



# Dhirubhai Ambani University Technology

Formerly DA-IICT

IT457 Cloud Computing

## Assignment-EC2

### Group 5

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# Screenshots

## Instance

The screenshot shows the AWS Management Console interface for the EC2 service. The left sidebar is collapsed, and the main content area displays the 'Instances' page. A single instance, 'mkgandhi' (ID: i-0d0bf577656df54ae), is listed as 'Running'. The instance type is 't2.micro', it has 2/2 checks passed, and is located in the 'us-east-1b' availability zone. Below the table, the details for the selected instance ('i-0d0bf577656df54ae (mkgandhi)') are shown. The 'Details' tab is active, displaying information such as Instance ID (i-0d0bf577656df54ae), Public IPv4 address (54.227.209.176), Private IP address (172.31.81.208), Instance state (Running), and Public DNS (ec2-54-227-209-176.compute-1.amazonaws.com). The bottom of the screen shows the Windows taskbar with various pinned icons.

```
neel@GeorgeBush MINGW64 ~/OneDrive/Desktop/Academic/Neel/Sem 7/IT457 Cloud Computing/Ec2 Lab (master)
$ chmod 400 "mkgandhi.pem"

neel@GeorgeBush MINGW64 ~/OneDrive/Desktop/Academic/Neel/Sem 7/IT457 Cloud Computing/Ec2 Lab (master)
$ ssh -i "mkgandhi.pem" ec2-user@ec2-54-227-209-176.compute-1.amazonaws.com
,
#_
~\_\_ #####_      Amazon Linux 2023
~~ \_\_ #####\_
~~ \_\_ #####|_
~~ \_\_ #####|_ https://aws.amazon.com/linux/amazon-linux-2023
~~ \_\_ #####|_
~~ \_\_ #####|_
[ec2-user@ip-172-31-81-208 ~]$
```

## Mount Verification

```
root@ip-172-31-81-208:~# ssh -i "mkgandhi.pem" ec2-user@ec2-54-227-209-176.compute-1.amazonaws.com
[ec2-54-227-209-176:~]# ls
[ec2-54-227-209-176:~]# cd mountfolder
[ec2-54-227-209-176:~/mountfolder]# ls
[ec2-54-227-209-176:~/mountfolder]# cat file1
[ec2-54-227-209-176:~/mountfolder]# cat file2
[ec2-54-227-209-176:~/mountfolder]#
```

Output of the terminal session showing the verification of mounted files.

```
root@ip-172-31-81-208:~# ssh -i "mkgandhi.pem" ec2-user@ec2-54-227-209-176.compute-1.amazonaws.com
[ec2-54-227-209-176:~]# ls
[ec2-54-227-209-176:~]# cd mountfolder
[ec2-54-227-209-176:~/mountfolder]# ls
[ec2-54-227-209-176:~/mountfolder]# cat file1
[ec2-54-227-209-176:~/mountfolder]# cat file2
[ec2-54-227-209-176:~/mountfolder]#
```

Output of the terminal session showing the verification of mounted files.

## Case Study: Mounting S3 on EC2 in a Real Startup

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- 1. How does mounting S3 on EC2 simplify your app's workflow compared to manually moving files back and forth?**

Mounting S3 makes the bucket appear like a local directory on EC2, so the app can read/write photos directly without extra upload/download scripts. This removes manual file transfer steps, reduces code complexity, and speeds up the workflow.

- 2. If suddenly 10,000 users upload images in a single day, what issues might you face with this setup? (Think speed, cost, or performance.)**

Large uploads may cause network bottlenecks, high S3 request costs, and increased EC2 processing load. The instance may slow down or run out of compute capacity, leading to performance issues for users.

- 3. What would you plan next to make the system more scalable and production-ready?**

I would introduce **auto-scaling EC2 instances**, use **S3 event triggers with AWS Lambda** for processing, and adopt a **queue system (SQS/Kinesis)** to handle spikes in uploads. Adding a load balancer and caching layer would further improve scalability and performance.