

## Experiment 1

### 1. Open AWS Academia and select launch instance

**Resources**

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	1	Auto Scaling Groups	1	Capacity Reservations	0
Dedicated Hosts	0	Elastic IPs	1	Instances	1
Key pairs	0	Load balancers	0	Placement groups	0
Security groups	2	Snapshots	0	Volumes	1

**Launch instance**

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

**Launch instance** (button)

**Migrate a server** (button)

Note: Your instances will launch in the US East (N. Virginia) Region

**Service health**

**AWS Health Dashboard** (button)

Region: US East (N. Virginia)

Status: ✔ This service is operating normally.

**Account attributes**

**Default VPC** (button)

vpc-0fcb2f3f7a22f1a71

**Settings**

- Data protection and security
- Zones
- EC2 Serial Console
- Default credit specification
- EC2 console preferences

**Additional information** (button)

### 2. Select Ubuntu

**Quick Start**

Amazon Linux, macOS, **Ubuntu**, Windows, Red Hat, SUSE L

**Amazon Machine Image (AMI)**

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type Free tier eligible

ami-04a81a99f5ec58529 (64-bit (x86)) / ami-0c14ff330901e49ff (64-bit (Arm))

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

**Description**

Ubuntu Server 24.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

**Architecture**

64-bit (x86)

**AMI ID**

ami-04a81a99f5ec58529 Verified provider

**Summary**

Number of instances **1**

**Software Image (AMI)**

Canonical, Ubuntu, 24.04 LTS, ...read more

ami-04a81a99f5ec58529

**Virtual server type (instance type)**

t2.micro

**Firewall (security group)**

New security group

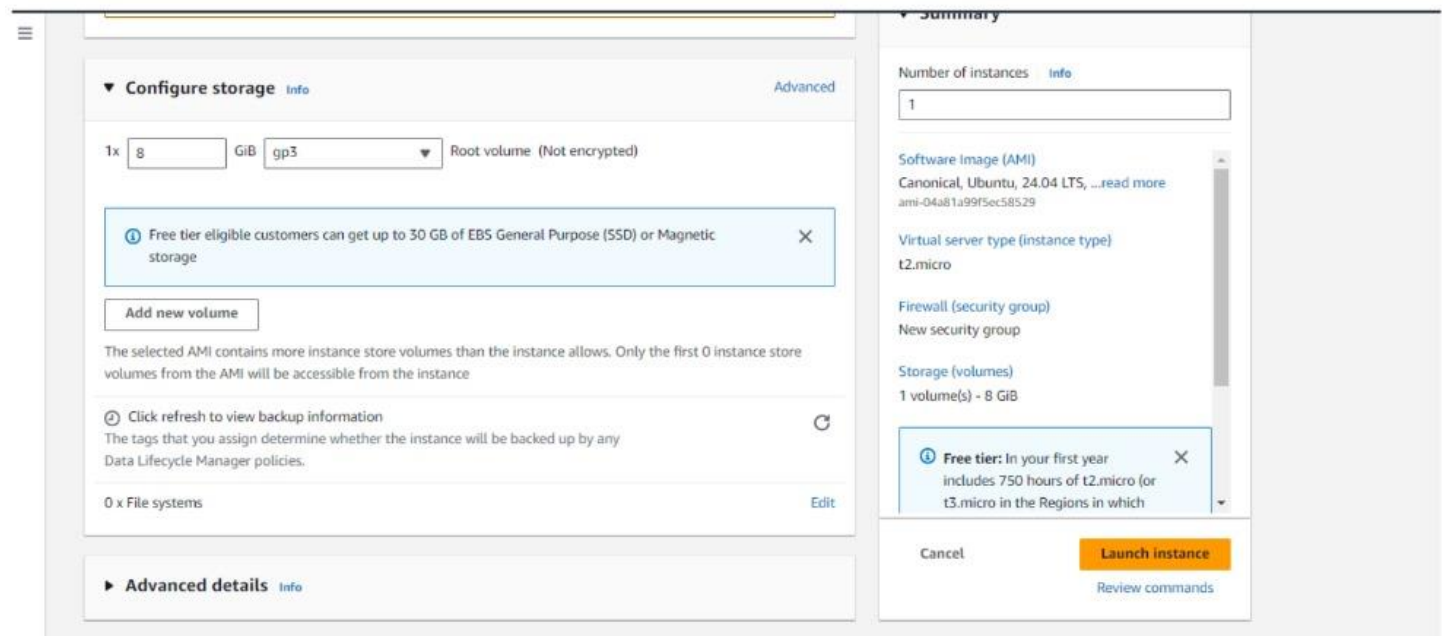
**Storage (volumes)**

1 volume(s) - 8 GiB

**Free tier:** In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which

**Launch instance** (button)

### 3. Set the configuration



4. Execute the following commands in the aws console.

#### Commands :

`sudo su`

`sudo apt install`

`sudo apt-get update`

`apt install apache2`

`systemctl status apache2`

`cd /var/www/html/`

```
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1009-aws x86_64)

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

System information disabled due to load higher than 1.0
Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

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

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.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-17-139:~$ sudo su
root@ip-172-31-17-139:/home/ubuntu# sudo apt install
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

i-Of7cedaab7d390e14 (My Web Server)  
PublicIPs: 3.91.6.193 PrivateIPs: 172.31.17.139

```
root@ip-172-31-17-139:/home/ubuntu# sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [265 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [63.3 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [3668 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [247 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [107 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [8632 B]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [9220 B]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [208 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [40.7 kB]
Get:16 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [420 B]
Get:17 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [10.6 kB]
Get:18 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [2808 B]
Get:19 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [344 B]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [318 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [82.9 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [5676 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [319 kB]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [134 kB]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [45.0 kB]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [12.6 kB]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [208 kB]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [208 kB]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [40.7 kB]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [14.1 kB]
Get:38 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [3608 B]
Get:39 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [212 B]
Get:40 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [532 B]
Get:41 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [208 B]
Get:42 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [112 B]
Get:43 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [10.3 kB]
Get:44 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [10.5 kB]
Get:45 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [17.6 kB]
Get:46 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1016 B]
Get:47 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:48 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:49 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 components [212 B]
Get:50 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B]
Fetched 28.2 MB in 6s (5073 kB/s)
Reading package lists... Done
root@ip-172-31-17-139:/home/ubuntu# apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap libaprutil1t64 liblua5.4-0 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap libaprutil1t64 liblua5.4-0 ssl-cert
0 upgraded, 10 newly installed, 0 to remove and 42 not upgraded.
Need to get 2083 kB of archives.
After this operation, 8094 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libapr1t64 amd64 1.7.2-3.1build2 [107 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1t64 amd64 1.6.3-1.1ubuntu7 [91.9 kB]
```

```
After this operation, 8094 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libapr1t64 amd64 1.7.2-3.1build2 [107 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1t64 amd64 1.6.3-1.1ubuntu7 [91.9 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.3-1.1ubuntu7 [11.2 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-ldap amd64 1.6.3-1.1ubuntu7 [9116 B]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 liblua5.4-0 amd64 5.4.6-3build2 [166 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-bin amd64 2.4.58-1ubuntu8.4 [1329 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-data all 2.4.58-1ubuntu8.4 [163 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-utils amd64 2.4.58-1ubuntu8.4 [97.1 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2 amd64 2.4.58-1ubuntu8.4 [90.2 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 ssl-cert all 1.1.2ubuntu1 [17.8 kB]
Fetched 2083 kB in 0s (25.8 MB/s)
Preconfiguring packages ...
Selecting previously unselected package libapr1t64:amd64.
(Reading database ... 67739 files and directories currently installed.)
Preparing to unpack .../0-libapr1t64_1.7.2-3.1build2_amd64.deb ...
Unpacking libapr1t64:amd64 (1.7.2-3.1build2) ...
Selecting previously unselected package libaprutil1t64:amd64.
Preparing to unpack .../1-libaprutil1t64_1.6.3-1.1ubuntu7_amd64.deb ...
Unpacking libaprutil1t64:amd64 (1.6.3-1.1ubuntu7) ...
Selecting previously unselected package libaprutil1-dbd-sqlite3:amd64.
Preparing to unpack .../2-libaprutil1-dbd-sqlite3_1.6.3-1.1ubuntu7_amd64.deb ...
Unpacking libaprutil1-dbd-sqlite3:amd64 (1.6.3-1.1ubuntu7) ...
Selecting previously unselected package libaprutil1-ldap:amd64.
Preparing to unpack .../3-libaprutil1-ldap_1.6.3-1.1ubuntu7_amd64.deb ...
Unpacking libaprutil1-ldap:amd64 (1.6.3-1.1ubuntu7) ...
Selecting previously unselected package liblua5.4-0:amd64.
Preparing to unpack .../4-liblua5.4-0_5.4.6-3build2_amd64.deb ...
Unpacking liblua5.4-0:amd64 (5.4.6-3build2) ...
Selecting previously unselected package apache2-bin.
Preparing to unpack .../5-apache2-bin_2.4.58-1ubuntu8.4_amd64.deb ...
Unpacking apache2-bin (2.4.58-1ubuntu8.4) ...
Selecting previously unselected package apache2-data.
Preparing to unpack .../6-apache2-data_2.4.58-1ubuntu8.4_all.deb ...
Unpacking apache2-data (2.4.58-1ubuntu8.4) ...
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /usr/lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /usr/lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.2-6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-17-139:/home/ubuntu# systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Wed 2024-08-07 14:32:03 UTC; 32s ago
     Docs: https://httpd.apache.org/docs/2.4/
  Main PID: 2487 (apache2)
    Tasks: 55 (limit: 1130)
   Memory: 5.4M (peak: 5.6M)
      CPU: 37ms
   CGroup: /system.slice/apache2.service
           └─2487 /usr/sbin/apache2 -k start
           └─2490 /usr/sbin/apache2 -k start
           └─2491 /usr/sbin/apache2 -k start

Aug 07 14:32:03 ip-172-31-17-139 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Aug 07 14:32:03 ip-172-31-17-139 systemd[1]: Started apache2.service - The Apache HTTP Server.
root@ip-172-31-17-139:/home/ubuntu# cd /var/www/html/
root@ip-172-31-17-139:/var/www/html#
```

5. Edit the inbound and outbound rules.

EC2 Dashboard

EC2 Global View

Events

Console-to-Code Preview

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Details

EC2 > Security Groups > sg-0501f07360e1dce47 - launch-wizard-1

sg-0501f07360e1dce47 - launch-wizard-1

Actions

Details

Security group name	Security group ID	Description	VPC ID
launch-wizard-1	sg-0501f07360e1dce47	launch-wizard-1 created 2024-08-07T14:21:19.108Z	vpc-0ec7dea564d6f7acf
Owner	Inbound rules count	Outbound rules count	
856746069793	1 Permission entry	1 Permission entry	

Inbound rules

Outbound rules

Tags

Inbound rules (1)

Manage tags

Edit inbound rules

Q Search

< 1 > ⚙

<input type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sgr-09fa86395ec8777e3	IPv4	HTTP	TCP	80



**Details**

sg-0501f07360e1dce47 - launch-wizard-1

**Details**

Security group name launch-wizard-1	Security group ID sg-0501f07360e1dce47	Description launch-wizard-1 created 2024-08-07T14:21:19.108Z	VPC ID vpc-0ec7dea564d6f7acf
Owner 856746069793	Inbound rules count 1 Permission entry	Outbound rules count 1 Permission entry	

**Outbound rules (1)**

Name	Security group rule...	IP version	Type	Protocol	Port range
-	sgr-0cc59fddd03e24266	IPv4	HTTP	TCP	80

6. This is the hosted Static Website.

**Apache2 Default Page**

Ubuntu

**It works!**

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

**Configuration Overview**

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```

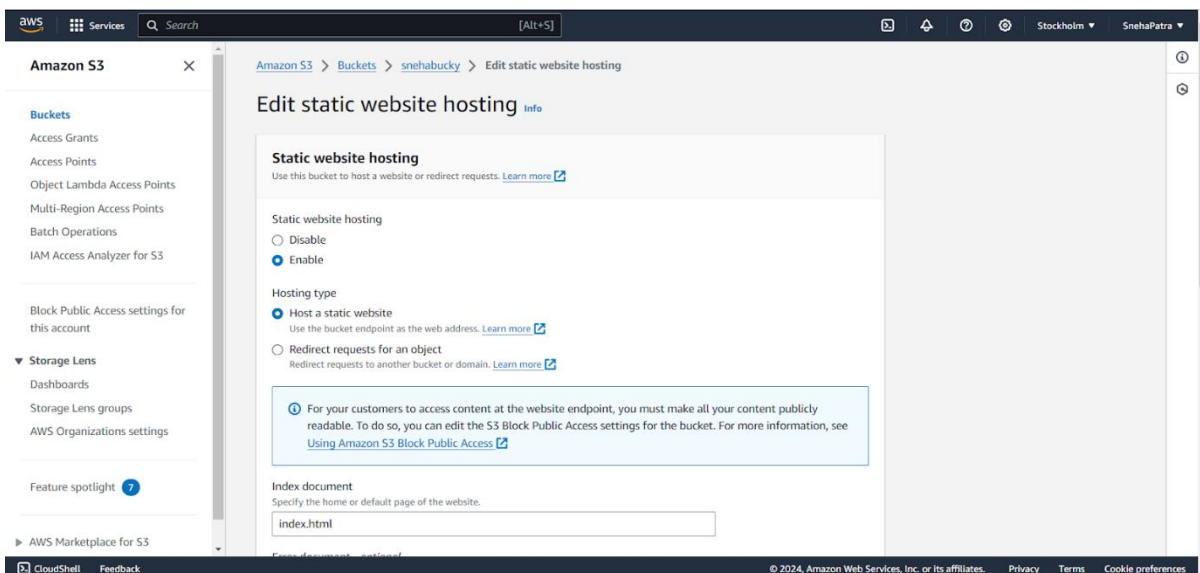
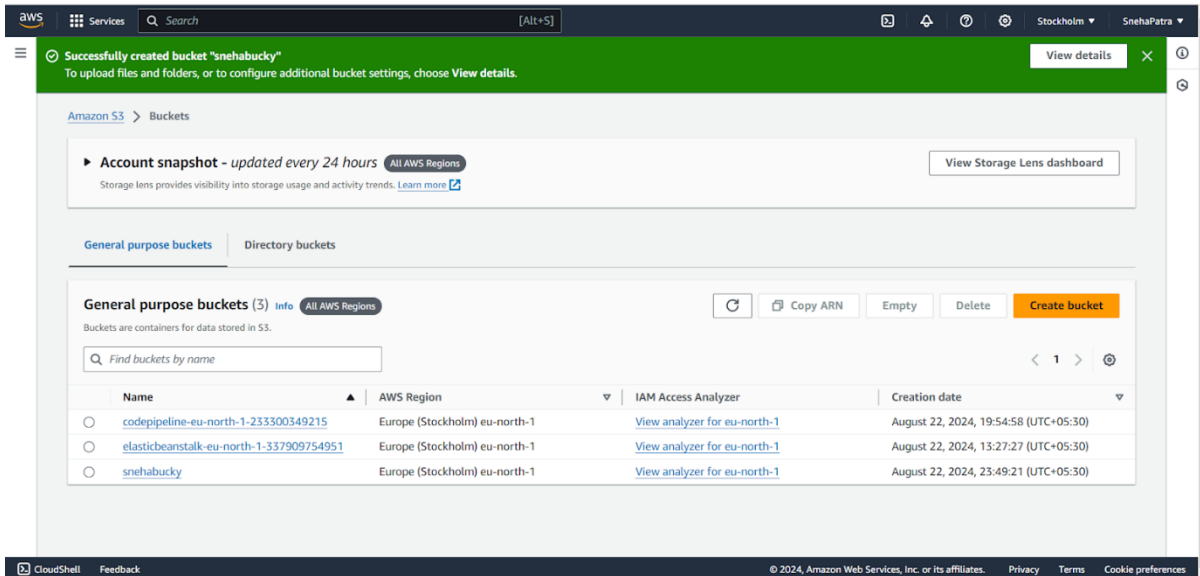
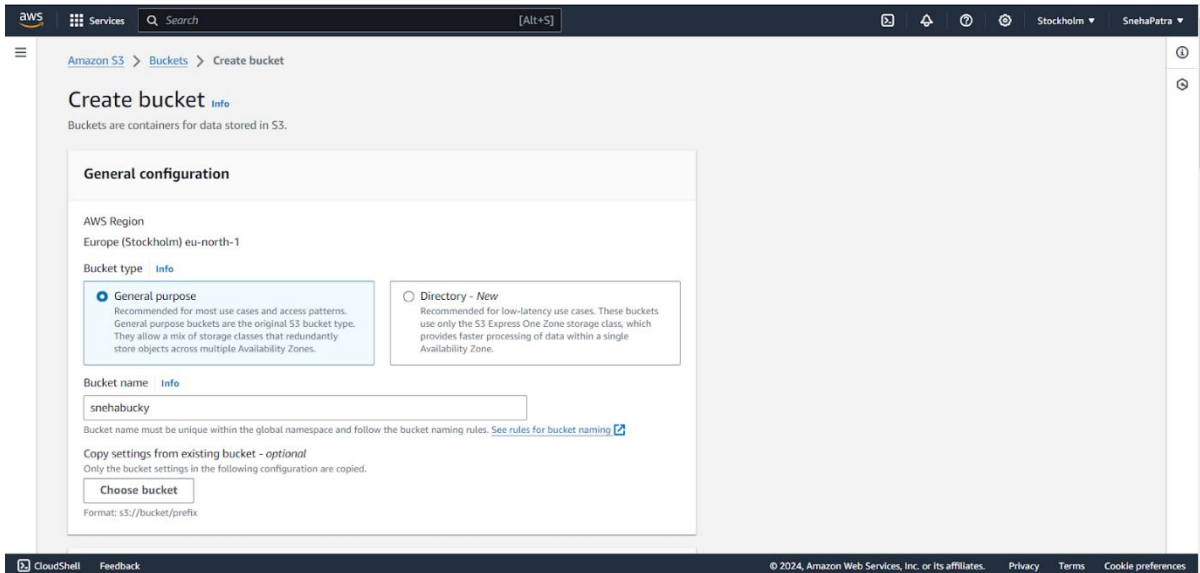
/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|-- mods-enabled
|   |-- *.load
|   |-- *.conf
|-- conf-enabled
|   |-- *.conf
|-- sites-enabled
|   |-- *.conf

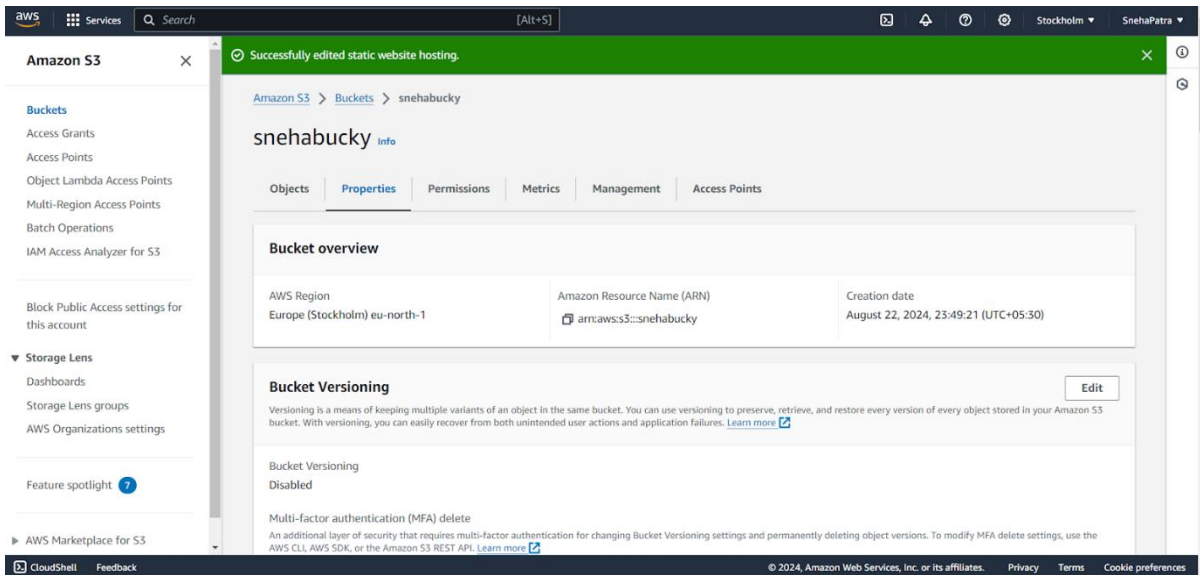
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain

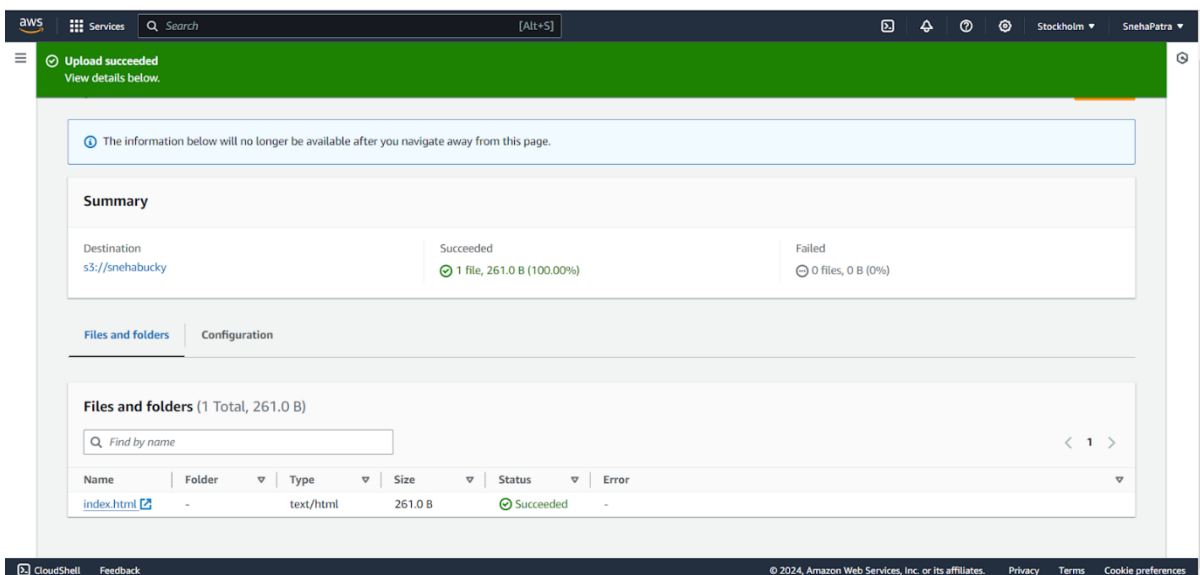
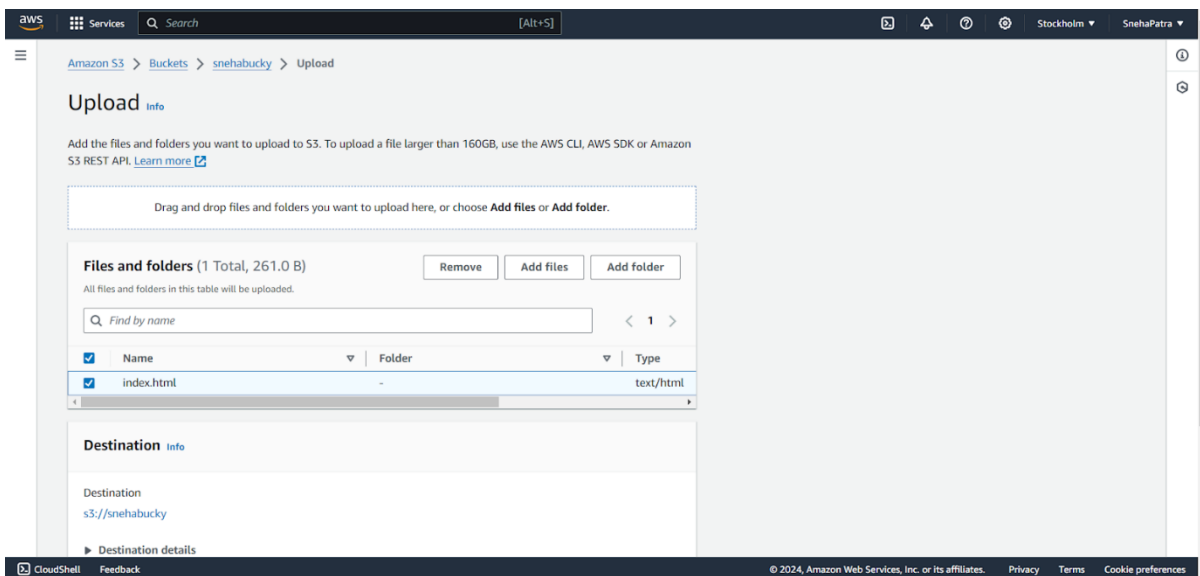
## Using S3

1. Visit S3 under the developer tools and create a Bucket. Click on the Edit Static Website Hosting under the properties tab

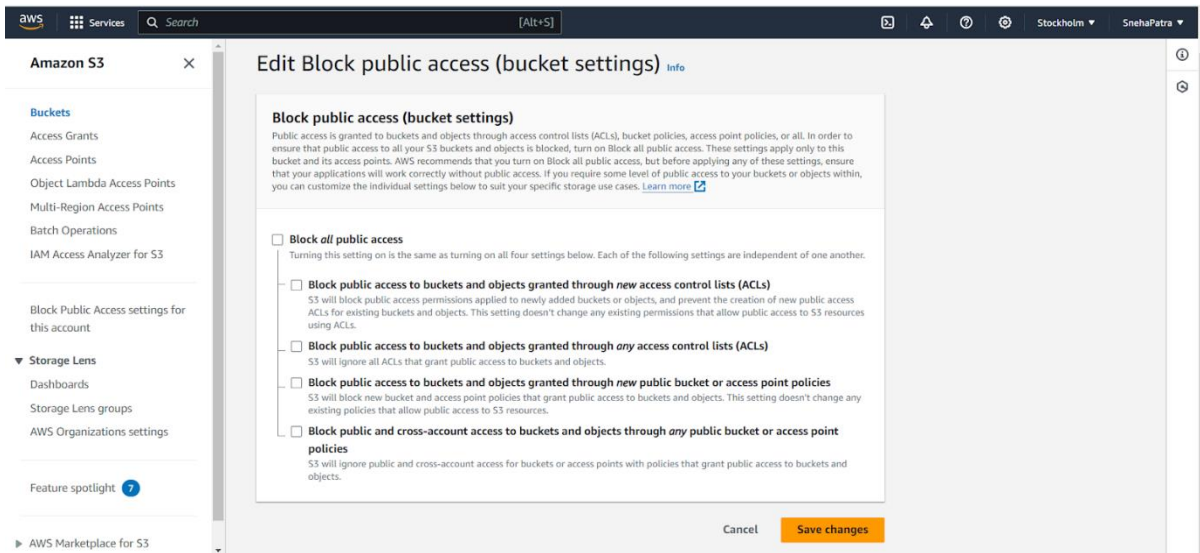




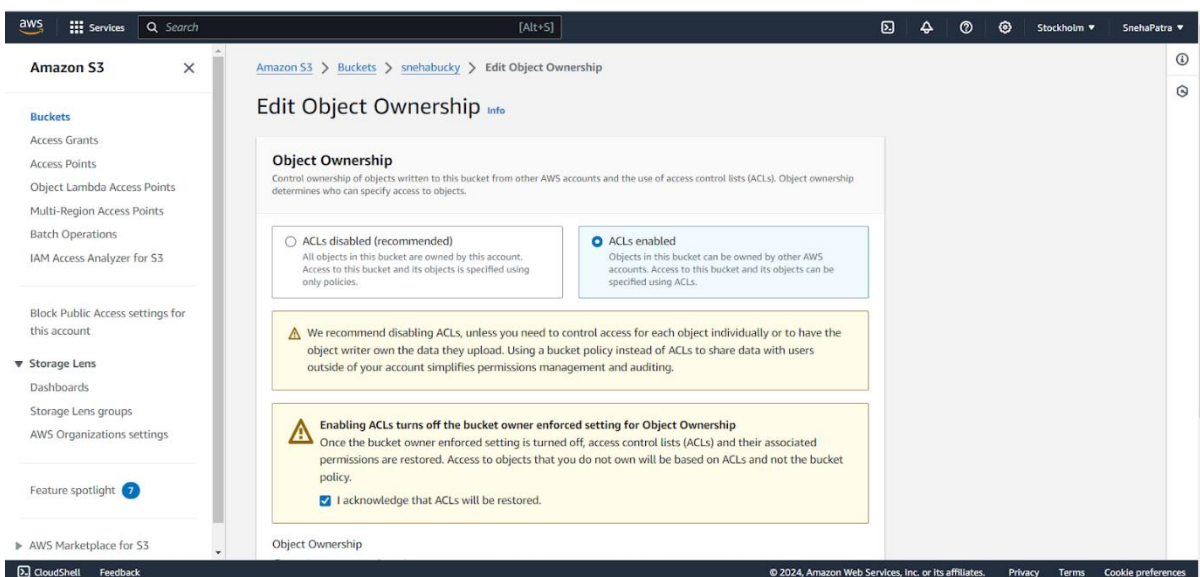
## 2. Upload a file



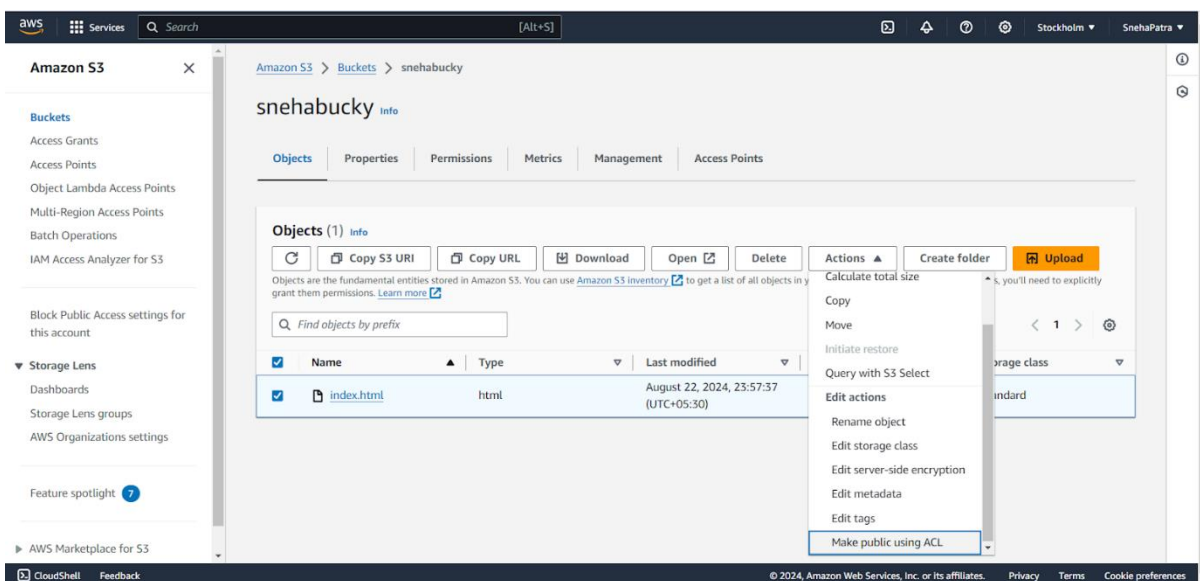
## 3. Click on the Edit block public access under the Permissions tab



#### 4. Click on Object Ownership under Permission Tab

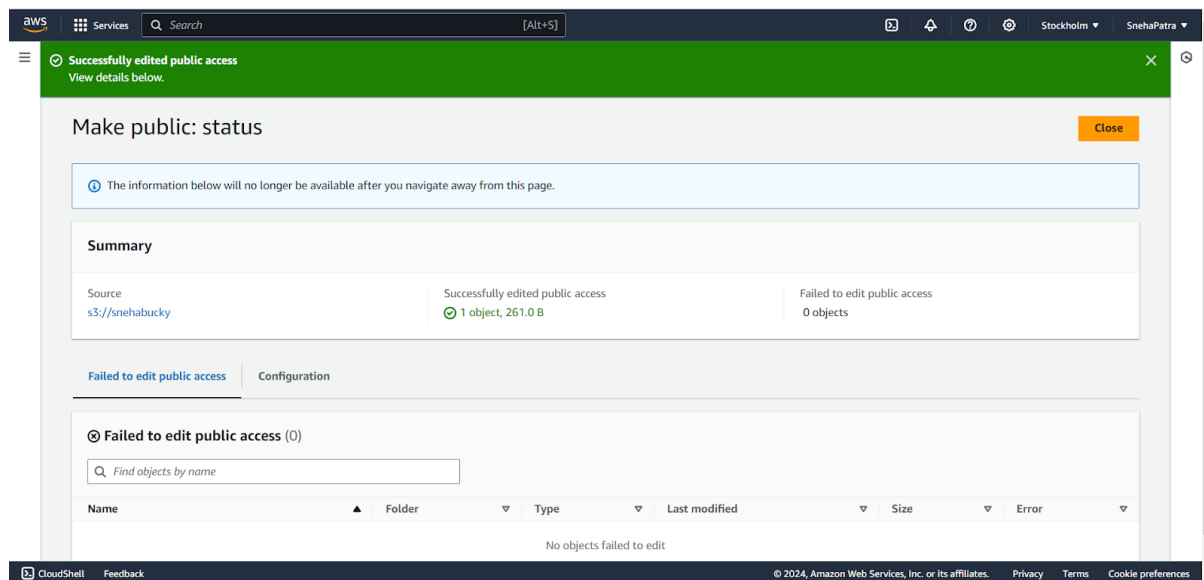


#### 5. Select the file and click on Actions and select the option Make Public using ACL from the dropdown

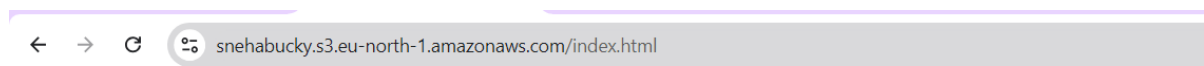


#### 6. Select on Make Public





7. Visit the domain and the website hosted.



Hello World. I am Sneha Patra From D15A!!