
- To add additional tags, choose **Add additional tags**. Choose **Add tag**, and then enter a key and value, and select the resource type to tag. Choose **Add tag** again for each additional tag to add.



Application and OS Images (Amazon Machine Image)

An Amazon Machine Image (AMI) contains the information required to create an instance. For example, an AMI might contain the software that's required to act as a web server, such as Linux, Apache, and your website.

5. Under **Application and OS Images (Amazon Machine Image)**, choose **Quick Start**, and then choose the **Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type** for your instance.

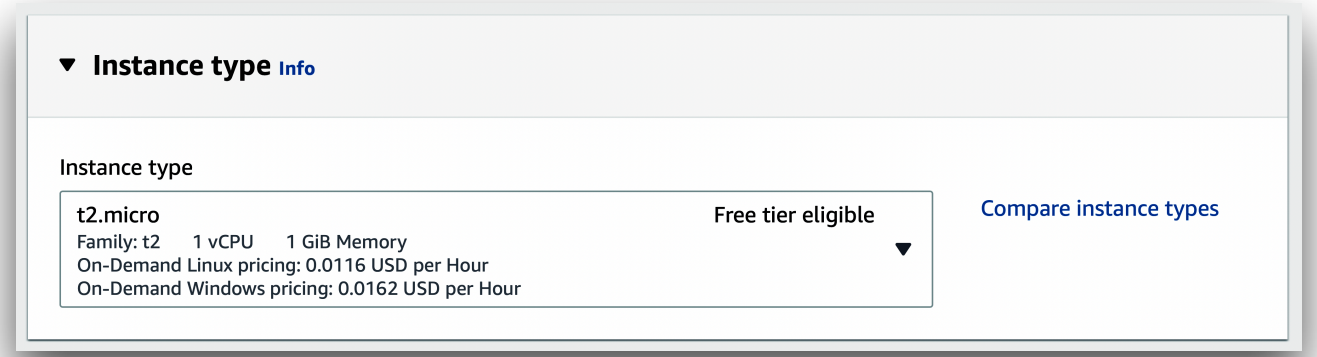


Instance type

The instance type defines the hardware configuration and size of the instance. Larger instance types have more CPU and memory.

6. For **Instance type**, select the instance type for the instance.

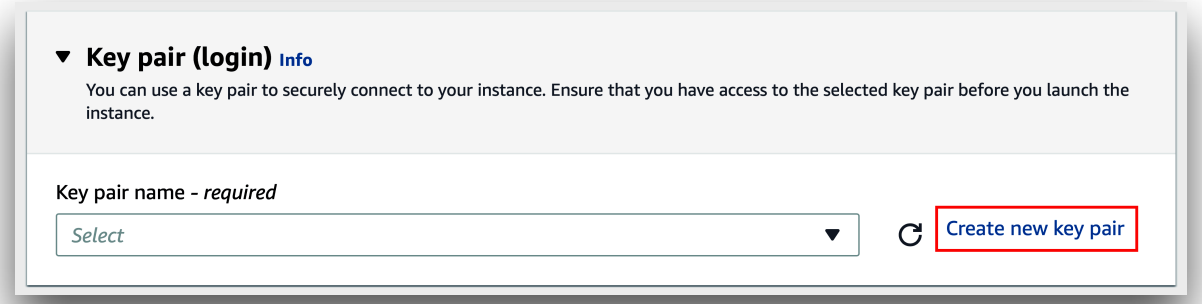
If your AWS account is less than 12 months old, you can use Amazon EC2 under the Free Tier by selecting the **t2.micro** instance type (or the **t3.micro** instance type in Regions where **t2.micro** is unavailable).



Compare instance types: You can compare different instance types by the following attributes: number of vCPUs, architecture, amount of memory (GiB), amount of storage (GB), storage type, and network performance.

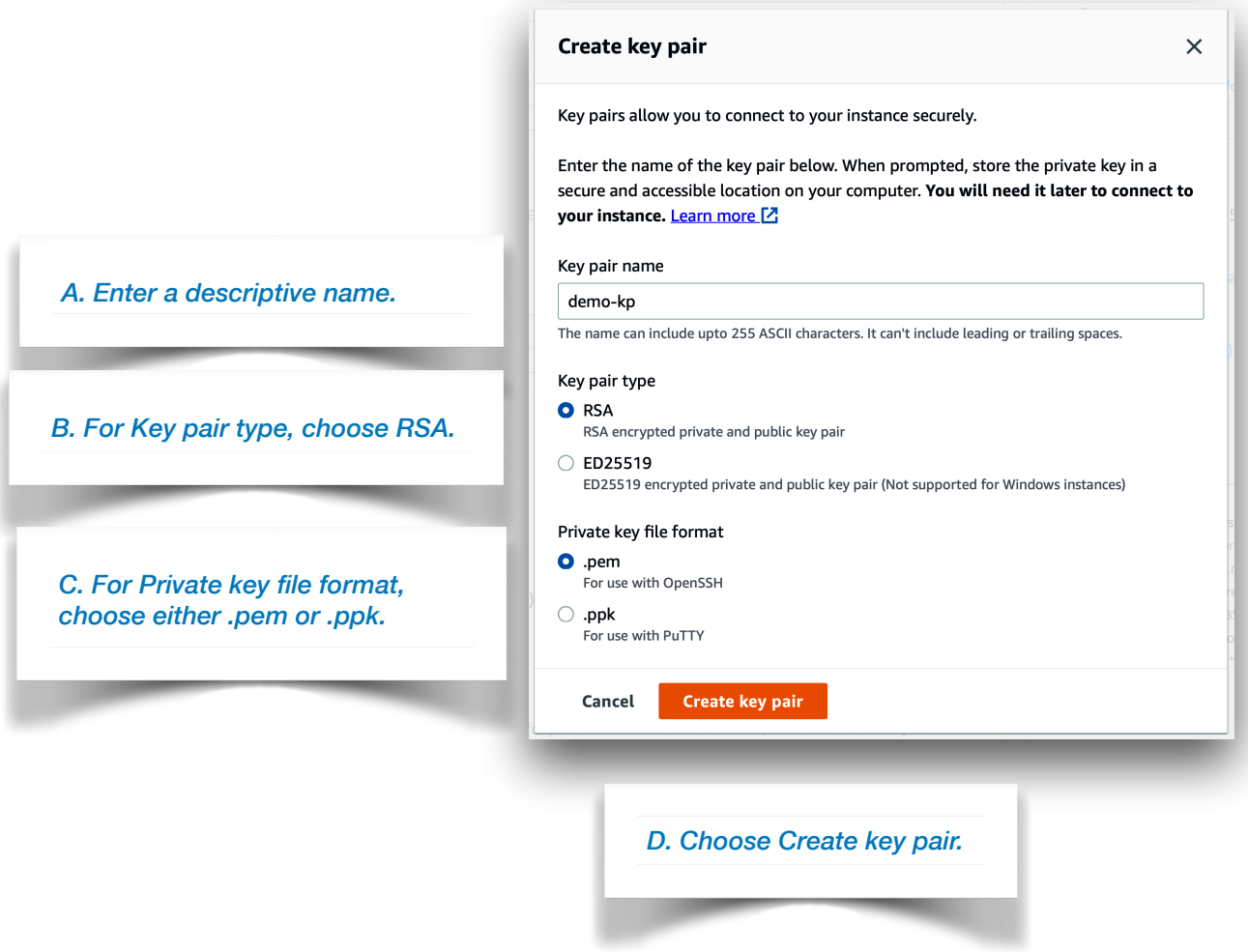
Key pair (login)

7. For **Key pair name**, choose an existing key pair, or choose **Create new key pair** to create a new one.

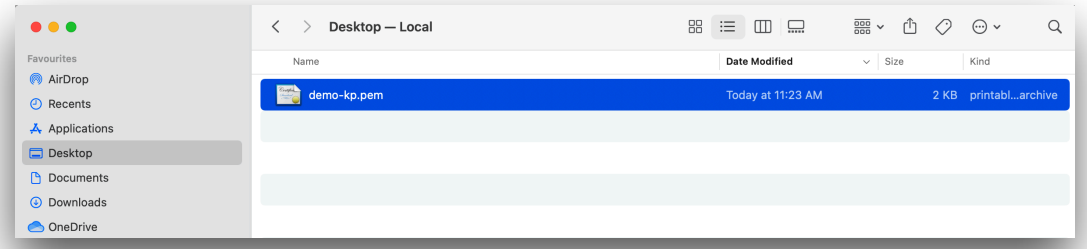


- For **Name**, enter a descriptive name for the key pair. Amazon EC2 associates the public key with the name that you specify as the key name. A key name can include up to 255 ASCII characters. It can't include leading or trailing space
- For **Key pair type**, choose either **RSA** or **ED25519**.
- For **Private key file format**, choose the format in which to save the private key. To save the private key in a format that can be used with OpenSSH, choose **pem**. To save the private key in a format that can be used with PuTTY, choose **ppk**.

- Choose **Create key pair**.



- The private key file is automatically downloaded by your browser. The base file name is the name that you specified as the name of your key pair, and the file name extension is determined by the file format that you chose. Save the private key file in a safe place.



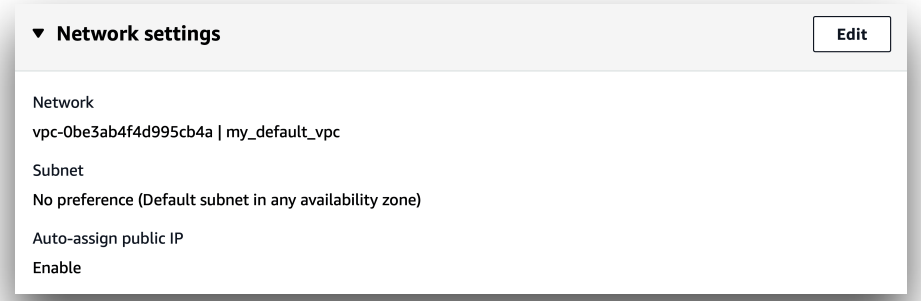
Network settings

8. Configure the networking settings as following:

- **Network:** Here the default VPC is selected automatically. You will be launching this EC2 instance in the same default VPC of the region you're working in.

- **Subnet**: You can launch an instance in a subnet associated with an Availability Zone, Local Zone, Wavelength Zone, or Outpost. For this hands-on, keep Subnet to **No preference (Default subnet in any availability zone)**.

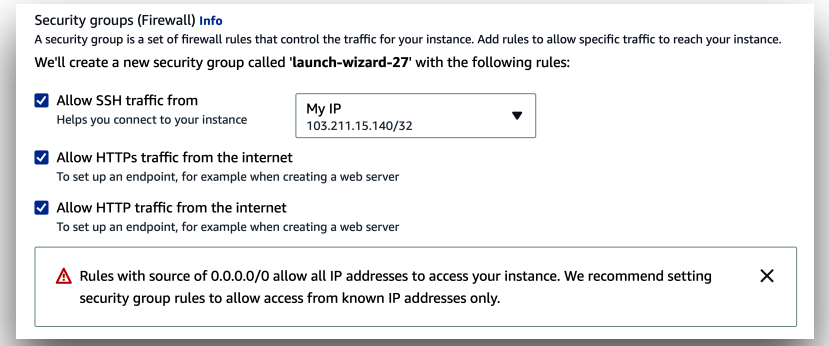
- **Auto-assign Public IP**: Specify whether your instance receives a public IPv4 address. By default, instances in a default subnet receive a public IPv4 address, and instances in a non-default subnet don't. You can select **Enable** or **Disable** to override the subnet's default setting. For this hands-on, keep **Auto-assign public IP** to **Enable**.



9. The launch instance wizard automatically defines the **launch-wizard-*x*** security group and creates an inbound rule to allow you to connect to your instance over SSH (port 22). Include the inbound rules as following:

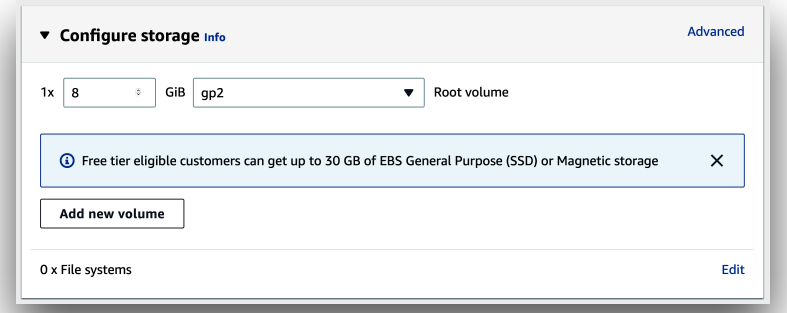
- To let the launch instance wizard add your computer's public IP address, choose **My IP**. However, if you are connecting through an ISP or from behind your firewall without a static IP address, you need to find out the range of IP addresses used by client computers.

- Select **Allow HTTPs traffic from the internet** and **Allow HTTP traffic from the internet** rules to allow internet traffic.



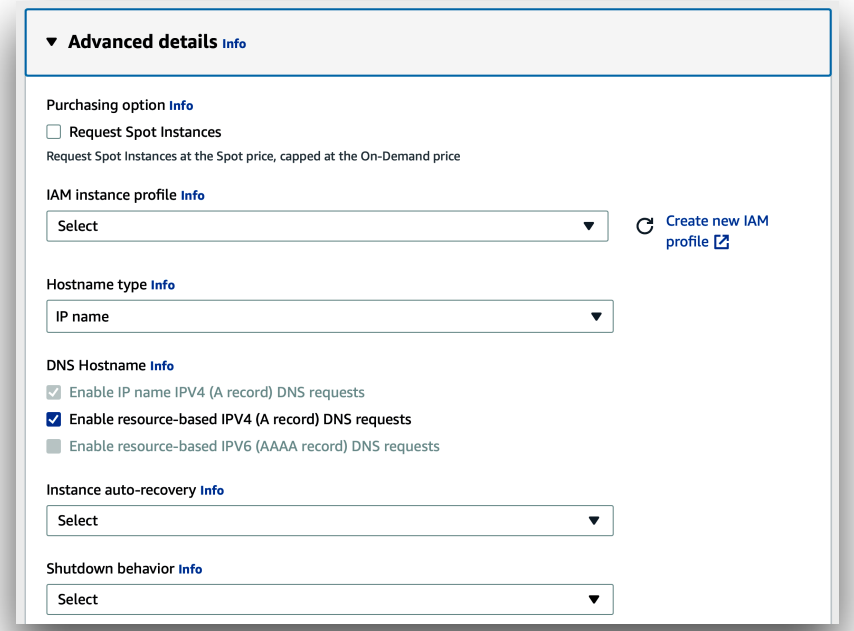
Configure storage

10. The AMI you selected includes one or more volumes of storage, including the root volume. By default, an 8 GiB of General Purpose SSD volume is attached to an Amazon Linux instance. For this hands-on, accept default values.

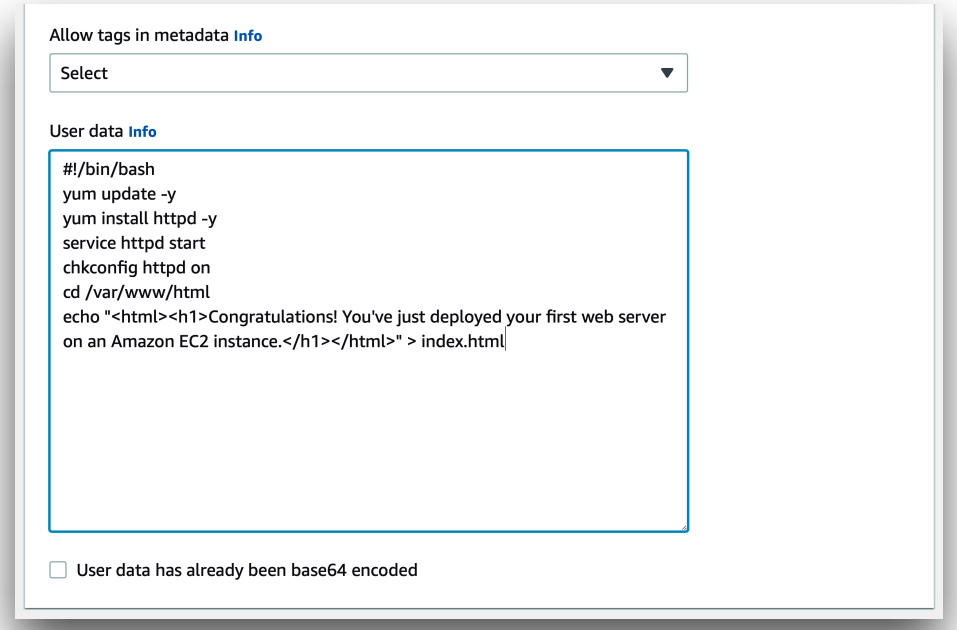


Advanced Details

11. For **Advanced details**, expand the section to view the fields and specify any additional parameters for the instance.



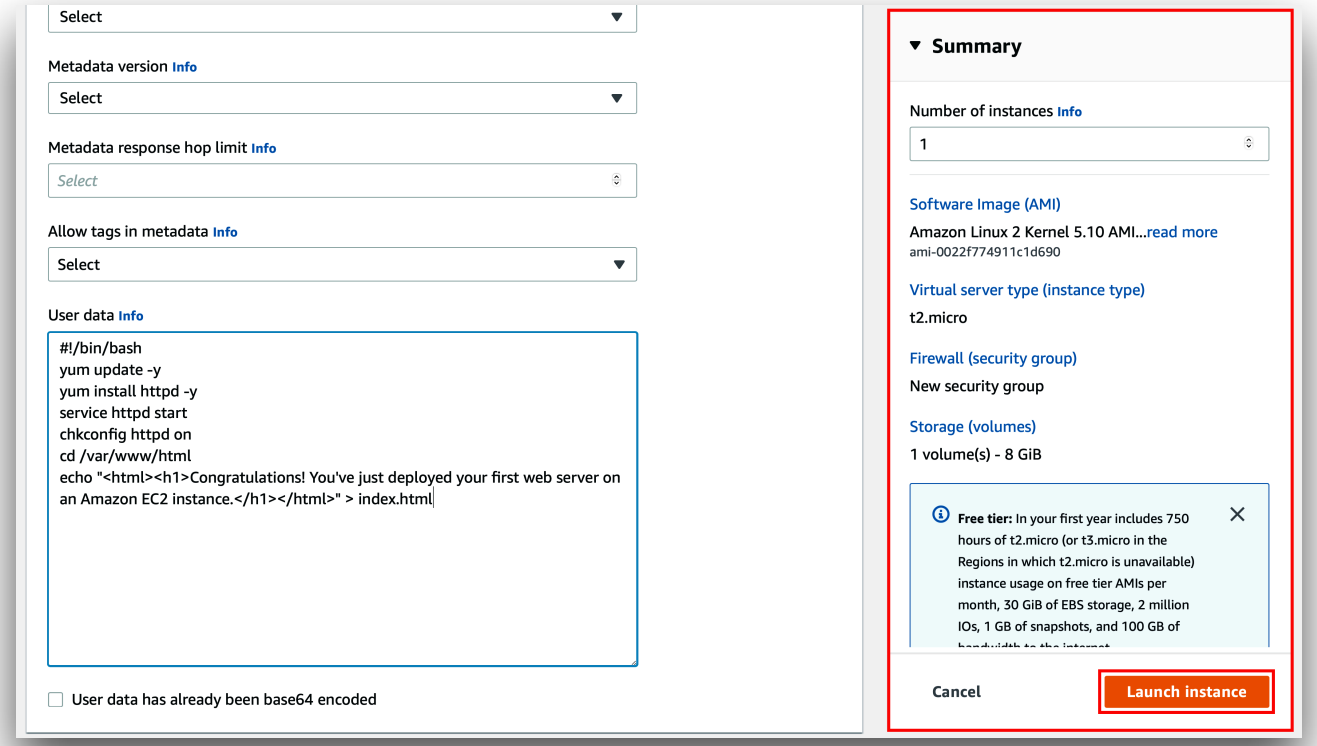
- Accept all default parameters here except for **User data**. You can specify user data to configure an instance during launch, or to run a configuration script.
- Click here to download the bash script which will be used launch an Apache PHP web application on this EC2 instance.
- Copy and paste the contents of the download script within User data field.



Summary

12. Use the **Summary** panel to specify the number of instances to launch, to review your instance configuration, and to launch your instances.

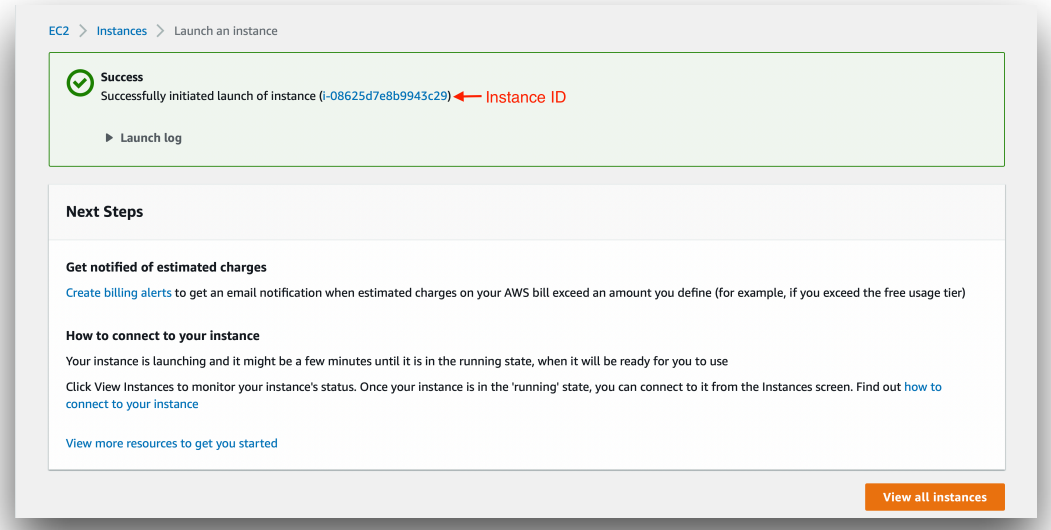
- Keep all settings to default and choose **Launch instance**.



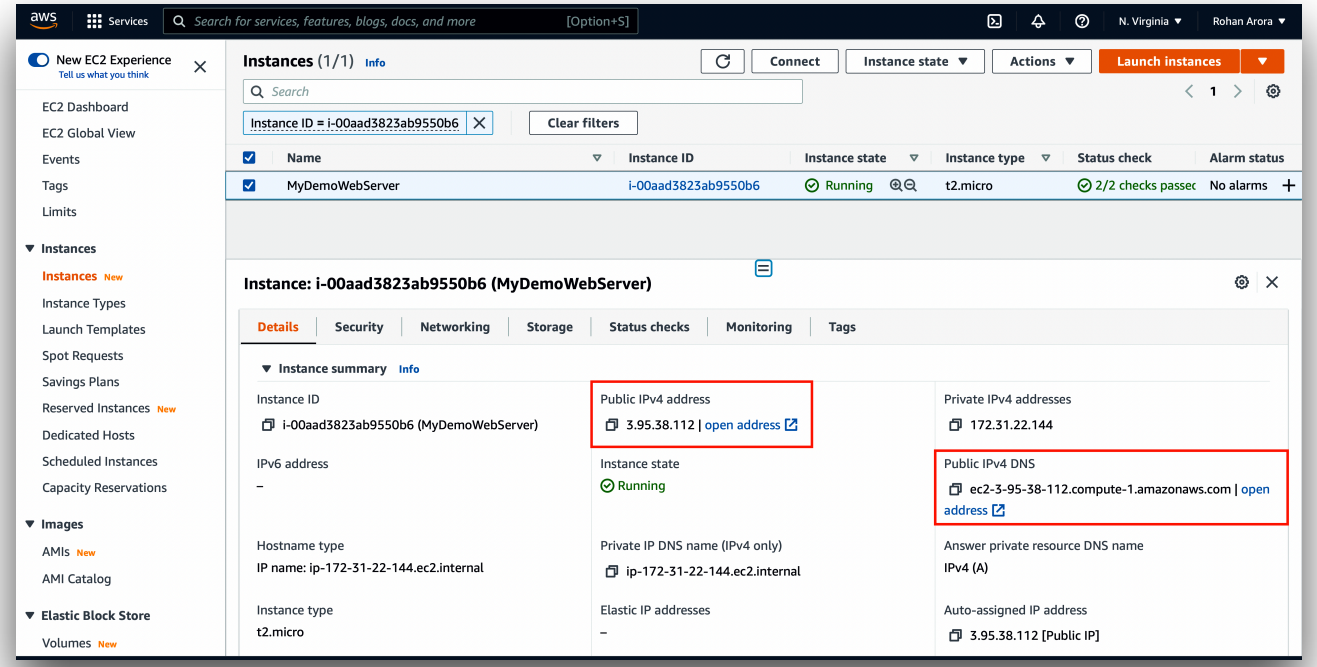
Review and test

After launching the instance, review and go through its details, and test the web server deployed on it.

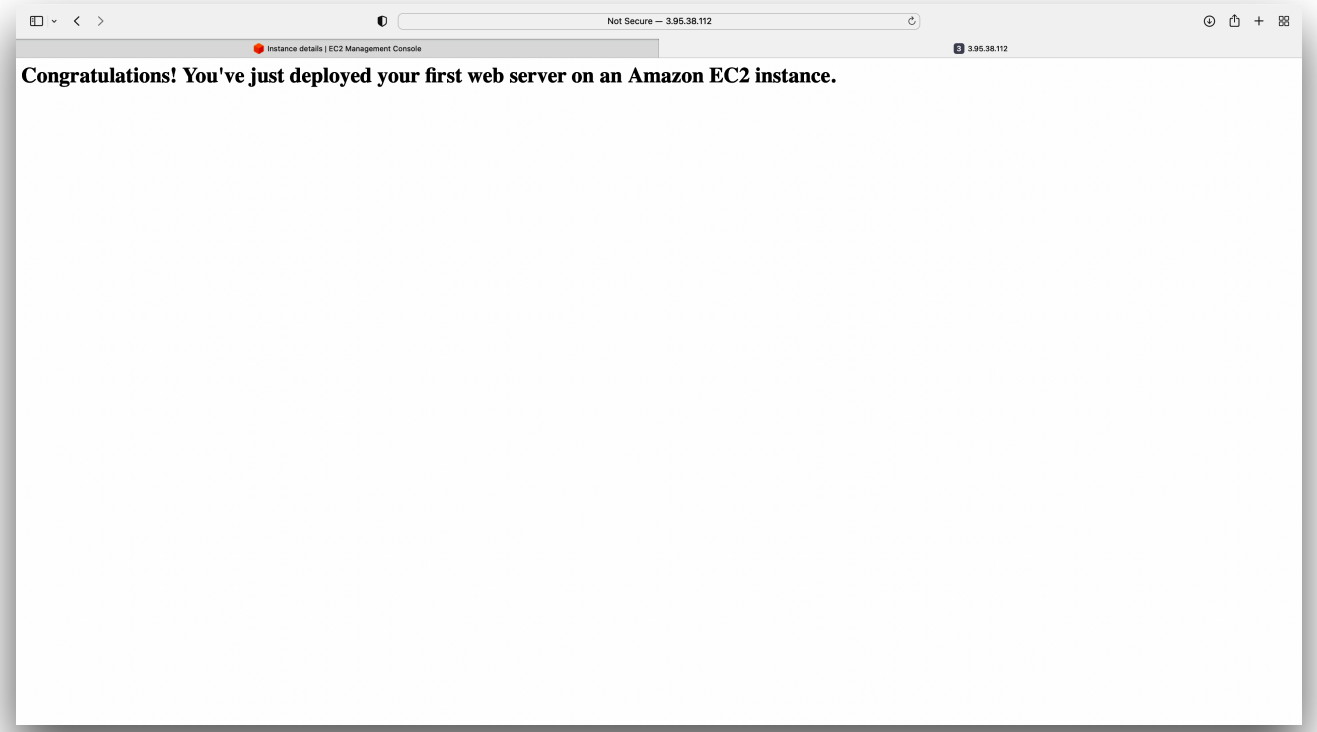
13. Click the Instance ID of the launched instance.



14. You will be straightaway sent to the **Instances** dashboard. Select the launched instance and look for **Public IPv4 address** and **Public IPv4 DNS** within **Details**.



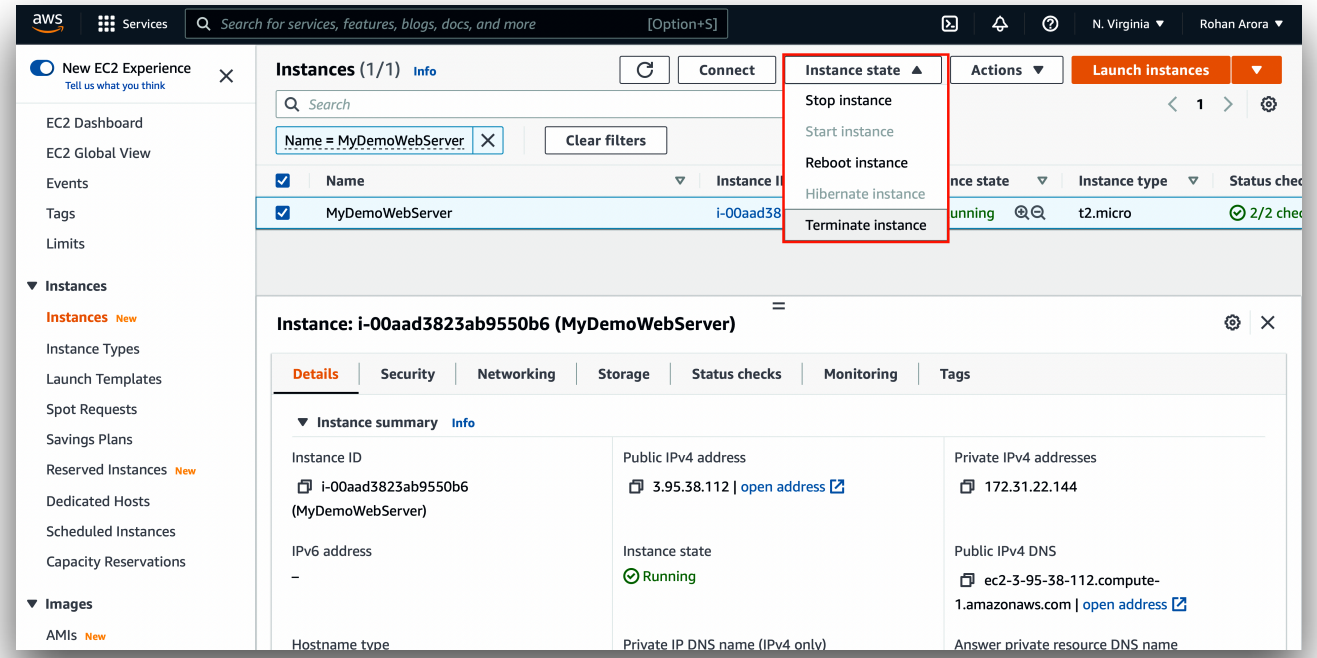
15. Now, access the website using either the public IPv4 address or public IPv4 DNS name and you should get the following output.



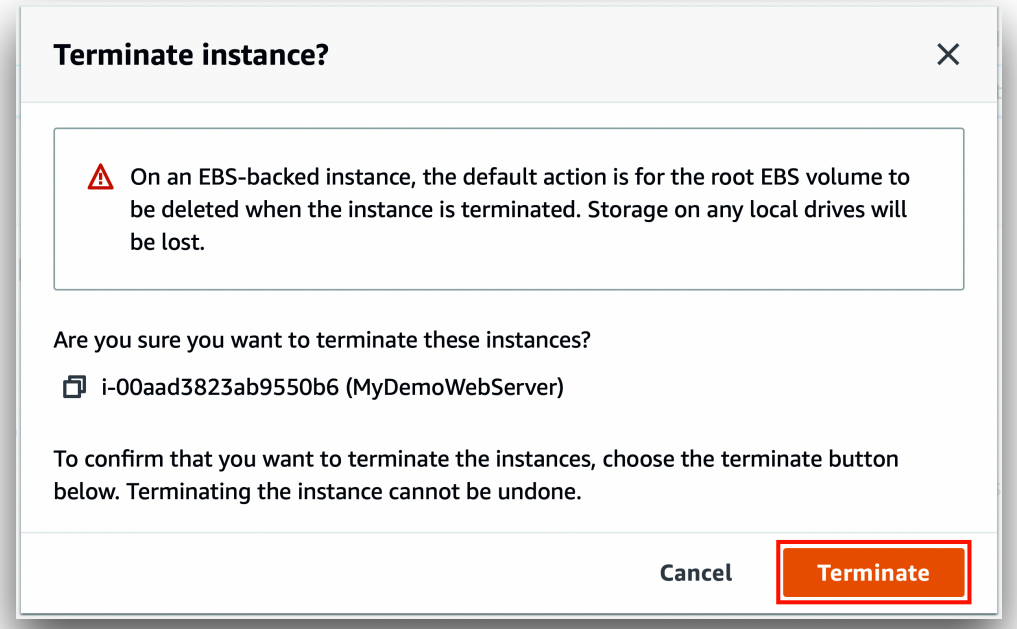
Terminate your instance

You can delete your instance when you no longer need it. This is referred to as *terminating* your instance. As soon as the state of an instance changes to `shutting-down` or `terminated`, you stop incurring charges for that instance.

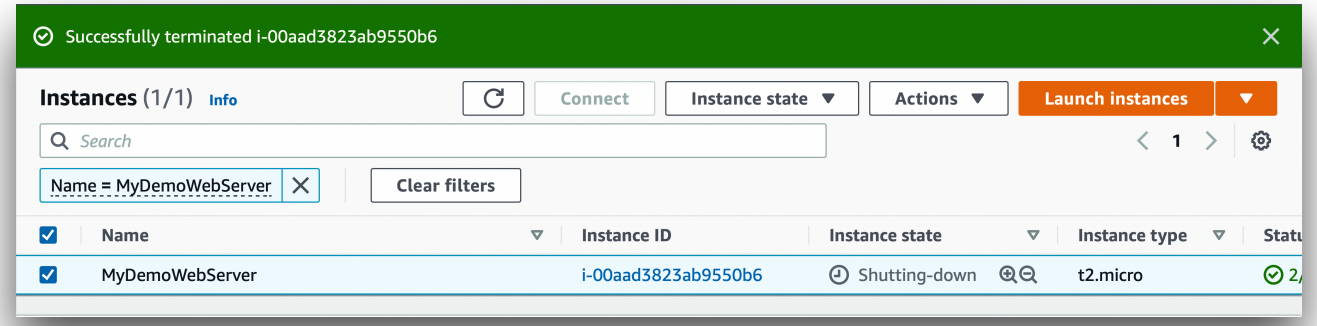
16. Select the instance, and choose **Instance state**, **Terminate instance**.



17. Choose **Terminate** when prompted for confirmation.



After you terminate an instance, it remains visible in the console for a short while, and then the entry is automatically deleted. You cannot delete the terminated instance entry yourself. After an instance is terminated, resources such as tags and volumes are gradually disassociated from the instance and may no longer be visible on the terminated instance after a short while



When an instance terminates, the data on any instance store volumes associated with that instance is deleted.

Summary

This completes the hands-on exercise on launching of an Amazon EC2 Linux instance. You also used a bootstrap script to install an Apache web server on it and later tested the website successfully. After testing, the instance was terminated to clean up and avoid any unexpected charges.