

AWS Create Ubuntu 20 Elastic Compute Instance

In this tutorial, we will be creating an [AWS Elastic Compute \(EC2\)](#) instance with Ubuntu 20 as the operating system.

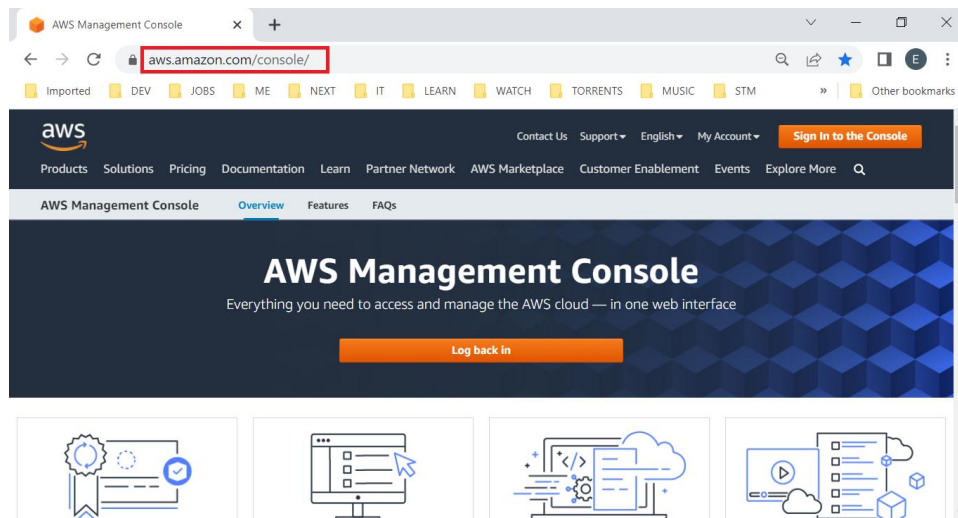
To complete this tutorial you will need an AWS Free Tier account.

If you do not have an AWS account, you can access my "AWS Create Free Tier Account" tutorial [here](#).

Steps to complete tutorial:

- Update Virtual Private Cloud (VPC)
- Create Ubuntu 20 EC2 Instance
- Connect to Ubuntu 20

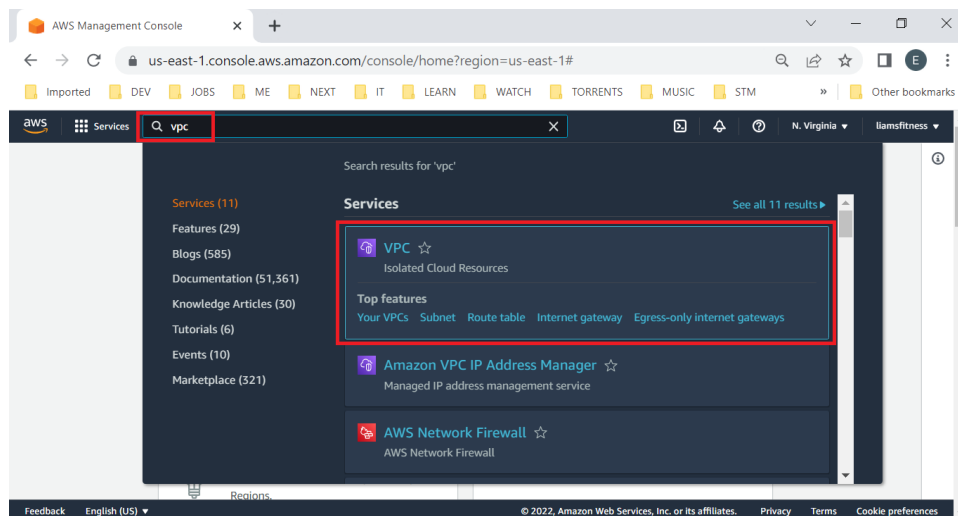
To begin, go to the following website, <https://aws.amazon.com/console/> and log in to the console.



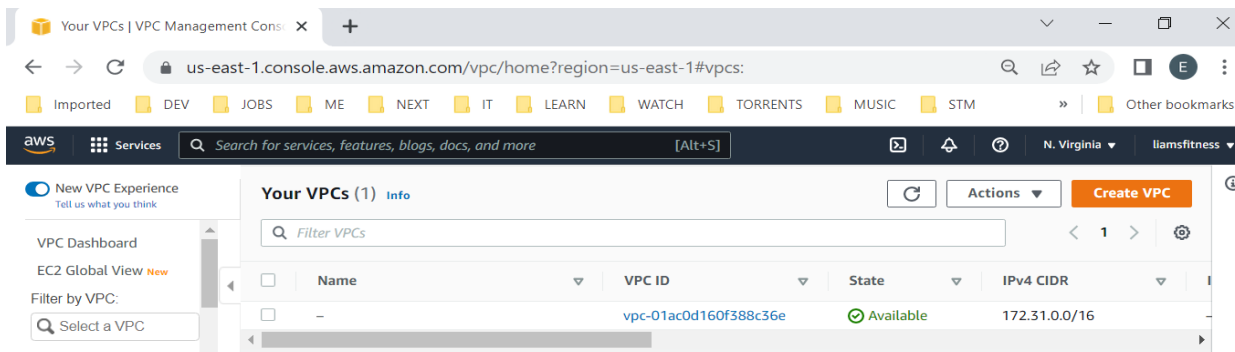
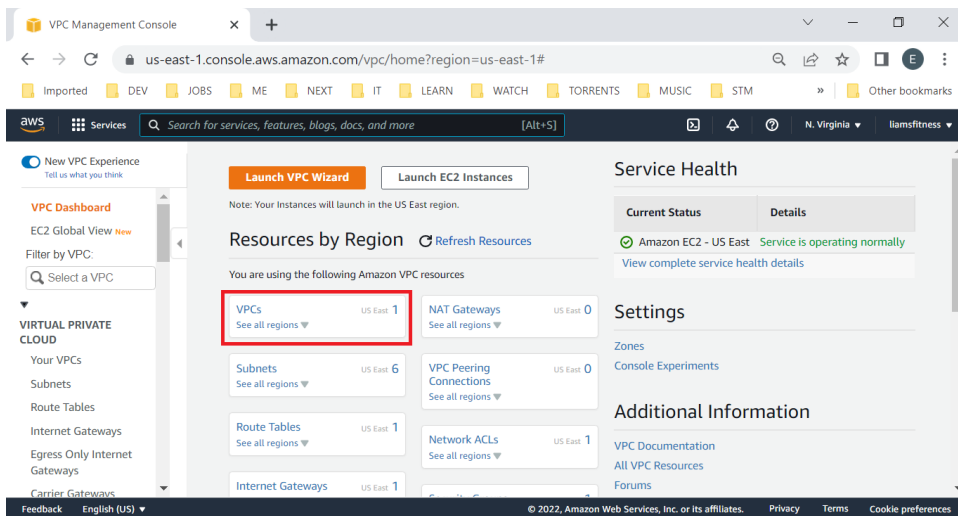
Before we create the EC2 instance, we will configure our default [VPC \(Virtual Private Cloud\)](#) so that it will be easier to work with moving forward. The VPC will allow us to launch resources in an isolated virtual network.

Update Virtual Private Cloud (VPC)

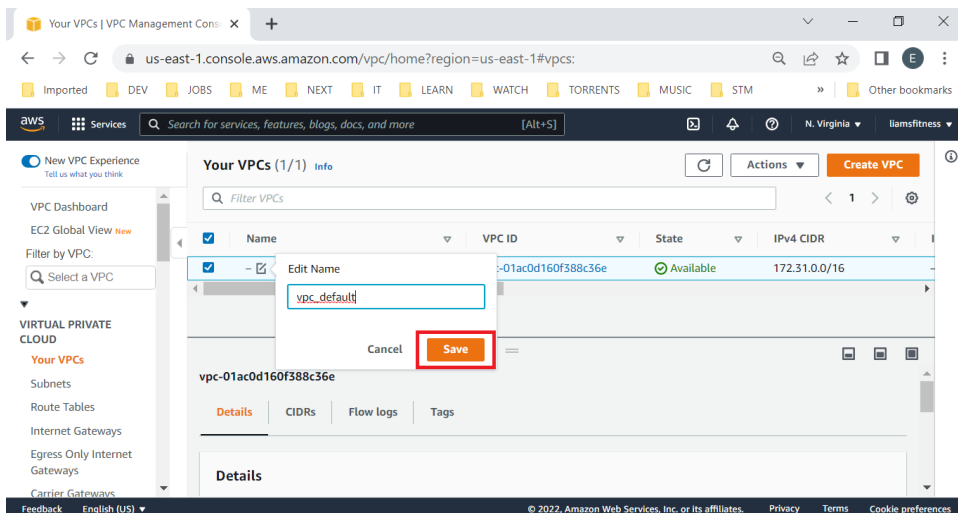
Once logged in, enter VPC in the search bar and select "VPC Isolated Cloud Resource"



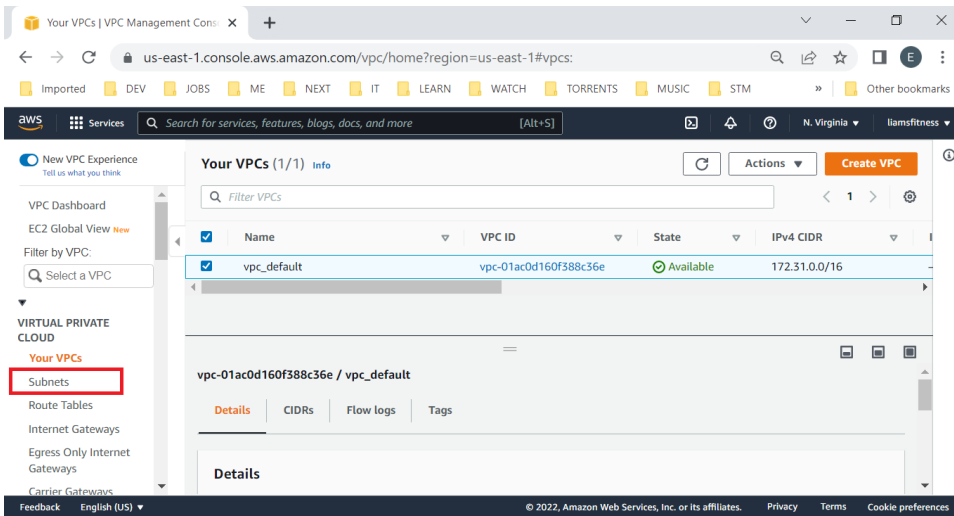
On the VPC Dashboard, select "VPCs"



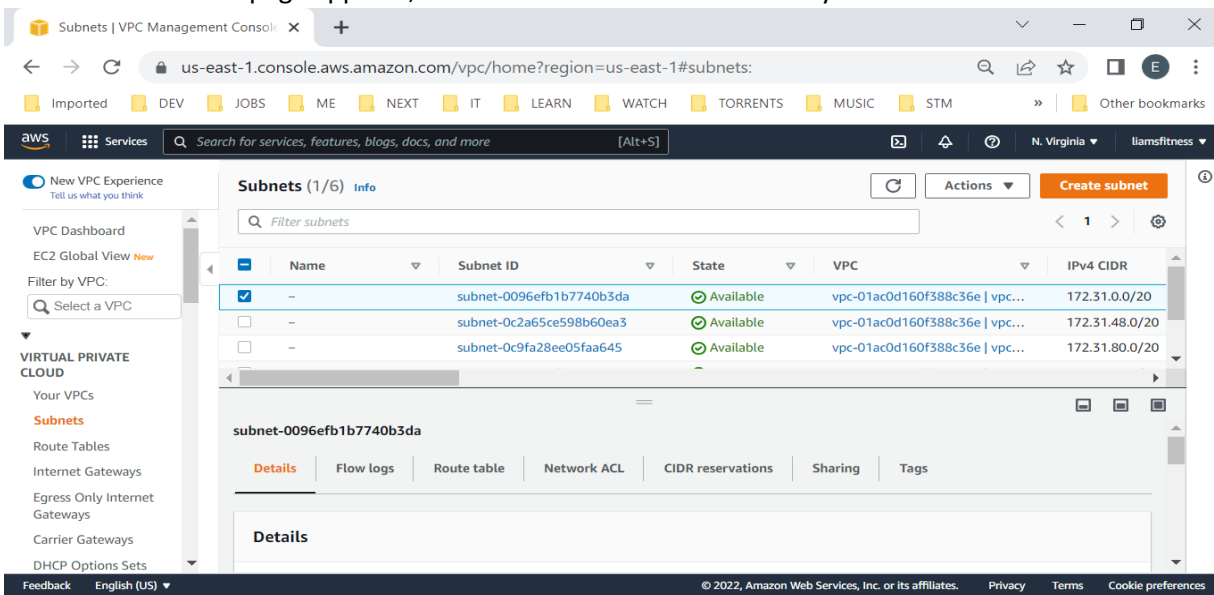
Let's set the name to "vpc_default" and click save.



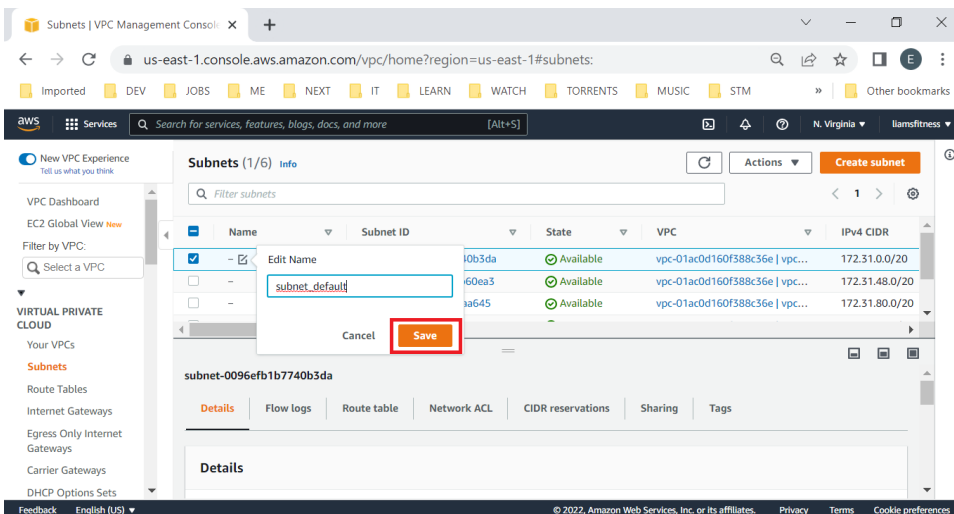
Now, on the left hand side of the screen click "Subnets"

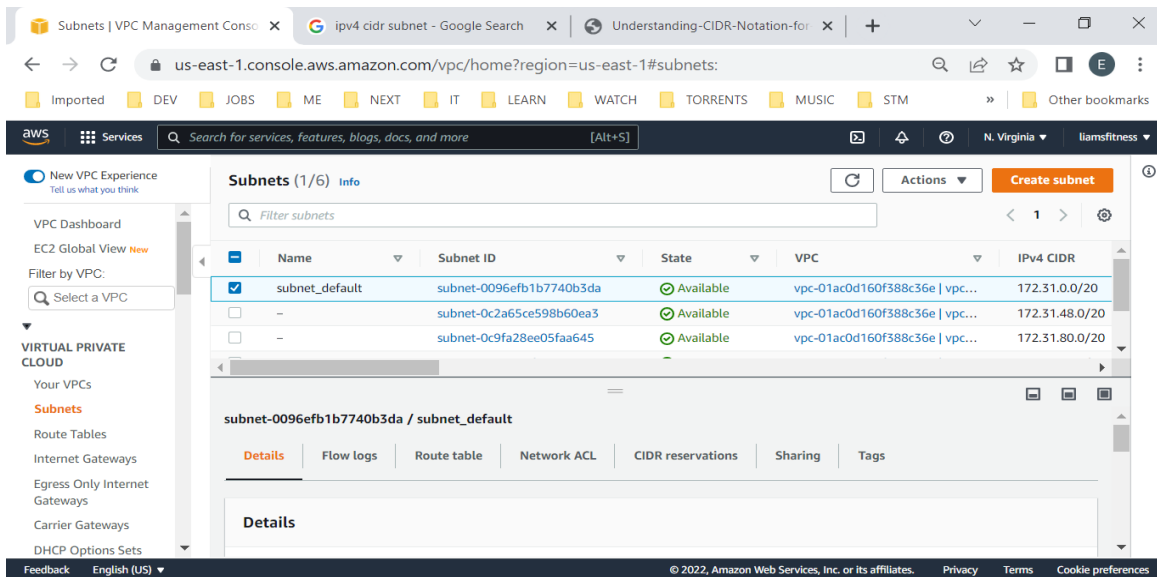


Once the subnet list page appears, notice that 6 subnets have already been created for us.



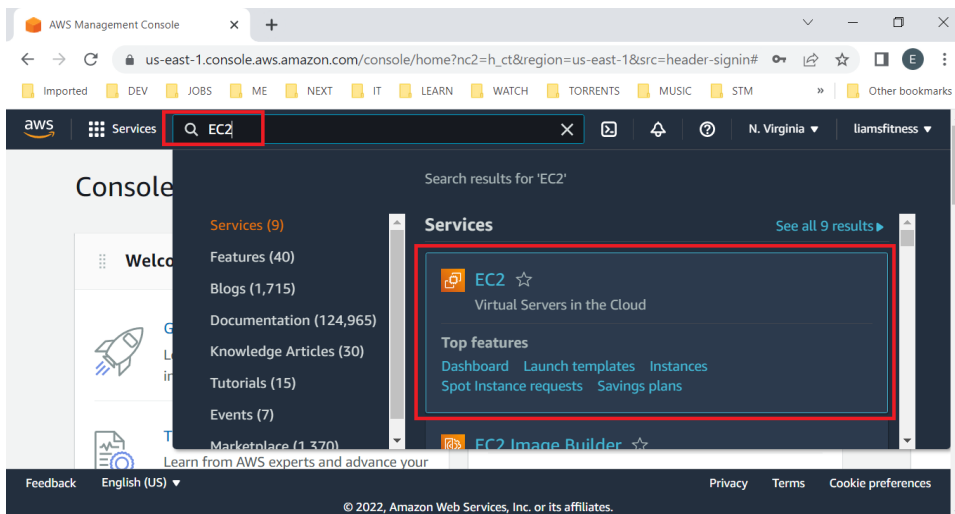
Set the name of the first subnet to "subnet_default" and click save. Also note that the CIDR IPv4 subnet is 172.31.0.0/20.





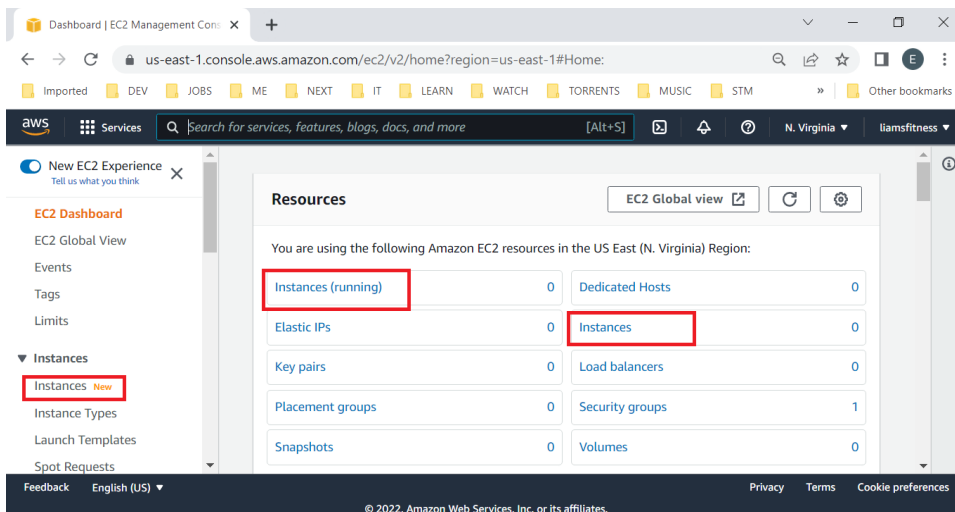
Create Ubuntu 20 EC2 Instance

Now we can proceed to create our instance, enter EC2 in the search bar and select the 1st EC2 listing.

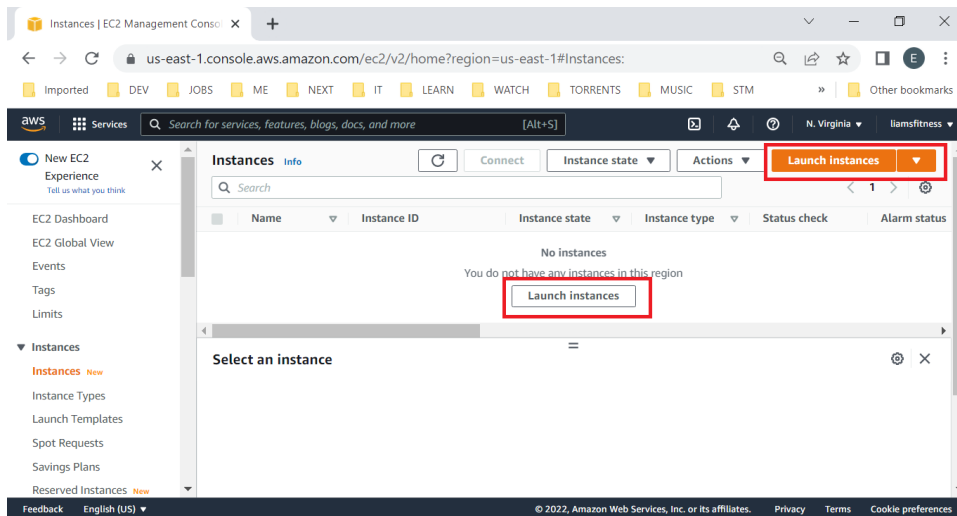


You will be brought to the EC2 Dashboard. It contains links to the resources being used in the selected AWS region. In my case it's US East (N. Virginia).

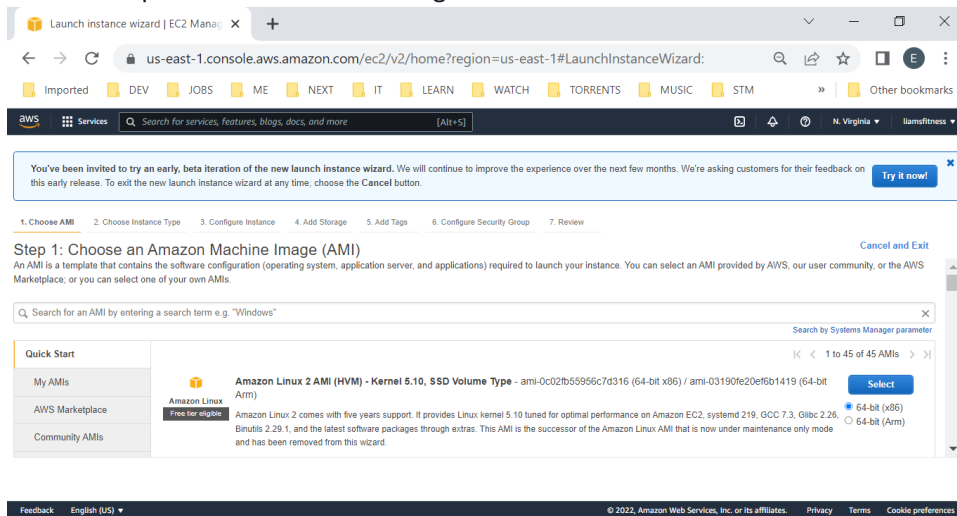
From the EC2 dashboard, click "Instances" (all links will work, your choice).



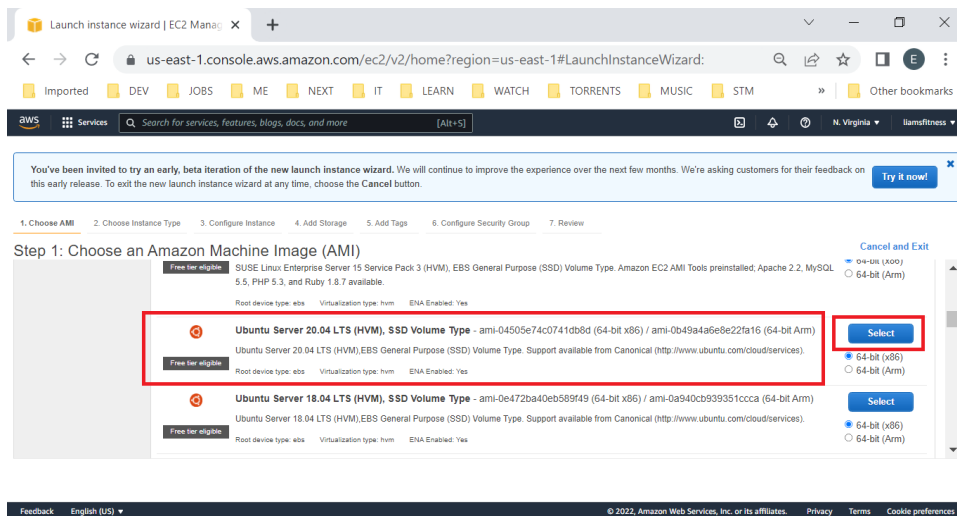
Next, click **"Launch Instances"** (either link will work, your choice).



The first step will be to select the image we want to use.



Scroll down the page until you locate **"Ubuntu 20 LTS"** and click the **"Select"** button next to the listing.



In the second step, we choose the instance type. Since we want a free instance, select **"t2.micro"** and click **"Next: Configure Instance Details"**.

Launch instance wizard | EC2 Mana

us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Imported DEV JOBS ME NEXT IT LEARN WATCH TORRENTS MUSIC STM Other bookmarks

Services Search for services, features, blogs, docs, and more [Alt+S]

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 checked="" type="checkbox"/>	t2	t2.micro	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.nano	1	0.5	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
<input type="checkbox"/>	t2	t2.large	2	8	EBS only	-	Low to Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Feedback English (US) © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

The third step allows us to select the VPC (**vpc_default**) and subnet (**subnet_default**) that we named earlier. After making those changes, click **"Next: Add Storage"**.

Launch instance wizard | EC2 Mana

us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Imported DEV JOBS ME NEXT IT LEARN WATCH TORRENTS MUSIC STM Other bookmarks

Services Search for services, features, blogs, docs, and more [Alt+S]

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-01ac0d160f388c36e | vpc_default (default) Create new VPC

Subnet: subnet-0095af61b7740b3da | subnet_default (Default) Create new subnet

Auto-assign Public IP: ☒ Use subnet setting (Enable)

Hostname type: ☒ Use subnet setting (IP name)

DNS Hostname: ☒ Enable IP name IPv4 (A record) DNS requests
☒ Enable resource-based IPv4 (A record) DNS requests
☐ Enable resource-based IPv6 (AAAA record) DNS requests

Cancel Previous Review and Launch Next: Add Storage

Feedback English (US) © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

The fourth step allows us to set the storage size and add volumes if we wish. The root volume of 8GB is enough for Ubuntu 20. In a future tutorial, I will be demonstrating disk partitioning, as well as, LVM management, so I will also add 3 additional volumes.

EC2 Management Console Launch instance wizard | EC2 Mana

us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Imported DEV JOBS ME NEXT IT LEARN WATCH TORRENTS MUSIC STM Other bookmarks

Services Search for services, features, blogs, docs, and more [Alt+S]

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/sda1	snap-0f7a6eeed90437c4	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

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

Feedback English (US) © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

After clicking the **"Add New Volume"** button, I set the size to 1GB and checked **"Delete on Termination"**.

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/sda1	snap-07fa6ee6d90437c4	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted
EBS	/dev/sdb	Search (case-insensit)	1	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[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](#)

I repeated these steps 3 times total. After setting the storage, click **"Next: Add Tags"**.

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/sda1	snap-07fa6ee6d90437c4	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted
EBS	/dev/sdb	Search (case-insensit)	1	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted
EBS	/dev/sdc	Search (case-insensit)	1	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted
EBS	/dev/sdd	Search (case-insensit)	1	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[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](#)

*****Note:** There is a 30GB max volume size for all your instances combined throughout the month. If you go over it, you will pay the cost.

The fifth step allows us to tag our instance. Tagging helps categorize our resources. We will keep it simple by adding a name tag. To do this click the **"click to add a Name tag"** link and set the name to whatever you desire.

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	Value	Instances	Volumes	Network Interfaces
This resource currently has no tags.				

Choose the Add tag button or [click to add a Name tag](#).

Make sure your IAM policy includes permissions to create tags.

[Add Tag](#) (Up to 50 tags maximum)

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

Once finished, click **"Next: Configure Security Group"**.

Launch instance wizard | EC2 Mana

us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Imported DEV JOBS ME NEXT IT LEARN WATCH TORRENTS MUSIC STM Other bookmarks

Services Search for services, features, blogs, docs, and more [Alt+S]

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 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	Volumes	Network Interfaces
Name	u20_vml	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add another tag (Up to 50 tags maximum)

Cancel Previous Review and Launch Next: Configure Security Group

Feedback English (US) © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

In the sixth step, before launching, we will create a security group named **"security-group1"**. Note that only port 22 is open and that we are only allowing SSH connections to our instance. I also provided a small description, **"Limit access to instance"**. After you've set the security group name, click **"Review and Launch"**.

EC2 Management Console Launch instance wizard | EC2 Mana

us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Imported DEV JOBS ME NEXT IT LEARN WATCH TORRENTS MUSIC STM Other bookmarks

Services Search for services, features, blogs, docs, and more [Alt+S]

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: security-group1

Description: Limit access to instance

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

Add Rule

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.

Cancel Previous Review and Launch

Feedback English (US) © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

This final step allows you to review your selections. After you've finished reviewing, click **"Launch"**.

Launch instance wizard | EC2 Mana

us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Imported DEV JOBS ME NEXT IT LEARN WATCH TORRENTS MUSIC STM Other bookmarks

Services Search for services, features, blogs, docs, and more [Alt+S]

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click Launch to assign a key pair to your instance and complete the launch process.

Warning
Improve your instances' security. Your security group, security-group1, is open to the world. Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

Ubuntu Server 20.04 LTS (HVM), SSD Volume Type - ami-04505e74c0741db5d

Free tier eligible

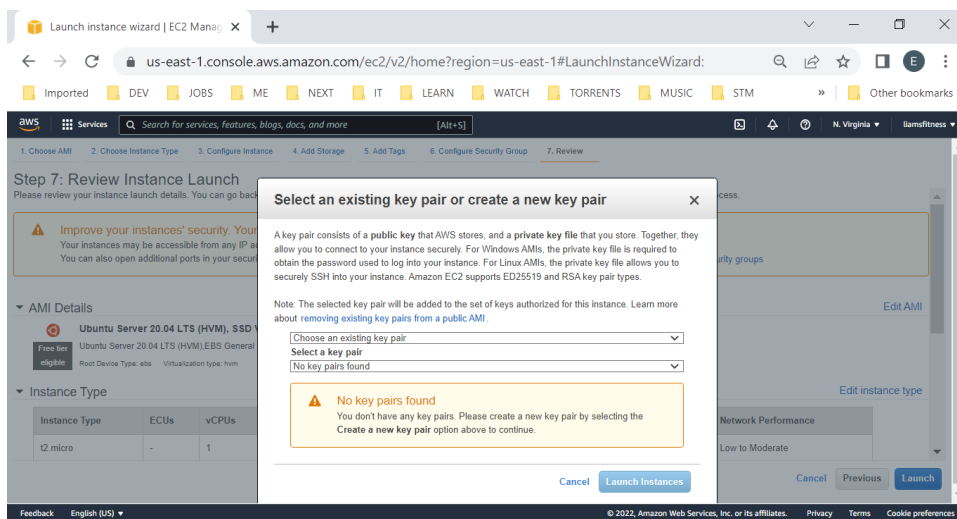
Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

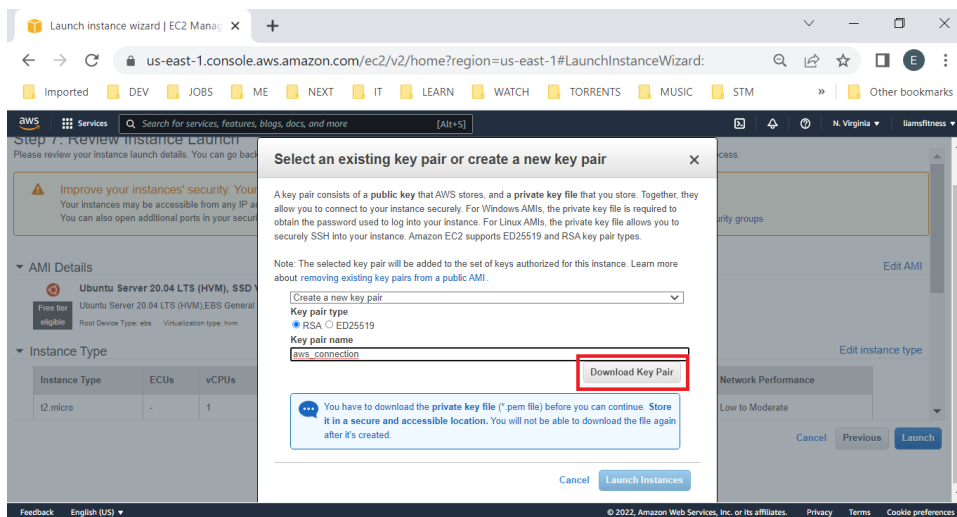
Cancel Previous Launch

Feedback English (US) © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

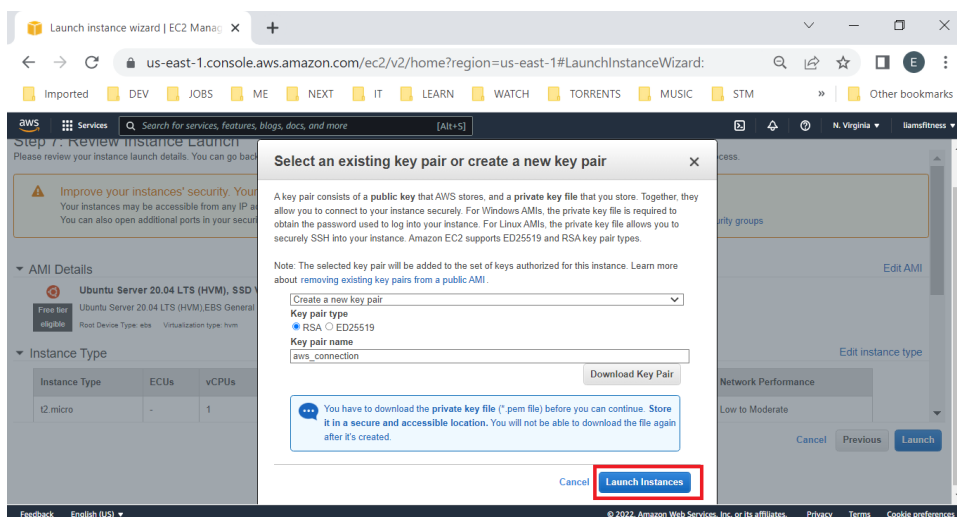
Prior to launch, we must create a key pair that can be used with an SSH connection to access our newly created instance.



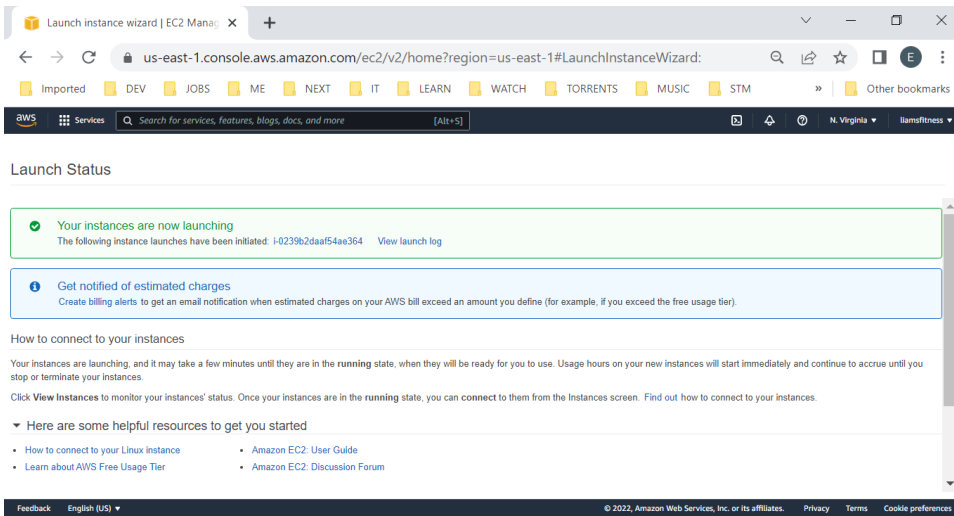
Ensure "Create a new key pair" is selected. Also, ensure that "Key pair type" is set to "RSA". Then, give it a name (**aws_connection**). Finally, click "Download Key Pair" and save it somewhere on your PC.



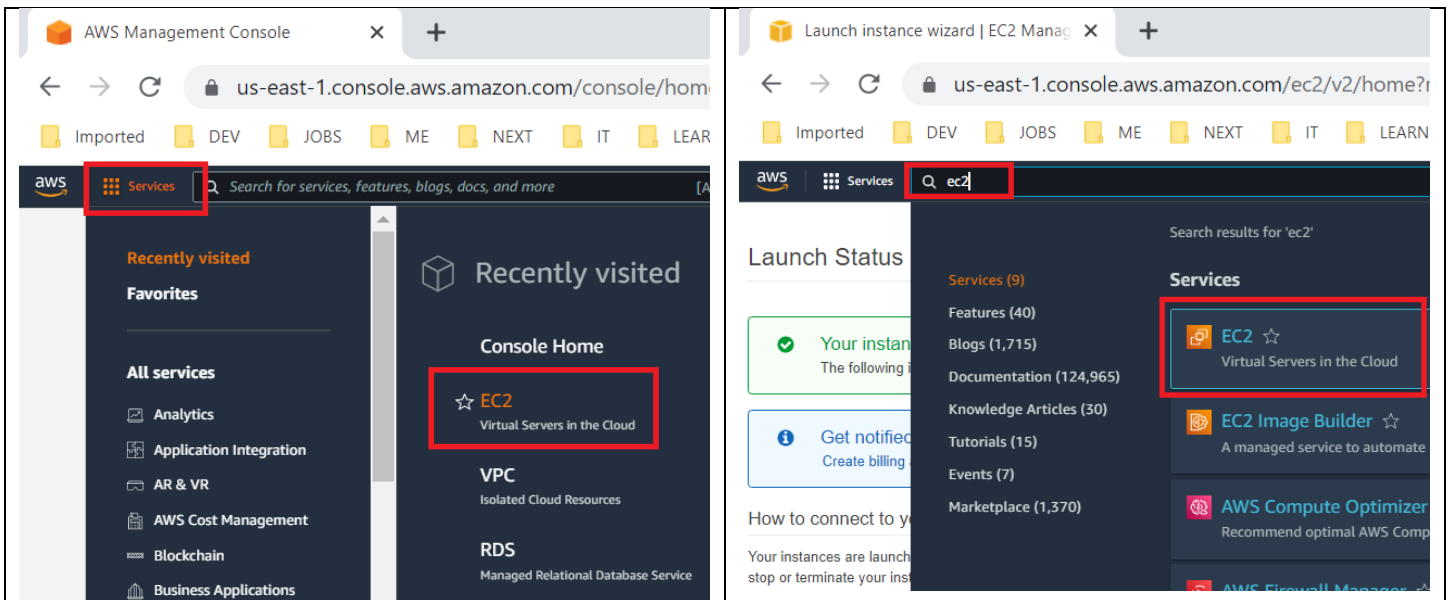
After you download the key pair (which will be named "**aws_connection.pem**"), you will be able to click "Launch Instances" to bring up our Ubuntu 20 instance.



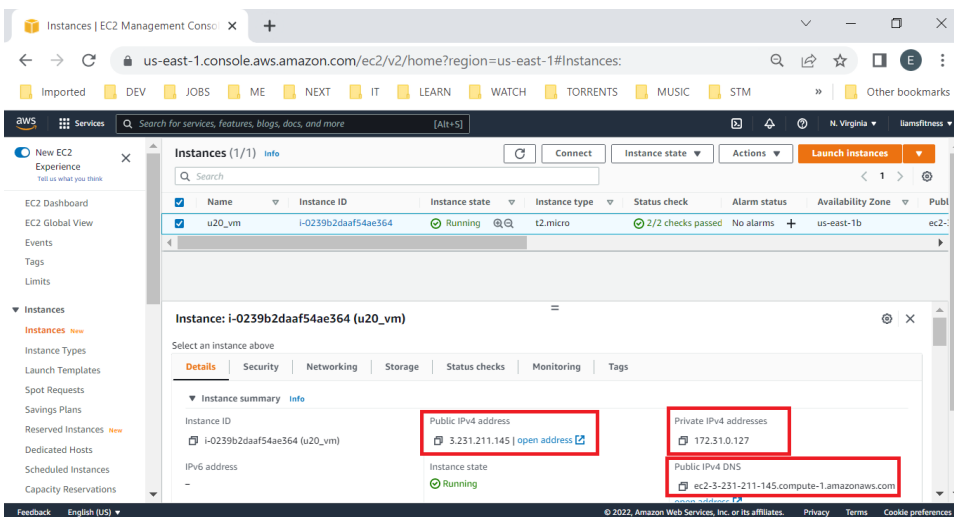
As you can see, it can take up to a minute, or two, for the instance to be brought up.



Now, you can click on **"Services"** at the top left of the screen and then select **"EC2"** under **"Recently visited"**. Or, you enter **"EC2"** in the search bar to access your running instance (both methods work).

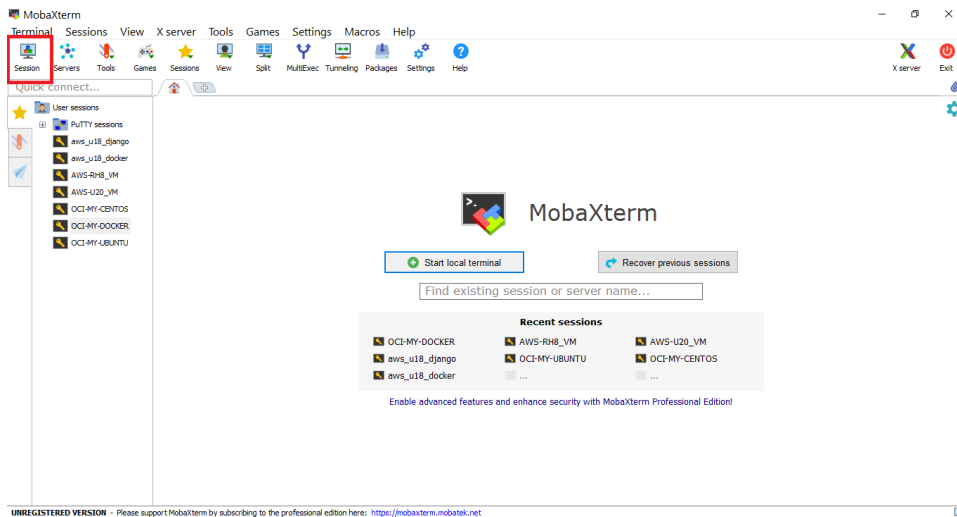


Ensure your new instance is selected (**u20_vm**), then on the **"Details"** tab, note the value for **"Public IPv4 DNS"**. I usually keep the instance's name, public IP, private IP and public IPv4 DNS stored for easy access. We will need this to connect to the instance.

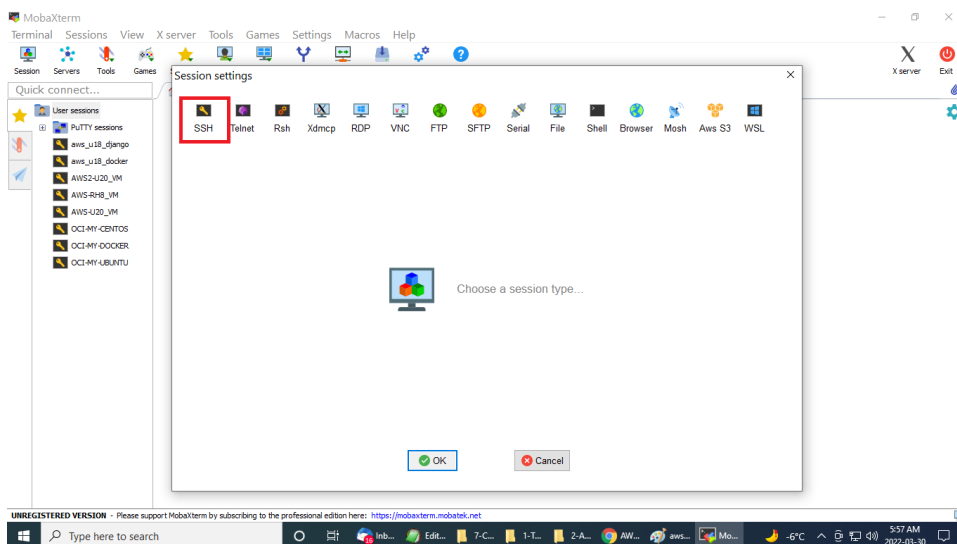


Connect to Ubuntu 20

Now you will need an SSH client to connect to your instance. I am on Windows 10 and have installed "[GitBash](#)" which includes an SSH client. If you do not want to install GitBash, I also use "[MobaXterm Portable](#)" and I find it to be a great tool and easy to use. Using **MobaXterm**, I would first create a session by clicking the "**Session**" button in the top left corner:

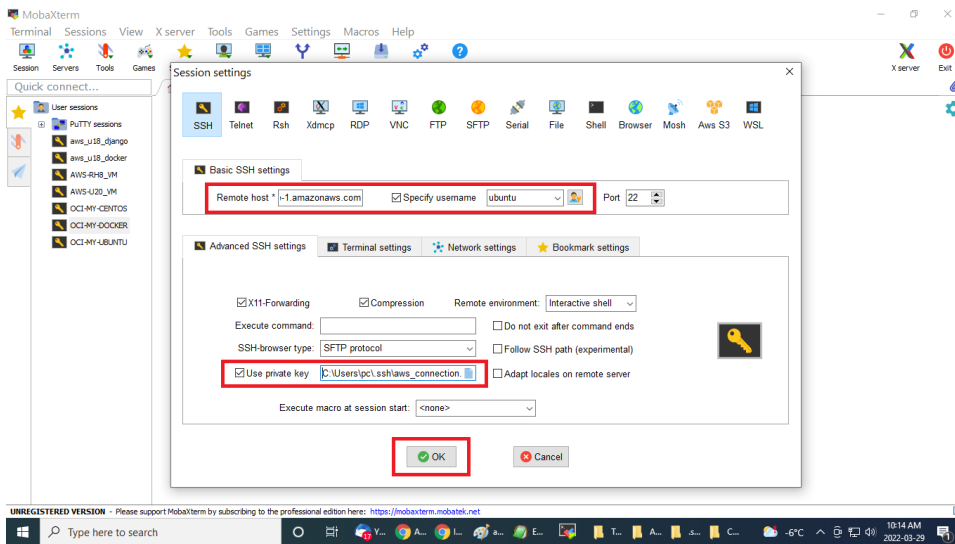


Followed by clicking the "**SSH**" button.

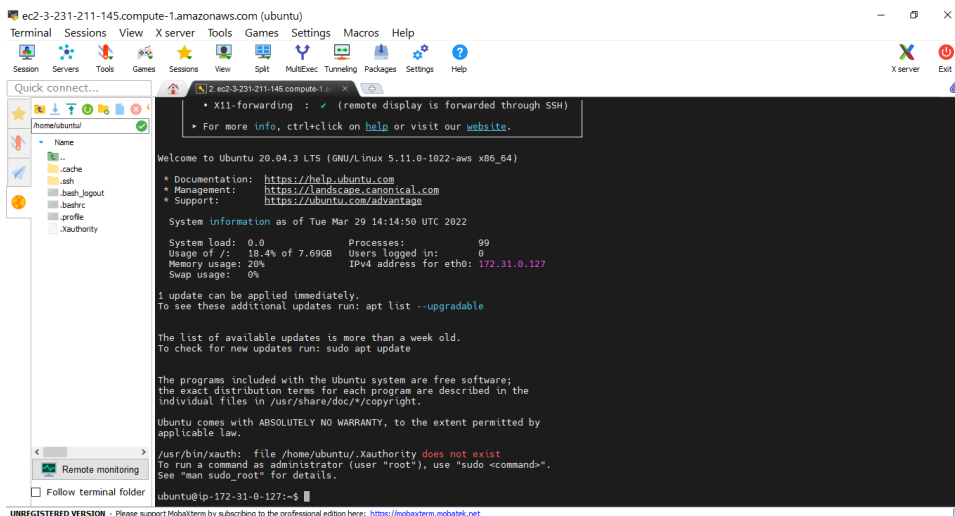


For "**Remote host:**", enter your "**Public IPv4 DNS**" from your instance's "**Details**" tab. Also specify the username of "**ubuntu**". That is the default username for every Ubuntu instance created on AWS.

Then, under "**Advanced SSH Settings**" select the key that you downloaded earlier (**aws_connection.pem**). Finally, click **OK**.



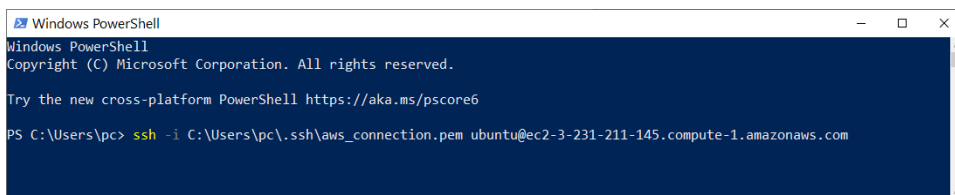
Your session should open to your newly created EC2 instance running Ubuntu 20.



If you installed "[GitBash](#)", or have another SSH client, you can open either PowerShell or a Windows command prompt. Then, from the command line, enter the following (**NOTE**: make sure you enter your connection details):

ssh -i /path/my-key-pair.pem my-instance-user-name@my-instance-public-dns-name

ssh -i C:\Users\pc\.ssh\aws_connection.pem ubuntu@ec2-3-231-211-145.compute-1.amazonaws.com



```
Select ubuntu@ip-172-31-0-127: ~
PS C:\Users\pc> ssh -i C:\Users\pc\.ssh\aws_connection.pem ubuntu@ec2-3-231-211-145.compute-1.amazonaws.com
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-1022-aws x86_64)Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-1022-aws
x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Tue Mar 29 14:29:05 UTC 2022

System load:  0.0          Processes:           102
Usage of /:   18.4% of 7.69GB    Users logged in:    1
Memory usage: 21%          IPv4 address for eth0: 172.31.0.127
Swap usage:   0%

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Tue Mar 29 14:20:43 2022 from 24.48.113.24
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-0-127: $
```

I hope you've enjoyed this tutorial.

Please note that the free tier allows for 750 hours per month of Amazon EC2. You can create many EC2 instances but beware of the limit. If you go over that limit, you will pay the cost. My advice to you is to shutdown your instance/s after you've done your work.

If you want to become more proficient in a Linux environment you can see my other tutorials here.