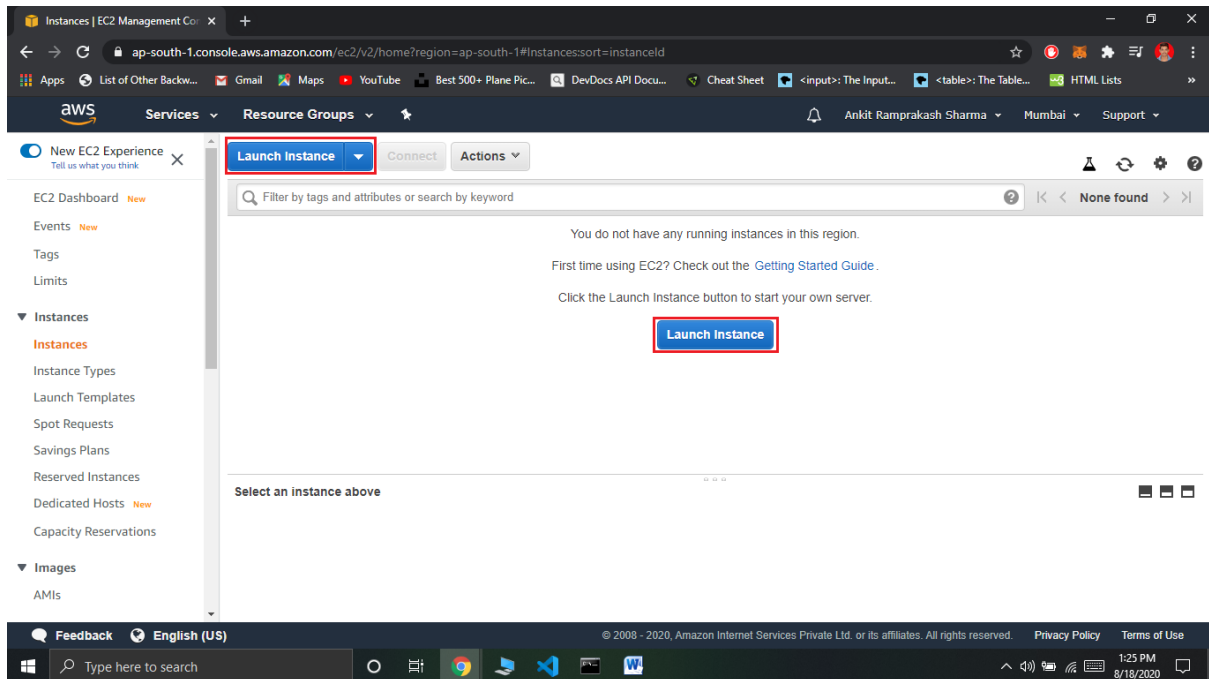


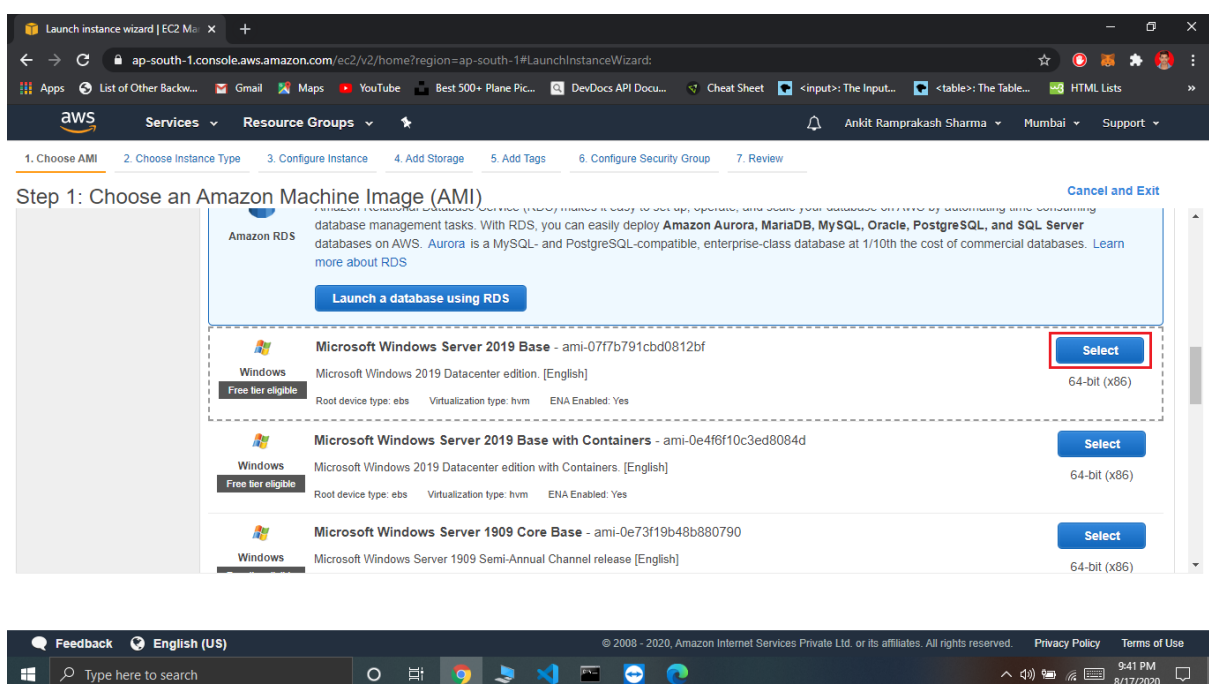
Project 1:

Deploying a Web Server in Windows Instance:

Step 1: Login to your AWS Console -> Go to Services -> Select EC2 -> In EC2 Dashboard select Instances -> Click on Launch Instance.



Step 2: Starting with EC2 (Elastic Compute Cloud) and launching a new instance Choose an AMI -> MS Windows Server 2019 Base OS under Free Tier Section.



Step 3: Choose an Instance type which should be free tier eligible -> Select t2 micro and then click, Next: Configure Instance Details.

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

Step 4: Configure Instance Details -> No. of instance = 1, Auto-assign Public IP = Enable -> Click Next: Add Storage.

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1 Launch into Auto Scaling group

Purchasing option: ☐ Request Spot instances

Network: vpc-5100e43a (default) Create new VPC

Subnet: No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP: Use subnet setting (Enable)

Placement group: ☐ Add instance to placement group

Capacity Reservation: Open

Domain join directory: No directory Create new directory

IAM role: None Create new IAM role

Cancel Previous Review and Launch Next: Add Storage

Step 5: Let everything be default in Add Storage.

Delete on Termination must be selected. -> Click Next: Add Tags.

The screenshot shows the 'Add Storage' step of the AWS Launch Instance Wizard. The wizard is at the URL `ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard`. The progress bar indicates steps 1 through 7, with '4. Add Storage' currently selected. The main content area shows the configuration for the root volume. A table lists the volume details:

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/sda1	snap-0e8cded59551e93cb	30	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

Below the table is an 'Add New Volume' button. 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 'Next: Add Tags' button is highlighted with a red box.

Step 6: Enter any name you want for your instance in Add Tags. -> Click Next: Configure Security Group.

The screenshot shows the 'Add Tags' step of the AWS Launch Instance Wizard. The wizard is at the same URL as the previous step. The progress bar now highlights '5. Add Tags'. The main content area explains that a tag consists of a case-sensitive key-value pair and provides a link to learn more about tagging EC2 resources.

Below the text is a table for adding tags:

Key (128 characters maximum)	Value (256 characters maximum)	Instances	Volumes
Name	Windows	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Below the table is an 'Add another tag' button with the text '(Up to 50 tags maximum)'. At the bottom right, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Configure Security Group'. The 'Next: Configure Security Group' button is highlighted with a red box.

Step 7: In Configure Security Group -> Create a new security group ->

Select Type = All Traffic and Source = Anywhere. -> Click Next: Review and launch.

Launch instance wizard | EC2 M... X +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

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 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: launch-wizard-1

Description: launch-wizard-1 created 2020-08-17T21:39:48.915+05:30

Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Anywhere	e.g. SSH for Admin Desktop

Add Rule

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.

Cancel Previous **Review and Launch**

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Type here to search

9:45 PM 8/17/2020

Step 8: Review all steps -> Click Launch.

Launch instance wizard | EC2 M... X +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

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 7: Review Instance Launch

AMI Details [Edit AMI](#)

Microsoft Windows Server 2019 Base - ami-07f7b791cbd0812bf

Free tier eligible Microsoft Windows 2019 Datacenter edition. [English]
Root Device Type: ebs Virtualization type: hvm

If you plan to use this AMI for an application that benefits from Microsoft License Mobility, fill out the [License Mobility Form](#). Don't show me this again

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups [Edit security groups](#)

Security group name: launch-wizard-1
Description: launch-wizard-1 created 2020-08-17T21:39:48.915+05:30

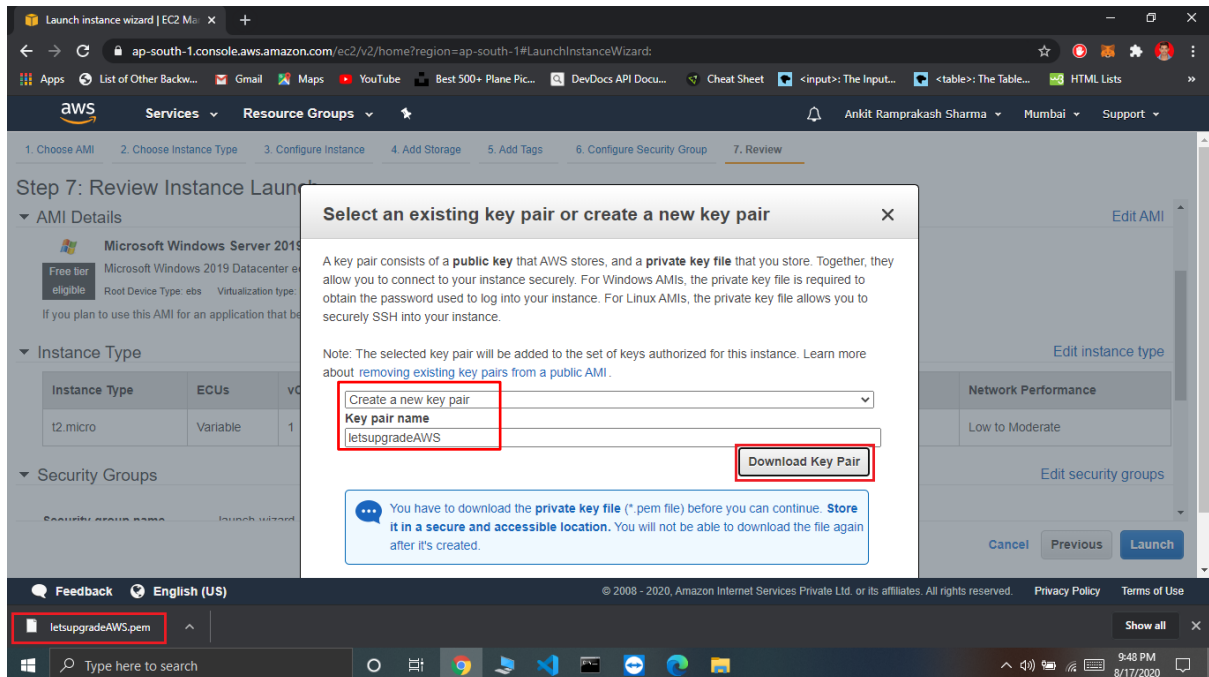
Cancel Previous **Launch**

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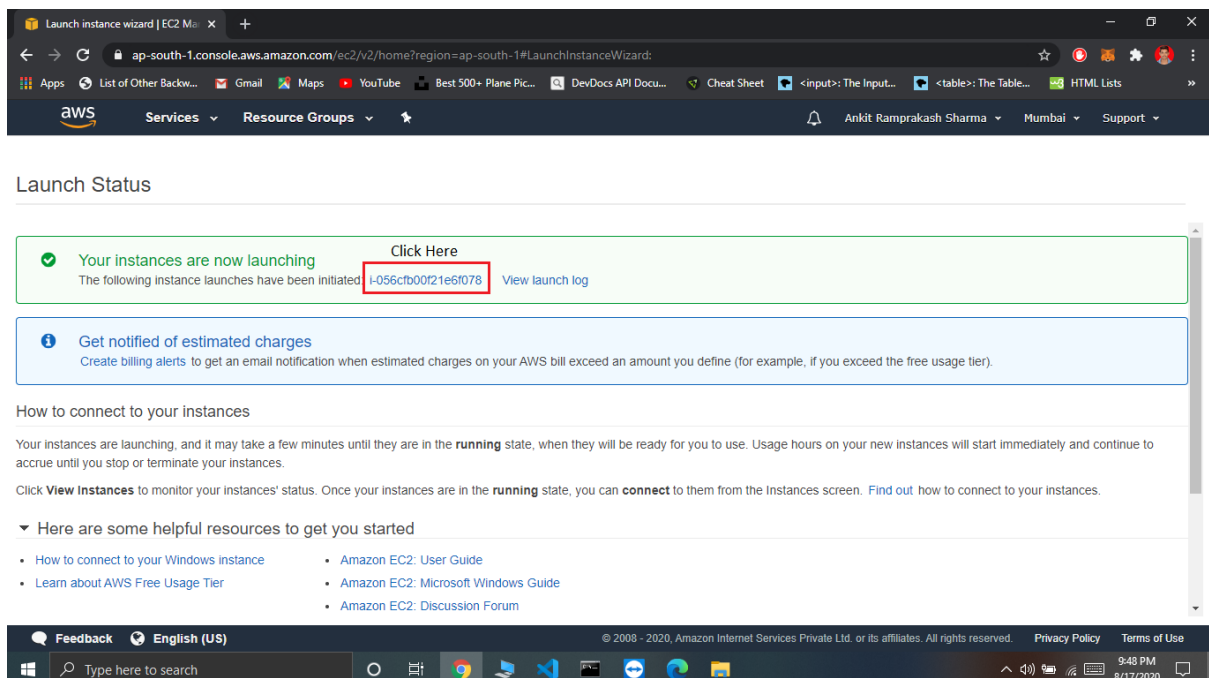
Type here to search

9:45 PM 8/17/2020

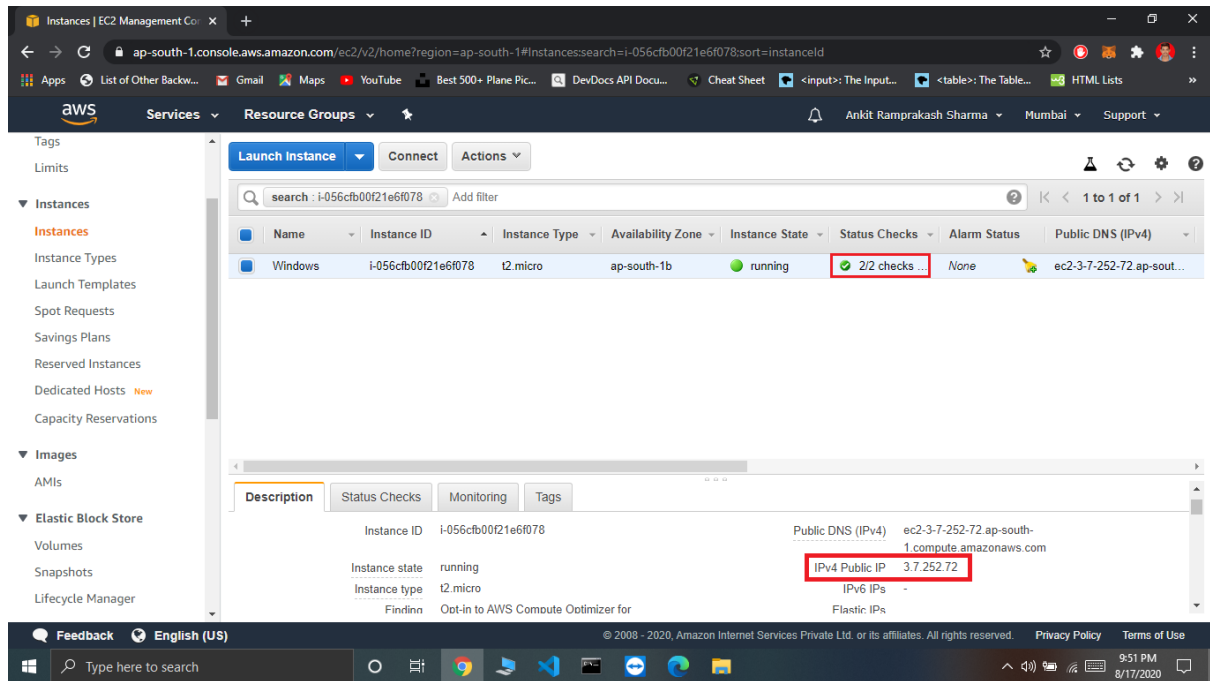
Step 9: After launching create a new key pair and give it a name for authenticity of instance -> Click on Download Key Pair. -> Click Launch Instance.



Step 10: Instance is created. -> Click on instance id which will redirect you to EC2 instances list.



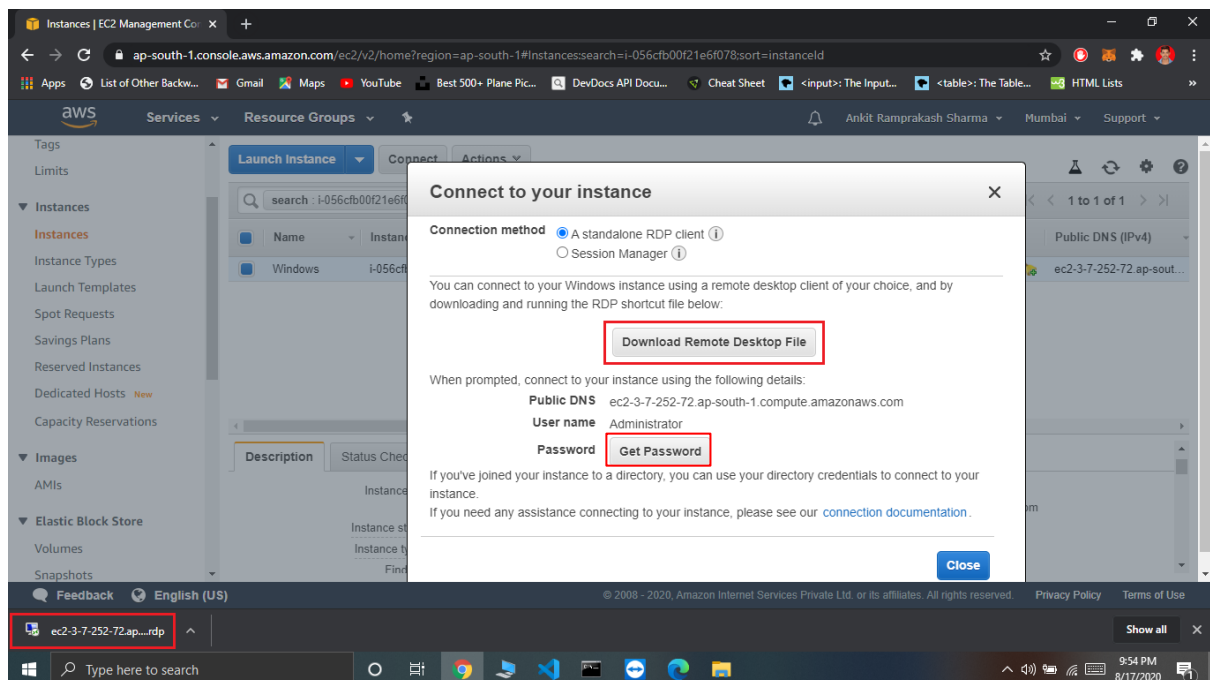
Step 11: Wait till the status checks are done.



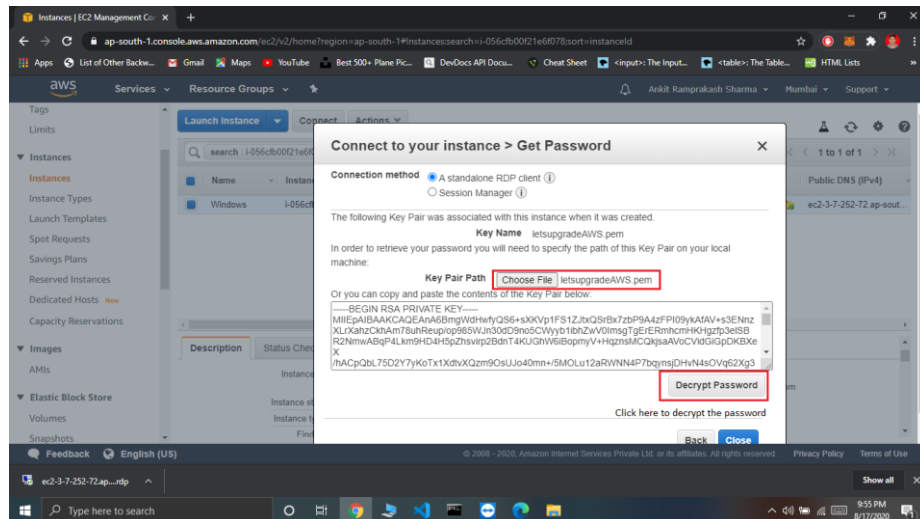
Step 12: After Status Check are done go to -> **Actions** -> **Connect**.

To connect and launch your web server.

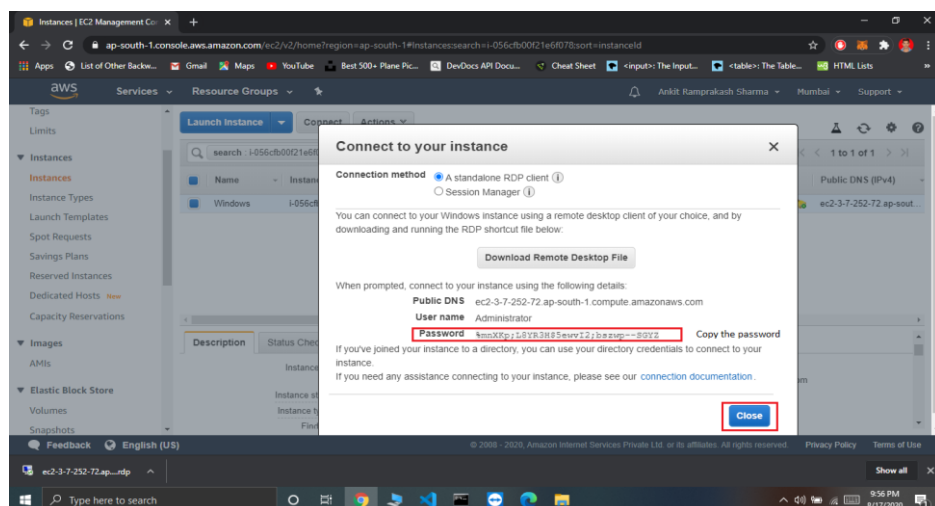
Step 13: Download Remote Desktop File -> Click on Get Password.



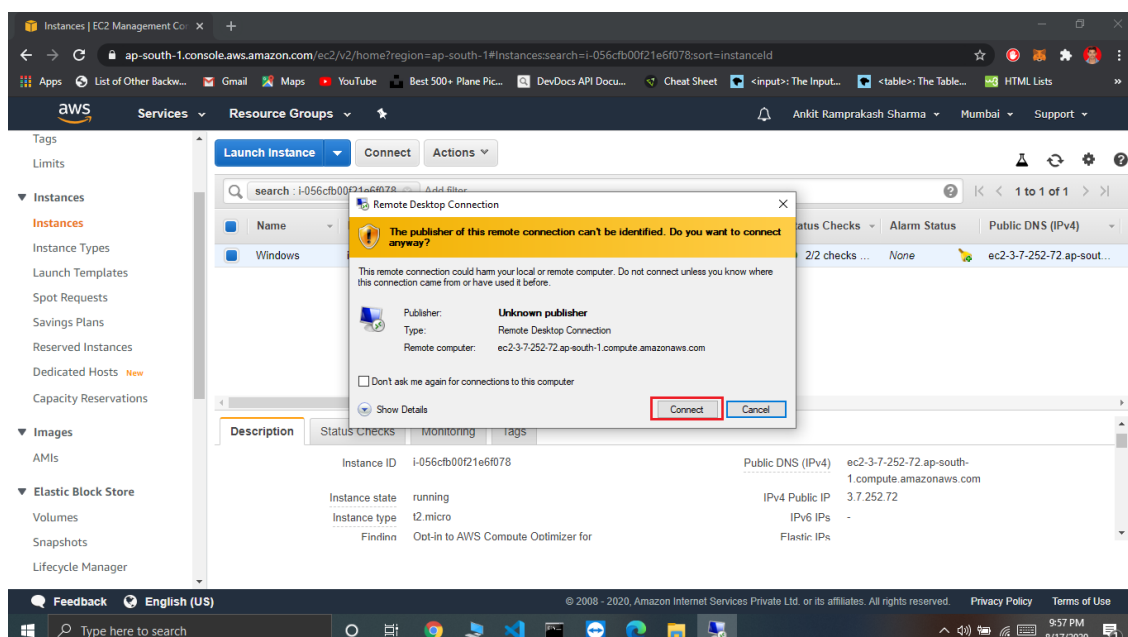
Step 14: Choose your .pem file which was downloaded in Step 9. -> Decrypt it.



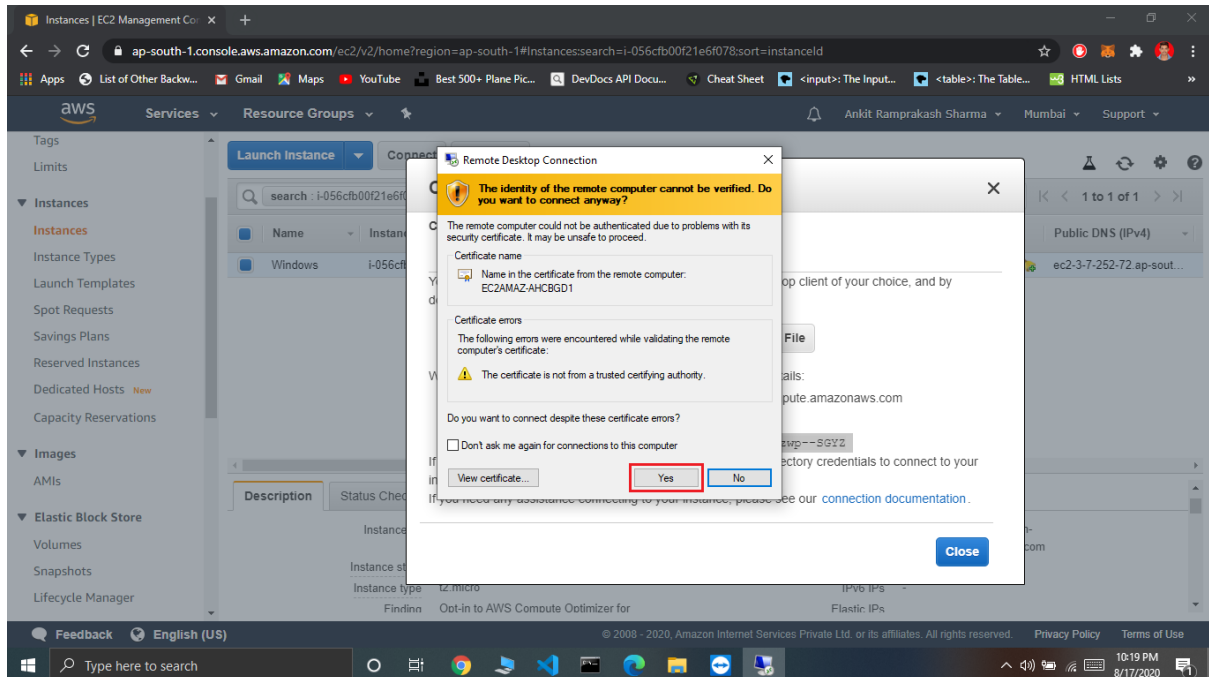
Step 15: Copy the Decrypted Password -> Close.



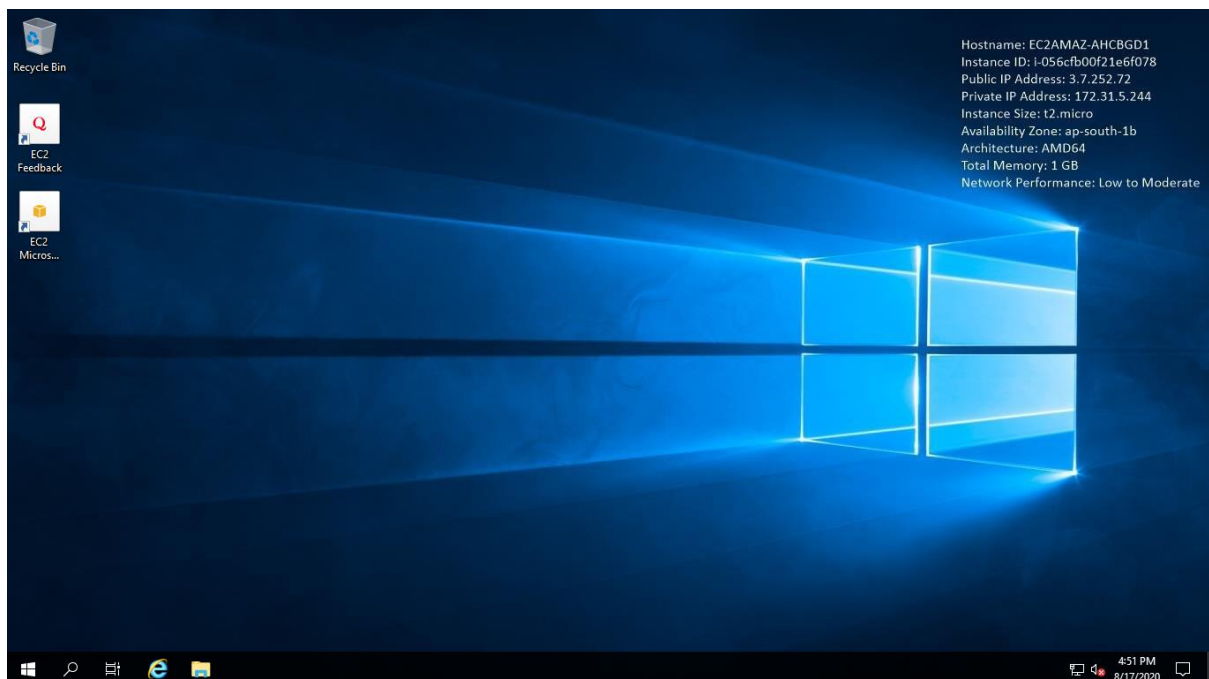
Step 16: Open .rdp file downloaded in Step 13 -> click Connect.



Step 17: While connecting a prompt will appear Enter your Decrypted Password copied in Step 15 -> click Yes.

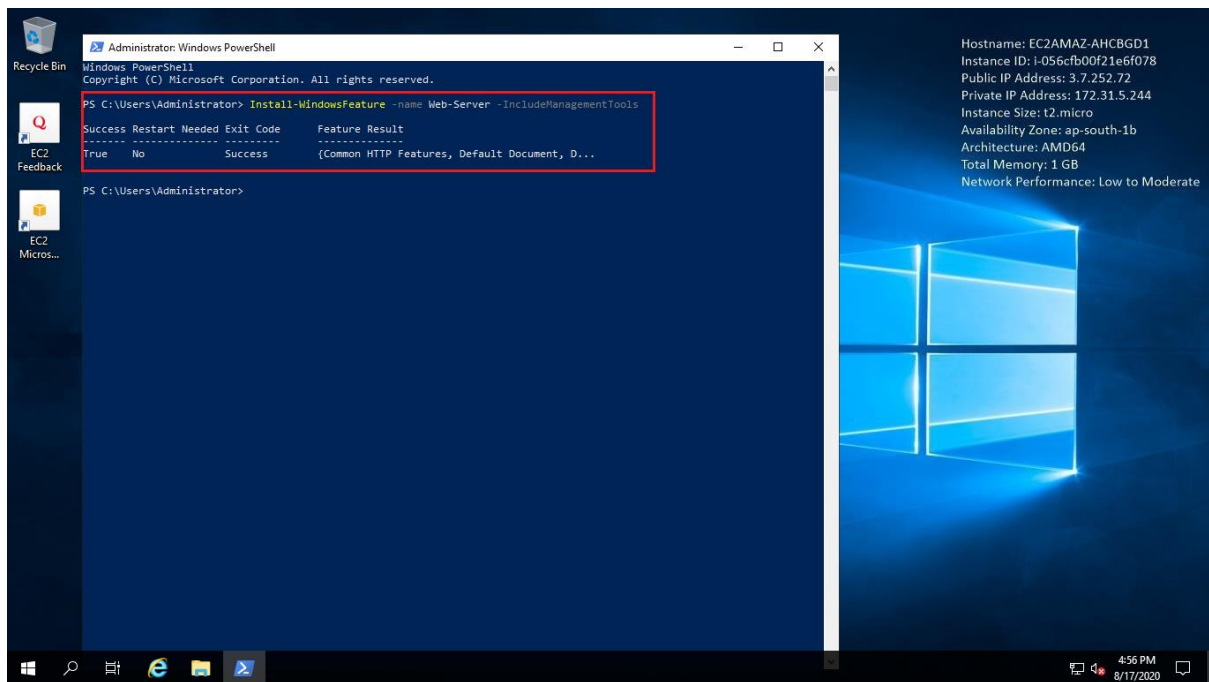


Step 18: Here's the instance launched with virtual private cloud (VPC)



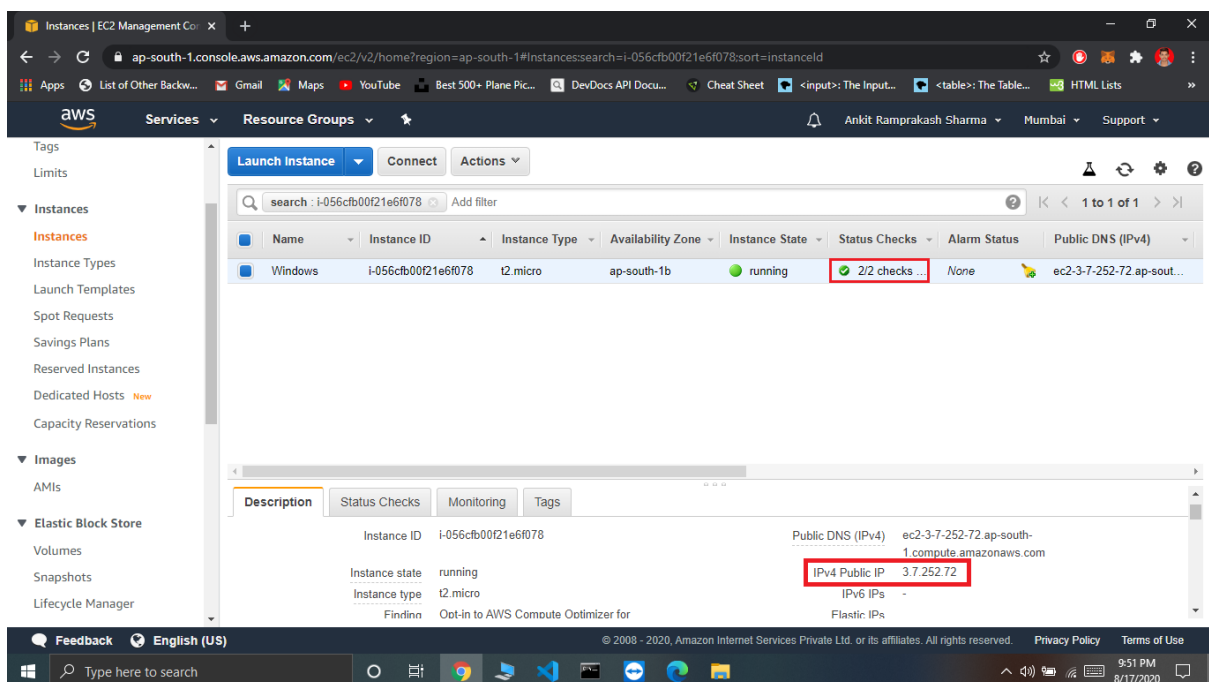
Step 19: Click on Windows button -> open Windows PowerShell and install the IIS Web Server using the command:

Install-WindowsFeature -name Web-Server -IncludeManagementTools



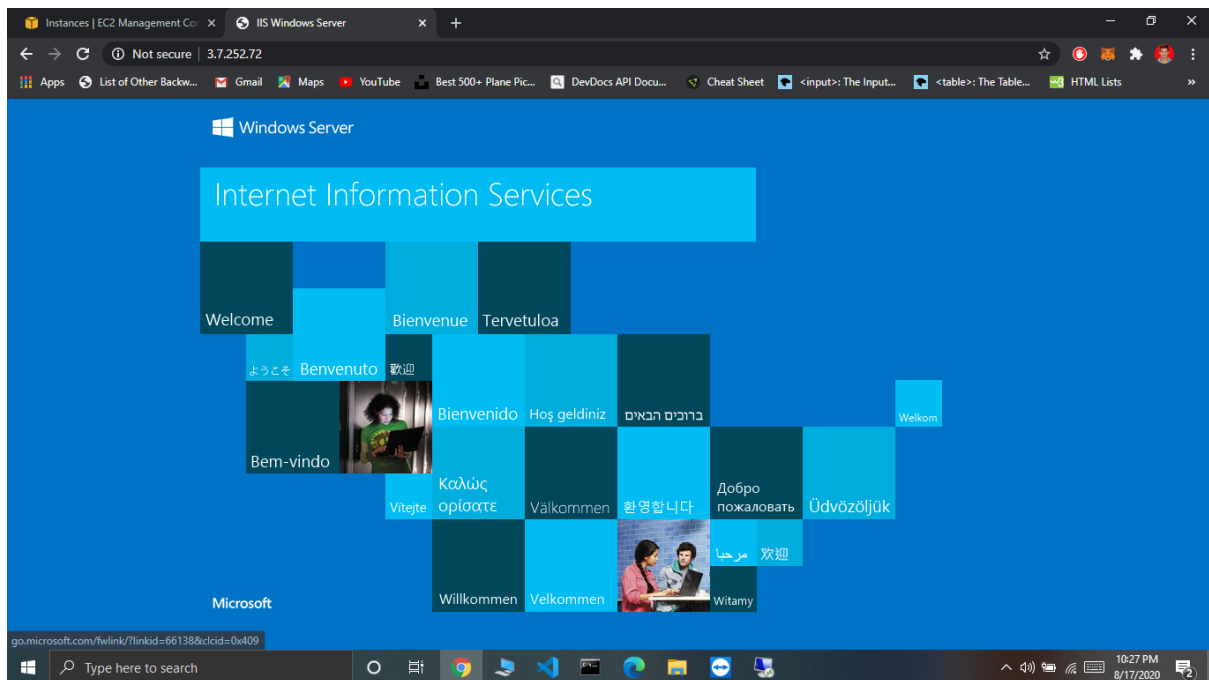
Step 20: After installation webserver will be deployed and can be viewed by public IP address available on the EC2 instances list. -> Copy the IP Address and paste and open it in the Browser.

Public IP address shown here: **3.7.252.72**



Step 21: Webserver Deployed and Viewed.

With the Public IP address: 3.7.252.72



TASK DONE.

MAKE SURE THAT THE INSTANCES CREATED ARE TERMINATED AFTER THE USAGE TO AVOID UNNECESSARY CHARGES.