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**Lets Upgrade AWS**  
**Assignment no 2 (Day 5 & 6 )**

## PROJECT 1: Working with IAM Roles with S3 and bootstrapping with EC2

### Task1: Creating a bootstrapped instance

#### SS1: edit user data

aws Services ▾

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

Step 3: Configure Instance Details

Additional charges will apply for dedicated tenancy.

**Credit specification** ⓘ ☐ Unlimited  
Additional charges may apply

**File systems** ⓘ

Advanced Details

**Metadata accessible** ⓘ Enabled ▾

**Metadata version** ⓘ V1 and V2 (token optional) ▾

**Metadata token response hop limit** ⓘ 1 ▾

**User data** ⓘ ☒ As text ☐ As file ☐ Input is already base64 encoded

```
#!/bin/bash
sudo yum install httpd
sudo service httpd start
```

## Ss2: list of ec2 instances with description

The screenshot shows the AWS Management Console interface. The top navigation bar includes the 'services' dropdown, a notification bell, and user information (Sahil, Mumbai, Support). The left sidebar shows the 'Experience' section with a search bar and a list of services. The main content area displays the 'Instance summary for i-0c2f8187c81b763f2' with a 'Connect' button and an 'Actions' dropdown. The instance is in the 'Running' state. The summary table provides details about the instance's configuration.

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0c2f8187c81b763f2	13.233.34.7   <a href="#">open address</a>	172.31.7.23
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-13-233-34-7.ap-south-1.compute.amazonaws.com   <a href="#">open address</a>	ip-172-31-7-23.ap-south-1.compute.internal
Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-ecc1de84
IAM Role	Subnet ID	
-	subnet-65384d29	

## Ss3: test page

The screenshot shows a web browser window with the address bar displaying 'Not secure | 13.233.34.7'. The browser's address bar and tabs are visible at the top. The main content area of the browser shows the 'Test Page' for the Apache HTTP server. The page has a red header with the text 'Test Page'. Below the header, there is a paragraph of text explaining the purpose of the page. The page is divided into two columns. The left column contains text for general public and website administrators. The right column contains text for website administrators and a logo for 'Powered by Apache 2.4'.

This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.

**If you are a member of the general public:**

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting [www.example.com](#), you should send e-mail to "webmaster@example.com".

**If you are the website administrator:**

You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

You are free to use the image below on web sites powered by the Apache HTTP Server:

Powered by **APACHE** 2.4

## Task 2: Checking bucket list and creating a new bucket from EC2 using IAM ROLES

### Ss1: user data

Services ▾

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

### Configure Instance Details

**Subnet** ⓘ No preference (default subnet in any Availability Zone) [Create new subnet](#)

**Auto-assign Public IP** ⓘ Use subnet setting (Enable) ▾

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**Placement group** ⓘ ☐ Add instance to placement group

**Capacity Reservation** ⓘ Open ▾

---

**Domain join directory** ⓘ No directory ⓘ [Create new directory](#)

**IAM role** ⓘ ec2S3 ⓘ [Create new IAM role](#)

---

**Shutdown behavior** ⓘ Stop ▾

**Stop - Hibernate behavior** ⓘ ☐ Enable hibernation as an additional stop behavior

**Enable termination protection** ⓘ ☐ Protect against accidental termination

**Monitoring** ⓘ ☐ Enable CloudWatch detailed monitoring  
Additional charges apply.

**Tenancy** ⓘ Shared - Run a shared hardware instance ▾  
Additional charges will apply for dedicated tenancy.

### Ss2: list of ec2 instances with description

Services ▾

EC2 > Instances > i-0c8e9a71e53f4ea8f

### Instance summary for i-0c8e9a71e53f4ea8f (ec2fors3) Info

Updated less than a minute ago

[Refresh](#) [Connect](#) [Actions ▾](#)

<b>Instance ID</b> i-0c8e9a71e53f4ea8f (ec2fors3)	<b>Public IPv4 address</b> 13.235.42.209   <a href="#">open address</a>	<b>Private IPv4 addresses</b> 172.31.45.244
<b>Instance state</b> Running	<b>Public IPv4 DNS</b> ec2-13-235-42-209.ap-south-1.compute.amazonaws.com   <a href="#">open address</a>	<b>Private IPv4 DNS</b> ip-172-31-45-244.ap-south-1.compute.internal
<b>Instance type</b> t2.micro	<b>Elastic IP addresses</b> -	<b>VPC ID</b> vpc-ecc1de84
<b>IAM Role</b> ec2S3	<b>Subnet ID</b> subnet-31212559	

## Ss3: 3 commands to be executed and outputs displayed

```
[ec2-user@ip-172-31-45-244 ~]$ aws s3 ls
2020-10-10 07:11:40 ec2for3s
2020-10-09 13:39:06 sahilaip5
2020-10-09 13:53:55 sahilaip53
2020-10-10 07:31:13 sahiltester
[ec2-user@ip-172-31-45-244 ~]$ aws s3 mb s3://tests3
make_bucket failed: s3://tests3 An error occurred (BucketAlreadyExists) when calling the CreateBucket operation: The requested bucket name is not available. The bucket namespace is shared by all users of the system. Please select a different name and try again.
[ec2-user@ip-172-31-45-244 ~]$ aws s3 mb s3://sahiltests3
make_bucket: sahiltests3
[ec2-user@ip-172-31-45-244 ~]$ aws s3 ls
2020-10-10 07:11:40 ec2for3s
2020-10-09 13:39:06 sahilaip5
2020-10-09 13:53:55 sahilaip53
2020-10-10 07:31:13 sahiltester
2020-10-16 10:36:48 sahiltests3
[ec2-user@ip-172-31-45-244 ~]$
```

## Task 3: Hosting a webpage using the bootstrap script on ec2.

### Ss1: user data

WS Services ▾

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

Step 3: Configure Instance Details

Additional charges will apply for dedicated tenancy.

Credit specification ⓘ ☐ Unlimited  
Additional charges may apply

File systems ⓘ  ☒ Create new file system

Advanced Details

Metadata accessible ⓘ Enabled

Metadata version ⓘ V1 and V2 (token optional)

Metadata token response hop limit ⓘ 1

User data ⓘ ☒ As text ☐ As file ☐ Input is already base64 encoded

```
#!/bin/bash
sudo yum -y install httpd
sudo aws s3 cp s3://sc2for3s/index.html /var/www/html
sudo service httpd start
sudo chkconfig httpd on
```

## Ss2:s3 bucket,index.html

The screenshot shows the AWS S3 console interface. At the top, the AWS logo and 'Services' dropdown are visible. The breadcrumb navigation shows 'Amazon S3 > ec2for3s'. The bucket name 'ec2for3s' is displayed. Below the bucket name are tabs for 'Overview', 'Properties', 'Permissions', 'Management', and 'Access points'. A search bar is present with the placeholder text 'Type a prefix and press Enter to search. Press ESC to clear.' Below the search bar are buttons for 'Upload', 'Create folder', 'Download', and 'Actions'. The region is set to 'US East (N. Virginia)'. A table lists the contents of the bucket, showing one file named 'index.html' with a size of 58.0 B and a storage class of 'Standard'. The file was last modified on Oct 16, 2020 at 5:34:58 PM GMT+0530.

Name	Last modified	Size	Storage class
index.html	Oct 16, 2020 5:34:58 PM GMT+0530	58.0 B	Standard

## Ss3: testing using public IP

The screenshot shows a web browser window. The address bar displays 'Not secure | 3.6.40.165'. Below the address bar, a list of open tabs is visible, including 'Apps', 'gmail', 'Nagios Core', 'Sensu', 'XOIP', 'Jira', 'CC Admin', 'CM IR Controller', 'PDU', 'HCS', 'Meetings', 'Linux', 'App', 'Paybooks', 'Radio-Locator.com', and 'AWS'. Below the tabs, a message reads: 'This is for the assignment for Letsupgrade AWS and Devops'.

## PROJECT 2: Creating an EC2 instance in custom VPC

### Task1: Create a VPC

#### Ss1: vpc created

The screenshot shows the AWS Management Console interface. A green notification bar at the top states: "You successfully created vpc-04e8e876ace674add / sahil-vpc-1". The main content area displays the details for the VPC "vpc-04e8e876ace674add / sahil-vpc-1". The details are organized into a table with four columns: VPC ID, State, DNS hostnames, and DNS resolution. The VPC ID is vpc-04e8e876ace674add, the State is Available, DNS hostnames are Disabled, and DNS resolution is Enabled. Other details include Tenancy (Default), DHCP options set (dopt-fc17ed97), Route table (rtb-00e8935f58ffb64bf), Network ACL (acl-0091ab57cfbadc376), Default VPC (No), IPv4 CIDR (172.19.0.0/16), IPv6 pool (None), and Owner ID (307271657231).

Details Info			
VPC ID	State	DNS hostnames	DNS resolution
vpc-04e8e876ace674add	Available	Disabled	Enabled
Tenancy	DHCP options set	Route table	Network ACL
Default	dopt-fc17ed97	rtb-00e8935f58ffb64bf	acl-0091ab57cfbadc376
Default VPC	IPv4 CIDR	IPv6 pool	IPv6 CIDR
No	172.19.0.0/16	-	-
Owner ID	307271657231		

### Task 2: Create an Internet gateway

#### Ss2: igw with vpc associated

The screenshot shows the AWS Management Console interface. A green notification bar at the top states: "Internet gateway igw-0304f3cbb9d0a026a successfully attached to vpc-04e8e876ace674add". The main content area displays the details for the Internet gateway "igw-0304f3cbb9d0a026a / sahil-igw-1". The details are organized into a table with four columns: Internet gateway ID, State, VPC ID, and Owner. The Internet gateway ID is igw-0304f3cbb9d0a026a, the State is Attached, the VPC ID is vpc-04e8e876ace674add / sahil-vpc-1, and the Owner is 307271657231. Below the details table, there is a section for Tags with a search bar and a table showing a single tag with the key "Name" and the value "sahil-igw-1".

Details Info			
Internet gateway ID	State	VPC ID	Owner
igw-0304f3cbb9d0a026a	Attached	vpc-04e8e876ace674add   sahil-vpc-1	307271657231

Tags	
Key	Value
Name	sahil-igw-1

## Task3: Create a route table

### Ss3: route table with routes

Services

Sahil Mumbai Support

W VPC Experience

Dashboard

My VPC

Private

VPCs

Subnets

Route Tables

Internet Gateways

Options Sets

IPs

Prefix

Points

Point Services

Create route table

Actions

Filter by tags and attributes or search by keyword

1 to 3 of 3

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID
sahil-rt-1	rtb-00adcab42a0d8eaf3	-	-	No	vpc-04e8e876ace674add ...
	rtb-00e8935f58ffb64bf	-	-	Yes	vpc-04e8e876ace674add ...
	rtb-fc75a897	-	-	Yes	vpc-ecc1de84

Route Table: rtb-00adcab42a0d8eaf3

Summary

Routes

Subnet Associations

Edge Associations

Route Propagation

Tags

Edit routes

View

All routes

Destination	Target	Status	Propagated
172.19.0.0/16	local	active	No
0.0.0.0/0	igw-0304f3cbb9d0a026a	active	No

## Task4: Create a subnet

### Ss4: subnet screen

Services

Sahil Mumbai Support

W VPC Experience

Dashboard

My VPC

Private

VPCs

Subnets

Route Tables

Internet Gateways

Options Sets

IPs

Prefix

Points

Point Services

Create subnet

Actions

Filter by tags and attributes or search by keyword

1 to 4 of 4

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR
sahil-sn-1	subnet-00f14b1c1e85d1336	available	vpc-04e8e876ace674add ...	172.19.11.0/24	251	-
	subnet-31212559	available	vpc-ecc1de84	172.31.32.0/20	4091	-
	subnet-65384d29	available	vpc-ecc1de84	172.31.0.0/20	4091	-
	subnet-df1ea2a4	available	vpc-ecc1de84	172.31.16.0/20	4091	-

Subnet: subnet-00f14b1c1e85d1336

Description

Flow Logs

Route Table

Network ACL

Tags

Sharing

Subnet ID

VPC

Available IPv4 Addresses

Availability Zone

Network ACL

Auto-assign public IPv4 address

Customer-owned IPv4 pool

Outpost ID

State

IPv4 CIDR

IPv6 CIDR

Route Table

Default subnet

Auto-assign customer-owned IPv4 address

Auto-assign IPv6 address

Owner

subnet-00f14b1c1e85d1336

vpc-04e8e876ace674add | sahil-vpc-1

251

ap-south-1b (aps1-az3)

acl-0091ab57cfbac376

No

-

-

available

172.19.11.0/24

-

rtb-00e8935f58ffb64bf

No

No

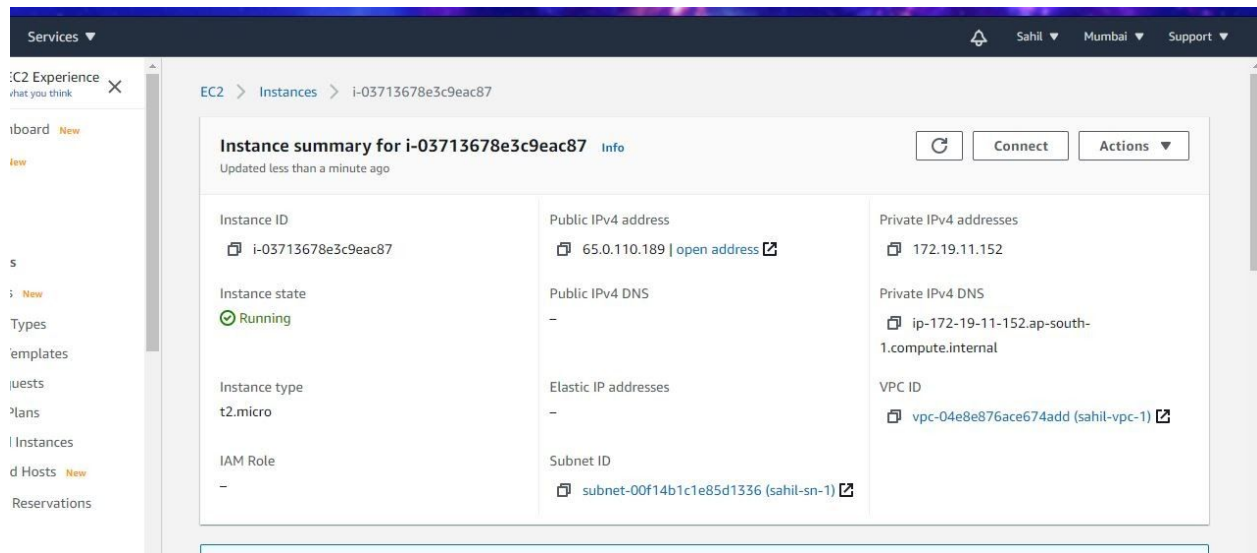
No

307271657231



## Task5: Create an EC2 in custom vpc

### Ss5: ec2 dashboard



## Task 6: Check ipconfig in VM command prompt

### Ss6: cmd prompt: ipconfig

