

AWS VPC Task

STEP 1 : Go to VPC console and create a VPC.

The screenshot shows two consecutive screenshots of the AWS VPC Console interface.

Screenshot 1: AWS VPC Dashboard

The dashboard provides an overview of Amazon VPC resources in the US East region:

- VPCs:** 1 (See all regions)
- NAT Gateways:** 0 (See all regions)
- Subnets:** 6 (See all regions)
- VPC Peering Connections:** 0 (See all regions)
- Route Tables:** 1 (See all regions)
- Network ACLs:** 1 (See all regions)
- Internet Gateways:** 1 (See all regions)
- Security Groups:** 1 (See all regions)
- Egress-only Internet Gateways:** 0 (See all regions)
- Customer Gateways:** 0 (See all regions)

Service Health: View complete service health details

Settings: Zones, Console Experiments

Additional Information: VPC Documentation, All VPC Resources, Forums, Report an Issue

AWS Network Manager: Provides tools and features to help you manage and monitor your network on AWS. Network Manager makes it easier to perform connectivity management, network monitoring and troubleshooting, IP management, and network security and governance.

Screenshot 2: Create VPC Wizard - Step 1: VPC settings

The wizard is titled "Create VPC" and shows the "VPC settings" step. It includes the following fields:

- Resources to create:** Info (radio button selected for "VPC only")
- Name tag - optional:** my_vpc_task
- IPv4 CIDR block:** Info (radio button selected for "IPv4 CIDR manual input")
Input field: 10.0.0.0/16

At the bottom, a note states: "CIDR block size must be between /16 and /28."

IPv6 CIDR block **Info**

- No IPv6 CIDR block
- IPAM-allocated IPv6 CIDR block
- Amazon-provided IPv6 CIDR block
- IPv6 CIDR owned by me

Tenancy **Info**

Default

Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional
Name	my_vpc_task

Add tag

You can add 49 more tags

Create VPC

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
-	vpc-03a640e2c83caab42	Available	172.31.0.0/16	-
my_vpc_task	vpc-0294a19eb99e23cc2	Available	10.0.0.0/16	-

Select a VPC above

STEP 2 : Create 2 Subnets (Public and Private)

The screenshot shows the 'Create subnet' page in the AWS VPC console. The 'VPC ID' dropdown is set to 'vpc-0294a19eb9e23cc2 (my_vpc_task)'. The 'Associated VPC CIDRs' section shows 'IPv4 CIDRs' as '10.0.0.0/16'. The 'Subnet settings' section is expanded, showing 'Subnet 1 of 1' with a 'Subnet name' of 'my-public-subnet', 'Availability Zone' as 'US East (N. Virginia) / us-east-1a', and 'IPv4 VPC CIDR block' as '10.0.0.0/16'. The 'IPv4 subnet CIDR block' dropdown is set to '10.0.0.0/24'. A 'Tags - optional' section is present at the bottom.

This screenshot shows the same 'Create subnet' page with more detailed configuration. The 'Subnet name' is 'my-public-subnet'. The 'Availability Zone' is 'US East (N. Virginia) / us-east-1a'. The 'IPv4 VPC CIDR block' is '10.0.0.0/16'. The 'IPv4 subnet CIDR block' is '10.0.0.0/24'. The 'Tags - optional' section includes a key 'Key' and a value 'Value - optional' field. The AWS navigation bar at the top includes 'CloudShell' and 'Feedback'.

Subnet 2 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

IPv4 subnet CIDR block
 256 IPs

Tags - optional

Key	Value - optional
CloudShell	Feedback

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CloudShell Feedback Type here to search 26°C Sunny ENG 11:14 AM IN 3/7/2024

You have successfully created 2 subnets: subnet-08196c3c9e24648c4, subnet-06dab6667f7d81078

Subnets (2) [Info](#)

Name	Subnet ID	State	VPC
my-public-subnet	subnet-08196c3c9e24648c4	Available	vpc-0294a19eb99e23cc2
my-private-subnet	subnet-06dab6667f7d81078	Available	vpc-0294a19eb99e23cc2

Select a subnet

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CloudShell Feedback Type here to search 26°C Sunny ENG 11:14 AM IN 3/7/2024

STEP : Create a Internet Gateway and attach it to your VPC

Screenshot of the AWS VPC console showing the 'Create internet gateway' wizard.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.

Tags - optional
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="my-ig"/>

Add new tag
You can add 49 more tags.

Create internet gateway

Screenshot of the AWS VPC console showing the list of Internet Gateways.

Internet gateways (1/2)

Name	Internet gateway ID	State	Actions
-	igw-0041bb3fd2abee31	Attached	View details
<input checked="" type="checkbox"/> my-ig	igw-006c5e6cd4435db11	Detached	Attach to VPC

igw-006c5e6cd4435db11 / my-ig

Details

Internet gateway ID	State	VPC ID	Owner
igw-006c5e6cd4435db11	Detached	-	730355498488

The screenshot shows the AWS VPC console with the URL <https://us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#AttachInternetGateway:internetGateways>. The page title is "Attach to VPC (igw-006c5e6cd4435db11)". The main content area is titled "VPC" and contains the instruction: "Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below." A search bar shows the query "Q vpc-0294a19eb99e23cc2". Below the search bar is a link "▶ AWS Command Line Interface command". At the bottom right of the dialog are two buttons: "Cancel" and "Attach internet gateway" (highlighted in orange).

STEP : Create Route-table and edit explicit subnet association and add a public subnet

The screenshot shows the AWS VPC console with the URL <https://us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#CreateRouteTable>. The page title is "Create route table". The main content area is titled "Route table settings" and contains a "Name - optional" field with the value "my-rt" and a "VPC" dropdown menu set to "vpc-0294a19eb99e23cc2 (my_vpc_task)". Below this is a "Tags" section with a single tag "Name: my-rt". At the bottom right of the dialog are two buttons: "Cancel" and "Create route table" (highlighted in orange). The status bar at the bottom indicates "CloudShell Feedback" and the date "3/7/2024".

You have successfully updated subnet associations for rtb-098793957af6d18bc / my-rt.

Route tables (1/1) Info

Name	Route table ID	Explicit subnet assoc...	Edge associations	Main
my-rt	rtb-098793957af6d18bc	subnet-08196c3c9e2464...	-	No

Explicit subnet associations (1)

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
my-public-subnet	subnet-08196c3c9e24648c4	10.0.0.0/24	-

Subnets without explicit associations (1)

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

Find subnet association
Q Find subnet association

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STEP : Edit the routes of your Route-table

You have successfully updated subnet associations for rtb-098793957af6d18bc / my-rt.

Route tables (1/1) Info

Name	Route table ID	Explicit subnet assoc...	Edge associations	Main
my-rt	rtb-098793957af6d18bc	subnet-08196c3c9e2464...	-	No

rtb-098793957af6d18bc / my-rt

Details | **Routes** | Subnet associations | Edge associations | Route propagation | Tags

Routes (1)

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

Both | Edit routes

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The screenshot shows the 'Edit routes' page for a specific route table. A new route is being added with the following details:

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway	-	No
	igw-	-	-
	Use: "igw-"	-	-
	igw-006c5e6cd4435db11 (my-ig)	-	-

Buttons at the bottom include 'Cancel', 'Preview', and 'Save changes'.

The screenshot shows the 'Route tables (1/1) Info' page. A single route table named 'my-rt' is listed. The table ID is 'rtb-098793957af6d18bc'. The subnet association is 'subnet-08196c5c9e2464...'. The edge association is 'Main'. The propagation status is 'No'.

Below the table, the 'rtb-098793957af6d18bc / my-rt' section shows the 'Routes (2)' tab selected. It lists two routes:

Destination	Target	Status	Propagated
0.0.0.0/0	igw-006c5e6cd4435db11	Active	No
10.0.0.0/16	local	Active	No

STEP : Create a EC2 Instance and attached the Created VPC to it.

Name and tags

Name: my-instance01

Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Quick Start

Amazon Machine Image (AMI)

CloudShell Feedback

Summary

Number of instances: 1

Software Image (AMI): Amazon Linux 2023.3.2...read more
ami-0f403e5180720d7e

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance

Launch instance

Key pair (login)

Key pair name - required: my-key

Network settings

VPC - required

vpc-0294a19eb99e23cc2 (my_vpc_task)
10.0.0.0/16

Subnet

subnet-08196c3c9e2464b4
my-public-subnet
VPC: vpc-0294a19eb99e23cc2 Owner: 730355498488 Availability Zone: us-east-1a IP addresses available: 251 CIDR: 10.0.0.0/24

Create new subnet

Auto-assign public IP

Enable

Firewall (security groups)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Summary

Number of instances: 1

Software Image (AMI): Amazon Linux 2023.3.2...read more
ami-0f403e5180720d7e

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance

Launch instance

The screenshot shows the 'Create security group' wizard in the AWS Management Console. The 'Summary' step is displayed, showing a single instance and the selected Amazon Linux 2023 AMI. The 'Virtual server type (instance type)' is set to t2.micro. A tooltip for the 'Free tier' is visible, stating: 'Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of'. The 'Launch instance' button is highlighted.

The screenshot shows the 'Instances (1) Info' page in the AWS Management Console. It displays a single instance named 'my-instance01' with Instance ID 'i-08f5118b0dbf378f0', currently running and assigned to the t2.micro instance type. The status is 'Initializing'. The left sidebar shows the 'Instances' section under 'Console-to-Code Preview'.

STEP : Connect to the VPC

```

        .
        .
        .
        /`-- Amazon Linux 2023
        .`-- https://aws.amazon.com/linux/amazon-linux-2023
        .
        .
        .
        [ec2-user@ip-10-0-0-130 ~]$
    
```

i-08f5118b0dbf378f0 (my-instance01)
PublicIPs: 100.24.41.223 PrivateIPs: 10.0.0.130

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STEP : Install the Httpd in your instance.

```

● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)
   Active: active (running) since Thu 2024-03-07 06:25:01 UTC; 35min ago
     Docs: man:httpd.service(8)
 Main PID: 26019 (httpd)
   Status: "Total requests: 4; Idle/Busy workers 100/0;Requests/sec: 0.00187; Bytes served/sec: 1 B/sec"
      Tasks: 230 (limit: 1114)
     Memory: 16.8M
        CPU: 1.786s
       CGroup: /system.slice/httpd.service
               ├─26019 /usr/sbin/httpd -DFOREGROUND
               ├─26033 /usr/sbin/httpd -DFOREGROUND
               ├─26034 /usr/sbin/httpd -DFOREGROUND
               ├─26035 /usr/sbin/httpd -DFOREGROUND
               └─26036 /usr/sbin/httpd -DFOREGROUND
               27263 /usr/sbin/httpd -DFOREGROUND

Mar 07 06:25:01 ip-10-0-0-130.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
lines 1-18
    
```

i-08f5118b0dbf378f0 (my-instance01)
PublicIPs: 100.24.41.223 PrivateIPs: 10.0.0.130

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STEP : Transfer the html file from local machine to remote machine

```
Windows PowerShell
Windows PowerShell
copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Sanket.Ugale> pwd
Path
-----
C:\Users\Sanket.Ugale

PS C:\Users\Sanket.Ugale> scp -i .\Downloads\my-key.pem .\Downloads\index2.html ec2-user@100.24.41.223:/var/www/html/
The authenticity of host '100.24.41.223 (100.24.41.223)' can't be established.
ECDSA key fingerprint is SHA256:wLZgp5R/mr47xav0tj9XXvTsmt/LX8ROU1?yeYI9c.
Are you sure you want to continue connecting (yes/no/[fingerprint])?
Warning: Permanently added '100.24.41.223' (ECDSA) to the list of known hosts.
index2.html                                              100% 1175      3.6KB/s   00:00
PS C:\Users\Sanket.Ugale>
```

The screenshot shows a browser window with multiple tabs open, including ChatGPT, Agile MBP in, Launch AWS, Instances | EC2, My Profile, and Introduction. The main content area is a CloudShell session for an EC2 instance. The session title is "aws Services". The user has run the command `ls` in the terminal, which lists the contents of the current directory as follows:

```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
```

Below the terminal output, the user's last login information is displayed:

Last login: Thu Mar 7 06:58:49 2024 from 18.206.107.29

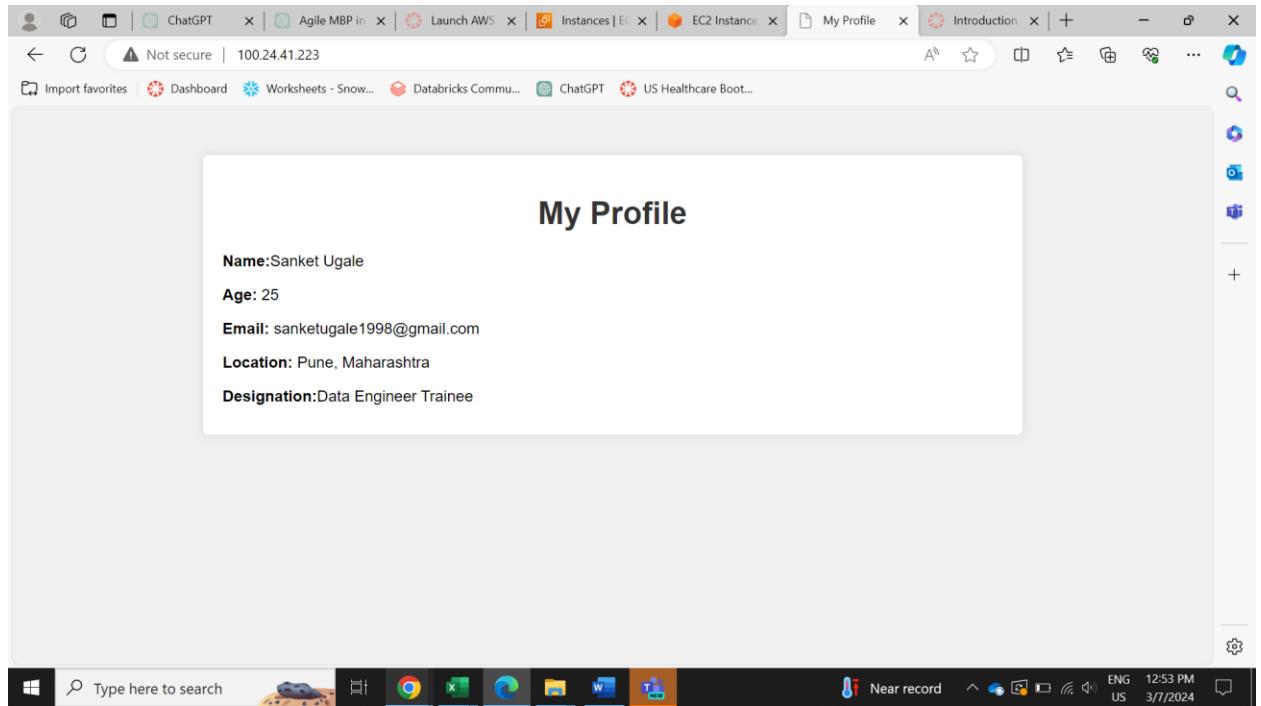
Terminal history:

```
[ec2-user@ip-10-0-0-130 ~]$ sudo su
[root@ip-10-0-0-130 ec2-user]# cd /var/www/html/
[root@ip-10-0-0-130 html]# ls
index2.html
[root@ip-10-0-0-130 html]# mv index2.html index.html
[root@ip-10-0-0-130 html]# ls
index.html
[root@ip-10-0-0-130 html]# 
```

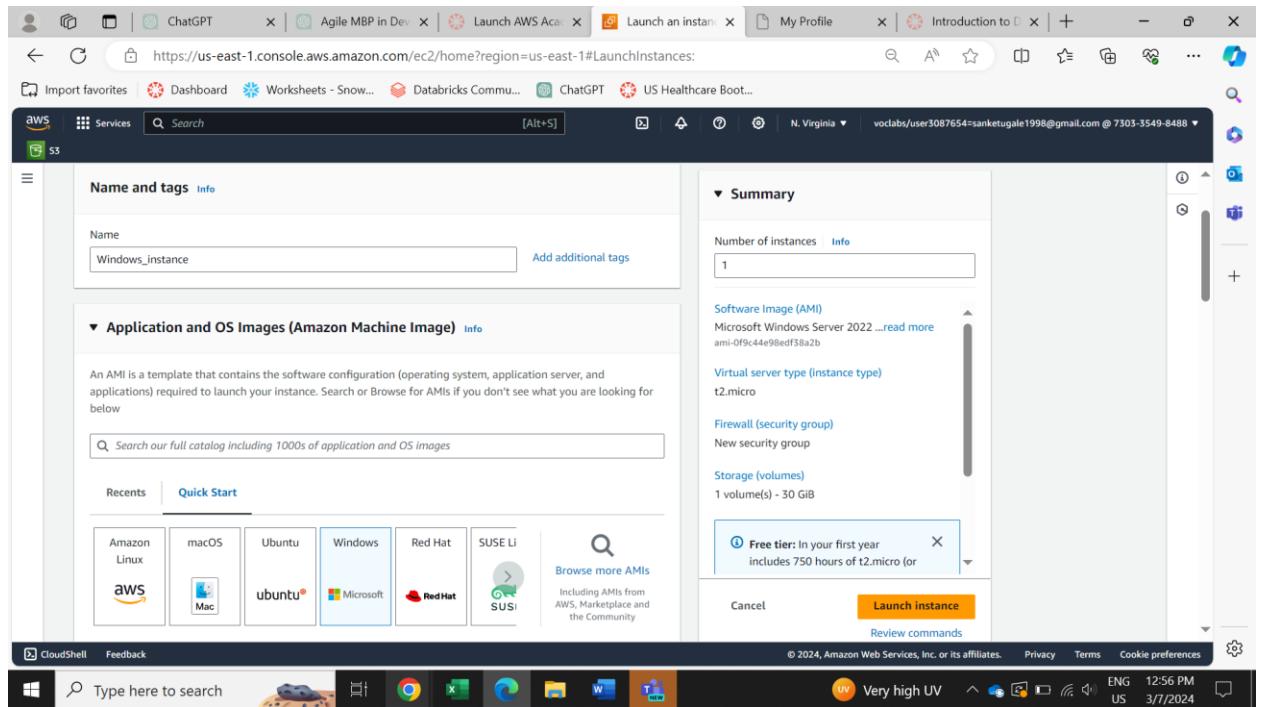
At the bottom of the session, the instance ID and public/private IP addresses are shown:

i-08f5118b0dbf378f0 (my-instance01)

Public IPs: 100.24.41.223 Private IPs: 10.0.0.130



STEP : Creating New instance with windows machine AMI



You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

my-key

Create new key pair

VPC - required

vpc-0294a19eb99e23cc2 (my_vpc_task)

Subnet

subnet-08196c3c9e24648c4

my-public-subnet

Auto-assign public IP

Enable

Summary

Number of instances

1

Software Image (AMI)

Microsoft Windows Server 2022

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 GiB

Free tier: In your first year includes 750 hours of t2.micro (or

Launch instance

launch-wizard-2 created 2024-03-07T07:29:45.706Z

Inbound Security Group Rules

Security group rule 1 (TCP, 3389, 0.0.0.0/0)

Type: rdp

Protocol: TCP

Port range: 3389

Source type: Anywhere

Description - optional: e.g. SSH for admin desktop

Security group rule 2 (TCP, 80, 0.0.0.0/0)

Type: HTTP

Protocol: TCP

Port range: 80

Source type: Anywhere

Description - optional: e.g. SSH for admin desktop

Security group rule 3 (TCP, 22)

Type:

Protocol:

Port range:

Source type:

Description - optional:

Summary

Number of instances

1

Software Image (AMI)

Microsoft Windows Server 2022

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 GiB

Free tier: In your first year includes 750 hours of t2.micro (or

Launch instance

The screenshot shows the AWS Management Console with the EC2 service selected. The left sidebar has 'Instances' expanded, showing 'Instances' and 'Launch Templates'. The main pane displays a table of instances:

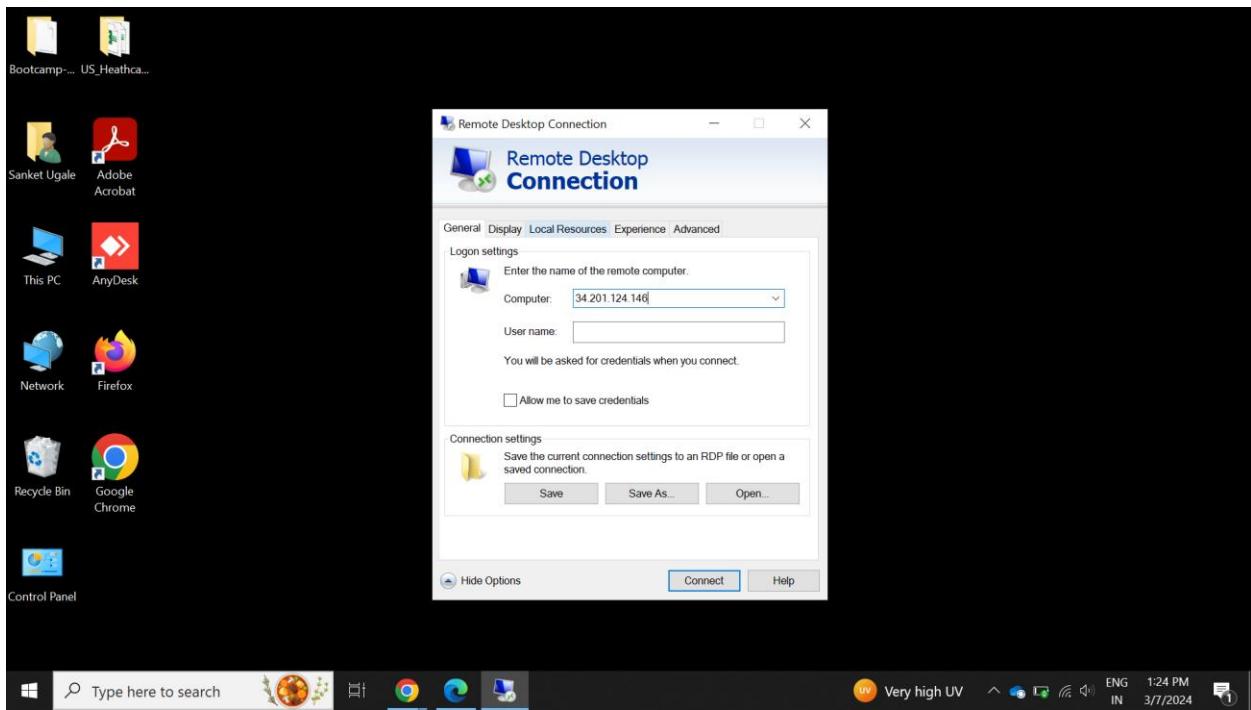
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
my-instance01	i-08f5118b0dbf378f0	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	-
window-instance	i-0170a91985d1fdb2	Running	t2.micro	-	View alarms	us-east-1a	-

Below the table, a modal window is open for the instance with the ID i-0170a91985d1fdb2, titled 'Instance: i-0170a91985d1fdb2 (window-instance)'. It contains tabs for 'Details', 'Status and alarms', 'Monitoring', 'Security', 'Networking', 'Storage', and 'Tags'. The 'Details' tab is selected.

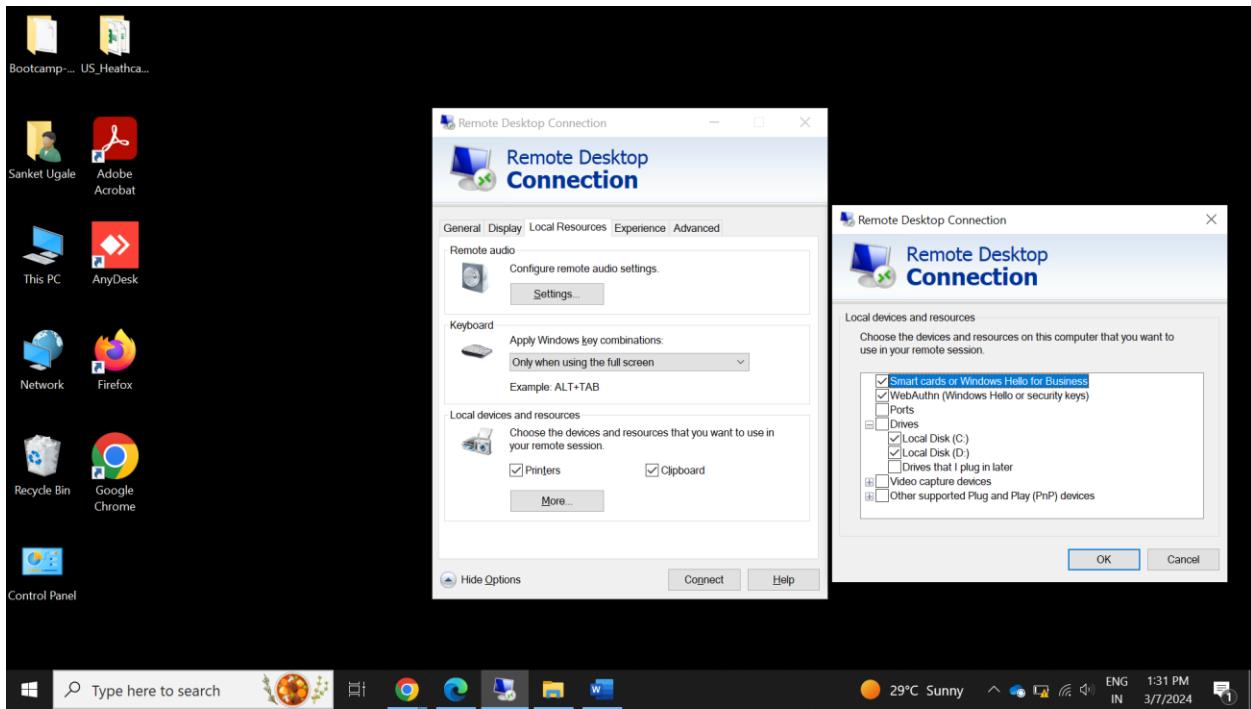
STEP : Connect to the EC2 with RDP Client AND Download the remote Desktop File.

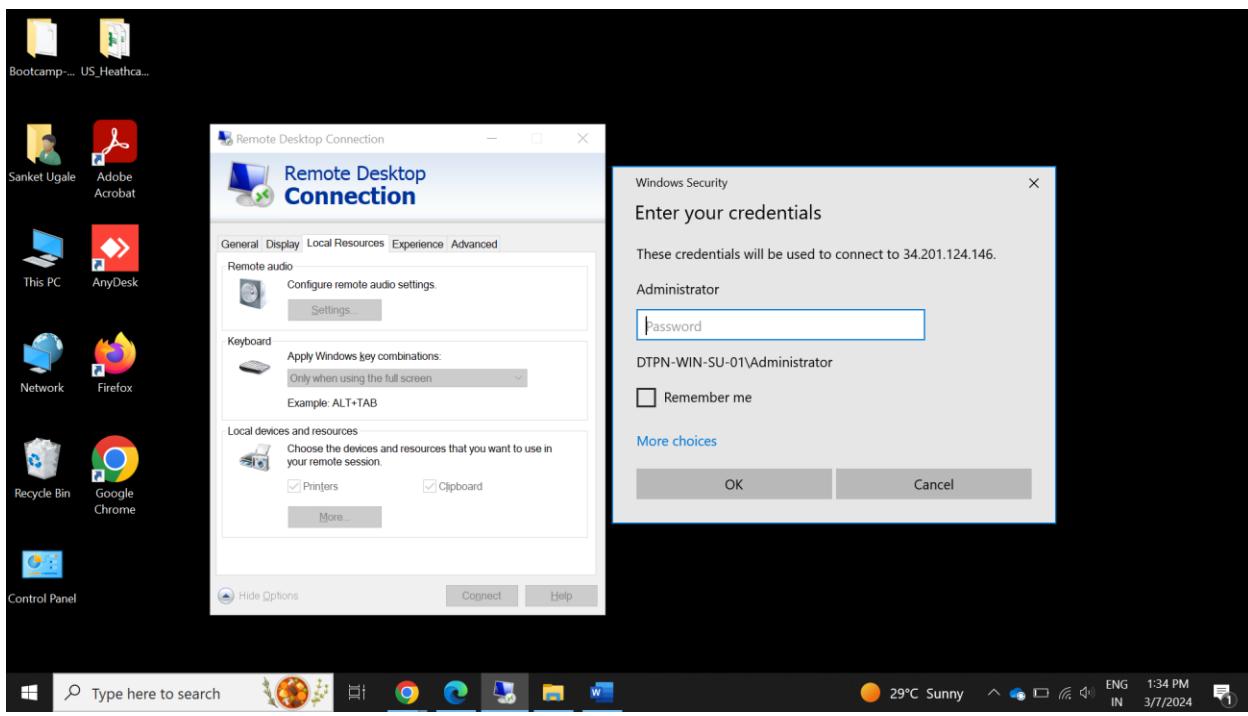
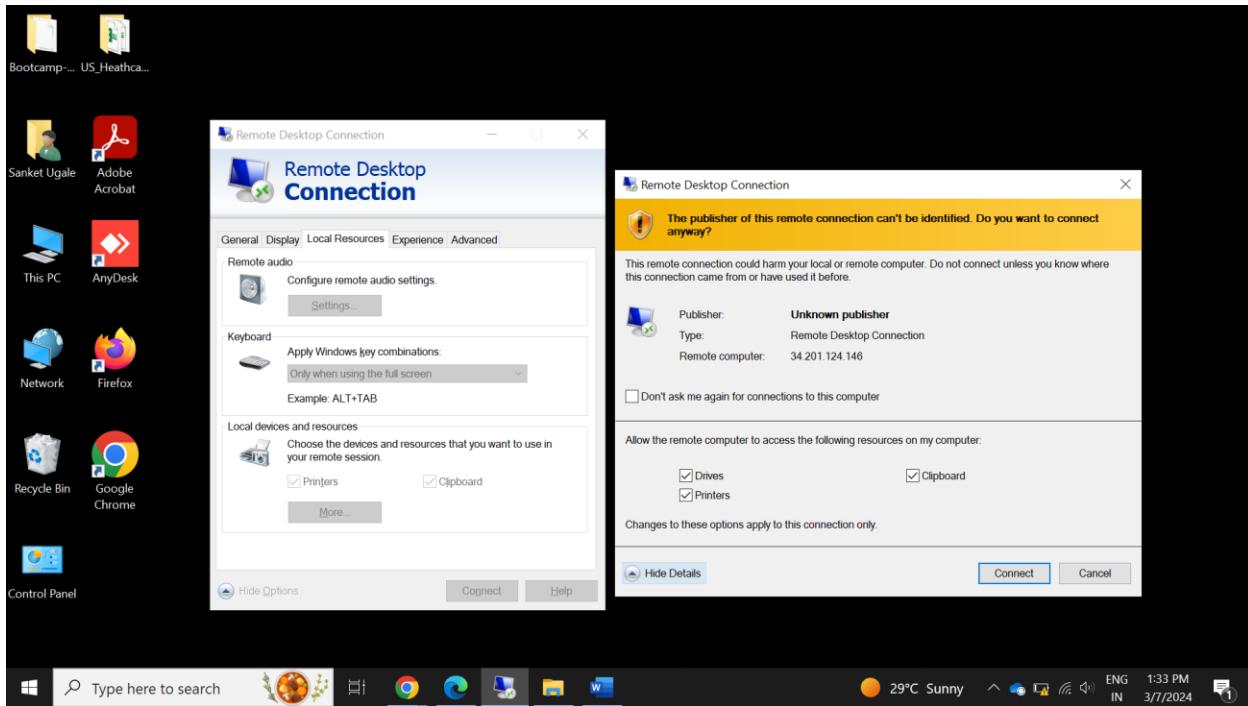
The screenshot shows the 'Connect to instance' page for the instance with ID i-0170a91985d1fdb2. The top navigation bar includes 'Session Manager', 'RDP client' (which is selected), and 'EC2 serial console'. The 'Connection Type' section shows two options: 'Connect using RDP client' (selected) and 'Connect using Fleet Manager'. Below this, instructions say you can connect using a remote desktop client or download an RDP file. A 'Download remote desktop file' button is present. At the bottom, it asks for a username, with 'Administrator' selected from a dropdown. The footer includes standard AWS links and a date/time stamp.

STEP : Opening Remote Desktop Connection on local machine and in connection settings open file where RDP file is downloaded



STEP : Then going on local resources, click on more and give access to drive where your html file is located





Get Windows password [info](#)

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID: i-0170a91985d1fdab2 (window-instance)

Key pair associated with this instance: my-key

Private key: Either upload your private key file or copy and paste its contents into the field below.

[test_key.pem](#) 1.674KB

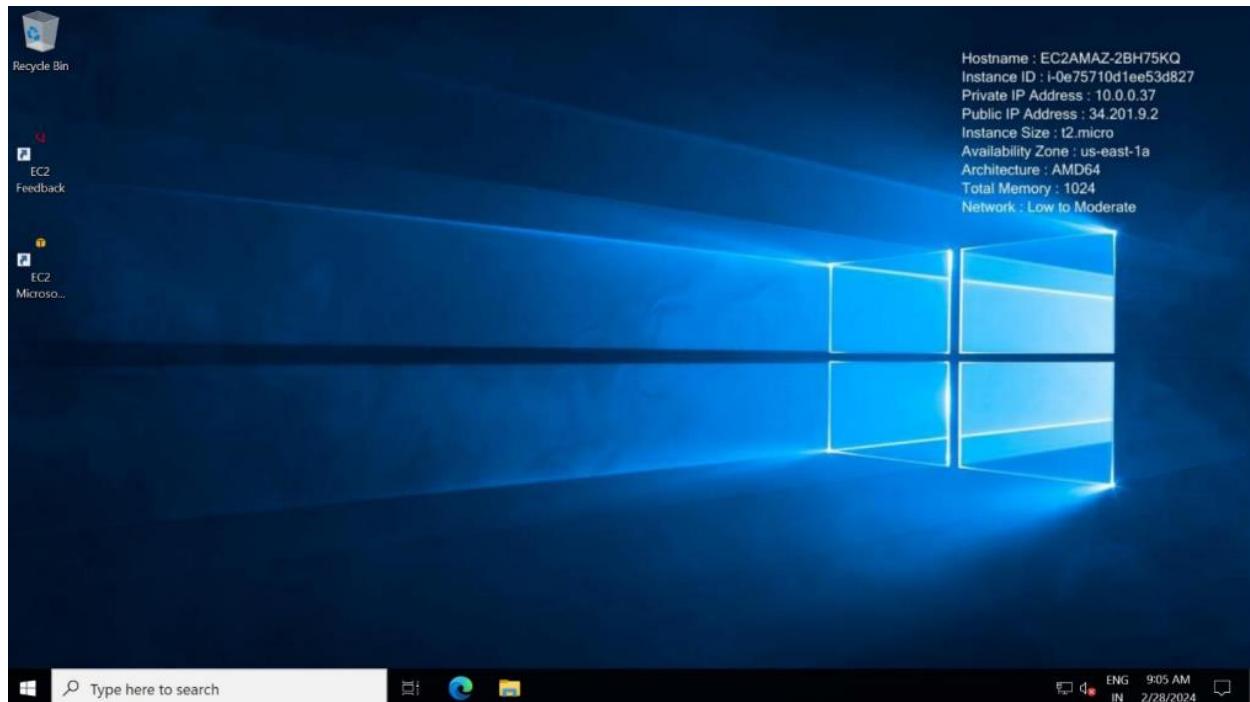
Private key contents - optional:

```
-----BEGIN RSA PRIVATE KEY-----
MIIEogIBAAKCAQEAvPBDQ(9)uQ0LvfpOeOcxKIElb5FF4llqJlE6ZAI2KBue
adWjje43za653/785ZtSqpKV03y/ED3DNgfPjSLyACs/S9rkApJC1AjlzL20m
xeMsAhY/mkzb0Lu/2SP2gMjPhZBMAm8FjaGv8hcw1q5/abDb7zFz5FSVvArHN5
/QrCsEDj6H6X7p2fRONlqWn/FznTWYy4fcmbmOzuXBau+7n0G6gvw1ao2vxx134
BFQYMuGu7Y1juYN7pH3IA2ZuVcfWaZW1BkR83r7/3jPQlnjryDkGipeCgY29Yz-
wZVJB8pm6s7xeT95XUTokdYarRG5o09GFjQDAOABAoIBAGRQtj951Tv8
uEn0mHe/+m2Y/PUEF5ckmkErZVdACJg10GaLE8W80ofieEwPGEvxxLyX1djvtYo
```

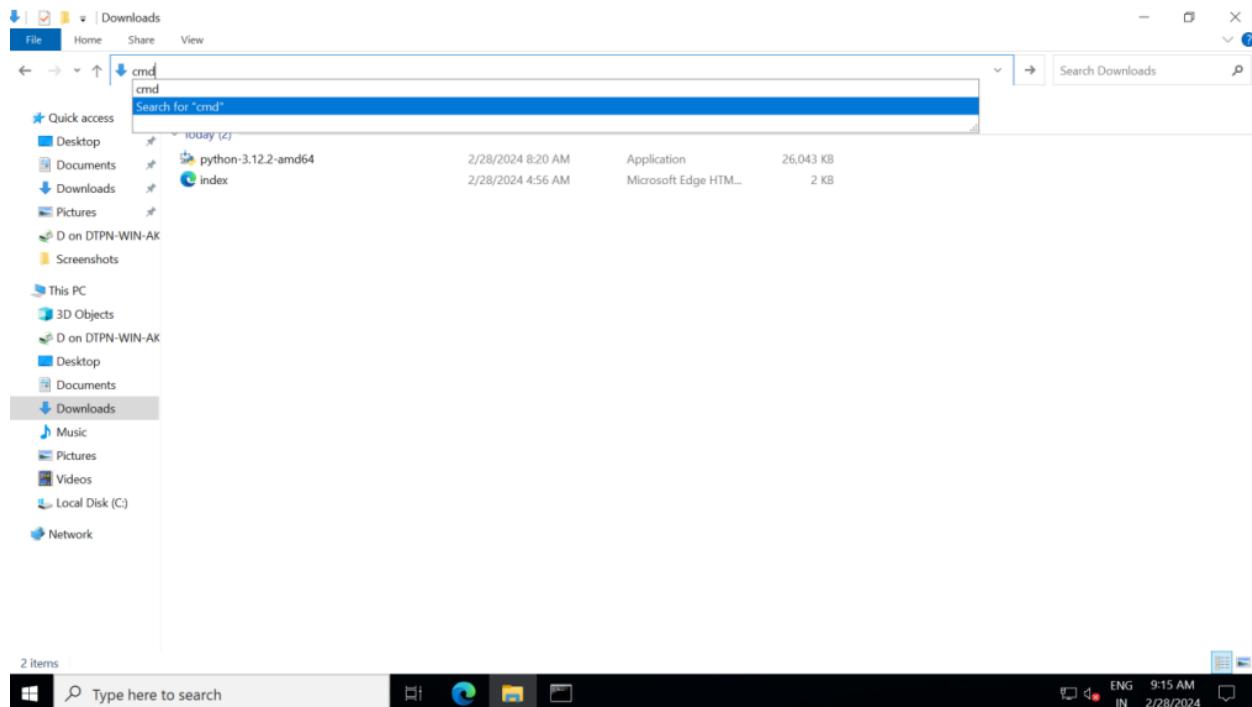
Cancel

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Connecting Windows AMI:-



Download python in EC2 machine and open cmd where html file is located:-



```
Administrator: C:\Windows\System32\cmd.exe - python -m http.server
Microsoft Windows [Version 10.0.20348.2922]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator\Downloads>python --version
Python 3.12.2

C:\Users\Administrator\Downloads>python -m http.server
Serving HTTP on :: port 8000 (http://[::]:8000/) ...
```

Type here to search

9:09 AM
ENG IN 2/28/2024

My Profile

Name: Sanket Ugale
Age: 25
Email: sanketugale1998@gmail.com
Location: Pune, Maharashtra
Designation: Data Engineer Trainee

Not secure | 100.24.41.223

Import favorites | Dashboard | Worksheets - Snow... | Databricks Commu... | ChatGPT | US Healthcare Boot...

Type here to search

ENG 12:53 PM
US 3/7/2024