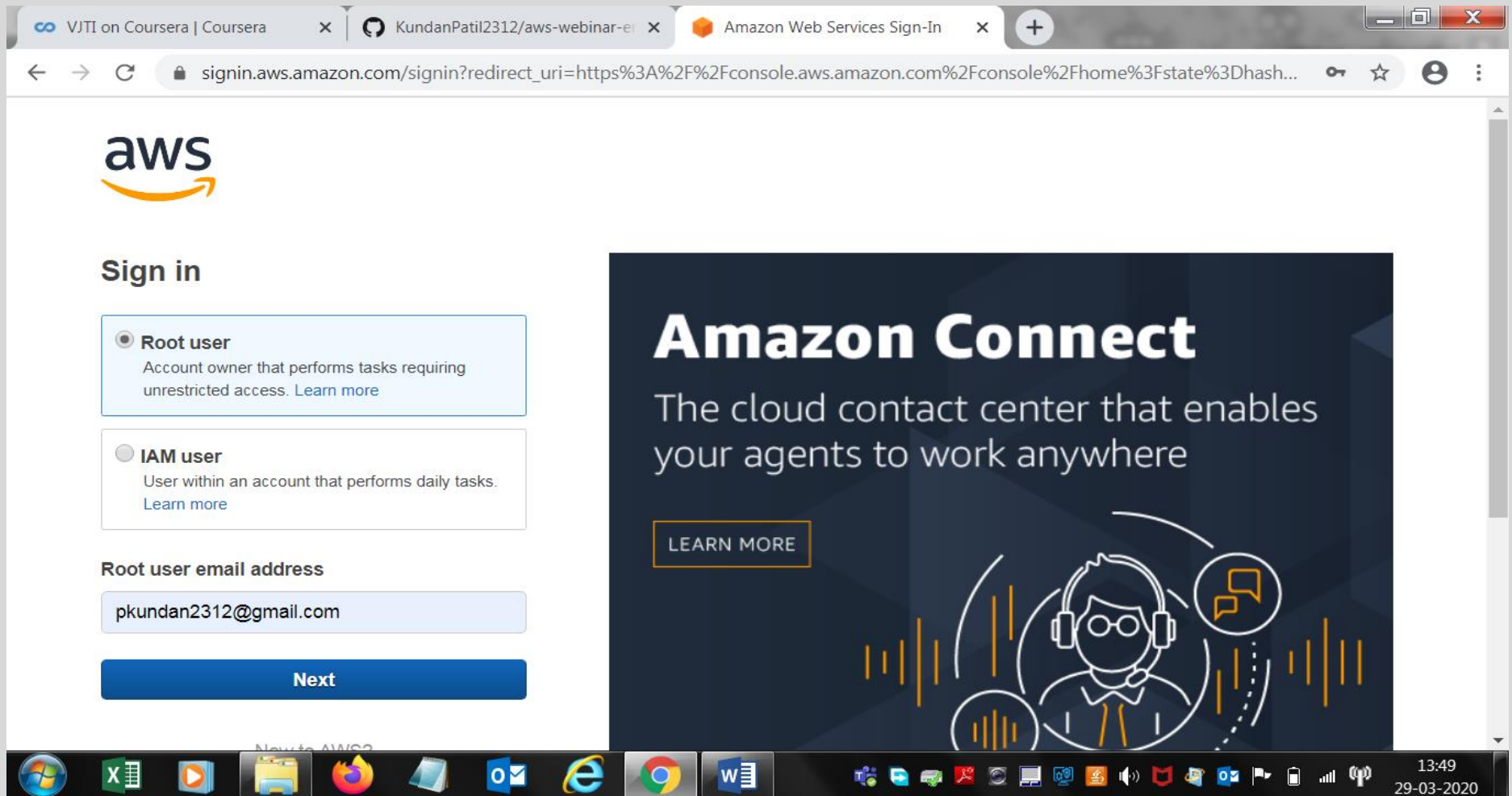


1. *AWS*

a) AWS LOGIN screen with username



b) EC2 DASHBOARD

The screenshot displays the AWS Management Console's EC2 Dashboard for the us-east-2 region. The interface includes a top navigation bar with the AWS logo, 'Services', 'Resource Groups', and user information (KUNDAN PATIL, Ohio, Support). A left-hand navigation pane lists various EC2-related features like 'New EC2 Experience', 'Events', 'Tags', 'Reports', 'Limits', 'INSTANCES', 'IMAGES', and 'ELASTIC BLOCK STORE'. The main content area is titled 'EC2' and contains several sections: 'Resources' showing a summary of EC2 resources (Running instances: 1, Elastic IPs: 0, Dedicated Hosts: 0, Snapshots: 0, Volumes: 1, Load balancers: 0, Key pairs: 1, Security groups: 4, Placement groups: 0), 'Launch instance' with a 'Launch instance' button and instructions, 'Service health' indicating the service is operating normally, and 'Availability Zone status'. On the right, there are sidebars for 'Account attributes' (Supported platforms, Default VPC, Console experiments, Settings) and 'Explore AWS' (Easily launch third-party AMI products, Optimize your EC2 cost and performance with Spot Instances). The bottom of the image shows a Windows taskbar with various application icons and a system clock indicating 19:39 on 29-03-2020.

Instances | EC2 Management Console | Zfx - pkundan123@gmail.com

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

aws Services Resource Groups

KUNDAN PATIL Ohio Support

New EC2 Experience
Tell us what you think

EC2 Dashboard New

Events New

Tags

Reports

Limits

INSTANCES

Instances

Instance Types

Launch Templates New

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts New

Capacity Reservations

IMAGES

AMIs

Bundle Tasks

ELASTIC BLOCK STORE

EC2

Resources

You are using the following Amazon EC2 resources in the US East (Ohio) Region:

Running instances	1	Elastic IPs	0
Dedicated Hosts	0	Snapshots	0
Volumes	1	Load balancers	0
Key pairs	1	Security groups	4
Placement groups	0		

Launch instance

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

[Launch instance](#)

Note: Your instances will launch in the US East (Ohio) Region

Scheduled events

Service health

[Service Health Dashboard](#)

Region: US East (Ohio)

Status: ✔ This service is operating normally

Availability Zone status

Account attributes

[Supported platforms](#)

- VPC

[Default VPC](#)
vpc-6cb06507

[Console experiments](#)

[Settings](#)

Explore AWS

Easily launch third-party AMI products

AWS Marketplace has thousands of third-party AMI products that you can find, buy, and deploy with 1-click using the Amazon EC2 console. [Learn more](#)

Optimize your EC2 cost and performance with Spot Instances

Combine EC2 On-Demand, Spot, Savings Plans, and RIs in a single EC2 Auto Scaling Group to optimize EC2 performance and cost. [Learn more](#)

Save with AMD EPYC-Powered EC2

Feedback English (US)

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19:39 29-03-2020

c) S3 DASHBOARD

The screenshot displays the AWS S3 Management Console interface. The browser address bar shows the URL `s3.console.aws.amazon.com/s3/home?region=us-east-2`. The left-hand navigation pane includes links for Buckets, Batch operations, Access analyzer for S3, Block public access (account settings), and a Feature spotlight with a notification badge. The main content area, titled 'Amazon S3', shows a 'Buckets (1)' section with a search bar and a table of buckets. The table contains one entry: 'aws-kundan' in the 'US East (Ohio) us-east-2' region, with public access enabled and created on 2020-03-27T17:02:59.000Z. Action buttons for 'Copy ARN', 'Empty', 'Delete', and 'Create bucket' are visible. The bottom of the image shows a Windows taskbar with various application icons and a system clock indicating 19:45 on 29-03-2020.

Name	Region	Access	Bucket created
aws-kundan	US East (Ohio) us-east-2	Objects can be public	2020-03-27T17:02:59.000Z

d) REKOGNITION DASHBOARD

The screenshot shows the Amazon Rekognition Console in a web browser. The browser's address bar displays the URL: `us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#`. The console header includes the AWS logo, navigation links for Services and Resource Groups, and a user profile for KUNDAN PATIL in the Ohio region. The main content area features a large banner for Amazon Rekognition, described as a "Deep learning-based visual analysis service" that can "Search, verify, and organize millions of images and videos". A "Try Demo" button and a "Download SDKs" link are visible. Below the banner, three key features are highlighted: "Easily Integrate Powerful Visual Analysis into Your App", "Continuously Learning", and "Integrated with AWS Services". The left sidebar contains a navigation menu with options like Custom Labels, Demos, and Metrics. The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating 19:48 on 29-03-2020.

Rekognition Console

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

aws Services Resource Groups

KUNDAN PATIL Ohio Support

Amazon Rekognition

Deep learning-based visual analysis service
Search, verify, and organize millions of images and videos

[Try Demo](#)
[Download SDKs](#)

Easily Integrate Powerful Visual Analysis into Your App

You don't need computer vision or deep learning expertise to take advantage of Rekognition's high quality image and video analysis for your web, mobile, enterprise or device applications. Amazon Rekognition removes the complexity of building visual recognition capabilities by making powerful and accurate analysis

Continuously Learning

Amazon Rekognition is designed to use deep learning technology to analyze billions of images and videos daily. It is continuously learning as we add support for new capabilities and learn from more and more data.

Integrated with AWS Services

Amazon Rekognition is designed to work seamlessly with other AWS services. Rekognition integrates directly with Amazon S3 and AWS Lambda so you can build scalable, affordable, and reliable visual analysis applications. You can start analyzing images and videos stored in Amazon S3 without moving any data. You can also run real-time video analysis on streams coming

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

Additional Resources
[Getting started guide](#)
[Download SDKs](#)

Feedback English (US)

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19:48
29-03-2020

2. EC2

a) Choosing an AMI

Launch instance wizard | EC2 Mar x +

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

aws Services Resource Groups

KUNDAN PATIL Ohio Support

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)

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.

Cancel and Exit

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

Quick Start

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

1 to 40 of 40 AMIs

 Amazon Linux Free tier eligible	Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0e01ce4ee18447327 (64-bit x86) / ami-03201f374ab66a26e (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. Root device type: ebs Virtualization type: hvm ENA Enabled: Yes	Select <input checked="" type="radio"/> 64-bit (x86) <input type="radio"/> 64-bit (Arm)
 Amazon Linux Free tier eligible	Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-01b01bbd08f24c7a8 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	Select 64-bit (x86)
 Red Hat	Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-0520e698dd500b1d1 (64-bit x86) / ami-0099847d600887c9f (64-bit Arm) Red Hat Enterprise Linux version 8 (HVM), ERS General Purpose (SSD) Volume Type	Select

Feedback English (US)

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19:24 27-03-2020

b) Choosing an Instance Type

Launch instance wizard | EC2 Mar 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
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Feedback English (US)

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19:27 27-03-2020

c) Adding Storage

The screenshot shows the AWS Management Console interface for the 'Launch instance wizard'. The browser address bar shows the URL: `us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:`. The console header includes the AWS logo, navigation tabs for 'Services' and 'Resource Groups', and user information for 'KUNDAN PATIL' in the 'Ohio' region. The wizard progress bar indicates the current step is '4. Add Storage'.

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [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 Encrypted

[Add New Volume](#)

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.

Navigation buttons at the bottom: [Cancel](#), [Previous](#), [Review and Launch](#), [Next: Add Tags](#).

Footer: © 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use

d) Configuring Security Group

The screenshot shows the AWS Management Console's 'Launch instance wizard' at Step 6: Configure Security Group. The browser address bar shows the URL: `us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:`. The AWS header includes the logo, 'Services', 'Resource Groups', and user information 'KUNDAN PATIL' from 'Ohio'. The wizard progress bar shows steps 1 through 7, with step 6 highlighted.

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 name:
Description:

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

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.

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e) Key Pair Download

Launch instance wizard | EC2 Mar x +

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

aws Services Resource Groups

KUNDAN PATIL Ohio Support

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

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instances' security. Your security groups may be accessible from any IP address. We recommend that you restrict access to your instances. You can also open additional ports in your security group to allow access to the latest software packages through extras.

AMI Details

Amazon Linux 2 AMI (HVM), SSD Volume Type

Free tier eligible

Amazon Linux 2 comes with five years support. It provides the latest software packages through extras.

Root Device Type: ebs Virtualization type: hvm

Instance Type

Instance Type	ECUs	vCPUs	Memory
t2.micro	Variable	1	1

Security Groups

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](#).

Create a new key pair

Key pair name

aws-sample-key

Download Key Pair

You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

Cancel Launch Instances

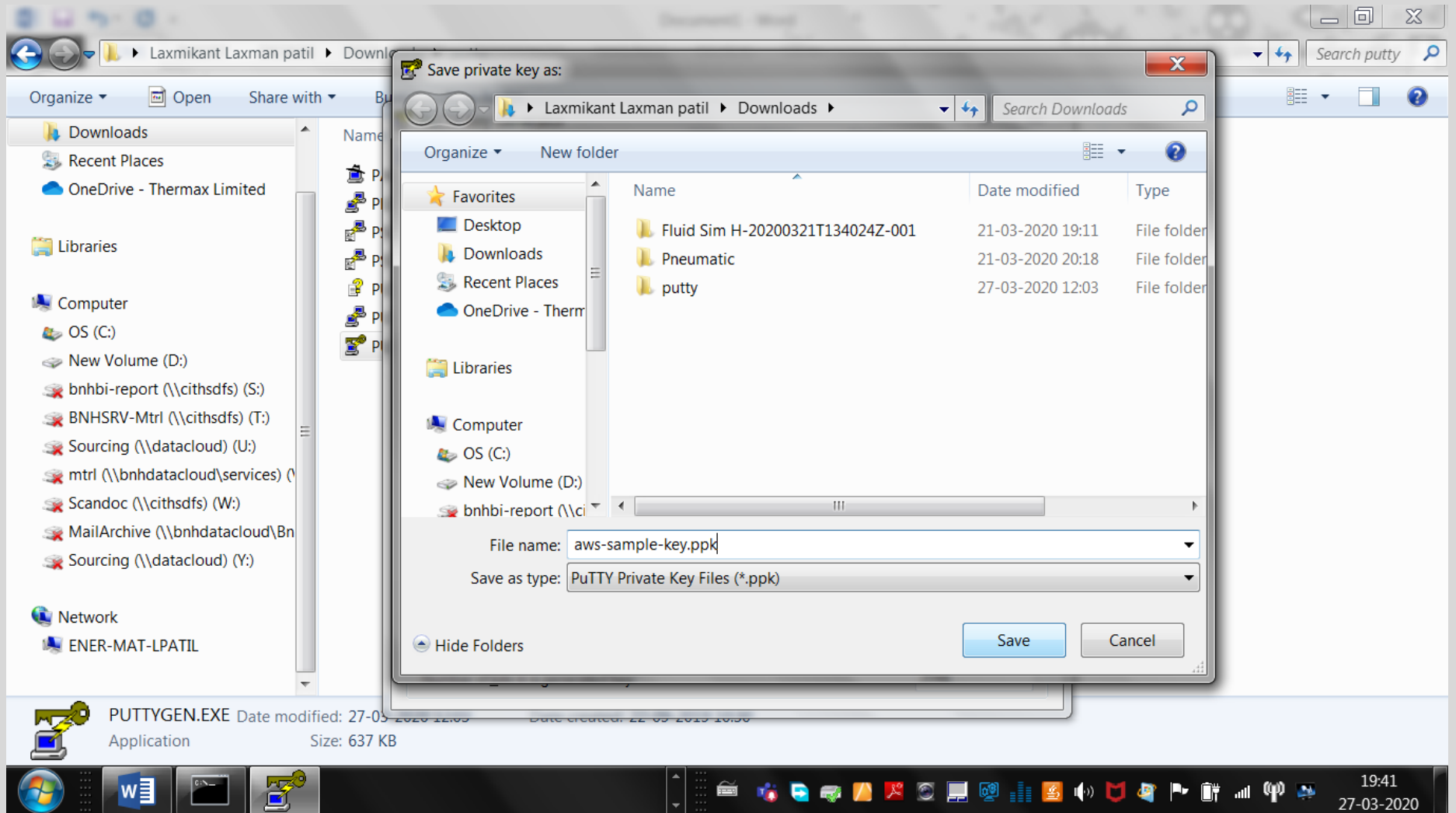
Feedback English (US)

aws-sample-key.pem

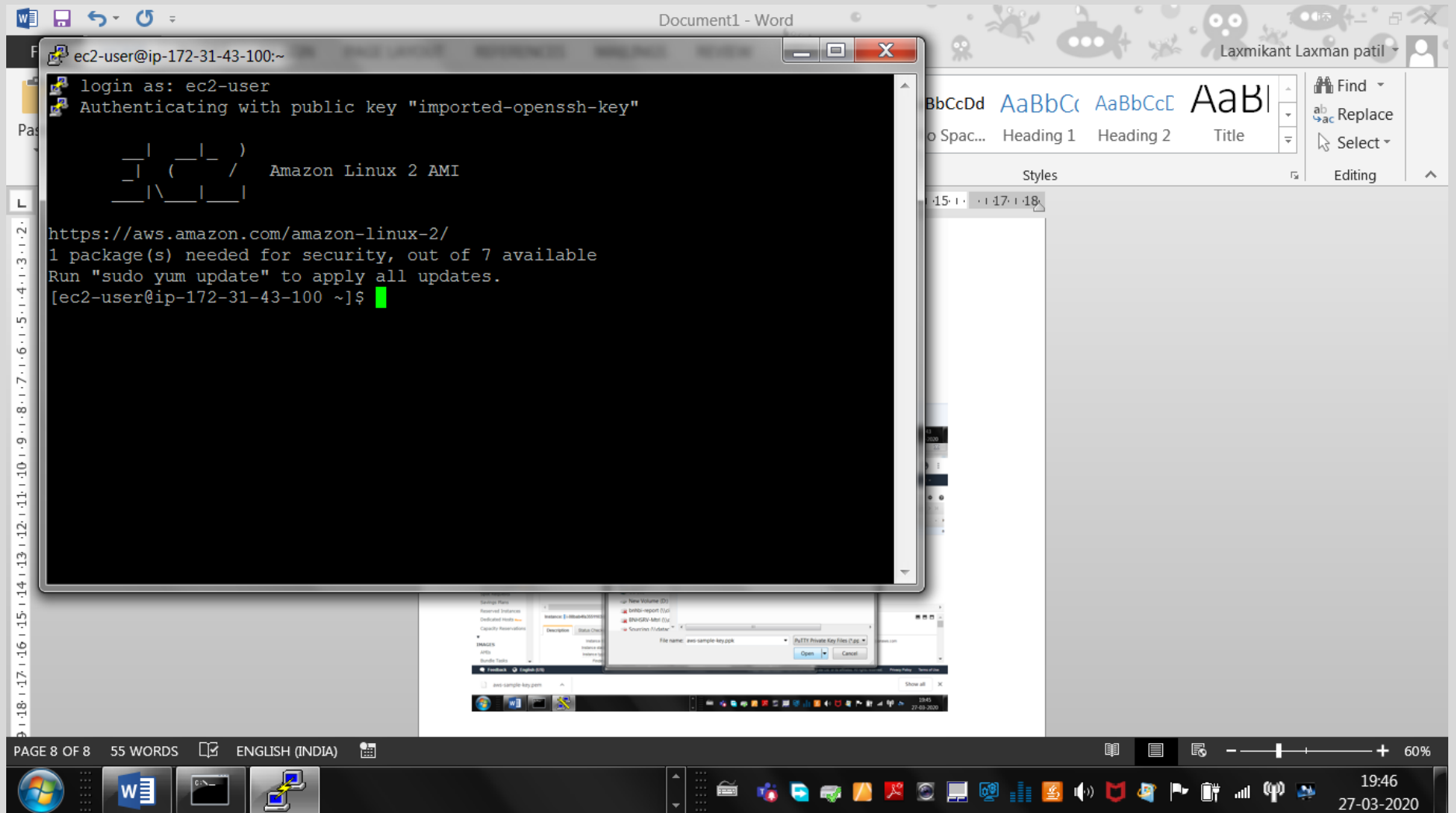
Show all

19:31 27-03-2020

f) PuTTYgen conversion from pem to ppk



g) Logged in EC2 black screen



3. S3

a) Creating a bucket

The screenshot displays the AWS S3 Management Console in a web browser. The address bar shows the URL `s3.console.aws.amazon.com/s3/home?region=us-east-2`. The console header includes the AWS logo, navigation links for Services and Resource Groups, and user information for KUNDAN PATIL. A left-hand sidebar lists S3-related actions like Buckets, Batch operations, and Access analyzer for S3. A blue notification banner at the top informs about console updates. A green success message states: "Successfully created bucket aws-kundan. To upload files and folders, or to configure additional bucket settings such as Bucket Versioning, tags, and default encryption, choose Go to bucket details." Below this, the "Buckets (1)" section shows a table with one entry:

Name	Region	Access	Bucket created
aws-kundan	US East (Ohio) us-east-2		2020-03-27T17:02:59.000Z

The bottom of the image shows a Windows taskbar with various application icons and a system clock indicating 22:31 on 27-03-2020.

b) Uploading an Object

The screenshot displays the AWS S3 Management Console interface. The browser address bar shows the URL `s3.console.aws.amazon.com/s3/buckets/aws-kundan/?region=us-east-2`. The console header includes the AWS logo, navigation menus for Services, Resource Groups, and a user profile for KUNDAN PATIL. The breadcrumb trail indicates the current location is `Amazon S3 > aws-kundan`.

The bucket `aws-kundan` is selected, and the `Overview` tab is active. Below the tabs is a search bar with the placeholder text "Type a prefix and press Enter to search. Press ESC to clear." Action buttons for `Upload`, `Create folder`, `Download`, and `Actions` are visible, along with the region `US East (Ohio)`.

A table lists the objects in the bucket:

	Name	Last modified	Size	Storage class
<input type="checkbox"/>	index.html	Mar 27, 2020 10:38:18 PM GMT+0530	64.0 B	Standard

At the bottom of the console, an `Operations` summary bar shows `0 In progress`, `1 Success`, and `0 Error`. The footer contains a `Feedback` link, `English (US)` language selection, copyright information for 2008-2020, and links to `Privacy Policy` and `Terms of Use`. The Windows taskbar at the very bottom shows the system clock at `22:36` on `27-03-2020`.

c) Enabling Static Website

The screenshot displays the AWS S3 Management Console interface for the 'aws-kundan' bucket. The 'Static website hosting' tab is active, showing the configuration for hosting a static website. The endpoint is set to <http://aws-kundan.s3-website-us-east-2.amazonaws.com>. The 'Use this bucket to host a website' option is selected. The 'Index document' is set to 'index.html' and the 'Error document' is set to 'error.html'. The 'Redirection rules (optional)' section is currently empty. The 'Versioning' and 'Server access logging' sections are also visible, both currently disabled. The bottom of the console shows an 'Operations' summary with 0 In progress, 3 Success, and 0 Error. The footer includes the AWS logo, 'English (US)', copyright information, and a date of 27-03-2020.

Amazon S3 > aws-kundan

aws-kundan

Overview Properties Permissions Management Access points

Versioning

Keep multiple versions of an object in the same bucket.

[Learn more](#)

Disabled

Server access logging

Set up access log records that provide details about access requests.

[Learn more](#)

Disabled

Static website hosting

Endpoint : <http://aws-kundan.s3-website-us-east-2.amazonaws.com>

☒ Use this bucket to host a website [Learn more](#)

Index document ⓘ

index.html

Error document ⓘ

error.html

Redirection rules (optional) ⓘ

Operations 0 In progress 3 Success 0 Error

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22:50 27-03-2020

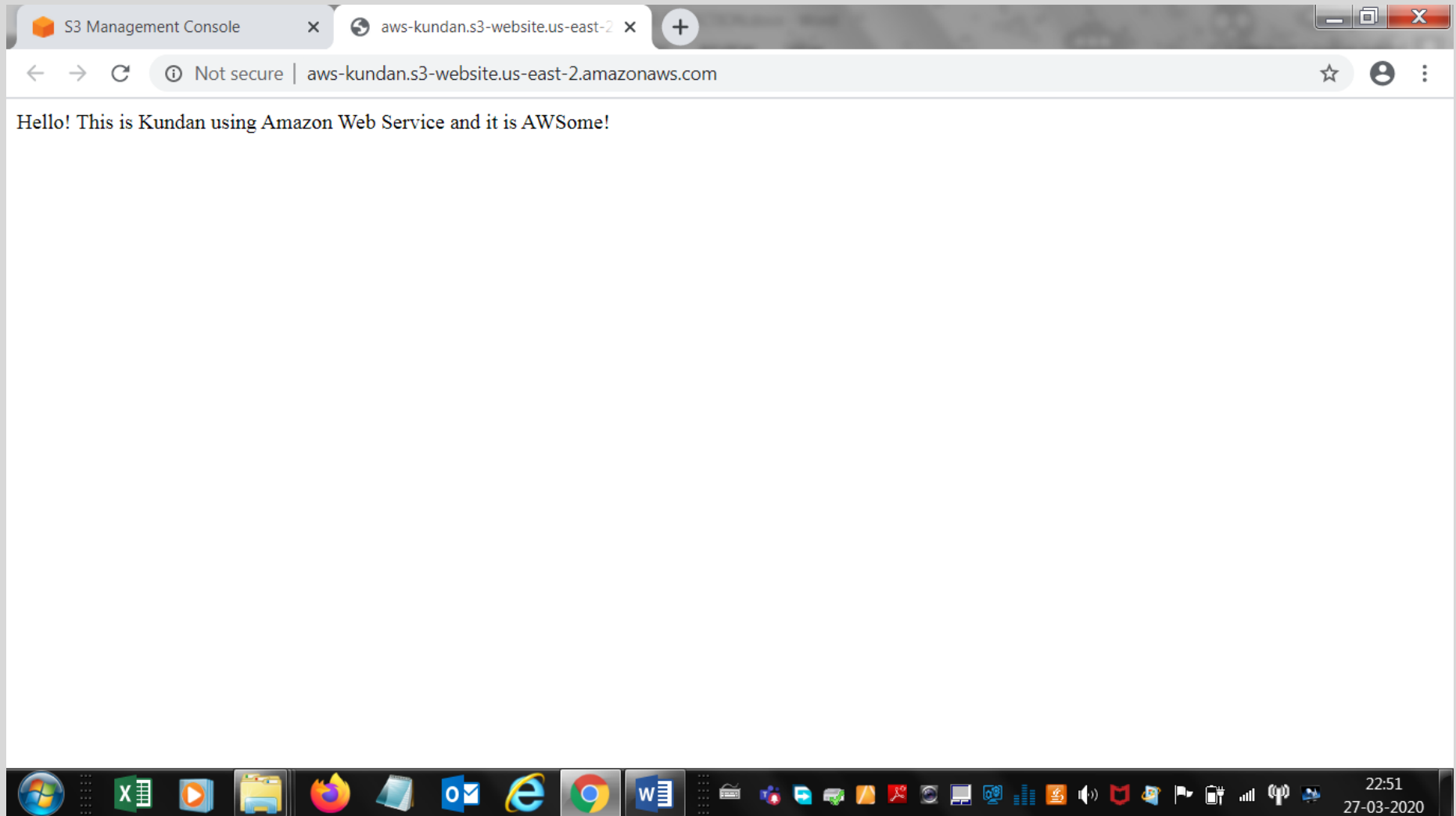
d) Making the Object Public

The screenshot shows the AWS S3 Management Console interface. The browser address bar displays the URL: `s3.console.aws.amazon.com/s3/object/aws-kundan/index.html?region=us-east-2&tab=overview`. The console header includes the AWS logo, navigation menus for Services and Resource Groups, and user information for KUNDAN PATIL. The breadcrumb trail indicates the path: Amazon S3 > aws-kundan > index.html. The 'index.html' object is selected, and the 'Overview' tab is active. A green success message is displayed at the top of the object details section. Below the message are buttons for 'Open', 'Download', 'Download as', 'Make public', and 'Copy path'. The object's metadata is listed below the buttons:

- Owner:** 73e22a4dfab58d6fc402c2586e2a9ffb140cca4b72ac877ca5708d59ee5ace9
- Last modified:** Mar 27, 2020 10:38:18 PM GMT+0530
- Etag:** c1307878819b8e420991685bb918c73f
- Storage class:** Standard
- Server-side encryption:** None
- Size:** 64.0 B

At the bottom of the console, there is a summary bar showing 'Operations' with '0 In progress', '3 Success', and '0 Error'. The footer includes a feedback link, language selection (English (US)), copyright information (© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.), and links to Privacy Policy and Terms of Use. The Windows taskbar at the very bottom shows various application icons and the system clock displaying 22:49 on 27-03-2020.

e) Checking the S3 link on the browser



4. REKOGNITION

a) Face Detect (Analysis)

The screenshot displays the Amazon Rekognition Console interface. The browser address bar shows the URL: `us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/face-detection`. The console header includes the AWS logo, navigation links for Services and Resource Groups, and user information for KUNDAN PATIL in the Ohio region.

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
- Additional Resources
- Getting started guide
- Download SDKs

Get a complete analysis of facial attributes, including confidence scores.

The main image shows a group of five people on a red carpet. The console has analyzed the image and provided the following results:

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

Results

-  [>](#)
- looks like a face 99.9 %
- appears to be male 54.8 %
- age range 44 - 62 years old
- not smiling 50.4 %
- not wearing glasses 54.7 %
- not wearing sunglasses 54.9 %

[Show more](#)

► 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.

[Upload](#) or drag and drop

Use image URL [Go](#)

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20:38
29-03-2020

b) Face Compare

The screenshot shows the AWS Rekognition Console's 'Face comparison' interface. The browser address bar shows the URL: `us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/face-comparison`. The console header includes the AWS logo, 'Services', 'Resource Groups', and user information for 'KUNDAN PATIL' in 'Ohio'. The left sidebar lists various services, with 'Face comparison' highlighted. 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.' It features two image upload sections: 'Reference face' and 'Comparison faces'. The 'Reference face' section displays a portrait of Narendra Modi. The 'Comparison faces' section displays a photo of Narendra Modi speaking at a podium. Below these images are buttons labeled 'Choose a sample image'. On the right, the 'Results' section shows a comparison of the two faces with an equals sign between them, a similarity score of '95.5 %', and a blue progress bar. Below the results are sections for 'Request' and 'Response'. The footer of the console includes 'Feedback', 'English (US)', copyright information, and links to 'Privacy Policy' and 'Terms of Use'. At the bottom of the screen, a Windows taskbar is visible with icons for various applications and the system clock showing '20:35 29-03-2020'.

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

Additional Resources

Face comparison

Compare faces to see how closely they match based on a similarity percentage.

Reference face

Comparison faces

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

▼ Results

Similarity 95.5 %

► Request

► Response

Feedback English (US)

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modi2.jpg

Show all


20:35 29-03-2020

c) Celebrity Recognition

The screenshot displays the AWS Rekognition Console interface. The browser address bar shows the URL: `us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/celebrity-detection`. The console header includes the AWS logo, navigation tabs for Services and Resource Groups, and user information for KUNDAN PATIL in the Ohio region.

The main content area is titled "Celebrity Recognition" and includes the description: "Rekognition automatically recognizes celebrities in images and provides confidence scores." A central image shows a portrait of actor Kartik Aaryan with a bounding box around his face.

On the right side, the "Results" section displays the following information:

- Done with the demo?** [Learn more](#)
- Results**
-  **Kartik Aaryan** [Learn More](#)
- Match confidence** 100 %
- Request**
- Response**

At the bottom of the console, there are options to "Choose a sample image" (showing thumbnails of Jeff Bezos and Mark Zuckerberg) or "Use your own image". The "Use your own image" section includes an "Upload" button, a note that images must be in .jpeg or .png format and no larger than 5MB, and a "Go" button next to a "Use image URL" input field.

The footer of the console shows a "Feedback" link, "English (US)" language selection, and copyright information: "© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved." It also includes links for "Privacy Policy" and "Terms of Use".

The Windows taskbar at the bottom of the screen shows various application icons, including Windows Explorer, Microsoft Word, and Google Chrome, along with the system clock indicating 20:36 on 29-03-2020.

d) Text in Image

The screenshot displays the AWS Rekognition Console interface. The browser address bar shows the URL: `us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/text-detection`. The console header includes the AWS logo, navigation tabs for 'Services' and 'Resource Groups', and user information for 'KUNDAN PATIL' in 'Ohio'.

The left sidebar lists various features under 'Amazon Rekognition': Custom Labels (New), Use Custom Labels, Demos, Object and scene detection, Image moderation, Facial analysis, Celebrity recognition, Face comparison, **Text in image** (highlighted), Video Demos, Video analysis, Metrics, and Additional Resources (Getting started guide, Download SDKs).

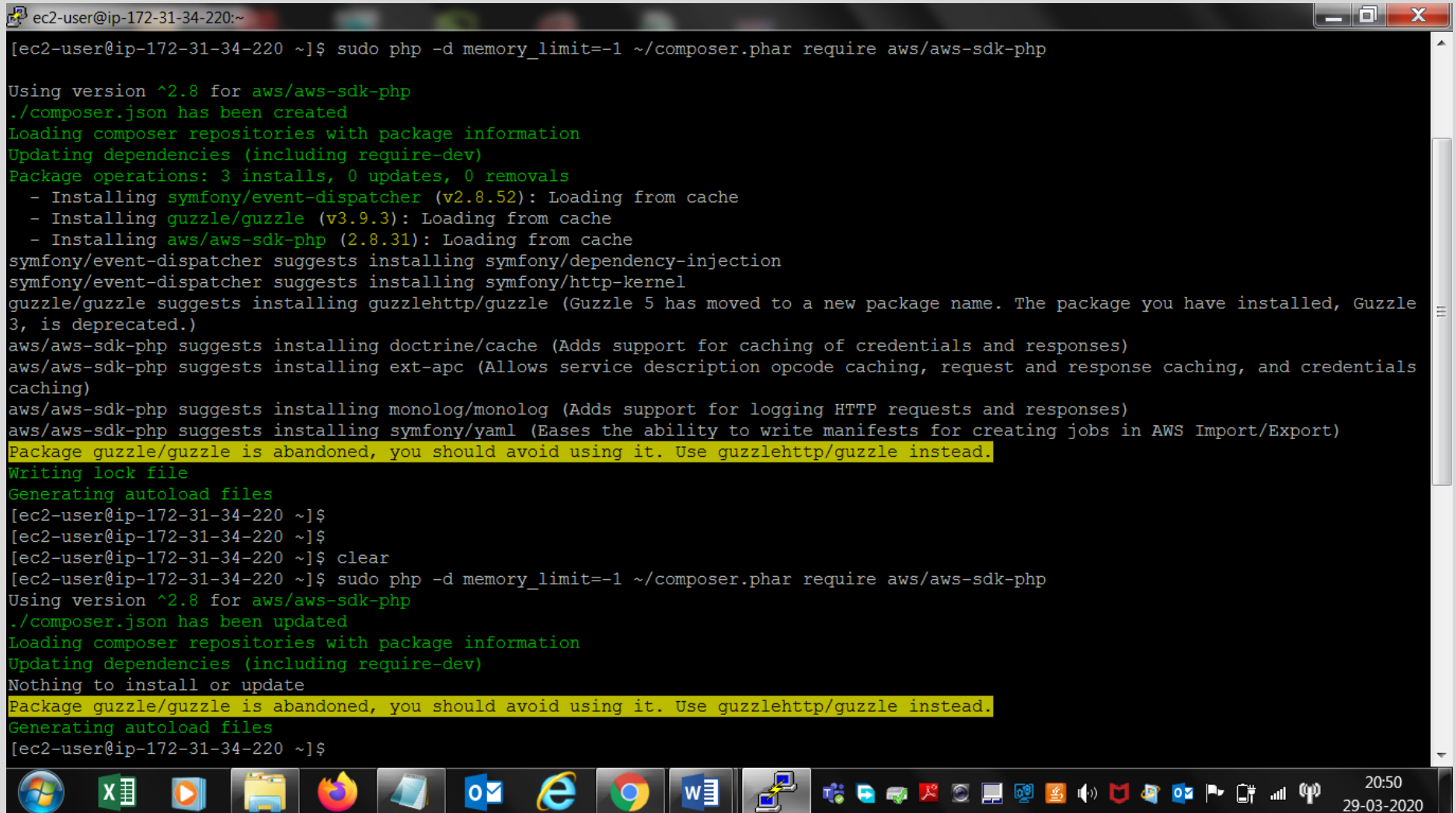
The main content area features a header stating 'Rekognition automatically detects and extracts text in your images. [Learn More](#)'. Below this is a large image of a man in a suit with the text 'I don't have dreams. I have goals.' and 'Harvey Specter' overlaid. At the bottom of the main area, there are two options: 'Choose a sample image' (with thumbnails of a cup and a car) and 'Use your own image' (with an 'Upload' button and a text field for 'Use image URL').

On the right side, a panel titled 'Done with the demo? [Learn more](#)' contains a 'Results' section (US English only) showing the detected text: 'I | don't | have | dreams, |', 'I | have |', 'goals.' |', and '- Harvey | Specter |'. Below this are sections for 'Request' and 'Response'.

The footer of the console shows 'Feedback', 'English (US)', copyright information '© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.', and links to 'Privacy Policy' and 'Terms of Use'. The system taskbar at the bottom shows the time as 20:33 on 29-03-2020.

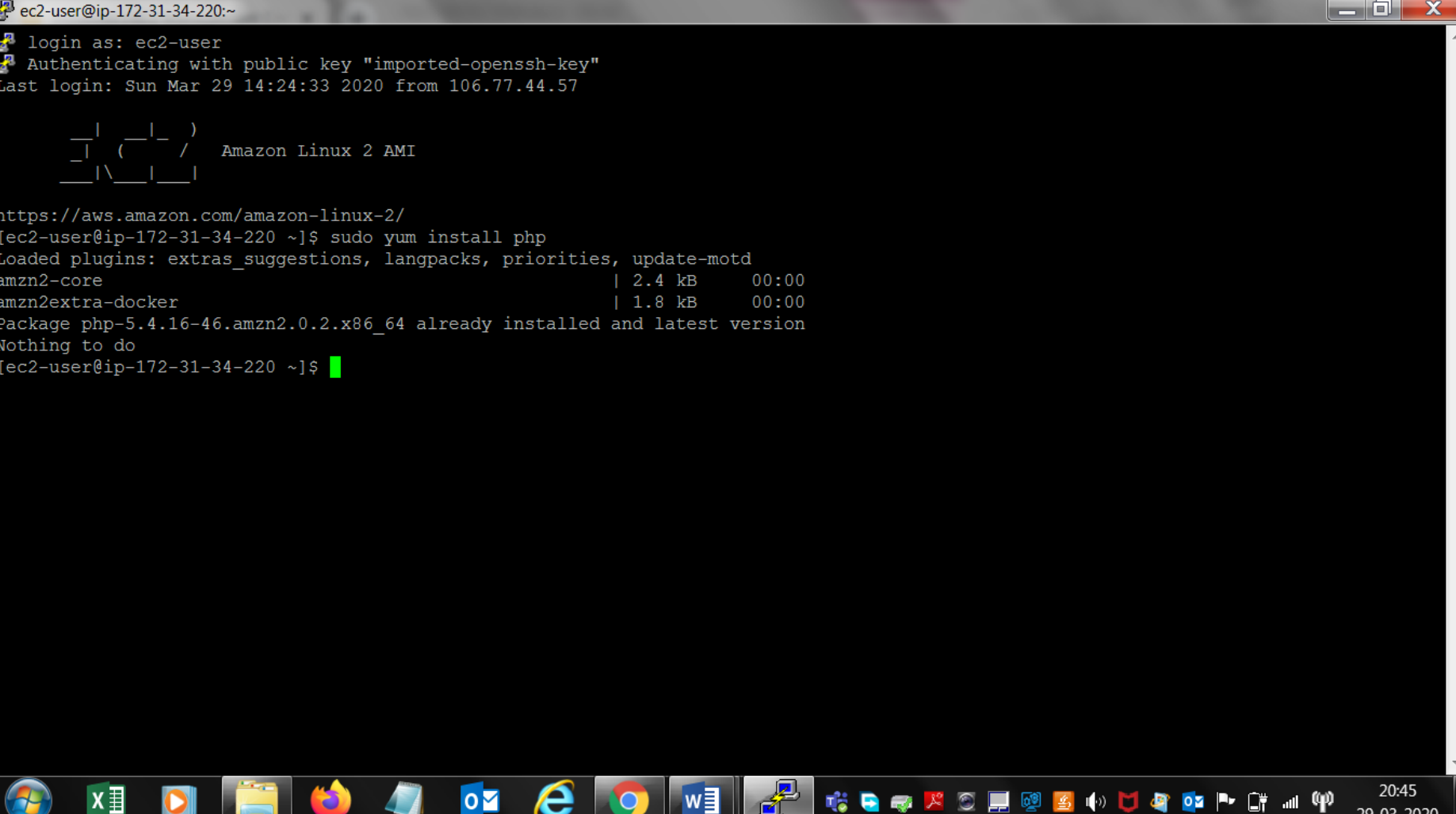
5. EC2 and S3

a) Installing aws-sdk



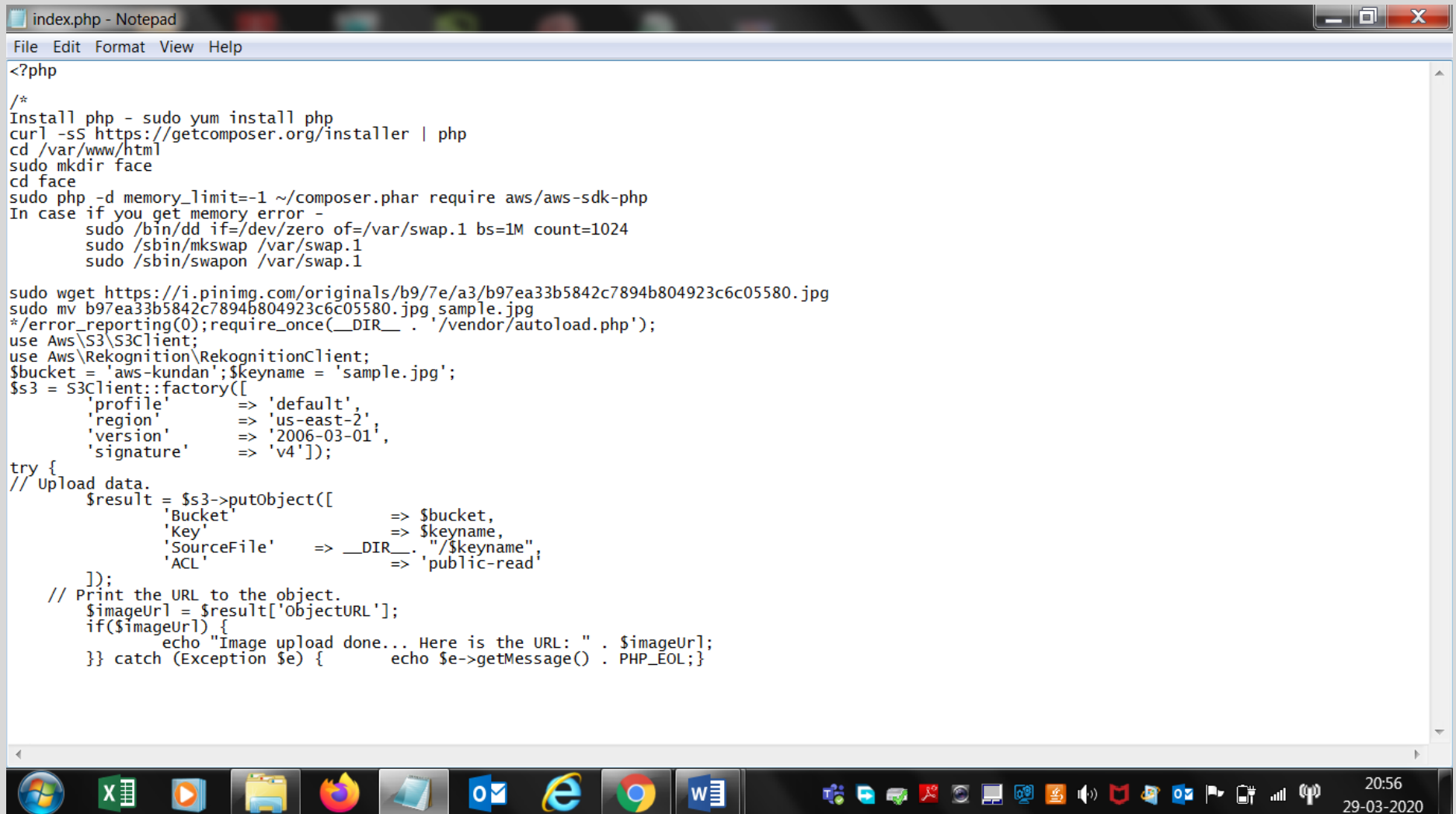
```
ec2-user@ip-172-31-34-220:~  
[ec2-user@ip-172-31-34-220 ~]$ sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-php  
  
Using version ^2.8 for aws/aws-sdk-php  
./composer.json has been created  
Loading composer repositories with package information  
Updating dependencies (including 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): Loading from cache  
  - Installing aws/aws-sdk-php (2.8.31): Loading from cache  
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-172-31-34-220 ~]$  
[ec2-user@ip-172-31-34-220 ~]$  
[ec2-user@ip-172-31-34-220 ~]$ clear  
[ec2-user@ip-172-31-34-220 ~]$ 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 updated  
Loading composer repositories with package information  
Updating dependencies (including require-dev)  
Nothing to install or update  
Package guzzle/guzzle is abandoned, you should avoid using it. Use guzzlehttp/guzzle instead.  
Generating autoload files  
[ec2-user@ip-172-31-34-220 ~]$
```

b) Installing php



```
ec2-user@ip-172-31-34-220:~  
login as: ec2-user  
Authenticating with public key "imported-openssh-key"  
Last login: Sun Mar 29 14:24:33 2020 from 106.77.44.57  
  
  _| _| _| )  
  _| ( _| /  Amazon Linux 2 AMI  
  _|\_|_|_|  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-34-220 ~]$ sudo yum install php  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
amzn2-core | 2.4 kB 00:00  
amzn2extra-docker | 1.8 kB 00:00  
Package php-5.4.16-46.amzn2.0.2.x86_64 already installed and latest version  
Nothing to do  
[ec2-user@ip-172-31-34-220 ~]$
```

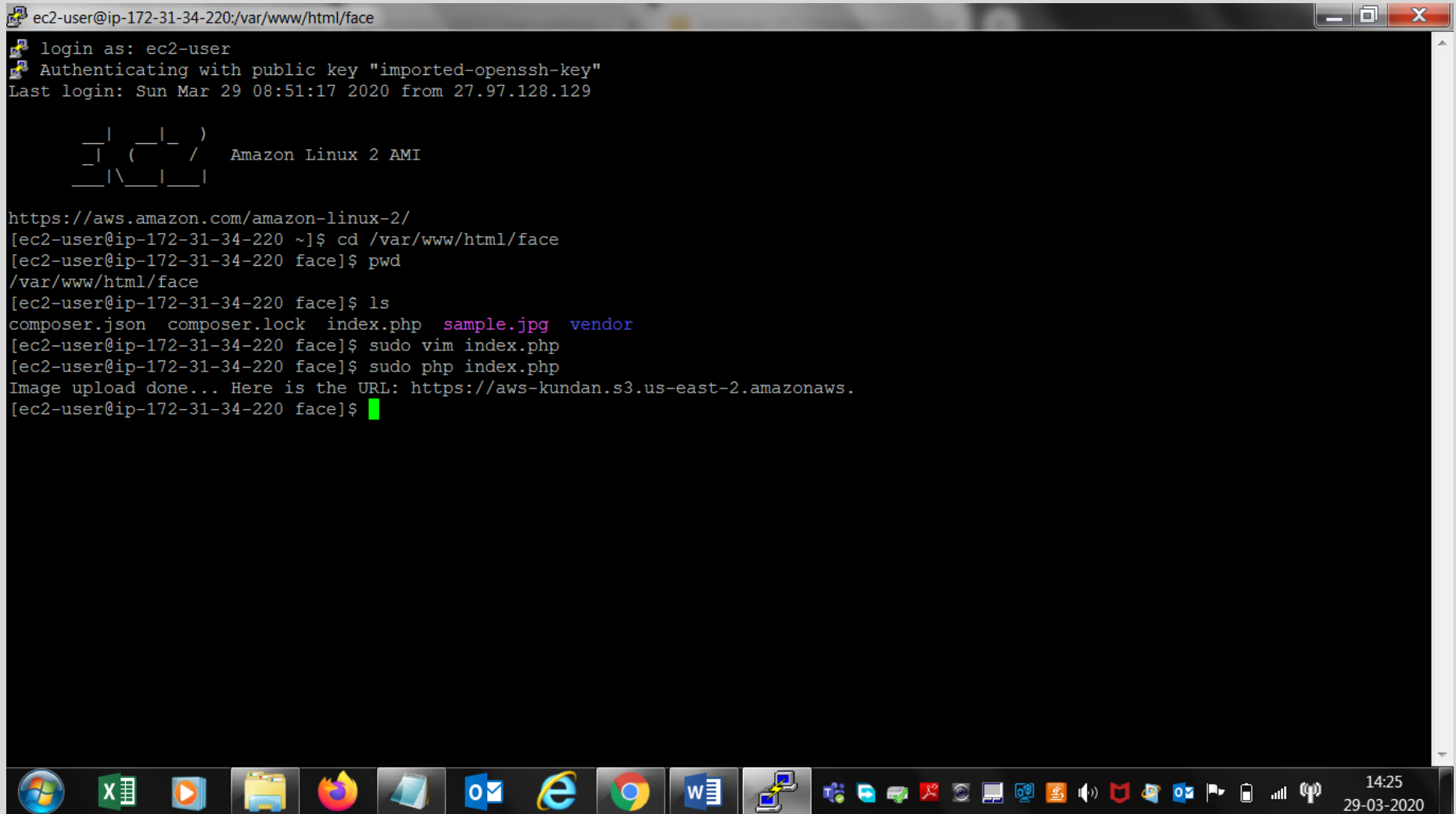
c) index.php file code



```
<?php
/*
Install php - sudo yum install php
curl -sS https://getcomposer.org/installer | php
cd /var/www/html
sudo mkdir face
cd face
sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-php
In case if you get memory error -
    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;
$bucket = 'aws-kundan';$keyname = 'sample.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;
}
```

d) upload success screenshot



The screenshot shows a terminal window titled "ec2-user@ip-172-31-34-220:/var/www/html/face". The terminal output includes login information for the "ec2-user", the Amazon Linux 2 AMI logo, and a series of commands and outputs. The user navigates to the "/var/www/html/face" directory, lists files (showing "sample.jpg"), edits "index.php" with "vim", and runs "php index.php". The final output is "Image upload done... Here is the URL: https://aws-kundan.s3.us-east-2.amazonaws.com/". The terminal window is displayed within a desktop environment with a taskbar at the bottom containing icons for various applications like Firefox, Chrome, and Word. The system clock in the bottom right corner shows 14:25 on 29-03-2020.

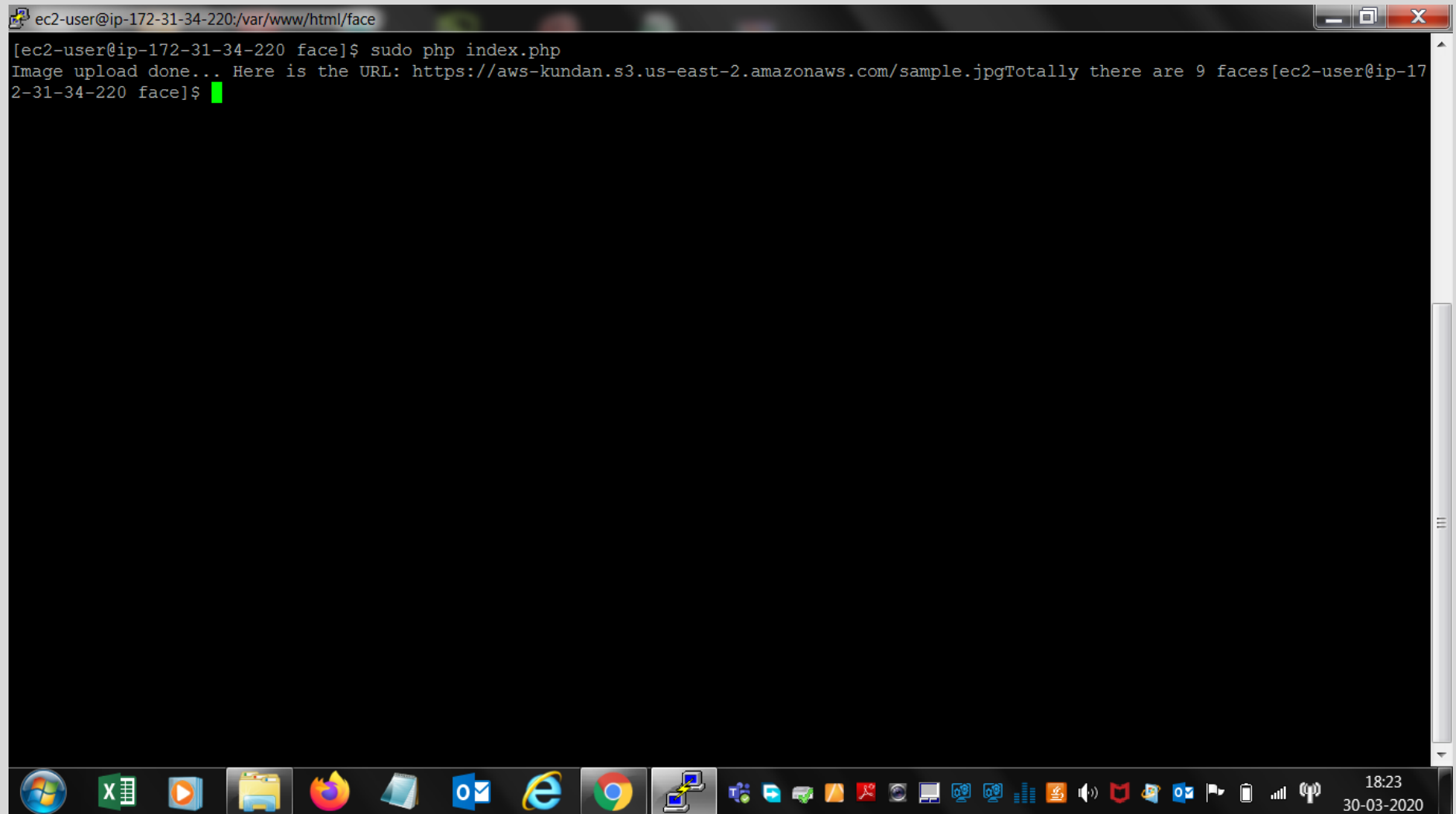
```
ec2-user@ip-172-31-34-220:/var/www/html/face
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Last login: Sun Mar 29 08:51:17 2020 from 27.97.128.129

  _ | _ | _ )
  _ | ( _ - /   Amazon Linux 2 AMI
  _ |\ _ | _ |

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-34-220 ~]$ cd /var/www/html/face
[ec2-user@ip-172-31-34-220 face]$ pwd
/var/www/html/face
[ec2-user@ip-172-31-34-220 face]$ ls
composer.json  composer.lock  index.php  sample.jpg  vendor
[ec2-user@ip-172-31-34-220 face]$ sudo vim index.php
[ec2-user@ip-172-31-34-220 face]$ sudo php index.php
Image upload done... Here is the URL: https://aws-kundan.s3.us-east-2.amazonaws.com/
[ec2-user@ip-172-31-34-220 face]$
```


6. EC2 and REKOGNITION

a) Face Detect success screenshot



The screenshot shows a Windows 10 desktop environment. A terminal window is open, displaying the following text:

```
ec2-user@ip-172-31-34-220:/var/www/html/face  
[ec2-user@ip-172-31-34-220 face]$ sudo php index.php  
Image upload done... Here is the URL: https://aws-kundan.s3.us-east-2.amazonaws.com/sample.jpgTotally there are 9 faces[ec2-user@ip-172-31-34-220 face]$
```

The terminal window has a title bar that reads "ec2-user@ip-172-31-34-220:/var/www/html/face". The desktop taskbar at the bottom includes icons for Windows, Excel, a media player, File Explorer, Firefox, a folder, Outlook, Edge, Chrome, and several system tray icons. The system clock in the bottom right corner shows the time as 18:23 and the date as 30-03-2020.