

Principles of Cloud Computing

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Lab 3

Question 1 - Launching a Web App onto EC2

The screenshot shows the AWS EC2 Management Console interface. On the left, a sidebar navigation menu includes options like EC2 Dashboard, Instances, Images, and Elastic Block Store. The main content area displays the 'Resources' section, which lists 1 running instance, 0 dedicated hosts, 0 elastic IPs, 1 instance, 1 key pair, 0 placement groups, 2 security groups, and 1 volume. Below this, a 'Launch instance' button is visible. To the right, the 'Account attributes' section shows supported platforms (VPC), default VPC (vpc-008d283763760bfd3), and other settings like EBS encryption and zones. A 'Explore AWS' sidebar highlights ML Inference and EC2 Spot Instances. At the bottom, a table shows the details of the single running instance, including its name (20BDS0033), instance ID (i-0f6b515c3dff73918), state (Running), type (t2.micro), status check (2/2 checks passed), alarm status (No alarms), availability zone (ap-south-1a), and public IP (ec2-52-66-98-). A modal window titled 'Select an instance' is open at the bottom.

Click Instance Summary

The screenshot shows the AWS EC2 Instance Summary page for instance i-0f6b515c3dff73918. The instance is running and has a public IPv4 address of 52.66.98.205. It is associated with a VPC ID (vpc-008d283763760bf3) and a subnet ID (subnet-0e3f599d3b533e1b6). The instance type is t2.micro. The instance was launched on Wednesday, August 10, 2022, at 16:22:04 GMT+0530 (India Standard Time).

Go to security then go to security groups

The screenshot shows the AWS EC2 Security Groups page for instance i-0f6b515c3dff73918. The instance is associated with a security group sg-0f8d17d628b24cea2. The inbound rules for this security group are listed below:

Security group rule ID	Port range	Protocol	Source	Security groups
sgr-079027db0b2ec264d	22	TCP	0.0.0.0/0	launch-wizard-1

The outbound rules for this security group are listed below:

Security group rule ID	Port range	Protocol	Destination	Security groups
sgr-05d52483915dd0232	All	All	0.0.0.0/0	launch-wizard-1

Click on actions drop down then choose edit inbound rules

sg-0f8d17d628b24cea2 - launch-wizard-1

Security group name: launch-wizard-1

Security group ID: sg-0f8d17d628b24cea2

Description: launch-wizard-1 created 2022-08-10T10:51:20.855Z

VPC ID: vpc-008d283763760bfd3

Owner: 513322549878

Inbound rules count: 1 Permission entry

Outbound rules count: 1 Permission entry

Inbound rules (1/1)

Name	Security group rule...	IP version	Type	Protocol	Port range
				TCP	22

Click on add rule and In type dropdown choose http and save rules

Edit inbound rules

Inbound rules control the incoming traffic to your instance.

Protocol	Info	Port range	Source	Info	Description - optional	Info
TCP		22	Custom		0.0.0.0/0	X
TCP		80	Custom		0.0.0.0/0	X

Add rule

Cancel Preview changes Save rules

The screenshot shows the AWS EC2 Management Console. The left sidebar is collapsed, and the main area displays the 'Details' section for a security group named 'sg-0f8d17d628b24cea2 - launch-wizard-1'. The 'Inbound rules' tab is selected, showing two entries. A green banner at the top indicates that 'Inbound security group rules successfully modified on security group (sg-0f8d17d628b24cea2 | launch-wizard-1)'. Below the banner, the security group details are listed, including its name, ID, owner, and rule counts. At the bottom, there are buttons for 'Run Reachability Analyzer' and 'Edit inbound rules'.

Now connect to the ec2 instance to Ubuntu (ssh) as done in previous experiment

The screenshot shows a terminal window titled 'root@ip-172-31-39-82:~'. The user is running a 'yum update' command on an Amazon Linux 2 AMI instance. The terminal output shows the package manager checking for updates and then installing them. The window also displays various system status icons and a file browser interface.

In terminal type `yum install httpd -y`

Activities Terminal Aug 24 10:45

```
[root@ip-172-31-39-82 ~]# yum install httpd -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package httpd.x86_64 0:2.4.54-1.amzn2 will be installed
--> Processing Dependency: httpd-tools = 2.4.54-1.amzn2 for package: httpd-2.4.
54-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem = 2.4.54-1.amzn2 for package: httpd
-2.4.54-1.amzn2.x86_64
--> Processing Dependency: system-logos-httpd for package: httpd-2.4.54-1.amzn2
.x86_64
--> Processing Dependency: mod_http2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem for package: httpd-2.4.54-1.amzn2.x
86_64
--> Processing Dependency: /etc/mime.types for package: httpd-2.4.54-1.amzn2.x8
6_64
--> Processing Dependency: libaprutil-1.so.0()(64bit) for package: httpd-2.4.54
-1.amzn2.x86_64
--> Processing Dependency: libapr-1.so.0()(64bit) for package: httpd-2.4.54-1.a
mzn2.x86_64
--> Running transaction check
--> Package apr.x86_64 0:1.7.0-9.amzn2 will be installed
--> Package apr-util.x86_64 0:1.6.1-5.amzn2.0.2 will be installed
--> Processing Dependency: apr-util-bdb(x86-64) = 1.6.1-5.amzn2.0.2 for package
: apr-util-1.6.1-5.amzn2.0.2.x86_64
--> Package generic-logos-httpd.noarch 0:18.0.0-4.amzn2 will be installed
--> Package httpd-filesystem.noarch 0:2.4.54-1.amzn2 will be installed
--> Package httpd-tools.x86_64 0:2.4.54-1.amzn2 will be installed
--> Package mailcap.noarch 0:2.1.41-2.amzn2 will be installed
```

Create file index.html

```
[root@ip-172-31-39-82 ~]# cd/var/www/html
-bash: cd/var/www/html: No such file or directory
[root@ip-172-31-39-82 ~]# cd /var/www/html
[root@ip-172-31-39-82 html]# nano index.html
```

Index.html

Activities Terminal Aug 24 10:49

root@ip-172-31-39-82:/var/www/html index.html Modified

GNU nano 2.9.8

```
<html>
<head>
<title>PCC LAB DA</title>
</head>
<body>
<p>Tejas Rahul Rokade 20BDS0033</p>
</body>
</html>
```

File Edit View Insert Cell Help

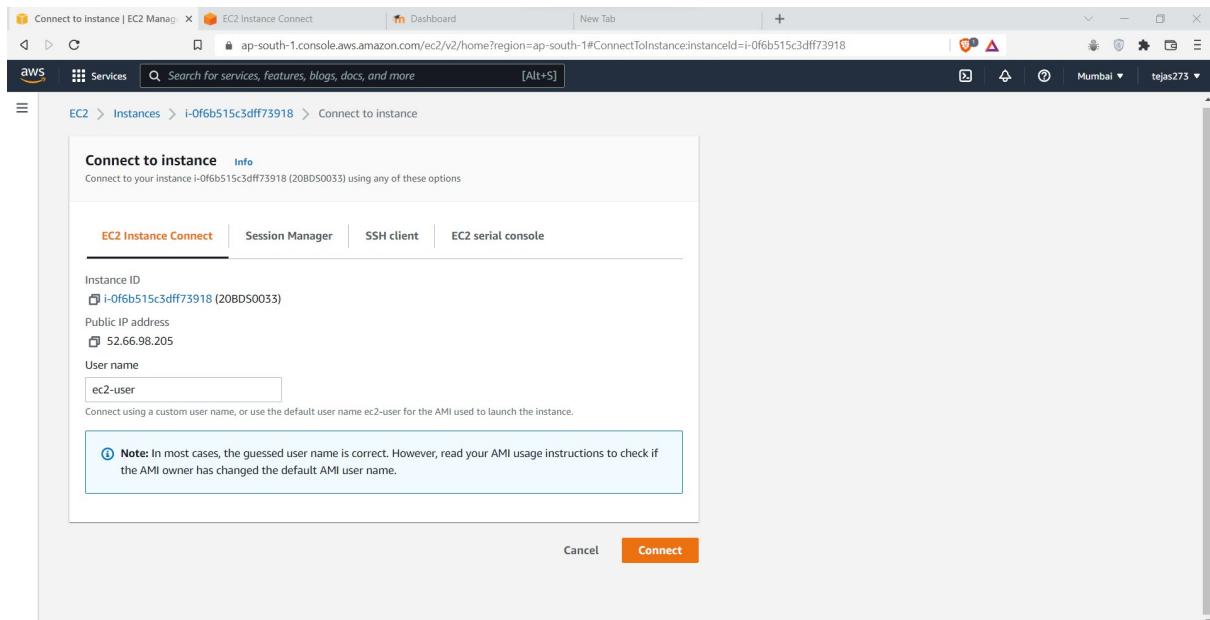
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell

After creating the file index.html

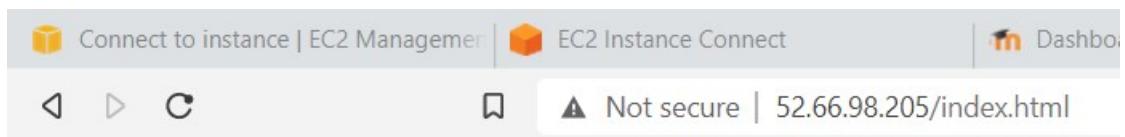
```
[root@ip-172-31-39-82 ~]# cd/var/www/html
-bash: cd/var/www/html: No such file or directory
[root@ip-172-31-39-82 ~]# cd /var/www/html
[root@ip-172-31-39-82 html]# nano index.html
[root@ip-172-31-39-82 html]# systemctl start httpd
```

Go to the browser window and type <http://<ipaddress>> of ec2>/index.html

In my case it is <http://52.66.98.205/index.html>

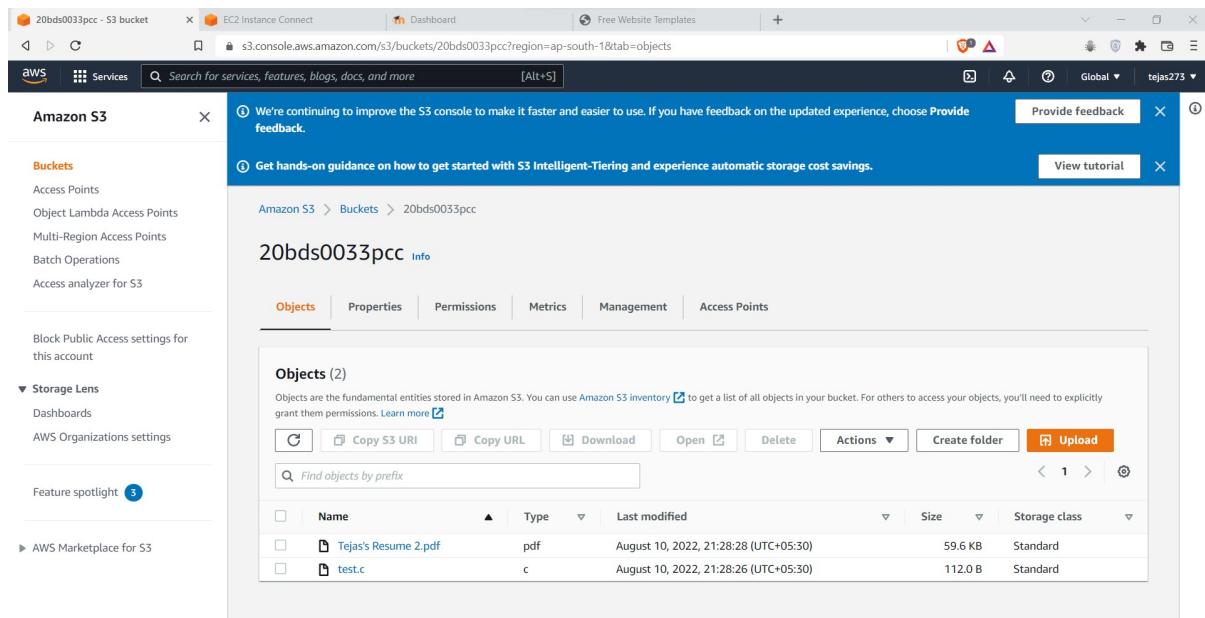
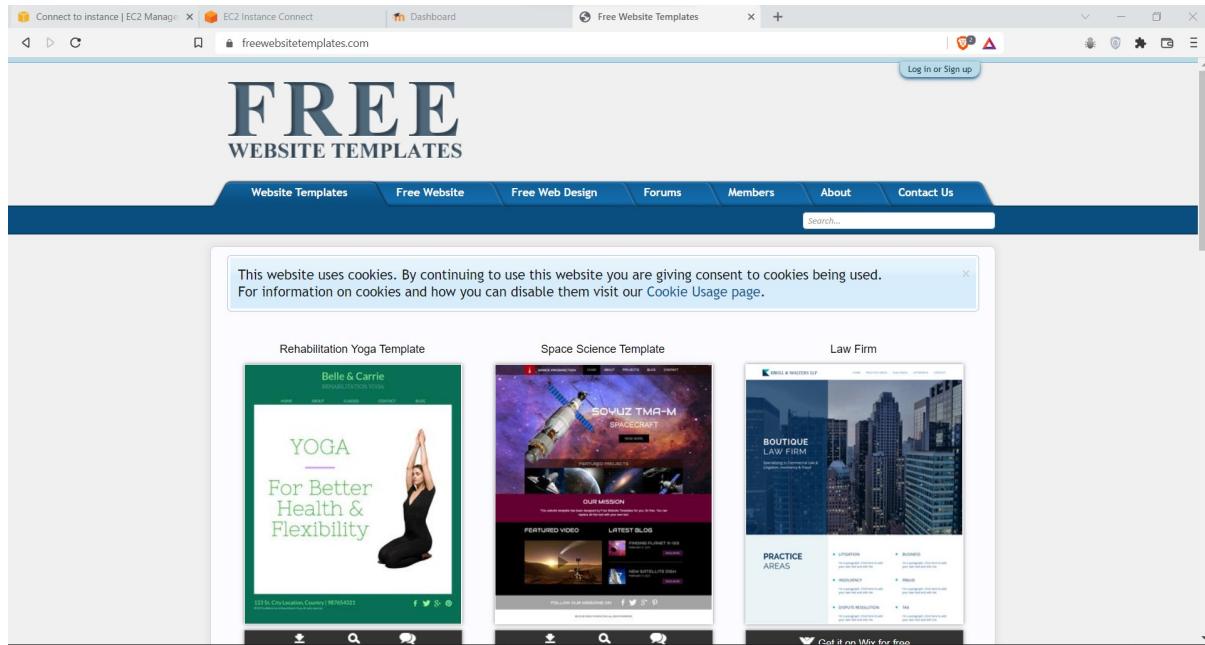


Output



Question 2

Go to freewebsitetemplates.com and download a template



Upload the zip file into the s3 bucket

S3 Management Console EC2 Instance Connect Dashboard Free Website Templates

Services Search for services, features, blogs, docs, and more [Alt+S]

We're continuing to improve the S3 console to make it faster and easier to use. If you have feedback on the updated experience, choose Provide feedback.

Provide feedback

Amazon S3 > Buckets > 20bds0033pcc > Upload

Upload

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose Add files, or Add folders.

Files and folders (1 Total, 5.3 MB)

All files and folders in this table will be uploaded.

	Name	Folder	Type	Size
<input type="checkbox"/>	rehabilitation-yoga.zip	-	application/x-zip-compressed	5.3 MB

Destination

Destination
s3://20bds0033pcc

Feedback Looking for language selection? Find it in the new Unified Settings

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This screenshot shows the AWS S3 Management Console's upload interface. It displays a list of files to be uploaded, a destination path, and a summary of the upload status. The 'Destination' field is set to 's3://20bds0033pcc'. The summary at the bottom indicates 'Succeeded' with '1 file, 5.3 MB (100.00%)'.

Upload Success

S3 Management Console EC2 Instance Connect Dashboard Free Website Templates

Services Search for services, features, blogs, docs, and more [Alt+S]

We're continuing to improve the S3 console to make it faster and easier to use. If you have feedback on the updated experience, choose Provide feedback.

Provide feedback

Upload succeeded

View details below.

Upload: status

The information below will no longer be available after you navigate away from this page.

Summary

Destination	Succeeded	Failed
s3://20bds0033pcc	1 file, 5.3 MB (100.00%)	0 files, 0 B (0%)

Files and folders (1 Total, 5.3 MB)

Name	Folder	Type	Size	Status	Error
rehabilitation-yoga.zip	-	application/x-zip-compressed	5.3 MB	Succeeded	

Feedback Looking for language selection? Find it in the new Unified Settings

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This screenshot shows the 'Upload: status' page after a successful upload. It provides a summary of the upload results, showing one file successfully uploaded to the specified destination. The 'Files and folders' table lists the uploaded file with its name, type, size, and status.

The screenshot shows a browser window with three tabs: '20bds0033 - S3 bucket', 'EC2 Instance Connect', and 'amazon web services - AWS S3 make'. The main content area displays a green success message: 'Successfully edited public access' with a link to 'View details below.' Below this, a section titled 'Make public: status' shows a summary table with one row: 'Source s3://20bds0033' under 'Successfully edited public access' (with a note '1 object, 5.3 MB'), and 'Failed to edit public access' (with a note '0 objects'). A link 'Configuration' is also present. At the bottom, there's a search bar 'Find objects by name' and a table header for 'Name', 'Type', 'Last modified', 'Size', and 'Error'. A note at the bottom states: 'The information below will no longer be available after you navigate away from this page.'

Download the Zip file from S3 Bucket into /var/www/html

through running

```
sudo wget http://3.110.132.67/rehabilitation-yoga/upload/blog.html
```

```
[root@ip-172-31-39-82 html]# wget https://20bds0033.s3.ap-south-1.amazonaws.com/rehabilitation-yoga.zip
--2022-08-24 11:28:57-- https://20bds0033.s3.ap-south-1.amazonaws.com/rehabilitation-yoga.zip
Resolving 20bds0033.s3.ap-south-1.amazonaws.com (20bds0033.s3.ap-south-1.amazonaws.com)... 52.219.156.154
Connecting to 20bds0033.s3.ap-south-1.amazonaws.com (20bds0033.s3.ap-south-1.amazonaws.com)|52.219.156.154|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 5559472 (5.3M) [application/zip]
Saving to: 'rehabilitation-yoga.zip'

100%[=====] 5,559,472   --K/s   in 0.04s

2022-08-24 11:28:57 (145 MB/s) - 'rehabilitation-yoga.zip' saved [5559472/5559472]

[root@ip-172-31-39-82 html]#
```

Unzip the zip file

```
[root@ip-172-31-39-82 html]# unzip rehabilitation-yoga.zip
Archive: rehabilitation-yoga.zip
  creating: rehabilitation-yoga/
  creating: rehabilitation-yoga/upload/
  creating: rehabilitation-yoga/upload/js/
  inflating: rehabilitation-yoga/upload/js/function.js
  inflating: rehabilitation-yoga/upload/js/jquery-1.11.1.min.js
  inflating: rehabilitation-yoga/upload/js/mobile.js
  inflating: rehabilitation-yoga/upload/classes.html
  creating: rehabilitation-yoga/upload/css/
  inflating: rehabilitation-yoga/upload/css/mobile.css
  inflating: rehabilitation-yoga/upload/css/style.css
  inflating: rehabilitation-yoga/upload/singlepost.html
```

Renaming the zip file

```
[root@ip-172-31-39-82 html]# mv rehabilitation-yoga/*
```

Output

