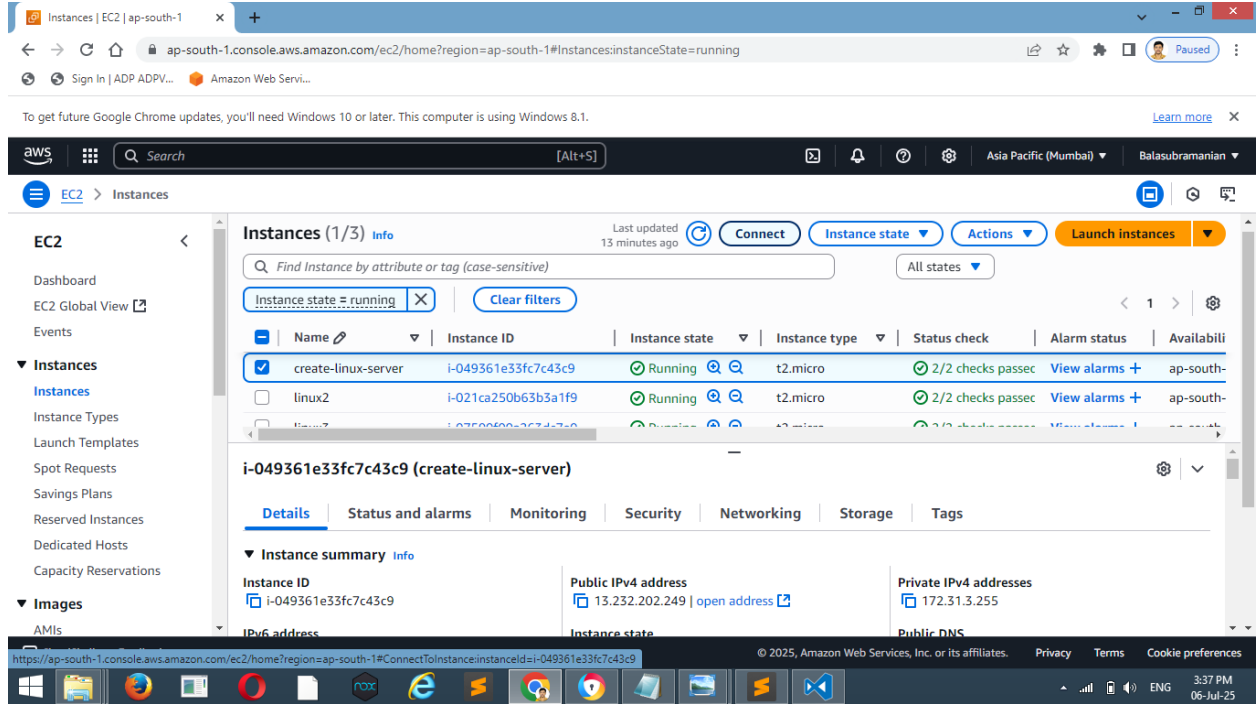


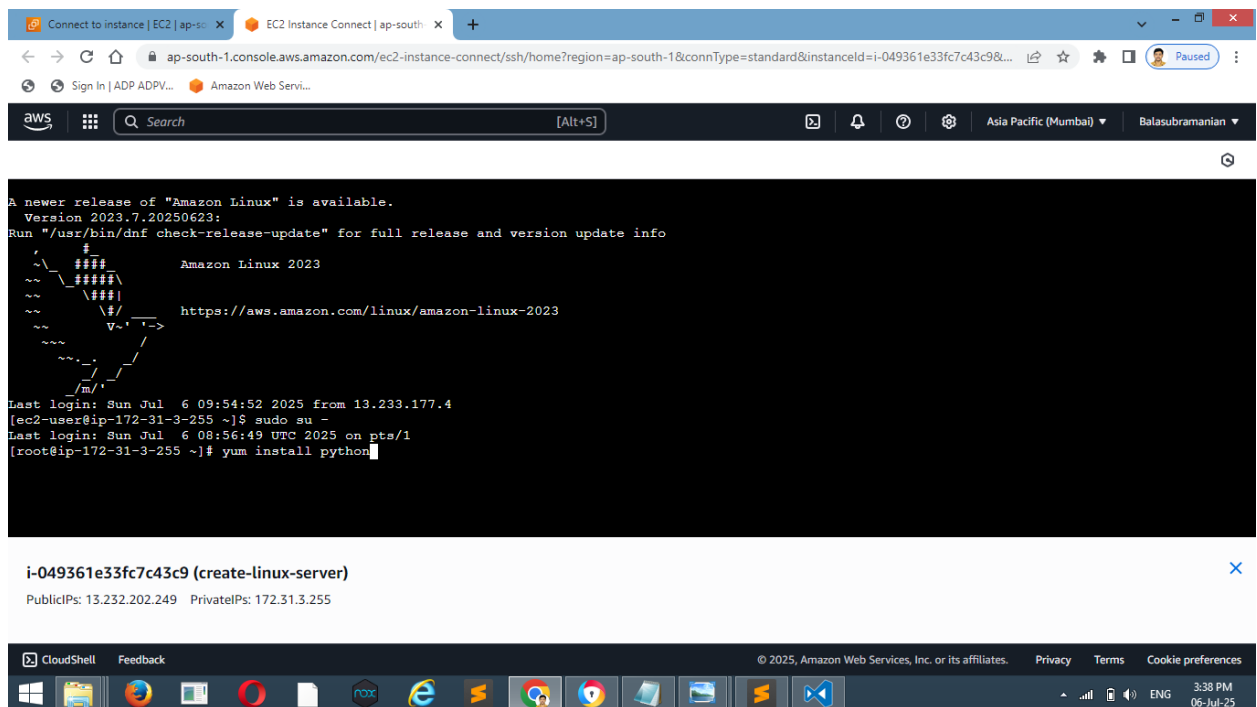
CONFIGURATION MANAGEMENT WITH ANSIBLE

SUMMARY: CONNECTED MAIN AND SLAVE MACHINES USING ANSIBLE FOR REMOTE DEPLOYMENT AUTOMATION.

STEP 1: OPEN AWS WEBSITE, GO TO THE EC2 SERVICE, SELECT AN INSTANCE RUNNING AWS LINUX OS AND CLICK ON THE CONNECT BUTTON



STEP 2: I WILL SWITCHES THE USER TO ROOT ACCOUNT AND INSTALLS PYTHON USING THE YUM PACKAGE MANAGER



Connect to instance | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-049361e33fc7c43c98... | Sign In | ADP ADPV... | Amazon Web Servi...

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```
~\###|
~\
~\V~' -> https://aws.amazon.com/linux/amazon-linux-2023
~\
~\
Last login: Sun Jul 6 09:54:52 2025 from 13.233.177.4
[ec2-user@ip-172-31-3-255 ~]$ sudo su -
Last login: Sun Jul 6 08:56:49 UTC 2025 on pts/1
[root@ip-172-31-3-255 ~]# yum install python
Last metadata expiration check: 5:44:46 ago on Sun Jul 6 04:24:03 2025.
Package python-unversioned-command-3.9.22-1.amzn2023.0.1.noarch is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-3-255 ~]# yum install python-pip
Last metadata expiration check: 5:45:12 ago on Sun Jul 6 04:24:03 2025.
Package python3-pip-21.3.1-2.amzn2023.0.11.noarch is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-3-255 ~]#
```

i-049361e33fc7c43c9 (create-linux-server)
PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

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3:39 PM 06-Jul-25

STEP 4: DISPLAYS THE INSTALLED PYTHON VERSION AND I WILL INSTALL ANSIBLE USING PIP

Connect to instance | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-049361e33fc7c43c98... | Sign In | ADP ADPV... | Amazon Web Servi...

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```
~\
~\
~\V~' ->
~\
~\
Last login: Sun Jul 6 09:54:52 2025 from 13.233.177.4
[ec2-user@ip-172-31-3-255 ~]$ sudo su -
Last login: Sun Jul 6 08:56:49 UTC 2025 on pts/1
[root@ip-172-31-3-255 ~]# yum install python
Last metadata expiration check: 5:44:46 ago on Sun Jul 6 04:24:03 2025.
Package python-unversioned-command-3.9.22-1.amzn2023.0.1.noarch is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-3-255 ~]# yum install python-pip
Last metadata expiration check: 5:45:12 ago on Sun Jul 6 04:24:03 2025.
Package python3-pip-21.3.1-2.amzn2023.0.11.noarch is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-3-255 ~]# python --version
Python 3.9.22
[root@ip-172-31-3-255 ~]#
```

i-049361e33fc7c43c9 (create-linux-server)
PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

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Connect to instance | EC2 | ap-sou... x EC2 Instance Connect | ap-south... x +

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-049361e33fc7c43c9&... i ☆ 🛠️ 📄 Paused ⋮

Sign In | ADP ADPV... Amazon Web Servi...

aws 🔍 Search [Alt+S] 📄 🔔 ⓘ ⚙️ Asia Pacific (Mumbai) ▾ Balasubramanian ▾

[root@ip-172-31-3-255 ~]# pip install ansible

i-049361e33fc7c43c9 (create-linux-server) X

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

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Windows File Explorer Edge Firefox VS Code Nox Powershell Terminal Chrome Brave Docker Desktop WSL2 Ubuntu

3:39 PM 06-Jul-25 ENG

STEP 5: DISPLAYS THE INSTALLED ANSIBLE VERSION AND I WILL CREATE DIRECTORY AND OPENS THE ANSIBLE.CFG FILE IN THE VI EDITOR

Connect to instance | EC2 | ap-sou... x EC2 Instance Connect | ap-south... x +

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-049361e33fc7c43c9&... i ☆ 🛠️ 📄 Paused ⋮

Sign In | ADP ADPV... Amazon Web Servi...

aws 🔍 Search [Alt+S] 📄 🔔 ⓘ ⚙️ Asia Pacific (Mumbai) ▾ Balasubramanian ▾

[root@ip-172-31-3-255 ~]# ansible --version

i-049361e33fc7c43c9 (create-linux-server) X

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

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3:40 PM 06-Jul-25 ENG

```
[root@ip-172-31-3-255 ~]# ansible --version
ansible [core 2.15.13]
  config file = /root/.ansible.cfg
  configured module search path = ['/root/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/local/lib/python3.9/site-packages/ansible
  ansible collection location = /root/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/local/bin/ansible
  python version = 3.9.22 (main, Apr 29 2025, 00:00:00) [GCC 11.5.0 20240719 (Red Hat 11.5.0-5)] (/usr/bin/python3)
  jinja version = 3.1.6
  libyaml = True
[root@ip-172-31-3-255 ~]# mkdir /etc/ansible
```

i-049361e33fc7c43c9 (create-linux-server)

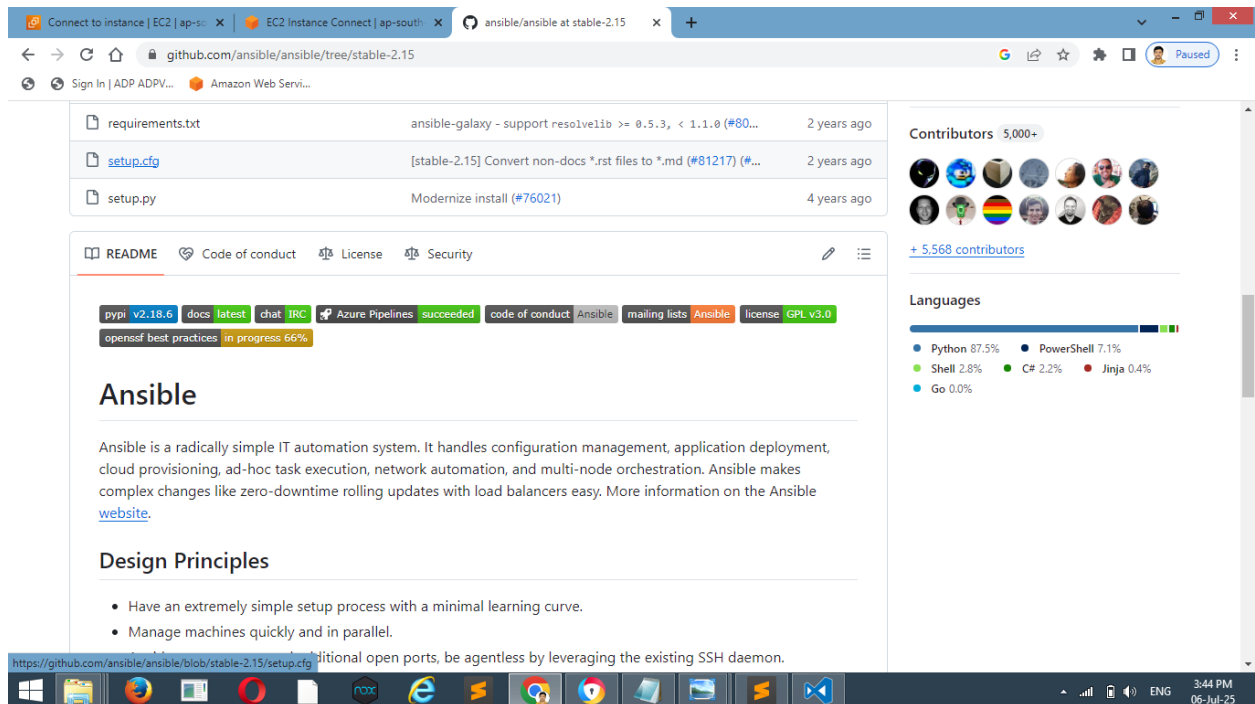
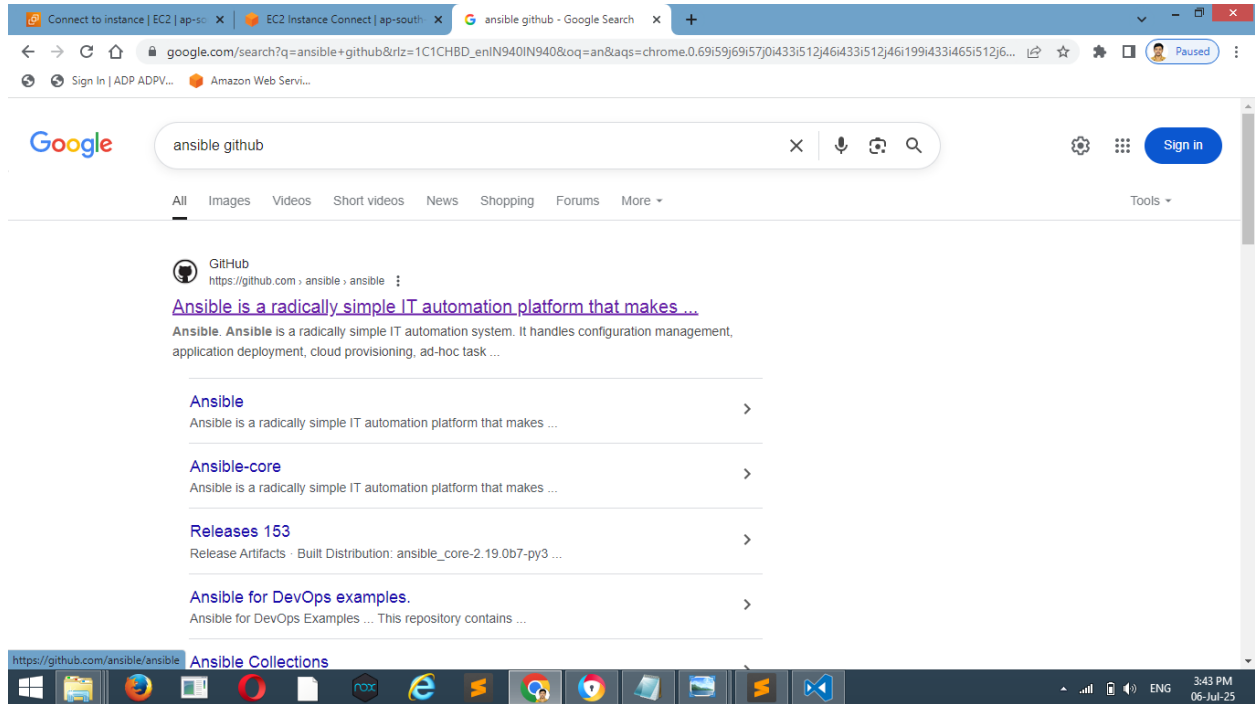
PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

```
[root@ip-172-31-3-255 ansible]# cd /etc/ansible
[root@ip-172-31-3-255 ansible]# pwd
/etc/ansible
[root@ip-172-31-3-255 ansible]# ls
[root@ip-172-31-3-255 ansible]# vi ansible.cfg
```

i-049361e33fc7c43c9 (create-linux-server)

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

STEP 6: I WILL BROWSE FOR ANSIBLE GITHUB AND COPY THE SETUP.CFG FILE AND PASTE IT IN ANSIBLE.CFG FILE



Connect to instance | EC2 | ap-sou... x EC2 Instance Connect | ap-south... x ansible/setup.cfg at stable-2.15 x +

github.com/ansible/ansible/blob/stable-2.15/setup.cfg

Sign In | ADP ADPV... Amazon Web Servi...

ansible / ansible

Type to search

<> Code Issues 538 Pull requests 281 Projects 6 Security Insights

Files

stable-2.15

Go to file

ansible / setup.cfg

mattclay [stable-2.15] Convert non-docs *.rst files to *.md (#81217) (#81222) 70dc6d6 · 2 years ago History

Code Blame 107 lines (102 loc) · 3.35 KB

```
1 # Minimum target setuputils 45.2.0
2
3 [metadata]
4 name = ansible-core
5 version = attr: ansible.release.__version__
6 description = Radically simple IT automation
7 long_description = file: README.md
8 long_description_content_type = text/markdown
9 author = Ansible, Inc.
10 author_email = info@ansible.com
11 url = https://ansible.com/
12 project_urls =
13     Bug Tracker=https://github.com/ansible/ansible/issues
14     CI: Azure Pipelines=https://dev.azure.com/ansible/ansible/
15     Code of Conduct=https://docs.ansible.com/ansible/latest/community/code_of_conduct.html
16     Documentation=https://docs.ansible.com/ansible-core/
17     Mailing lists=https://docs.ansible.com/ansible/latest/community/communication.html#mailing-list-information
```

Raw Download Edit Copy

Windows taskbar: File Explorer, Edge, Firefox, VS Code, etc.

Connect to instance | EC2 | ap-sou... x EC2 Instance Connect | ap-south... x ansible/setup.cfg at stable-2.15 x +

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-049361e33fc7c43c9&... | Sign In | ADP ADPV... Amazon Web Servi...

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```
util/**/*.py
util/**/*.yaml
config/*.template
config/*.yaml

# setuptools 51.0.0
# [options.entry_points]
# console_scripts =
#     ansible = ansible.cli.adhoc:main
#     ansible-config = ansible.cli.config:main
#     ansible-console = ansible.cli.console:main
#     ansible-doc = ansible.cli.doc:main
#     ansible-galaxy = ansible.cli.galaxy:main
#     ansible-inventory = ansible.cli.inventory:main
#     ansible-playbook = ansible.cli.playbook:main
#     ansible-pull = ansible.cli.pull:main
#     ansible-vault = ansible.cli.vault:main
#     ansible-connection = ansible.cli.scripts.ansible_connection_cli_stub:main
#     ansible-test = ansible_test.util.target.cli.ansible_test_cli_stub:main

[flake8]
max-line-length = 100
```

107, 21 Bot

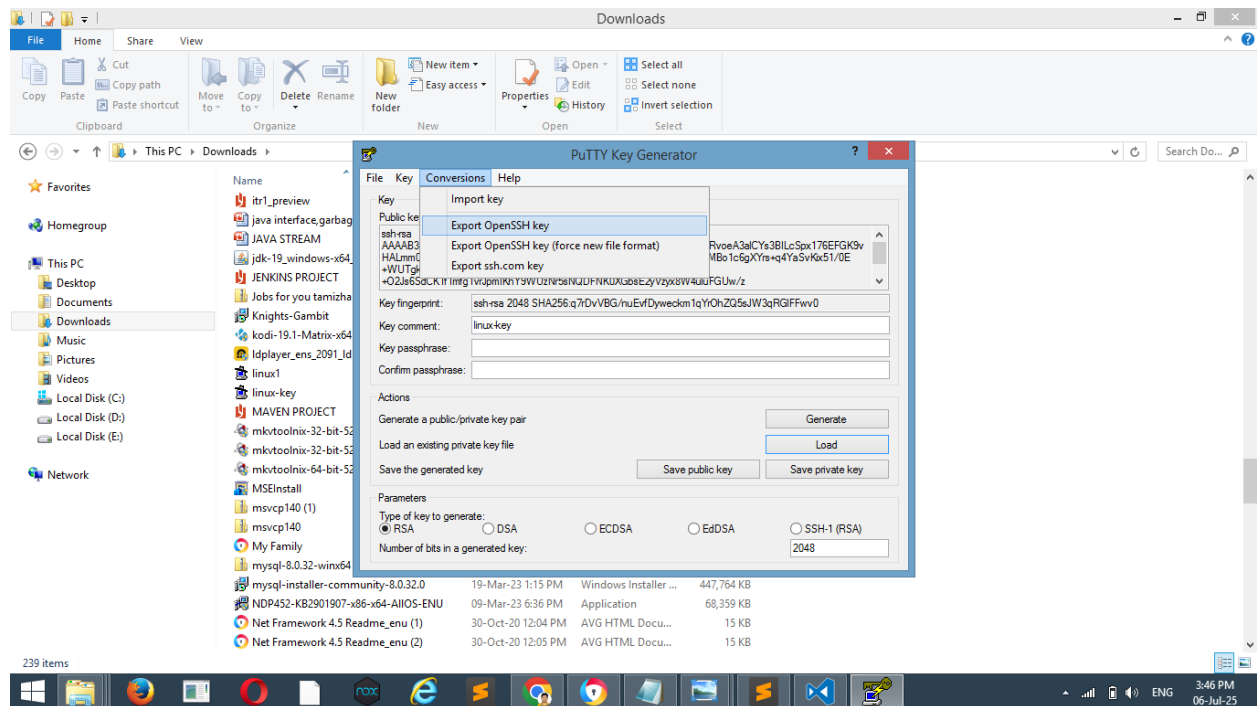
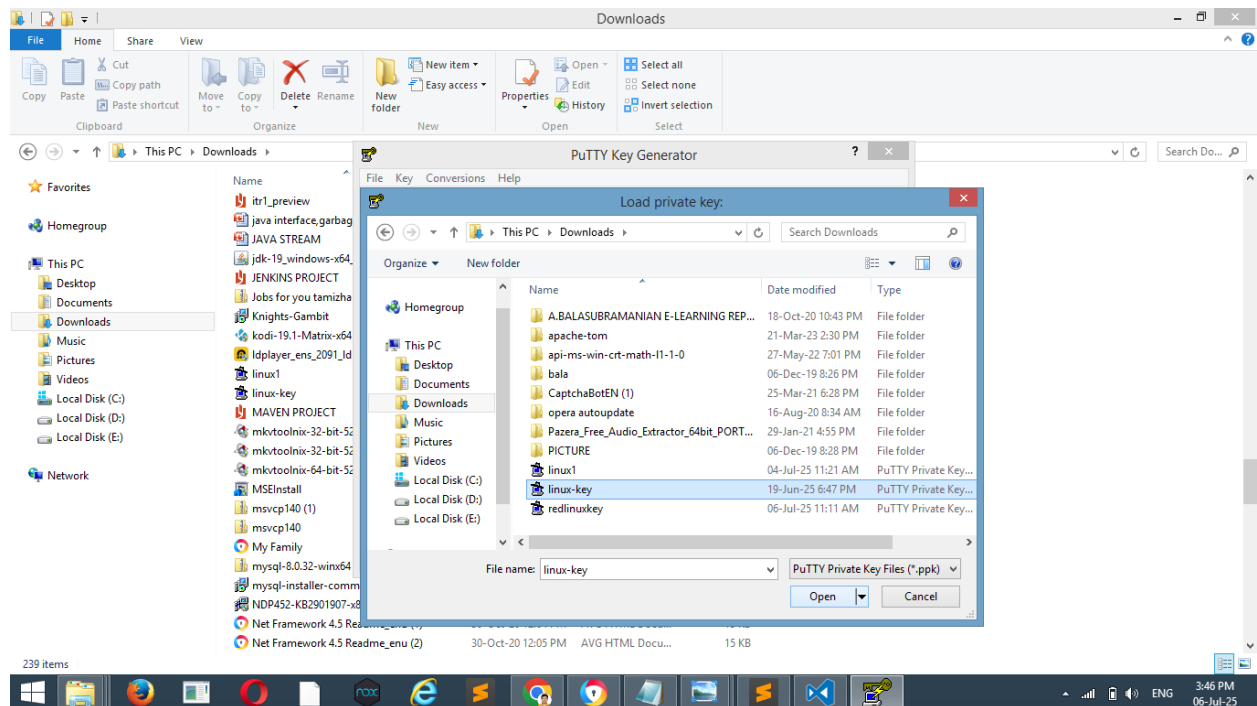
i-049361e33fc7c43c9 (create-linux-server)

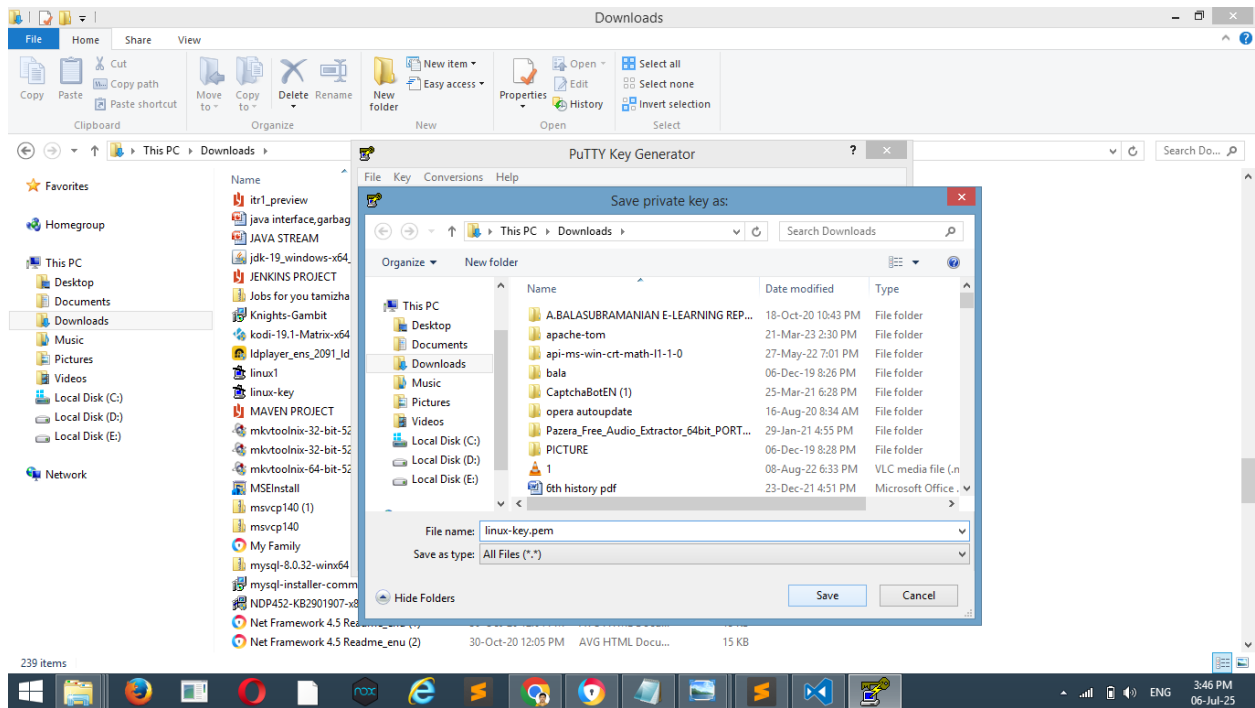
PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

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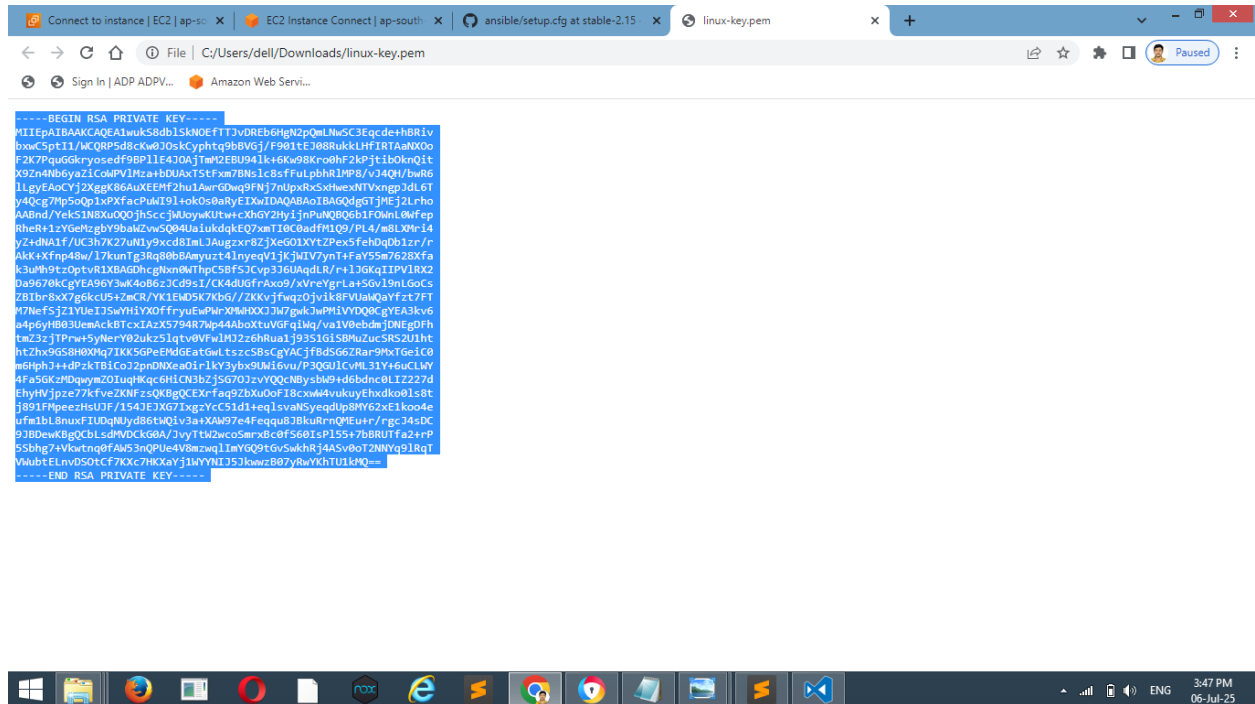
Windows taskbar: File Explorer, Edge, Firefox, VS Code, etc.

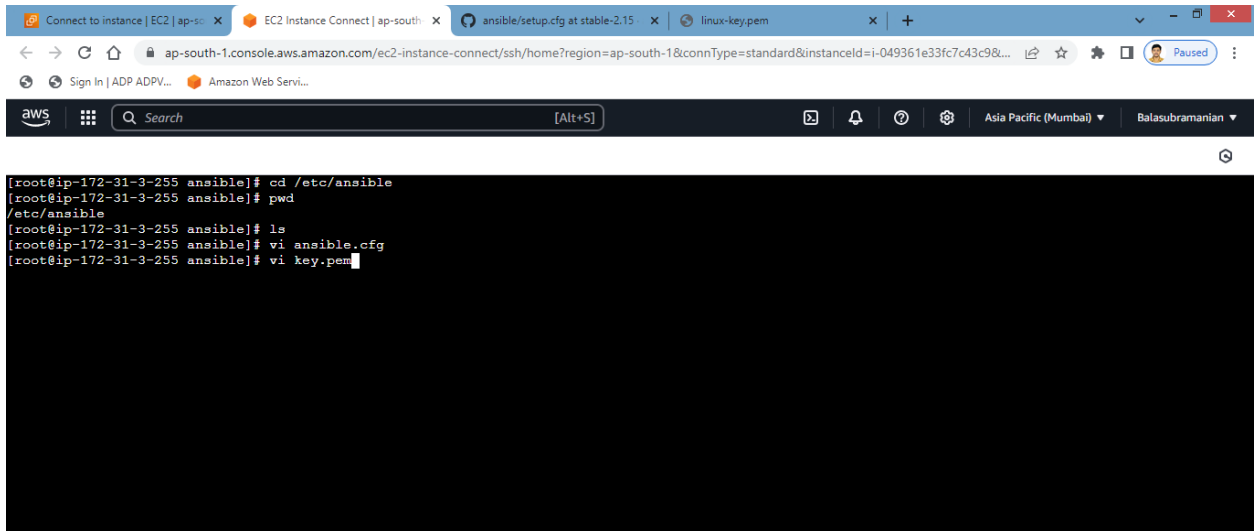
STEP 7: I WILL CONVERT PPK KEY FILE TO PEM KEY FILE USING PUTTYGEN





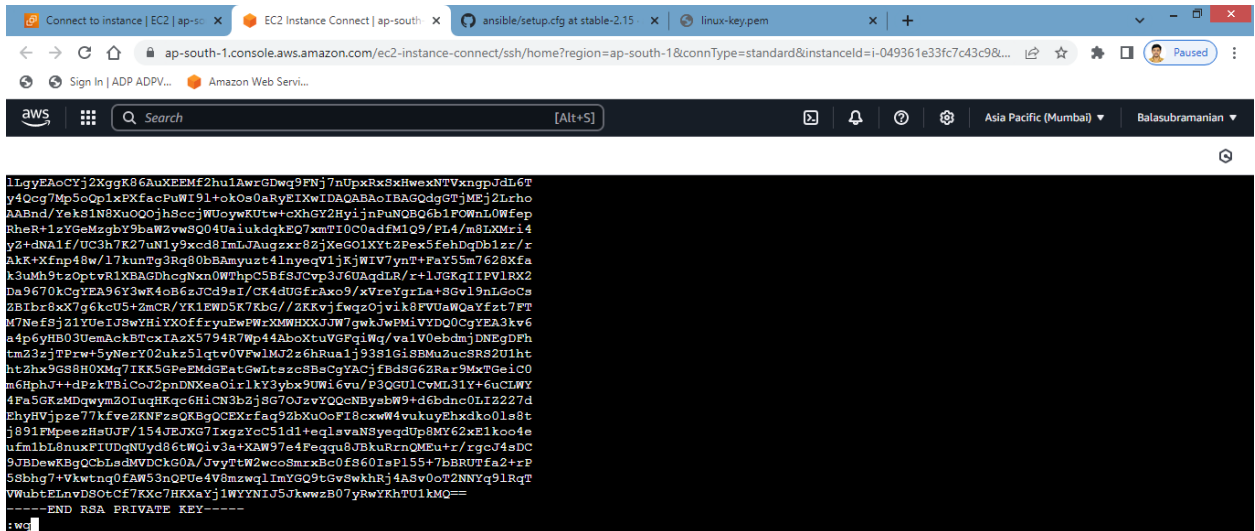
STEP 8: COPY THE PEM KEY FILE AND OPEN KEY.PEM FILE AND PASTE IT





i-049361e33fc7c43c9 (create-linux-server)

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

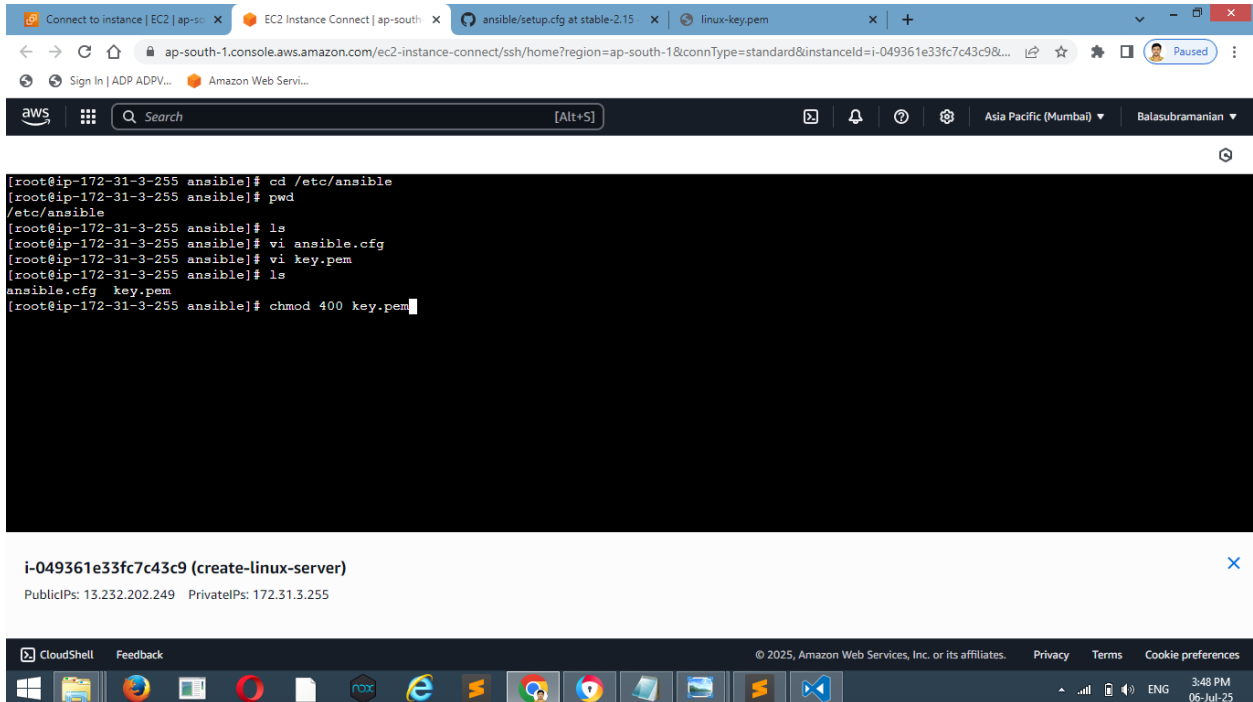


i-049361e33fc7c43c9 (create-linux-server)

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255



STEP 9: SETS READ-ONLY PERMISSIONS FOR THE KEY.PEM FILE

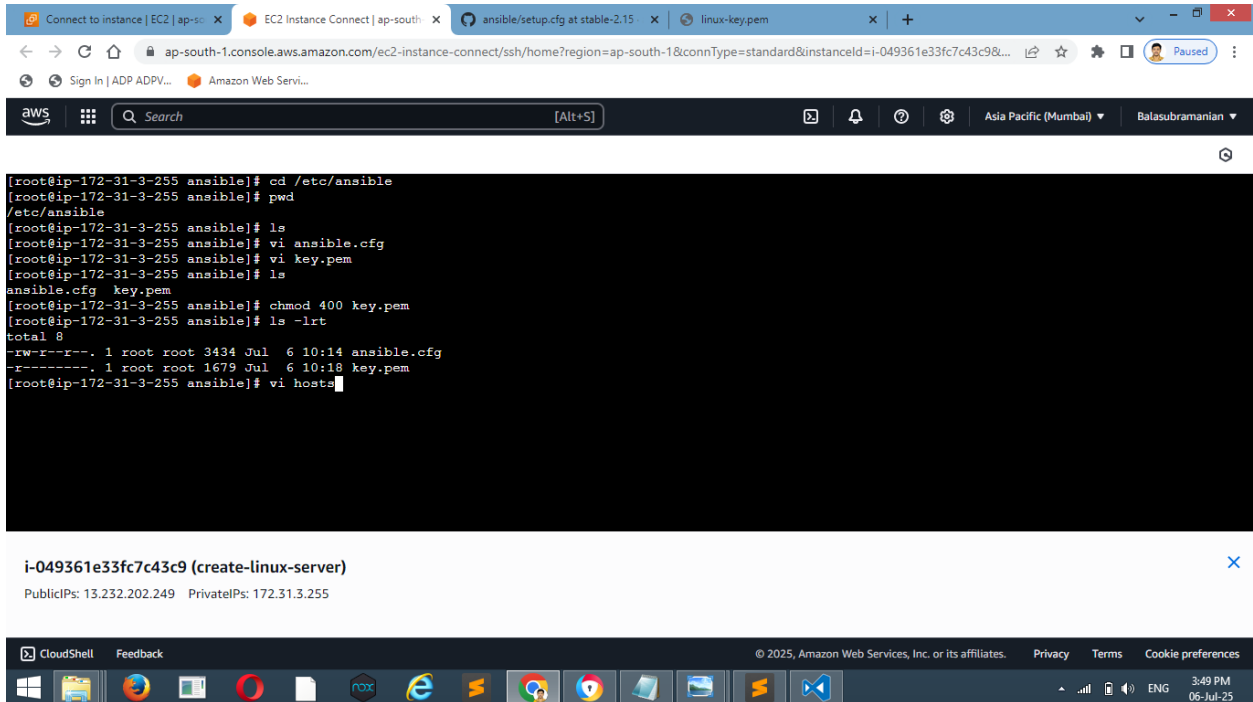


The screenshot shows the AWS CloudShell interface with a terminal window. The terminal output is as follows:

```
[root@ip-172-31-3-255 ansible]# cd /etc/ansible
[root@ip-172-31-3-255 ansible]# pwd
/etc/ansible
[root@ip-172-31-3-255 ansible]# ls
[root@ip-172-31-3-255 ansible]# vi ansible.cfg
[root@ip-172-31-3-255 ansible]# vi key.pem
[root@ip-172-31-3-255 ansible]# ls
ansible.cfg  key.pem
[root@ip-172-31-3-255 ansible]# chmod 400 key.pem
```

Below the terminal window, the instance details for **i-049361e33fc7c43c9 (create-linux-server)** are shown, including PublicIPs (13.232.202.249) and PrivateIPs (172.31.3.255).

STEP 10: I WILL OPENS THE HOSTS FILE IN THE VI EDITOR FOR EDITING

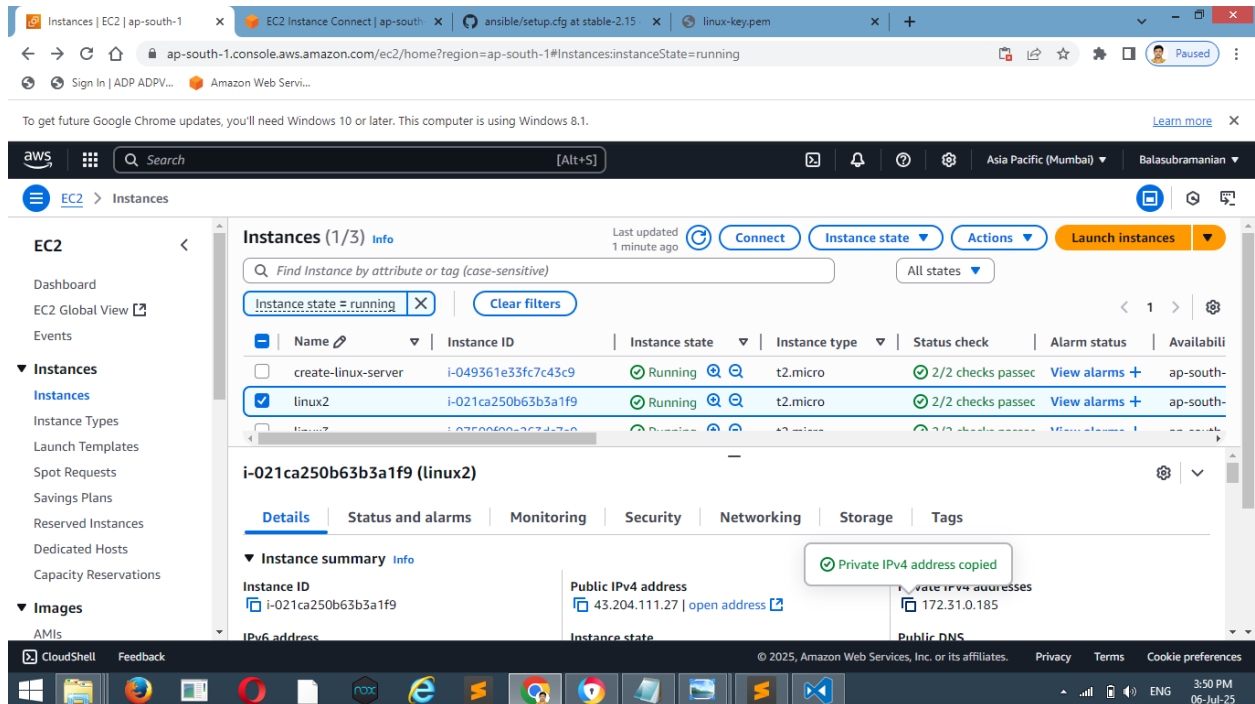


The screenshot shows the AWS CloudShell interface with a terminal window. The terminal output is as follows:

```
[root@ip-172-31-3-255 ansible]# cd /etc/ansible
[root@ip-172-31-3-255 ansible]# pwd
/etc/ansible
[root@ip-172-31-3-255 ansible]# ls
[root@ip-172-31-3-255 ansible]# vi ansible.cfg
[root@ip-172-31-3-255 ansible]# vi key.pem
[root@ip-172-31-3-255 ansible]# ls
ansible.cfg  key.pem
[root@ip-172-31-3-255 ansible]# chmod 400 key.pem
[root@ip-172-31-3-255 ansible]# ls -lrt
total 8
-rw-r--r--. 1 root root 3434 Jul  6 10:14 ansible.cfg
-r----- 1 root root 1679 Jul  6 10:18 key.pem
[root@ip-172-31-3-255 ansible]# vi hosts
```

Below the terminal window, the instance details for **i-049361e33fc7c43c9 (create-linux-server)** are shown, including PublicIPs (13.232.202.249) and PrivateIPs (172.31.3.255).

STEP 11: CONNECTING SLAVE MACHINE SO I WILL COPY PRIVATE IP ADDRESS



The screenshot shows the AWS Management Console for the 'ap-south-1' region. The 'Instances' page is active, displaying a list of EC2 instances. The instance 'linux2' (ID: i-021ca250b63b3a1f9) is selected. The details for this instance are shown, including its state (Running), type (t2.micro), and status checks. A tooltip indicates that the private IPv4 address '172.31.0.185' has been copied.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
create-linux-server	i-049361e33fc7c43c9	Running	t2.micro	2/2 checks passed	View alarms	ap-south-
linux2	i-021ca250b63b3a1f9	Running	t2.micro	2/2 checks passed	View alarms	ap-south-

i-021ca250b63b3a1f9 (linux2)

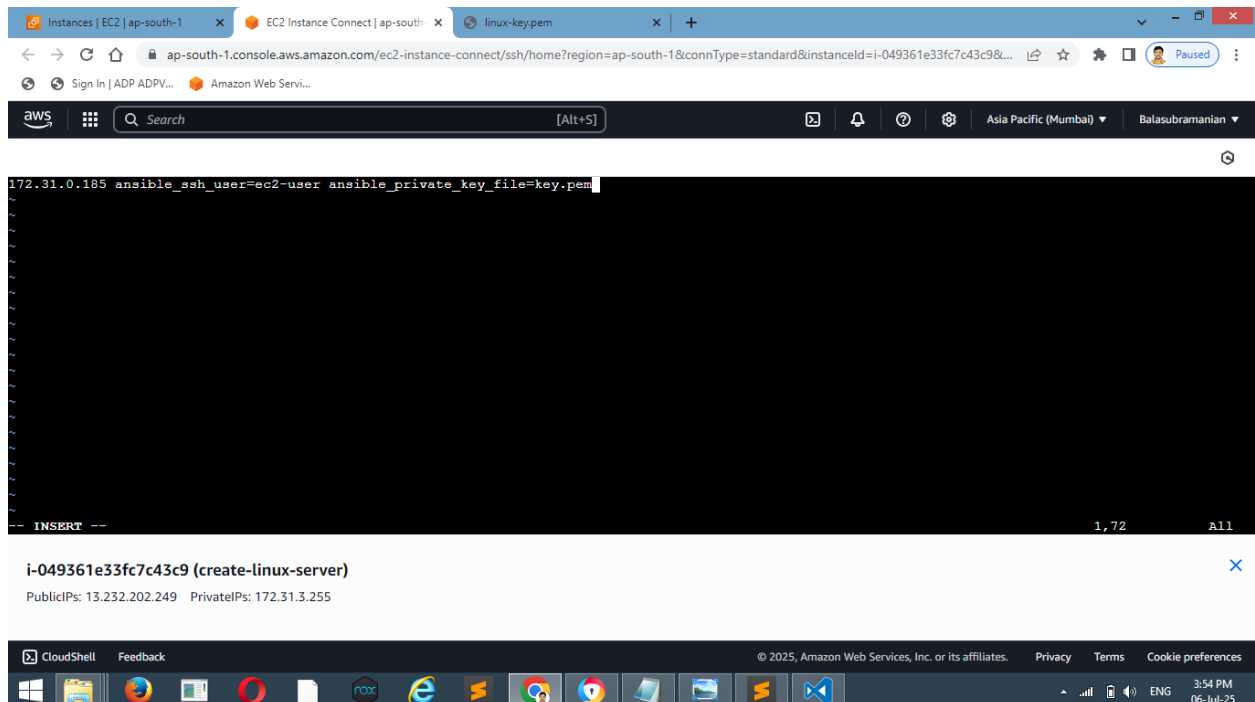
Instance summary

Instance ID: i-021ca250b63b3a1f9

Public IPv4 address: 43.204.111.27 | open address

Private IPv4 address: 172.31.0.185

STEP 12: PASTE THE IP ADDRESS IN HOST FILE AND SSH USER FOR CONNECTING TO THE INSTANCE AT THAT TIME SSH PRIVATE KEY USED FOR AUTHENTICATION

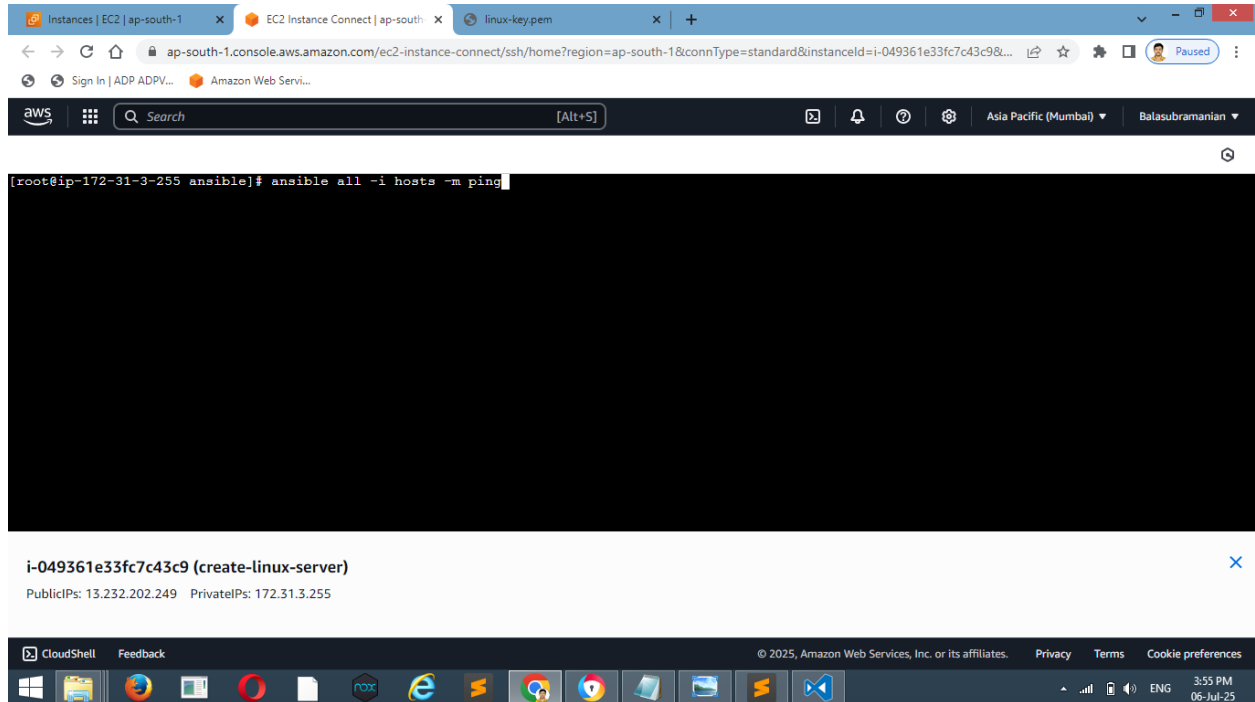


The screenshot shows a terminal window with the command: `172.31.0.185 ansible_ssh_user=ec2-user ansible_private_key_file=key.pem`. Below the terminal, a notification shows the instance details for 'i-049361e33fc7c43c9 (create-linux-server)'. The notification includes the public IP address '13.232.202.249' and the private IP address '172.31.3.255'.

i-049361e33fc7c43c9 (create-linux-server)

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

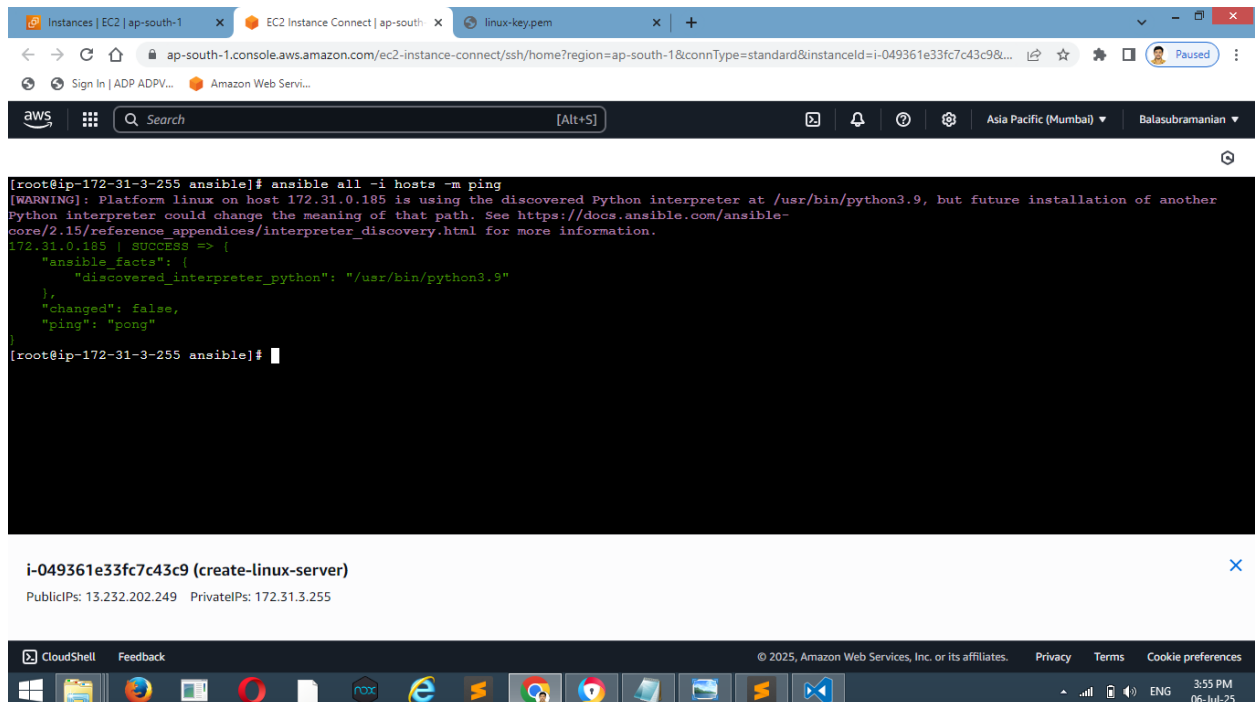
STEP 13: PINGS ALL THE HOSTS LISTED IN THE HOSTS FILE TO CHECK CONNECTIVITY



The screenshot shows the AWS CloudShell interface. The terminal window displays the command `[root@ip-172-31-3-255 ansible]# ansible all -i hosts -m ping`. The command has been executed, but the output is not visible in this frame.

i-049361e33fc7c43c9 (create-linux-server)
PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

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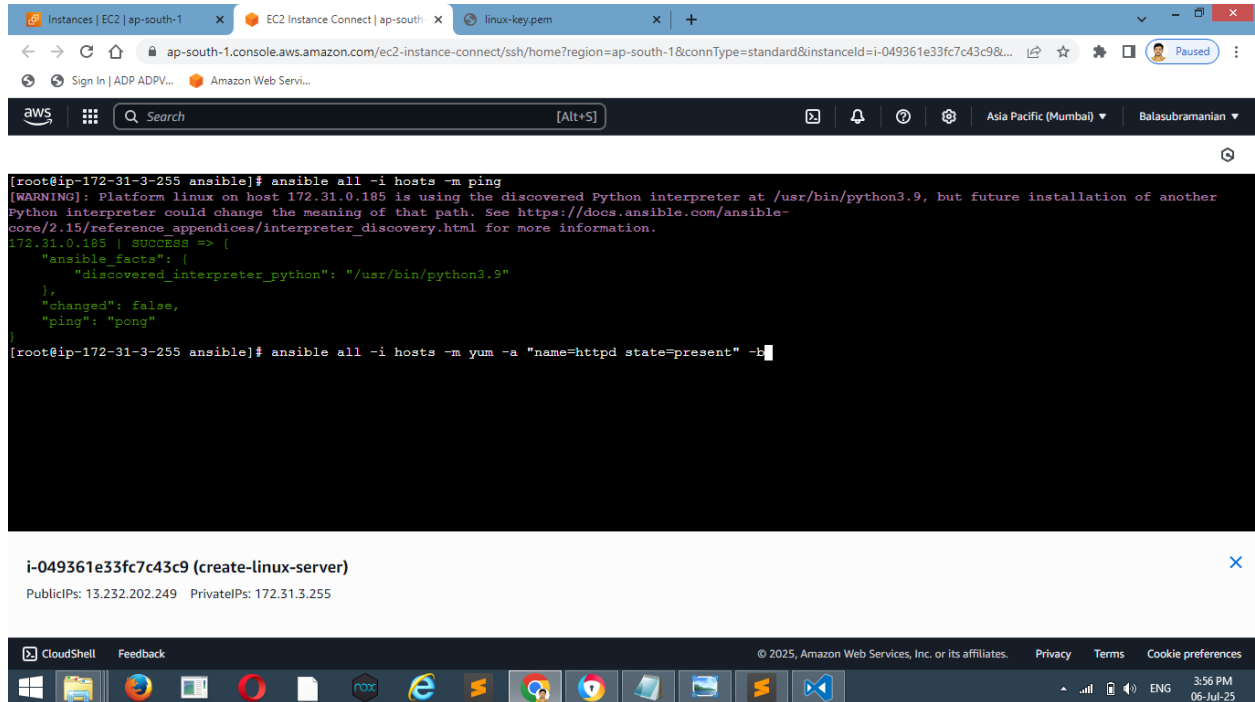
The screenshot shows the AWS CloudShell interface. The terminal window displays the output of the `ansible all -i hosts -m ping` command. The output shows a warning about the Python interpreter and a successful ping result for the host 172.31.0.185.

```
[root@ip-172-31-3-255 ansible]# ansible all -i hosts -m ping
[WARNING]: Platform linux on host 172.31.0.185 is using the discovered Python interpreter at /usr/bin/python3.9, but future installation of another
Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.15/reference_appendices/interpreter_discovery.html for more information.
172.31.0.185 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.9"
  },
  "changed": false,
  "ping": "pong"
}
[root@ip-172-31-3-255 ansible]#
```

i-049361e33fc7c43c9 (create-linux-server)
PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255

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STEP 14: I WILL INSTALL THE HTTPD PACKAGE ON ALL HOSTS LISTED IN THE HOSTS FILE USING ANSIBLE WITH YUM AND ESCALATED PRIVILEGES

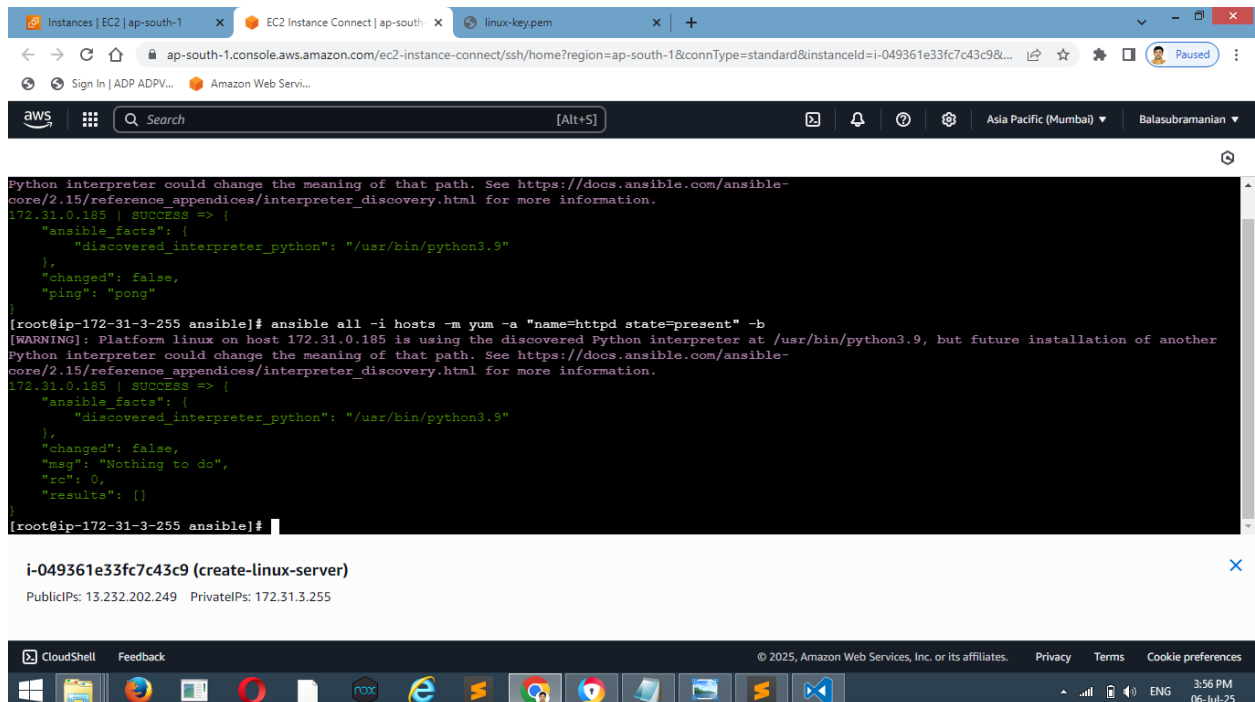


The screenshot shows the AWS Management Console interface. At the top, there are tabs for 'Instances | EC2 | ap-south-1', 'EC2 Instance Connect | ap-south-1', and 'linux-key.pem'. The browser address bar shows the URL: `ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-049361e33fc7c43c9&...`. The AWS logo and search bar are visible. The main content area displays a terminal window with the following text:

```
[root@ip-172-31-3-255 ansible]# ansible all -i hosts -m ping
[WARNING]: Platform linux on host 172.31.0.185 is using the discovered Python interpreter at /usr/bin/python3.9, but future installation of another
Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.15/reference_appendices/interpreter_discovery.html for more information.
172.31.0.185 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.9"
  },
  "changed": false,
  "ping": "pong"
}

[root@ip-172-31-3-255 ansible]# ansible all -i hosts -m yum -a "name=httpd state=present" -b
```

Below the terminal window, the instance details for `i-049361e33fc7c43c9 (create-linux-server)` are shown, including PublicIPs: 13.232.202.249 and PrivateIPs: 172.31.3.255. At the bottom, there is a taskbar with various application icons and system information: © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences 3:56 PM 06-Jul-25.



This screenshot is similar to the one above, showing the AWS Management Console interface. The browser address bar shows the URL: `ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-049361e33fc7c43c9&...`. The AWS logo and search bar are visible. The main content area displays a terminal window with the following text:

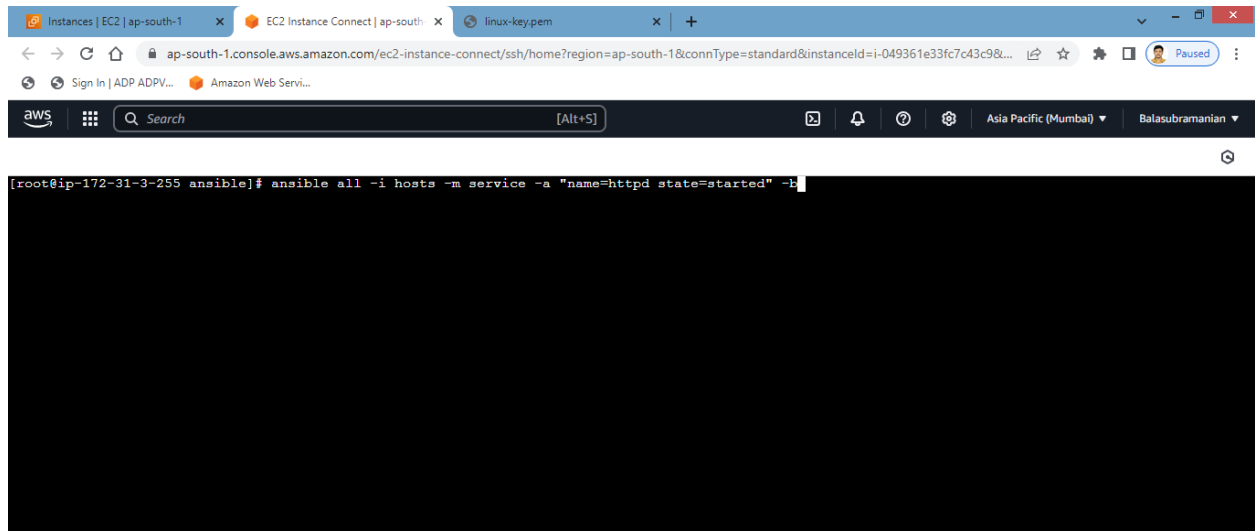
```
Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.15/reference_appendices/interpreter_discovery.html for more information.
172.31.0.185 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.9"
  },
  "changed": false,
  "ping": "pong"
}

[root@ip-172-31-3-255 ansible]# ansible all -i hosts -m yum -a "name=httpd state=present" -b
[WARNING]: Platform linux on host 172.31.0.185 is using the discovered Python interpreter at /usr/bin/python3.9, but future installation of another
Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.15/reference_appendices/interpreter_discovery.html for more information.
172.31.0.185 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.9"
  },
  "changed": false,
  "msg": "Nothing to do",
  "rc": 0,
  "results": {}
}

[root@ip-172-31-3-255 ansible]#
```

Below the terminal window, the instance details for `i-049361e33fc7c43c9 (create-linux-server)` are shown, including PublicIPs: 13.232.202.249 and PrivateIPs: 172.31.3.255. At the bottom, there is a taskbar with various application icons and system information: © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences 3:56 PM 06-Jul-25.

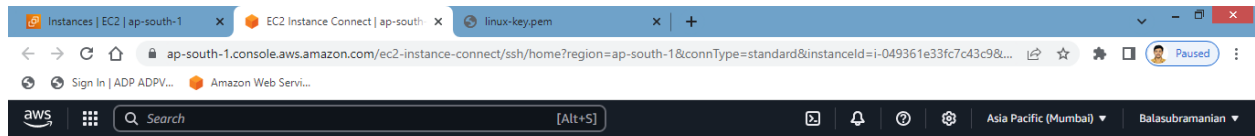
STEP 15: I WILL START THE HTTPD SERVICE ON ALL THE HOSTS



The screenshot shows the AWS Management Console interface. The top navigation bar includes the AWS logo, a search bar, and the user's name 'Balasubramanian'. The main content area displays a terminal window for the instance 'i-049361e33fc7c43c9'. The terminal shows the command `ansible all -i hosts -m service -a "name=httpd state=started" -b` being executed. The output is currently blank, indicating the command has been entered but the results have not yet appeared.

i-049361e33fc7c43c9 (create-linux-server)

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255



```
"TasksCurrent": "230",
"TasksMax": "1111",
"TimeoutAbortUSec": "1min 30s",
"TimeoutCleanUSec": "infinity",
"TimeoutStartFailureMode": "terminate",
"TimeoutStartUSec": "1min 30s",
"TimeoutStopFailureMode": "terminate",
"TimeoutStopUSec": "1min 30s",
"TimerSlackNSec": "50000",
"Transient": "no",
"Type": "notify",
"UID": "[not set]",
"UMask": "0022",
"UnitFilePreset": "disabled",
"UnitFileState": "disabled",
"UtmpMode": "init",
"Wants": "httpd-init.service tmp.mount",
"WatchdogSignal": "6",
"WatchdogTimestampMonotonic": "0",
"WatchdogUSec": "0"
}
```

[root@ip-172-31-3-255 ansible]#

i-049361e33fc7c43c9 (create-linux-server)

PublicIPs: 13.232.202.249 PrivateIPs: 172.31.3.255



STEP 16: I WILL COPY THE SLAVE MACHINE PUBLIC IP ADDRESS

The screenshot shows the AWS Management Console for the 'ap-south-1' region. The 'Instances' page displays a list of EC2 instances. The instance 'linux2' (ID: i-021ca250b63b3a1f9) is selected. The 'Details' tab is active, showing the instance's public IPv4 address as 43.204.111.27. A tooltip indicates that the public IPv4 address has been copied.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
linux2	i-021ca250b63b3a1f9	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-
linux3	i-07590f00a263dc7e0	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-

i-021ca250b63b3a1f9 (linux2)

Instance summary

Instance ID: i-021ca250b63b3a1f9

Public IPv4 address: 43.204.111.27 | open address

Private IPv4 addresses: 172.31.0.185

STEP 17: PASTE IT IN THE BROWSER

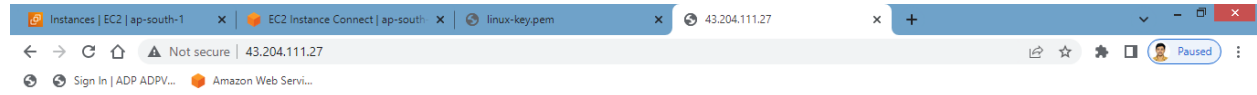
The screenshot shows a web browser with the Google homepage. The address bar contains the URL 'http://43.204.111.27'. The search bar is visible below the address bar.

Search Google or type a URL

Add shortcut

Customize Chrome

STEP 18: FINALLY SUCCESSFULLY MAIN MACHINE IS CONNECTED TO SLAVE MACHINE



It works!

