



# CLOUD COMPUTING PROJECT





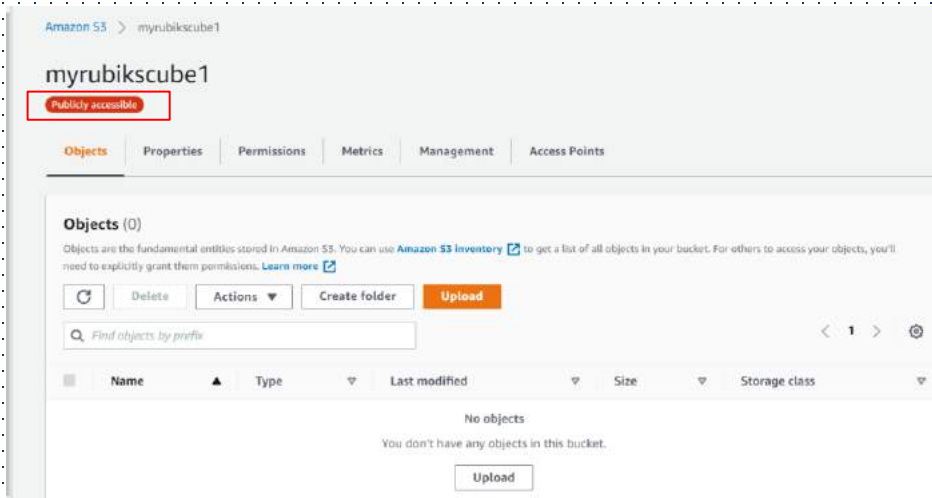
## PROJECT- TO HOST A WEBSITE ON THE APACHE SERVER USING THE EC2 INSTANCE

Project details::

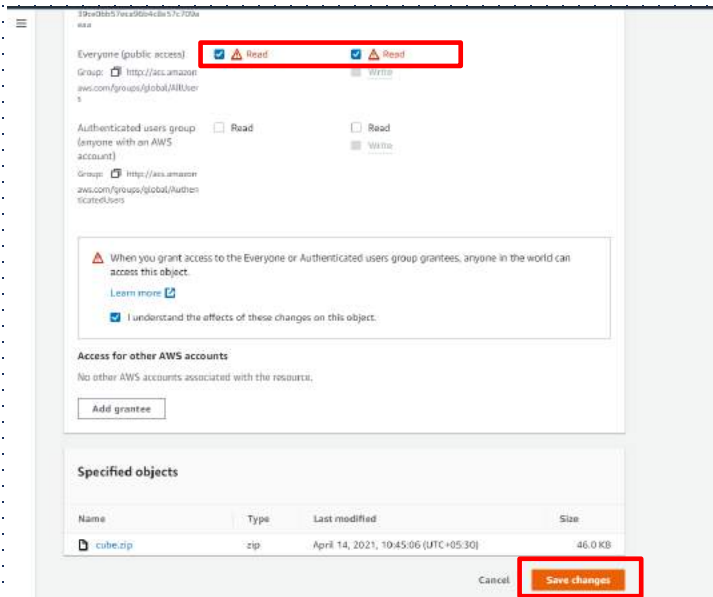
1. Go to the LINK.
2. Upload it to S3.
3. Create an EC2 instance.
4. Install apache using `yum install httpd -y`
5. Go to `var/www/html` using `cd` command.
6. `Wget(s3 link)` and unzip the file.
7. `cp filename ../`
8. `Service httpd start`
9. Run the IP in the browser of the EC2 instance



# I. Make a public s3 bucket



## 2.Upload the zip file in the bucket and set the (ACL) public to everyone.



### 3. Make a security group and in the inbound add the rules shown. Click create.

**Create Security Group**

Security group name: MAJOR PROJECT  
Description: security group used in the major project  
VPC: vpc-a344bfc8 (default)

Security group rules:

Inbound Outbound

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Ad
HTTP	TCP	80	Custom 0.0.0.0/0 ::/0	e.g. SSH for Ad
HTTPS	TCP	443	Custom 0.0.0.0/0 ::/0	e.g. SSH for Ad
Custom TCP	TCP	0	Custom 0.0.0.0/0	e.g. SSH for Ad

Add Rule

Cancel Create

### 4. Launch the Instance Amazon Linux 2 as shown by clicking on select and after clicking here select t2 instance type (free tier eligible) under choose an instance tab and click review and launch.

#### Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Search by Systems Manager parameter

Quick Start

- My AMIs
- AWS Marketplace
- Community AMIs
- ☐ Free tier only

1 to 40 of 40 AMIs

 <b>Amazon Linux</b> Free tier eligible	<b>Amazon Linux 2 AMI (HVM), SSD Volume Type</b> - ami-0bcf5425cdc1d8a85 (64-bit x86) / ami-003025fed2eb22f59 (64-bit Arm) Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is approaching end of life on December 31, 2020 and has been removed from this wizard. Root device type: ebs Virtualization type: hvm ENA Enabled: Yes	<b>Select</b> <input checked="" type="radio"/> 64-bit (x86) <input type="radio"/> 64-bit (Arm)
 <b>Red Hat</b> Free tier eligible	<b>Red Hat Enterprise Linux 8 (HVM), SSD Volume Type</b> - ami-0a9d27a9f4f5c0efc (64-bit x86) / ami-0816d75a127c17a49 (64-bit Arm) Red Hat Enterprise Linux version 8 (HVM), EBS General Purpose (SSD) Volume Type Root device type: ebs Virtualization type: hvm ENA Enabled: Yes	<b>Select</b> <input checked="" type="radio"/> 64-bit (x86) <input type="radio"/> 64-bit (Arm)
 <b>SUSE Linux</b> Free tier eligible	<b>SUSE Linux Enterprise Server 15 SP2 (HVM), SSD Volume Type</b> - ami-0b3acf3edf2397475 (64-bit x86) / ami-0ab71076ab9b53b0d (64-bit Arm) SUSE Linux Enterprise Server 15 Service Pack 2 (HVM), EBS General Purpose (SSD) Volume Type. Amazon EC2 AMI Tools preinstalled, Apache 2.2, MySQL 5.5, PHP 5.3, and Ruby 1.8.7 available. Root device type: ebs Virtualization type: hvm ENA Enabled: Yes	<b>Select</b> <input checked="" type="radio"/> 64-bit (x86) <input type="radio"/> 64-bit (Arm)

## 5. Select Edit security groups and select the group which we made earlier.

1 Choose AMI 2 Choose Instance Type 3 Configure Instance 4 Add Storage 5 Add Tags 6 Configure Security Group 7 Review

### Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☐ Create a new security group ☒ Select an existing security group

Security Group ID	Name	Description	Actions
sg-266da65c	default	default VPC security group	<a href="#">Copy to new</a>
sg-06ab79ec2d2d9e3c	JENKENS_SECURITY_GROUP	THIS WAS USED AS A TUTORIAL FOR JENKINS	<a href="#">Copy to new</a>
sg-069337bf8a6b4ef8	launch-wizard-1	launch-wizard-1 created 2021-04-12T13:43:06-05:30	<a href="#">Copy to new</a>
sg-04c09e1b835702dc5	launch-wizard-2	launch-wizard-2 created 2021-04-13T18:30:56-11:2+05:30	<a href="#">Copy to new</a>
sg-0b0be1fe5323ad8bc	MAJOR PROJECT	security group used in the major project	<a href="#">Copy to new</a>

Inbound rules for sg-0b0be1fe5323ad8bc (Selected security groups: sg-0b0be1fe5323ad8bc)

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::0	
SSH	TCP	22	0.0.0.0/0	
Custom TCP Rule	TCP	0	0.0.0.0/0	

[Cancel](#) [Previous](#) [Review and Launch](#)

## 6. Select the existing key pair(or create a new) and launch the instance.

### 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

JENKENS\_TESTING

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

[Cancel](#)

[Launch Instances](#)

## 7. Install apache by the command :yum install httpd -y

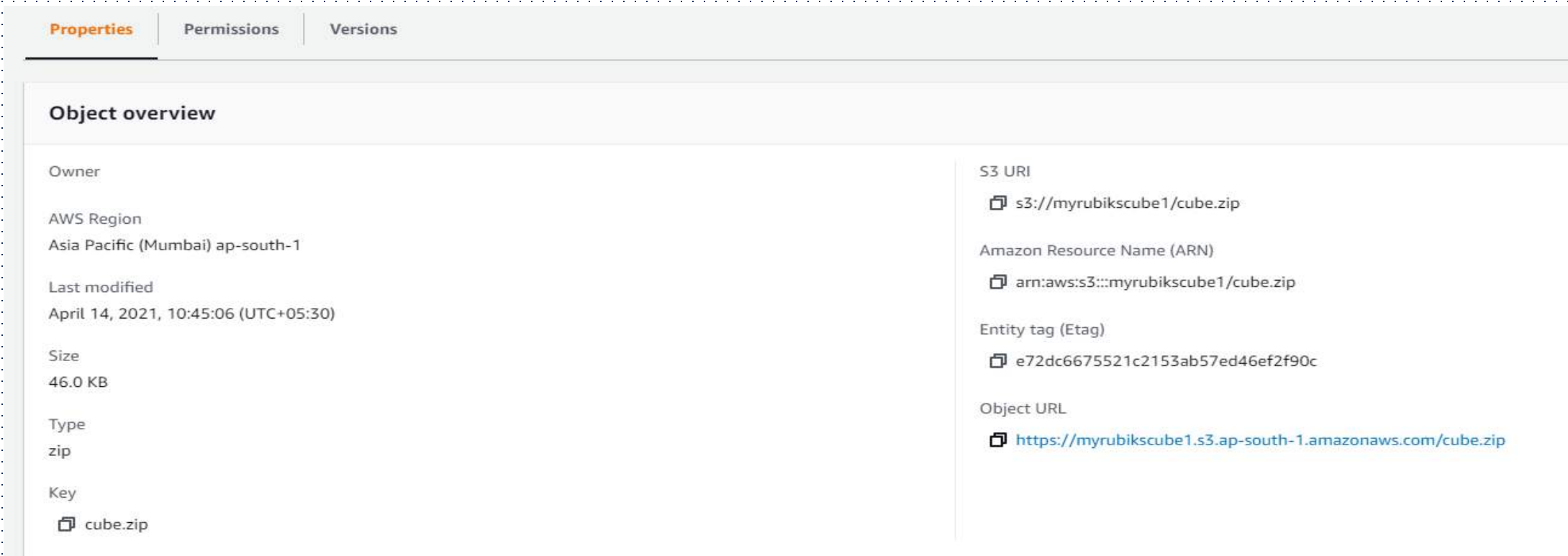
```
ec2-user@ip-172-31-2-195:~  
Install 1 Package (+8 Dependent packages)  
  
Total download size: 1.8 M  
Installed size: 5.1 M  
Is this ok [y/d/N]: y  
Downloading packages:  
(1/9): apr-1.6.3-5.amzn2.0.2.x86_64.rpm | 118 kB 00:00:00  
(2/9): apr-util-1.6.1-5.amzn2.0.2.x86_64.rpm | 99 kB 00:00:00  
(3/9): generic-logos-httpd-18.0.0-4.amzn2.noarch.rpm | 19 kB 00:00:00  
(4/9): apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64.rpm | 19 kB 00:00:00  
(5/9): httpd-2.4.46-1.amzn2.x86_64.rpm | 1.3 MB 00:00:00  
(6/9): httpd-filesystem-2.4.46-1.amzn2.noarch.rpm | 23 kB 00:00:00  
(7/9): httpd-tools-2.4.46-1.amzn2.x86_64.rpm | 87 kB 00:00:00  
(8/9): mailcap-2.1.41-2.amzn2.noarch.rpm | 31 kB 00:00:00  
(9/9): mod_http2-1.15.14-2.amzn2.x86_64.rpm | 147 kB 00:00:00  
-----  
Total 9.1 MB/s | 1.8 MB 00:00:00  
Running transaction check  
Running transaction test  
Transaction test succeeded  
Running transaction  
  Installing : apr-1.6.3-5.amzn2.0.2.x86_64 1/9  
  Installing : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 2/9  
  Installing : apr-util-1.6.1-5.amzn2.0.2.x86_64 3/9  
  Installing : httpd-tools-2.4.46-1.amzn2.x86_64 4/9  
  Installing : generic-logos-httpd-18.0.0-4.amzn2.noarch 5/9  
  Installing : mailcap-2.1.41-2.amzn2.noarch 6/9  
  Installing : httpd-filesystem-2.4.46-1.amzn2.noarch 7/9  
  Installing : mod_http2-1.15.14-2.amzn2.x86_64 8/9  
  Installing : httpd-2.4.46-1.amzn2.x86_64 9/9  
  Verifying : apr-util-1.6.1-5.amzn2.0.2.x86_64 1/9  
  Verifying : httpd-filesystem-2.4.46-1.amzn2.noarch 2/9  
  Verifying : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 3/9  
  Verifying : httpd-tools-2.4.46-1.amzn2.x86_64 4/9  
  Verifying : mod_http2-1.15.14-2.amzn2.x86_64 5/9  
  Verifying : apr-1.6.3-5.amzn2.0.2.x86_64 6/9  
  Verifying : mailcap-2.1.41-2.amzn2.noarch 7/9  
  Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 8/9  
  Verifying : httpd-2.4.46-1.amzn2.x86_64 9/9  
  
Installed:  
  httpd.x86_64 0:2.4.46-1.amzn2  
  
Dependency Installed:  
  apr.x86_64 0:1.6.3-5.amzn2.0.2      apr-util.x86_64 0:1.6.1-5.amzn2.0.2      apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2      generic-logos-httpd.noarch 0:18.0.0-4.amzn2  
  httpd-filesystem.noarch 0:2.4.46-1.amzn2      httpd-tools.x86_64 0:2.4.46-1.amzn2      mailcap.noarch 0:2.1.41-2.amzn2      mod_http2.x86_64 0:1.15.14-2.amzn2  
  
Complete!  
[ec2-user@ip-172-31-2-195 ~]$
```

Installation is complete.

## 8. Go to the /var/www/html directory.

```
[ec2-user@ip-172-31-2-195 ~]$ cd /var/www/html
[ec2-user@ip-172-31-2-195 html]$ sudo cd /var/www/html
[ec2-user@ip-172-31-2-195 html]$ pwd
/var/www/html
[ec2-user@ip-172-31-2-195 html]$
```

## 9. Copy the s3 object URL and paste it after the command:: w3get



The screenshot displays the AWS S3 console interface for an object named 'cube.zip'. The 'Properties' tab is selected, showing the following details:

- Owner:** AWS Region: Asia Pacific (Mumbai) ap-south-1
- Last modified:** April 14, 2021, 10:45:06 (UTC+05:30)
- Size:** 46.0 KB
- Type:** zip
- Key:** cube.zip

On the right side, the following S3-specific information is provided:

- S3 URI:** s3://myrubikscube1/cube.zip
- Amazon Resource Name (ARN):** arn:aws:s3:::myrubikscube1/cube.zip
- Entity tag (Etag):** e72dc6675521c2153ab57ed46ef2f90c
- Object URL:** <https://myrubikscube1.s3.ap-south-1.amazonaws.com/cube.zip>

## 10. Paste it after the command:: w3get

```
[ec2-user@ip-172-31-2-195 html]$ sudo su
[root@ip-172-31-2-195 html]# wget https://myrubikscube1.s3.ap-south-1.amazonaws.com/cube.zip
--2021-04-14 07:24:00-- https://myrubikscube1.s3.ap-south-1.amazonaws.com/cube.zip
Resolving myrubikscube1.s3.ap-south-1.amazonaws.com (myrubikscube1.s3.ap-south-1.amazonaws.com)... 52.219.62.23
Connecting to myrubikscube1.s3.ap-south-1.amazonaws.com (myrubikscube1.s3.ap-south-1.amazonaws.com)|52.219.62.23|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 47084 (46K) [application/zip]
Saving to: 'cube.zip'

100%[=====>] 47,084 --.-K/s in 0.002s

2021-04-14 07:24:00 (28.7 MB/s) - 'cube.zip' saved [47084/47084]

[root@ip-172-31-2-195 html]#
```

## 11. Unzip the file and copy it to the var/www/html directory

```
[root@ip-172-31-2-195 html]# ls
cube.zip
[root@ip-172-31-2-195 html]# unzip cube.zip
Archive: cube.zip
  creating: cube/
  inflating: cube/index.html
  inflating: cube/script.js
  inflating: cube/style.css
[root@ip-172-31-2-195 html]# ls
cube cube.zip
[root@ip-172-31-2-195 html]# cd cube
[root@ip-172-31-2-195 cube]# ls
index.html script.js style.css
[root@ip-172-31-2-195 cube]# pwd
/var/www/html/cube
[root@ip-172-31-2-195 cube]# cp index.html script.js style.css ../
[root@ip-172-31-2-195 cube]# cd ..
[root@ip-172-31-2-195 html]# pwd
/var/www/html
[root@ip-172-31-2-195 html]# ls
cube cube.zip index.html script.js style.css
[root@ip-172-31-2-195 html]#
```



## 12. Type the command:: service httpd start

```
root@ip-172-31-2-195:/var/www/html
[root@ip-172-31-2-195 html]# ls
cube  cube.zip  index.html  script.js  style.css
[root@ip-172-31-2-195 html]# service httpd start
```

## 13. Copy the IP address of the instance.

The screenshot displays the AWS Management Console interface. On the left, the navigation menu shows 'EC2 Dashboard' and 'INSTANCES'. The main panel shows a list of EC2 instances. The instance 'i-018d5d2bb0c57c03e' is selected, and its details are shown below. The 'IPv4 Public IP' is highlighted with a red box, and a 'Copy to clipboard' button is visible next to it.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name
	i-018d5d2bb0c57c03e	t2.micro	ap-south-1b	running	2/2 checks ...	None	ec2-13-127-118-135.ap-south-1.compute.amazonaws.com	13.127.118.135	-	JENKENS_I
old	i-0df4b9b7a0606521a	t2.micro	ap-south-1a	stopped		None	-	-	-	JENKENS_I
	i-03bed0b38a984eef5	t2.micro	ap-south-1a	stopped		None	-	-	-	mynewtrialr

Instance: i-018d5d2bb0c57c03e		Public DNS: ec2-13-127-118-135.ap-south-1.compute.amazonaws.com	
Description	Status Checks	Monitoring	Tags
Instance ID	i-018d5d2bb0c57c03e	Public DNS (IPv4)	ec2-13-127-118-135.ap-south-1.compute.amazonaws.com
Instance state	running	IPv4 Public IP	13.127.118.135
Instance type	t2.micro	IPv6 IPs	-
Finding	Opt-in to AWS Compute Optimizer for recommendations. <a href="#">Learn more</a>	Elastic IPs	-
Private DNS	ip-172-31-2-195.ap-south-1.compute.internal	Availability zone	ap-south-1b
Private IPs	172.31.2.195	Security groups	MAJOR PROJECT: <a href="#">view inbound rules</a> , <a href="#">view outbound rules</a>

14. Run it in the browser.



It's working absolutely fine.



THANK YOU

-Mohammad Touseef