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TOPIC : Creating EC2 instance

Step 1 : Search EC2 in search bar Instances

The screenshot shows the AWS EC2 Management console. In the top navigation bar, there are tabs for 'Launch an instance | EC2 Manager' and 'Dashboard | EC2 Management'. A search bar at the top right contains the text 'EC2'. On the left, a sidebar menu is open under 'Services', showing categories like EC2 Dashboard, Instances, Images, and Elastic Block Store. The main content area displays search results for 'EC2' under 'Services' and 'Features'. The 'Services' section includes links for EC2 (Virtual Servers in the Cloud), EC2 Image Builder (A managed service to automate build, customize and deploy OS images), Recycle Bin (Protect resources from accidental deletion), and Amazon Inspector (Continual vulnerability management at scale). The 'Features' section includes links for EC2 Global View, Auto Scaling Groups, Dedicated Hosts, Instances, Key pairs, Placement groups, Security groups, and Volumes. To the right, there is a sidebar titled 'Account attributes' which lists supported platforms (VPC), default VPC (vpc-091e73e8517b0a3a6), and various settings like EBS encryption, Zones, and Default credit specification. Below this is an 'Explore AWS' section featuring 'Amazon GuardDuty Malware Protection' and a list of '10 Things You Can Do Today to Reduce AWS Costs'.

Step 2 : Select correct region to your Customer

The screenshot shows the AWS EC2 Management console with the search bar still containing 'EC2'. The sidebar on the left remains the same. The main content area now focuses on the 'Resources' section, which displays a summary of Amazon EC2 resources in the Asia Pacific (Mumbai) Region. It shows 0 instances (running), 0 auto scaling groups, 0 dedicated hosts, 0 elastic IPs, 2 instances, 21 key pairs, 0 load balancers, 0 placement groups, 79 security groups, and 0 snapshots, volumes, and snapshots. Below this, there is a callout box with a tip about using the AWS Launch Wizard for Microsoft SQL Server Always On availability groups. To the right of the resources, there are sections for 'Launch instance' (with a prominent orange 'Launch instance' button) and 'Service health' (showing the region as Asia Pacific (Mumbai)). The right sidebar continues to show account attributes, supported platforms (VPC), default VPC (vpc-091e73e8517b0a3a6), and explore AWS sections for GuardDuty and price performance.

Step 3 :Launch Instances

The screenshot shows the AWS EC2 Management Console. On the left, there's a sidebar with navigation links like EC2 Dashboard, Instances, Images, and Elastic Block Store. The main area is titled 'Resources' and displays various Amazon EC2 resources in the Asia Pacific (Mumbai) Region. It includes sections for Instances (running), Auto Scaling Groups, Dedicated Hosts, Elastic IPs, Instances, Key pairs, Load balancers, Placement groups, Security groups, Snapshots, and Volumes. A callout box highlights the 'Launch instance' button. To the right, there's a panel for 'Account attributes' showing supported platforms (VPC), default VPC (vpc-091e73e8517b0a3a6), and settings for EBS encryption, Zones, EC2 Serial Console, Default credit specification, and Console experiments. At the bottom, there's an 'Explore AWS' section about AWS Graviton2.

Step 4 : Choose An AMI Amazon Machine Image(AMI)

The screenshot shows the 'Launch instance' wizard. Step 1 is 'Choose an AMI'. The user has typed 'Amazon Linux' into the search bar. A dropdown menu lists several AMI options, each with details like name, ID, and virtualization type. The first option is 'Amazon Linux 2023 AMI'. To the right, the 'Summary' pane shows the selected instance type (t2.micro), a note about free tier (750 hours), and a 'Launch instance' button. The bottom of the screen shows the AWS navigation bar and system tray.

Step 5: Select Key Pair ex:shahid5 if not then create new key

Key pair name - required

Select
Ubuntu3
shahid5
website

Number of instances: 1

Software Image (AMI): Amazon Linux 2 Kernel 5.10 AMI...
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)

Step 6 : Click On Network Edit

Number of instances: 1

Software Image (AMI): Amazon Linux 2 Kernel 5.10 AMI...
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)

Step 7 : Select your VPS if have if not select default

The screenshot shows the AWS Launch Instance wizard at Step 7. The left panel displays network settings, specifically VPC and subnet selection. A dropdown menu lists three subnets: 'vpc-00472edef6e542b5 (shahid)' (selected), 'vpc-091e73e8517b0a3a6 (default)', and 'vpc-00472edef6e542b5 (shahid)'. The right panel shows a summary of the instance configuration, including the selected AMI (Amazon Linux 2 Kernel 5.10 AMI), instance type (t2.micro), and storage (1 volume(s) - 8 GiB). A 'Free tier' message indicates 750 hours of t2.micro usage included. The bottom navigation bar includes CloudShell, Feedback, Language, and other browser tabs.

Step 8 : Select Public Subnet1

The screenshot shows the AWS Launch Instance wizard at Step 8. The left panel displays subnet selection, listing four subnets under 'PublicSubnet-1': 'subnet-0fdb3407943fda87', 'subnet-0ce2acc91e7dc1306', 'subnet-052bb0b2684ce92ee6', and 'subnet-0b2252ea5bfd1f85b2'. The right panel shows a summary of the instance configuration, including the selected AMI (Amazon Linux 2 Kernel 5.10 AMI), instance type (t2.micro), and storage (1 volume(s) - 8 GiB). A 'Free tier' message indicates 750 hours of t2.micro usage included. The bottom navigation bar includes CloudShell, Feedback, Language, and other browser tabs.

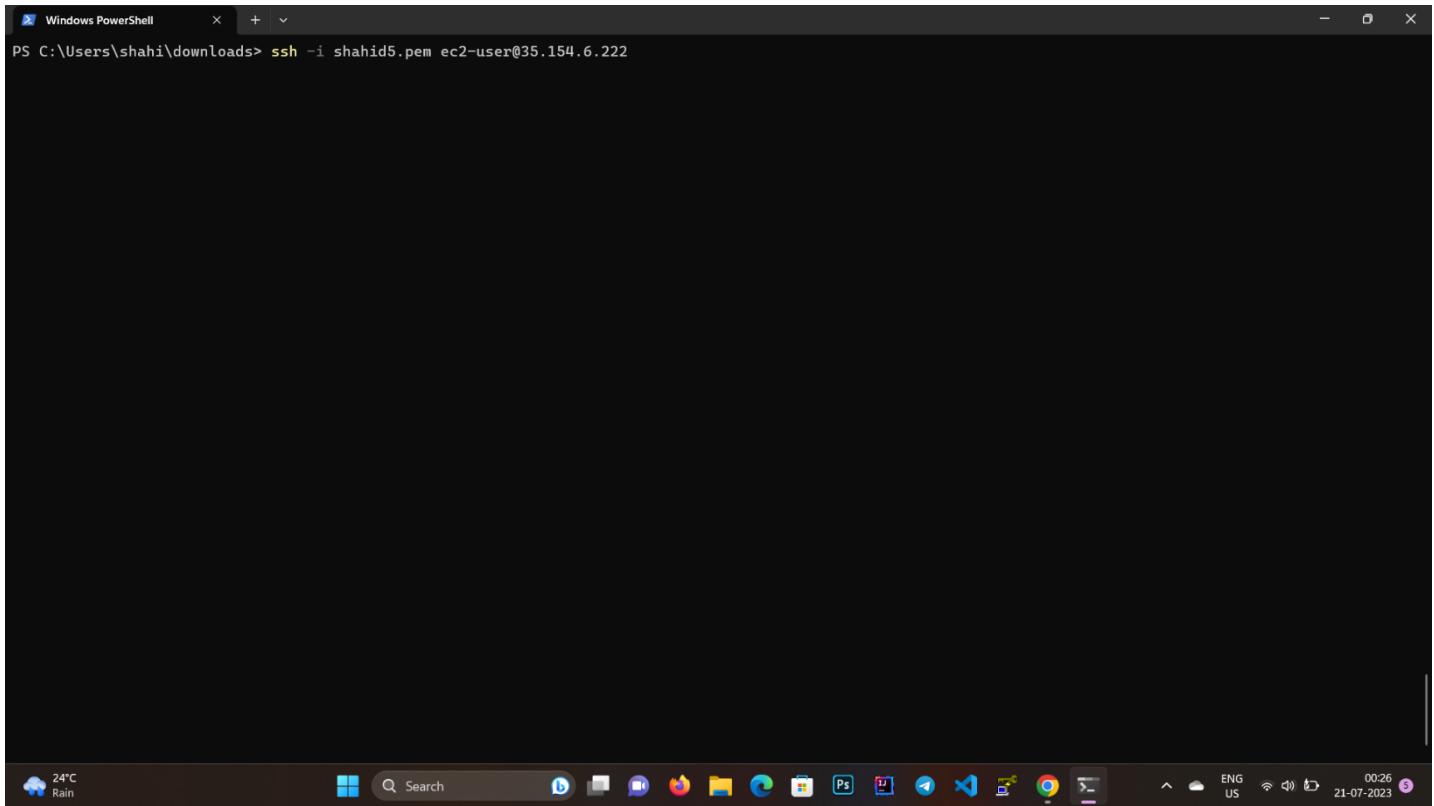
Step 9: Enable Public IP

The screenshot shows the 'Network settings' section of the AWS EC2 Launch Instance wizard. Under 'Auto-assign public IP', the 'Enable' option is selected. A tooltip indicates that enabling this allows specific traffic to reach your instance. The 'Create security group' radio button is selected, while 'Select existing security group' is unselected. Other fields include 'Security group name - required' (set to 'launch-wizard-78') and a 'Description' field (empty). On the right, the 'Summary' panel shows 1 instance, the AMI (Amazon Linux 2 Kernel 5.10 AMI), the instance type (t2.micro), and storage (1 volume(s) - 8 GiB). A 'Free tier' notification is present, stating it includes 750 hours of t2.micro usage. At the bottom are 'Cancel', 'Launch instance' (highlighted in orange), and 'Review commands' buttons.

Step 9 : Click On Launch Instance

The screenshot shows the 'Advanced details' section of the AWS EC2 Launch Instance wizard. It includes sections for 'Add security group rule', 'Advanced network configuration', 'Storage (volumes)', 'EBS Volumes', 'File systems', and 'Advanced details'. A 'Free tier' notification states that eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. On the right, the 'Summary' panel shows 1 instance, the AMI, the instance type (t2.micro), and storage. A 'Free tier' notification is present, stating it includes 750 hours of t2.micro usage. At the bottom are 'Cancel', 'Launch instance' (highlighted in orange), and 'Review commands' buttons.

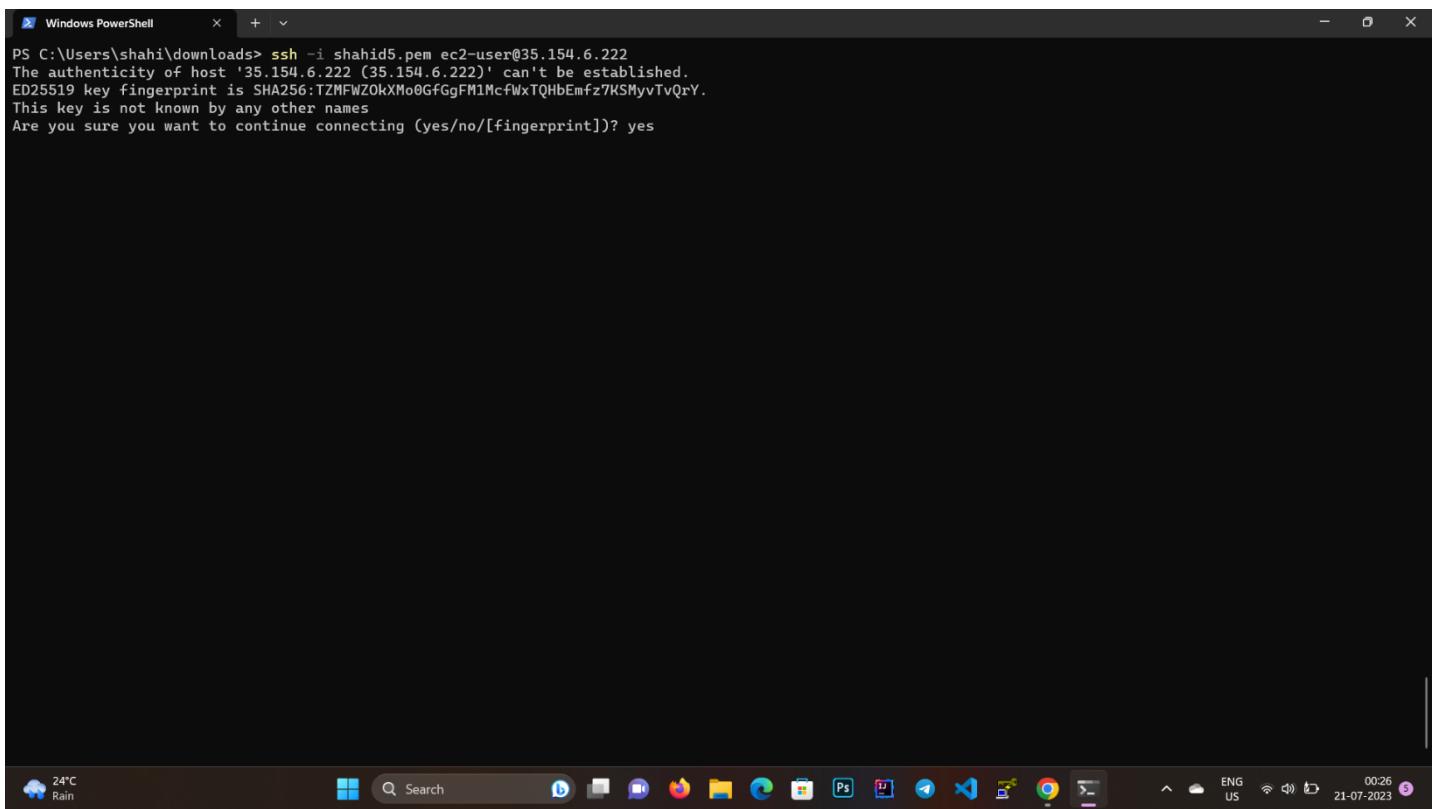
Step 10: Go to Terminal connet your .pem with ec2-user@public_ip



```
Windows PowerShell
PS C:\Users\shahil\downloads> ssh -i shahid5.pem ec2-user@35.154.6.222
```

The terminal window shows a command being entered: `ssh -i shahid5.pem ec2-user@35.154.6.222`. The background is dark, and the window title is "Windows PowerShell". The taskbar at the bottom shows various application icons.

Step 11: type yes



```
Windows PowerShell
PS C:\Users\shahil\downloads> ssh -i shahid5.pem ec2-user@35.154.6.222
The authenticity of host '35.154.6.222 (35.154.6.222)' can't be established.
ED25519 key fingerprint is SHA256:TZMFNZOkXMo0GfGgFM1McfWxTQHbEmfz7KSMyvTvQrY.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
```

The terminal window shows an SSH connection attempt. It displays a warning about the host's fingerprint and asks if the user wants to continue connecting. The response "yes" is typed at the end of the command line. The background is dark, and the window title is "Windows PowerShell". The taskbar at the bottom shows various application icons.

Step 12 :Now Sucessfully login into our Amazon Linux AMI Machine

```
PS C:\Users\shahi\downloads> ssh -i shahid5.pem ec2-user@35.154.6.222
The authenticity of host '35.154.6.222 (35.154.6.222)' can't be established.
ED25519 key fingerprint is SHA256:TZMFNZOkXMo0GfGgFM1McFWxTQHbEmfz7KSMYvTvQrY.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '35.154.6.222' (ED25519) to the list of known hosts.

--| --|_
_-| ( _ /   Amazon Linux 2 AMI
---\_\_|\_\_|

https://aws.amazon.com/amazon-linux-2/
6 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-177 ~]$
```

Step 13 : To update Tools type : sudo yum update

```
[ec2-user@ip-10-0-0-177 ~]$ sydo yum update
-bash: sydo: command not found
[ec2-user@ip-10-0-0-177 ~]$ sudo yum update|
```

Step 14 : type yes

```
ec2-user@ip-10-0-0-177:~ + 
--> Package kernel.x86_64 0:5.10.184-175.749.amzn2 will be installed
--> Package kernel-tools.x86_64 0:5.10.184-175.749.amzn2 will be updated
--> Package kernel-tools.x86_64 0:5.10.184-175.749.amzn2 will be an update
--> Package libcap.x86_64 0:2.54-1.amzn2.0.1 will be updated
--> Package libcap.x86_64 0:2.54-1.amzn2.0.2 will be an update
--> Package libtiff.x86_64 0:4.0.3-35.amzn2.0.6 will be updated
--> Package libtiff.x86_64 0:4.0.3-35.amzn2.0.7 will be an update
--> Package python-requests.noarch 0:2.6.0-7.amzn2 will be updated
--> Package python-requests.noarch 0:2.6.0-10.amzn2.0.1 will be an update
--> Package python2-rsa.noarch 0:3.4.1-1.amzn2.0.3 will be updated
--> Package python2-rsa.noarch 0:3.4.1-1.amzn2.0.4 will be an update
--> Package python3-pip.noarch 0:20.2.2-1.amzn2.0.3 will be updated
--> Package python3-pip.noarch 0:20.2.2-1.amzn2.0.4 will be an update
--> Package tcpdump.x86_64 14:4.9.2-4.amzn2.1 will be updated
--> Package tcpdump.x86_64 14:4.9.2-4.amzn2.1.0.1 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package          Arch      Version           Repository      Size
=====
Installing:
kernel          x86_64   5.10.184-175.749.amzn2    amzn2extra-kernel-5.10  33 M
Updating:
kernel-tools    x86_64   5.10.184-175.749.amzn2    amzn2extra-kernel-5.10  203 k
libcap           x86_64   2.54-1.amzn2.0.2        amzn2-core            73 k
libtiff          x86_64   4.0.3-35.amzn2.0.7       amzn2-core            174 k
python-requests  noarch   2.6.0-10.amzn2.0.1      amzn2-core            95 k
python2-rsa      noarch   3.4.1-1.amzn2.0.4       amzn2-core            67 k
python3-pip      noarch   20.2.2-1.amzn2.0.4      amzn2-core            2.0 M
tcpdump          x86_64   14:4.9.2-4.amzn2.1.0.1    amzn2-core            424 k

Transaction Summary
=====
Install  1 Package
Upgrade  7 Packages

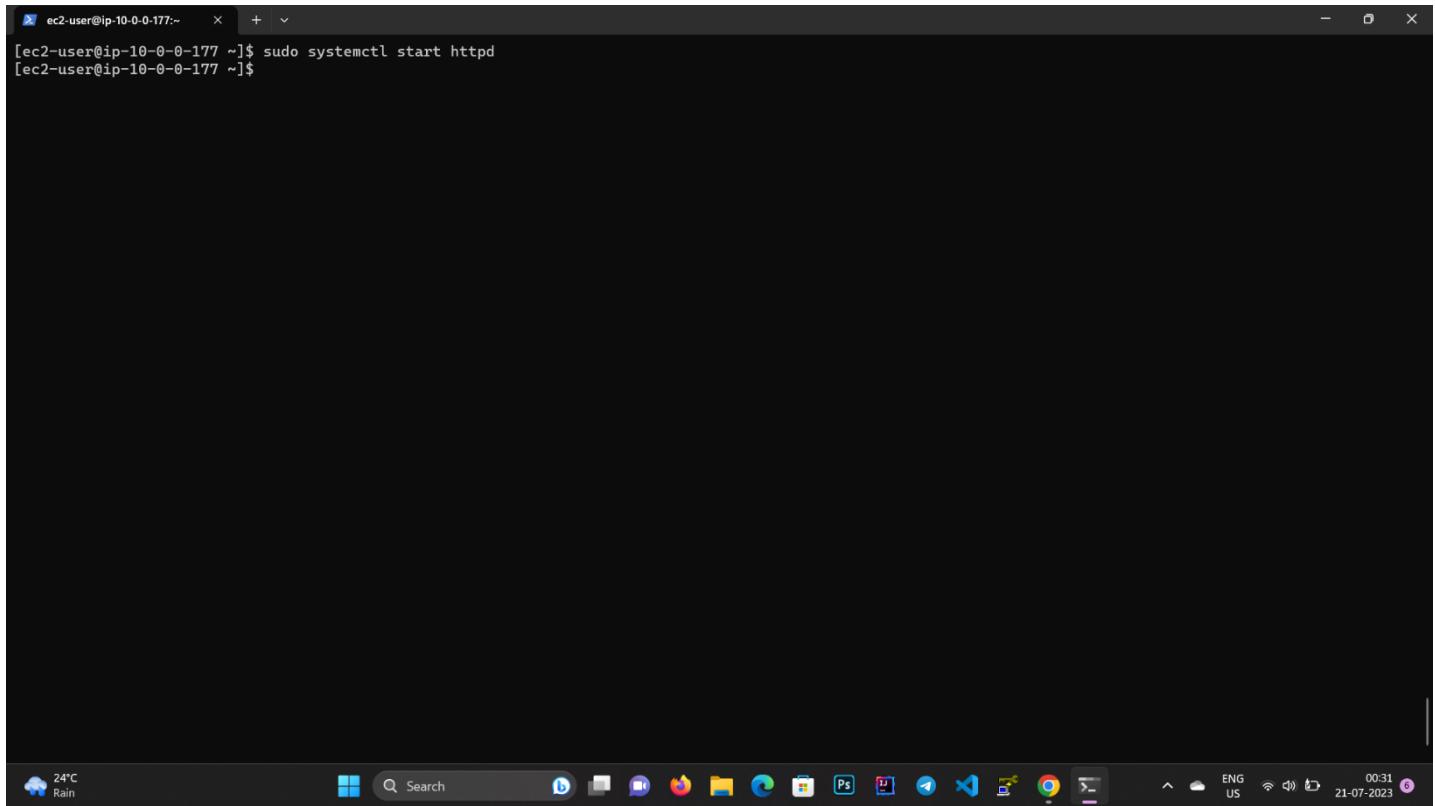
Total download size: 36 M
Is this ok [y/d/N]: yes|
```

Step 15 : To update httpd type : **sudo yum install httpd -y**

```
ec2-user@ip-10-0-0-177:~ + 
[ec2-user@ip-10-0-0-177 ~]$ sudo yum install httpd -y

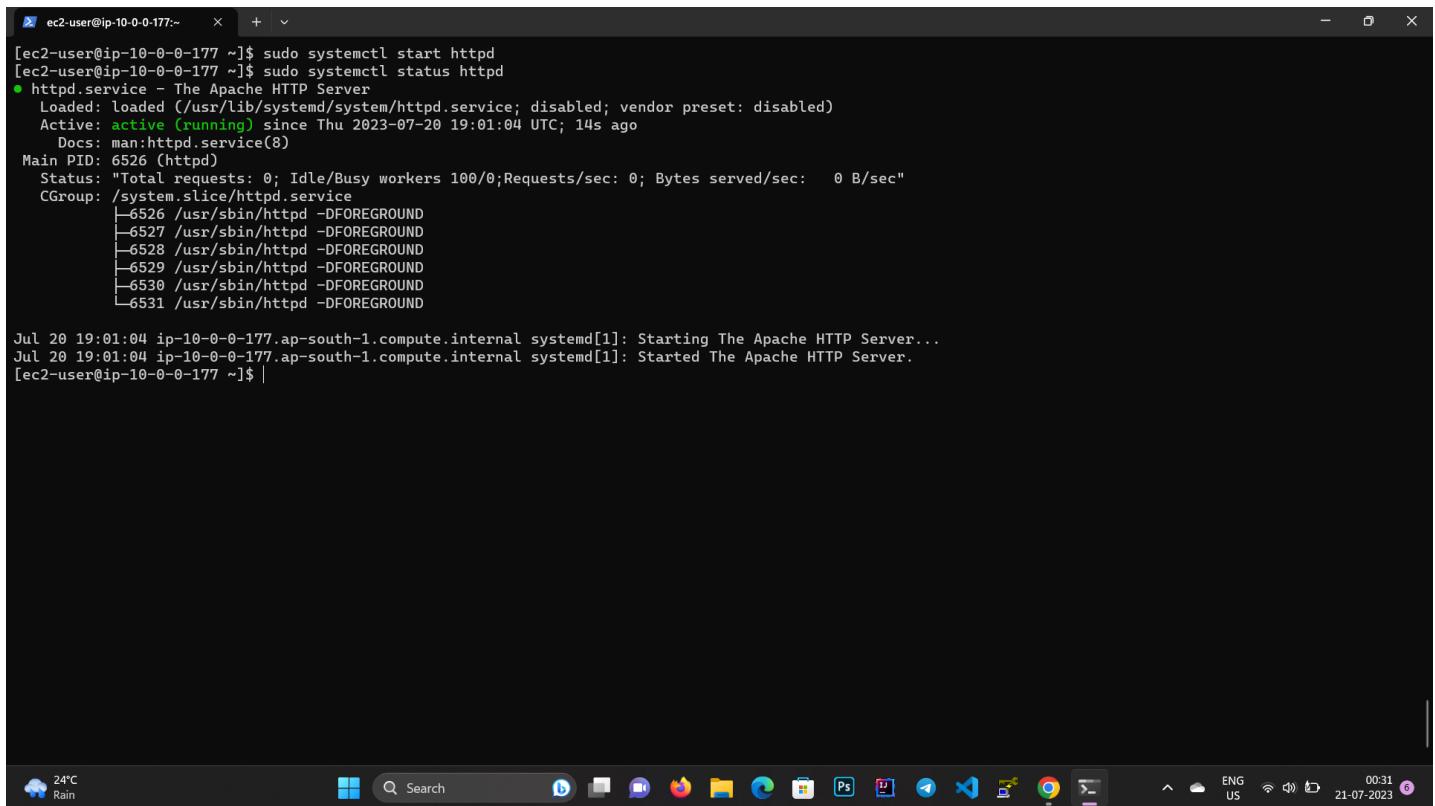
24°C Rain
Search
Clouds ENG US 00:27 21-07-2023
```

Step 16 : to connect systemctl with httpd : **sudo systemctl start httpd**



```
ec2-user@ip-10-0-0-177:~$ sudo systemctl start httpd
[ec2-user@ip-10-0-0-177 ~]$
```

Step 17 : to check systemctl are connected with httpd type : **sudo systemctl status httpd**



```
ec2-user@ip-10-0-0-177:~$ sudo systemctl start httpd
[ec2-user@ip-10-0-0-177 ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Thu 2023-07-20 19:01:04 UTC; 14s ago
     Docs: man:httpd.service(8)
 Main PID: 6526 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
  CGroup: /system.slice/httpd.service
          ├─6526 /usr/sbin/httpd -DFOREGROUND
          ├─6527 /usr/sbin/httpd -DFOREGROUND
          ├─6528 /usr/sbin/httpd -DFOREGROUND
          ├─6529 /usr/sbin/httpd -DFOREGROUND
          ├─6530 /usr/sbin/httpd -DFOREGROUND
          └─6531 /usr/sbin/httpd -DFOREGROUND

Jul 20 19:01:04 ip-10-0-0-177.ap-south-1.compute.internal systemd[1]: Starting The Apache HTTP Server...
Jul 20 19:01:04 ip-10-0-0-177.ap-south-1.compute.internal systemd[1]: Started The Apache HTTP Server.
[ec2-user@ip-10-0-0-177 ~]$ |
```

Step 18 : Copy your instance public IP

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links like EC2 Dashboard, EC2 Global View, Events, Instances (selected), Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (AMIs, AMI Catalog), and Elastic Block Store (Volumes). The main area displays the instance summary for 'i-0ca7d5c0f4fc4d476'. The summary includes fields such as Instance ID (i-0ca7d5c0f4fc4d476 (shahid)), IPv6 address (none), Hostname type (IP name: ip-10-0-0-177.ap-south-1.compute.internal), IP name (ip-10-0-0-177.ap-south-1.compute.internal), Answer private resource DNS name (none), Auto-assigned IP address (35.154.6.222 [Public IP]), IAM Role (none), IMDSv2 (Optional), Instance state (Running), Private IP DNS name (ip-10-0-0-177.ap-south-1.compute.internal), VPC ID (vpc-00472edefd6e542b5 (shahid)), Subnet ID (subnet-052b0b2684ce92ee6 (PublicSubnet1)), and various addresses and IDs. A tooltip at the top right says 'Public IPv4 address copied' over the IP address field. The bottom of the page has tabs for Details, Security, Networking, Storage, Status checks, Monitoring, and Tags, with 'Details' being the active tab.

Step 19 : Paste your instance ip in any browser

The screenshot shows a Google search results page for the IP address 35.154.6.222. The search bar at the top contains the query '35.154.6.222'. Below the search bar is a large Google logo. The search results include a snippet from YouTube, a link to AWS Management Console, a privacy error message, and a WhatsApp link. At the bottom of the search results, there are links for 'https', 'WordPress > ...', and 'Add shortcut'. The bottom of the page shows the standard Chrome browser interface with various icons and status bars.

A screenshot of a web browser window. The address bar shows the URL as 'Not secure | 35.154.6.222'. The page title is 'Test Page for the Apache HTTP Server'. The main content area has a red header bar with the text 'Test Page'.

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

If you are a member of the general public:

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

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

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

If you are the website administrator:

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

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



Now we are successfully login apache page with EC2 Linux machine !!!!!