



Module 2: EC2 Assignment

Problem Statement:

You work for XYZ Corporation. Your corporation wants to launch a new web-based application using AWS Virtual Machines. Configure the resources accordingly for the tasks.

Tasks To Be Performed:

1. Create an instance in the US-East-1 (N. Virginia) region with an Ubuntu OS and install Nginx for making them web servers.
2. Change the default website with a page displaying the message: "Hello World"

1. Launched Ec2 Instances

The screenshot shows the AWS Management Console for the us-east-1 region. The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, Console-to-Code, and a list of services including Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, and AMI Catalog. The main content area displays a table of EC2 instances. One instance, 'EC2-Assign' with ID 'i-007bbe0a7580d5420', is in the 'Running' state. Below the table, the details for this instance are shown, including its public IP address (44.211.71.99) and private IP address (172.31.90.255). A yellow arrow points to the public IP address.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
EC2-Assign	i-007bbe0a7580d5420	Running	t2.micro	Initializing	View alarms +	us-east-1d

Instance: i-007bbe0a7580d5420 (EC2-Assign)

Details | Status and alarms New | Monitoring | Security | Networking | Storage | Tags

Instance summary Info

Instance ID: i-007bbe0a7580d5420 (EC2-Assign)

Public IP address: 44.211.71.99 [open address](#)

Private IP address: 172.31.90.255

Instance state: Running

Public IPv4 DNS: ec2-44-211-71-99.compute-1.amazonaws.com [open address](#)

2. After that installing nginx

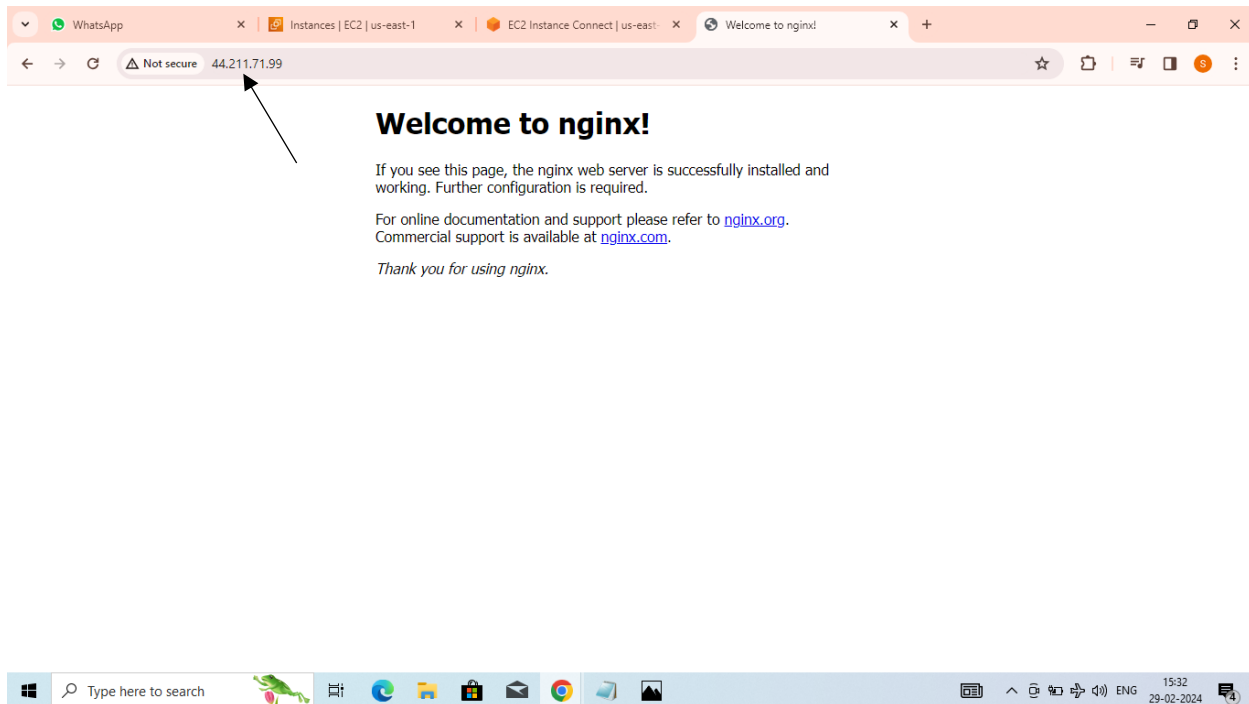
The screenshot shows the AWS Management Console for the us-east-1 region, specifically the EC2 Instance Connect terminal. The terminal output shows the command 'sudo apt-get install nginx -y' being executed. The output lists the packages to be installed and their dependencies. A yellow arrow points to the command. Below the terminal output, a modal window displays the instance details for 'i-007bbe0a7580d5420 (EC2-Assign)', including its public IP address (44.211.71.99) and private IP address (172.31.90.255).

```
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [24.3 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [644 B]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1202 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [218 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1476 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [244 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [846 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [161 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.1 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7476 B]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 29.8 MB in 6s (5099 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-90-255:~$ sudo apt-get install nginx -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core libbrotli0 libfontconfig1 libgd3 libjpeg-turbo8 libjpeg8 libnginx-mod-http-geoip2
```

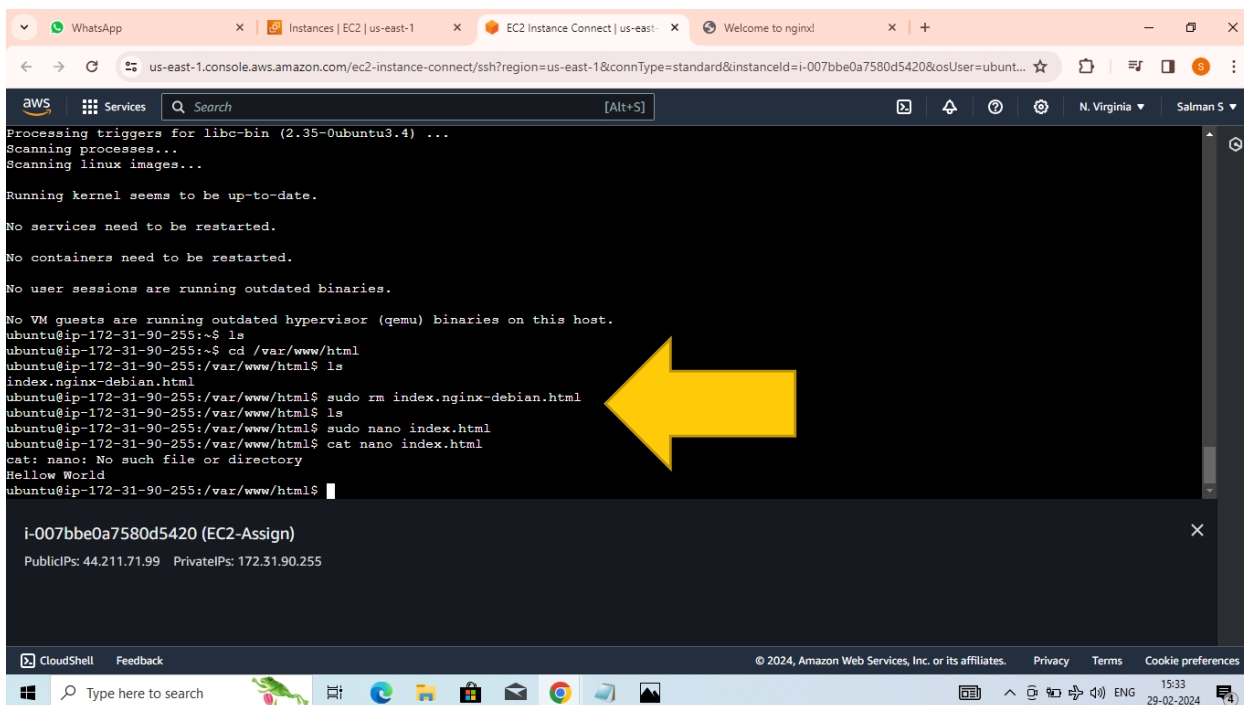
i-007bbe0a7580d5420 (EC2-Assign)

PublicIPs: 44.211.71.99 PrivateIPs: 172.31.90.255

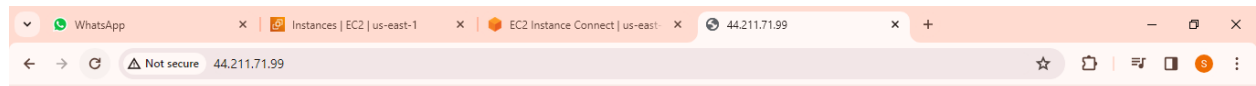
3. And successfully installed **nginx Web Server**



4. And we go the path of nginx and delete the welcome page and created the **Hello World** in **index.html**



5. successfully completed the Ass



Hellow World





Module 2: EBS Assignment

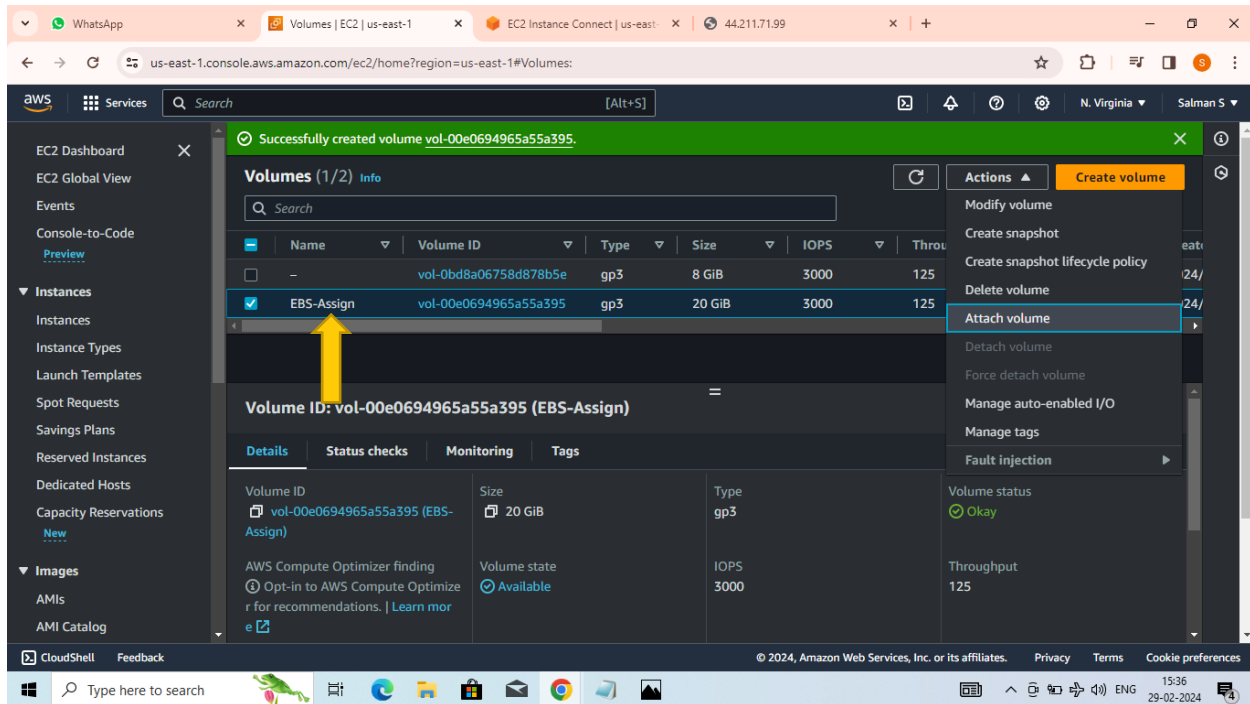
Problem Statement:

You work for XYZ Corporation. Your corporation wants to launch a new web-based application using AWS Virtual Machines. Configure the resources accordingly with appropriate storage for the tasks.

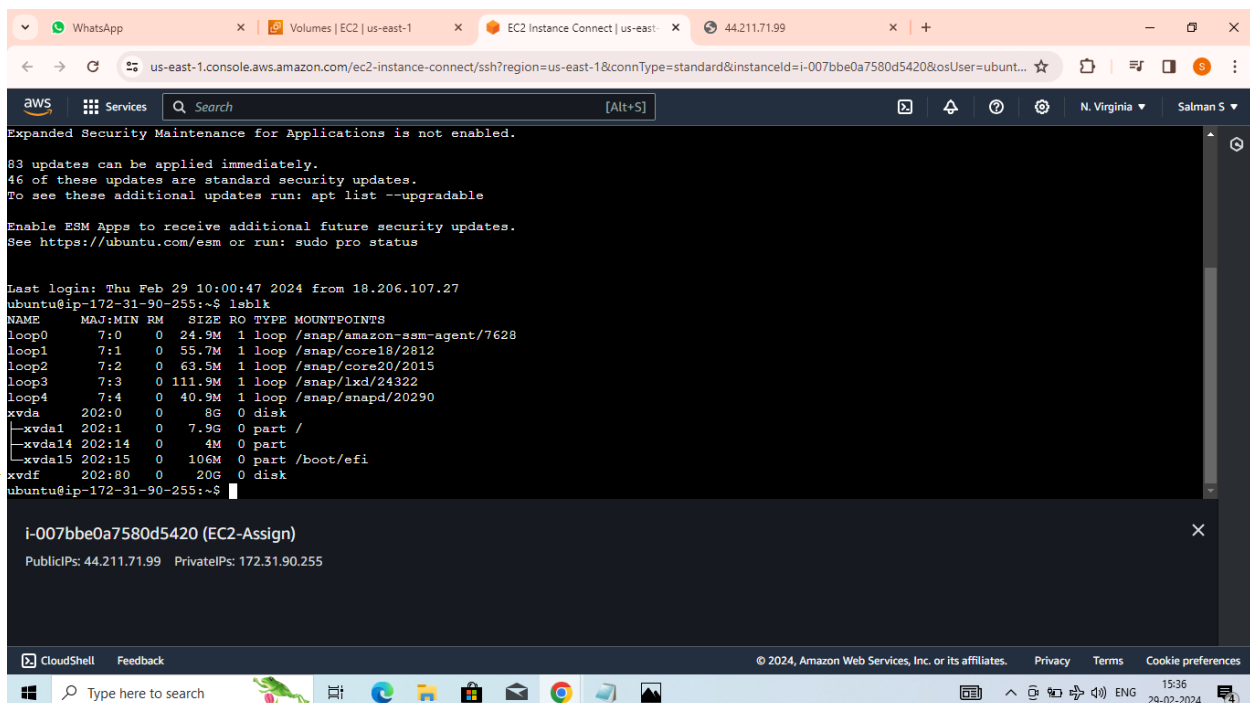
Tasks To Be Performed:

1. Launch a Linux EC2 instance.
2. Create an EBS volume with 20 GB of storage and attach it to the created EC2 instance.
3. Resize the attached volume and make sure it reflects in the connected instance.

1. **Previously** we Created EC2 with using Same Instance and **Attach 20 gb** of Storage and Attached to Instances



2. Now we just check 20 gb volume attach to the instance or not



3. After that we resize it to 20gib to 23 gib

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

Requested volume modification for volume **vol-00e0694965a55a395**.
The volume is being modified.

Volumes (2) Info

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
<input type="checkbox"/>	-	vol-0bd8a06758d878b5e	gp3	8 GiB	3000	125	snap-091ad9e...	2024/02
<input type="checkbox"/>	EBS-Assign	vol-00e0694965a55a395	gp3	23 GiB	3000	125	-	2024/02

Summary for all volumes in this Region

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4. we attached but its not mounted

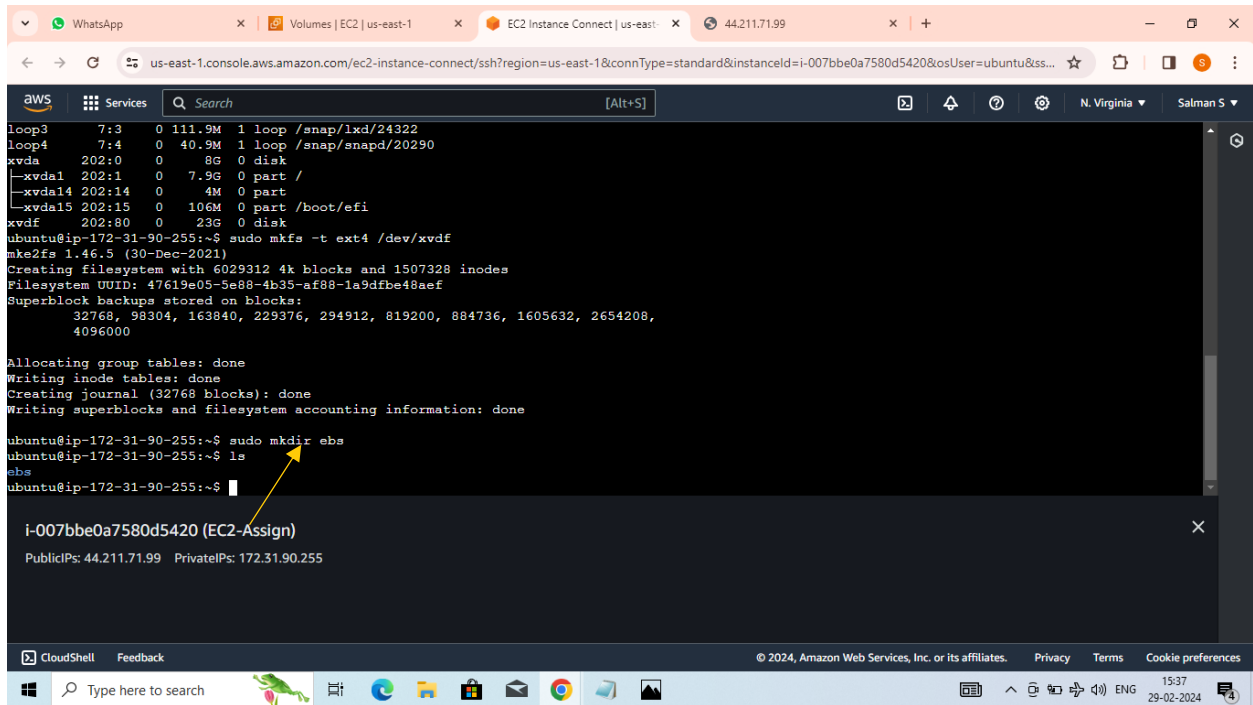
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-007bbe0a7580d5420&osUser=ubuntu&ss...

```
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
loop0 7:0 0 24.9M 1 loop /snap/amazon-ssm-agent/7628
loop1 7:1 0 55.7M 1 loop /snap/core18/2812
loop2 7:2 0 63.5M 1 loop /snap/core20/2015
loop3 7:3 0 111.9M 1 loop /snap/lxd/24322
loop4 7:4 0 40.9M 1 loop /snap/snapd/20290
xvda 202:0 0 8G 0 disk
├─xvda1 202:1 0 7.9G 0 part /
├─xvda14 202:14 0 4M 0 part
├─xvda15 202:15 0 106M 0 part /boot/efi
└─xvdf 202:80 0 20G 0 disk
ubuntu@ip-172-31-90-255:~$ lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
loop0 7:0 0 24.9M 1 loop /snap/amazon-ssm-agent/7628
loop1 7:1 0 55.7M 1 loop /snap/core18/2812
loop2 7:2 0 63.5M 1 loop /snap/core20/2015
loop3 7:3 0 111.9M 1 loop /snap/lxd/24322
loop4 7:4 0 40.9M 1 loop /snap/snapd/20290
xvda 202:0 0 8G 0 disk
├─xvda1 202:1 0 7.9G 0 part /
├─xvda14 202:14 0 4M 0 part
├─xvda15 202:15 0 106M 0 part /boot/efi
└─xvdf 202:80 0 23G 0 disk
ubuntu@ip-172-31-90-255:~$
```

i-007bbe0a7580d5420 (EC2-Assign)
PublicIPs: 44.211.71.99 PrivateIPs: 172.31.90.255

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5. so I Created a Directory "EBS"



The screenshot shows the AWS CloudShell interface with a terminal window. The terminal output displays disk information for loop3, loop4, xvda, and xvdF. It then shows the execution of 'sudo mkfs -t ext4 /dev/xvdf' and 'sudo mkdir ebs'. A yellow arrow points from the 'ebs' directory listing to the 'I-007bbe0a7580d5420 (EC2-Assign)' instance details box below the terminal.

```
loop3    7:3    0 111.9M 1 loop /snap/lxd/24322
loop4    7:4    0 40.9M  1 loop /snap/snapd/20290
xvda     202:0   0 8G     0 disk
├─xvda1   202:1   0 7.9G   0 part /
├─xvda14  202:14  0 4M     0 part
├─xvda15  202:15  0 106M   0 part /boot/efi
└─xvdF    202:80  0 23G    0 disk

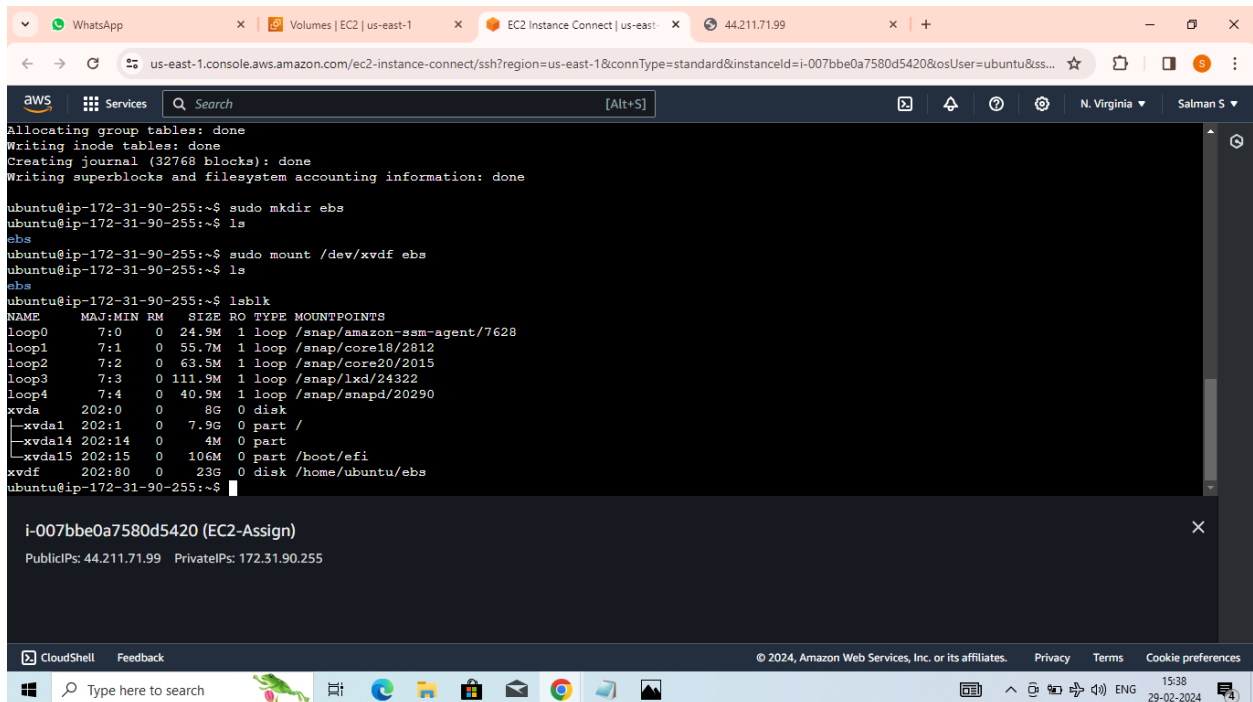
ubuntu@ip-172-31-90-255:~$ sudo mkfs -t ext4 /dev/xvdf
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 6029312 4k blocks and 1507328 inodes
Filesystem UUID: 47619e05-5e88-4b35-af88-1a9dfbe48aef
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
    4096000

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

ubuntu@ip-172-31-90-255:~$ sudo mkdir ebs
ubuntu@ip-172-31-90-255:~$ ls
ebs
ubuntu@ip-172-31-90-255:~$
```

I-007bbe0a7580d5420 (EC2-Assign)
PublicIPs: 44.211.71.99 PrivateIPs: 172.31.90.255

6. And After mounting and I Checked with using of command lsblk(list Block Devices) and its mounted



The screenshot shows the AWS CloudShell interface with a terminal window. The terminal output displays the execution of 'sudo mkdir ebs', 'ls', 'sudo mount /dev/xvdf ebs', 'ls', and 'lsblk'. The 'lsblk' command output shows a table of block devices, including loop0 through loop4, xvda, and xvdF, with their respective mount points. A yellow arrow points from the 'ebs' directory listing to the 'I-007bbe0a7580d5420 (EC2-Assign)' instance details box below the terminal.

```
ubuntu@ip-172-31-90-255:~$ sudo mkdir ebs
ubuntu@ip-172-31-90-255:~$ ls
ebs
ubuntu@ip-172-31-90-255:~$ sudo mount /dev/xvdf ebs
ubuntu@ip-172-31-90-255:~$ ls
ebs
ubuntu@ip-172-31-90-255:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0      0 24.9M 1 loop /snap/amazon-s3-agent/7628
loop1        7:1      0 55.7M 1 loop /snap/core18/2812
loop2        7:2      0 63.5M 1 loop /snap/core20/2015
loop3        7:3      0 111.9M 1 loop /snap/lxd/24322
loop4        7:4      0 40.9M  1 loop /snap/snapd/20290
xvda        202:0    0 8G     0 disk
├─xvda1      202:1    0 7.9G   0 part /
├─xvda14     202:14   0 4M     0 part
├─xvda15     202:15   0 106M   0 part /boot/efi
└─xvdF       202:80   0 23G    0 disk /home/ubuntu/ebs
ubuntu@ip-172-31-90-255:~$
```

I-007bbe0a7580d5420 (EC2-Assign)
PublicIPs: 44.211.71.99 PrivateIPs: 172.31.90.255