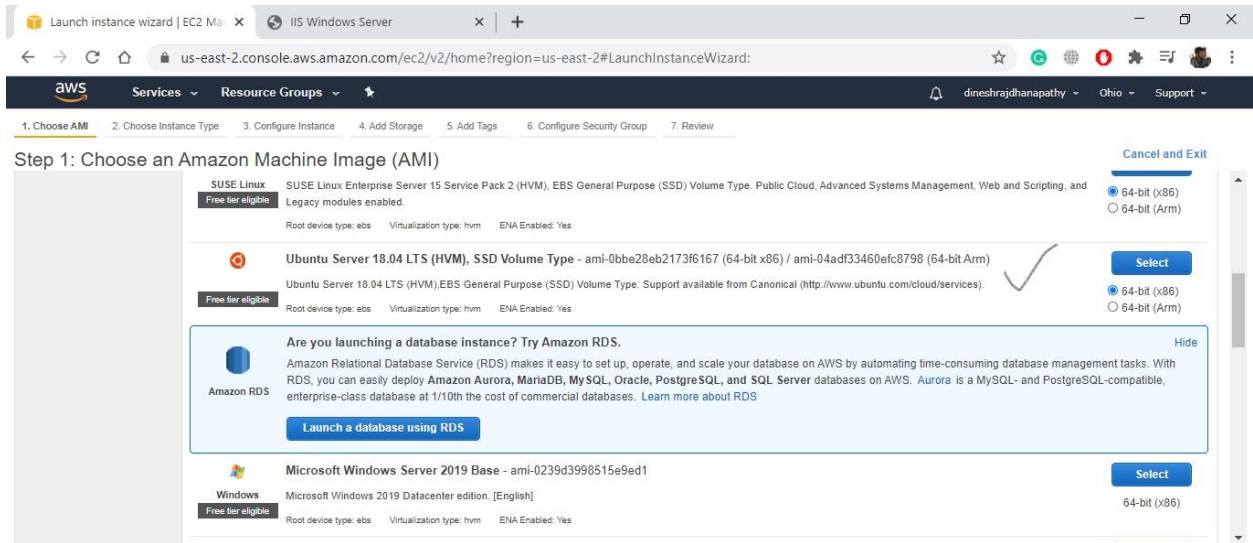
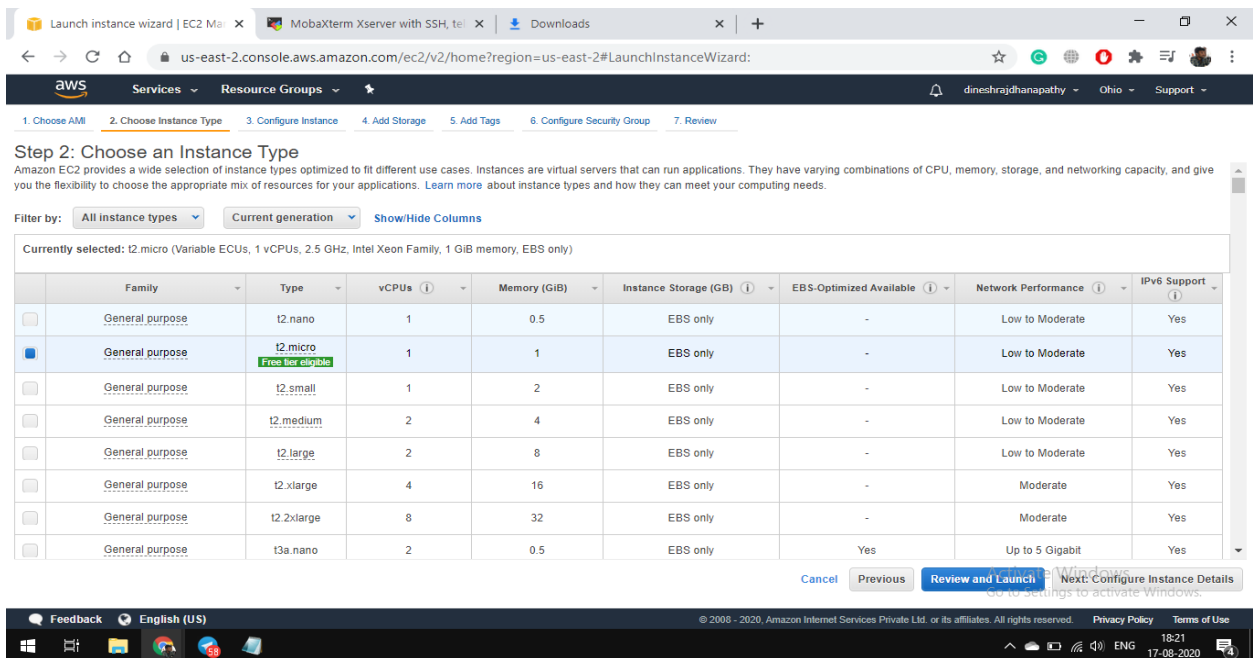


# Launching Ubuntu instance in EC2 and hosting a web server:

## 1.Choosing AMI(Ubuntu 18.04 LTS (HVM), SSD Volume Type) :



## 2. Choosing instance type(t2 micro) :



### 3. Configuring instance details :

The screenshot shows the 'Step 3: Configure Instance Details' page of the AWS Launch Instance Wizard. The page is titled '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.' The configuration options are as follows:

- Number of instances:** 1 (with a link to 'Launch into Auto Scaling Group')
- Purchasing option:** ☐ Request Spot instances
- Network:** vpc-e654f78d (default) (with a link to 'Create new VPC')
- Subnet:** No preference (default subnet in any Availability Zone) (with a link to 'Create new subnet')
- Auto-assign Public IP:** Use subnet setting (Enable)
- Placement group:** ☐ Add instance to placement group
- Capacity Reservation:** Open
- IAM role:** None (with a link to 'Create new IAM role')
- Shutdown behavior:** Stop
- Stop - Hibernate behavior:** ☐ Enable hibernation as an additional stop behavior
- Enable termination protection:** ☐ Protect against accidental termination
- Monitoring:** ☐ Enable CloudWatch detailed monitoring (Additional charges apply)

At the bottom, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Add Storage'. A watermark 'Active Windows' is visible over the 'Review and Launch' button.

### 4. Adding Storage :

The screenshot shows the 'Step 4: Add Storage' page of the AWS Launch Instance Wizard. The page is titled '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.' The storage configuration table is as follows:

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/sda1	snap-0cd98f931a6ffac8	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Below the table is an 'Add New Volume' button. A blue box contains the text: '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.'

At the bottom, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Add Tags'. A watermark 'Active Windows' is visible over the 'Review and Launch' button.

## 5. Add Tags:

The screenshot shows the 'Add Tags' step of the AWS Launch Instance Wizard. The breadcrumb trail at the top indicates the steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags (current), 6. Configure Security Group, and 7. Review. The main heading is 'Step 5: Add Tags'. Below it, a text block explains that a tag consists of a case-sensitive key-value pair and that tags can be applied to instances and volumes. A table with two columns, 'Key' (128 characters maximum) and 'Value' (256 characters maximum), is shown. Below the table, a message states 'This resource currently has no tags'. A button 'Add Tag' is visible, with a note '(Up to 50 tags maximum)'. At the bottom right, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Configure Security Group'. The footer of the console shows the user's name 'dineshrajdhanapathy', the region 'Ohio', and support links.

## 6. Configuring Security Group :

The screenshot shows the 'Configure Security Group' step of the AWS Launch Instance Wizard. The breadcrumb trail at the top indicates the steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group (current), and 7. Review. The main heading is 'Step 6: Configure Security Group'. Below it, a text block explains that a security group is a set of firewall rules that control traffic. Under 'Assign a security group', the 'Create a new security group' option is selected. The 'Security group name' field contains 'launch-wizard-2' and the 'Description' field contains 'launch-wizard-2 created 2020-08-17T18:23:05.272+05:30'. Below these fields is a table for adding rules. The table has columns: Type, Protocol, Port Range, Source, and Description. A rule is added with Type 'All traffic', Protocol 'All', Port Range '0 - 65535', Source 'Anywhere', and Description 'e.g. SSH for Admin Desktop'. An 'Add Rule' button is at the bottom left of the table. A yellow warning box at the bottom states: '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.' At the bottom right, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Activate Windows'. The footer of the console shows the user's name 'dineshrajdhanapathy', the region 'Ohio', and support links.

## 7. Reviewing and launching the instance :

Launch instance wizard | EC2 Ma x MobaXterm Xserver with SSH, tel x Downloads x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups

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.

**Improve your instances' security. Your security group, launch-wizard-2, 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 18.04 LTS (HVM), SSD Volume Type - ami-0bbe28eb2173f6167

Free tier eligible

Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).  
Root Device Type: ebs Virtualization type: hvm

**Instance Type** [Edit instance type](#)

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

**Security Groups** [Edit security groups](#)

Security group name: launch-wizard-2  
Description: launch-wizard-2 created 2020-08-17T18:23:05.272+05:30

Activate Windows  
Go to Settings to activate Windows.

Cancel Previous **Launch**

Feedback English (US) © 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## 8. Selecting Key pair :

Launch instance wizard | EC2 Ma x MobaXterm Xserver with SSH, tel x Downloads x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups

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.

**Improve your instances' security. Your security group, launch-wizard-2, 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 18.04 LTS (HVM), SSD Volume Type - ami-0bbe28eb2173f6167

Free tier eligible

Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).  
Root Device Type: ebs Virtualization type: hvm

**Instance Type** [Edit instance type](#)

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

**Security Groups** [Edit security groups](#)

Security group name: launch-wizard-2  
Description: launch-wizard-2 created 2020-08-17T18:23:05.272+05:30

**Select an existing key pair or create a new key pair**

A key pair consists of a public key that AWS stores, and a private key file that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair

Select a key pair

DD-windows1

☒ I acknowledge that I have access to the selected private key file (DD-windows1.pem), and that without this file, I won't be able to log into my instance.

Cancel **Launch Instances**

Cancel Previous **Launch**

Feedback English (US) © 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## 9. Initiated the instances:

**Launch Status**

✓ **Your instances are now launching**  
The following instance launches have been initiated: i-0b11a586fac95df5a [View launch log](#)

ℹ **Get notified of estimated charges**  
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

**How to connect to your instances**

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the **Instances** screen. [Find out how to connect to your instances.](#)

▼ Here are some helpful resources to get you started

- How to connect to your Linux instance
- Learn about AWS Free Usage Tier
- Amazon EC2: User Guide
- Amazon EC2: Discussion Forum

While your instances are launching you can also

- Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply)
- Create and attach additional EBS volumes (Additional charges may apply)
- Manage security groups

Activate Windows  
Go to Settings to activate Windows.

## 10. Status Checks done:

**Instances | EC2 Management Console**

Launch Instance Connect Actions

search: i-0b11a586fac95df5a Add filter

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
DDubuntu	i-0b11a586fac95df5a	t2.micro	us-east-2b	running	2/2 checks ...	None	ec2-3-129-243-60.us-east-2.compute.amazonaws.com	3.129.243.60	-

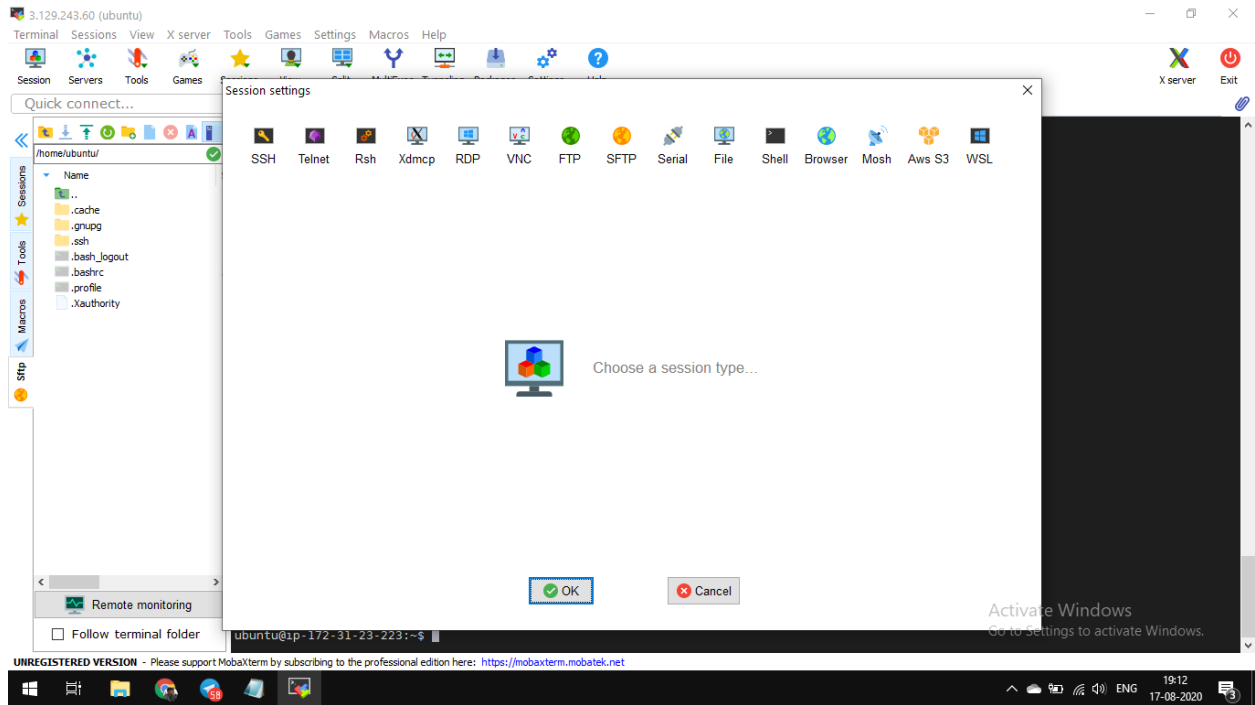
Instance: i-0b11a586fac95df5a (DDubuntu) Public DNS: ec2-3-129-243-60.us-east-2.compute.amazonaws.com

Public DNS (IPv4) ec2-3-129-243-60.us-east-2.compute.amazonaws.com  
IPv4 Public IP 3.129.243.60  
IPv6 IPs -  
Elastic IPs -

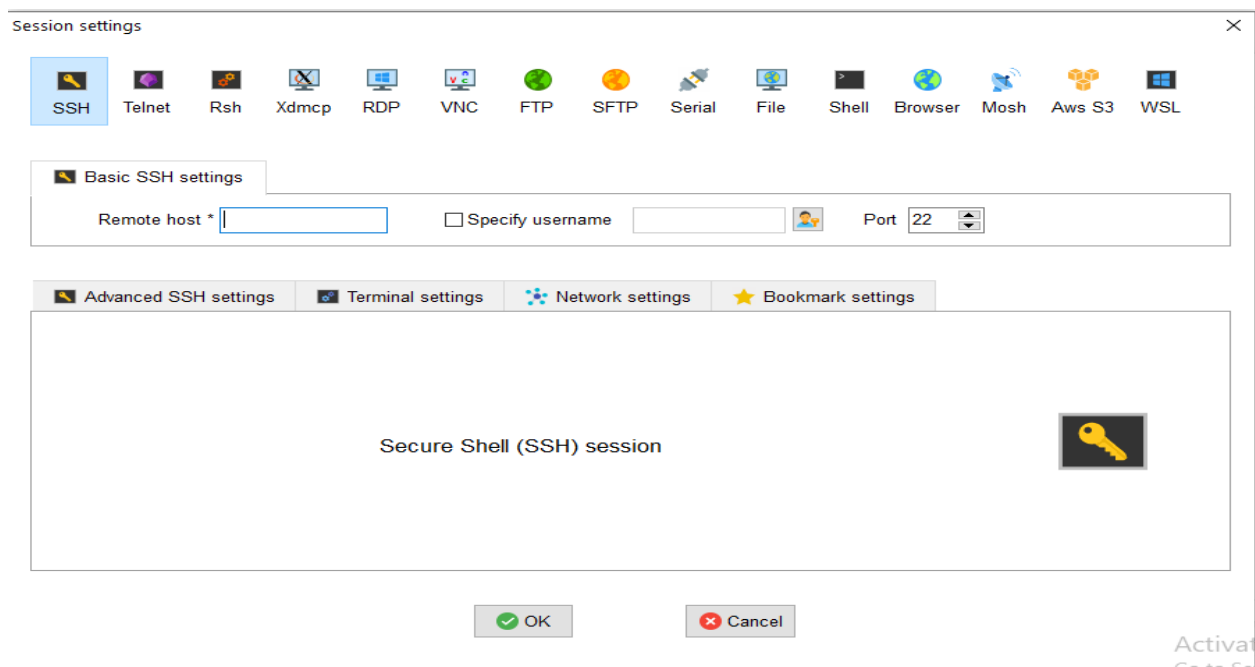
Activate Windows  
Go to Settings to activate Windows.

# MobaXterm:

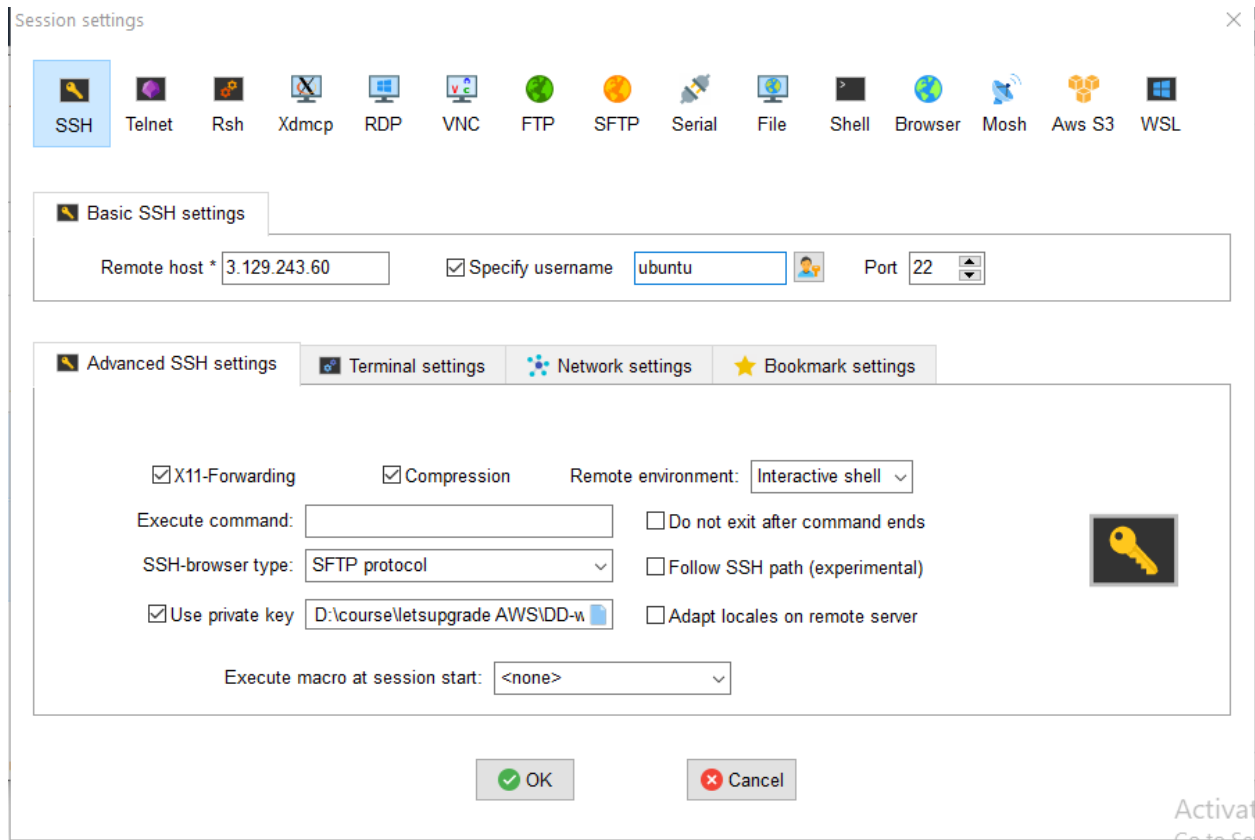
## 11. Home Screen :



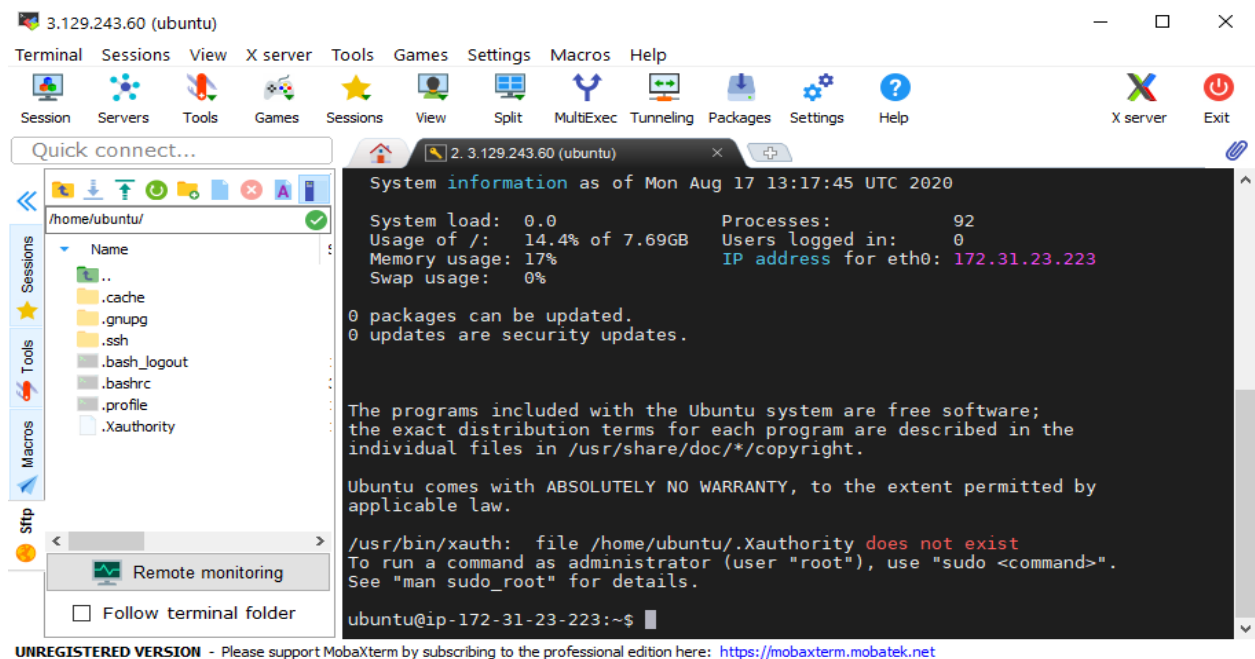
## 12. Select Session and click on SSH :



## 13.SSH Settings :

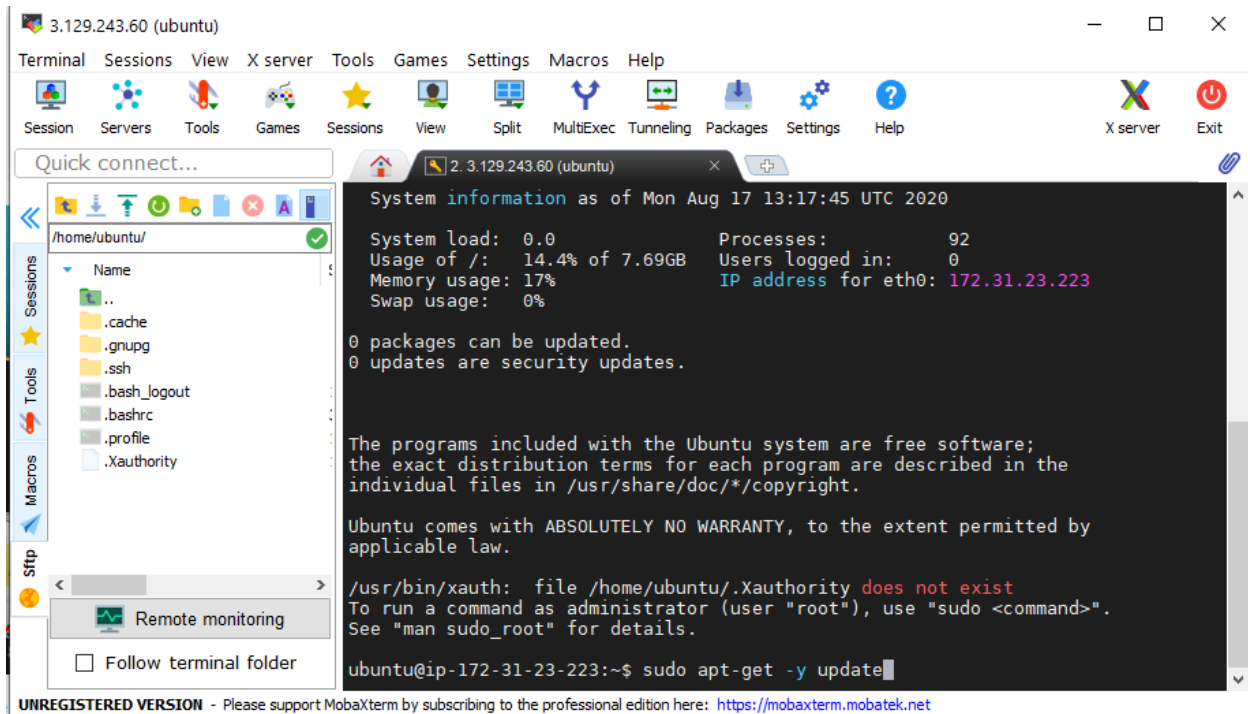


## 14.Instance in running state:





## 15.Updating current instance:



The screenshot shows the MobaXterm interface with a terminal window titled '2. 3.129.243.60 (ubuntu)'. The terminal displays system information as of Mon Aug 17 13:17:45 UTC 2020. The system load is 0.0, usage of / is 14.4% of 7.69GB, memory usage is 17%, and swap usage is 0%. There are 92 processes and 0 users logged in. The IP address for eth0 is 172.31.23.223. The terminal indicates that 0 packages can be updated and 0 updates are security updates. It also displays the Ubuntu license information and the command to run as administrator (user "root"), use "sudo <command>". The terminal shows the command 'ubuntu@ip-172-31-23-223:~\$ sudo apt-get -y update' being executed.

```
System information as of Mon Aug 17 13:17:45 UTC 2020

System load:  0.0                Processes:    92
Usage of /:   14.4% of 7.69GB    Users logged in: 0
Memory usage: 17%               IP address for eth0: 172.31.23.223
Swap usage:  0%

0 packages can be updated.
0 updates are security updates.

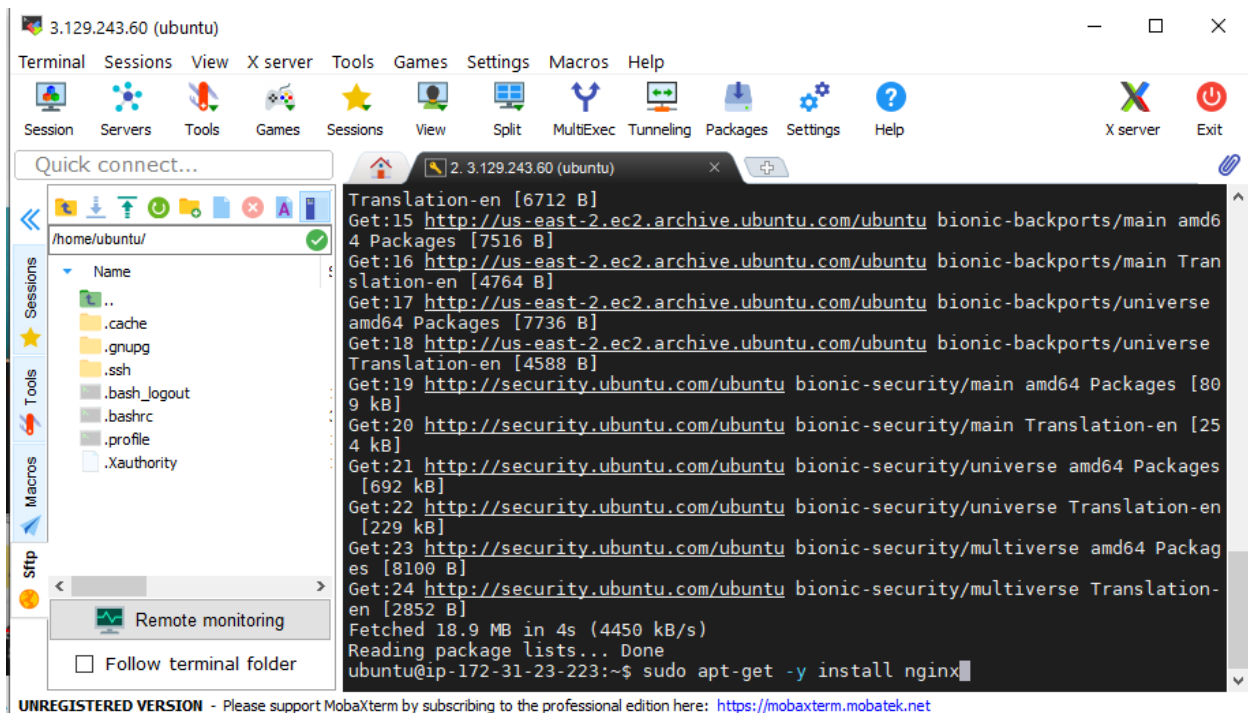
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

/usr/bin/xauth:  file /home/ubuntu/.Xauthority does not exist
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-23-223:~$ sudo apt-get -y update
```

## 16.Installing the web server :



The screenshot shows the MobaXterm interface with a terminal window titled '2. 3.129.243.60 (ubuntu)'. The terminal displays the output of the command 'ubuntu@ip-172-31-23-223:~\$ sudo apt-get -y install nginx'. The output shows the installation of nginx from the bionic-backports repository. The terminal shows the command 'ubuntu@ip-172-31-23-223:~\$ sudo apt-get -y install nginx' being executed.

```
Translation-en [6712 B]
Get:15 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/main amd64 Packages [7516 B]
Get:16 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/main Translation-en [4764 B]
Get:17 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 Packages [7736 B]
Get:18 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe Translation-en [4588 B]
Get:19 http://security.ubuntu.com/ubuntu bionic-security/main amd64 Packages [809 kB]
Get:20 http://security.ubuntu.com/ubuntu bionic-security/main Translation-en [254 kB]
Get:21 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 Packages [692 kB]
Get:22 http://security.ubuntu.com/ubuntu bionic-security/universe Translation-en [229 kB]
Get:23 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 Packages [8100 B]
Get:24 http://security.ubuntu.com/ubuntu bionic-security/multiverse Translation-en [2852 B]
Fetched 18.9 MB in 4s (4450 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-23-223:~$ sudo apt-get -y install nginx
```



## 17. Running web server using public IP

