

## Lab Programs 3

# Working with AWS Instances

### Objectives

In this lab programs, you learn about

- Launching the AWS Instances.
- How to connect to the Launched Instances.
- How to Install IIS Web Server
- How to host a website

### Prerequisites

Before working on this lab program, you must know

- About Cloud Computing
- About AWS
- About AWS Instances

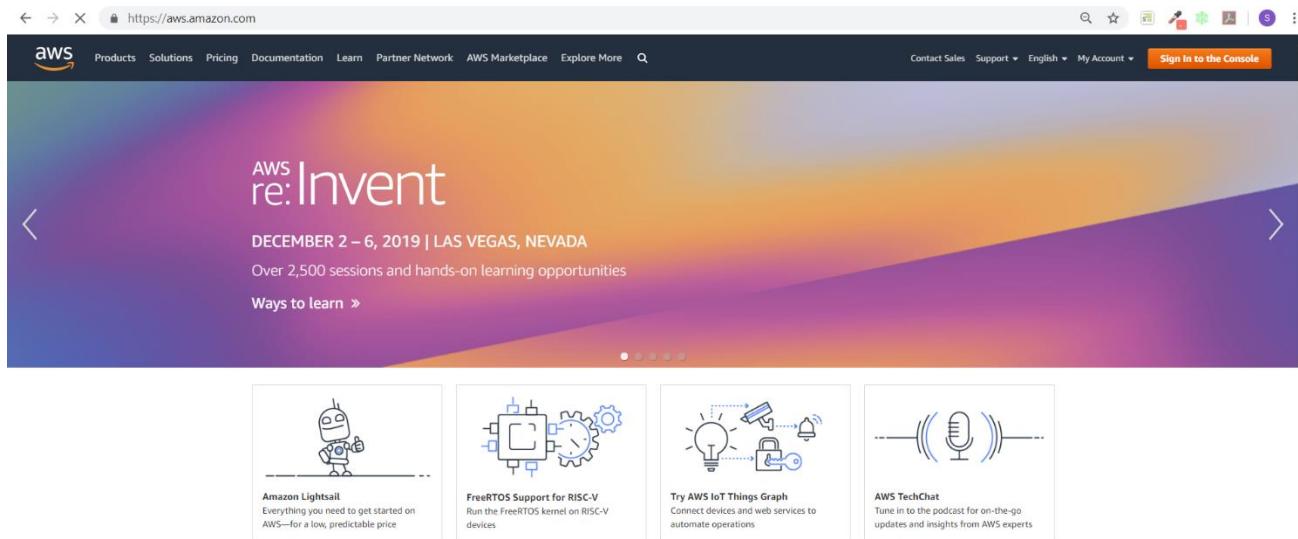
**Estimated time to complete this lab programs: 150 minutes**

## ❖ Lab Program 01

- Type the below URL in the web browser.

<https://aws.amazon.com/>

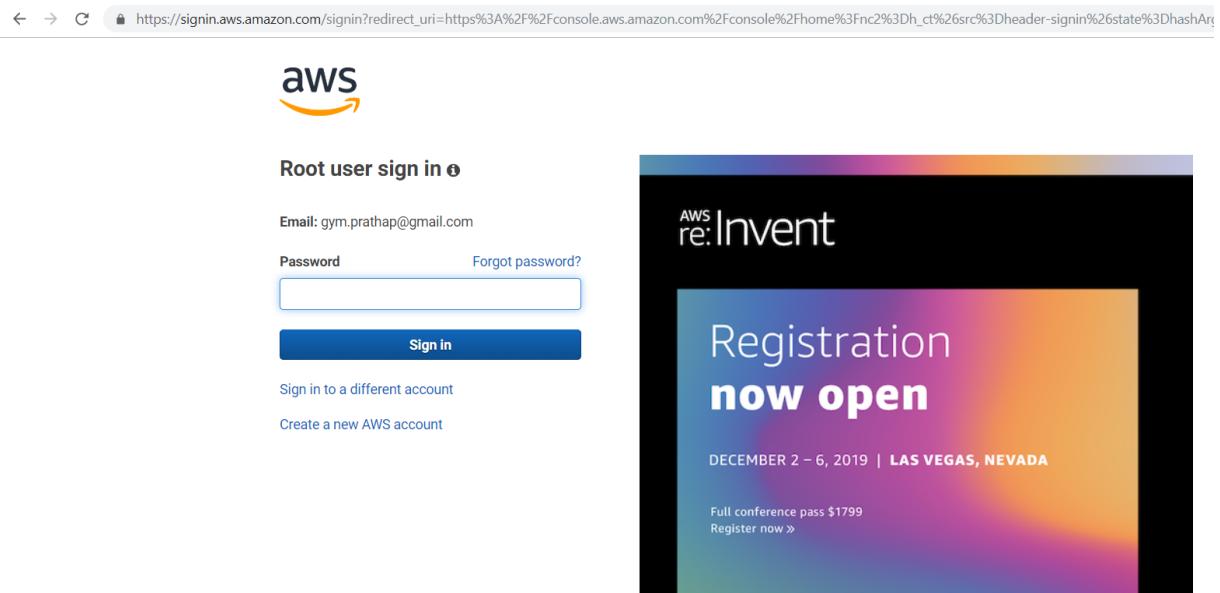
- This action brings the below screen (if you're not already logged on to AWS) (The content may vary)



- In the above screen, **Click on Sign in to Console**. This action brings the below screen

The screenshot shows the AWS sign-in page. It features the AWS logo and a 'Sign in' button. Below the button, it asks for the 'Email address of your AWS account' or 'account alias'. There's a 'Next' button and links for 'New to AWS?' and 'Create a new AWS account'. To the right, there's a promotional banner for AWS re:Invent 2019 with the text 'Registration now open'.

- Type your **AWS Account Email ID** and **Click Next**. This action brings the below screen.



[About Amazon.com Sign In](#)  
 Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our Terms of Use and Privacy Policy linked below. Your use of Amazon Web Services products and services is governed by the AWS Customer Agreement linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

- Type the **Password** in the above screen and **Click on Sign In**. This action brings the below screen.

The screenshot shows the AWS Management Console home page. At the top, there's a navigation bar with 'Services', 'Resource Groups', and user information ('kannanwisen', 'Mumbai', 'Support'). The main area is titled 'AWS Management Console'. On the left, there's a sidebar with 'AWS services' and a 'Find Services' search bar. The 'All services' section lists various services like Compute, Lightsail, ECR, ECS, EKS, Lambda, Batch, Management & Governance, CloudWatch, AWS Auto Scaling, CloudFormation, CloudTrail, Config, OpsWorks, Security, Identity, & Compliance, IAM, Resource Access Manager, Cognito, Secrets Manager, GuardDuty, and Inspector. On the right, there are two boxes: 'Access resources on the go' (with a link to the AWS Console Mobile App) and 'Explore AWS' (with links to 'Open Distro for Elasticsearch' and 'Run Serverless Containers with AWS Fargate').

- In the above screen, **Click on the Services drop down**. This action brings the below screen. (this screen vary in the left hand side)

The screenshot shows the AWS Services console with the following navigation structure:

- Services** dropdown: AWS, Services, Resource Groups.
- Region:** Mumbai.
- Header:** kannanwisen, Support.
- Search Bar:** Find a service by name or feature (for example, EC2, S3 or VM, storage).
- Group:** A-Z.
- Categories:**
  - Compute:** EC2, Lightsail, ECR, ECS, EKS, Lambda, Batch, Elastic Beanstalk, Serverless Application Repository.
  - Robotics:** AWS RoboMaker.
  - Analytics:** Athena, EMR, CloudSearch, Elasticsearch Service, Kinesis, QuickSight, Data Pipeline, AWS Glue, MSK.
  - Business Applications:** Alexa for Business, Amazon Chime, WorkMail.
  - Blockchain:** Amazon Managed Blockchain.
  - Satellite:** Ground Station.
  - Management & Governance:** AWS Organizations, CloudWatch, AWS Auto Scaling, CloudFormation, CloudTrail, Config, OpsWorks, Service Catalog, Systems Manager, Trusted Advisor.
  - Security, Identity, & Compliance:** IAM, Resource Access Manager, Cognito, Secrets Manager, GuardDuty, Inspector, Amazon Macie, AWS Single Sign-On, Certificate Manager, Key Management Service.
  - End User Computing:** WorkSpaces, AppStream 2.0, WorkDocs, WorkLink.
  - Internet Of Things:** IoT Core, Amazon FreeRTOS, IoT 1-Click, IoT Analytics, IoT Device Defender, IoT Device Management, IoT Events, IoT Greengrass, IoT SiteWise.

7. In the above screen, Click on the EC2 under Compute heading. This action brings the below screen.

The screenshot shows the AWS EC2 Dashboard with the following sections:

- EC2 Dashboard** sidebar: Events, Tags, Reports, Limits, Instances, Launch Templates, Spot Requests, Reserved Instances, Dedicated Hosts, Scheduled Instances, Capacity Reservations, Images, AMIs, Bundle Tasks, Elastic Block Store, Volumes, Snapshots, Lifecycle Manager, Network & Security, Security Groups, Elastic IPs.
- Resources** section: You are using the following Amazon EC2 resources in the US East (N. Virginia) region:
  - 0 Running Instances, 0 Elastic IPs
  - 0 Dedicated Hosts, 0 Snapshots
  - 0 Volumes, 0 Load Balancers
  - 0 Key Pairs, 1 Security Groups
  - 0 Placement Groups
- Create Instance** section: Learn more about the latest in AWS Compute from AWS re:Invent by viewing the EC2 Videos. Launch Instance button.
- Service Health** section: Service Status: US East (N. Virginia) is operating normally. Availability Zone Status: us-east-1a and us-east-1b are operating normally.
- Scheduled Events** section: US East (N. Virginia): No events.
- Account Attributes** section: Supported Platforms: VPC, Default VPC: vpc-69086213, Resource ID length management, Console experiments, Settings.
- Additional Information** section: Getting Started Guide, Documentation, All EC2 Resources, Forums, Pricing, Contact Us.
- AWS Marketplace** section: Find free software trial products in the AWS Marketplace from the EC2 Launch Wizard. Or try these popular AMIs: Barracuda CloudGen Firewall for AWS - PAYG.

8. In the above Screen, Click on the Region Drop down. (It is available in Top Right Corner before Support). This action brings the below screen.

The screenshot shows the AWS EC2 Dashboard with the Region dropdown open, displaying the following regions:

- US East (N. Virginia)
- US East (Ohio)
- US West (N. California)
- US West (Oregon)
- Asia Pacific (Hong Kong)
- Asia Pacific (Mumbai)
- Asia Pacific (Seoul)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Canada (Central)
- EU (Frankfurt)
- EU (Ireland)
- EU (London)
- EU (Paris)
- EU (Stockholm)
- South America (São Paulo)

The Region dropdown is currently set to "US East (N. Virginia)".

9. In the above screen **Select Mumbai**. This action brings the below screen.

The screenshot shows the AWS EC2 Dashboard. On the left sidebar, under the 'INSTANCES' section, 'Instances' is selected. At the top right, the region is set to 'Mumbai'. The main panel displays resource counts: 1 Running Instances, 0 Dedicated Hosts, 1 Volumes, 1 Key Pairs, 0 Placement Groups, 0 Elastic IPs, 0 Snapshots, 0 Load Balancers, and 6 Security Groups. A 'Create Instance' button is prominently displayed. The right sidebar contains sections for 'Account Attributes' (Supported Platforms: VPC), 'Additional Information' (Getting Started Guide, Documentation, All EC2 Resources, Forums, Pricing, Contact Us), and 'AWS Marketplace' (Find free software trial products).

10. In the above screen, **Click on Launch Instance**. This action brings the screen

The screenshot shows the 'Step 1: Choose an Amazon Machine Image (AMI)' page of the Launch Instance Wizard. The top navigation bar shows steps 1 through 7. The left sidebar has a 'Free tier only' checkbox checked. The main area lists several AMIs:

- Amazon Linux 2 AMI (HVM), SSD Volume Type** - ami-0b898040803850657 (64-bit x86) / ami-0ad82a384c06c911e (64-bit Arm)
  - Description: 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 button (radio buttons for 64-bit (x86) and 64-bit (Arm))
- Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type** - ami-035b3c7fe6d061d5
  - Description: 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 button (radio buttons for 64-bit (x86))
- Red Hat Enterprise Linux 8 (HVM), SSD Volume Type** - ami-0c322300a1dd5dc79 (64-bit x86) / ami-03587fa4048e9eb92 (64-bit Arm)
  - Description: Red Hat Enterprise Linux version 8 (HVM), EBS General Purpose (SSD) Volume Type
  - Root device type: ebs Virtualization type: hvm ENA Enabled: Yes
  - Select button (radio buttons for 64-bit (x86) and 64-bit (Arm))
- SUSE Linux Enterprise Server 15 SP1 (HVM), SSD Volume Type** - ami-0b5372ab3202bd20b (64-bit x86) / ami-0072af0151fbe67b9 (64-bit Arm)
  - Description: SUSE Linux Enterprise Server 15 SP1 (HVM), EBS General Purpose (SSD) Volume Type
  - Root device type: ebs Virtualization type: hvm ENA Enabled: Yes
  - Select button (radio buttons for 64-bit (x86))

11. In the above screen, **Check on Free Tier Only Check box**. This action brings the below screen.

The screenshot shows the same 'Step 1: Choose an Amazon Machine Image (AMI)' page, but with the 'Free tier only' checkbox checked in the left sidebar. The list of AMIs is identical to the previous screenshot, but the 'Select' buttons now have radio buttons for '64-bit (x86)' only.

12. **Scroll down. Go to Microsoft Windows Server 2019 Base - ami-09ef280df1a6a5330.** This action brings the below screen.

Step 1: Choose an Amazon Machine Image (AMI)

**Amazon RDS** You can easily use Amazon Aurora, MySQL, Oracle, PostgreSQL, and SQL Server databases on AWS. Aurora is a MySQL and PostgreSQL-compatible, enterprise-class database at 1/10th the cost of commercial databases. Learn more about RDS

**Launch a database using RDS**

**Free tier eligible**

**Ubuntu Server 16.04 LTS (HVM), SSD Volume Type** ami-0cfee17793b08a293 (64-bit x86) / ami-0f01fcbe971af8f5a (64-bit Arm)

**Select**

**64-bit (x86)** **64-bit (Arm)**

**Root device type: ebs Virtualization type: hvm ENA Enabled: Yes**

**Microsoft Windows Server 2019 Base** ami-09ef280df1a6a5330

**Select**

**64-bit (x86)**

**Root device type: ebs Virtualization type: hvm ENA Enabled: Yes**

**Deep Learning AMI (Ubuntu) Version 23.1** ami-0757fc5a639fe7666

**Select**

**64-bit (x86)**

**Root device type: ebs Virtualization type: hvm ENA Enabled: Yes**

**Deep Learning AMI (Amazon Linux) Version 23.1** ami-0d5602f9d86b96d42

**Select**

**64-bit (x86)**

**Root device type: ebs Virtualization type: hvm ENA Enabled: Yes**

**Amazon Linux**

13. In the above screen, Click the **Select** which is available in the **Microsoft Windows Server 2019 Base - ami-09ef280df1a6a5330** row. This action brings the below screen.

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.

Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
General purpose	<b>t2.micro</b> Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
General purpose	t3a.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes

**Cancel** **Previous** **Review and Launch** **Next: Configure Instance Details**

14. In the above Screen, Click on **Review and Launch**. This action brings the below screen.

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.

**AMI Details**

**Microsoft Windows Server 2019 Base - ami-05941fa1ddfa830d3**

**Free tier eligible** Root Device Type: ebs Virtualization type: hvm

**Edit AMI**

**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

**Edit instance type**

**Security Groups**

**Security group name** launch-wizard-2  
**Description** launch-wizard-2 created 2019-07-02T13:21:19.028+05:30

Type	Protocol	Port Range	Source	Description
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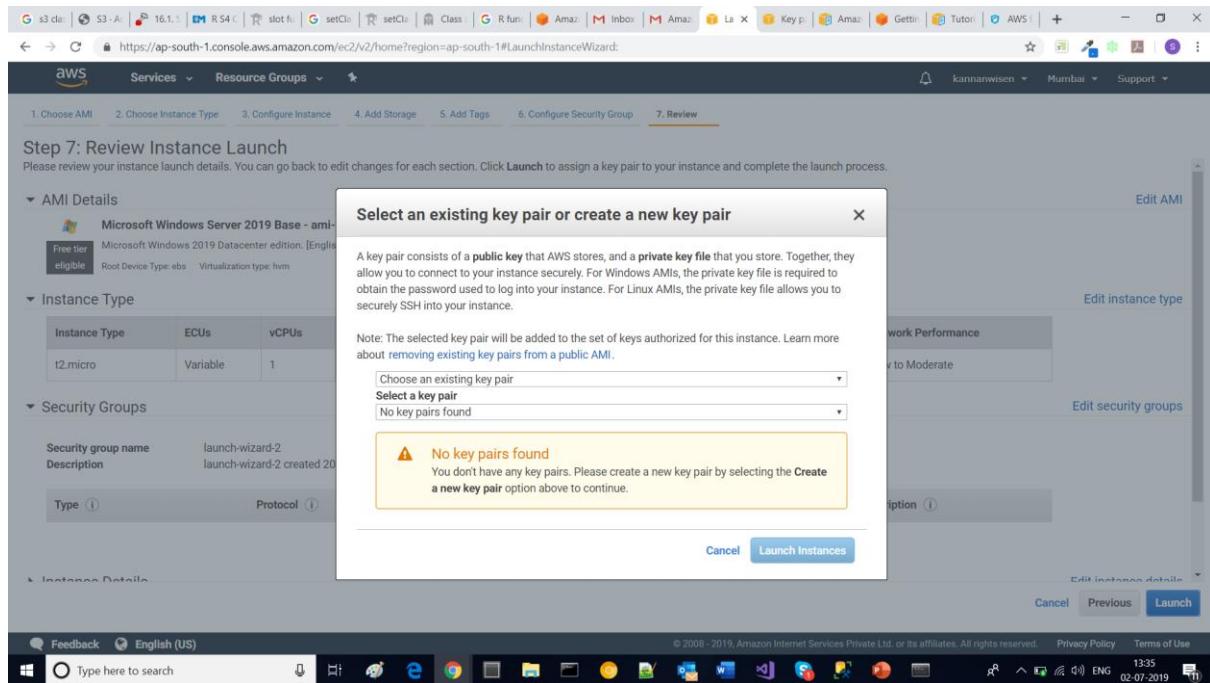
*This security group has no rules*

**Edit security groups**

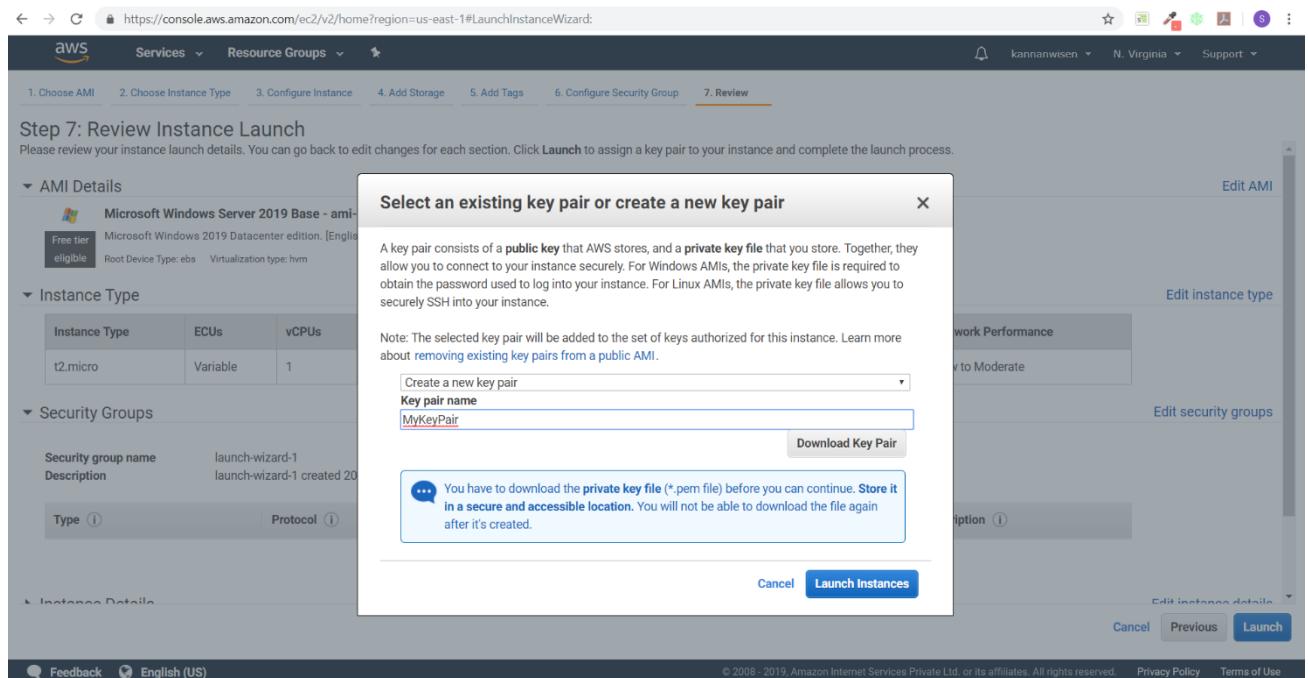
**Instance Details**

**Cancel** **Previous** **Launch**

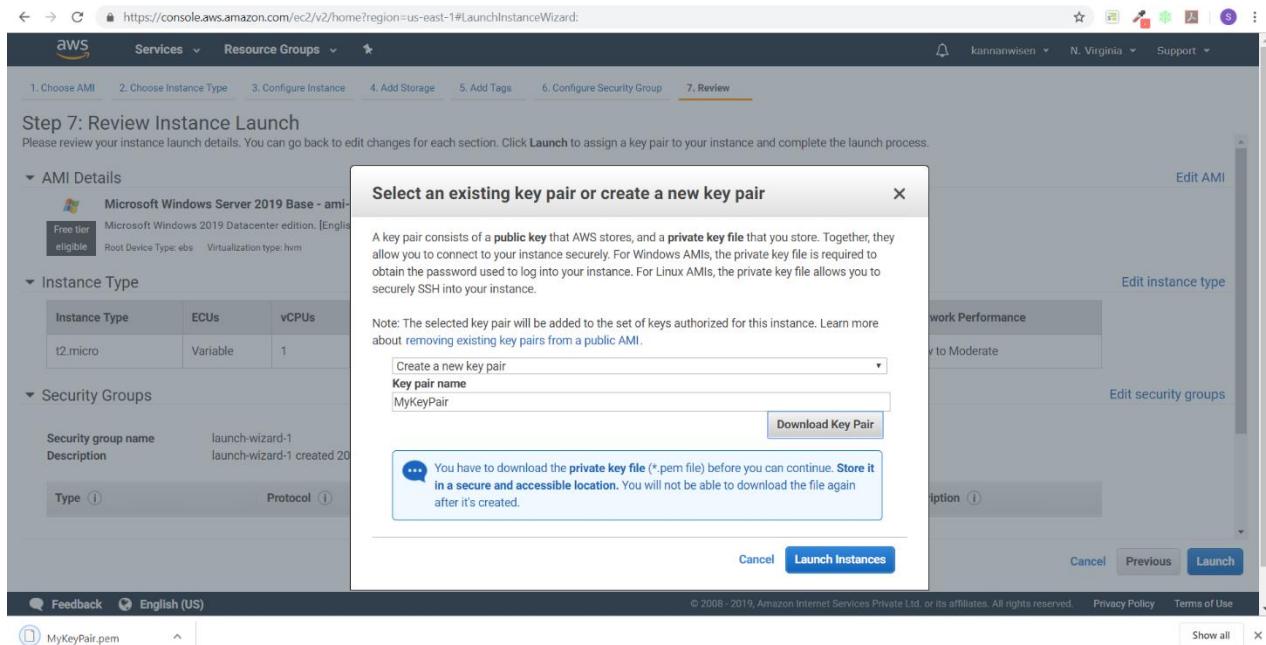
15. In the above screen, Click on the **Launch** button. This action brings the below screen



16. In the first drop down, Select the Choose a New Key Pair. In the Key pair name field, type MyKeyPair like below.



17. In the above screen, click on the Download Key pair button. This action download the key like below



18. MyKeyPair.pem contains the similar content like below

```

1 -----BEGIN RSA PRIVATE KEY-----
2 MIIEpAIBAAKCAQEAjYp6ByvJUJthafniUqrdlf+HezkwEmPiuw+TwPBByIix2dyyOdmhDeODYyV+
3 ON8wrw0w8dCHsJDIiwnFuY0aIZe0V01whZHLZoPB+lbRWK5OhVxsUVLrZrXFzL2hgi6PT3MTAQ
4 EtSisaKv2q4y/n80KNYM5K/KmP7C56iaOyAWttsAmvmyZ/mIQjyeBwbIMFNxIi551VsApyjhnaY
5 PNF33ATXy6OQcxI0RimSIGNtHyIMjJBf+BC6EAZnfUpbXtDosVuMPyPAeM5y51c3GiLLAxrIP1Vk
6 Lj8KOszwJTFQq0qRdUSRevM1SMx7TTMweDzKZQ79EpKGX0hP841nywIDAQABoIBAD3HTF3m6baq
7 K2q7f574HYDJBVyQcoPPV7zeQpAAZsudhms+HfiIMGfts8h0LV5/ZWw1863kQeL1DaJTvTgMgKGCz
8 M37LiSpzqWD0b21SCYv4gMNKxOh2FqT3atOkmUF3OX20tnocuLCBaQW5qaH8WLumT+DnFLeYVwiS
9 YgX1HGRjhdknjkY0ESVtpAHStZhRyhQR1EIXLR/cgBB00OjsprpThGBaf1V9aRbQD71CN1ZQJq69d5
10 60CTrS9RwfNjbv2TU71mHo0AtXSnZ108SYvJK8/T2a8U5i2GKyB+MJ/0DFutF9LE8xDuyd1dVRW6
11 UvkrSDa6d8J1/zaP2+bEe/AQRECGYEAxgKULhD6WKpsL76Xty5zfnxuzVZq513TDOIbEejH9AMs
12 Lo7qMRtRF6V7Ui0ojija0SjyI8mrwqzrbSnQEvsitX1CfFVF5ieVQyoTcSCbIJ8j1KJUvGTfavAT
13 1d3he55tTQZdPZC3Ihekth0iNzSiF1jlBRNnQml5X3b/UHZQB5MCgYEAtv47QT31E8ShqEbe+idh
14 4U1kehCgVidvVFF51TsRON1EARlVPjIpQuxj4I2bid8T3C1JBU/FXKdmYE0dM6ZoR5AqWKY85df
15 2Dg5xPbCm0y9NLrM2sL7tXivxa70IiYdvL9m088On2seJcqhkdzRV9KKjgMpVIGRVuOObkULUekC
16 gYEAw9Z1gt6T2/Hiqm5suaKEVAtZwzi/TcxqGoneYB4s9QfwQM4UjjEISSzgBWjZSvzzPpkSs5aY
17 jFheGH+MTdmYGavet/3WvkVT+TO60t8WznLXC0zqJdJWrft4gsOKaatNSysKOQPSPKPJw1yaJKOn
18 1ROUhyqLREGJS4P0DG6XxIUCgYEAjRwk12spA7H/gSQo2RFFUDhz0MM8QK91dNNd+LDwyxKX1GY
19 oNqrlqIazShDITRuBrA9mEKN/9L/dsTs13pNe7HhePzgJ08+iHRRd9idHrahXI0DtVoQUdL78Dvg
20 ZKLx4X/TIlgT1Zj7iXbk+p7GC6v+Th5f+5tiYRde20eDICkCgYBRRg42cUHPuTo92wse81zD1Rmq
21 9BJr2AtZgvWpb215s1WTRB4MXVLJe24arV2IbFtGtiDm78oo6qcIdvPBBCmCV2SWNEJK94khB3QC
22 6qBX10Yfffr/RpjLxsWc8SGp2xNv7tJXhtOyZAsd7X2jrg3N9USX5ivE9eaASBUwIIvzFw==
23 -----END RSA PRIVATE KEY-----
```

19. In Line 17, Click on the **Launch Instances**. This action brings the below screen.

The screenshot shows the AWS Launch Status page. At the top, there is a green success message: "Your instances are now launching" with a link to "View launch log". Below it is an info message about estimated charges. A section titled "How to connect to your instances" provides instructions and links to help resources.

#### How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click [View Instances](#) to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

- Here are some helpful resources to get you started

- [How to connect to your Windows instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Microsoft Windows Guide](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

[Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)

## 20. In the above screen, Click on the **View launch log**. This action brings the below screen.

The screenshot shows the AWS Launch Status page with the "View launch log" link clicked. The expanded log details the steps: Creating security groups (Successful), Authorizing inbound rules (Successful), and Initiating launches (Successful). It also shows the "Launch initiation complete" message.

#### How to connect to your instances

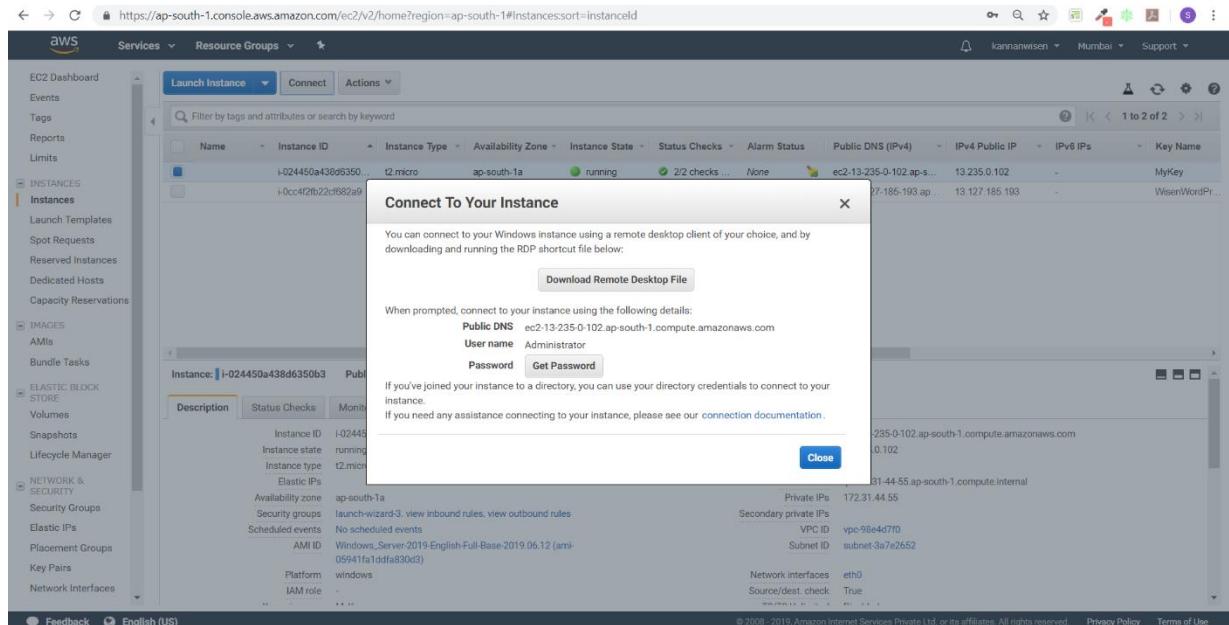
Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click [View Instances](#) to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

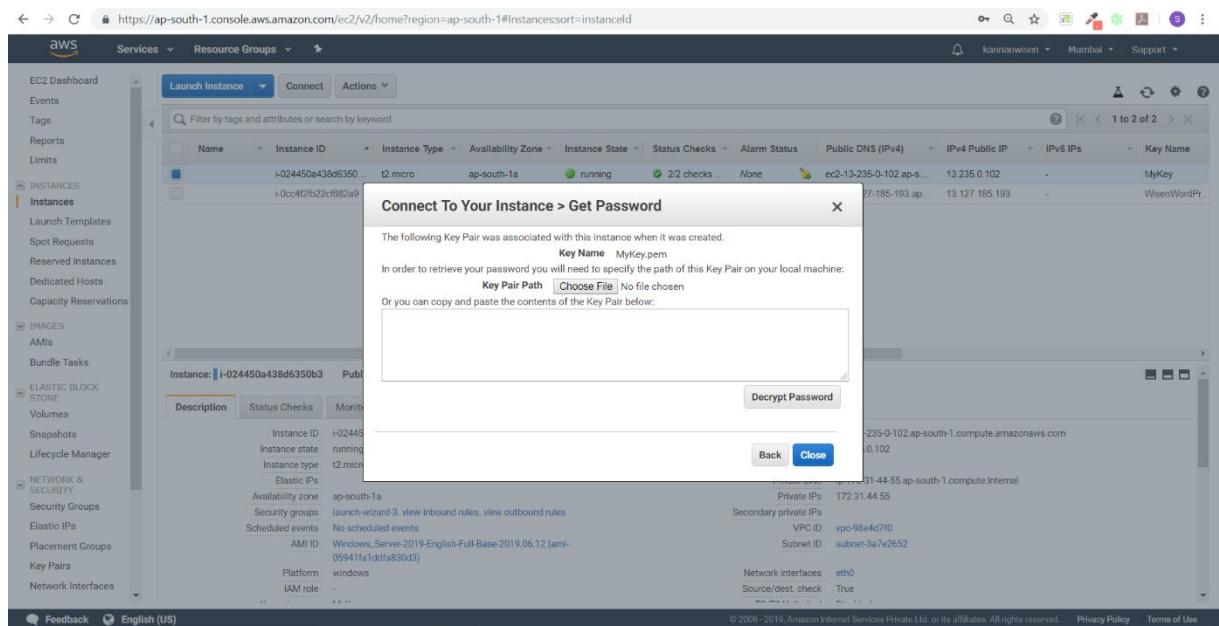
## 21. In the above screen, Click on the **Hyperlink before the Hide launch log hyperlink**. This action brings the below screen.

The screenshot shows the AWS Instances page. The left sidebar is collapsed. The main area displays a table with one row for the instance "i-0ff7cfdfb1ed4bf1e". The table columns include Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS (IPv4), IPv4 Public IP, and IPv6 IP. Below the table, a detailed view for the instance "i-0ff7cfdfb1ed4bf1e" is shown, including its description, status checks, monitoring, and tags. The Public DNS (IPv4) is listed as "ec2-34-229-155-121.compute-1.amazonaws.com".

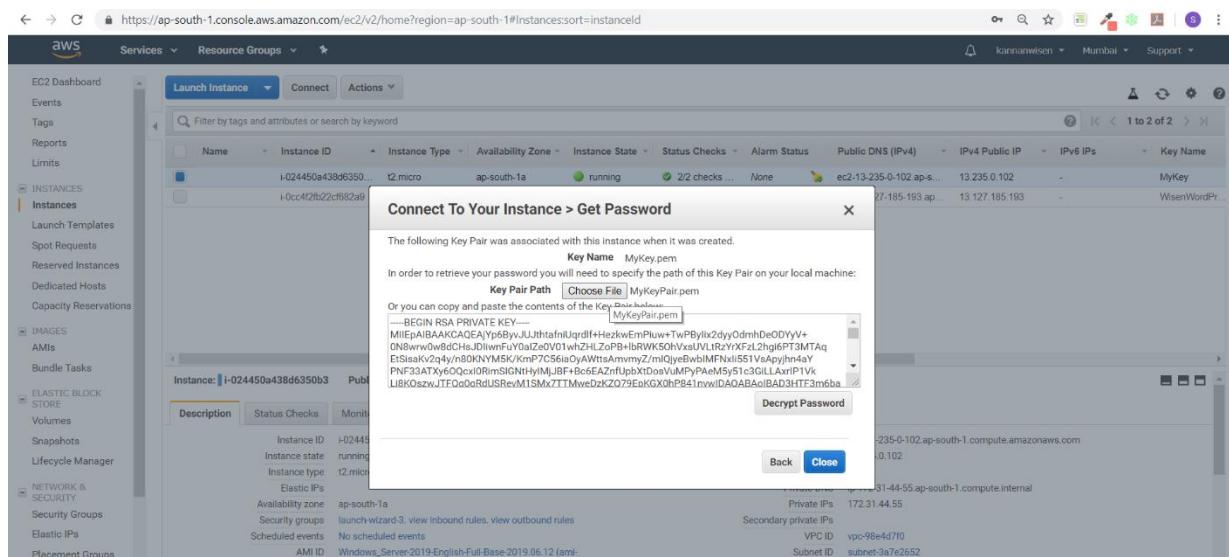
## 22. In the above screen, Click on the **Connect** button. This action brings the below screen.



23. In the above Screen, Click on Get Password button, This action brings the below screen.



24. In the above screen, Click on Choose File button and select the MyKeyPair.pem (which is generated in Line No 17). This action brings the below screen.



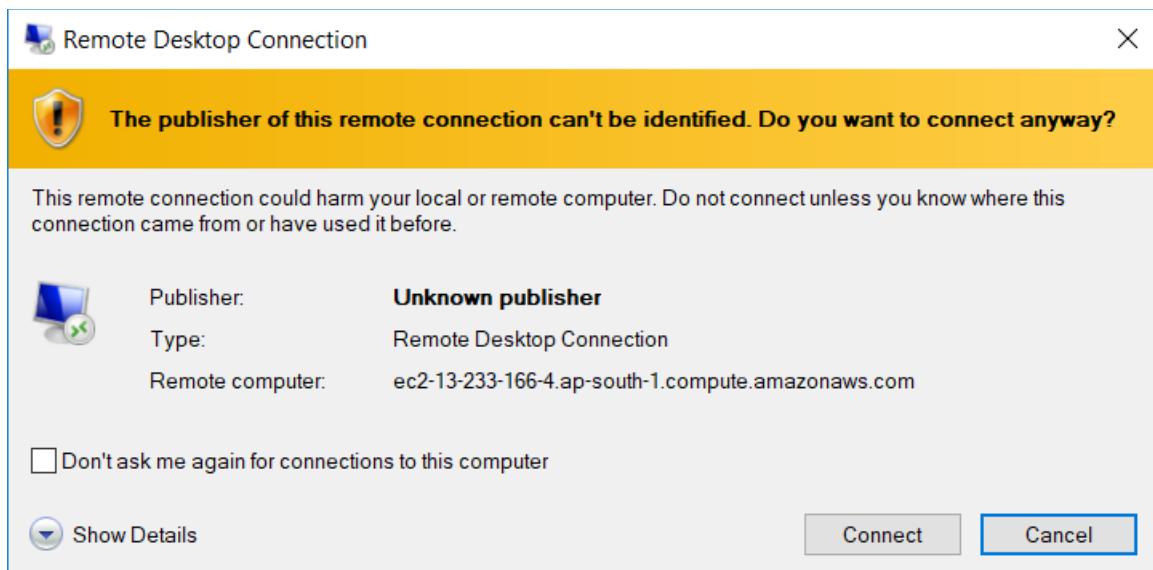
25.

26. In the above screen, **Click in Decrypt Password**. This action brings the below screen.

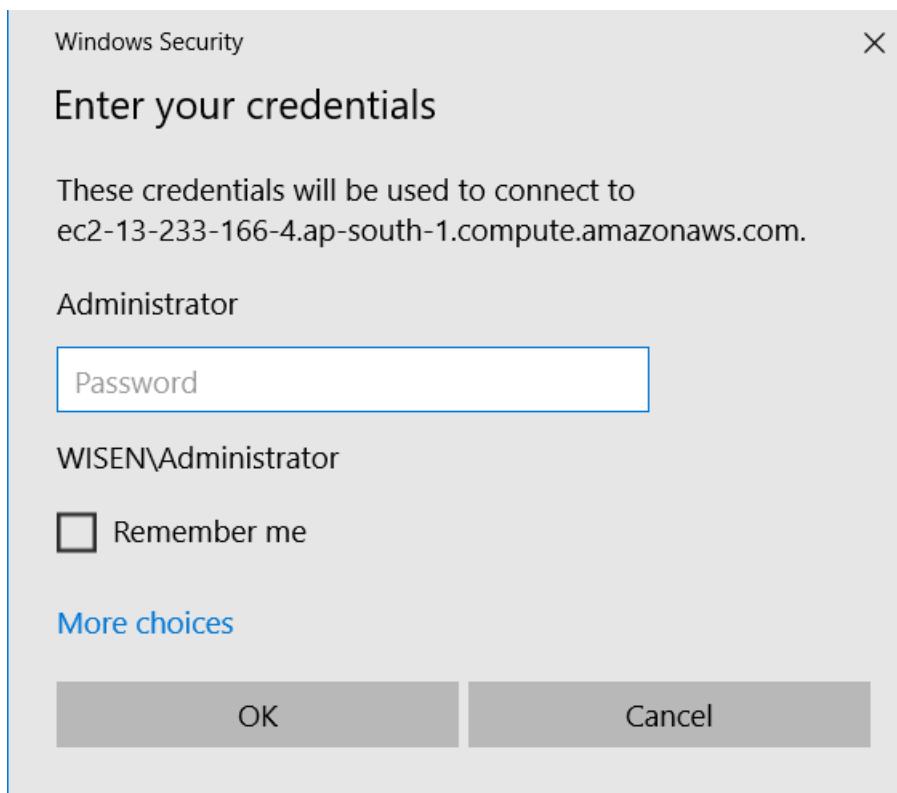
27. **Note down the password** in above screen. **Click on the Download Remote Desktop File** in the above screen. This action brings the below screen.

28. The above action download the file like below.

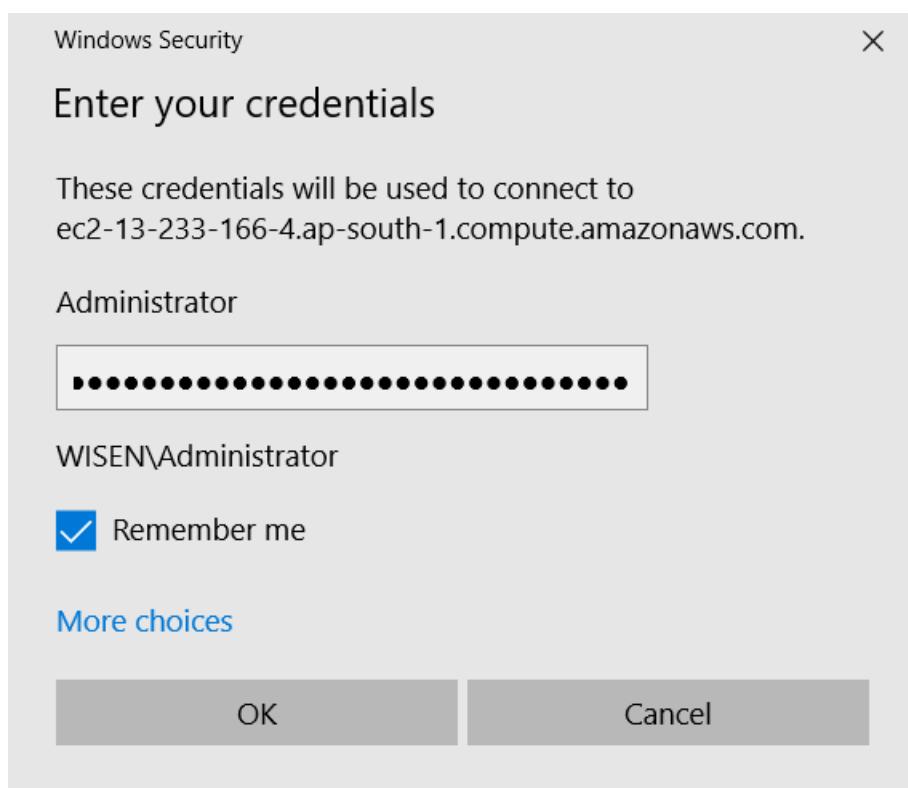
29. In the above screen, **double click the Remote Desktop file**. This action brings the below screen.



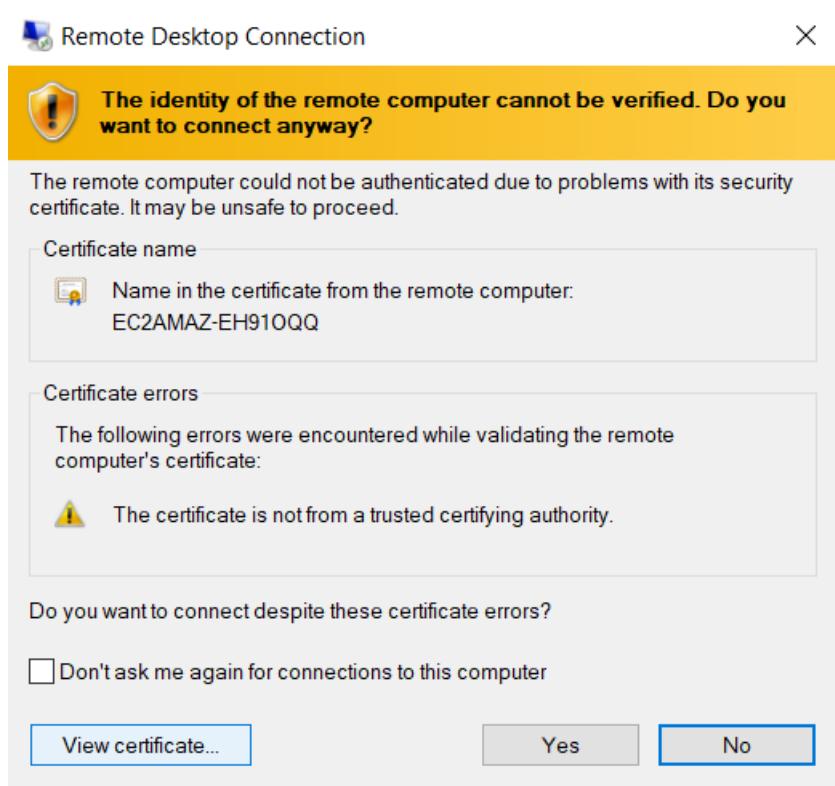
30. In the above screen, **Click on the Connect button**. This action brings the below screen.



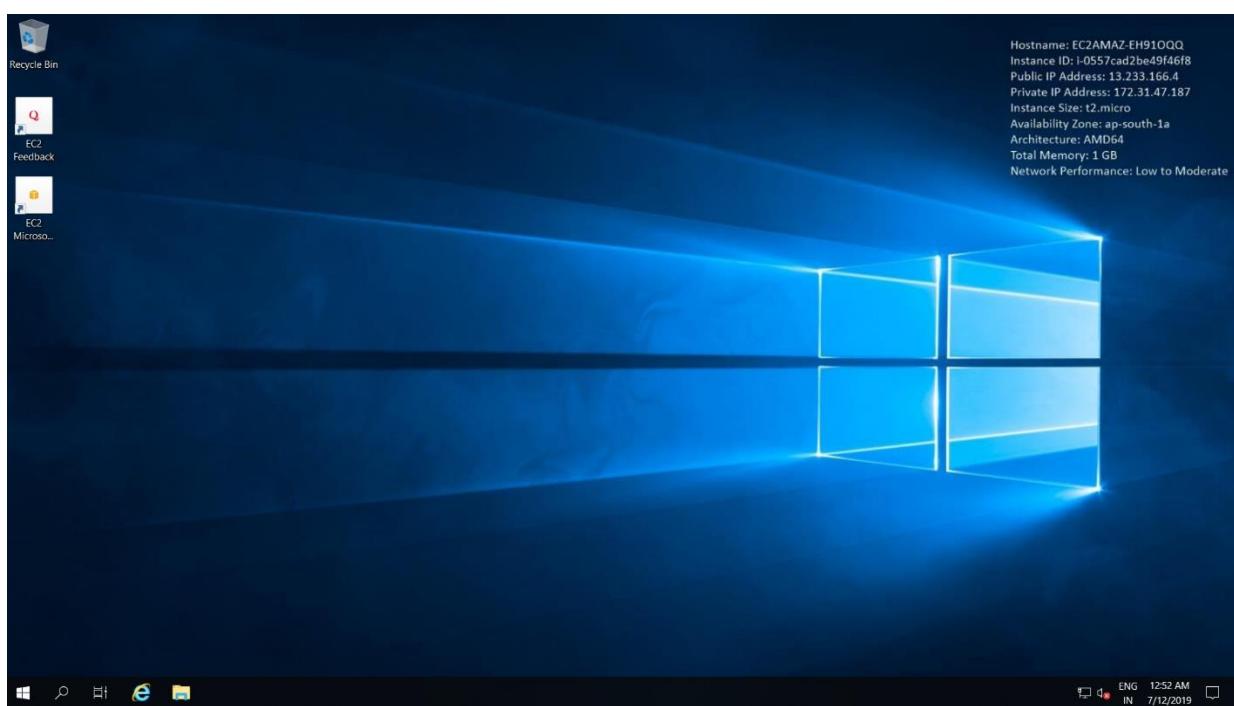
31. In the above screen, type the **password** which is created in Line No 27. And **Check the Remember me** Checkbox like below



32. In the above screen, Click on OK button. This action brings the below screen.



33. In the above screen, Click on Yes button. This action connects to the remote server. The **Remote Server Desktop** will be shown as below



34. In the Server, download the chrome and install.

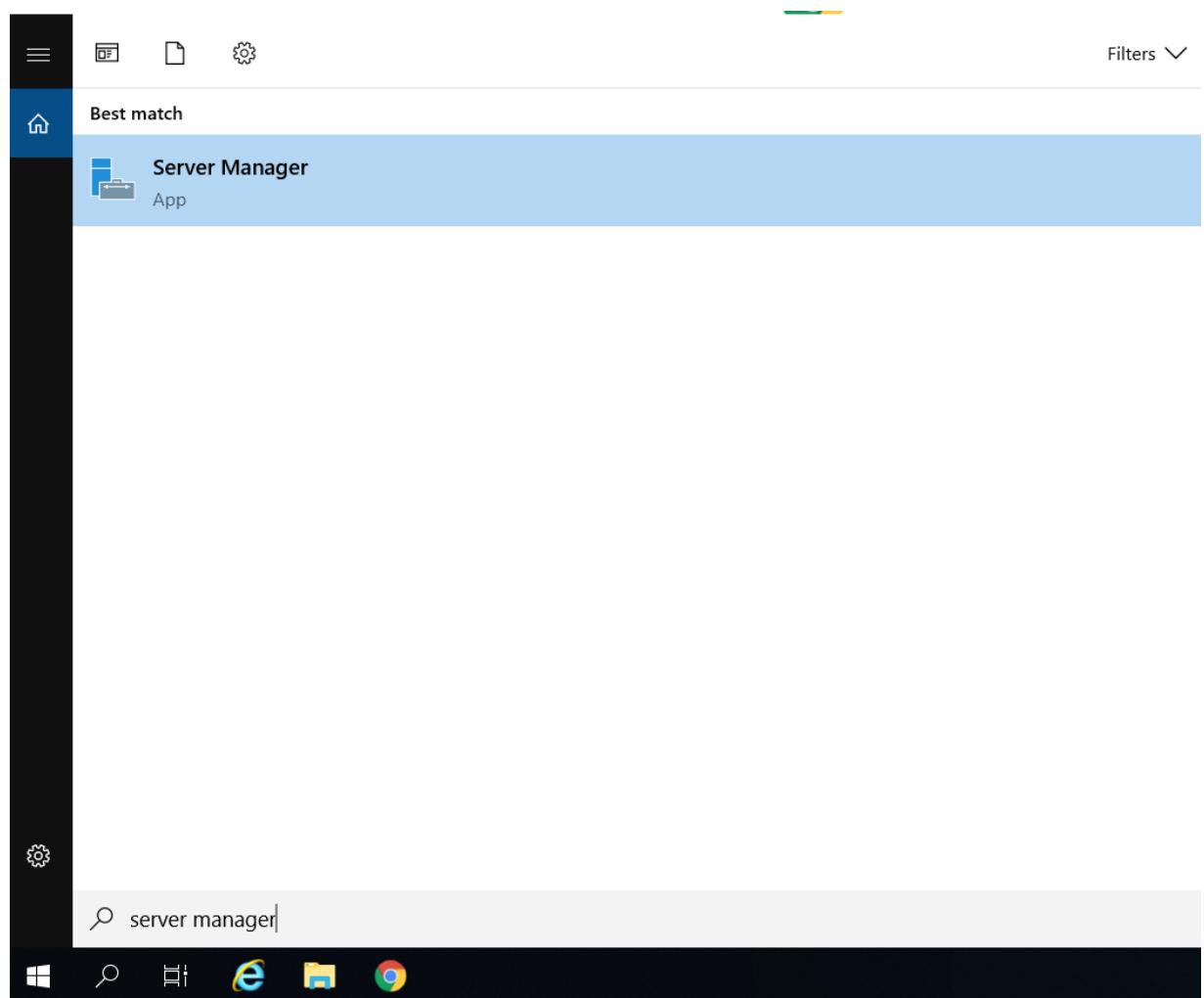
#### Program Output

What you learnt from this program?

## ❖ Lab Program 02

This Lab Program demonstrates how to install the IIS (Internet Information Server) Web Server in your AWS EC2 instance.

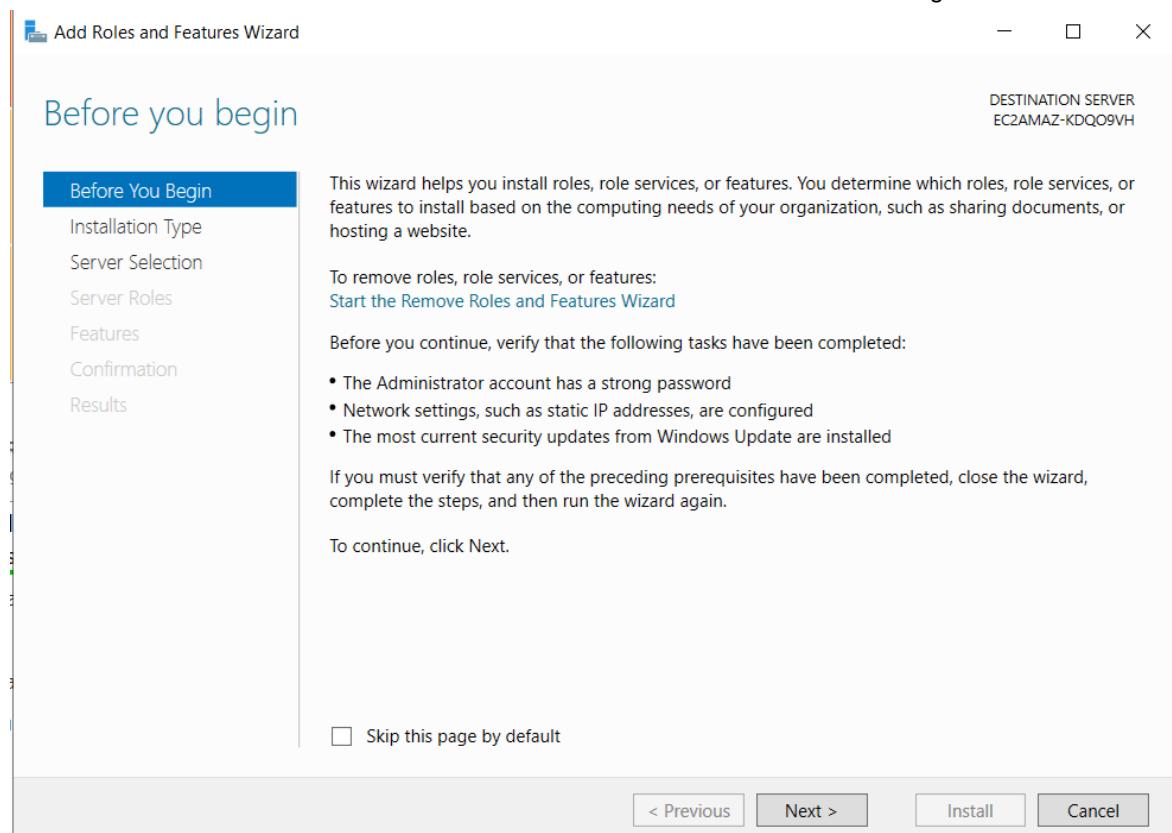
1. In the Server Search box, type Server Manager like below



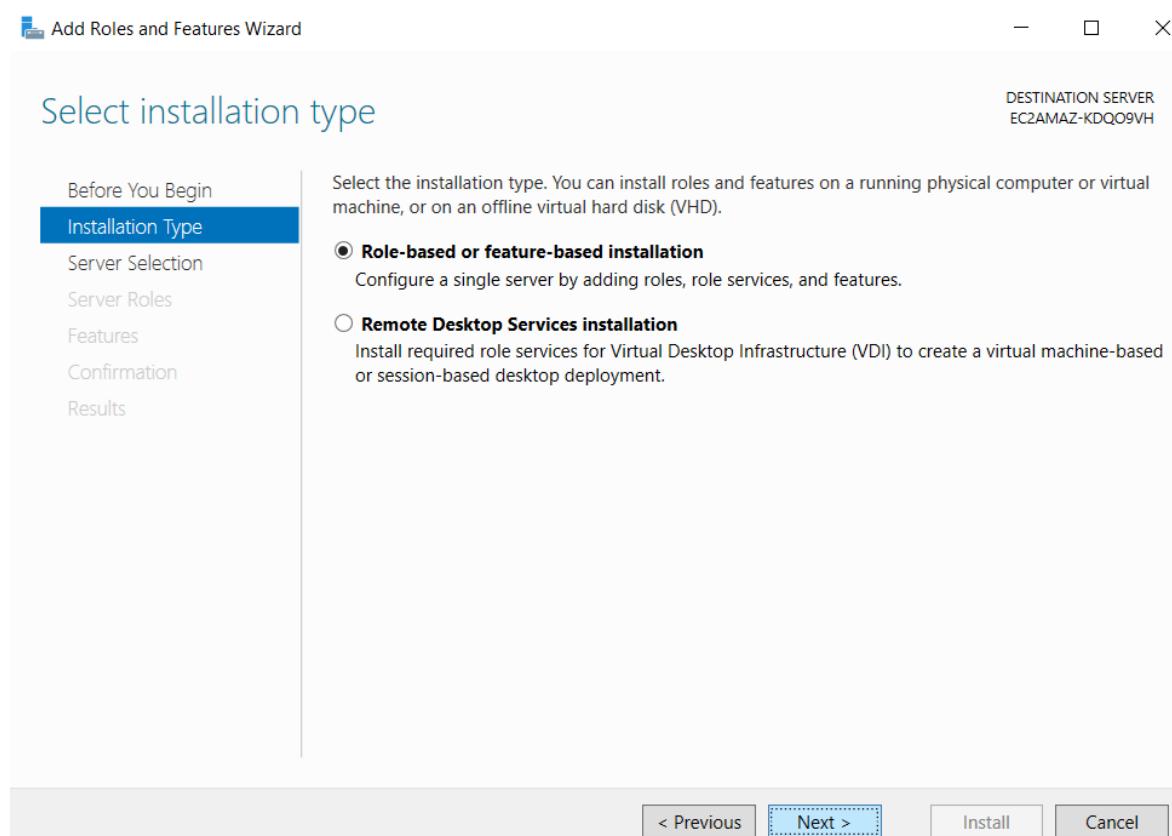
2. Click on the **Server Manager App** in the above screen. This action brings the below screen.

A screenshot of the Microsoft Server Manager dashboard. The top navigation bar shows "Server Manager &gt; Dashboard". On the left, there's a sidebar with links for "Dashboard", "Local Server", and "All Servers". The main content area has a "WELCOME TO SERVER MANAGER" header. To the right of this is a vertical stack of three orange boxes: "QUICK START", "WHAT'S NEW", and "LEARN MORE". The "QUICK START" box contains five numbered steps: 1. Configure this local server, 2. Add roles and features, 3. Add other servers to manage, 4. Create a server group, and 5. Connect this server to cloud services. Below this is a section titled "ROLES AND SERVER GROUPS" with the following details: Roles: 0 | Server groups: 1 | Servers total: 1. It lists two items: "Local Server" (1 item) and "All Servers" (1 item). Both items have a green horizontal bar underneath them. Under "Local Server", it lists "Manageability", "Events", "Services", "Performance", and "BPA results". Under "All Servers", it lists "Manageability", "Events", "Services", "Performance", and "BPA results".

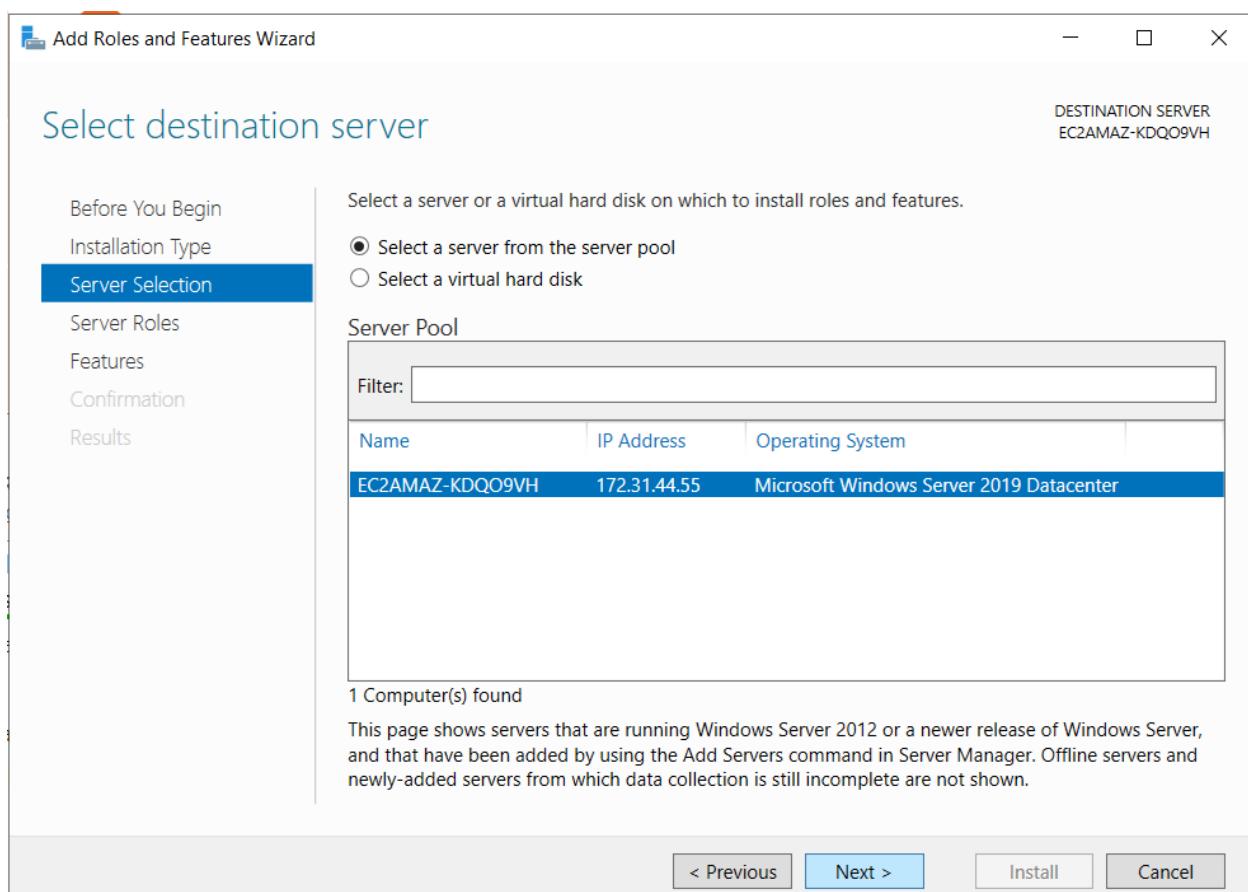
3. Click on the **Add Roles and Features** in the above screen. This action brings the below screen.



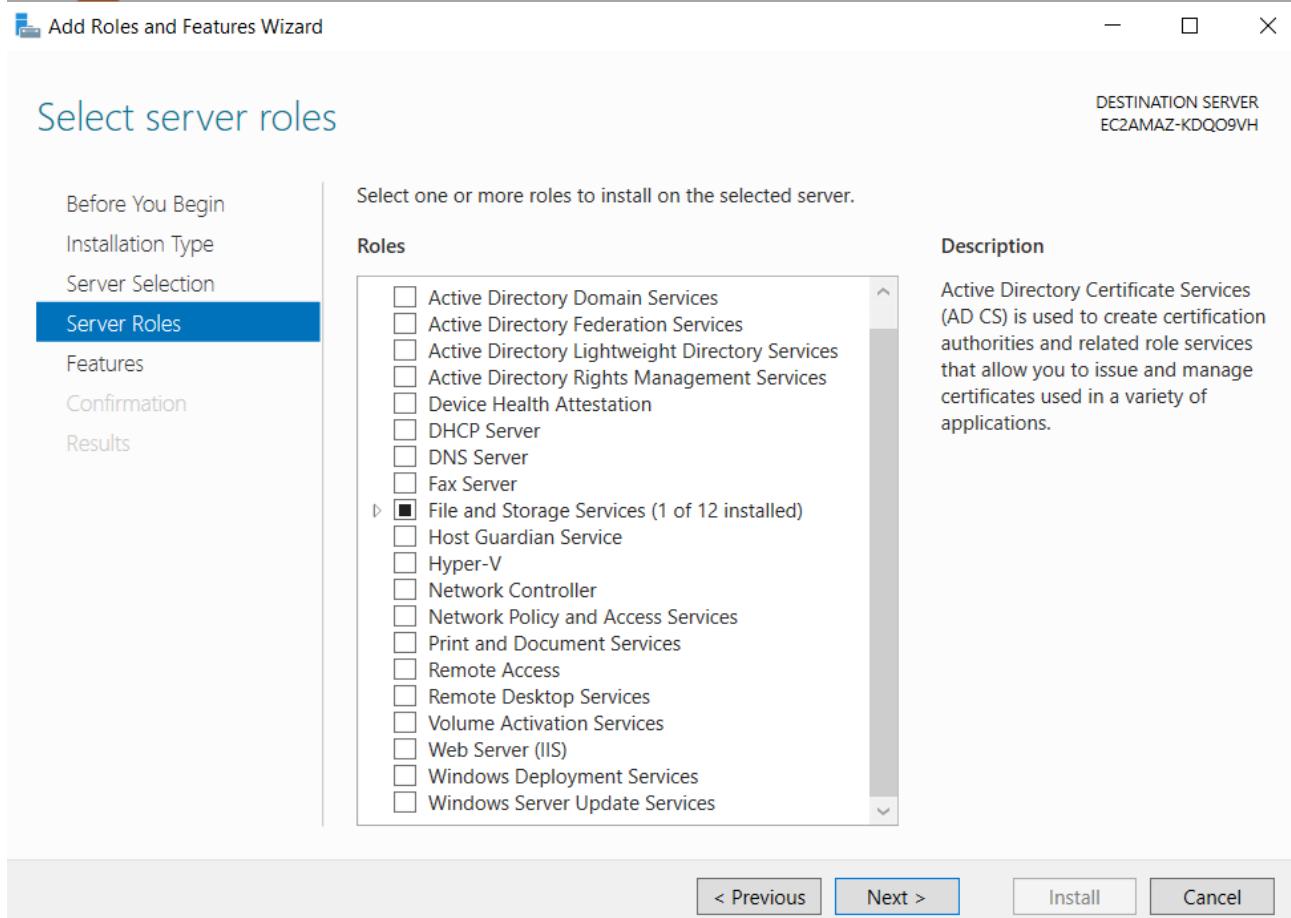
4. Click on the **Next** in the above screen. This action brings the below screen.



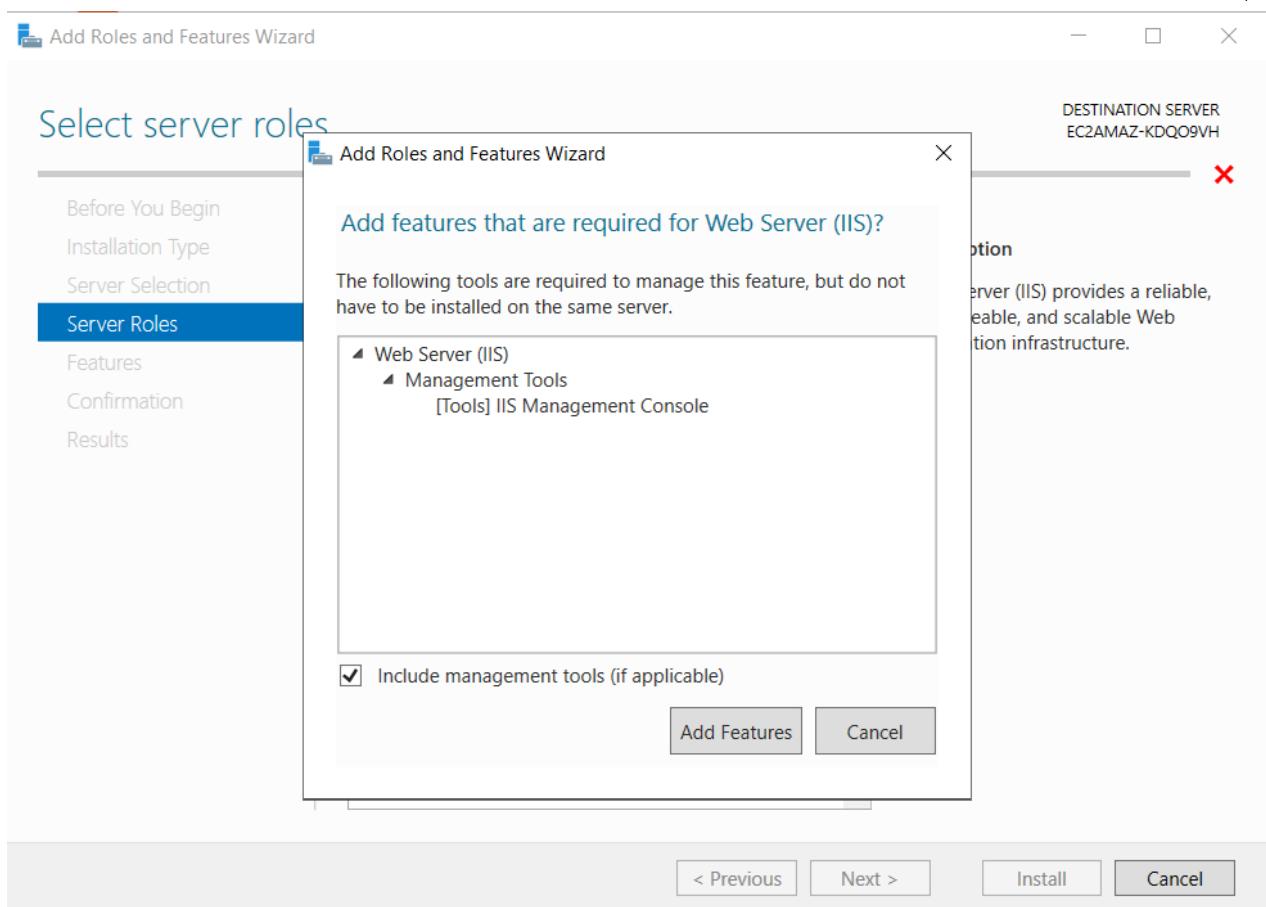
5. Check the **Role-based or feature-based installation** radio button. And Click on **Next**. This action brings the below screen.



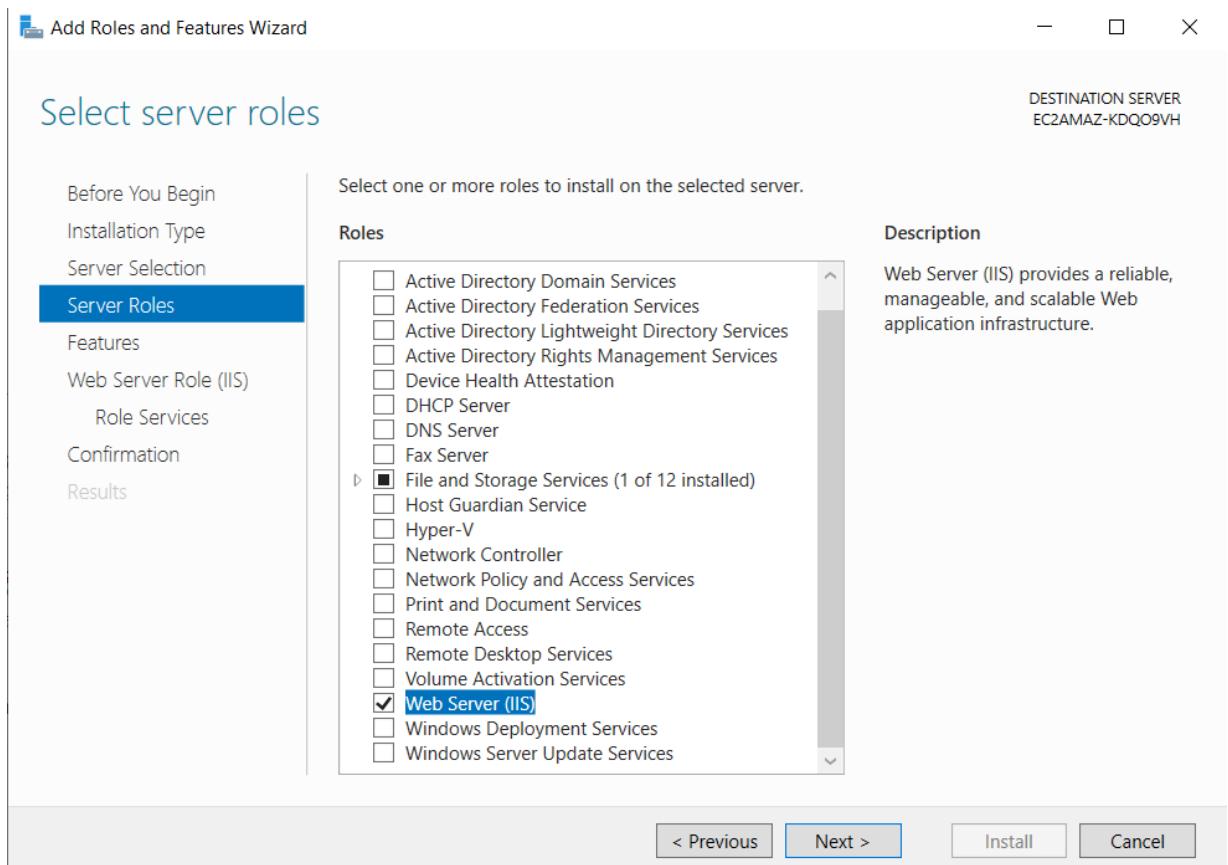
6. Check the **Select a server from the server pool** radio button. And Click on **Next**. This action brings the below screen



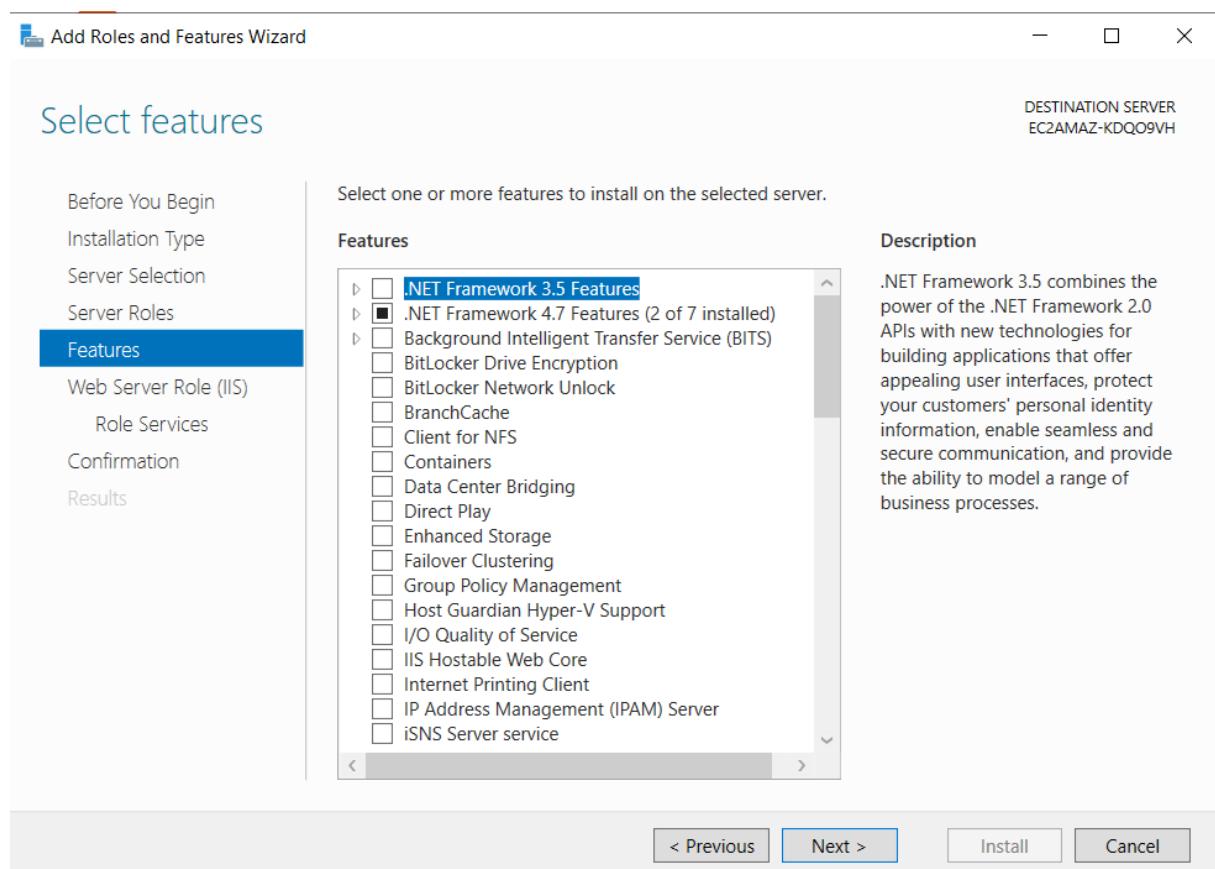
7. Click the **Web Server (IIS)** Checkbox. This action brings the below screen.



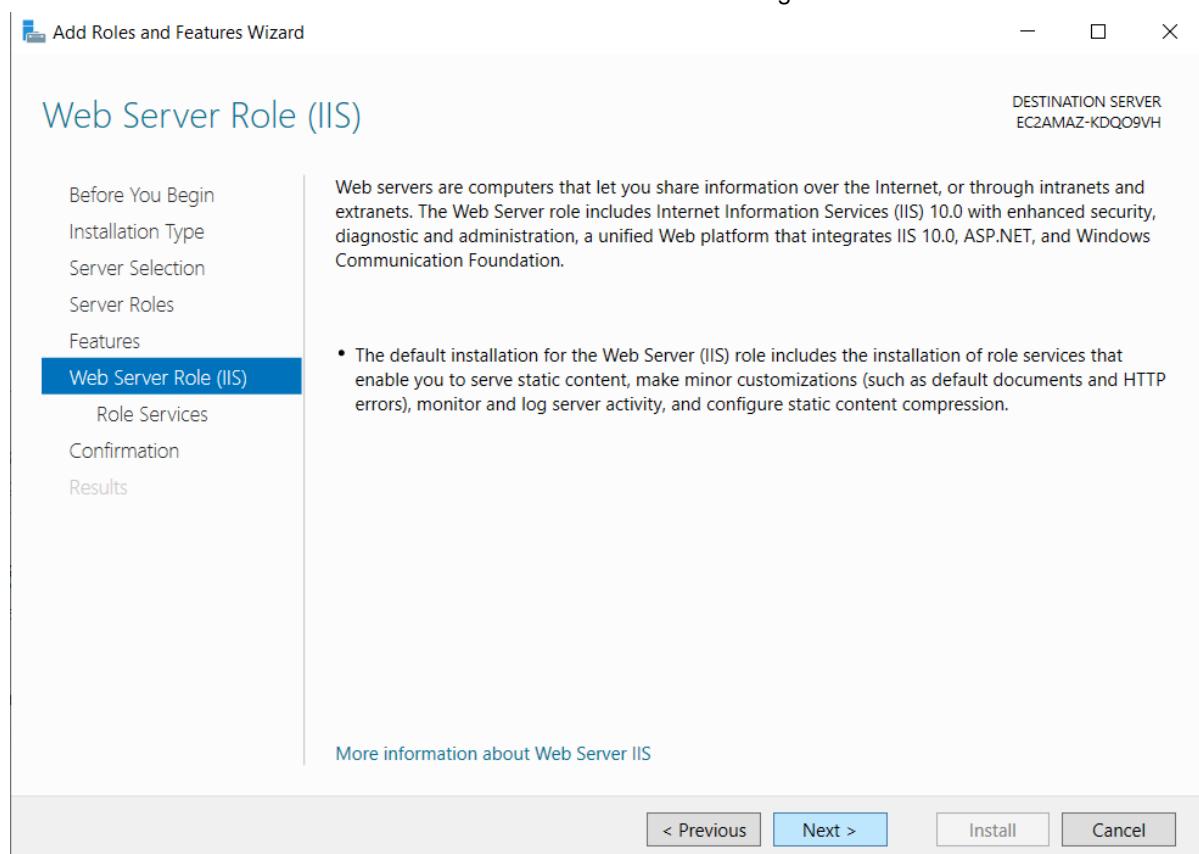
8. Click on the **Add features** in the above screen. This action brings the below screen.



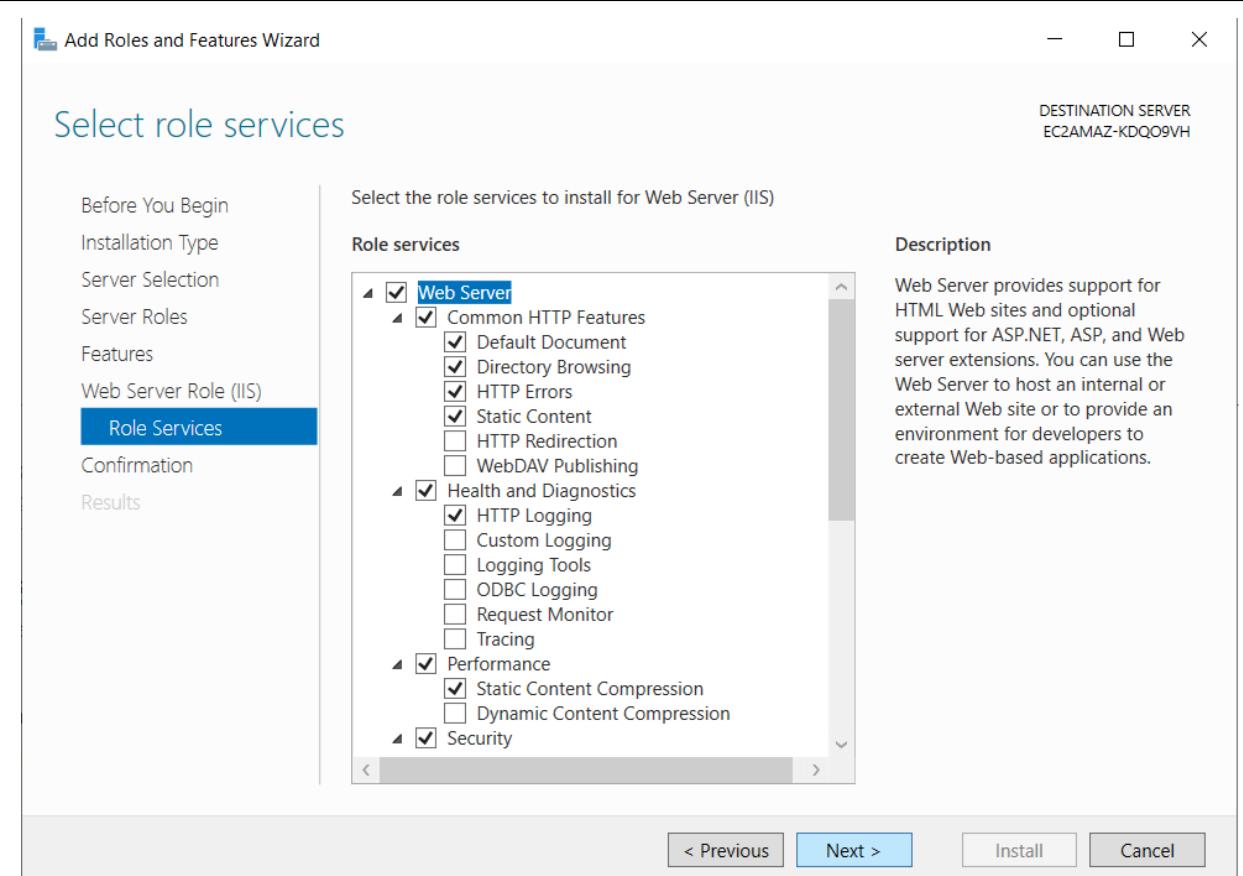
9. Click on the **Next** button in the above screen. This action brings the below screen.



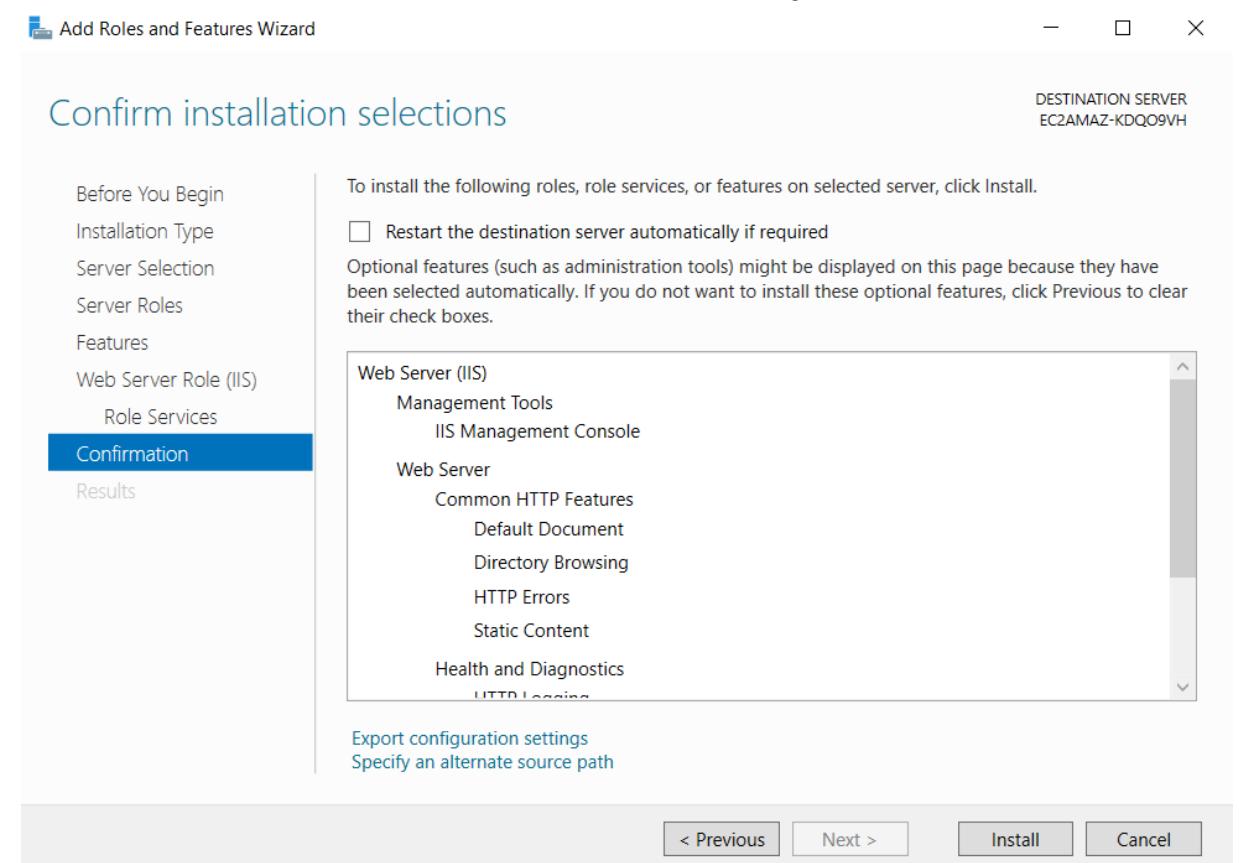
10. Click on the **Next** button in the above screen. This action brings the below screen.



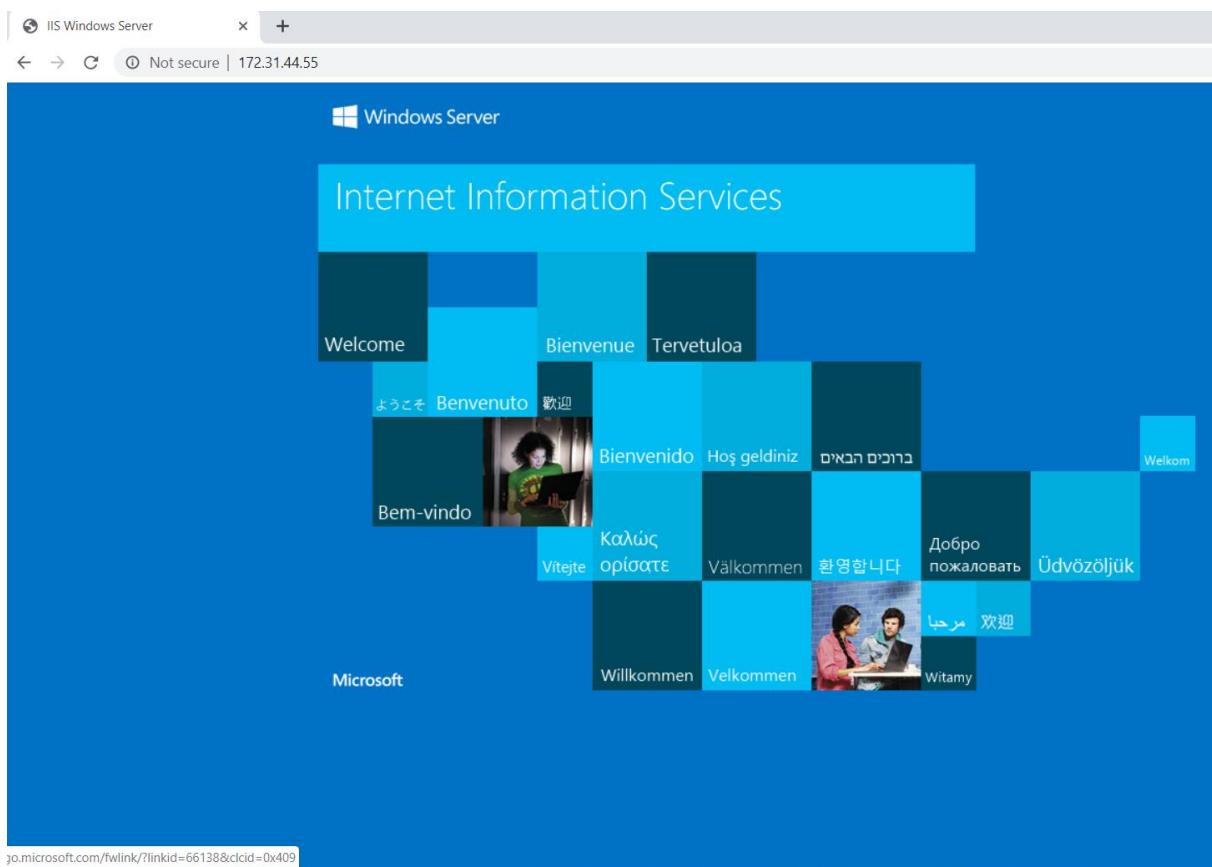
11. Click on the **Next** button in the above screen. This action brings the below screen



12. Click on the **Next** button in the above screen. This action brings the below screen



13. Click on the **Install** button, this action **start installing the IIS**.  
 14. In the **Server Machine**, (Not in your Laptop or desktop), type the **Public IP** in Google Chrome Web Browser. This action brings the below screen.



### Program Output

What you learnt from this program?

### ❖ Lab Program 03

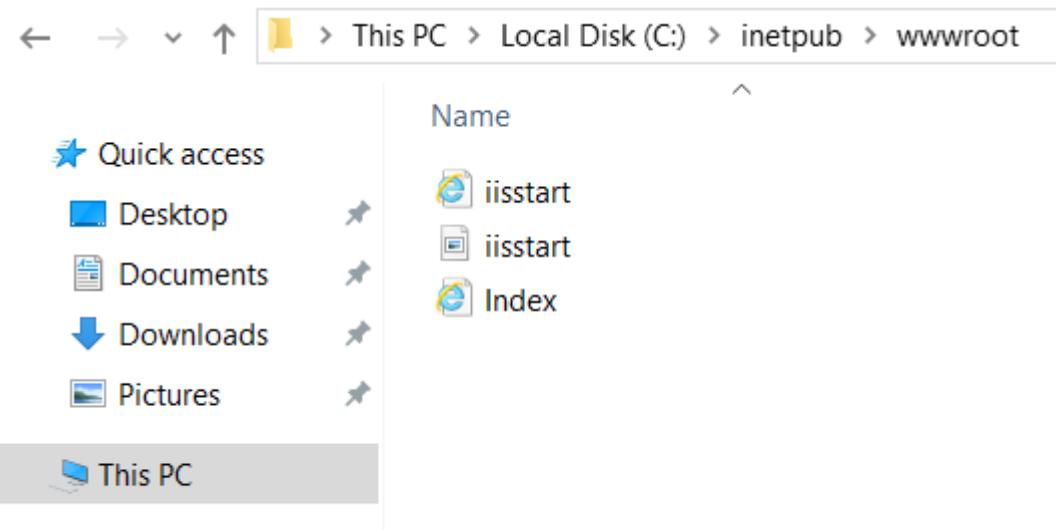
1. Create a new file called Index.html in the local machine. Type the below contents.

```
1  <!DOCTYPE html>
2  
3  
4  
5  Welcome to AWS
6  
7
8  
9  

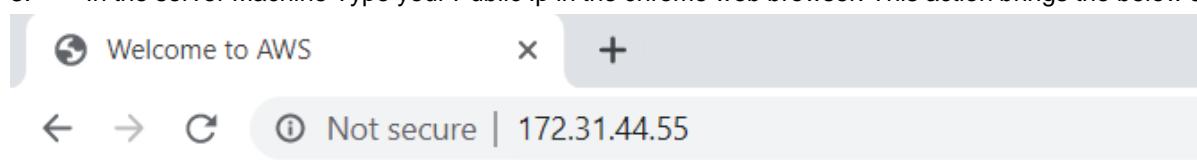
# My AWS Certified Cloud Practitioner


10 
11
12 </html>
```

2. Copy the index.html file from your local machine to Server machine in C:\inetpub\wwwroot folder like below.



3. In the server Machine Type your Public Ip in the chrome web browser. This action brings the below screen.



## My AWS Certified Cloud Practitioner

4. In your local machine type the Public IP in the web browser and check.

### Program Output

### What you learnt from this program?



## ❖ Lab Program 04

1. Go the **EC2 Console**. Click on the **Instances** in the left hand side menu. This action brings the below screen.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name
i-024450a43bd6350...	t2.micro	ap-south-1a	running	2/2 checks ...	None		ec2-13-235-0-102.ap.s...	13.235.0.102	-	MyKey
<b>i-0557cad2be49f46f8</b>	<b>t2.micro</b>	<b>ap-south-1a</b>	<b>running</b>	<b>2/2 checks ...</b>	<b>None</b>		<b>ec2-13-233-166-4.ap.s...</b>	<b>13.233.166.4</b>		<b>MyKeyPair</b>
i-0cc4f2fb22cf682a9	t2.micro	ap-south-1b	running	2/2 checks ...	None		ec2-13-127-185-193.ap...	13.127.185.193	-	WisenWordPr...

Instance: **i-0557cad2be49f46f8**      Public DNS: **ec2-13-233-166-4.ap-south-1.compute.amazonaws.com**

Description    Status Checks    Monitoring    Tags

Instance ID: i-0557cad2be49f46f8  
 Instance state: running  
 Instance type: t2.micro  
 Elastic IPs: ap-south-1a  
 Availability zone: ap-south-1a  
 Security groups: launch-wizard-4, view inbound rules, view outbound rules  
 Scheduled events: No scheduled events  
 AMI ID: Windows\_Server-2019-English-Full-Base-2019.06.12 (ami-05941fa1ddfa830d3)  
 Platform: windows  
 IAM role: -

Public DNS (IPv4): ec2-13-233-166-4.ap-south-1.compute.amazonaws.com  
 IPv4 Public IP: 13.233.166.4  
 IPv6 IPs: -  
 Private DNS: ip-172-31-47-187.ap-south-1.compute.internal  
 Private IPs: 172.31.47.187  
 Secondary private IPs: vpc-98e4d7f0  
 VPC ID: subnet-3a7e2652  
 Subnet ID: eth0  
 Network interfaces: eth0  
 Source/dest. check: True

2. Note down the **IPV4 Public IP** in the above screen.

3. In the **security group** click on the **first Hyperlink**. This action brings the below screen.

Name	Group ID	Group Name	VPC ID	Owner	Description
sg-00ccb9f0660ad3d6c	launch-wizard-4	vpc-98e4d7f0	282378965462		launch-wizard-4 created 2019-07-12T06:01:10.808+05:30

Security Group: **sg-00ccb9f0660ad3d6c**

Description    Inbound    Outbound    Tags

Group name: launch-wizard-4  
 Group ID: sg-00ccb9f0660ad3d6c

Group description: launch-wizard-4 created 2019-07-12T06:01:10.808+05:30  
 VPC ID: vpc-98e4d7f0

4. Click on the **Inbound Tab**. This action brings the below screen.

The screenshot shows the AWS EC2 Security Groups page. On the left sidebar, under 'NETWORK & SECURITY', 'Security Groups' is selected. In the main content area, a table lists a single security group:

Name	Group ID	Group Name	VPC ID	Owner	Description
sg-0ccb9f0f660ad3d6c	sg-0ccb9f0f660ad3d6c	launch-wizard-4	vpc-98e4d7f0	282378965462	launch-wizard-4 created 2019-07-12T06:01:10.808+05:30

Below the table, there is a detailed view of the security group 'sg-0ccb9f0f660ad3d6c'. The 'Inbound' tab is selected, showing one rule:

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	0.0.0.0/0	

5. Click on the Edit button in the above screen. This action brings the below screen.

The screenshot shows the 'Edit inbound rules' dialog box. It displays two rules:

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
RDP	TCP	3389	0.0.0.0/0	

An 'Add Rule' button is visible at the bottom left of the dialog. A note at the bottom states: 'NOTE: Any edits made on existing rules will result in the edited rule being deleted and a new rule created with the new details. This will cause traffic that depends on that rule to be dropped for a very brief period of time until the new rule can be created.'

6. Click on the Add Rule Button, this action brings the below screen.

The screenshot shows the 'Edit inbound rules' dialog box after adding a new rule. It now contains three rules:

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom TCP F	TCP	0	Custom CIDR, IP or Security Group	e.g. SSH for Admin Desktop
RDP	TCP	3389	0.0.0.0/0	

7. Click on the Type drop down Button, this action brings the below screen

**8. Select on the HTTP option, this action brings the below screen**

**9. Click on the Source drop down Button, this action brings the below screen**

**10. Select on the Anywhere option, this action brings the below screen**

The screenshot shows the AWS EC2 Dashboard with the 'Security Groups' section selected. A modal window titled 'Edit inbound rules' is open, displaying two rules:

- Type: RDP, Protocol: TCP, Port Range: 3389, Source: 0.0.0.0/0, Description: e.g. SSH for Admin Desktop
- Type: HTTP, Protocol: TCP, Port Range: 80, Source: Anywhere (0.0.0.0/0), Description: e.g. SSH for Admin Desktop

A note at the bottom of the modal says: "NOTE: Any edits made on existing rules will result in the edited rule being deleted and a new rule created with the new details. This will cause traffic that depends on that rule to be dropped for a very brief period of time until the new rule can be created."

11. Click on the **Save** Button, this action brings the below screen

The screenshot shows the AWS EC2 Dashboard with the 'Security Groups' section selected. The 'Inbound' tab is active in the security group configuration panel. The rules listed are:

- Type: HTTP, Protocol: TCP, Port Range: 80, Source: 0.0.0.0/0
- Type: RDP, Protocol: TCP, Port Range: 3389, Source: 0.0.0.0/0

12. Type the Public IP in the local machine web browser and check

### Program Output

**What you learnt from this program?**

## ❖ Lab Program 05

1. Go to **EC2 Console**. This action brings the below screen

The screenshot shows the AWS EC2 Dashboard. On the left, a sidebar lists various services: EC2 Dashboard, Events, Tags, Reports, Limits, Instances (Instances, Launch Templates, Spot Requests, Reserved Instances, Dedicated Hosts, Capacity Reservations), Images (AMIs, Bundle Tasks), Elastic Block Store (Volumes, Snapshots, Lifecycle Manager), and Network & Security (Security Groups, Elastic IPs). The main panel displays resource counts: 1 Running Instances, 0 Dedicated Hosts, 1 Volumes, 2 Key Pairs, 0 Placement Groups, 0 Elastic IPs, 0 Snapshots, 0 Load Balancers, and 8 Security Groups. A message at the bottom encourages learning about the latest in AWS Compute from re:Invent. Below this is a 'Create Instance' section with a 'Launch Instance' button.

2. In the above screen, Click on the **Launch Instance** Button. This action brings the below screen.

The screenshot shows the 'Step 1: Choose an Amazon Machine Image (AMI)' wizard. The top navigation bar includes links for 'Choose AMI', 'Choose Instance Type', 'Configure Instance', 'Add Storage', 'Add Tags', 'Configure Security Group', and 'Review'. The main area is titled 'Step 1: Choose an Amazon Machine Image (AMI)'. It explains that an AMI is a template containing software configuration required to launch an instance. A search bar is available to find specific AMIs. The results list several options under 'Quick Start': 'Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0d2692b6acea72ee6' (Free tier eligible), 'Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-0b99c7725b948f9e' (Free tier eligible), 'Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-0a74bfeb190bd404f' (Free tier eligible), and 'SUSE Linux Enterprise Server 15 SP1 (HVM), SSD Volume Type - ami-0a05dcad6f9c8ad87' (Free tier eligible). Each item has a 'Select' button to the right.

3. In the above screen, Click on the **AWS Marketplace** Button. This action brings the below screen.

The screenshot shows the 'Choose an AMI' step of the AWS Launch Instance Wizard. At the top, there's a navigation bar with back, forward, and search icons, and the URL <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>. Below the navigation is a breadcrumb trail: 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.

A search bar at the top right says "Search for an AMI by entering a search term e.g. "Windows"".

The left sidebar has sections: Quick Start, My AMIs, AWS Marketplace (selected), Community AMIs, Categories (All Categories, Infrastructure Software (1908), DevOps (1551), Business Applications (618), Industries (165)), and Popular Software.

The main area features the "aws marketplace" logo and a heading "Find and buy software that runs in the AWS Cloud, software from trusted vendors like SAP, Zend, Microsoft, as well as many open source offerings. Marketplace AMI products. View Marketplace products you are currently subscribed to by visiting Your Software in the AWS Marketplace." It lists several products:

- Barracuda CloudGen Firewall for AWS - Rating: ★★★★☆, By Barracuda Networks, Inc. Starting from \$0.60/hr or from \$4,599/yr (12% savings) for software.
- JUNIPER NETWORKS vSRX Next Generation Firewall - Rating: ★★★★☆, By Juniper Networks. Starting from \$0.55/hr or \$2,280/yr (53% savings) for software.
- MATILLION Matillion ETL for Amazon Redshift - Rating: ★★★★☆, By Matillion. Starting from \$1.37/hr or from \$9,950/yr (17% savings) for software.
- TREND MICRO Trend Micro Deep Security - Rating: ★★★★☆, By Trend Micro. Starting from \$0.01 per host/hr for software usage.

4. In the above screen, **Type on the Workd Press** in search textbox. This action brings the below screen.

The screenshot shows the AWS Marketplace search results for "wordpress". The search bar at the top contains "wordpress". The left sidebar is identical to the previous screenshot. The main area shows three search results:

- WordPress Certified by Bitnami and Automattic**: Rating: ★★★★☆ (113), 5.2.1-0 on Ubuntu 16.04 Previous versions | By Bitnami. \$0.00/hr for software + AWS usage fees. Linux/Unix, Ubuntu 16.04 | 64-bit (x86) Amazon Machine Image (AMI) | Updated: 6/17/19. Bitnami, the leaders in application packaging, and Automattic, the experts behind WordPress, have teamed up to offer this official WordPress image on AWS Marketplace. WordPress ...
- WordPress Multisite Certified by Bitnami and Automattic**: Rating: ★★★★☆ (23), 5.2.1-0 on Ubuntu 16.04 Previous versions | By Bitnami. \$0.00/hr for software + AWS usage fees. Linux/Unix, Ubuntu 16.04 | 64-bit (x86) Amazon Machine Image (AMI) | Updated: 6/17/19. Bitnami, the leaders in application packaging, and Automattic, the experts behind WordPress, have teamed up to offer this official WordPress image on AWS Marketplace. WordPress ...
- WordPress with NGINX and SSL Certified by Bitnami and Automattic**: Rating: ★★★★☆ (2), 5.2.1-0 on Ubuntu 16.04 Previous versions | By Bitnami.

Each result has a "Select" button on the right. A page navigation bar at the bottom right shows "Cancel and Exit", "1 to 25 of 122 Products", and arrows for navigation.

5. In the above screen, **Click on the Select Button in Wordpress Certified by Bitnami and Automatic Row.** This action brings the below screen.

**WordPress Certified by Bitnami and Automatic**

 <b>Free tier eligible</b>	<p><b>WordPress Certified by Bitnami and Automatic</b></p> <p>Bitnami, the leaders in application packaging, and Automatic, the experts behind WordPress, have teamed up to offer this official WordPress image on AWS Marketplace.</p> <p>WordPress is the world's most popular content management platform. Whether it's for an enterprise or small business website, or a personal or corporate blog, content authors can ...</p> <p style="text-align: right;"><a href="#">More info</a></p> <p><a href="#">View Additional Details in AWS Marketplace</a></p>	<p><b>Pricing Details</b></p> <p><b>Hourly Fees</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Instance Type</th> <th>Software</th> <th>EC2</th> <th>Total</th> </tr> </thead> <tbody> <tr><td>t2.nano</td><td>\$0.00</td><td>\$0.006</td><td><b>\$0.006/hr</b></td></tr> <tr><td>t2.micro</td><td>\$0.00</td><td>\$0.012</td><td><b>\$0.012/hr</b></td></tr> <tr><td>t2.small</td><td>\$0.00</td><td>\$0.025</td><td><b>\$0.025/hr</b></td></tr> <tr><td>t2.medium</td><td>\$0.00</td><td>\$0.05</td><td><b>\$0.05/hr</b></td></tr> <tr><td>t2.large</td><td>\$0.00</td><td>\$0.099</td><td><b>\$0.099/hr</b></td></tr> <tr><td>t2.xlarge</td><td>\$0.00</td><td>\$0.198</td><td><b>\$0.198/hr</b></td></tr> <tr><td>t2.2xlarge</td><td>\$0.00</td><td>\$0.397</td><td><b>\$0.397/hr</b></td></tr> <tr><td>t3.nano</td><td>\$0.00</td><td>\$0.006</td><td><b>\$0.006/hr</b></td></tr> <tr><td>t3.micro</td><td>\$0.00</td><td>\$0.011</td><td><b>\$0.011/hr</b></td></tr> <tr><td>t3.small</td><td>\$0.00</td><td>\$0.022</td><td><b>\$0.022/hr</b></td></tr> <tr><td>t3.medium</td><td>\$0.00</td><td>\$0.045</td><td><b>\$0.045/hr</b></td></tr> <tr><td>t3.large</td><td>\$0.00</td><td>\$0.09</td><td><b>\$0.09/hr</b></td></tr> <tr><td>t3.xlarge</td><td>\$0.00</td><td>\$0.179</td><td><b>\$0.179/hr</b></td></tr> <tr><td>t3.2xlarge</td><td>\$0.00</td><td>\$0.358</td><td><b>\$0.358/hr</b></td></tr> <tr><td>m5d.large</td><td>\$0.00</td><td>\$0.122</td><td><b>\$0.122/hr</b></td></tr> <tr><td>m5d.xlarge</td><td>\$0.00</td><td>\$0.244</td><td><b>\$0.244/hr</b></td></tr> <tr><td>m5d.2xlarge</td><td>\$0.00</td><td>\$0.488</td><td><b>\$0.488/hr</b></td></tr> <tr><td>m5d.4xlarge</td><td>\$0.00</td><td>\$0.976</td><td><b>\$0.976/hr</b></td></tr> </tbody> </table>	Instance Type	Software	EC2	Total	t2.nano	\$0.00	\$0.006	<b>\$0.006/hr</b>	t2.micro	\$0.00	\$0.012	<b>\$0.012/hr</b>	t2.small	\$0.00	\$0.025	<b>\$0.025/hr</b>	t2.medium	\$0.00	\$0.05	<b>\$0.05/hr</b>	t2.large	\$0.00	\$0.099	<b>\$0.099/hr</b>	t2.xlarge	\$0.00	\$0.198	<b>\$0.198/hr</b>	t2.2xlarge	\$0.00	\$0.397	<b>\$0.397/hr</b>	t3.nano	\$0.00	\$0.006	<b>\$0.006/hr</b>	t3.micro	\$0.00	\$0.011	<b>\$0.011/hr</b>	t3.small	\$0.00	\$0.022	<b>\$0.022/hr</b>	t3.medium	\$0.00	\$0.045	<b>\$0.045/hr</b>	t3.large	\$0.00	\$0.09	<b>\$0.09/hr</b>	t3.xlarge	\$0.00	\$0.179	<b>\$0.179/hr</b>	t3.2xlarge	\$0.00	\$0.358	<b>\$0.358/hr</b>	m5d.large	\$0.00	\$0.122	<b>\$0.122/hr</b>	m5d.xlarge	\$0.00	\$0.244	<b>\$0.244/hr</b>	m5d.2xlarge	\$0.00	\$0.488	<b>\$0.488/hr</b>	m5d.4xlarge	\$0.00	\$0.976	<b>\$0.976/hr</b>
Instance Type	Software	EC2	Total																																																																											
t2.nano	\$0.00	\$0.006	<b>\$0.006/hr</b>																																																																											
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t3.medium	\$0.00	\$0.045	<b>\$0.045/hr</b>																																																																											
t3.large	\$0.00	\$0.09	<b>\$0.09/hr</b>																																																																											
t3.xlarge	\$0.00	\$0.179	<b>\$0.179/hr</b>																																																																											
t3.2xlarge	\$0.00	\$0.358	<b>\$0.358/hr</b>																																																																											
m5d.large	\$0.00	\$0.122	<b>\$0.122/hr</b>																																																																											
m5d.xlarge	\$0.00	\$0.244	<b>\$0.244/hr</b>																																																																											
m5d.2xlarge	\$0.00	\$0.488	<b>\$0.488/hr</b>																																																																											
m5d.4xlarge	\$0.00	\$0.976	<b>\$0.976/hr</b>																																																																											
		<a href="#">Cancel</a> <a href="#">Continue</a>																																																																												

6. In the above screen, **Click on the Continue Button**. This action brings the below screen.

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 vCPU, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)							
Note: The vendor recommends using a t3a.small instance (or larger) for the best experience with this product.							
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	<b>t2.micro</b> <small>Free tier eligible</small>	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
<input type="checkbox"/> General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/> General purpose	t3.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

7. In the above screen, **Click on the Review and Launch Button**. This action brings the below screen.

Note: Make sure **Free Tier** is selected.

← → 🔍 https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#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 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.

**AMI Details**

<input checked="" type="checkbox"/>  <b>WordPress Certified by Bitnami and Automatic</b>	This image may not be the latest version available and might include security vulnerabilities. Please check the latest, up-to-date, available version at <a href="https://bitnami.com/stacks">https://bitnami.com/stacks</a> .
Root Device Type: ebs	Virtualization type: hvm

Hourly Software Fees: \$0.00 per hour on t2.micro instance. Additional taxes or fees may apply.  
Software charges will begin once you launch this AMI and continue until you terminate the instance.

By launching this product, you will be subscribed to this software and agree that your use of this software is subject to the pricing terms and the seller's End User License Agreement.

**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**

Security group name: WordPress Certified by Bitnami and Automatic-5-2-1-0 on Ubuntu 16-04-AutogenByAWSMP-1	Description: This security group was generated by AWS Marketplace and is based on recommended settings for WordPress Certified by Bitnami and Automatic version 5.2.1-0 on Ubuntu 16.04 provided by Bitnami
--	---

Edit instance type Edit security groups Cancel Previous Launch

8. In the above screen, **Click on the Launch Button**. This action brings the below screen.

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.

**AMI Details**

WordPress Certified by Bitnami and Automatic This image may not be the latest version available and might include security updates. Root Device Type: ebs Virtualization type: hvm

Hourly Software Fees: \$0.00 per hour on t2.micro instance. Actual Software charges will begin once you launch this AMI and continue until you terminate it.

By launching this product, you will be subscribed to this software's End User License Agreement.

**Instance Type**

Instance Type	ECUs	vCPUs	Memory (GiB)
t2.micro	Variable	1	1

**Security Groups**

Security group name	Description
WordPress Certified by Bitnami and Automatic-5.2.1-0 on Ubuntu 16-04-AutogenByAWSMP-1	This security group was generated by AWS Marketplace and is based on recommended settings for WordPress Certified by Bitnami and Automatic version 5.2.1-0 on Ubuntu 16.04 provided by Bitnami

**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](#).

Choose an existing key pair  
Select a key pair  
MyKey

I acknowledge that I have access to the selected private key file (MyKey.pem), and that without this file, I won't be able to log into my instance.

**Cancel** **Launch Instances**

9. In the above screen, Click on the First Dropdown and select Create a new Keyvalue pair. And type **WisenWordPressKeyPair** in the Key pair name field. This action brings the below screen.

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.

**AMI Details**

WordPress Certified by Bitnami and Automatic This image may not be the latest version available and might include security updates. Root Device Type: ebs Virtualization type: hvm

Hourly Software Fees: \$0.00 per hour on t2.micro instance. Actual Software charges will begin once you launch this AMI and continue until you terminate it.

By launching this product, you will be subscribed to this software's End User License Agreement.

**Instance Type**

Instance Type	ECUs	vCPUs	Memory (GiB)
t2.micro	Variable	1	1

**Security Groups**

Security group name	Description
WordPress Certified by Bitnami and Automatic-5.2.1-0 on Ubuntu 16.04 provided by Bitnami	This security group was generated by AWS Marketplace and is based on recommended settings for WordPress Certified by Bitnami and Automatic version 5.2.1-0 on Ubuntu 16.04 provided by Bitnami

**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  
WisenWordPressKeyPair

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**

10. In the above screen, Click on the Download Key Pair Button..

Note: Save the .pem file safely.

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.

**AMI Details**

WordPress Certified by Bitnami and Automatic This image may not be the latest version available and might include security updates. Root Device Type: ebs Virtualization type: hvm

Hourly Software Fees: \$0.00 per hour on t2.micro instance. Actual Software charges will begin once you launch this AMI and continue until you terminate it.

By launching this product, you will be subscribed to this software's End User License Agreement.

**Instance Type**

Instance Type	ECUs	vCPUs	Memory (GiB)
t2.micro	Variable	1	1

**Security Groups**

Security group name	Description
WordPress Certified by Bitnami and Automatic-5.2.1-0 on Ubuntu 16.04 provided by Bitnami	This security group was generated by AWS Marketplace and is based on recommended settings for WordPress Certified by Bitnami and Automatic version 5.2.1-0 on Ubuntu 16.04 provided by Bitnami

**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  
WisenWordPressKeyPair

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**

11. In the above screen, Click on the Launch Instance Button. This action brings the below screen.

The screenshot shows the AWS EC2 Launch Status page. It displays a green checkmark icon and the message "Your instances are now launching". Below this, it says "The following instance launches have been initiated: i-0cc4f2fb22cf682a9" and provides a link to "View launch log". There is also a note about getting notified of estimated charges.

12. In the above screen, Click on the Hyperlink before View launch log. This action brings the below screen.

The screenshot shows the AWS EC2 Instances page. It lists a single instance named "i-0cc4f2fb22cf682a9" which is currently "running". The instance type is "t2.micro" and it is located in the "ap-south-1b" availability zone. The public DNS is "ec2-13-127-185-193.ap-south-1.compute.amazonaws.com". The instance was launched via "WordPress Certified by Bitnami and Automattic 5.2-1-0 on Ubuntu 16-04-AutogenByAWSMP-1". The VPC ID is "vpc-98e4d7f0" and the subnet ID is "subnet-dbde5797".

13. In the above screen, Security Group on the First Hyperlink. This action brings the below screen.

The screenshot shows the AWS Security Groups page. It displays a single security group named "sg-06af463620036beef" which was generated by "WordPress Certified by Bitnami and Automattic 5.2-1-0 on Ubuntu 16-04-AutogenByAWSMP-1". The security group has an "Inbound" tab selected, showing the group name and group ID.

14. In the above screen, Click on the Inbound Tab. This action brings the below screen.

The screenshot shows the AWS EC2 Dashboard with the 'Security Groups' section selected. A table lists a single security group named 'sg-06af4636200368eef'. The 'Inbound' tab is selected, showing three rules: HTTP (TCP port 80), SSH (TCP port 22), and HTTPS (TCP port 443). The 'Edit' button is located at the top left of the rule table.

15. In the above screen, Click on the **Edit** Button. This action brings the below screen.

The screenshot shows the 'Edit inbound rules' dialog box. In the 'Source' column for the SSH rule, the 'Custom' dropdown is open, revealing options like 'Anywhere', 'My IP', and 'Custom'. The 'Save' button is visible at the bottom right of the dialog.

16. In the above screen, Click on the **Source Dropdown and select Anywhere**. This action brings the below screen.

The screenshot shows the 'Edit inbound rules' dialog box with the 'Source' dropdown for the SSH rule set to 'Anywhere'. The 'Save' button is visible at the bottom right of the dialog.

17. In the above screen, Click on the **Save** Button. This action brings the below screen.

The screenshot shows the AWS EC2 Security Groups page. On the left, there's a navigation sidebar with links like EC2 Dashboard, Events, Tags, Reports, Limits, INSTANCES, AMIs, ELASTIC BLOCK STORE, Volumes, Snapshots, Lifecycle Manager, SECURITY Groups, Elastic IPs, and Placement Groups. The main content area has a search bar at the top. Below it is a table with columns: Name, Group ID, Group Name, VPC ID, Owner, and Description. One row is selected, showing Group ID: sg-06af4636200368eef, Group Name: WordPress Certified by Bitnami, VPC ID: vpc-98e4d7f0, Owner: 282378965462, and Description: This security group was generated by AWS Marketplace and is based on recommended settings. Below the table, a section titled "Security Group: sg-06af4636200368eef" shows the inbound rules. There are four rules listed: HTTP (TCP port 80 from 0.0.0.0/0), HTTP (TCP port 80 from ::/0), SSH (TCP port 22 from 0.0.0.0/0), and HTTPS (TCP port 443 from 0.0.0.0/0). At the bottom of the page, there are links for Feedback, English (US), and a footer with copyright information.

## 18. Go to EC2 console.

Note down the Public IP.

The screenshot shows the AWS EC2 Instances page. The left sidebar is identical to the previous screenshot. The main content area shows a table of instances. One instance is selected, highlighted with a blue border: i-0cc4f2fb22cf682a9, which is a t2.micro instance running in ap-south-1a. Its public DNS is ec2-13-127-185-193.ap-south-1.compute.amazonaws.com and its public IP is 13.127.185.193. Other instances listed include i-024450a438d6350... (terminated) and i-09b005a0054ec44... (terminated).

## 19. Type the public IP in the any web browser from anywhere. This action brings the below screen.

The screenshot shows a web browser window with the URL 13.127.185.193. The page title is "user's Blog! — Just another WordPress site". The main content features a large heading "Hello world!". Below it, a paragraph says "Welcome to WordPress. This is your first post. Edit or delete it, then start writing!". At the bottom, there's a footer with "user" and "May 21, 2019" and a "Recent Posts" section. The browser's address bar shows the public IP 13.127.185.193.

## 20. Go to EC2 console.

EC2 Dashboard  
Events  
Tags  
Reports  
Limits  
**INSTANCES**  
Instances  
Launch Templates  
Spot Requests  
Reserved Instances  
Dedicated Hosts  
Capacity Reservations  
**IMAGES**  
AMIs  
Bundle Tasks  
**ELASTIC BLOCK STORE**  
Volumes  
Snapshots  
Lifecycle Manager  
**NETWORK & SECURITY**  
Security Groups  
Elastic IPs  
Placement Groups

Instance: i-0cc4f2fb22cf682a9 Public DNS: ec2-13-127-185-193.ap-south-1.compute.amazonaws.com

Description	Status Checks	Monitoring	Tags	Usage Insights
Instance ID: i-0cc4f2fb22cf682a9	Instance state: running	Elastic IP: t2.micro	Availability zone: ap-south-1b	WordPress Certified by Bitnami and Automatic 5.2-1-0 on Ubuntu 16-04-AutogenByAWSMP-1. view inbound rules. view outbound rules
Scheduled events	AMI ID: bitnami-wordpress-5.2.1-0-linu... (ami-0419af8ff0d3fd66e)			No scheduled events
Platform				VPC ID: vpc-98e4d7f0 Subnet ID: subnet-dbd65797

Public DNS (IPv4): ec2-13-127-185-193.ap-south-1.compute.amazonaws.com  
IPv6 Public IP: 13.127.185.193  
IPv6 IPs: -  
Private DNS: ip-172-31-3-240.ap-south-1.compute.internal  
Private IPs: 172.31.3.240  
Secondary private IPs: -

Network Interface: eth0

Feedback English (US)

WisenWordPress.pem TestWordPress.pem mysql-workbench....msi MyKeyPair.pem Show all

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21. In the above screen, Click on the Action -> Instance Settings -> Get System Log option. This action brings the below screen

EC2 Dashboard  
Events  
Tags  
Reports  
Limits  
**INSTANCES**  
Instances  
Launch Templates  
Spot Requests  
Reserved Instances  
Dedicated Hosts  
Capacity Reservations  
**IMAGES**  
AMIs  
Bundle Tasks  
**ELASTIC BLOCK STORE**  
Volumes  
Snapshots  
Lifecycle Manager  
**NETWORK & SECURITY**  
Security Groups  
Elastic IPs  
Placement Groups

Instance: i-0cc4f2fb22cf682a9 Public DNS: ec2-13-127-185-193.ap-south-1.compute.amazonaws.com

Description	Status Checks	Monitoring	Tags	Usage Insights
Instance ID: i-0cc4f2fb22cf682a9	Instance state: running	Elastic IP: t2.micro	Availability zone: ap-south-1b	WordPress Certified by Bitnami and Automatic 5.2-1-0 on Ubuntu 16-04-AutogenByAWSMP-1. view inbound rules. view outbound rules
Scheduled events	AMI ID: bitnami-wordpress-5.2.1-0-linu... (ami-0419af8ff0d3fd66e)			No scheduled events
Platform				VPC ID: vpc-98e4d7f0 Subnet ID: subnet-dbd65797

Public DNS (IPv4): ec2-13-127-185-193.ap-south-1.compute.amazonaws.com  
IPv6 Public IP: 13.127.185.193  
IPv6 IPs: -  
Private DNS: ip-172-31-3-240.ap-south-1.compute.internal  
Private IPs: 172.31.3.240  
Secondary private IPs: -

Network Interface: eth0

Feedback English (US)

WisenWordPress.pem TestWordPress.pem mysql-workbench....msi MyKeyPair.pem Show all

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22. Scroll down and go the line where password is available like below  
Note down the password.

EC2 Dashboard  
Events  
Tags  
Reports  
Limits  
**INSTANCES**  
Instances  
Launch Templates  
Spot Requests  
Reserved Instances  
Dedicated Hosts  
Capacity Reservations  
**IMAGES**  
AMIs  
Bundle Tasks  
**ELASTIC BLOCK STORE**  
Volumes  
Snapshots  
Lifecycle Manager  
**NETWORK & SECURITY**  
Security Groups  
Elastic IPs  
Placement Groups

Instance: i-0cc4f2fb22cf682a9 Public DNS: ec2-13-127-185-193.ap-south-1.compute.amazonaws.com

Description	Status Checks	Monitoring	Tags	Usage Insights
Instance ID: i-0cc4f2fb22cf682a9	Instance state: running	Elastic IP: t2.micro	Availability zone: ap-south-1b	WordPress Certified by Bitnami and Automatic 5.2-1-0 on Ubuntu 16-04-AutogenByAWSMP-1. view inbound rules. view outbound rules
Scheduled events	AMI ID: bitnami-wordpress-5.2.1-0-linu... (ami-0419af8ff0d3fd66e)			No scheduled events
Platform				VPC ID: vpc-98e4d7f0 Subnet ID: subnet-dbd65797

Public DNS (IPv4): ec2-13-127-185-193.ap-south-1.compute.amazonaws.com  
IPv6 Public IP: 13.127.185.193  
IPv6 IPs: -  
Private DNS: ip-172-31-3-240.ap-south-1.compute.internal  
Private IPs: 172.31.3.240  
Secondary private IPs: -

Network Interface: eth0

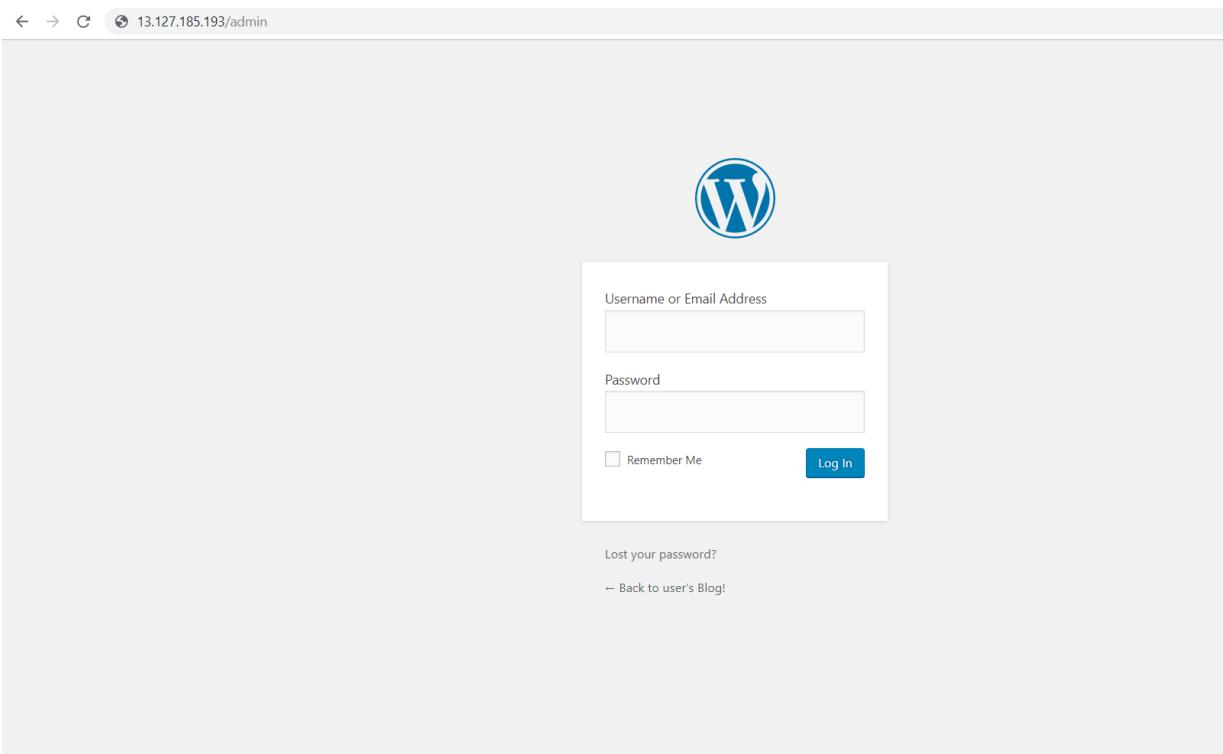
Feedback English (US)

WisenWordPress.pem TestWordPress.pem mysql-workbench....msi MyKeyPair.pem Show all

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23. Type the below URL in the web browser.

<http://<your public ip>/admin>



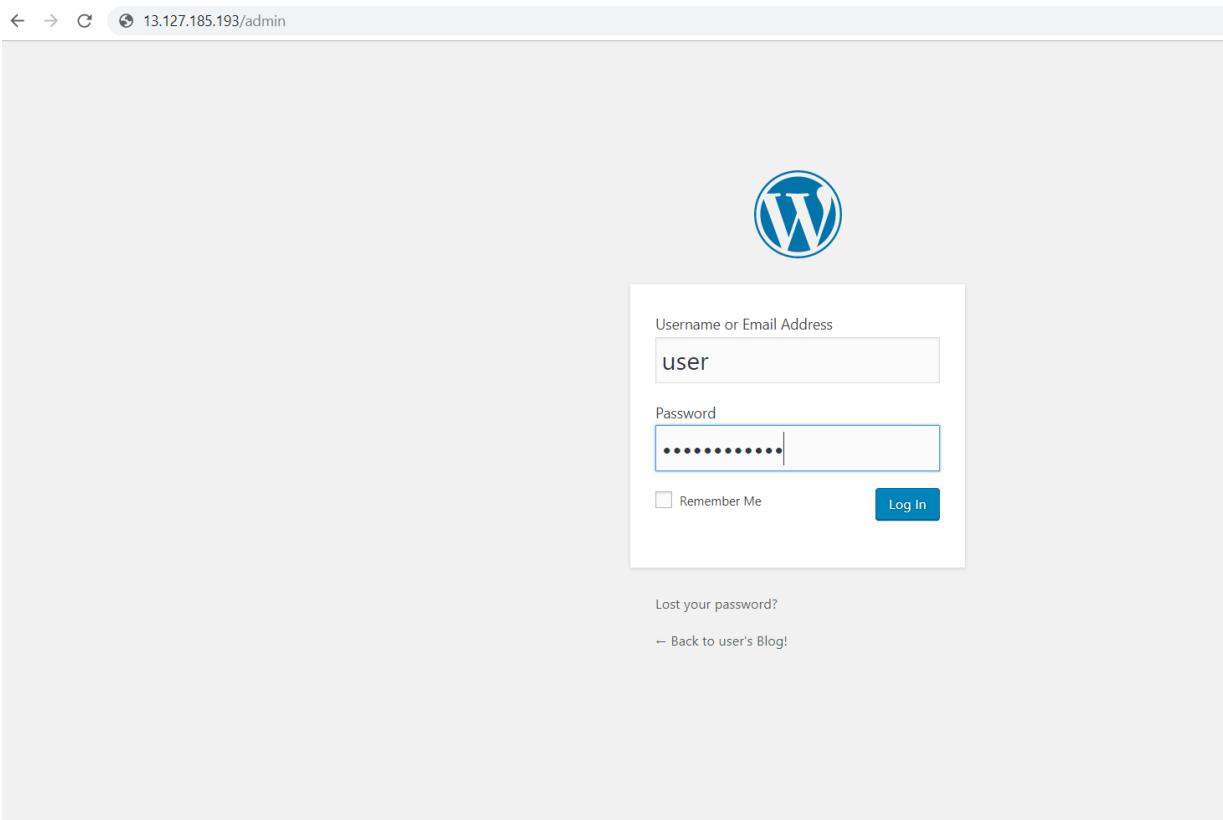
The screenshot shows a WordPress login screen. At the top center is a large blue 'W' logo. Below it is a login form with the following fields:

- Username or Email Address: An empty input field.
- Password: An empty input field.
- Remember Me: A checkbox.
- Log In**: A blue button.

Below the form are two links: "Lost your password?" and "← Back to user's Blog!".

---

24. Enter User and Password (noted in Line No 22)

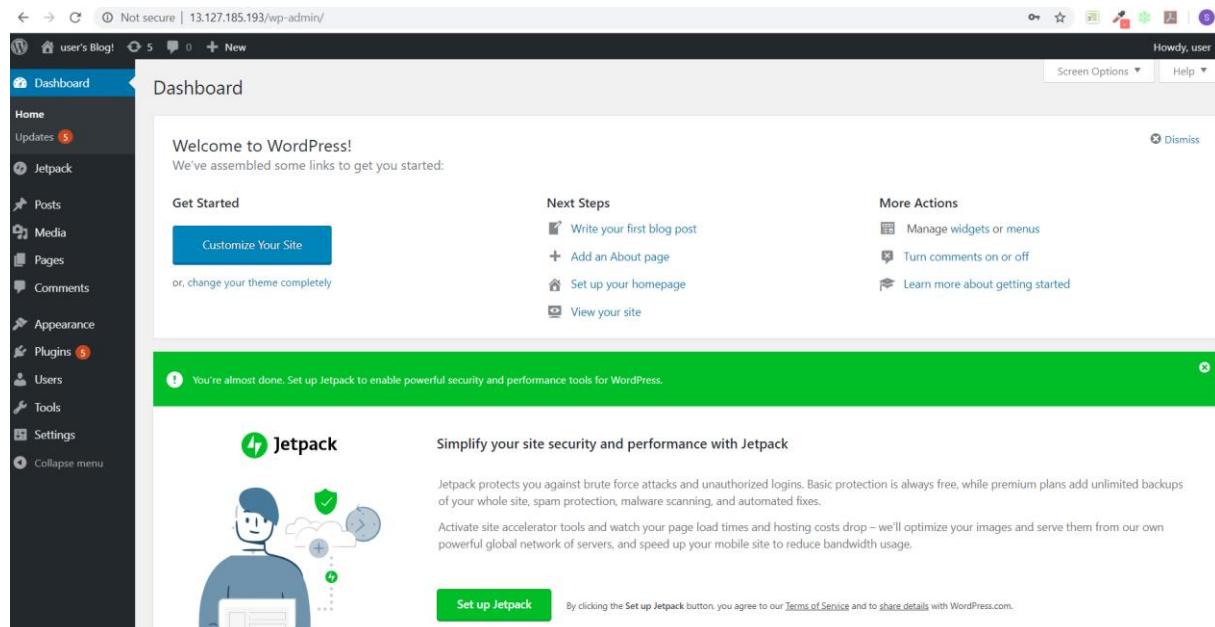


The screenshot shows the same WordPress login screen as above, but with the following changes:

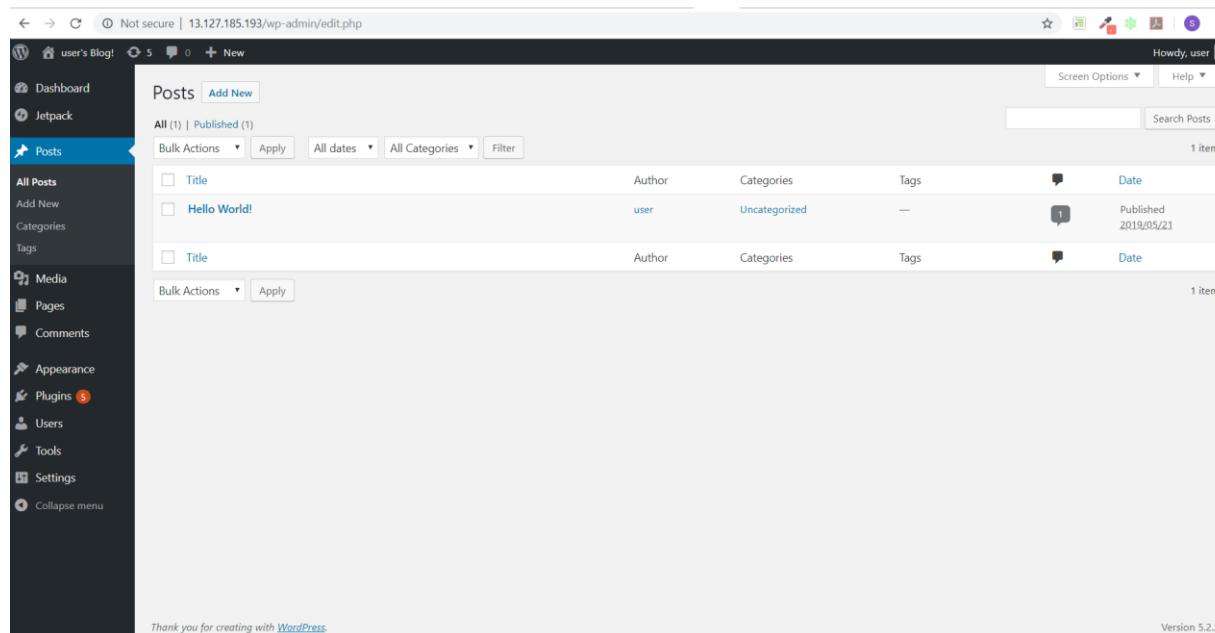
- The "Username or Email Address" field contains the text "user".
- The "Password" field contains a series of dots (".....") indicating a password has been entered.
- The "Remember Me" checkbox is unchecked.
- The "Log In" button is visible.

Below the form are the same two links: "Lost your password?" and "← Back to user's Blog!".

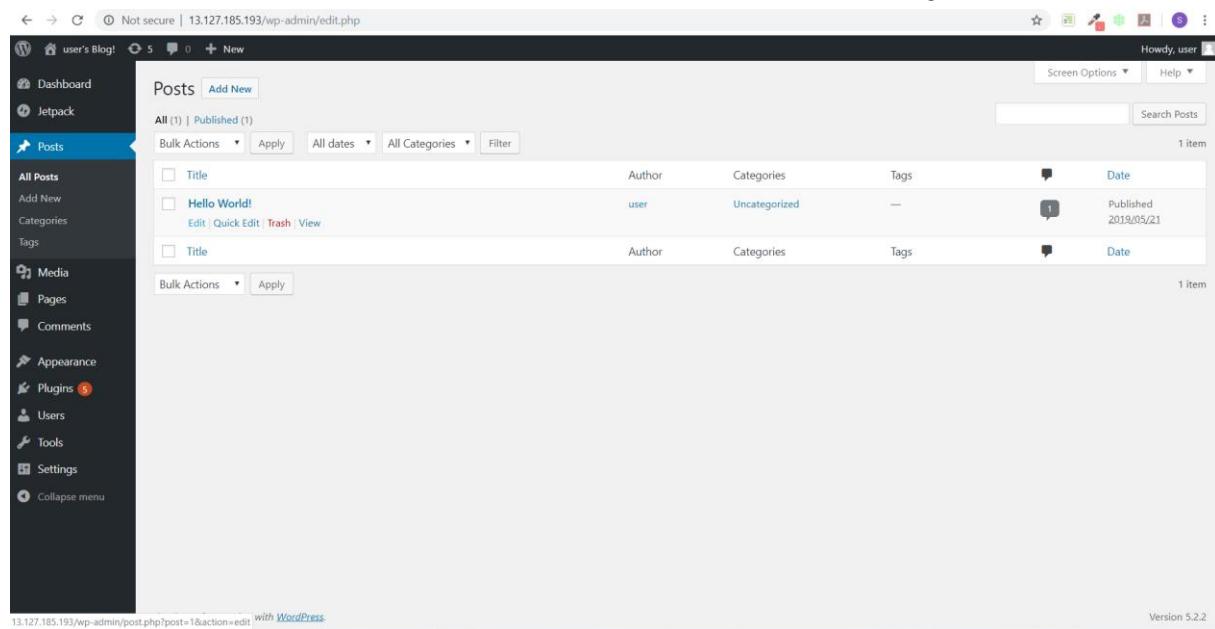
25. In the above screen, **Click on the Log in Button**. This action brings the below screen



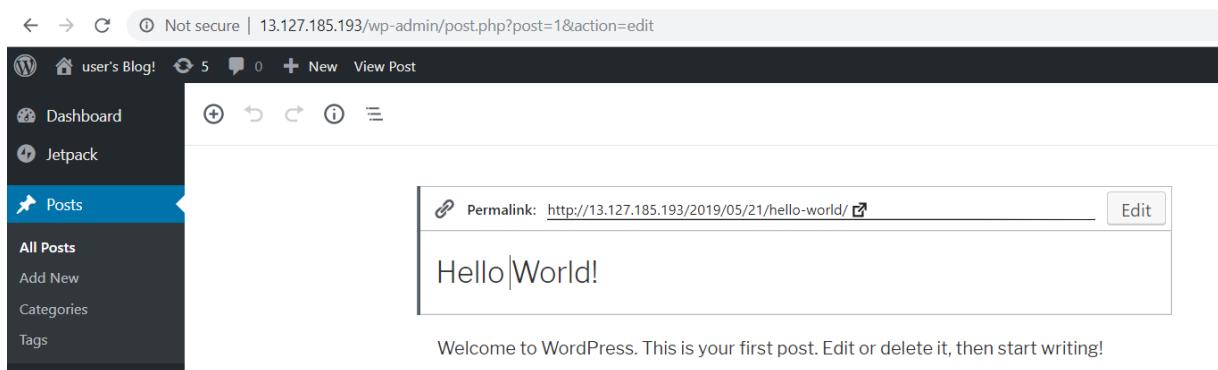
26. In the above screen, Click on the Posts Button. This action brings the below screen



27. In the above screen, Move the Cursor near to Hello World. This action brings the below screen



28. In the above screen, Click on the Edit Button. This action brings the below screen



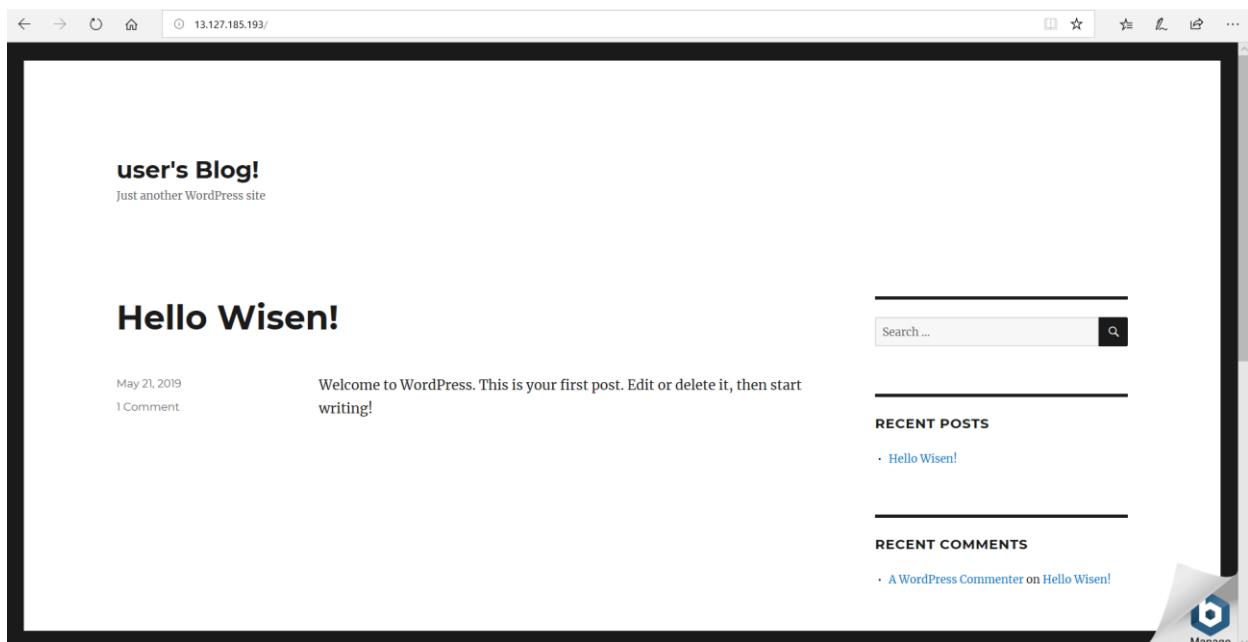
29. In the above screen, **Click on the Hello World Text**. And change the World to Wisen. This action brings the below screen

A screenshot of a web browser displaying a WordPress post editor. The URL in the address bar is 13.127.185.193/wp-admin/post.php?post=1&amp;action=edit. The left sidebar shows a navigation menu with 'Posts' selected. The main content area contains a text block with the text 'Hello Wisen!'. Above the text block, there is a 'Permalink' field with the value 'http://13.127.185.193/2019/05/21/hello-world/'. A small 'Edit' button is located to the right of the permalink field. On the right side of the screen, there is a sidebar with various settings: 'Switch to Draft', 'Preview', 'Update' (which is highlighted in blue), and other options like 'Status &amp; Visibility' (set to 'Public'), 'Publish' (set to 'May 21, 2019 7:47 pm'), 'Post Format' (set to 'Standard'), and 'Revisions' (2 revisions).

30. In the above screen, **Click on the Update Button**.

[http://<your public ip>/](http://<your public ip>)

This action brings the below screen



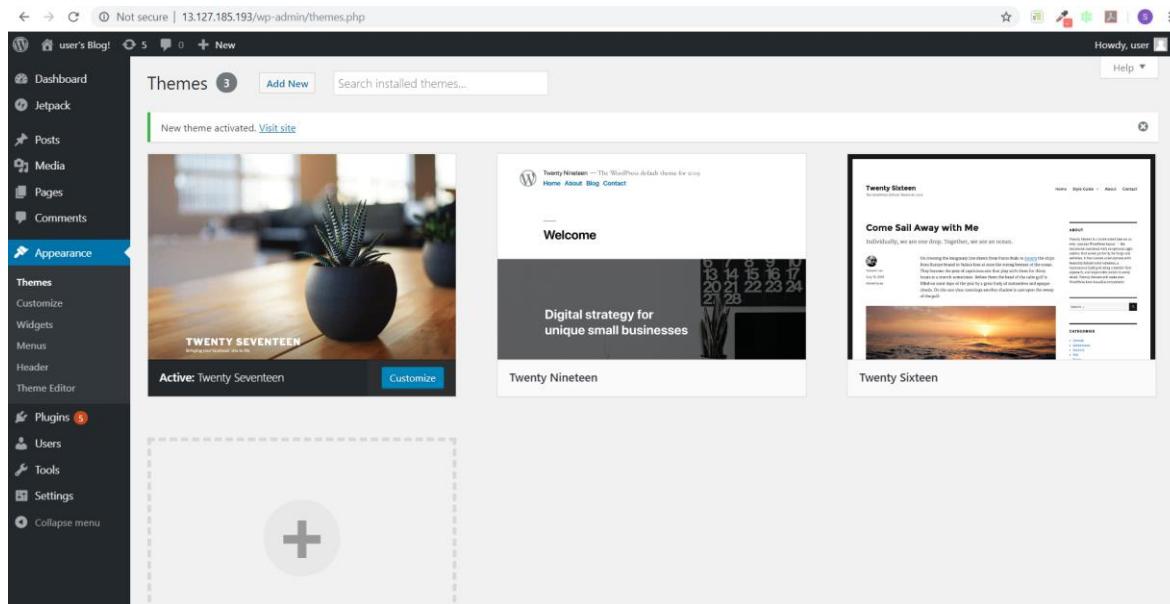
31. Go the Admin Area <http://<Your Public IP>/admin>

The screenshot shows the WordPress admin post editor. The post content is "Hello Wisen!". The sidebar on the right shows various settings like Status & Visibility (Visibility: Public), Publish (May 21, 2019 7:47 pm), Post Format (Standard), and Permalink.

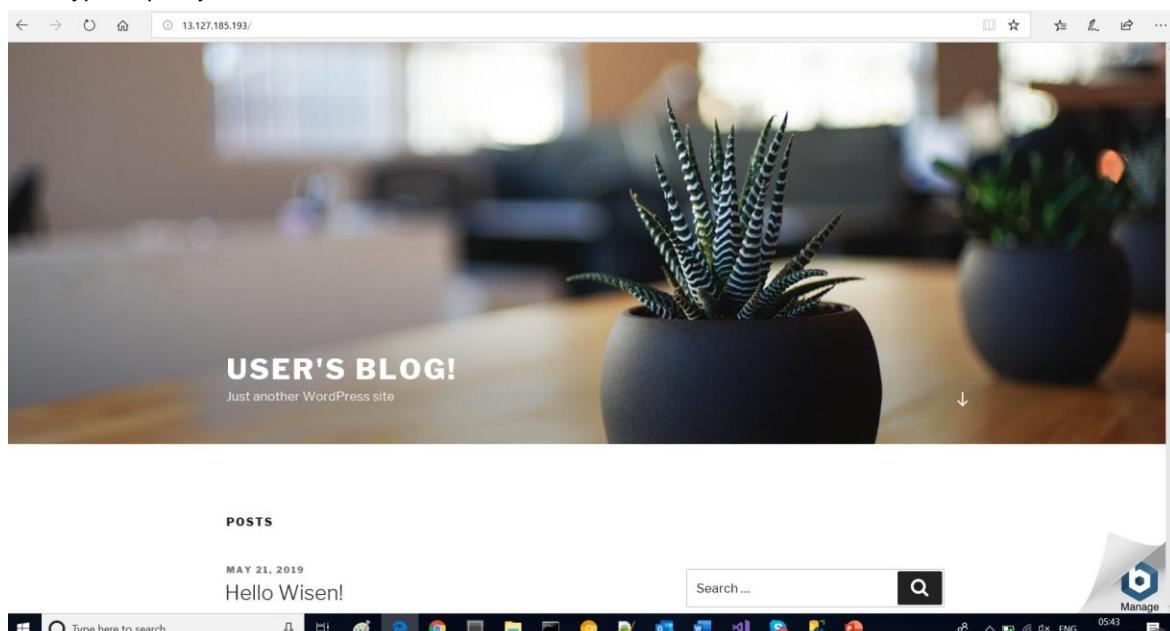
32. In the above screen, Click on the Appearance -> Themes. This action brings the below screen

The screenshot shows the WordPress admin themes page. It displays three theme preview cards: "Twenty Sixteen" (Active), "Twenty Nineteen", and "Twenty Seventeen". The sidebar on the left shows the Appearance menu selected.

33. Activate the Twenty Seventeen Theme. This action brings the below screen.



34. Type `http://<your Public IP>`



### Program Output



What you learnt from this program?

