

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna Shrivastav

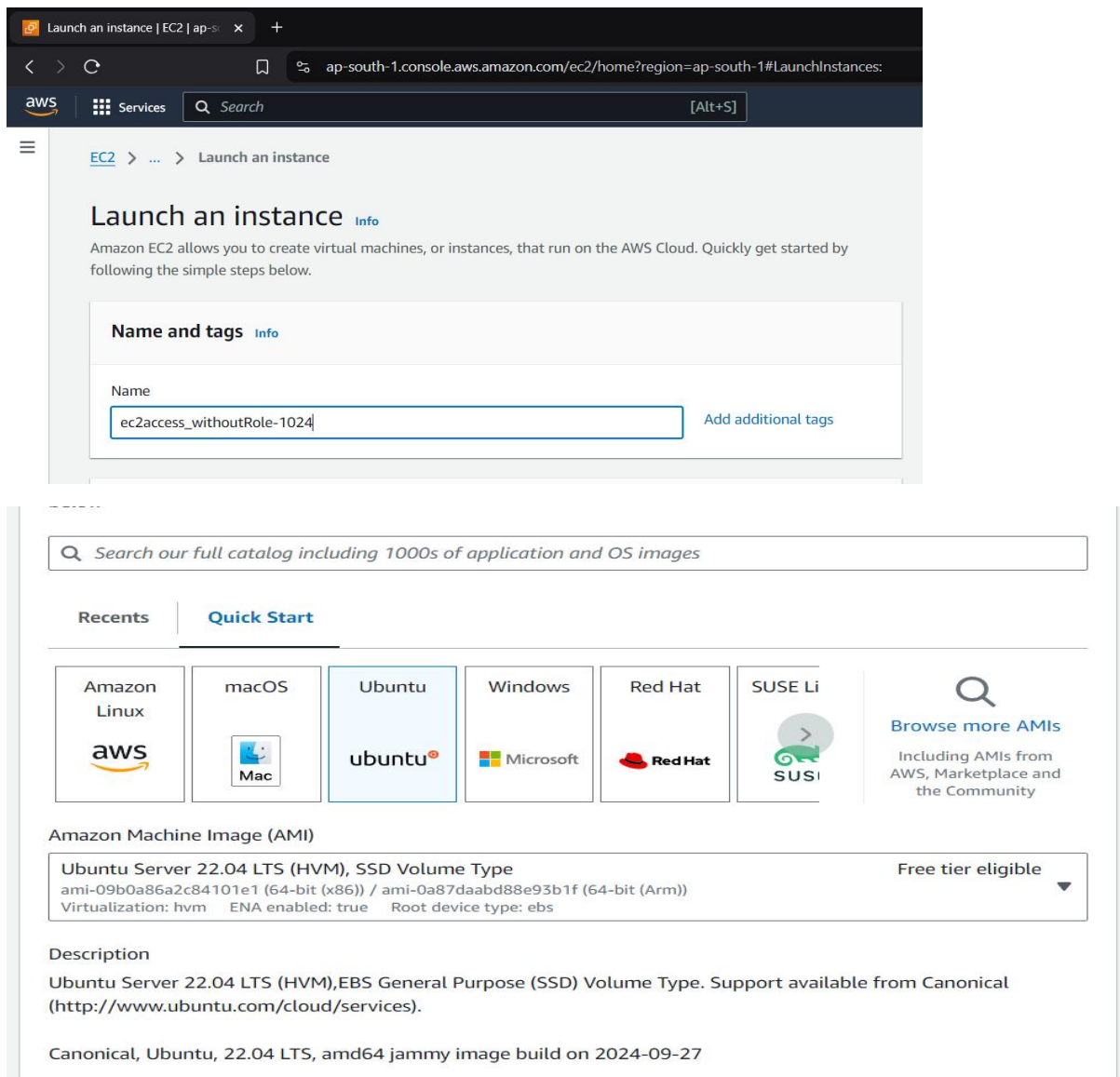
PRN: 20220801024

Title of Practical :

Enabling EC2 Instance Access to S3 Buckets

Without IAM role

Step 1 – Create an EC2 instance and connect it via SSH



Launch an instance | EC2 | ap-south-1

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

ec2access_withoutRole-1024

Add additional tags

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Recents Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux

aws Mac ubuntu Microsoft Red Hat SUSI

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type

ami-09b0a86a2c84101e1 (64-bit (x86)) / ami-0a87daabd88e93b1f (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Ubuntu Server 22.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).

Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2024-09-27



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▼ Instance type [Info](#) | [Get advice](#)

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0124 USD per Hour
On-Demand Windows base pricing: 0.017 USD per Hour
On-Demand RHEL base pricing: 0.0268 USD per Hour
On-Demand Ubuntu Pro base pricing: 0.0142 USD per Hour
On-Demand SUSE base pricing: 0.0124 USD per Hour

☐ All generations

[Compare instance types](#)

[Additional costs apply for AMIs with pre-installed software](#)

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

IOdemo1

[Create new key pair](#)

▼ Network settings [Info](#)

[Edit](#)

Network [Info](#)

vpc-0662aa9456cd34d0a | -defaultVPC-

Subnet [Info](#)

No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)

Enable

[Additional charges apply](#) when outside of [free tier allowance](#)

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☐ Create security group

☒ Select existing security group

Common security groups [Info](#)

Select security groups

SG-CCSA-TY-1024 sg-08f4e0d7ab53772a8 ✕
VPC: vpc-0662aa9456cd34d0a

[Compare security group rules](#)

Security groups that you add or remove here will be added to or removed from all your network interfaces.

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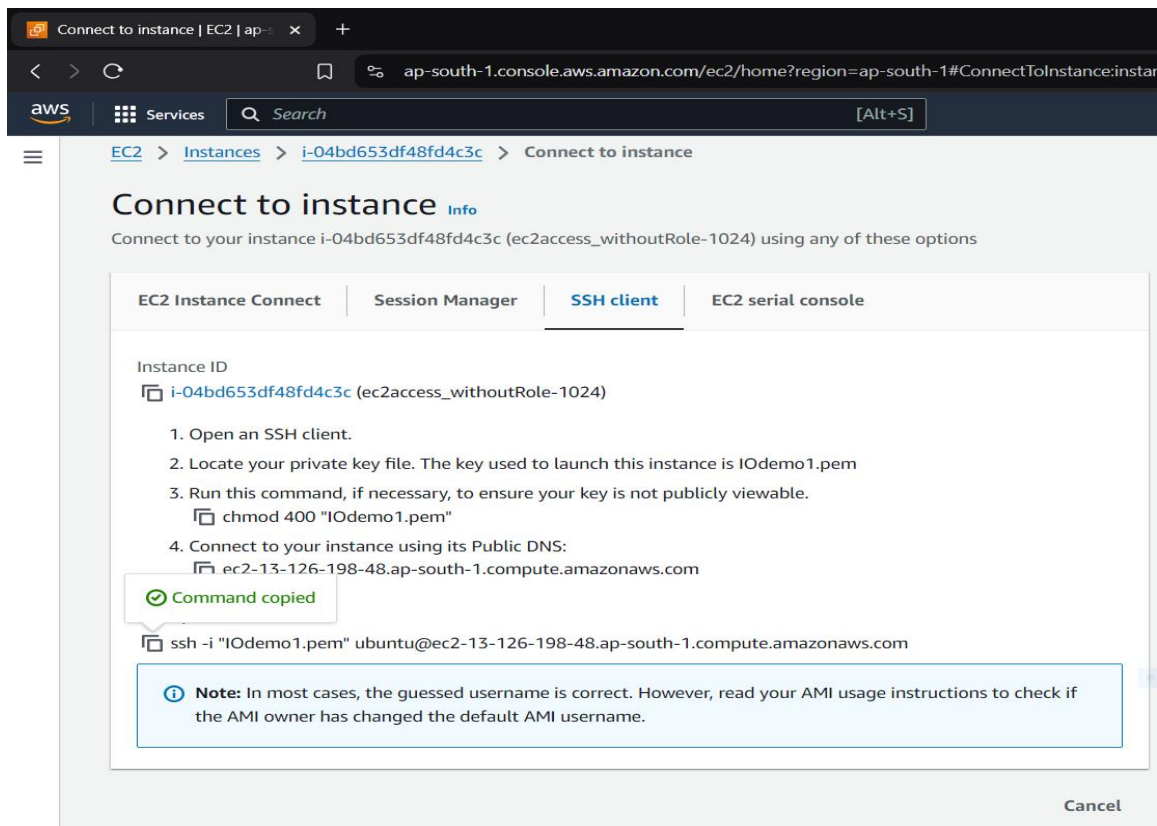
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Connect to instance using SSH---



Step 2 – open the cmd and connect via ssh--

```
C:\Users\shrushti\OneDrive\Desktop> ssh -i "IOdemo1.pem" ubuntu@ec2-13-126-198-48.ap-south-1.compute.amazonaws.com
```

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Step 3 – commands to install aws CLI

```
ubuntu@ip-172-31-2-211:~$  
ubuntu@ip-172-31-2-211:~$  
ubuntu@ip-172-31-2-211:~$  
ubuntu@ip-172-31-2-211:~$ sudo apt install unzip  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Suggested packages:  
  zip  
The following NEW packages will be installed:  
  unzip
```

Install AWS CLI using curl---

```
ubuntu@ip-172-31-2-211:~$  
ubuntu@ip-172-31-2-211:~$ curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64-2.0.30.zip" -o "awscliv2.zip"  
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current  
                                 Dload  Upload   Total   Spent    Left   Speed  
100 31.5M  100 31.5M    0     0  90.1M      0 --:--:-- --:--:-- --:--:--  90.1M  
ubuntu@ip-172-31-2-211:~$  
ubuntu@ip-172-31-2-211:~$
```

```
ubuntu@ip-172-31-2-211:~$  
ubuntu@ip-172-31-2-211:~$ unzip awscliv2.zip  
Archive:  awscliv2.zip  
  creating: aws/  
  creating: aws/dist/  
  inflating: aws/README.md  
  inflating: aws/install  
  inflating: aws/THIRD PARTY LICENSES
```

```
ubuntu@ip-172-31-2-211:~$  
ubuntu@ip-172-31-2-211:~$ sudo ./aws/install  
You can now run: /usr/local/bin/aws --version  
ubuntu@ip-172-31-2-211:~$
```

```
ubuntu@ip-172-31-2-211:~$ aws --version  
aws-cli/2.0.30 Python/3.7.3 Linux/6.8.0-1015-aws botocore/2.0.0dev34  
ubuntu@ip-172-31-2-211:~$
```

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Step 4 – create one S3 bucket--

Amazon S3 > Buckets > Create bucket

Create bucket Info

Buckets are containers for data stored in S3.

General configuration

AWS Region
Asia Pacific (Mumbai) ap-south-1

Bucket name Info

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

Copy settings from existing bucket - *optional*
Only the bucket settings in the following configuration are copied.

Format: s3://bucket/prefix

aws Services Search [Alt+S] Mumbai Shrushti

Successfully created bucket "ec2access-bkt24"
To upload files and folders, or to configure additional bucket settings, choose [View details](#).

Amazon S3 > Buckets

Account snapshot - updated every 24 hours All AWS Regions [View Storage Lens dashboard](#)

General purpose buckets | Directory buckets

General purpose buckets (1) Info All AWS Regions

Buckets are containers for data stored in S3.

	Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/>	ec2access-bkt24	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	November 13, 2024, 06:51:18 (UTC+05:30)

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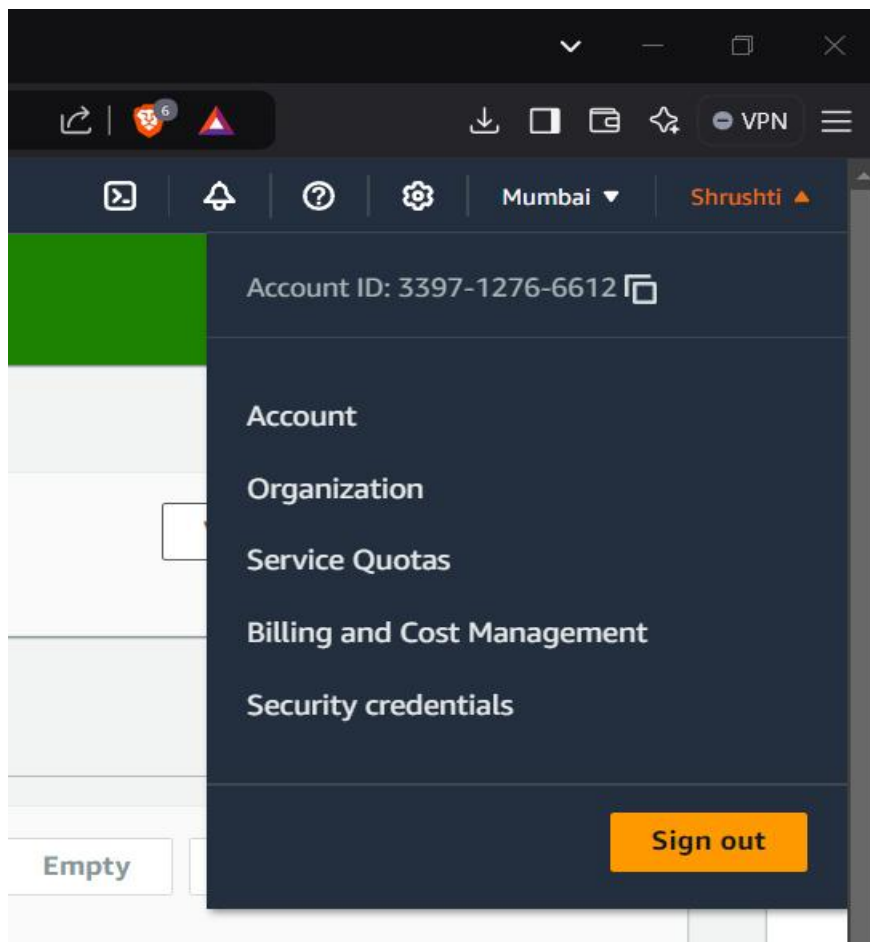
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Step 5 – Go to your profile and click on the “Security Credentials” tab as shown below.



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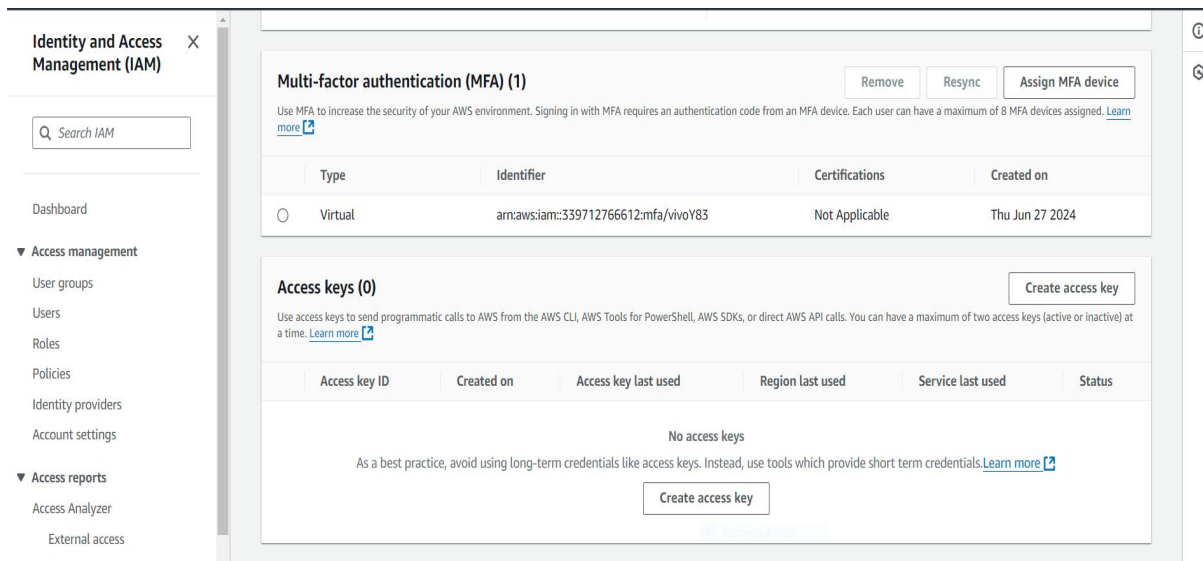
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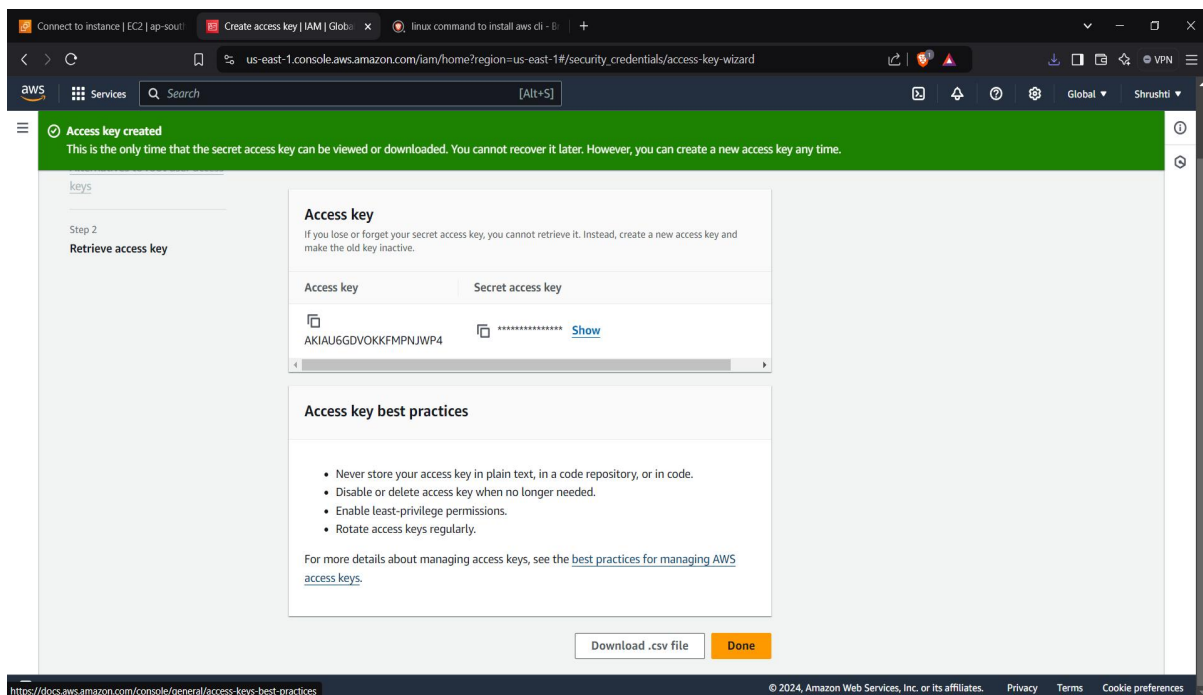
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Scroll-up a bit and create access key--



The screenshot shows the AWS IAM console. On the left is the navigation menu with 'Identity and Access Management (IAM)' selected. The main content area has two sections: 'Multi-factor authentication (MFA) (1)' and 'Access keys (0)'. The MFA section shows a table with one entry: a virtual MFA device 'arnawsiam:339712766612:mfa/vivoY83' created on 'Thu Jun 27 2024'. The Access keys section shows a 'Create access key' button and a message stating 'No access keys' and 'As a best practice, avoid using long-term credentials like access keys. Instead, use tools which provide short term credentials.'



The screenshot shows the AWS IAM console after creating an access key. A green notification bar at the top says 'Access key created' and 'This is the only time that the secret access key can be viewed or downloaded. You cannot recover it later. However, you can create a new access key any time.' Below this, the 'Access key' section shows the 'Secret access key' as a masked string with a 'Show' button. The 'Access key best practices' section lists several guidelines: 'Never store your access key in plain text, in a code repository, or in code.', 'Disable or delete access key when no longer needed.', 'Enable least-privilege permissions.', and 'Rotate access keys regularly.' At the bottom, there are buttons for 'Download .csv file' and 'Done'.

Ensure to download the csv file.



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Step 6 – Go to cmd and follow the command:

‘aws configure’-- enter --

provide access key, secret access key (from above or csv file)--

Provide region, output format.

```
ubuntu@ip-172-31-2-211:~$ aws configure
AWS Access Key ID [None]: AKIAU6GDVOKKMPNJWP4
AWS Secret Access Key [None]: OGW+sW7JunFt1KfquNKXKRiVh41ic5Bzm6m5T0Lg
Default region name [None]: ap-south-1
Default output format [None]: json
ubuntu@ip-172-31-2-211:~$
```

Step 7 – command to view s3 from ec2:

‘aws s3 ls’

This will show list of all the bucket created

```
ubuntu@ip-172-31-2-211:~$ aws s3 ls
2024-11-13 01:21:19 ec2access-bkt24
ubuntu@ip-172-31-2-211:~$
```