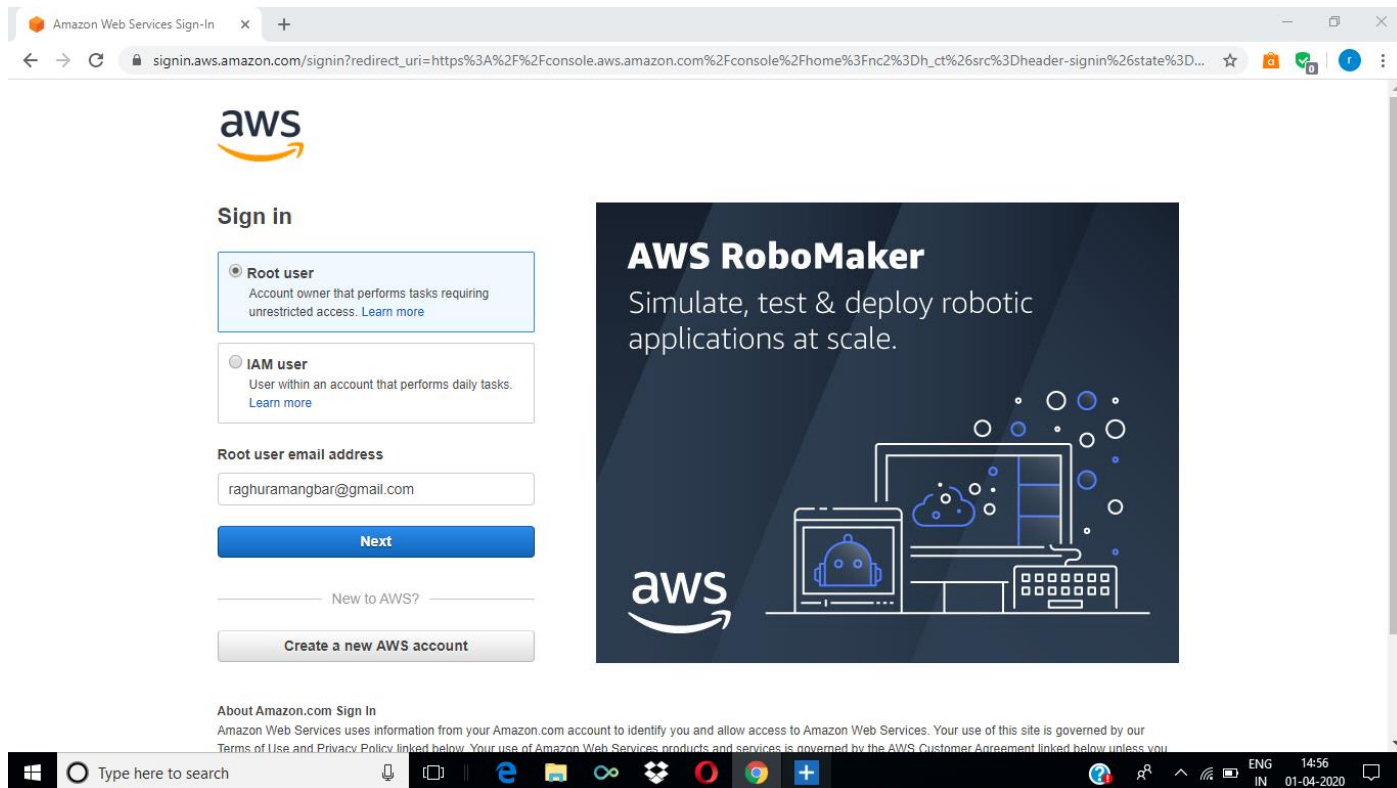


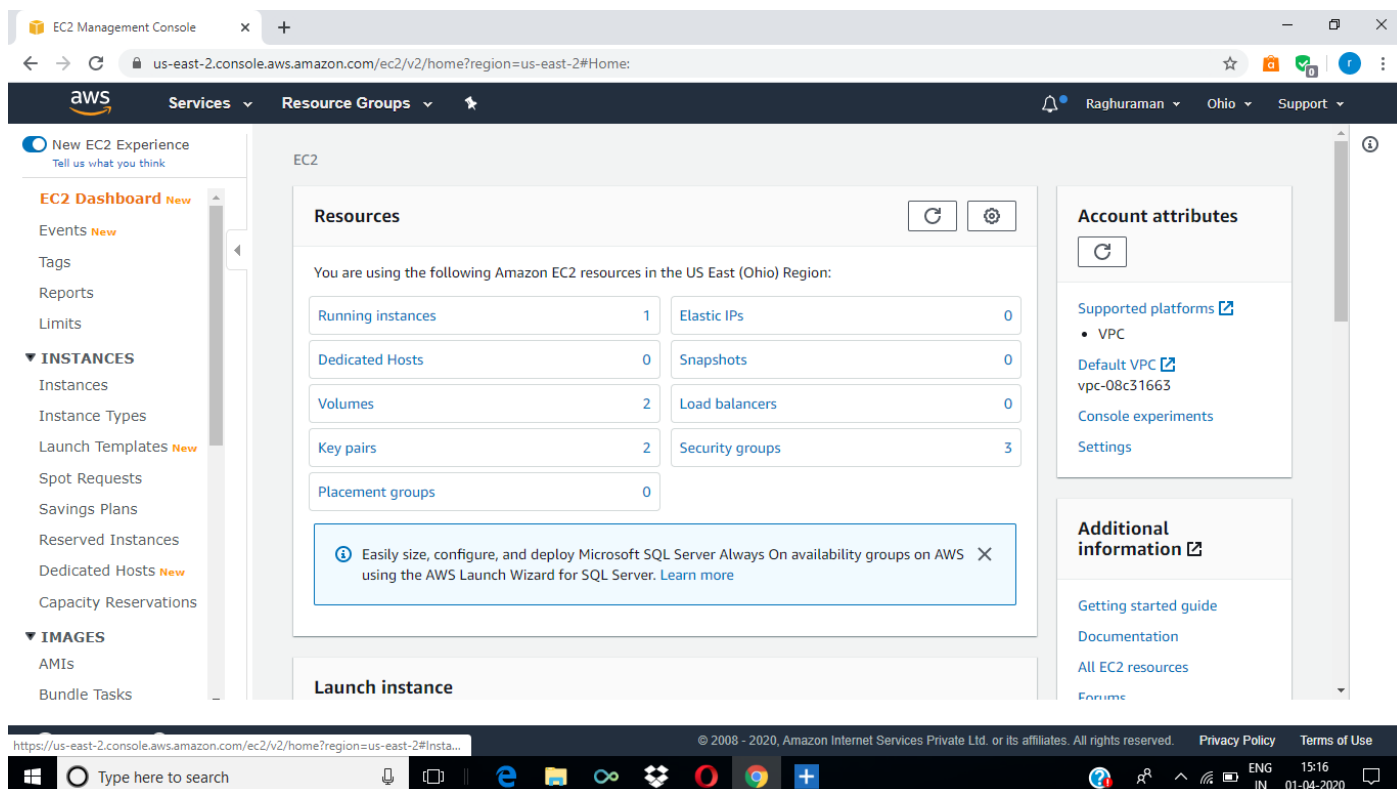
Building a Face Detection Application on Amazon Web Services

Project by Raghuraman G

1. AWS Login screen with username



2. EC2 Dashboard



3. S3 Dashboard

The screenshot shows the Amazon S3 Management Console in a web browser. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and a user profile 'Raghuraman'. A blue banner at the top right contains a message about the console's design updates. The left sidebar lists navigation options: 'Buckets', 'Batch operations', 'Access analyzer for S3', 'Block public access (account settings)', and 'Feature spotlight' (with a '2' badge). The main content area, titled 'Amazon S3', displays 'Buckets (1)' with buttons for 'Copy ARN', 'Empty', 'Delete', and 'Create bucket'. A search bar is present with the placeholder 'Find bucket by name'. Below is a table with one bucket:

Name	Region	Access	Bucket created
aws-masterclass	US East (Ohio) us-east-2	Objects can be public	2020-03-29T03:54:55.000Z

The bottom of the screen shows a Windows taskbar with the search bar and various application icons. The footer of the console includes 'Feedback', 'English (US)', and copyright information for 2008-2020.

4. Rekognition Dashboard

The screenshot shows the Amazon Rekognition Console. The top navigation bar is similar to the S3 console, with 'Services', 'Resource Groups', and a user profile 'Raghuraman'. The left sidebar lists navigation options: 'Amazon Rekognition', 'Custom Labels' (with a 'New' badge), 'Use Custom Labels', 'Demos', 'Object and scene detection', 'Image moderation', 'Facial analysis', 'Celebrity recognition', 'Face comparison', 'Text in image', 'Video Demos', 'Video analysis', 'Metrics', and 'Metrics'. The main content area features a large hero section with the title 'Amazon Rekognition' and the description 'Deep learning-based visual analysis service. Search, verify, and organize millions of images and videos'. It includes a 'Try Demo' button and a 'Download SDKs' link. Below the hero section are three columns of content:

- Easily Integrate Powerful Visual Analysis into Your App**: You don't need computer vision or deep learning expertise to take advantage of...
- Continuously Learning**: Amazon Rekognition is designed to use deep learning technology to analyze billions of images and videos daily. It is...
- Integrated with AWS Services**: Amazon Rekognition is designed to work seamlessly with other AWS services. Rekognition integrates directly with Amazon...

The bottom of the screen shows a Windows taskbar and the console footer with 'Feedback', 'English (US)', and copyright information for 2008-2020.

EC2

1. Choosing an AMI

Launch instance wizard | EC2 Ma x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups

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

Step 1: Choose an Amazon Machine Image (AMI) Cancel and Exit

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"

Quick Start 1 to 40 of 40 AMIs

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0e01ce4ee18447327 (64-bit x86) / ami-03201f374ab66a26e (64-bit Arm) Select

Amazon Linux Free tier eligible

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.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-01b01bbd08f24c7a8 Select

Amazon Linux Free tier eligible

The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

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Type here to search

2. Choosing an Instance Type

Launch instance wizard | EC2 Ma x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups

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

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes

Cancel Previous **Review and Launch** Next: Configure Instance Details

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Type here to search

3. Adding Storage

The screenshot shows the AWS Management Console's Launch Instance Wizard at Step 4: Add Storage. The breadcrumb navigation at the top includes: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage (highlighted), 5. Add Tags, 6. Configure Security Group, and 7. Review. The main heading is "Step 4: Add Storage". Below it, a paragraph explains that the instance will be launched with storage device settings, and you can attach additional EBS volumes and instance store volumes. It also mentions that you can attach additional EBS volumes after launching an instance, but not instance store volumes, and provides a link to "Learn more" about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-0f54692056aaa4c20	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

Below the table is a button labeled "Add New Volume".

A blue information box states: "Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions."

At the bottom right, there are buttons for "Cancel", "Previous", "Review and Launch", and "Next: Add Tags".

The footer of the console shows the AWS logo, "Services", "Resource Groups", and user information: "Raghuraman", "Ohio", and "Support". The bottom of the browser window shows the Windows taskbar with the search bar and various application icons.

4. Configuring Security Group

The screenshot shows the AWS Management Console's Launch Instance Wizard at Step 6: Configure Security Group. The breadcrumb navigation at the top includes: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group (highlighted), and 7. Review. The main heading is "Step 6: Configure Security Group". Below it, a paragraph explains that a security group is a set of firewall rules that control the traffic for your instance. It also mentions that you can add rules to allow specific traffic to reach your instance, and provides a link to "Learn more" about Amazon EC2 security groups.

Under the heading "Assign a security group:", there are two radio buttons: "Create a new security group" (selected) and "Select an existing security group".

Below the radio buttons, there are two text input fields: "Security group name:" with the value "launch-wizard-3" and "Description:" with the value "launch-wizard-3 created 2020-04-01T15:31:42.389+05:30".

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

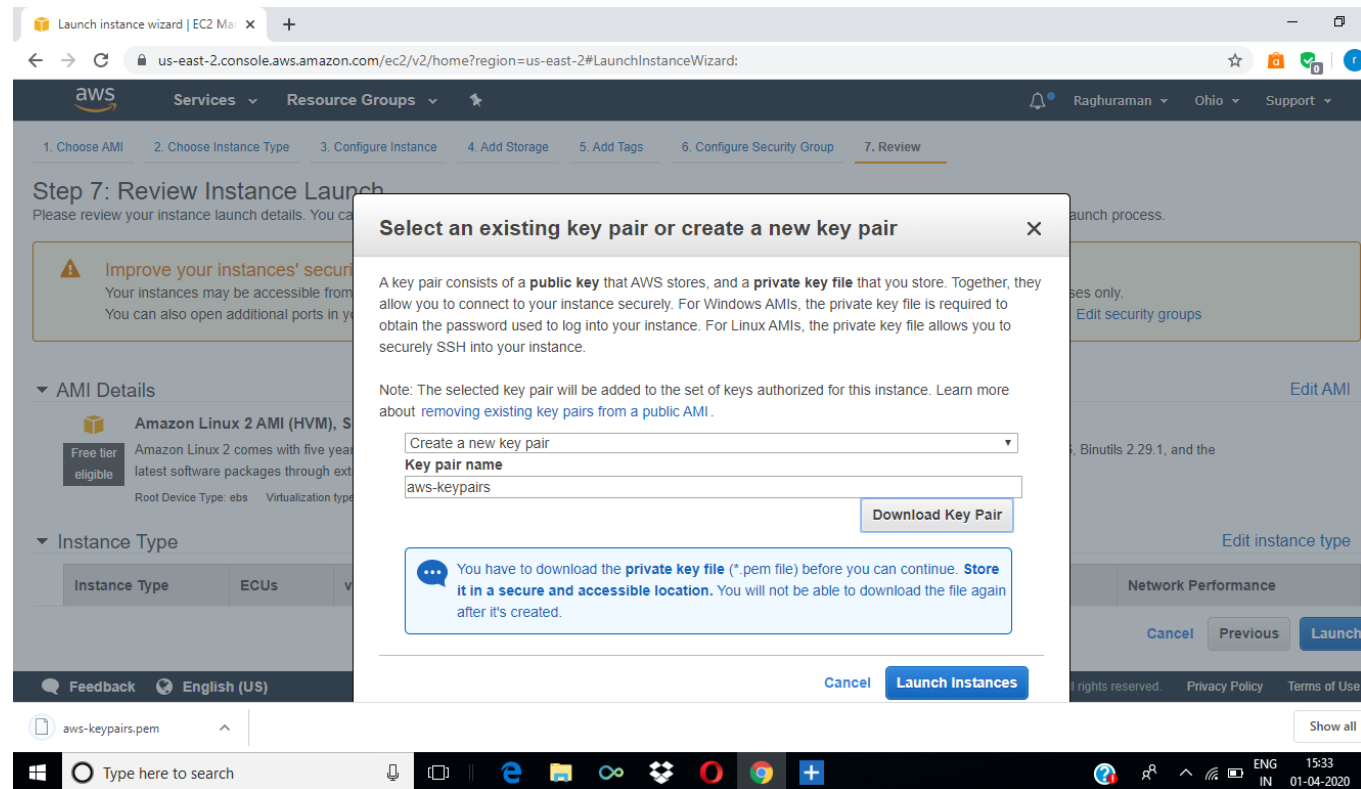
Below the table is a button labeled "Add Rule".

A yellow warning box with a triangle icon states: "Warning: Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only."

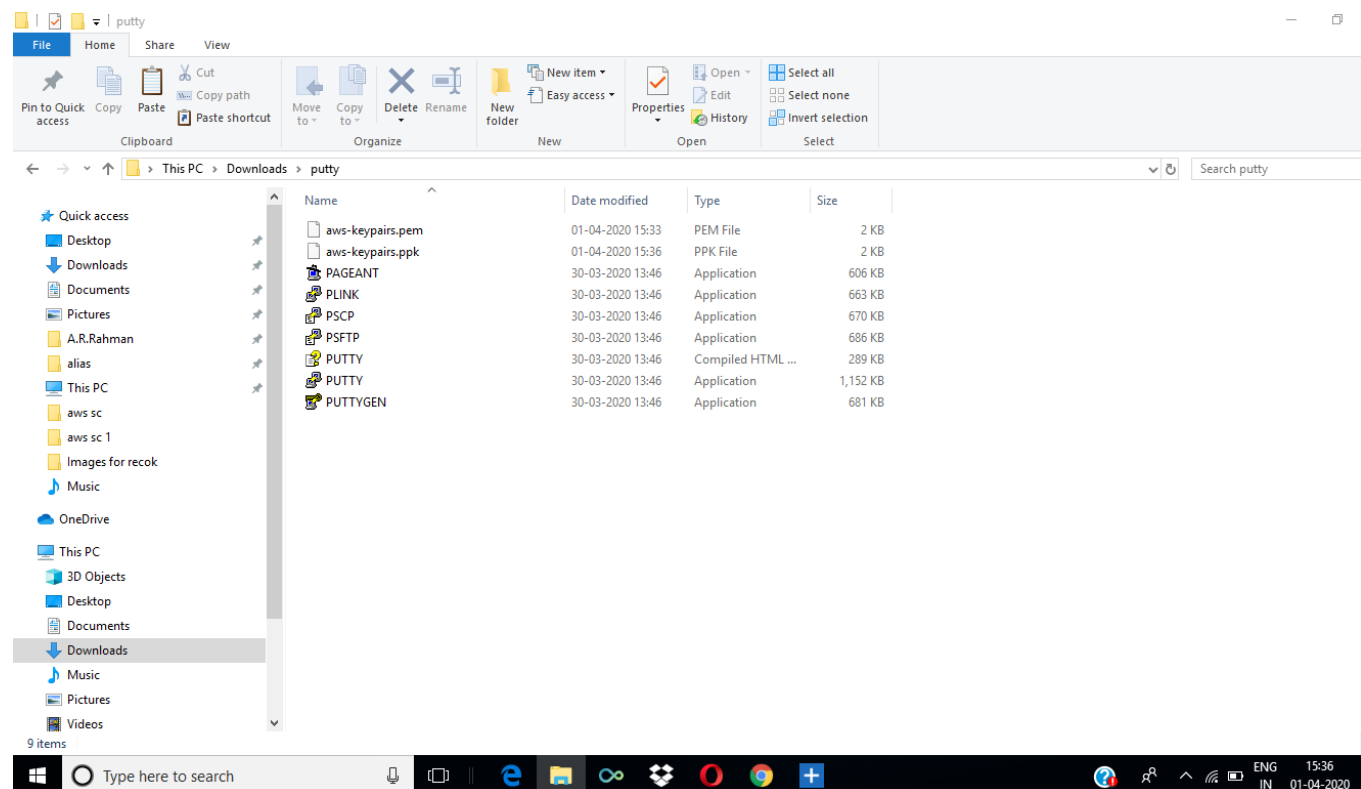
At the bottom right, there are buttons for "Cancel", "Previous", and "Review and Launch".

The footer of the console shows the AWS logo, "Services", "Resource Groups", and user information: "Raghuraman", "Ohio", and "Support". The bottom of the browser window shows the Windows taskbar with the search bar and various application icons.

5. Key Pair Download



6. puTTYgen conversion from pem to ppk



7. Logged in EC2 black screen

```
ec2-user@ip-172-31-31-18:~  
login as: ec2-user  
Authenticating with public key "imported-openssh-key"  
Last login: Mon Mar 30 10:04:35 2020 from 157.46.124.189  
  
 _ _ | _ _ |  
 _ | ( _ _ / Amazon Linux 2 AMI  
 _ | \ _ _ |  
 _ | _ _ |  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-31-18 ~]$
```

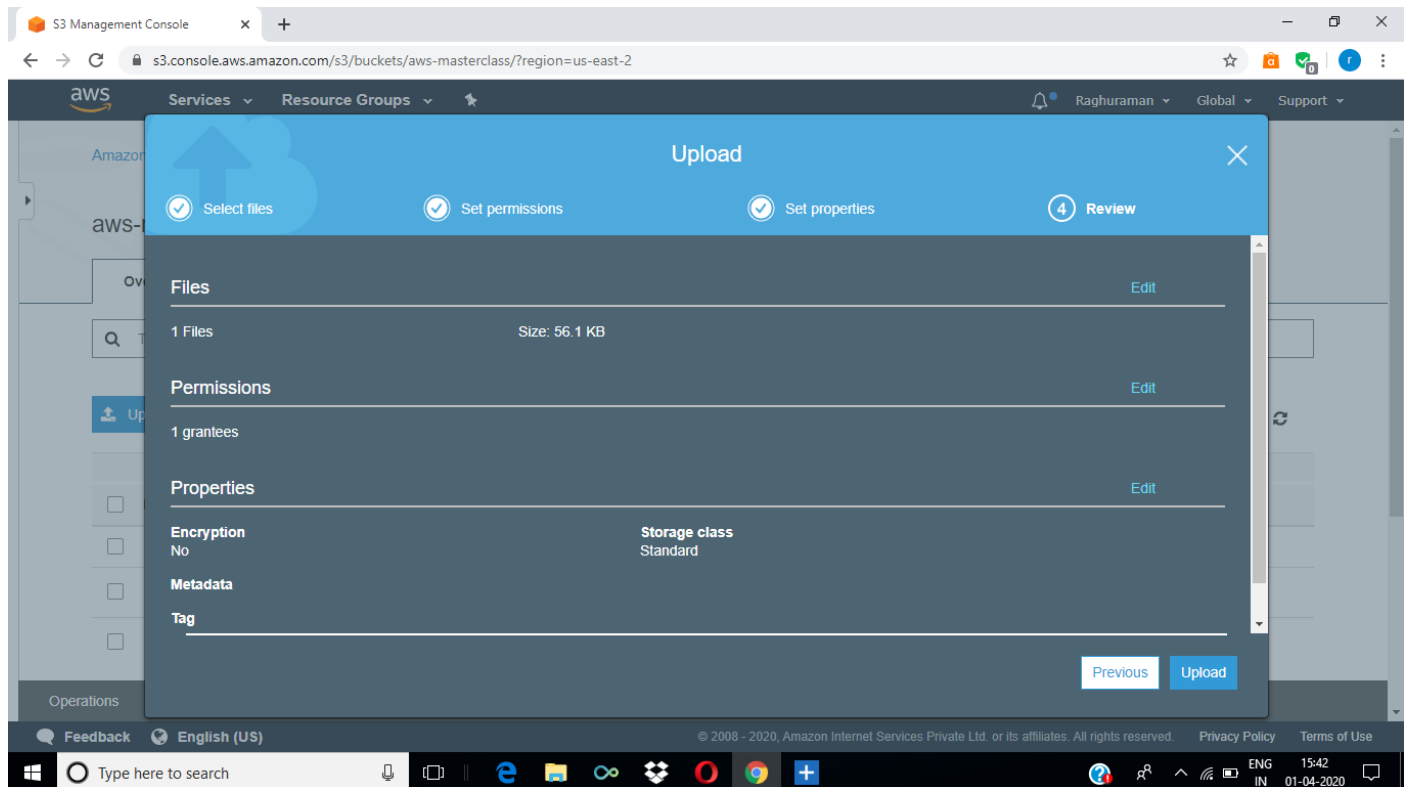
S3

1. Creating a bucket

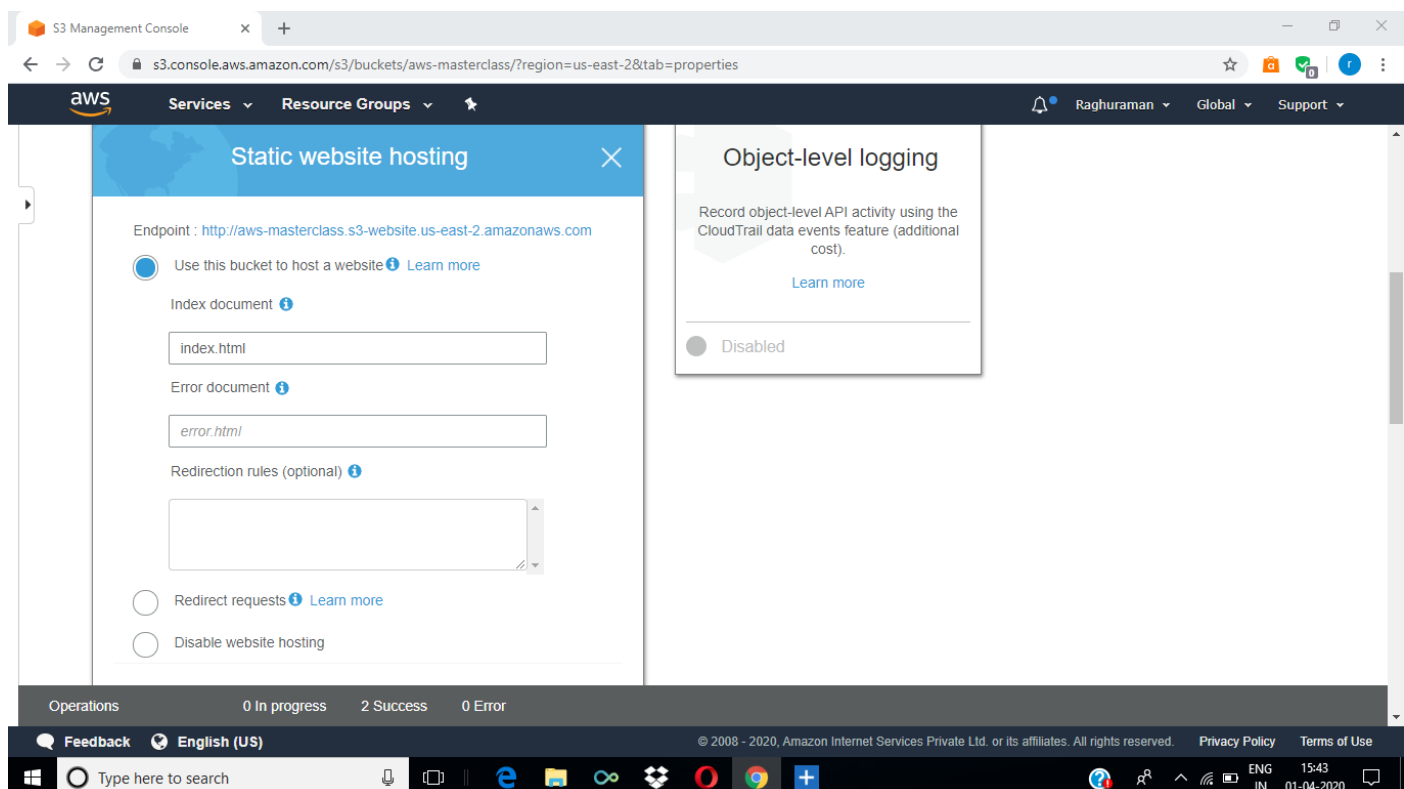
The screenshot shows the AWS S3 Management Console in the us-east-2 region. A notification banner at the top states: "Successfully created bucket aws-masterclass. To upload files and folders, or to configure additional bucket settings such as Bucket Versioning, tags, and default encryption, choose Go to bucket details." The left sidebar shows the "Buckets" section selected. The main content area displays a table of buckets with one entry:

	Name	Region	Access	Bucket created
<input type="radio"/>	aws-masterclass	US East (Ohio) us-east-2	Objects can be public	2020-04-01T11:10:29.000Z

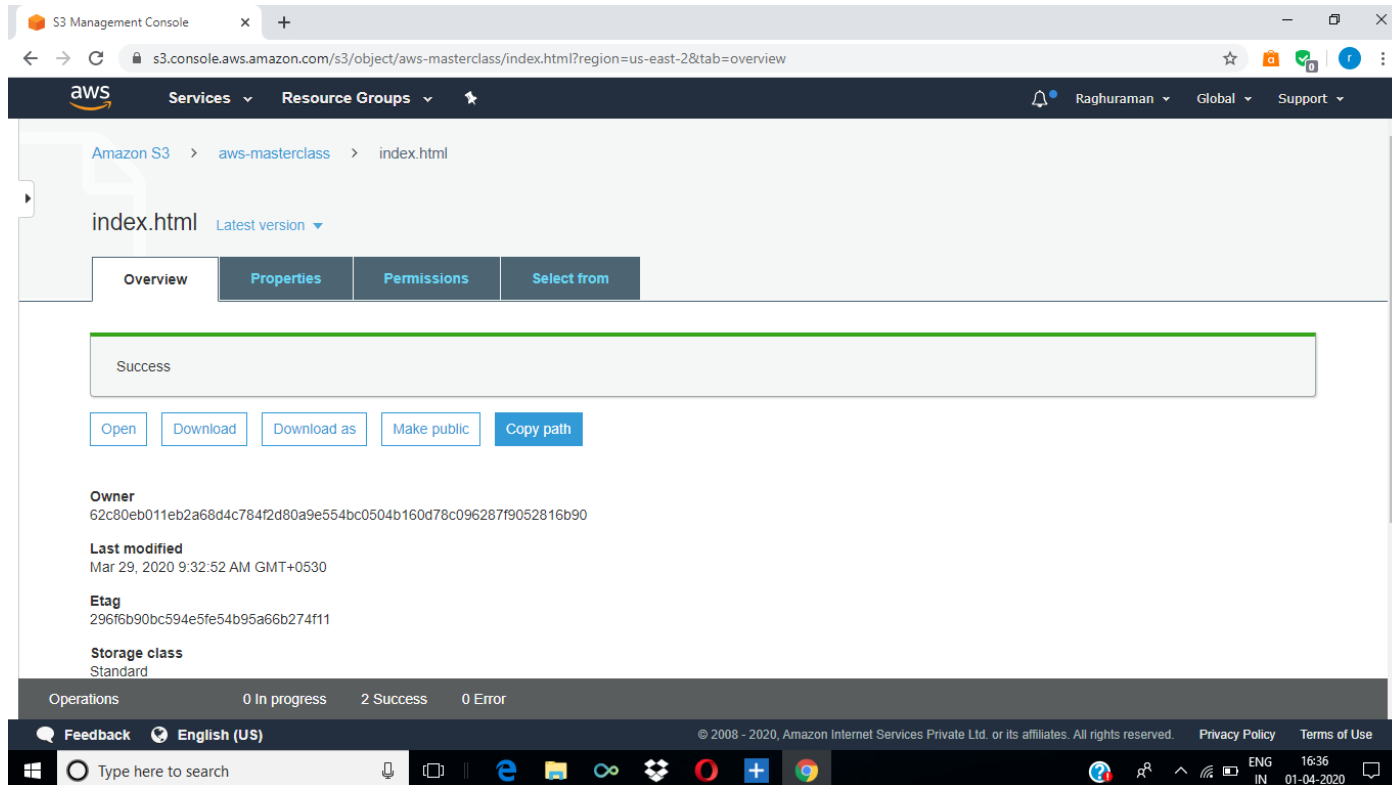
2. Uploading an Object



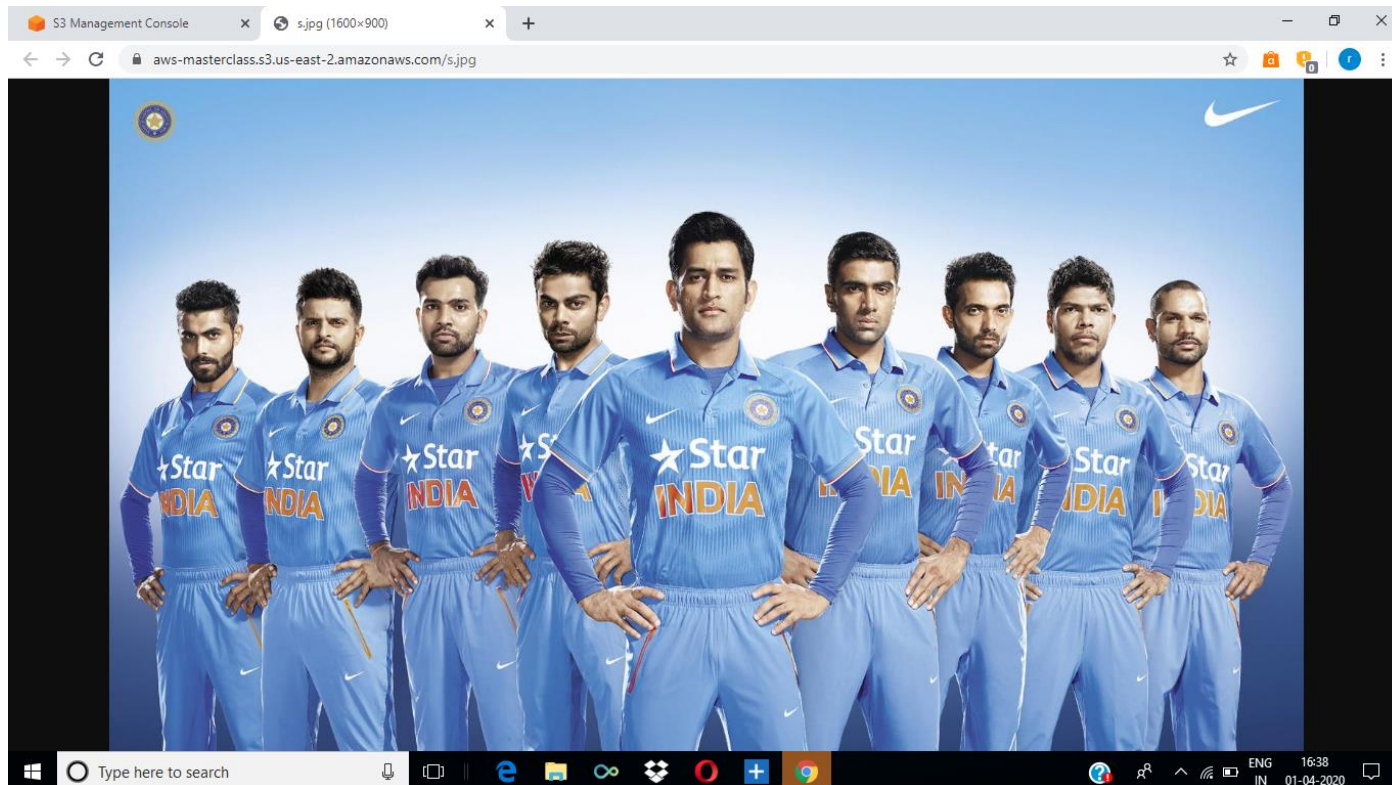
3. Enabling Static Website



4. Making the Object Public



5. Checking the S3 link on the Browser



Rekognition

1. Face Detect

The screenshot shows the AWS Rekognition Console interface. The left sidebar contains a navigation menu with options like Custom Labels, Demos, Facial analysis, and Video Demos. The main content area is titled "Facial analysis" and includes a description: "Get a complete analysis of facial attributes, including confidence scores." A large image of a cricket player in a blue jersey with "INDIA" on it is shown. A bounding box is drawn around the player's face. To the right of the image, a "Results" section displays a list of attributes and their confidence scores:

Attribute	Confidence Score
looks like a face	99.9 %
appears to be male	90 %
age range	22 - 34 years old
not smiling	99.9 %
appears to be calm	96.8 %
not wearing glasses	87.8 %

The bottom of the console shows a taskbar with various application icons and a system clock indicating 15:02 on 01-04-2020.

2. Face Compare

The screenshot shows the AWS Rekognition Console interface for the "Face comparison" demo. The left sidebar is similar to the previous one, but the "Face comparison" option is selected. The main content area is titled "Face comparison" and includes a description: "Compare faces to see how closely they match based on a similarity percentage." The interface is divided into two main sections: "Reference face" and "Comparison faces". The "Reference face" section shows a single image of a cricket player. The "Comparison faces" section shows two images of the same player. Below these images, there are labels "Choose a sample image". To the right of the images, a "Results" section displays a comparison of the two faces. It shows two images of the player, one with a blue background and one with a white background, separated by an equals sign. Below the images, a "Similarity" bar is shown with a value of 98.1 %.

Similarity
98.1 %

The bottom of the console shows a taskbar with various application icons and a system clock indicating 15:13 on 01-04-2020.

3. Celebrity Recognition

Amazon Rekognition Console

us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/celebrity-detection

aws Services Resource Groups

Raghuraman Ohio Support

Amazon Rekognition

Custom Labels New

Use Custom Labels

Demos

Object and scene detection

Image moderation

Facial analysis

Celebrity recognition

Face comparison

Text in image

Video Demos

Video analysis

Metrics


Metrics

Celebrity recognition

Rekognition automatically recognizes celebrities in images and provides confidence scores.

Done with the demo? [Learn more](#)

▼ Results

 **Virat Kohli**

Match confidence 100 %

► Request

► Response

Feedback English (US)

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Type here to search

15:14 01-04-2020

4. Text in Image

Amazon Rekognition Console

us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/text-detection

aws Services Resource Groups

Raghuraman Ohio Support

Amazon Rekognition

Custom Labels New

Use Custom Labels

Demos

Object and scene detection

Image moderation

Facial analysis

Celebrity recognition

Face comparison

Text in image

Video Demos

Video analysis

Metrics

Metrics

Text in image

Rekognition automatically detects and extracts text in your images. [Learn More](#)

Done with the demo? [Learn more](#)

▼ Results US English only

| 24 |

| Gulf |

| 00 |

| 24 | Gulf |

| 00 |

| Gulf |

► Request

► Response

Choose a sample image

Use your own image

Image must be .jpeg or .png format and no larger than 5MB. Your image isn't stored.

Feedback English (US)

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Type here to search

15:15 01-04-2020

EC2 and S3

1. Installing aws-sdk

```
ec2-user@ip-172-31-6-109:/var/www/html/face
Warning: proc_open(): fork failed - Cannot allocate memory in phar:///home/ec2-user/composer.phar/vendor/symfony/console/Application.php on line 952

[ErrorException]
proc_open(): fork failed - Cannot allocate memory

require [--dev] [--prefer-source] [--prefer-dist] [--fixed] [--no-progress] [--no-suggest] [--no-update] [--no-scripts] [--update-no-dev] [--update-with-dependencies] [
--update-with-all-dependencies] [--ignore-platform-reqs] [--prefer-stable] [--prefer-lowest] [--sort-packages] [-o|--optimize-autoloader] [-a|--classmap-authoritative]
[--apcu-autoloader] [--] [<packages>]...

[ec2-user@ip-172-31-6-109 face]$ sudo /bin/dd if=/dev/zero of=/var/swap.1 bs=1M count=1024

1024+0 records in
1024+0 records out
1073741824 bytes (1.1 GB) copied, 13.3753 s, 80.3 MB/s
[ec2-user@ip-172-31-6-109 face]$
[ec2-user@ip-172-31-6-109 face]$ sudo /sbin/mkswap /var/swap.1
mkswap: /var/swap.1: insecure permissions 0644, 0600 suggested.
Setting up swapspace version 1, size = 1024 MiB (1073737728 bytes)
no label, UUID=2f722954-elb0-4277-8fe5-70b27c668644
[ec2-user@ip-172-31-6-109 face]$ sudo /sbin/swapon /var/swap.1
swapon: /var/swap.1: insecure permissions 0644, 0600 suggested.
[ec2-user@ip-172-31-6-109 face]$
[ec2-user@ip-172-31-6-109 face]$ sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-php
Using version ^2.8 for aws/aws-sdk-php
./composer.json has been created
Loading composer repositories with package information
Updating dependencies (including require-dev)
Package operations: 3 installs, 0 updates, 0 removals
  - Installing symfony/event-dispatcher (v2.8.52): Loading from cache
  - Installing guzzle/guzzle (v3.9.3): Downloading (100%)
  - Installing aws/aws-sdk-php (2.8.31): Downloading (100%)
symfony/event-dispatcher suggests installing symfony/dependency-injection
symfony/event-dispatcher suggests installing symfony/http-kernel
guzzle/guzzle suggests installing guzzlehttp/guzzle (Guzzle 5 has moved to a new package name. The package you have installed, Guzzle 3, is deprecated.)
aws/aws-sdk-php suggests installing doctrine/cache (Adds support for caching of credentials and responses)
aws/aws-sdk-php suggests installing ext-apc (Allows service description opcode caching, request and response caching, and credentials caching)
aws/aws-sdk-php suggests installing monolog/monolog (Adds support for logging HTTP requests and responses)
aws/aws-sdk-php suggests installing symfony/yaml (Eases the ability to write manifests for creating jobs in AWS Import/Export)
Package guzzle/guzzle is abandoned, you should avoid using it. Use guzzlehttp/guzzle instead.
Writing lock file
Generating autoload files
[ec2-user@ip-172-31-6-109 face]$
```

2. Installing php

```
ec2-user@ip-172-31-6-109:~
(13/13): php-common-5.4.16-46.amzn2.0.2.x86_64.rpm | 563 kB 00:00:00
-----
Total 21 MB/s | 6.6 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 1/13
  Installing : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 2/13
  Installing : apr-util-1.6.1-5.amzn2.0.2.x86_64 3/13
  Installing : httpd-tools-2.4.41-1.amzn2.0.1.x86_64 4/13
  Installing : httpd filesystem-2.4.41-1.amzn2.0.1.noarch 5/13
  Installing : mailcap-2.1.41-2.amzn2.noarch 6/13
  Installing : generic-logos-httpd-18.0.0-4.amzn2.noarch 7/13
  Installing : mod_http2-1.15.3-2.amzn2.x86_64 8/13
  Installing : httpd-2.4.41-1.amzn2.0.1.x86_64 9/13
  Installing : libzip010-compat-0.10.1-9.amzn2.0.5.x86_64 10/13
  Installing : php-common-5.4.16-46.amzn2.0.2.x86_64 11/13
  Installing : php-cli-5.4.16-46.amzn2.0.2.x86_64 12/13
  Installing : php-5.4.16-46.amzn2.0.2.x86_64 13/13
  Verifying : apr-util-1.6.1-5.amzn2.0.2.x86_64 1/13
  Verifying : libzip010-compat-0.10.1-9.amzn2.0.5.x86_64 2/13
  Verifying : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 3/13
  Verifying : php-cli-5.4.16-46.amzn2.0.2.x86_64 4/13
  Verifying : mod_http2-1.15.3-2.amzn2.x86_64 5/13
  Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 6/13
  Verifying : httpd-2.4.41-1.amzn2.0.1.x86_64 7/13
  Verifying : php-5.4.16-46.amzn2.0.2.x86_64 8/13
  Verifying : apr-1.6.3-5.amzn2.0.2.x86_64 9/13
  Verifying : mailcap-2.1.41-2.amzn2.noarch 10/13
  Verifying : httpd filesystem-2.4.41-1.amzn2.0.1.noarch 11/13
  Verifying : httpd-tools-2.4.41-1.amzn2.0.1.x86_64 12/13
  Verifying : php-common-5.4.16-46.amzn2.0.2.x86_64 13/13

Installed:
  php.x86_64 0:5.4.16-46.amzn2.0.2

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.x86_64 0:2.4.41-1.amzn2.0.1 httpd filesystem.noarch 0:2.4.41-1.amzn2.0.1 libzip010-compat.x86_64 0:0.10.1-9.amzn2.0.5
  mailcap.noarch 0:2.1.41-2.amzn2 mod_http2.x86_64 0:1.15.3-2.amzn2 php-cli.x86_64 0:5.4.16-46.amzn2.0.2 php-common.x86_64 0:5.4.16-46.amzn2.0.2

Complete!
[ec2-user@ip-172-31-6-109 ~]$
```

3. Index.php file code

```
ec2-user@ip-172-31-6-109:/var/www/html/face
sudo /bin/dd if=/dev/zero of=/var/swap.1 bs=1M count=1024
sudo /sbin/mkswap /var/swap.1
sudo /sbin/swapon /var/swap.1

sudo wget https://i.pinimg.com/originals/b9/7e/a3/b97ea33b5842c7894b804923c6c05580.jpg
sudo mv b97ea33b5842c7894b804923c6c05580.jpg sample.jpg

*/
error_reporting(0);

require_once(__DIR__ . '/vendor/autoload.php');

use Aws\S3\S3Client;
use Aws\Rekognition\RekognitionClient;

$bucket = 'aws-masterclass';
$keyname = 's.jpg';

$s3 = S3Client::factory([
    'profile' => 'default',
    'region' => 'us-east-2',
    'version' => '2006-03-01',
    'signature' => 'v4'
]);

try {
    // Upload data.
    $result = $s3->putObject([
        'Bucket' => $bucket,
        'Key' => $keyname,
        'SourceFile' => __DIR__ . "/$keyname",
        'ACL' => 'public-read'
    ]);

    // Print the URL to the object.
    $imageUrl = $result['ObjectURL'];
    if($imageUrl) {
        echo "Image upload done... Here is the URL: " . $imageUrl;
    }
} catch (Exception $e) {
    echo $e->getMessage() . PHP_EOL;
}

-- INSERT --
```

4. Upload Success Screenshot

```
ec2-user@ip-172-31-6-109:/var/www/html/face
[ec2-user@ip-172-31-6-109 face]$ sudo /sbin/mkswap /var/swap.1
mkswap: /var/swap.1: insecure permissions 0644, 0600 suggested.
Setting up swapspace version 1, size = 1024 MiB (107373728 bytes)
no label, UUID=2f722954-e1b0-4277-8fe5-70b27c668644
[ec2-user@ip-172-31-6-109 face]$ sudo /sbin/swapon /var/swap.1
swapon: /var/swap.1: insecure permissions 0644, 0600 suggested.
[ec2-user@ip-172-31-6-109 face]$
[ec2-user@ip-172-31-6-109 face]$ sudo php -d memory_limit=1 ~/composer.phar require aws/aws-sdk-php
Using version ^2.8 for aws/aws-sdk-php
./composer.json has been created
Loading composer repositories with package information
Updating dependencies (including require-dev)
Package operations: 3 installs, 0 updates, 0 removals
  - Installing symfony/event-dispatcher (v2.8.52): Loading from cache
  - Installing guzzle/guzzle (v3.9.3): Downloading (100%)
  - Installing aws/aws-sdk-php (2.8.31): Downloading (100%)
symfony/event-dispatcher suggests installing symfony/dependency-injection
symfony/event-dispatcher suggests installing symfony/http-kernel
guzzle/guzzle suggests installing guzzlehttp/guzzle (Guzzle 5 has moved to a new package name. The package you have installed, Guzzle 3, is deprecated.)
aws/aws-sdk-php suggests installing doctrine/cache (Adds support for caching of credentials and responses)
aws/aws-sdk-php suggests installing ext-apc (Allows service description opcode caching, request and response caching, and credentials caching)
aws/aws-sdk-php suggests installing monolog/monolog (Adds support for logging HTTP requests and responses)
aws/aws-sdk-php suggests installing symfony/yaml (Eases the ability to write manifests for creating jobs in AWS Import/Export)
Package guzzle/guzzle is abandoned, you should avoid using it. Use guzzlehttp/guzzle instead.
Writing lock file
Generating autoload files
[ec2-user@ip-172-31-6-109 face]$ sudo wget https://i.pinimg.com/originals/b9/7e/a3/b97ea33b5842c7894b804923c6c05580.jpg
--2020-04-01 10:31:34-- https://i.pinimg.com/originals/b9/7e/a3/b97ea33b5842c7894b804923c6c05580.jpg
Resolving i.pinimg.com (i.pinimg.com)... 151.101.248.84, 2a04:4e42:53::84
Connecting to i.pinimg.com (i.pinimg.com)|151.101.248.84|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 215551 (210K) [image/jpeg]
Saving to: 'b97ea33b5842c7894b804923c6c05580.jpg'

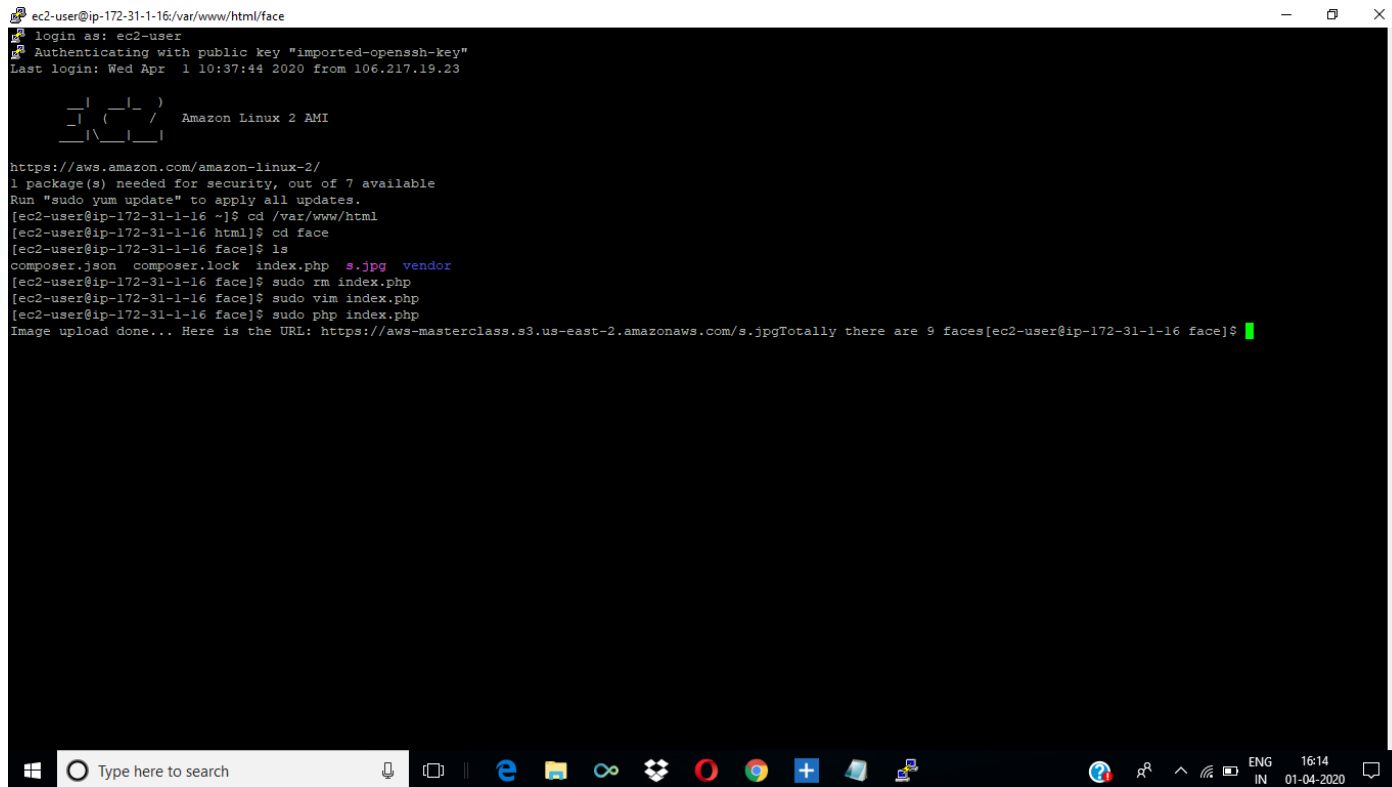
100%[=====>] 215,551 --.-K/s in 0.05s

2020-04-01 10:31:34 (4.50 MB/s) - 'b97ea33b5842c7894b804923c6c05580.jpg' saved [215551/215551]

[ec2-user@ip-172-31-6-109 face]$ ls
b97ea33b5842c7894b804923c6c05580.jpg composer.json composer.lock vendor
[ec2-user@ip-172-31-6-109 face]$ sudo mv b97ea33b5842c7894b804923c6c05580.jpg s.jpg
[ec2-user@ip-172-31-6-109 face]$ sudo vim index.php
[ec2-user@ip-172-31-6-109 face]$ sudo php index.php
Image upload done... Here is the URL: https://aws-masterclass.s3.us-east-2.amazonaws.com/s.jpg[ec2-user@ip-172-31-6-109 face]$
```

EC2 and Rekognition

1. Face Detect Success Screenshot

A terminal window titled 'ec2-user@ip-172-31-1-16:/var/www/html/face' showing the execution of a face detection script. The script outputs the URL 'https://aws.amazon.com/amazon-linux-2/' and lists packages needed for security. It then runs 'sudo yum update' and 'cd /var/www/html'. The user enters 'cd face' and 'ls', showing files 'composer.json', 'composer.lock', 'index.php', 's.jpg', and 'vendor'. The user then runs 'rm index.php', 'vim index.php', and 'php index.php'. The final output is 'Image upload done... Here is the URL: https://aws-masterclass.s3.us-east-2.amazonaws.com/s.jpgTotally there are 9 faces[ec2-user@ip-172-31-1-16 face]\$'. The terminal is running on an Amazon Linux 2 AMI. The Windows taskbar is visible at the bottom with the search bar and various application icons.

```
ec2-user@ip-172-31-1-16:/var/www/html/face
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Last login: Wed Apr  1 10:37:44 2020 from 106.217.19.23

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 _ _ | \ _ _ | _ _ |

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 7 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-1-16 ~]$ cd /var/www/html
[ec2-user@ip-172-31-1-16 html]$ cd face
[ec2-user@ip-172-31-1-16 face]$ ls
composer.json  composer.lock  index.php  s.jpg  vendor
[ec2-user@ip-172-31-1-16 face]$ sudo rm index.php
[ec2-user@ip-172-31-1-16 face]$ sudo vim index.php
[ec2-user@ip-172-31-1-16 face]$ sudo php index.php
Image upload done... Here is the URL: https://aws-masterclass.s3.us-east-2.amazonaws.com/s.jpgTotally there are 9 faces[ec2-user@ip-172-31-1-16 face]$
```

Thank You...